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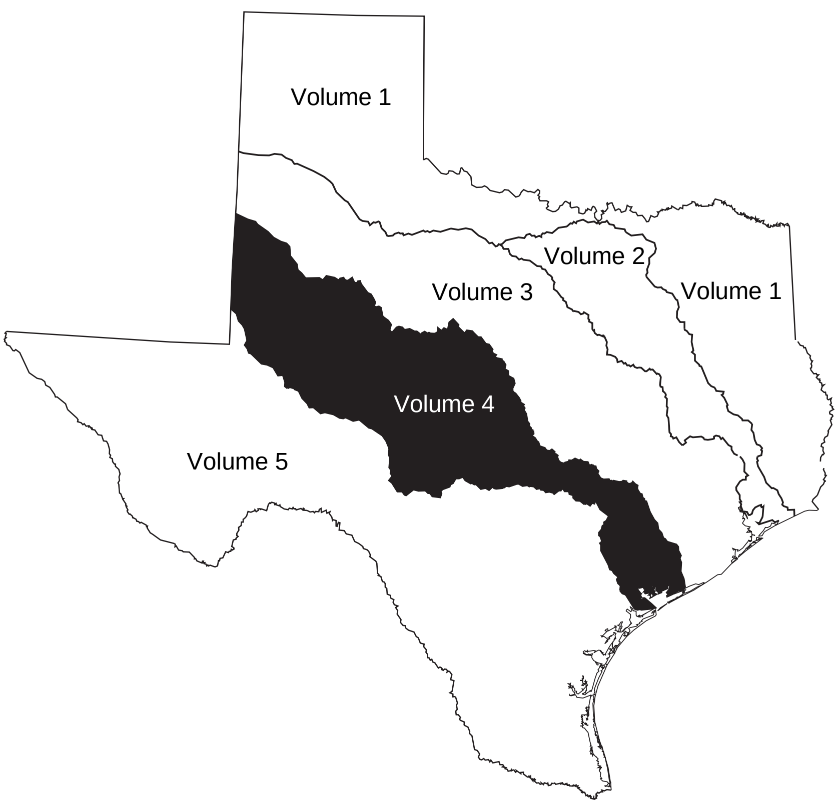
U.S. Geological Survey

Water Resources Data Texas Water Year 2002

Volume 4. Colorado River Basin, Lavaca River Basin, and Intervening Coastal Basins

By S.C. Gandara

Water-Data Report TX-02-4



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 4 contains records for water discharge at 63 gaging stations; stage and contents at 13 lakes and reservoirs; water quality at 35 gaging stations; and data for 11 partial-record stations comprised of 3 flood-hydrograph, 5 low-flow, 1 crest-stage, and 2 miscellaneous 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.]

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

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

Station name	Station number	Drainage area (mi^2)	Period of record (water years)
Punta De Agua Creek near Channing (d)	07227448	3,568	1968-73
East Cheyenne Creek Tributary near Channing (e)	07227460	1.60	1965-74
Canadian River at Tascosa (d)	07227470	18,536	1969-77
Tecovas Creek Tributary near Bushland (e)	07227480	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
Salado Creek at Rittman Road, San Antonio (e)	08178720	137.1	1968-81

Station name	Station number	Drainage area (mi^2)	Period of record (water years)
Salado Creek Tributary at Bee Street, San Antonio (e)	08178736	0.45	1970-77
Salado Creek at E. Houston Street, San Antonio (e)	08178740	181	1968-81
Salado Creek at U.S. Highway 87, San Antonio (e)	08178760	186	1968-81
Salado Creek at Southcross Blvd., San Antonio (e)	08178780	188	1968-81
Bandera Creek Tributary near Bandera (e)	08178900	0.27	1966-74
Medina River near Pipe Creek (d)	08179000	474	1923-35, 1953-82
Red Bluff Creek near Pipe Creek (d)	08179100	56.30	1956-81
Medina River Tributary near Pipe Creek (e)	08179200	0.30	1966-74
Medina River at La Coste (d)	08180640	805	1987-2000
Medio Creek at Pearsall Road, San Antonio (e)	08180750	47.9	1987-95
Leon Creek Tributary at FM 1604, San Antonio (e)	08181000	5.57	1968-80
French Creek Tributary near Helotes (e)	08181200	1.08	1966-74
Ranch Creek near Helotes (d)	08181410		1978
Leon Creek Tributary at Kelly Air Force Base (d)	08181450	1.19	1969-79
Calaveras Creek SWS No. 6 (inflow) near Elmendorf (e)	08182400	7.01	1957-77
Calaveras Creek near Elmendorf (d)	08182500	77.20	1954-71
San Antonio River at Calaveras (d)	08183000	1,786	1918-25
Cibolo Creek near Boerne (d)	08183900	68.4	1963-95
Cibolo Creek near Bulverde (d)	08184000	198	1946-66
Cibolo Creek above Bracken (d)	08184500	250	1946-51
Cibolo Creek at Sutherland Springs (d)	08185500	665	1924-29
Ecleto Creek near Runge (d)	08186500	239	1962-89
Escondido Creek SWS No. 1 (inflow) near Kenedy (e)	08187000	3.29	1955-73
Escondido Creek at Kenedy (d)	08187500	72.40	1954-73
Escondido Creek SWS No. 11 (inflow) near Kenedy (e)	08187900	8.45	1959-77
Dry Escondido Creek near Kenedy (d)	08188000	9.43	1954-59
Baugh Creek at Goliad (e)	08188400	3.02	1966-74
Guadalupe-Blanco River Authority Calhoun Canal-Flume No. 2 near Long Mott (d)	08188750	N/A	1972-86
Guadalupe River at State Highway 35 near Tivoli (e)	08188810	10,280	1975-82
Olmos Creek Tributary near Skidmore (e)	08189600	0.58	1966-73
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
Rincon Bayou Channel near Calallen (d)	08211503	N/A	1996-2000
Pintas Creek Tributary near Banquete (e)	08211550	3.28	1966-74

Station name	Station number	Drainage area (mi^2)	Period of record (water years)
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
Limpia Creek near Fort Davis (d)	08432000	303	1925-32
Toyah Creek below Toyah Lake near Pecos (d)	08434000	3,709	1939-51

Station name	Station number	Drainage area (mi^2)	Period of record (water years)
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
South Floodway South of McAllen (d)	08470000	N/A	1929-60

Station name	Station number	Drainage area (mi^2)	Type of record	Period of record (water years)
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
Red River near Gainesville	07316000	30,872	SC, Cl	1944-46,
			SC, T, pH, Cl	1953-63,

Station name	Station number	Drainage area (mi^2)	Type of record	Period of record (water years)
			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
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
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

Station name	Station number	Drainage area (mi^2)	Type of record	Period of record (water years)
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
Trinity River at Anahuac	08067300	17,912	SC, pH, Cl	1950-65
Cedar Bayou near Crosby	08067500	69.4	SC,pH,Cl	1971-79

Station name	Station number	Drainage area (mi^2)	Type of record	Period of record (water years)
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
Salt Creek at Olney	08088100	11.80	SC, T	1958-60
Salt Creek near Newcastle	08088200	120	SC, T	1958-60

Station name	Station number	Drainage area (mi^2)	Type of record	Period of record (water years)
Brazos River at Morris Sheppard Dam near Graford	08088600	23,596	SC	1942-91,
			T	1950-55,
				1966-91
Brazos River near Dennis	08090800	25,237	SC, T	1971-95
Brazos River at Whitney Dam near Whitney	08092600	27,189	SC, T	1947-97
Aquilla Creek above Aquilla	08093360	255	SC, T	1980-83
Aquilla Creek near Aquilla	08093500	308	SC, T	1960-66,
				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	1959-81,
			S	1976-81
Brazos River near Richmond	08114000	45,007	S	1966-86,
			SC	1942-95,
			T	1951-95
Brazos River near Rosharon	08116650	45,399	SC, T	1969-80
Brazos River at Harris Reservoir near Angleton	08116700	44,000	SC	1962-77,
			T	1967-77
Brazos River at Brazoria Reservoir near Brazoria	08117200	44,000	SC	1962-77,
			T	1967-77
San Bernard River near Boling	08117500	727	SC, T	1978-81
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	1950-52,
				1959-70,
				1975-82,
			Cl	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
Colorado River at Robert Lee	08124000	15,307	SC, T, pH, Cl	1948-51,
			S	1949-51

Station name	Station number	Drainage area (mi^2)	Type of record	Period of record (water years)
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
Cibolo Creek near Falls City	08186000	827	SC, T	1969-91

Station name	Station number	Drainage area (mi^2)	Type of record	Period of record (water years)
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

WATER RESOURCES DATA—TEXAS, 2002

VOLUME 4

COLORADO RIVER BASIN, LAVACA 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 4 contains records for water discharge at 63 gaging stations; stage and contents at 13 lakes and reservoirs; and water quality at 35 gaging stations. Also included are data for 11 partial-record stations comprised of 3 flood-hydrograph, 5 low-flow, 1 crest-stage, and 2 miscellaneous measurement 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-02-4.” 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 4 includes the Colorado River Basin, Lavaca River Basin, and Intervening Costal Basins. The area described in volume 4 and the location of selected streamflow stations in the area are shown in figure 1.

Streamflow

In the area covered in volume 4, streamflow averaged normal during water year 2002. Streamflow for water year 2002 and for the period of record at two selected stations (fig. 1) for which data are included in volume 4 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 Concho River near Carlsbad 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.The 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,

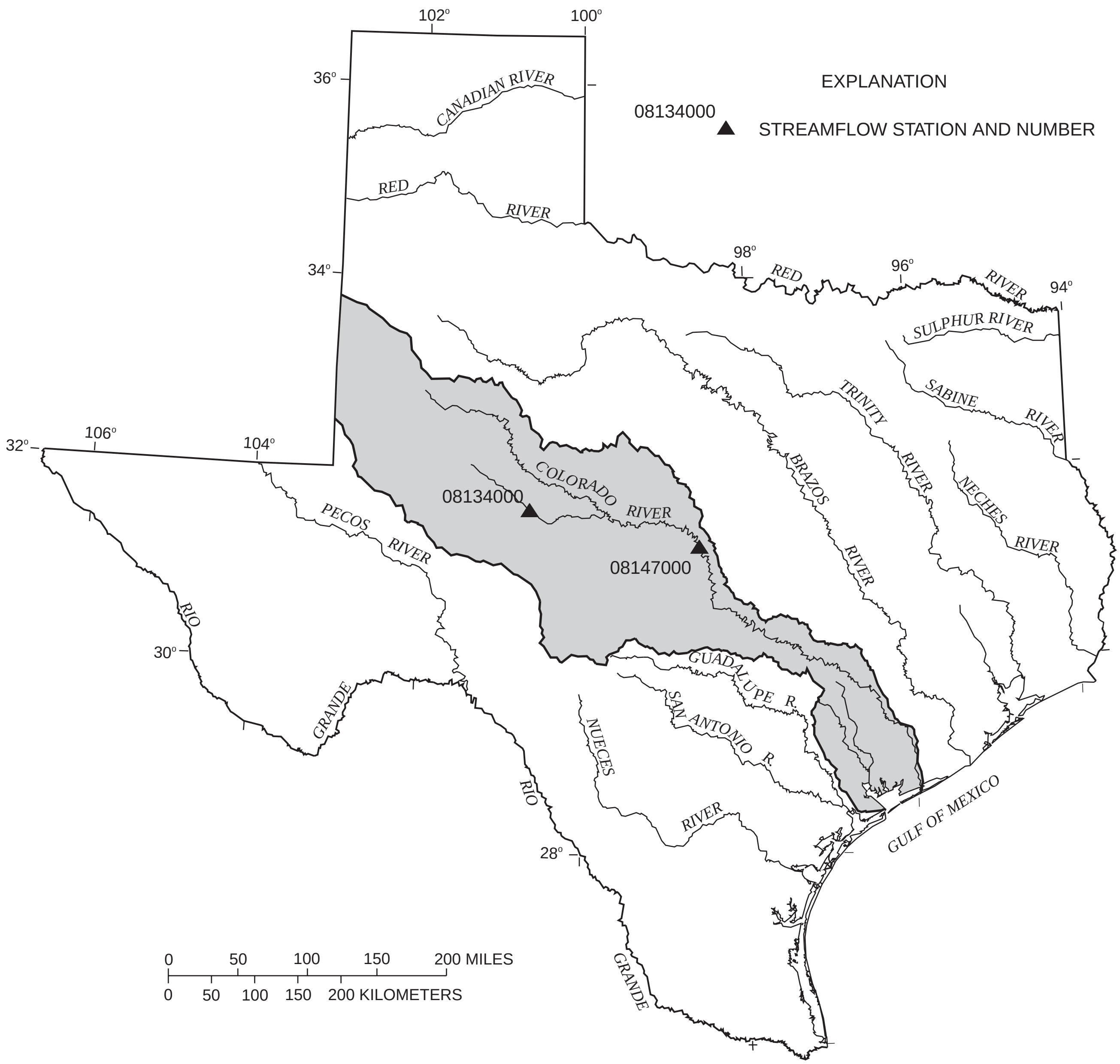

Figure 1. Area of Texas covered by volume 4 (shaded) and location of selected streamflow stations in volume 4.

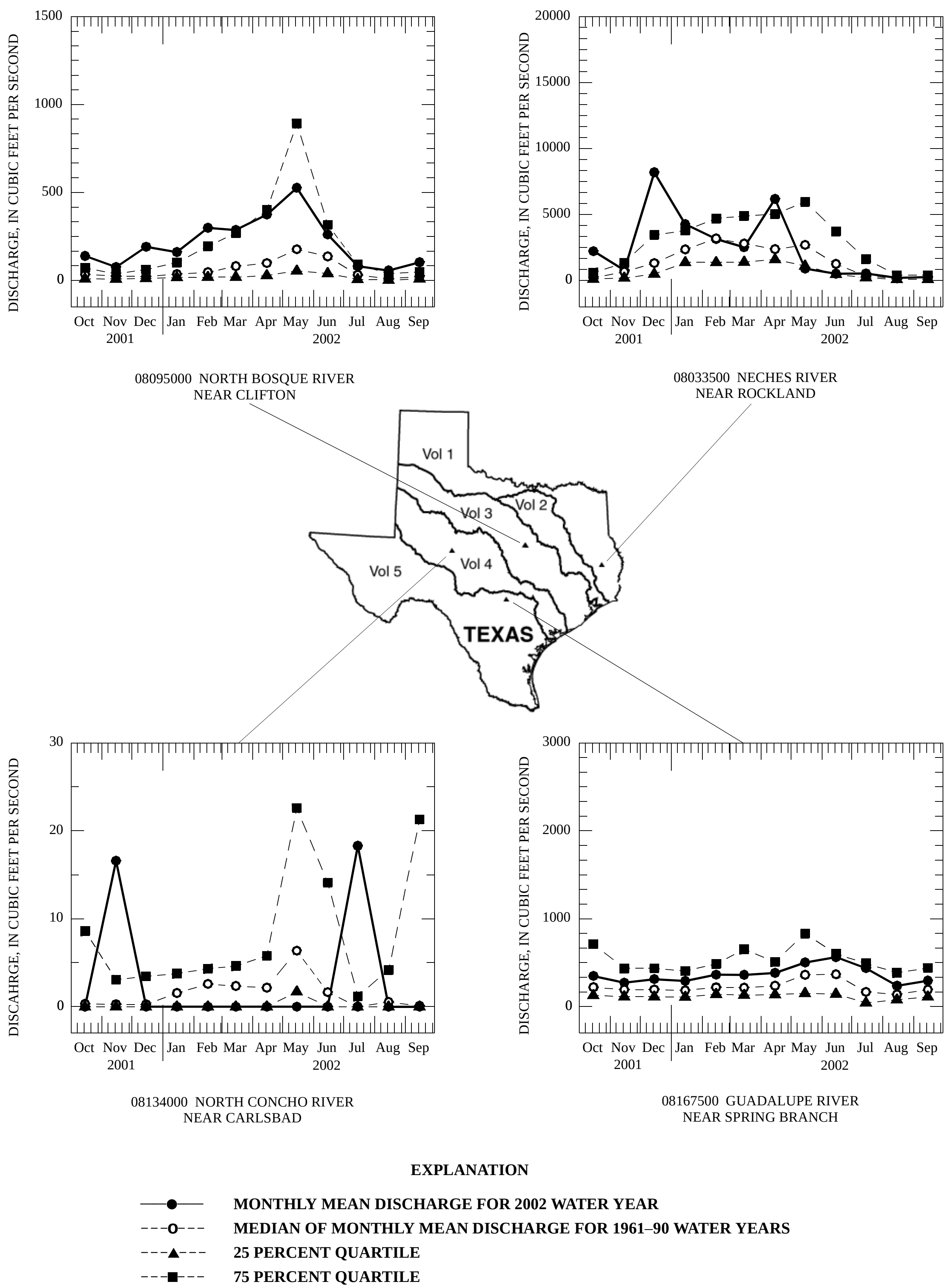

Figure 2. Monthly mean discharges at four long-term hydrologic index stations during 2002 water year and median of the monthly mean discharges for 1961–90 water years.

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

Conservation storage in 12 selected reservoirs in this area of the State, with a total combined conservation capacity of 3,962,000 acre-feet, increased from 60 percent of capacity at the end of September 2001 to 63 percent of capacity at the end of September 2002. Records from these reservoirs indicate that storage increased in 5 and decreased in 7.

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 where discharge is controlled by reservoirs, the dissolved-solids concentrations may remain relatively constant despite substantial fluctuations in precipitation and runoff.

Table 1. Streamflow at two selected stations

Station no. and name		Discharge during 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
Colorado River Basin							
08134000	North Concho River near Carlsbad, TX 1/	1,950	0	2.9	c94,600	0	28.1 (1924-2002)
08147000	Colorado River near San Saba, TX	23,400	41	630	cc224,000	0	1,018 (1931-2002)

1/ Hydrologic index station.
c From rating curve extended above 15,000 ft^3/s on basis of slope-area measurements of 55,200 and 94,600 ft^3/s at former site.
cc From rating curve extended above 215,000 ft^3/s.

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.

<u>Data table of daily mean values</u>

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

Change in National Trends Network Procedures

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

Water-Quality Control Data

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

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

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

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.

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

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

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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

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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.

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Book 7. Automated Data Processing and Computations

Section C. Computer Programs

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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.

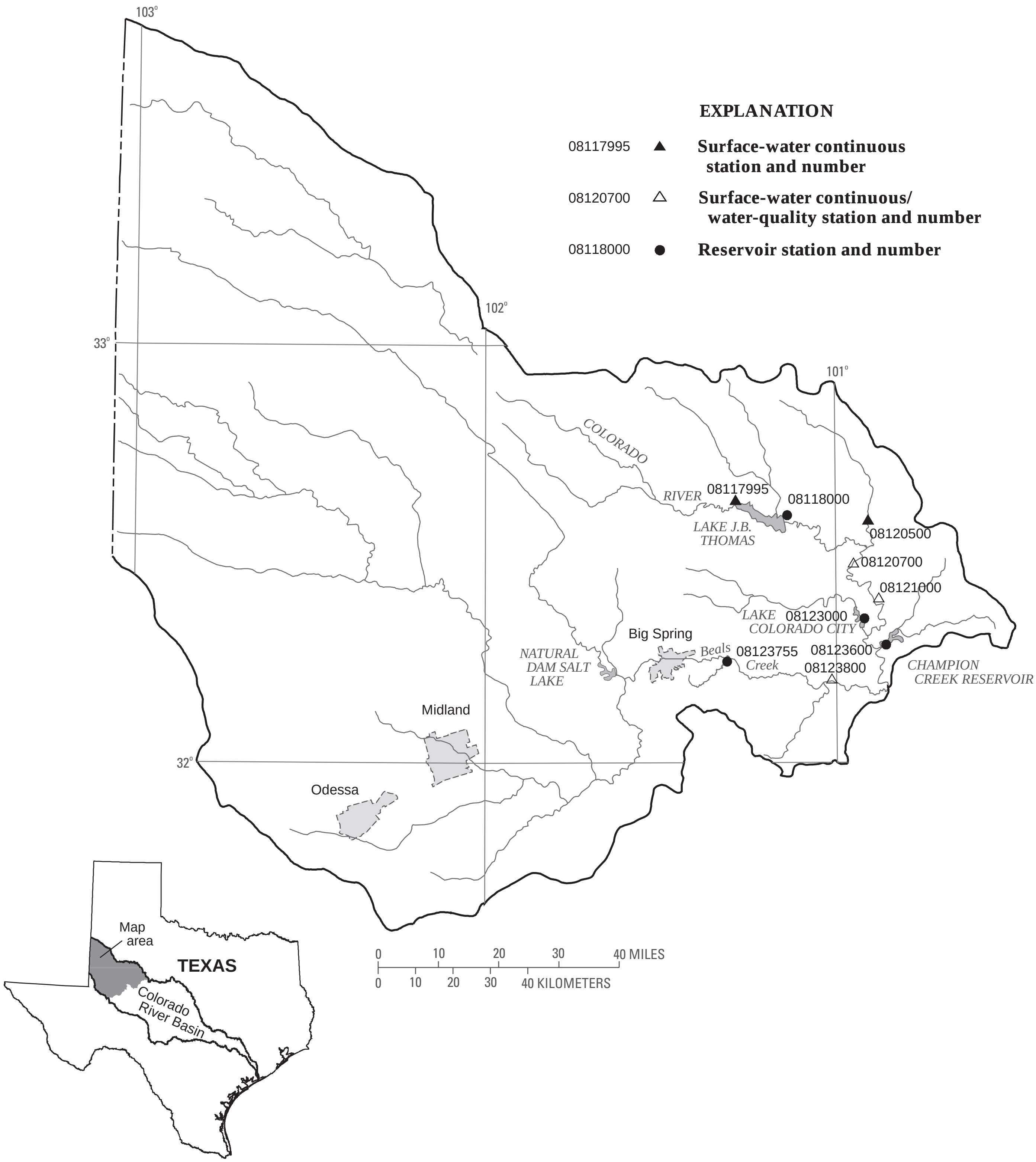


Figure 3.--Map showing location of gaging stations in the first section of the Colorado River Basin

08117995 Colorado River near Gail, TX

LOCATION.--Lat 32°37'43", long 101°17'06", Borden County, Hydrologic Unit 12080002, near right downstream end of bridge on FM 1205, 5.0 mi north of junction with FM 1785, 13 mi southeast of Gail, 14 mi northwest of Vincent, and 25 mi west of Ira.

DRAINAGE AREA.--498 mi^2.

PERIOD OF RECORD.--Mar. 1988 to current year.

REVISED RECORDS.--WRD TX-01-4: 1988-91 (maximum only, 1989-91).

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 2,240 ft above NGVD of 1929, from topographic map. Satellite telemeter at station.

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

REVISIONS.--The maximum peak flow reported for water years 1988-2001 in WRD TX-01-4 has been revised to 2,320 ft^3/s, May 26, 1992.

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	e0.00	0.00	e0.60	e0.00	0.00	0.00	13	0.00	0.00	0.10	0.11	0.00
2	e0.00	0.00	e0.01	0.00	0.00	0.00	1.6	0.00	0.00	0.00	0.89	0.00
3	e0.00	0.00	e0.00	0.00	0.00	0.00	0.13	0.00	0.00	0.00	0.21	0.00
4	e0.00	0.00	e0.00	0.00	0.00	0.00	0.00	0.01	0.00	11	0.04	0.00
5	2.9	0.00	e0.00	0.00	0.00	0.00	0.00	130	0.00	101	0.00	0.00
6	e0.05	0.00	e0.00	0.00	e0.00	0.00	0.00	15	0.00	1060	0.00	0.00
7	e0.00	0.00	e0.00	0.00	e0.00	0.00	0.00	1.3	0.00	399	0.00	0.00
8	e0.00	0.00	e0.00	0.00	0.00	0.00	0.21	0.24	0.00	345	0.00	0.00
9	e0.00	0.00	e0.00	0.00	0.00	0.00	16	0.01	0.00	120	0.00	0.00
10	e0.00	0.00	e0.00	0.00	0.00	0.00	1.4	0.00	0.00	45	0.00	0.00
11	e0.05	0.00	e0.00	0.00	0.00	0.00	0.27	0.00	0.00	11	0.00	0.00
12	e0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	9.2	0.00	0.00
13	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.5	0.00	0.00
14	e0.00	44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.4	0.00	0.00
15	0.00	364	0.00	0.00	0.00	0.00	0.00	0.00	10	2.0	0.00	0.00
16	0.00	195	0.01	0.00	0.00	0.00	0.00	0.00	18	0.59	0.00	0.00
17	0.00	e20	1.5	0.00	0.00	0.00	0.00	0.00	0.88	0.13	0.00	0.00
18	0.00	93	e0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.00	0.00
19	0.00	14	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	e7.0	e0.00	0.00	0.00	105	0.00	0.00	0.00	0.00	0.00	7.0
21	0.00	e3.5	e0.00	0.00	0.00	74	0.00	0.00	0.00	0.00	0.00	3.0
22	0.00	e1.5	e0.00	0.00	0.00	1.6	0.00	0.00	0.00	0.00	273	0.17
23	0.00	e0.75	e0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00	78	0.01
24	0.00	e0.25	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.1	0.00
25	0.00	e0.05	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.00
26	0.00	e0.01	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00
27	0.00	e0.00	e0.00	0.00	0.00	0.00	0.00	0.00	74	0.00	0.00	0.00
28	0.00	e0.00	e0.00	0.00	0.00	0.00	0.00	0.00	121	0.00	0.00	0.00
29	0.00	e0.00	e0.00	0.00	---	0.00	0.00	0.00	59	3.6	0.00	0.00
30	0.00	e4.0	e0.00	0.00	---	35	0.00	0.00	2.0	0.37	0.00	0.00
31	0.00	---	e0.00	0.00	---	215	---	0.00	---	0.01	0.00	---
TOTAL	3.00	747.06	2.12	0.00	0.00	430.66	32.62	146.56	284.89	2120.92	354.57	10.18
MEAN	0.097	24.90	0.068	0.000	0.000	13.89	1.087	4.728	9.496	68.42	11.44	0.339
MAX	2.9	364	1.5	0.00	0.00	215	16	130	121	1060	273	7.0
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	6.0	1480	4.2	0.00	0.00	854	65	291	565	4210	703	20

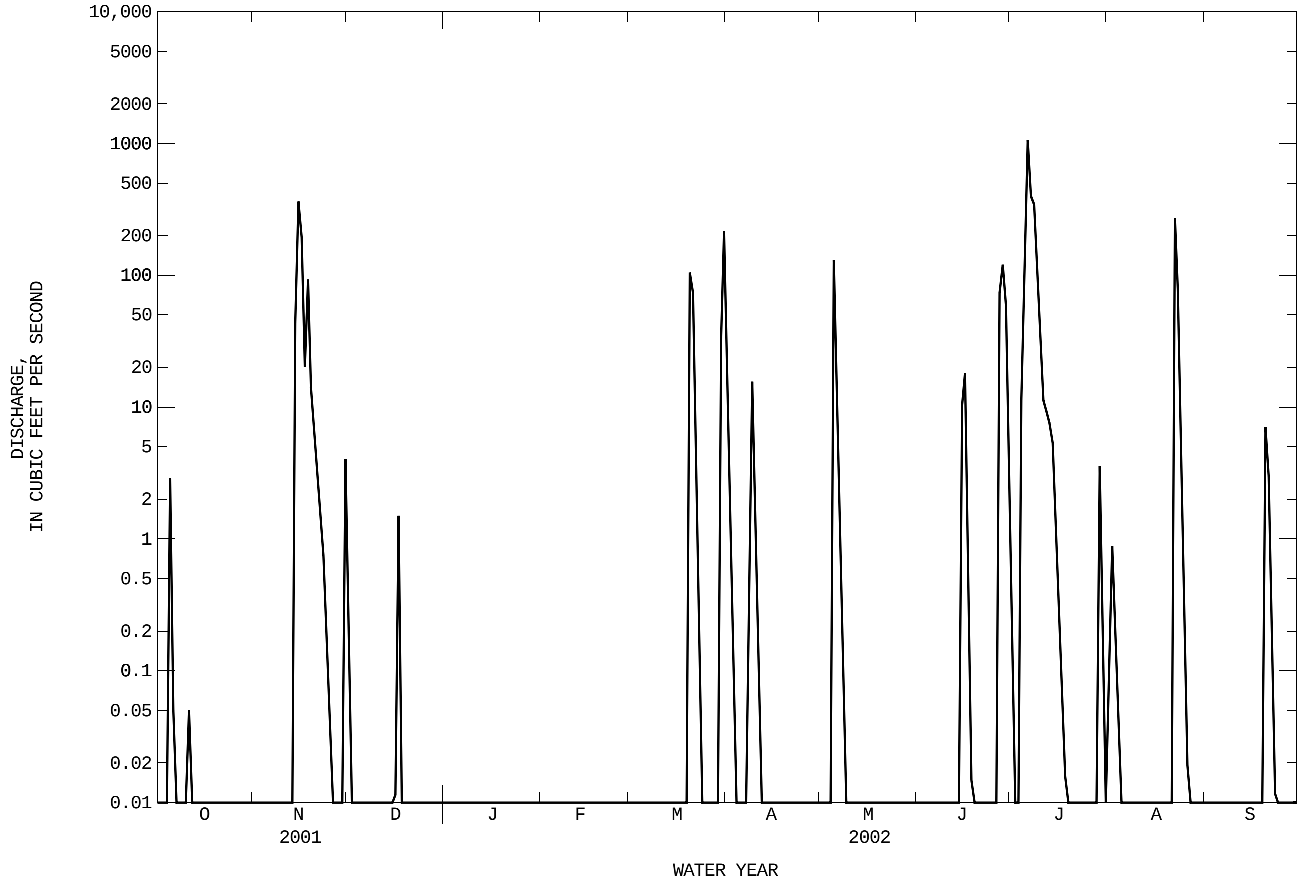
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	6.796	2.819	1.444	1.205	2.940	5.996	4.765	29.45	45.66	13.03	4.930	14.76
MAX	78.9	24.9	15.6	8.42	23.8	51.2	51.5	263	166	76.1	22.6	49.1
(WY)	2001	2002	1992	1992	1992	2000	1990	1992	1992	1988	1996	1989
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)	1990	1990	1990	1995	1991	1991	1991	1993	1990	1994	1994	1997

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1988 - 2002	
ANNUAL TOTAL	1651.99		4132.58			
ANNUAL MEAN	4.526		11.32		11.06	
HIGHEST ANNUAL MEAN					46.2	1992
LOWEST ANNUAL MEAN					0.48	1998
HIGHEST DAILY MEAN	364	Nov 15	1060	Jul 6	2060	May 25 1992
LOWEST DAILY MEAN	0.00	Jan 1	0.00	Oct 1	0.00	Jun 7 1988
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00	Oct 12	0.00	Jun 7 1988
MAXIMUM PEAK FLOW			1510	Jul 6	2320	May 26 1992
MAXIMUM PEAK STAGE			14.12	Jul 6	m16.43	May 26 1992
ANNUAL RUNOFF (AC-FT)	3280		8200		8010	
10 PERCENT EXCEEDS	0.15		3.5		6.1	
50 PERCENT EXCEEDS	0.00		0.00		0.00	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

e Estimated
m Result of earthen dam.

08117995 Colorado River near Gail, TX--Continued



08118000 Lake J.B. Thomas near Vincent, TX

LOCATION.--Lat 32°35'35", long 101°08'16", Scurry County, Hydrologic Unit 12080002, on upstream edge of dam 500 feet right of valve tower for Snyder pump station near center of dam on Colorado River, 8.5 mi west of Ira, 9.2 mi northeast of Vincent, and at mile 837.0.

DRAINAGE AREA.--3,389 mi^2, of which 2,371 mi^2 probably is noncontributing. Drainage area includes 455 mi^2 above Bull Creek diversion dam, of which 38 mi^2 probably is noncontributing.

PERIOD OF RECORD.--Oct. 1953 to Sept. 1986, Feb. 1999 to current year.
Water-quality records.--Chemical data: Feb. 1970 to May 1984.

REVISED RECORDS.--WDR TX-81-3: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is NGVD of 1929. Water-stage recorder and nonrecording gage read once daily from Oct. 1953 to Sept. 1986 at site 4.0 mi upstream at same datum. Nov. 4, 1953, to Feb. 7, 1955, Colorado River Municipal Water District nonrecording gage at present site and datum. Satellite telemeter at station.

REMARKS.--Records good except those for estimated daily contents and those for Oct. 1-25 and Apr. 6-11, which are fair. The lake is formed by a rolled earthfill dam, 14,500 ft long. Storage began in July 1952 and the dam was completed in Sept. 1952. There was no appreciable storage prior to July 1953. There are two uncontrolled emergency spillways, both cut through natural ground and located as follows: the first is a 500 ft wide cut located at the left end of dam, and the second cut is 1,600 ft wide located at the right end of dam. These spillways are designed to discharge 161,000 ft^3/s (elevation, 2,275.0 ft). An uncontrolled rectangular concrete drop inlet, 38.0 by 53.0 ft at the crest, discharges into two 10.0 ft concrete conduits. In addition, there is an outlet that can release water through a 24-inch gate into a 30-inch concrete pipe. The dam was built by the Colorado River Municipal Water District to impound water for municipal and industrial supply for the cities of Big Spring, Odessa, and Snyder. A diversion dam on Bull Creek diverts water through a 13,000 ft long gravity canal into Lake J.B. Thomas. These diversions began in Nov. 1953. Conservation pool storage is 199,931 acre-ft. Data regarding the dam are given in the following table:

	Elevation (feet)
Top of dam...	2,280.0
Crest of right spillway (south)......................................	2,267.0
Crest of left spillway (north).......................................	2,264.0
Crest of drop inlet...	2,258.0
Lowest gated outlet (invert)...	2,200.0

COOPERATION.--The capacity table dated July 1, 1953 was derived from area and capacity curves furnished by Colorado River Municipal Water District and is based on surveys made by Freese and Nichols in 1948 and 1950. A volumetric survey by the Texas Water Development Board in Nov. 1999 has not received final approval from the Colorado River Municipal Water District.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 218,600 acre-ft, Sept. 8, 1962, elevation, 2,259.85 ft; minimum contents, 4,960 acre-ft, May 28, 1971, elevation, 2,206.43 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 23,040 acre-ft, July 13, elevation, 2,218.35 ft; minimum contents, 15,900 acre-ft, Nov. 14, elevation, 2,214.65 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	17320	16200	22070	21180	20030	19250	21110	20510	20460	19360	21450	19980
2	17270	16190	22060	21140	20000	19180	21350	20320	20760	19310	21390	19940
3	17220	16150	22060	21110	19960	19170	21370	20240	20680	19260	21330	19900
4	17170	16120	22050	21090	19910	19180	21360	20210	20570	19260	21260	19840
5	17120	16100	22080	21060	19950	19150	21300	21140	20460	19300	21180	19780
6	17100	16090	22050	21050	20020	19110	21280	21370	20420	19610	21090	19700
7	17070	16120	22040	21030	20010	19080	21440	21420	20380	21100	21010	19610
8	17030	16050	22010	21010	20020	19100	21540	21380	20300	22070	20940	19510
9	17030	16030	21990	20990	19980	19010	21580	21240	20240	22700	20850	19470
10	16940	16010	21970	20940	19900	18990	21670	21100	20170	22870	20760	19440
11	16940	15970	21930	20890	19880	19010	21760	21040	20100	22900	20670	19420
12	16910	15950	21930	20870	19830	18940	21710	e21000	20010	22890	20590	19400
13	16890	15940	21850	20860	19770	18950	21630	e21000	19910	23000	20500	19370
14	16860	16020	21820	20810	19750	18930	21590	e21000	19820	22960	20410	19370
15	16790	16610	21760	20760	19690	18810	21540	20980	19770	22870	20340	19880
16	16740	19410	21720	20710	19650	18770	21470	20890	19700	22810	20240	19870
17	16720	21020	21780	20660	19610	18750	21380	20780	19670	22720	20160	19850
18	16690	21570	21790	20580	19570	18720	21270	20690	19610	22640	20080	19820
19	16640	21900	21760	20560	19590	18650	21200	20600	19530	22540	19990	19800
20	16600	22070	21730	20580	19540	18970	21120	20530	19450	22470	19900	19750
21	16570	22110	21690	20520	19470	19210	21070	20400	19390	22360	19860	19730
22	16550	22110	21670	20480	19470	19440	21010	20320	19320	22280	20160	19670
23	16550	22150	21590	20400	19460	19490	20940	20220	19270	22180	20340	19620
24	16490	22090	21550	20330	19460	19520	20880	20150	19210	22100	20480	19590
25	16450	22060	21540	20310	19370	19440	20760	20060	19150	22030	20460	19560
26	16400	22030	21490	20280	19320	19430	20720	20160	19090	21920	20420	19510
27	16360	21910	21450	20240	19320	19360	20760	20360	19280	21820	20330	19480
28	16320	e22000	21430	20200	19290	19230	20670	20460	19300	21710	20230	19430
29	16270	22090	21360	20150	---	19220	20580	20450	19380	21600	20150	19350
30	16240	22080	21280	20080	---	19390	20530	20400	19410	21550	20080	19300
31	16220	---	21220	20070	---	20140	---	20360	---	21520	20020	---

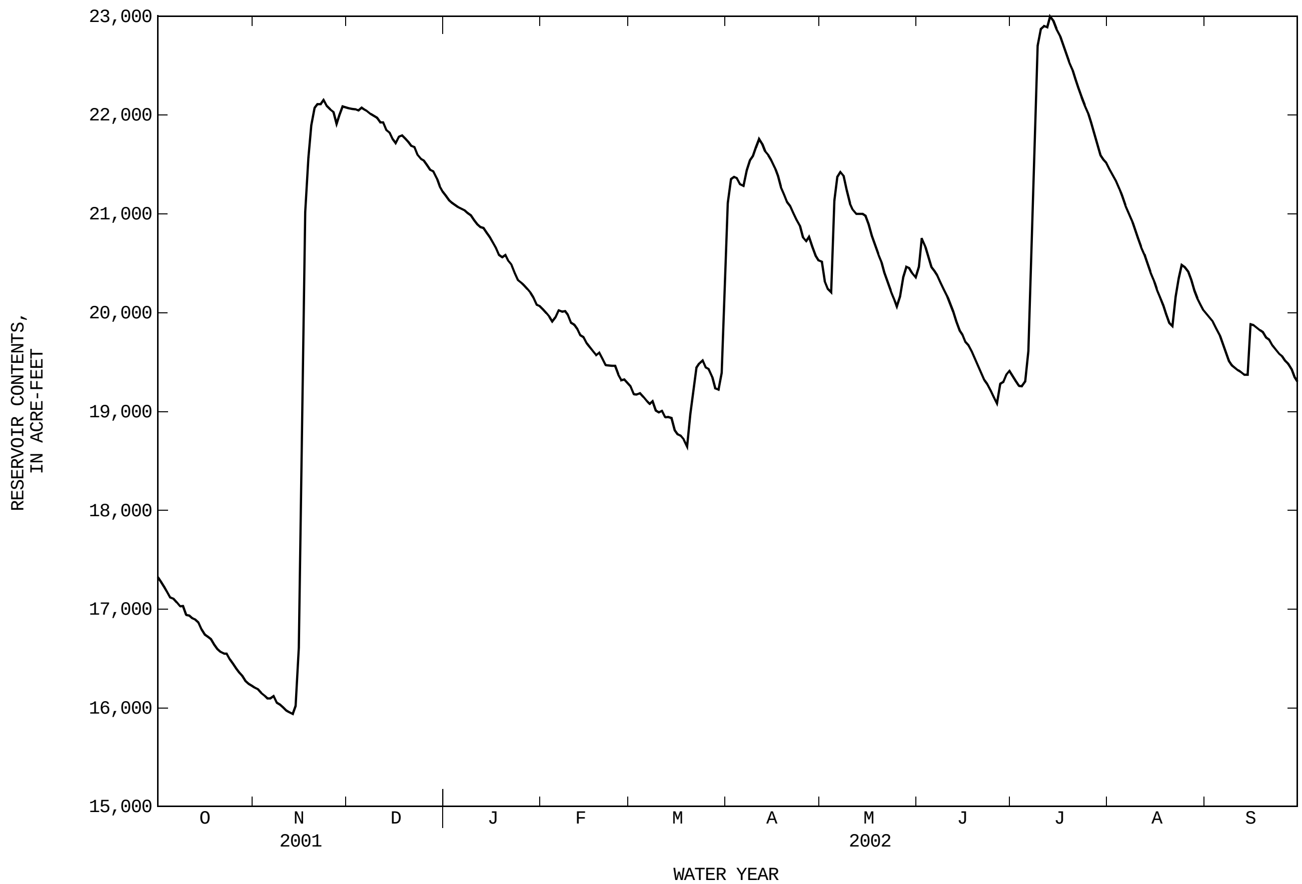
08118000 Lake J.B. Thomas near Vincent, TX--Continued

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	16760	18940	21770	20680	19710	19150	21220	20670	19830	21730	20540	19630
MAX	17320	22150	22080	21180	20030	20140	21760	21420	20760	23000	21450	19980
MIN	16220	15940	21220	20070	19290	18650	20530	20060	19090	19260	19860	19300
(+)	2214.83	2217.89	2217.47	2216.89	2216.49	2216.93	2217.13	2217.04	2216.56	2217.61	2216.87	2216.50
(@)	-1140	+5860	-860	-1150	-780	+850	+390	-170	-950	+2110	-1500	-720

CAL YR 2001 MAX 27030 MIN 15480 (@) -5830
WTR YR 2002 MAX 23000 MIN 15940 (@) +1940

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

e Estimated



08120500 Deep Creek near Dunn, TX

LOCATION.--Lat 32°34'25", long 100°54'27", Scurry County, Hydrologic Unit 12080002, at right end of downstream side of bridge on Farm Road 1606, 1.5 mi northwest of Dunn, 2.7 mi upstream from Sulphur Draw, and 9.6 mi upstream from mouth.

DRAINAGE AREA.--198 mi^2, of which 10 mi^2 probably is noncontributing.

PERIOD OF RECORD.--Apr. 1953 to Sept. 1986, July 2001 to current year.
Water-quality records.--Specific conductance: Mar. 1953 to Sept. 1954. Water temperature: Mar. 1953 to Sept. 1954.

REVISED RECORDS.--WSP 1922: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 2,172.17 ft (Texas Department of Transportation bridge plans, vertical control datum unknown). Prior to Apr. 21, 1955, nonrecording gage at site 128 ft left. Water-stage recorder 128 ft left from Apr. 1953 to Sept. 1986. Datum of previous gages was 2,172.17 ft above NGVD of 1929 and has not been tied to present gage datum. 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 each year.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since at least 1881, 36,400 ft^3/s June 19, 1939, by slope-area measurement at site 8.0 mi upstream from gage. Flood in 1892 reached about same stage as that of June 19, 1939, 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	0.49	0.00	1.7	1.5	1.9	1.3	3.4	0.29	1.1	0.11	0.00	0.00
2	0.63	0.00	1.2	1.7	1.8	1.1	2.0	0.19	1.0	0.04	0.00	0.00
3	0.51	0.00	1.1	1.8	1.9	0.88	1.5	0.15	0.97	0.12	0.00	0.00
4	0.28	0.00	1.0	1.9	1.8	0.95	1.4	4.9	0.96	e250	0.00	0.00
5	0.30	0.00	1.0	2.0	2.1	0.93	1.5	237	0.86	e235	0.00	0.00
6	2.5	0.00	0.73	1.8	12	0.99	1.6	6.3	0.76	e60	0.00	0.00
7	1.0	0.00	0.67	1.7	3.2	1.3	2.0	2.5	0.57	e20	0.00	0.00
8	0.45	0.00	0.54	1.9	1.1	1.2	2.2	1.9	0.48	4.5	0.00	0.00
9	0.24	0.00	0.47	2.2	1.3	1.0	2.1	1.3	0.39	2.7	0.00	0.00
10	0.16	0.00	0.55	2.0	1.0	0.81	1.9	1.2	0.19	1.9	0.00	0.00
11	0.11	0.00	0.63	1.8	1.0	0.94	1.9	1.3	0.10	1.7	15	0.00
12	0.06	0.00	0.70	1.8	1.1	0.68	2.0	1.3	0.05	1.5	1.5	0.00
13	0.00	0.00	0.80	1.9	1.1	0.82	1.8	1.2	0.02	8.1	0.30	0.00
14	0.00	0.00	1.3	1.8	1.2	0.51	1.8	1.1	0.00	3.7	0.07	0.00
15	0.00	8.8	1.5	2.0	1.3	0.32	1.7	0.92	19	1.9	0.00	0.00
16	0.00	20	1.8	2.3	1.2	0.25	1.6	0.85	6.0	1.4	0.00	0.00
17	0.00	5.1	27	1.9	1.2	0.24	1.7	0.71	1.9	1.3	0.00	0.00
18	0.00	3.8	4.5	1.9	1.5	0.30	1.6	0.45	1.1	1.1	0.00	0.00
19	0.00	1.9	2.2	2.0	1.5	0.36	1.8	0.44	0.76	1.0	0.00	0.00
20	0.01	1.0	1.9	1.8	1.2	9.9	1.7	0.24	0.59	0.86	0.00	0.00
21	0.01	0.97	2.0	1.8	0.87	5.2	1.3	0.15	0.44	0.60	0.00	0.00
22	0.01	0.91	2.2	2.1	0.99	1.5	1.0	0.11	0.35	e0.55	0.00	0.00
23	0.01	0.77	1.8	2.2	1.0	1.1	0.87	0.09	0.24	e0.50	0.00	0.00
24	0.00	0.58	1.8	2.2	1.2	0.95	0.89	0.07	0.18	0.35	0.00	0.00
25	0.00	0.56	1.9	1.9	1.1	0.66	0.81	0.08	0.28	e0.30	0.00	0.00
26	0.00	0.57	1.9	2.1	1.0	0.49	0.90	0.11	0.30	e0.20	0.00	0.00
27	0.00	0.60	1.9	2.1	0.99	0.58	0.75	41	1.4	e0.10	0.00	0.00
28	0.00	0.99	2.1	2.3	1.1	0.81	0.51	26	0.54	e0.03	0.00	0.00
29	0.00	0.95	2.0	2.4	---	1.2	0.43	3.7	0.45	e0.00	0.00	0.00
30	0.00	2.8	1.8	2.1	---	74	0.34	2.1	0.25	e0.00	0.00	0.00
31	0.00	---	1.7	2.2	---	51	---	1.4	---	0.00	0.00	---
TOTAL	6.77	50.30	72.39	61.1	48.65	162.27	45.00	339.05	41.23	599.56	16.87	0.00
MEAN	0.218	1.677	2.335	1.971	1.738	5.235	1.500	10.94	1.374	19.34	0.544	0.000
MAX	2.5	20	27	2.4	12	74	3.4	237	19	250	15	0.00
MIN	0.00	0.00	0.47	1.5	0.87	0.24	0.34	0.07	0.00	0.00	0.00	0.00
AC-FT	13	100	144	121	96	322	89	673	82	1190	33	0.00

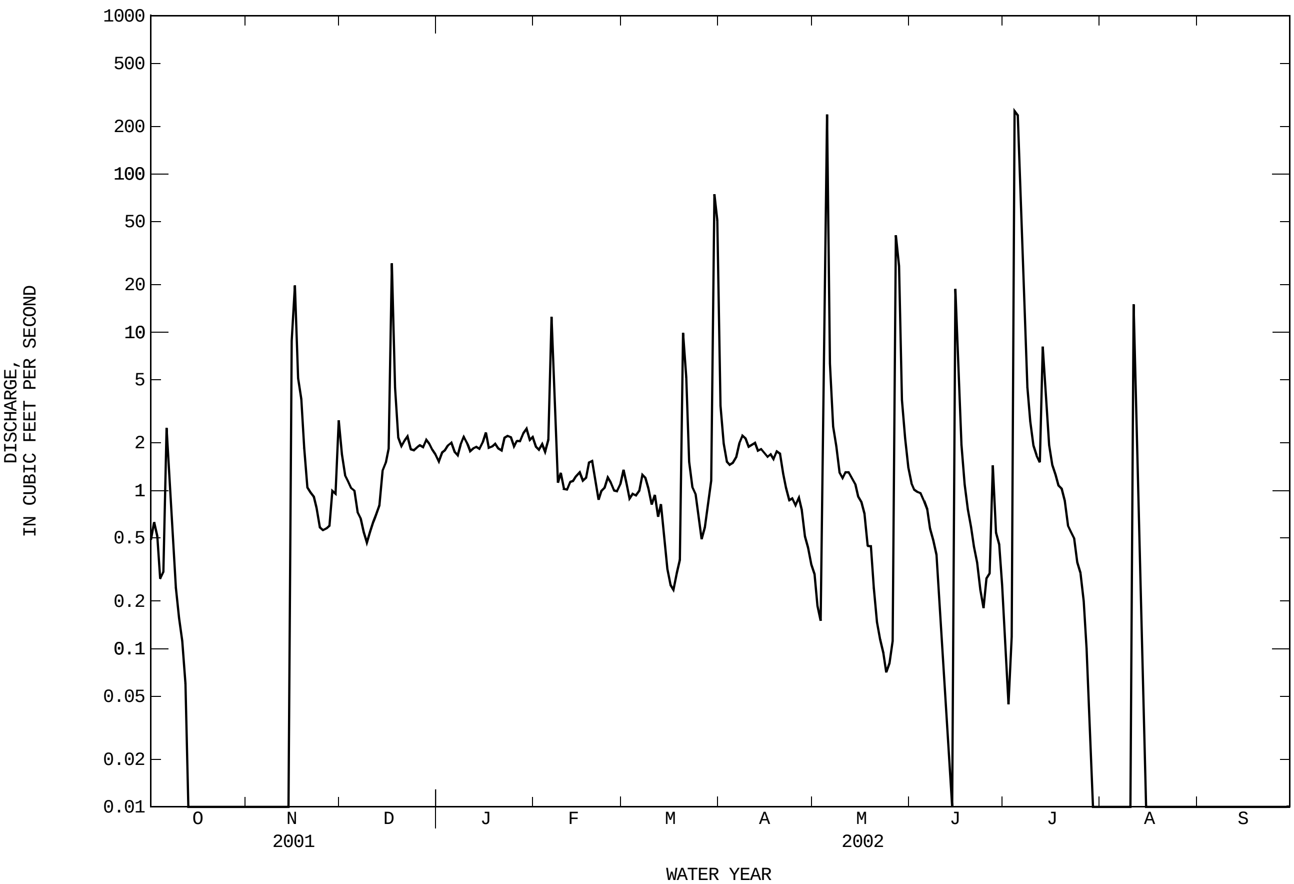
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1953 - 2002h, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	8.830	2.378	1.495	1.408	3.258	2.375	9.310	38.89	25.37	7.501	21.43	14.79
MAX	96.9	18.8	5.92	5.55	58.3	20.5	88.3	253	252	66.0	316	214
(WY)	1956	1985	1985	1983	1957	1973	1957	1957	1967	1959	1972	1980
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.005	0.000	0.000	0.000	0.000
(WY)	1955	1955	1954	1955	1965	1954	1955	1967	1953	1954	1956	1954

08120500 Deep Creek near Dunn, TX--Continued

SUMMARY STATISTICS	FOR 2002 WATER YEAR		WATER YEARS 1953 - 2002h	
ANNUAL TOTAL	1443.19			
ANNUAL MEAN	3.954		11.68	
HIGHEST ANNUAL MEAN			38.5	1957
LOWEST ANNUAL MEAN			1.14	1970
HIGHEST DAILY MEAN	250	Jul 4	6990	Aug 14 1972
LOWEST DAILY MEAN	0.00	Oct 13	0.00	Apr 1 1953
ANNUAL SEVEN-DAY MINIMUM	0.00	Oct 13	0.00	Apr 1 1953
MAXIMUM PEAK FLOW	cc1310	May 5	c20700	Aug 14 1972
MAXIMUM PEAK STAGE	a9.76	May 5	a31.28	Aug 14 1972
ANNUAL RUNOFF (AC-FT)	2860		8460	
10 PERCENT EXCEEDS	2.2		3.9	
50 PERCENT EXCEEDS	0.86		0.60	
90 PERCENT EXCEEDS	0.00		0.00	

e Estimated
h See PERIOD OF RECORD paragraph.
cc From rating curve extended above 94 ft^3/s.
c From rating curve extended above 12,300 ft^3/s on basis of velocity area study.
a From floodmark.



08120700 Colorado River near Cuthbert, TX

LOCATION.--Lat 32°28'38", long 100°56'58", Mitchell County, Hydrologic Unit 12080002, on left bank at downstream side of bridge on Farm Road 1808, 4.0 mi downstream from Deep Creek, 4.8 mi east of Cuthbert, 8.0 mi northwest of Colorado City, and at mile 810.0.

DRAINAGE AREA.--3,912 mi^2, of which 2,381 mi^2 probably is noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Mar. 1965 to Sept. 2002 (discontinued).

REVISED RECORDS.--WDR TX-81-3: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,073.49 ft above NGVD of 1929. Oct. 29, 1987 to Oct. 23, 1989, water-stage recorder at site on right bank 300 ft downstream at same datum. Satellite telemeter at station.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Since installation of gage in Mar. 1965, at least 10% of contributing drainage area has been regulated. There are numerous diversions from Lake J.B. Thomas (station 08118000) for municipal use and oil field operations. No flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Floods in 1941 and 1946 reached a stage of 36.1 ft, from Texas Department of Transportation bridge plans.

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	8.3	2.7	4.7	3.7	40	2.8	4.8	2.3	0.57	0.00
2	0.02	0.00	7.0	2.8	3.8	3.8	17	2.3	3.4	1.4	0.29	0.00
3	0.02	0.00	5.6	3.0	4.0	3.8	9.8	2.0	2.4	0.95	0.15	0.00
4	0.00	0.00	4.6	3.0	3.8	3.9	6.7	1.6	2.0	12	0.07	0.00
5	0.00	0.00	4.0	3.1	5.2	3.9	6.6	887	1.6	48	0.03	0.00
6	0.02	0.00	3.4	2.8	9.5	3.9	5.7	1150	1.5	29	0.00	0.00
7	0.00	0.00	3.2	2.8	16	4.0	6.5	975	1.3	76	0.00	0.00
8	0.00	0.00	2.6	2.7	9.7	4.1	6.9	103	1.4	26	0.00	0.00
9	0.00	0.00	2.3	2.8	8.1	4.2	5.7	17	1.1	19	0.00	0.00
10	0.55	0.00	2.3	2.9	5.8	4.4	5.4	9.5	0.92	9.7	0.00	0.00
11	1.1	0.01	2.4	2.8	4.5	4.5	5.0	7.0	0.76	4.2	0.00	0.00
12	0.21	0.03	2.4	2.7	4.0	3.9	4.9	5.7	0.66	2.6	4.7	0.00
13	0.06	0.03	2.4	2.7	3.4	3.6	4.9	4.6	0.55	2.0	1.7	0.00
14	0.02	1.3	2.3	2.7	3.4	3.3	4.9	4.3	0.43	4.3	1.1	0.00
15	0.00	27	2.4	2.5	3.4	2.6	4.9	4.2	0.47	3.4	0.53	0.00
16	0.00	146	4.2	2.9	3.1	2.3	4.8	3.7	12	1.9	0.62	10
17	0.00	444	16	2.7	3.4	2.2	4.5	3.3	4.4	1.4	0.27	9.8
18	0.00	126	18	2.7	3.4	2.2	4.6	2.5	1.9	1.2	0.11	3.3
19	0.00	27	9.2	2.9	3.2	2.3	4.7	2.5	0.99	1.2	0.02	7.1
20	0.00	12	5.6	2.6	2.8	18	4.7	2.8	0.63	2.5	0.00	4.1
21	0.00	6.8	4.3	2.4	2.6	55	4.7	2.4	0.44	1.2	0.00	0.75
22	0.00	5.1	3.8	2.4	2.3	20	4.0	2.4	0.30	0.76	0.00	0.33
23	0.00	4.3	3.1	2.5	2.7	9.6	3.8	2.2	0.22	0.55	0.00	0.21
24	0.00	3.5	2.8	2.7	3.1	6.3	3.5	1.9	0.17	0.38	0.00	0.14
25	0.00	e3.0	2.8	2.8	3.1	4.6	3.1	1.1	0.14	0.26	0.00	0.07
26	0.00	2.5	2.7	3.4	2.9	3.9	3.4	1.0	0.10	0.15	0.00	0.04
27	0.00	2.4	2.7	3.2	3.4	3.3	5.0	20	4.2	0.07	0.00	0.01
28	0.00	3.8	2.8	3.1	3.4	3.1	4.2	331	19	0.03	0.00	0.00
29	0.00	4.7	2.6	3.2	---	3.1	3.3	83	20	0.46	0.00	0.00
30	0.00	4.6	2.4	3.4	---	26	3.3	24	6.7	0.46	0.00	0.00
31	0.00	---	2.4	5.0	---	186	---	8.6	---	0.86	0.00	---
TOTAL	2.03	824.07	140.6	89.9	128.7	405.5	196.5	3668.4	94.48	254.23	10.16	35.85
MEAN	0.065	27.47	4.535	2.900	4.596	13.08	6.550	118.3	3.149	8.201	0.328	1.195
MAX	1.1	444	18	5.0	16	186	40	1150	20	76	4.7	10
MIN	0.00	0.00	2.3	2.4	2.3	2.2	3.1	1.0	0.10	0.03	0.00	0.00
AC-FT	4.0	1630	279	178	255	804	390	7280	187	504	20	71

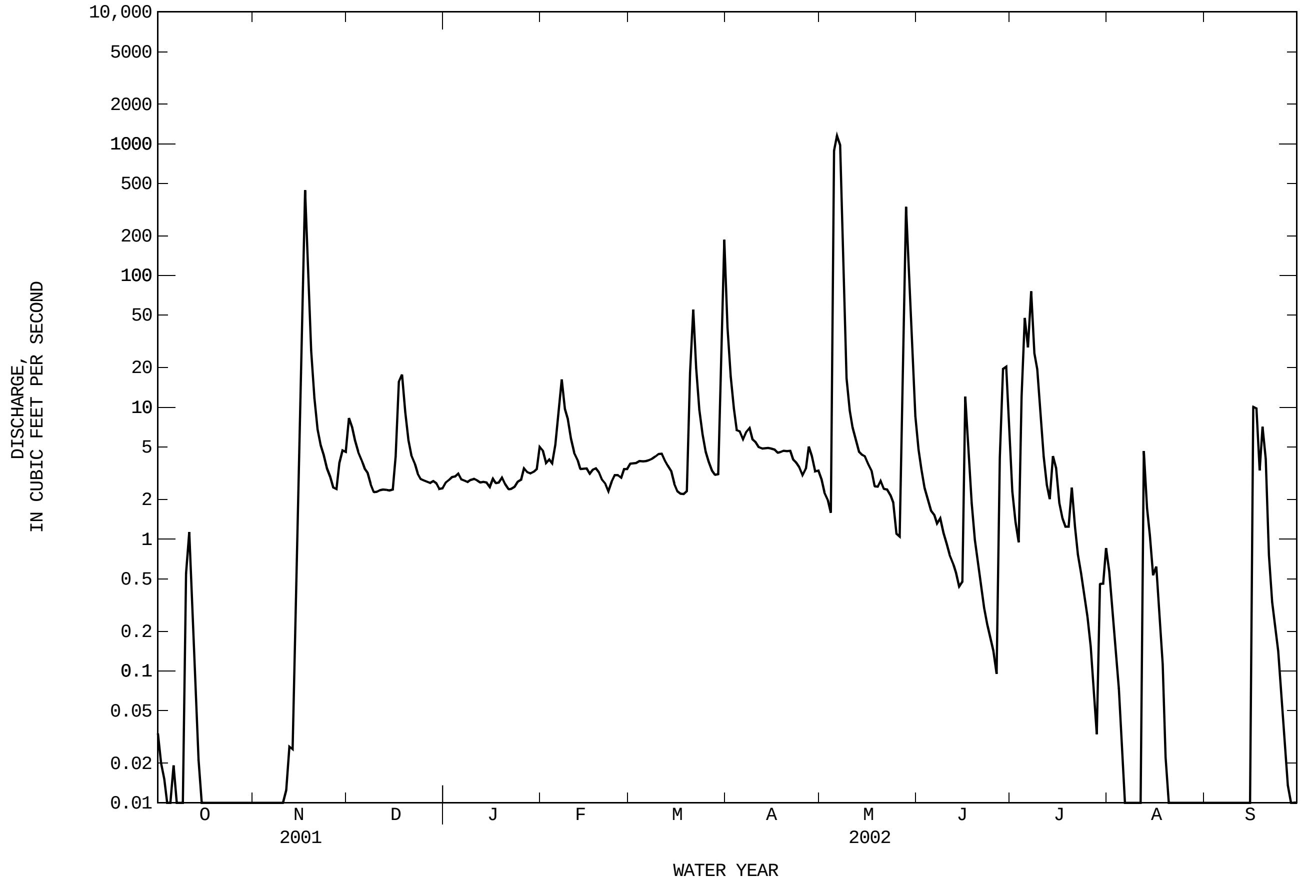
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	26.21	8.335	7.611	6.943	10.67	21.05	26.55	70.55	78.76	17.11	51.29	45.75
MAX	304	37.1	51.5	30.2	86.5	420	204	403	592	131	771	810
(WY)	1987	1985	1992	1992	1992	2000	1981	1965	1982	1988	1971	1980
MIN	0.000	0.092	0.53	0.68	0.82	0.20	0.39	0.044	0.000	0.000	0.000	0.000
(WY)	1969	1971	1971	1971	1971	1971	1971	1967	1984	1970	1970	1983

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1965 - 2002	
ANNUAL TOTAL	1972.39		5850.42			
ANNUAL MEAN	5.404		16.03		30.40	
HIGHEST ANNUAL MEAN					104	1980
LOWEST ANNUAL MEAN					2.59	1998
HIGHEST DAILY MEAN	444	Nov 17	1150	May 6	8770	Sep 29 1980
LOWEST DAILY MEAN	0.00	Jun 10	0.00	Oct 4	0.00	Apr 13 1965
ANNUAL SEVEN-DAY MINIMUM	0.00	Jun 10	0.00	Oct 15	0.00	Apr 13 1965
MAXIMUM PEAK FLOW			1580	May 5	c15100	Mar 23 2000
MAXIMUM PEAK STAGE			13.76	May 5	p29.55	Mar 23 2000
ANNUAL RUNOFF (AC-FT)	3910		11600		22020	
10 PERCENT EXCEEDS	7.1		9.8		23	
50 PERCENT EXCEEDS	2.6		2.7		3.9	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

e Estimated
c From rating curve extended above 14,800 ft^3/s.
p Observed.

08120700 Colorado River near Cuthbert, TX--Continued



08120700 Colorado River near Cuthbert, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--
CHEMICAL DATA: Mar. 1965 to Sept. 1999, Feb. 2001 to June 2002 (discontinued).

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Mar. 1965 to May 1980 (local observer), June 1980 to Oct. 1987, Nov. 1987 to Sept. 1989 (local observer), Oct. 1989 to Sept. 1999, Feb. 2001 to Sept. 2002 (discontinued).
WATER TEMPERATURE: Mar. 1965 to May 1980 (local observer), Apr. 1983 to Oct. 1987, Nov. 1987 to Sept. 1989 (local observer), Oct. 1989 to Sept. 1999, Feb. 2001 to Sept. 2002 (discontinued).

INSTRUMENTATION.--Specific conductance recorder from Mar. 1965 to Oct. 1987, Oct. 1989 to Sept. 1999, Feb. 2001 to Sept. 2002 (discontinued). Water temperature recorder from Apr. 1983 to Oct. 1987, Oct. 1989 to Sept. 1999, Feb. 2001 to Sept. 2002 (discontinued).

REMARKS.--Records good. Interruptions in the record were due to malfunction of the instrument and no flow. No flow Oct. 4, 5, 7-9, Oct. 15 to Nov. 10, Aug. 6-11, Aug. 20 to Sept. 15, 28-30. 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, 70,000 microsiemens/cm, Nov. 17, 1968; minimum, 102 microsiemens/cm, Sept. 28, 1980.
WATER TEMPERATURE: Maximum, 36.0°C, Aug. 7, 1985; minimum, 0.0°C, on many days during winter months.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 12,800 microsiemens/cm, Mar. 21; minimum, 162 microsiemens/cm, May 5.
WATER TEMPERATURE: Maximum, 35.0°C, June 13; minimum, 0.7°C, Jan. 3.

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)
MAY													
06...	1340	1290	503	--	15.1	--	--	120	40.0	6.03	58.9	2	6.62
28...	1235	350	1560	--	17.3	--	--	240	65.9	19.1	173	5	10.0
29...	1130	100	5090	--	21.6	--	--	490	127	42.8	832	16	10.1
JUN													
24...	1240	.17	2900	8.3	27.5	5.7	79	440	110	39.2	395	8	9.77

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)
MAY					
06...	44.0	91.8	.1	4.1	301
28...	141	281	.3	6.7	762
29...	339	1380	.3	4.7	2810
JUN					
24...	206	664	.6	6.5	1560

08120700 Colorado River near Cuthbert, TX--Continued

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

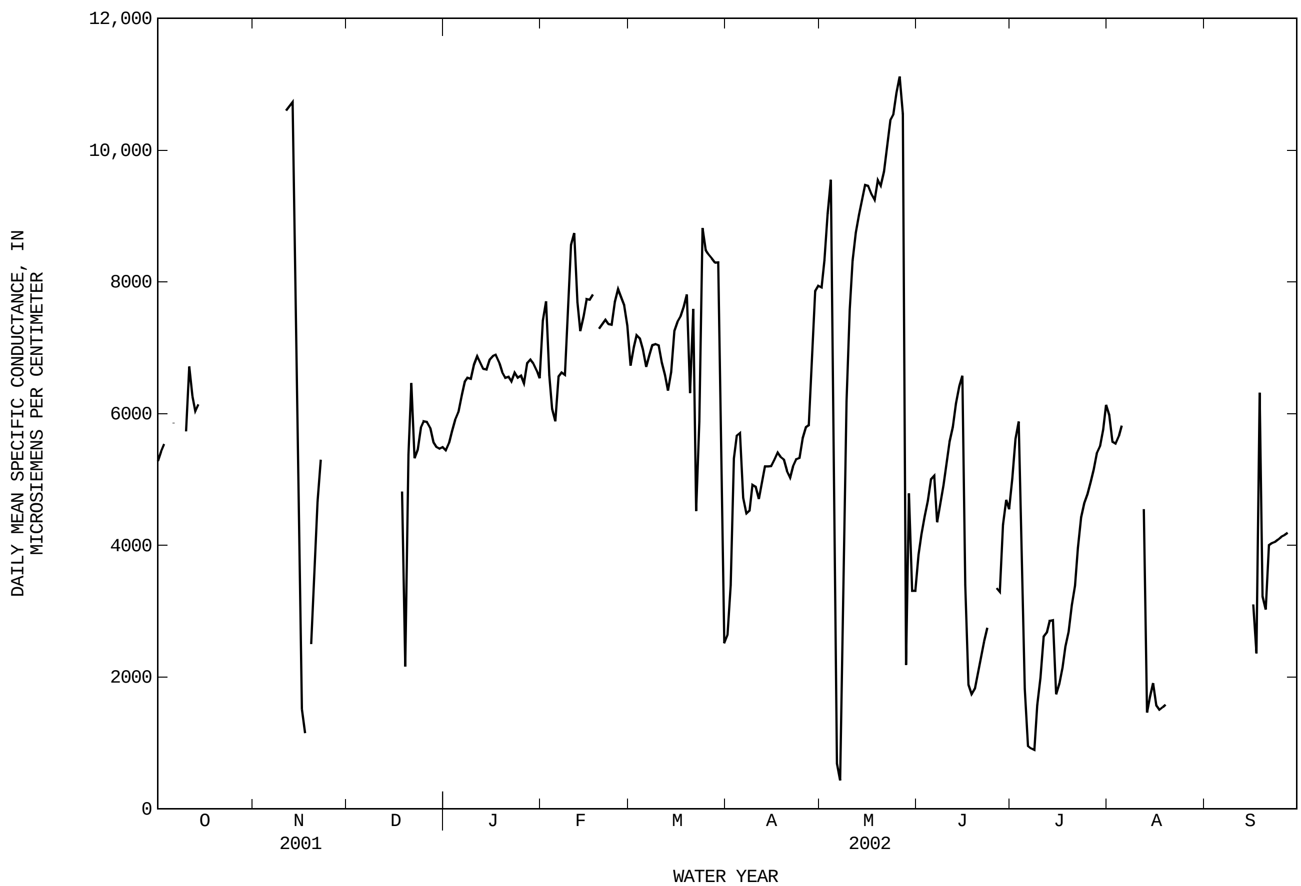
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	5340	5220	5280	---	---	---	---	---	---	5520	5400	5440
2	5520	5340	5420	---	---	---	---	---	---	5580	5520	5560
3	5560	5520	5540	---	---	---	---	---	---	5860	5580	5730
4	---	---	---	---	---	---	---	---	---	5940	5860	5900
5	---	---	---	---	---	---	---	---	---	6160	5930	6020
6	5940	5790	5850	---	---	---	---	---	---	6370	6160	6260
7	---	---	---	---	---	---	---	---	---	6580	6370	6480
8	---	---	---	---	---	---	---	---	---	6610	6470	6540
9	---	---	---	---	---	---	---	---	---	6610	6480	6530
10	6310	4800	5730	---	---	---	---	---	---	6890	6600	6750
11	7150	4770	6720	10600	10500	10600	---	---	---	6920	6830	6880
12	6590	6010	6270	10700	10600	10700	---	---	---	6840	6730	6780
13	6080	5970	6030	10800	10700	10700	---	---	---	6780	6560	6680
14	6260	6070	6140	10800	3490	7890	---	---	---	6770	6590	6670
15	---	---	---	8960	1910	4810	---	---	---	6870	6770	6820
16	---	---	---	3280	497	1510	---	---	---	6920	6830	6870
17	---	---	---	1770	828	1150	---	---	---	6930	6860	6900
18	---	---	---	---	---	---	6700	1950	4820	6900	6690	6790
19	---	---	---	3080	1720	2500	3320	1780	2160	6720	6540	6630
20	---	---	---	4260	3080	3720	6710	3320	5370	6600	6480	6550
21	---	---	---	5110	4260	4670	6860	5720	6460	6580	6500	6560
22	---	---	---	5700	5110	5300	5720	5140	5320	6570	6430	6490
23	---	---	---	---	---	---	5700	5220	5450	6690	6570	6620
24	---	---	---	---	---	---	5830	5700	5790	6690	6420	6540
25	---	---	---	---	---	---	5950	5830	5890	6630	6500	6580
26	---	---	---	---	---	---	5950	5820	5870	6630	6340	6460
27	---	---	---	---	---	---	5870	5710	5790	6940	6580	6770
28	---	---	---	---	---	---	5720	5480	5570	6940	6730	6820
29	---	---	---	---	---	---	5530	5440	5490	6820	6690	6760
30	---	---	---	---	---	---	5510	5430	5470	6730	6540	6660
31	---	---	---	---	---	---	5520	5450	5490	6820	6270	6530
MONTH	---	---	---	---	---	---	---	---	---	6940	5400	6500

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	8920	6260	7420	7110	6490	6730	2960	1680	2630	8030	7760	7920
2	8900	6940	7710	7210	6710	7000	4520	2790	3390	8740	7960	8330
3	6970	6440	6590	7290	7080	7190	5680	4520	5320	9310	8740	9040
4	6440	5780	6070	7290	7030	7140	5720	5640	5670	9800	8390	9550
5	6060	5790	5880	7140	6830	6970	5770	5440	5700	9580	162	2600
6	8340	6060	6560	6870	6610	6710	5440	3900	4720	1800	321	690
7	8370	5610	6620	7000	6770	6890	4740	4030	4490	811	325	431
8	7310	5910	6590	7120	7000	7040	4690	4420	4530	5210	811	3050
9	7900	7310	7640	7130	6990	7050	5030	4650	4920	7020	5210	6190
10	8820	8250	8560	7170	6910	7040	4960	4750	4890	8040	7020	7580
11	8980	8260	8740	6910	6640	6770	4790	4660	4710	8530	8030	8330
12	8260	7240	7690	6780	6340	6580	5110	4790	4980	8880	8530	8750
13	7360	7210	7250	6420	6260	6350	5230	5110	5200	9140	8850	9020
14	7660	7350	7470	7010	6400	6640	5270	5130	5200	9390	9130	9250
15	7800	7660	7740	7360	7010	7250	5260	5160	5200	9580	9360	9470
16	7790	7650	7730	7440	7360	7390	5380	5210	5300	9710	8980	9460
17	7890	7730	7810	7550	7440	7480	5440	5370	5410	9510	9120	9340
18	---	---	---	7680	7550	7620	5390	5320	5350	9480	8890	9250
19	7340	7160	7290	7880	7680	7810	5340	5260	5310	9810	9180	9550
20	7400	7310	7360	7940	3350	6310	5290	5040	5130	9650	9230	9460
21	7470	7380	7430	12800	3910	7590	5070	5000	5030	9900	9270	9670
22	7430	7290	7360	5140	4120	4520	5330	5070	5200	10300	9770	10100
23	7510	7270	7350	8560	4140	5880	5360	5260	5310	10800	9950	10500
24	7800	7510	7690	9030	8560	8820	5440	5270	5330	11000	9870	10500
25	7980	7800	7890	8600	8400	8480	5690	5430	5630	11200	10400	10900
26	7890	7650	7760	8490	8320	8420	5900	5660	5790	11400	10600	11100
27	7750	7530	7650	8440	8250	8350	5910	5720	5820	11800	2940	10600
28	7540	7100	7340	8360	8200	8290	7700	5820	6810	3920	1040	2180
29	---	---	---	8570	7500	8300	7970	7700	7860	6440	2650	4790
30	---	---	---	8560	3510	5990	8120	7740	7940	3890	2940	3310
31	---	---	---	3780	1680	2510	---	---	---	3600	3070	3310
MONTH	---	---	---	12800	1680	7000	8120	1680	5290	11800	162	7560

08120700 Colorado River near Cuthbert, 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	4040	3600	3860	5350	4630	5010	6390	5660	5980	---	---	---
2	4420	3980	4160	5810	5350	5620	5700	5440	5570	---	---	---
3	4570	4330	4440	5920	5480	5880	5590	5500	5540	---	---	---
4	4800	4490	4680	5750	1220	4310	5780	5590	5660	---	---	---
5	5110	4800	5000	2710	648	1820	5890	5700	5820	---	---	---
6	5220	4490	5060	1170	645	955	---	---	---	---	---	---
7	4590	3950	4350	1060	848	915	---	---	---	---	---	---
8	4780	4380	4640	964	831	892	---	---	---	---	---	---
9	5090	4710	4910	1920	929	1580	---	---	---	---	---	---
10	5420	5090	5270	2510	1620	1990	---	---	---	---	---	---
11	5730	5420	5570	2660	2510	2610	---	---	---	---	---	---
12	5930	5700	5790	2760	2640	2670	6710	1850	4550	---	---	---
13	6320	5920	6160	2950	2740	2860	1850	1300	1460	---	---	---
14	6600	6260	6410	3000	2180	2870	2100	1310	1690	---	---	---
15	7060	6190	6570	2180	1600	1740	2060	1710	1910	---	---	---
16	7710	1610	3400	2010	1800	1900	1710	1480	1570	5620	2040	3100
17	1920	1820	1880	2290	2000	2150	1520	1480	1510	3380	2030	2360
18	1830	1690	1740	2590	2280	2470	1570	1510	1540	7130	3380	6320
19	1940	1710	1820	2840	2590	2690	1600	1570	1580	6100	1900	3230
20	2190	1940	2070	3190	2830	3090	---	---	---	3970	1900	3030
21	2420	2180	2300	3660	3180	3390	---	---	---	4020	3970	4000
22	2670	2420	2550	4260	3660	3960	---	---	---	4070	3990	4040
23	2900	2650	2750	4590	4260	4430	---	---	---	4090	4000	4050
24	---	---	---	4740	4580	4640	---	---	---	4120	4060	4090
25	---	---	---	4890	4720	4780	---	---	---	4170	4090	4130
26	3440	3290	3350	5060	4880	4960	---	---	---	4180	4130	4160
27	4350	1800	3290	5270	5050	5140	---	---	---	4220	4150	4190
28	6870	1950	4320	5560	5260	5400	---	---	---	---	---	---
29	5780	3360	4690	5700	5170	5500	---	---	---	---	---	---
30	5300	4280	4550	6020	5500	5760	---	---	---	---	---	---
31	---	---	---	6410	5880	6130	---	---	---	---	---	---
MONTH	---	---	---	6410	645	3490	---	---	---	---	---	---



08120700 Colorado River near Cuthbert, TX--Continued

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

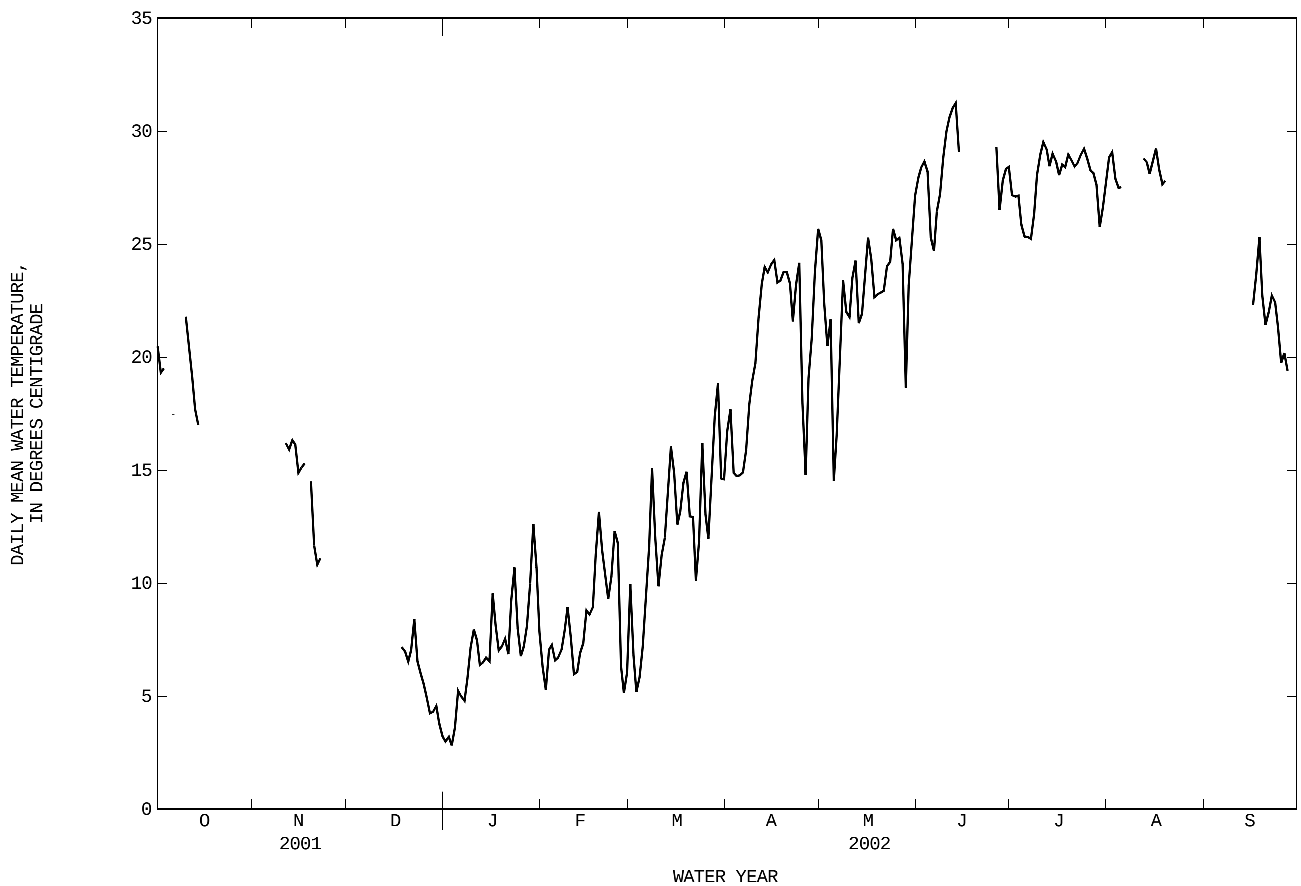
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	24.6	17.6	20.5	---	---	---	---	---	---	3.7	2.1	3.0
2	23.1	16.1	19.3	---	---	---	---	---	---	3.8	2.6	3.2
3	23.9	17.2	19.5	---	---	---	---	---	---	5.0	0.7	2.8
4	---	---	---	---	---	---	---	---	---	4.6	2.6	3.6
5	---	---	---	---	---	---	---	---	---	7.0	4.0	5.2
6	21.7	14.4	17.5	---	---	---	---	---	---	7.3	2.8	5.0
7	---	---	---	---	---	---	---	---	---	7.0	2.3	4.8
8	---	---	---	---	---	---	---	---	---	8.2	3.3	5.8
9	---	---	---	---	---	---	---	---	---	9.6	4.5	7.1
10	23.6	20.1	21.8	---	---	---	---	---	---	8.9	6.5	7.9
11	23.8	18.1	20.4	17.5	14.5	16.2	---	---	---	9.2	5.7	7.5
12	21.2	17.4	19.1	18.6	14.4	15.9	---	---	---	8.4	4.1	6.4
13	21.9	14.6	17.7	19.1	14.1	16.3	---	---	---	8.8	4.1	6.5
14	20.9	13.9	17.0	16.7	15.1	16.1	---	---	---	8.7	4.5	6.7
15	---	---	---	15.6	13.9	14.9	---	---	---	8.7	3.9	6.5
16	---	---	---	16.0	14.3	15.1	---	---	---	12.0	7.8	9.5
17	---	---	---	15.9	14.7	15.3	---	---	---	9.4	7.0	8.2
18	---	---	---	---	---	---	8.6	5.7	7.2	7.9	6.2	7.0
19	---	---	---	16.2	12.7	14.5	8.7	5.6	7.0	8.9	5.3	7.2
20	---	---	---	13.2	10.2	11.7	8.7	4.7	6.5	9.5	5.6	7.5
21	---	---	---	12.9	9.2	10.8	9.6	4.6	7.0	9.0	4.2	6.8
22	---	---	---	13.1	10.5	11.1	10.4	6.8	8.4	12.4	6.8	9.2
23	---	---	---	---	---	---	8.4	4.6	6.5	13.0	8.8	10.7
24	---	---	---	---	---	---	7.2	4.5	6.0	10.8	6.1	8.0
25	---	---	---	---	---	---	7.6	3.5	5.6	9.2	4.1	6.8
26	---	---	---	---	---	---	7.0	2.9	4.9	10.0	4.1	7.2
27	---	---	---	---	---	---	5.3	2.6	4.2	10.4	5.4	8.1
28	---	---	---	---	---	---	6.3	2.0	4.3	13.0	6.8	10
29	---	---	---	---	---	---	6.0	2.8	4.6	14.6	10.6	12.6
30	---	---	---	---	---	---	4.8	2.7	3.8	14.3	7.8	10.7
31	---	---	---	---	---	---	4.1	2.1	3.2	10.0	6.4	7.9
MONTH	---	---	---	---	---	---	---	---	---	14.6	0.7	7.1

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	9.0	3.7	6.3	14.0	6.7	10	20.1	13.6	16.7	27.5	22.7	25.2
2	6.5	3.6	5.3	10.4	4.1	6.8	20.1	16.0	17.7	25.1	20.0	22.4
3	8.4	5.6	7.0	8.1	2.0	5.2	17.0	12.6	14.9	24.0	17.6	20.5
4	8.0	6.7	7.3	9.1	2.1	5.8	18.1	12.1	14.7	26.4	17.7	21.7
5	7.3	5.6	6.6	10.6	3.4	7.2	16.5	13.6	14.8	22.8	6.9	14.5
6	9.5	4.9	6.7	13.2	6.3	9.7	15.6	14.4	14.9	18.7	13.9	16.5
7	9.6	4.8	7.0	14.2	8.7	11.6	18.9	14.1	15.9	22.7	18.7	20.5
8	11.2	5.0	7.9	17.7	13.0	15.1	22.4	14.3	17.9	25.9	22.0	23.4
9	11.7	7.0	8.9	15.4	8.9	12.0	22.6	16.2	18.9	24.1	19.7	22.0
10	10.0	5.9	7.6	12.0	6.9	9.9	24.4	15.8	19.7	24.2	19.8	21.8
11	9.2	2.9	6.0	14.6	8.2	11.3	26.5	18.0	21.8	26.4	21.4	23.5
12	9.5	2.7	6.1	15.3	8.3	12.0	27.4	19.3	23.3	26.2	22.3	24.3
13	9.8	4.2	6.9	17.0	10.4	13.9	26.4	21.5	24.0	24.9	18.4	21.5
14	10.6	4.0	7.3	18.6	13.3	16.0	27.6	20.2	23.8	25.6	19.1	21.9
15	11.6	5.9	8.8	17.5	11.9	14.9	27.2	21.0	24.1	27.6	20.3	23.4
16	11.6	5.5	8.6	14.6	10.7	12.6	27.6	21.3	24.3	29.1	22.6	25.3
17	11.1	6.2	8.9	14.6	11.9	13.2	26.4	19.5	23.3	27.0	22.4	24.3
18	14.9	7.7	11.3	15.9	13.0	14.4	25.2	22.1	23.4	26.7	19.0	22.7
19	15.1	11.2	13.1	15.9	13.0	14.9	26.8	21.2	23.8	26.9	18.9	22.8
20	14.3	8.3	11.5	16.9	9.1	13.0	25.4	21.9	23.8	26.1	19.3	22.8
21	12.5	9.1	10.4	14.4	10.9	12.9	25.7	20.5	23.3	26.0	19.7	22.9
22	12.3	6.2	9.3	11.6	8.0	10.1	24.2	18.3	21.6	27.4	20.9	24.0
23	13.4	6.8	10.3	15.8	8.3	11.9	25.7	20.7	23.2	25.9	22.3	24.2
24	15.2	9.3	12.3	20.4	13.3	16.2	27.9	21.7	24.2	29.5	22.6	25.7
25	14.6	9.1	11.8	16.3	11.2	13.0	22.6	15.1	18.0	27.1	23.0	25.2
26	9.6	3.4	6.3	16.3	7.9	12.0	15.6	14.0	14.8	29.2	22.1	25.3
27	7.9	2.1	5.1	19.5	10.9	15.0	23.6	15.6	19.1	25.8	20.1	24.1
28	8.3	3.2	6.0	20.8	13.5	17.4	25.8	16.1	20.8	21.0	16.0	18.7
29	---	---	---	22.1	15.7	18.8	28.6	19.8	23.8	25.8	20.6	23.2
30	---	---	---	18.7	11.7	14.6	28.9	22.5	25.7	27.7	23.5	25.4
31	---	---	---	16.6	12.6	14.6	---	---	---	30.6	24.3	27.1
MONTH	15.2	2.1	8.2	22.1	2.0	12.5	28.9	12.1	20.5	30.6	6.9	22.8

08120700 Colorado River near Cuthbert, 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	31.9	25.0	27.9	29.4	25.3	27.2	32.8	25.9	28.8	---	---	---
2	32.4	25.3	28.4	29.6	25.1	27.1	32.8	26.2	29.1	---	---	---
3	32.7	25.4	28.6	28.9	25.7	27.1	31.3	24.8	27.9	---	---	---
4	30.1	26.3	28.2	27.1	25.0	25.9	31.3	24.1	27.5	---	---	---
5	28.0	24.1	25.3	26.9	24.1	25.3	30.6	24.8	27.5	---	---	---
6	27.4	22.1	24.7	26.9	23.9	25.3	---	---	---	---	---	---
7	29.1	24.1	26.5	26.2	24.1	25.2	---	---	---	---	---	---
8	29.8	25.0	27.2	29.2	24.1	26.3	---	---	---	---	---	---
9	32.0	26.2	28.8	30.3	25.8	28.1	---	---	---	---	---	---
10	33.0	27.4	30.0	31.9	26.4	29.0	---	---	---	---	---	---
11	33.7	28.0	30.6	33.0	26.8	29.5	---	---	---	---	---	---
12	34.0	28.4	31.0	32.1	26.9	29.2	32.0	26.3	28.8	---	---	---
13	35.0	28.8	31.2	31.5	25.7	28.5	32.2	25.9	28.6	---	---	---
14	32.5	26.7	29.1	32.8	25.5	29.0	31.4	25.1	28.1	---	---	---
15	---	---	---	31.8	26.0	28.7	32.9	25.8	28.7	---	---	---
16	---	---	---	31.0	25.1	28.1	32.8	27.0	29.2	24.2	19.8	22.3
17	---	---	---	30.8	26.2	28.5	31.5	25.7	28.3	26.3	21.3	23.7
18	---	---	---	30.6	26.6	28.4	31.0	24.9	27.6	28.2	23.3	25.3
19	---	---	---	31.8	26.7	29.0	31.1	25.6	27.8	24.1	20.9	22.7
20	---	---	---	31.9	25.8	28.7	---	---	---	24.8	18.6	21.4
21	---	---	---	31.4	26.0	28.4	---	---	---	25.7	18.8	22.0
22	---	---	---	31.4	26.1	28.6	---	---	---	25.9	20.2	22.7
23	---	---	---	32.4	26.2	29.0	---	---	---	26.7	19.3	22.4
24	---	---	---	33.1	25.9	29.2	---	---	---	25.1	18.5	21.3
25	---	---	---	33.1	25.6	28.8	---	---	---	23.3	16.2	19.7
26	31.3	25.4	29.3	32.7	24.8	28.3	---	---	---	23.6	16.9	20.2
27	30.1	22.4	26.5	32.1	25.0	28.2	---	---	---	23.3	17.2	19.4
28	29.5	25.9	27.8	29.8	25.8	27.6	---	---	---	---	---	---
29	30.9	26.0	28.3	26.9	24.5	25.8	---	---	---	---	---	---
30	30.8	26.4	28.4	30.9	23.3	26.6	---	---	---	---	---	---
31	---	---	---	30.3	25.6	27.6	---	---	---	---	---	---
MONTH	---	---	---	33.1	23.3	27.8	---	---	---	---	---	---



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08121000 Colorado River at Colorado City, TX

LOCATION.--Lat 32°23'33", long 100°52'42", Mitchell County, Hydrologic Unit 12080002, on right bank at Colorado City, 3,517 ft upstream from bridge on State Highway 377, 4,100 ft upstream from the Texas and Pacific Railroad Company bridge, 1.3 mi downstream from bridge on Interstate Highway 20 and U.S. Highway 80, 1.6 mi upstream from Lone Wolf Creek, and at mile 796.3.

DRAINAGE AREA.--3,966 mi^2, of which 2,381 mi^2 probably is noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Nov. 1923 to Aug. 1925 (published as "at Colorado"), May 1946 to current year.

REVISED RECORDS.--WSP 1512: 1946(M). WDR TX-81-3: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 2,030.16 ft above NGVD of 1929. Nov. 28, 1923, to Aug. 31, 1925, nonrecording gage at site 1.4 mi downstream at different datum. May 9 to Aug. 5, 1946, nonrecording gage at site 185 ft upstream at present datum. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. Since water year 1952, at least 10% of contributing drainage area has been regulated. The Colorado River Municipal Water District diverts low flow into an off channel reservoir 3 mi upstream for brine disposal. There are numerous diversions from Lake J.B. Thomas for municipal use and oil field operations.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--5 years (water years 1947-51) prior to completion of Lake J.B. Thomas, 102 ft^3/s (73,660 acre-ft/yr).

EXTREMES FOR PERIOD PRIOR TO REGULATION (WATER YEARS 1947-51).--Maximum discharge, 24,900 ft^3/s, July 6, 1948, gage height, 22.37 ft, from floodmark; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1910, 35.9 ft June 20, 1939, present site and datum, based on floodmarks 1,000 ft upstream and 3,740 ft downstream from gage; discharge, 66,000 ft^3/s, by slope-area measurement of peak flow at site 2.5 mi upstream from gage.

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	0.16	2.3	0.22	0.52	0.24	100	0.64	1.6	18	0.04	0.00
2	1.4	0.17	2.2	0.24	0.47	0.24	44	0.41	1.1	1.5	0.02	0.00
3	0.23	0.18	10	0.24	0.53	0.23	30	0.41	12	0.63	0.0	0.00
4	0.15	0.19	1.0	0.24	0.56	0.23	24	0.36	1.6	1.3	0.00	0.00
5	0.61	0.21	0.41	0.25	1.4	0.26	19	89	0.92	18	0.00	0.00
6	0.60	0.19	4.2	0.24	1.2	0.60	12	864	0.92	37	0.00	0.00
7	0.17	0.19	2.0	0.23	2.0	0.41	1.8	1030	0.92	85	0.00	0.00
8	0.15	0.16	0.41	0.20	0.65	0.36	0.53	511	0.88	100	0.00	0.06
9	0.15	0.15	0.32	0.34	0.41	0.24	0.33	71	0.77	47	0.00	0.22
10	26	0.15	0.27	0.39	0.28	0.24	0.29	52	0.64	44	0.91	0.27
11	47	0.15	0.30	0.41	0.24	0.27	3.7	33	0.51	28	13	0.06
12	9.2	0.15	0.25	0.41	0.24	0.27	12	3.3	0.44	18	1.0	0.03
13	4.2	0.16	0.24	0.41	0.24	0.25	1.9	7.3	0.41	12	0.16	0.02
14	1.0	0.40	0.24	0.41	0.23	0.25	0.77	27	0.40	8.0	0.07	0.02
15	0.20	47	0.24	0.41	0.29	0.28	0.62	21	18	11	0.05	0.02
16	0.15	71	3.9	0.41	0.54	0.25	0.57	2.7	1.4	11	0.04	0.01
17	0.14	302	5.9	0.41	0.38	0.26	0.91	0.96	1.4	7.1	0.03	0.01
18	0.10	471	0.82	0.41	0.31	0.35	0.64	1.2	0.89	3.4	0.02	0.0
19	0.09	102	0.39	0.42	0.27	0.30	0.72	1.7	0.62	1.3	0.01	35
20	0.10	44	0.24	0.79	0.24	1.8	0.67	1.1	0.59	0.59	0.00	13
21	0.10	31	0.25	0.44	0.24	1.4	0.62	1.1	0.46	0.40	0.00	0.12
22	0.09	24	0.24	0.41	0.23	12	0.62	1.0	0.40	0.26	0.00	0.05
23	0.09	16	0.24	0.56	0.24	0.94	0.62	0.95	0.34	0.18	0.00	0.04
24	0.09	2.2	0.24	0.41	0.24	0.35	0.57	1.0	0.24	0.15	0.00	0.03
25	0.09	0.44	0.24	0.41	0.23	0.24	0.41	1.1	0.19	0.08	0.00	0.03
26	0.09	0.41	0.24	0.41	0.20	0.21	0.91	1.3	0.19	0.04	0.00	0.03
27	0.09	0.40	0.24	0.41	0.18	0.21	0.89	3.0	13	0.02	0.00	0.03
28	0.09	0.85	0.18	0.43	0.21	0.21	0.66	134	7.8	0.01	0.00	0.03
29	0.09	2.7	0.23	0.41	---	0.40	2.9	148	1.4	0.01	0.00	0.03
30	0.11	12	0.22	0.41	---	19	1.4	72	17	0.03	0.00	0.03
31	0.16	---	0.17	0.53	---	109	---	7.9	---	0.03	0.00	---
TOTAL	95.23	1129.61	38.12	11.91	12.77	151.29	264.05	3089.43	87.03	454.03	15.35	49.14
MEAN	3.072	37.65	1.230	0.384	0.456	4.880	8.802	99.66	2.901	14.65	0.495	1.638
MAX	47	471	10	0.79	2.0	109	100	1030	18	100	13	35
MIN	0.09	0.15	0.17	0.20	0.18	0.21	0.29	0.36	0.19	0.01	0.00	0.00
AC-FT	189	2240	76	24	25	300	524	6130	173	901	30	97

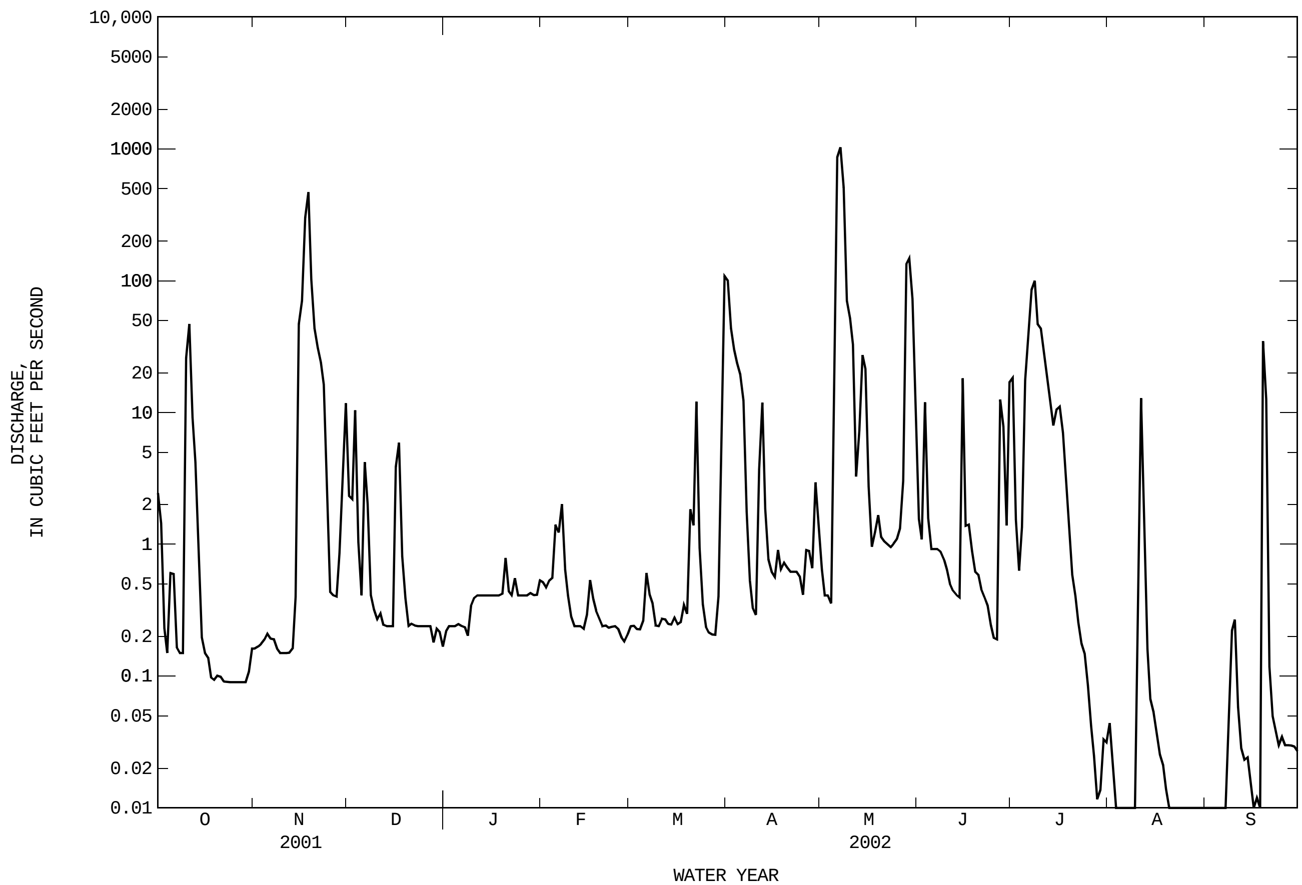
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1952 - 2002z, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	34.32	7.703	5.273	4.118	9.453	18.75	34.02	92.55	77.47	20.19	37.24	53.22
MAX	339	61.1	49.6	33.6	99.0	595	332	1047	745	197	684	817
(WY)	1987	1985	1992	1992	1957	2000	1957	1957	1982	1961	1971	1962
MIN	0.000	0.000	0.026	0.051	0.061	0.000	0.010	0.001	0.000	0.000	0.000	0.000
(WY)	1969	1956	1955	1971	1971	1956	1955	1970	1953	1974	1954	1954

08121000 Colorado River at Colorado City, TX--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1952 - 2002z	
ANNUAL TOTAL	1664.94		5397.96			
ANNUAL MEAN	4.561		14.79		32.92	
HIGHEST ANNUAL MEAN					143	1957
LOWEST ANNUAL MEAN					0.34	1998
HIGHEST DAILY MEAN	471	Nov 18	1030	May 7	9560	May 25 1957
LOWEST DAILY MEAN	0.00	May 21	0.00	Aug 3	0.00	Oct 1 1951
ANNUAL SEVEN-DAY MINIMUM	0.00	Jun 9	0.00	Aug 3	0.00	Oct 1 1951
MAXIMUM PEAK FLOW			1100	May 7	c17700	Mar 24 2000
MAXIMUM PEAK STAGE			12.25	May 7	28.58	Mar 24 2000
ANNUAL RUNOFF (AC-FT)	3300		10710		23850	
10 PERCENT EXCEEDS	6.0		18		23	
50 PERCENT EXCEEDS	0.15		0.40		0.45	
90 PERCENT EXCEEDS	0.00		0.02		0.00	

z Period of regulated streamflow.
c From rating curve extended above 9,550 ft^3/s on basis of slope-area measurement of 66,000 ft^3/s.



08121000 Colorado River at Colorado City, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--
CHEMICAL DATA: May 1946 to Sept. 1954, Nov. 1956 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: May 1946 to Sept. 1954 and Nov. 1956 to current year (local observer).
WATER TEMPERATURE: Nov. 1952 to Sept. 1954 and Nov. 1956 to current year (local observer).

REMARKS.--Records good. Interruptions in the record are due to no flow except for Oct. 13, Nov. 28, and Apr. 22, 26, 28 when specific conductance was not determined and Nov. 28, Dec. 14-31, and Aug. 18 when water temperature was 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, 76,000 microsiemens/cm, Sept. 21, 1998; minimum daily, 240 microsiemens/cm, Sept. 29, 1980.
WATER TEMPERATURE: Maximum daily, 39.0°C, July 21, 1995; minimum daily, 0.0°C, on many days during winter months.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 28,400 microsiemens/cm, Mar. 16, 18, 19; minimum daily, 444 microsiemens/cm, May 7.
WATER TEMPERATURE: Maximum daily, 36.0°C, June 10, 12, July 22-27; minimum daily, 3.0°C, Nov. 29.

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

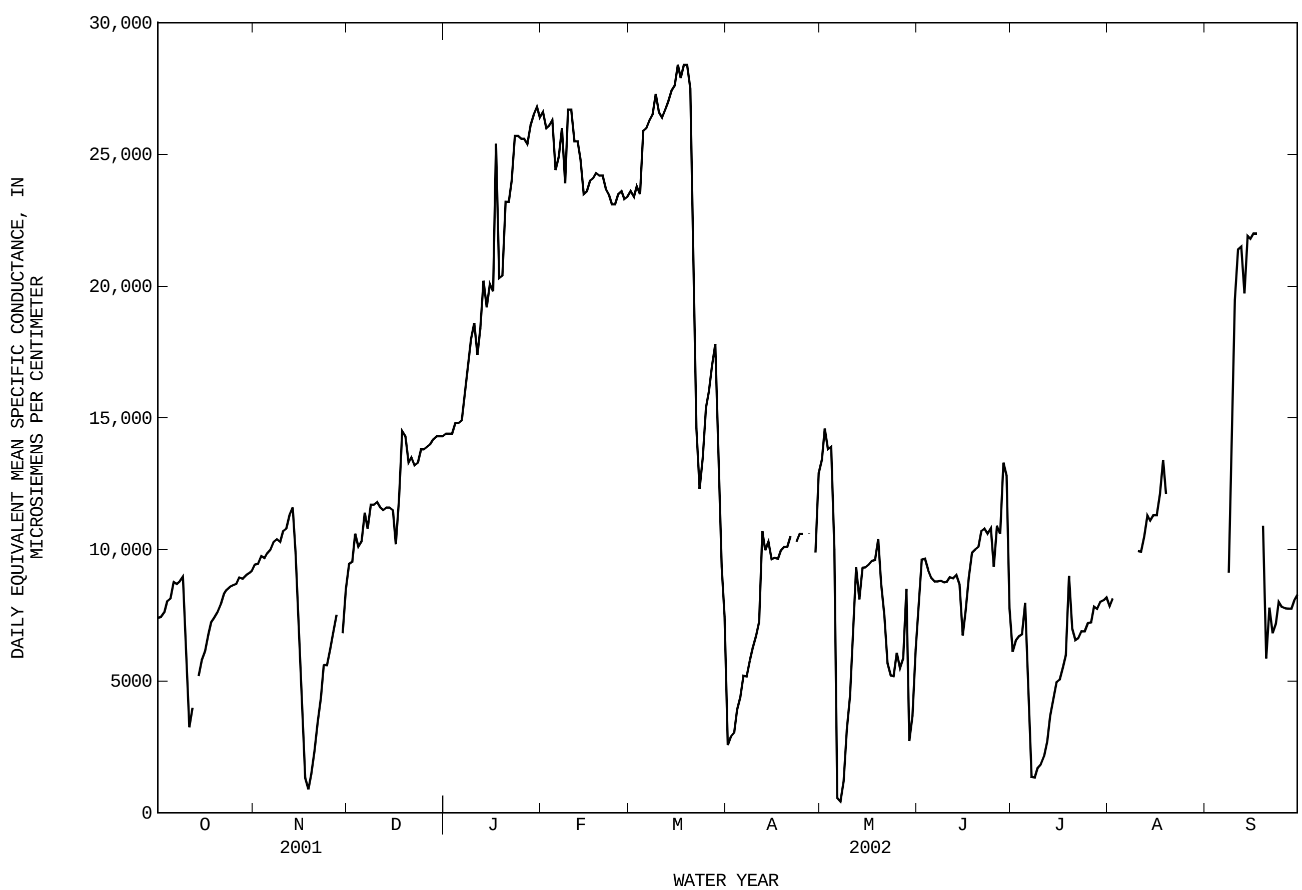
Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM 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)
OCT													
25...	0855	.20	8520	--	950	218	99.2	1480	21	23.4	1060	2330	.4
FEB													
21...	0720	.30	21700	9.0	1900	437	191	4510	45	15.2	1960	7540	.6
APR													
10...	1340	.40	6220	23.5	770	176	79.4	1110	17	7.14	817	1680	.5
MAY													
29...	1310	80	1710	21.7	290	77.3	22.9	222	6	9.63	173	367	.4

Date	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)
OCT		
25...	2.8	5320
FEB		
21...	1.0	14800
APR		
10...	.6	3980
MAY		
29...	6.9	952

08121000 Colorado River at Colorado City, TX--Continued

SPECIFIC CONDUCTANCE FROM DAILY OBSERVER, in US/CM @ 25C, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY EQUIVALENT MEAN VALUES

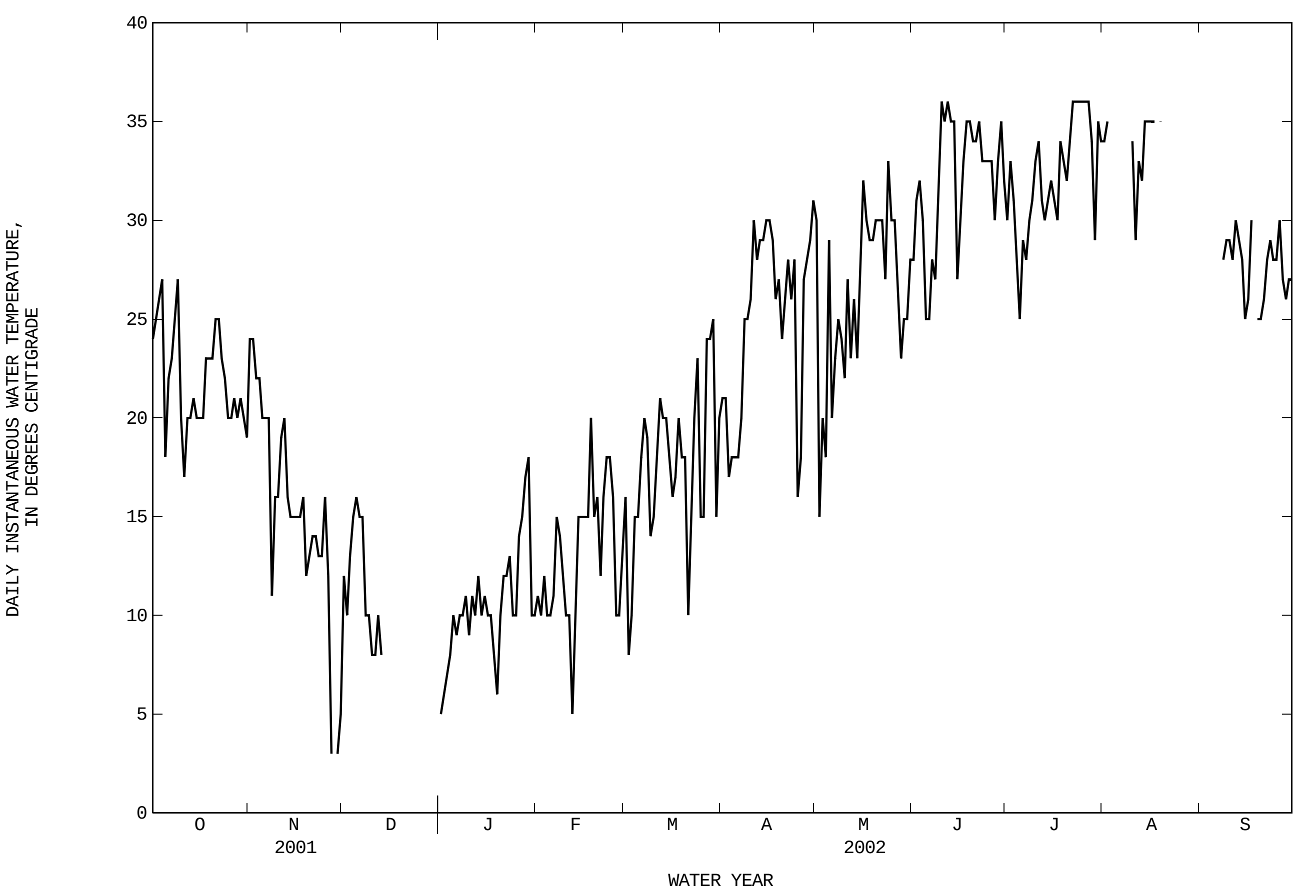
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7410	9440	9450	14400	26600	23600	2570	13400	8000	6120	7840	---
2	7440	9460	9530	14400	26000	23400	2900	14600	9620	6550	8150	---
3	7610	9750	10600	14400	26100	23800	3050	13800	9650	6700	---	---
4	8040	9680	10100	14800	26300	23500	3910	13900	9230	6770	---	---
5	8140	9870	10300	14800	24400	25900	4380	10000	8930	7980	---	---
6	8770	10000	11400	14900	24900	26000	5210	576	8790	4260	---	---
7	8700	10300	10800	16000	26000	26300	5190	444	8790	1370	---	---
8	8800	10400	11700	17000	23900	26500	5790	1220	8810	1350	---	9120
9	8960	10300	11700	18000	26700	27300	6260	3180	8760	1710	---	15000
10	6500	10700	11800	18600	26700	26600	6700	4460	8780	1850	9940	19500
11	3260	10800	11600	17400	25500	26400	7260	6550	8950	2150	9920	21400
12	4000	11300	11500	18400	25500	26700	10700	9320	8910	2720	10500	21500
13	---	11600	11600	20200	24800	27000	9980	8110	9030	3680	11300	19700
14	5200	9850	11600	19200	23500	27400	10300	9310	8670	4330	11100	21900
15	5800	7000	11500	20100	23600	27600	9630	9320	6740	4970	11300	21800
16	6130	4440	10200	19800	24000	28400	9690	9420	7670	5060	11300	22000
17	6750	1330	11900	25400	24100	27900	9650	9570	8950	5530	12100	22000
18	7230	900	14500	20300	24300	28400	9970	9610	9880	5990	13400	---
19	7410	1480	14300	20400	24200	28400	10100	10400	10000	9000	12100	10900
20	7610	2360	13300	23200	24200	27500	10100	8720	10100	7000	---	5870
21	7910	3450	13500	23200	23700	20000	10500	7520	10700	6560	---	7790
22	8310	4370	13200	24000	23500	14600	---	5680	10800	6630	---	6830
23	8470	5620	13300	25700	23100	12300	10300	5220	10600	6900	---	7180
24	8590	5610	13800	25700	23100	13500	10600	5200	10800	6900	---	8010
25	8640	6220	13800	25600	23500	15400	10600	6090	9350	7210	---	7820
26	8700	6890	13900	25600	23600	16000	---	5500	10900	7240	---	7770
27	8940	7530	14000	25400	23300	17000	10600	5860	10600	7830	---	7760
28	8890	---	14200	26100	23400	17800	---	8500	13300	7750	---	7760
29	9010	6820	14300	26500	---	12900	9890	2730	12800	8010	---	8070
30	9090	8500	14300	26800	---	9340	12900	3690	7780	8070	---	8290
31	9200	---	14300	26400	---	7450	---	6200	---	8190	---	---
MEAN	---	---	12300	20700	24600	22100	---	7360	9530	5690	---	---
MAX	---	---	14500	26800	26700	28400	---	14600	13300	9000	---	---
MIN	---	---	9450	14400	23100	7450	---	444	6740	1350	---	---



08121000 Colorado River at Colorado City, 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	24.0	24.0	12.0	5.0	11.0	16.0	21.0	30.0	28.0	30.0	34.0	---
2	25.0	24.0	10.0	6.0	10.0	8.0	21.0	15.0	31.0	33.0	35.0	---
3	26.0	22.0	13.0	7.0	12.0	10.0	17.0	20.0	32.0	31.0	---	---
4	27.0	22.0	15.0	8.0	10.0	15.0	18.0	18.0	30.0	28.0	---	---
5	18.0	20.0	16.0	10.0	10.0	15.0	18.0	29.0	25.0	25.0	---	---
6	22.0	20.0	15.0	9.0	11.0	18.0	18.0	20.0	25.0	29.0	---	---
7	23.0	20.0	15.0	10.0	15.0	20.0	20.0	23.0	28.0	28.0	---	---
8	25.0	11.0	10.0	10.0	14.0	19.0	25.0	25.0	27.0	30.0	---	28.0
9	27.0	16.0	10.0	11.0	12.0	14.0	25.0	24.0	31.0	31.0	---	29.0
10	20.0	16.0	8.0	9.0	10.0	15.0	26.0	22.0	36.0	33.0	34.0	29.0
11	17.0	19.0	8.0	11.0	10.0	18.0	30.0	27.0	35.0	34.0	29.0	28.0
12	20.0	20.0	10.0	10.0	5.0	21.0	28.0	23.0	36.0	31.0	33.0	30.0
13	20.0	16.0	8.0	12.0	10.0	20.0	29.0	26.0	35.0	30.0	32.0	29.0
14	21.0	15.0	---	10.0	15.0	20.0	29.0	23.0	35.0	31.0	35.0	28.0
15	20.0	15.0	---	11.0	15.0	18.0	30.0	27.0	27.0	32.0	35.0	25.0
16	20.0	15.0	---	10.0	15.0	16.0	30.0	32.0	30.0	31.0	35.0	26.0
17	20.0	15.0	---	10.0	15.0	17.0	29.0	30.0	33.0	30.0	35.0	30.0
18	23.0	16.0	---	8.0	20.0	20.0	26.0	29.0	35.0	34.0	---	---
19	23.0	12.0	---	6.0	15.0	18.0	27.0	29.0	35.0	33.0	35.0	25.0
20	23.0	13.0	---	10.0	16.0	18.0	24.0	30.0	34.0	32.0	---	25.0
21	25.0	14.0	---	12.0	12.0	10.0	26.0	30.0	34.0	34.0	---	26.0
22	25.0	14.0	---	12.0	16.0	14.0	28.0	30.0	35.0	36.0	---	28.0
23	23.0	13.0	---	13.0	18.0	20.0	26.0	27.0	33.0	36.0	---	29.0
24	22.0	13.0	---	10.0	18.0	23.0	28.0	33.0	33.0	36.0	---	28.0
25	20.0	16.0	---	10.0	16.0	15.0	16.0	30.0	33.0	36.0	---	28.0
26	20.0	12.0	---	14.0	10.0	15.0	18.0	30.0	33.0	36.0	---	30.0
27	21.0	3.0	---	15.0	10.0	24.0	27.0	26.0	30.0	36.0	---	27.0
28	20.0	---	---	17.0	13.0	24.0	28.0	23.0	33.0	34.0	---	26.0
29	21.0	3.0	---	18.0	---	25.0	29.0	25.0	35.0	29.0	---	27.0
30	20.0	5.0	---	10.0	---	15.0	31.0	25.0	32.0	35.0	---	27.0
31	19.0	---	---	10.0	---	20.0	---	28.0	---	34.0	---	---
MEAN	21.94	---	---	10.45	13.00	17.45	24.93	26.10	31.97	32.19	---	---
MAX	27.00	---	---	18.00	20.00	25.00	31.00	33.00	36.00	36.00	---	---
MIN	17.00	---	---	5.00	5.00	8.00	16.00	15.00	25.00	25.00	---	---



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08123000 Lake Colorado City near Colorado City, TX

LOCATION.--Lat 32°20′41", long 100°55′10", Mitchell County, Hydrologic Unit 12080002, on left bank at municipal water-intake structure, 1.7 mi upstream from Colorado City Dam on Morgan Creek, 2.2 mi downstream from the Texas and Pacific Railway Co. bridge, 2.5 mi upstream from mouth, and 4.0 mi southwest of Colorado City.

DRAINAGE AREA.--345 mi^2, of which 42.7 mi^2 probably is noncontributing.

PERIOD OF RECORD.--Apr. 1949 to current year.
Water-quality records.--Chemical data: Dec. 1969 to May 1984.

REVISED RECORDS.--WDR TX-81-3: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is NGVD of 1929. Prior to Aug. 23, 1950, nonrecording gages at or near powerplant about 0.7 mi downstream at same datum. Satellite telemeter at station.

REMARKS.--Records good except those for estimated daily contents, which are fair. The lake is formed by a rolled earthfill dam 4,800 ft long. Storage began in Apr. 1949, and the dam was completed in Sept. 1949. The dam and lake are owned by the Texas Electric Service Co. to operate their thermal electric powerplant. The uncontrolled spillway is an excavated cut channel through natural ground 1,200 ft wide located 600 ft upstream and to the left of left end of dam. The spillway is designed to discharge 150,000 ft^3/s at the maximum design flood elevation. The service spillway is an uncontrolled rectangular drop inlet located 100 ft upstream from dam with two uncontrolled openings of 10.0 by 12.0 ft. The spillway is designed for a maximum discharge of 5,000 ft^3/s. A service outlet is provided for small releases downstream through a 30-inch valve-controlled concrete pipe. Record of pumpage from Champion Creek Reservoir (station 08123600, conservation pool storage 41,600 acre-ft), into Lake Colorado City can be obtained from the Texas Electric Service Co. Conservation pool storage is 30,800 acre-ft. Data regarding the dam are given in the following table:

	Elevation (feet)
Top of dam...	2,090.0
Design flood...	2,086.7
Crest of spillway..	2,073.7
Crest of service spillway..	2,069.6
Lowest gated outlet (invert).......................................	2,024.3

COOPERATION.--Capacity curve dated Oct. 1, 1964 was furnished by the Texas Utilities Electric Co. Record of diversions for municipal use can be obtained from the city of Colorado City.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 40,280 acre-ft, Sept. 7, 1962, elevation, 2,075.10 ft; minimum contents after initial filling, 9,740 acre-ft, Aug. 30, 31, and Sept. 1, 1953, elevation, 2,051.30 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 19,430 acre-ft, Nov. 23, elevation, 2,061.26 ft; minimum contents, 16,510 acre-ft, Nov. 14, elevation, 2,058.65 ft.

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

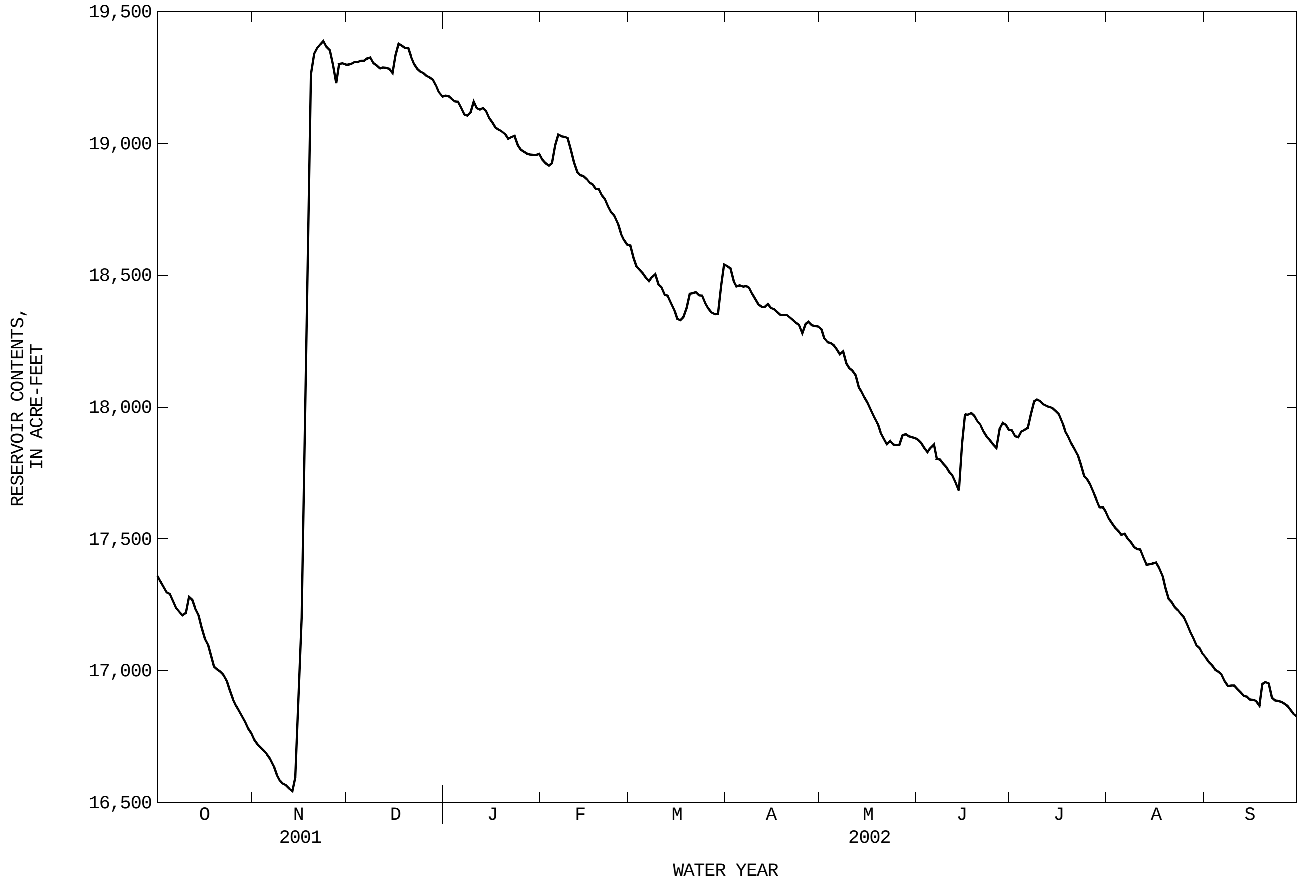
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17360	16740	19300	19180	18940	18610	18530	18300	17880	17910	17580	17050
2	17340	16720	19300	19180	18920	18570	18530	18260	17860	17890	17560	17030
3	17320	16710	19310	19170	18920	18530	18480	18250	17840	17890	17540	17020
4	17300	16700	19310	19160	18920	18520	18460	18240	17830	17910	17530	17000
5	17290	16680	19310	19160	18990	18510	18460	18230	17850	17910	17520	16990
6	17260	16670	19310	19140	19030	18490	18460	18220	17860	17920	17520	16990
7	17240	16640	19320	19110	19030	18480	18460	18200	17800	17970	17500	16960
8	17220	16610	19330	19110	19020	18490	18450	18210	17800	18020	17490	16940
9	17210	16580	19300	19120	19020	18500	18430	18170	17780	18030	17470	16940
10	17220	16570	19300	19160	18980	18460	18410	18150	17770	18020	17460	16940
11	17280	16570	19280	19130	18930	18450	18390	18140	17750	18010	17460	16930
12	17270	16550	19290	19130	18890	18430	18380	18120	17740	18000	17430	16920
13	17240	16540	19290	19130	18880	18420	18380	18080	17710	18000	17400	16910
14	17210	16590	19280	19120	18880	18400	18390	18060	17680	18000	17400	16900
15	17160	16880	19270	19100	18870	18370	18380	18030	17860	17980	17410	16890
16	17120	17200	19330	19080	18850	18330	18370	18010	17970	17970	17410	16890
17	17100	18220	19380	19060	18840	18330	e18360	17990	17970	17940	17390	16880
18	17060	18910	19370	19050	18830	18340	e18350	17960	17980	17910	17360	16870
19	17020	19260	19360	19050	18830	18380	e18350	17940	17970	17890	17310	16950
20	17000	19340	19360	19040	18800	18430	e18350	17900	17940	17860	17270	16960
21	17000	19360	19330	19020	18790	18430	e18340	17880	17930	17840	17260	16950
22	16980	19380	19300	19020	18760	18440	e18330	17860	17910	17820	17240	16900
23	16960	19390	19280	19030	18740	18420	18320	17870	17890	17780	17230	16890
24	16930	19370	19270	18990	18730	18420	18310	17860	17870	17740	17220	16890
25	16890	19350	19270	18980	18700	18390	18280	17860	17860	17730	17200	16880
26	16870	19300	19260	18970	18660	18370	18320	17860	17840	17700	17170	16880
27	16850	19230	19250	18960	18640	18360	18320	17890	17920	17680	17140	16870
28	16830	19300	19240	18960	18620	18350	18310	17900	17940	17650	17120	16850
29	16810	19300	19220	18960	---	18350	18310	17890	17930	17620	17100	16840
30	16780	19300	19190	18960	---	18460	18310	17890	17910	17620	17080	16830
31	16760	---	19180	18960	---	18540	---	17880	---	17600	17060	---
MEAN	17090	17870	19290	19070	18860	18440	18380	18040	17860	17860	17350	16920
MAX	17360	19390	19380	19180	19030	18610	18530	18300	17980	18030	17580	17050
MIN	16760	16540	19180	18960	18620	18330	18280	17860	17680	17600	17060	16830
(+)	2058.89	2061.15	2061.05	2060.86	2060.56	2060.49	2060.29	2059.91	2059.94	2059.66	2059.16	2058.95
(@)	-630	+2540	-120	-220	-340	-80	-230	-430	+30	-310	-540	-230

CAL YR 2001 MAX 20990 MIN 16540 (@) -1810
WTR YR 2002 MAX 19390 MIN 16540 (@) -560

e Estimated

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

08123000 Lake Colorado City near Colorado City, TX--Continued



08123600 Champion Creek Reservoir near Colorado City, TX

LOCATION.--Lat 32°16'53", long 100°51'30", Mitchell County, Hydrologic Unit 12080002, 50 ft downstream from service outlet structure at Champion Creek Dam on Champion Creek, 1.0 mi upstream from mouth, 4.8 mi downstream from State Highway 208, and 7.2 mi south of Colorado City.

DRAINAGE AREA.--207 mi^2, of which 20.8 mi^2 probably is noncontributing.

PERIOD OF RECORD.--Oct. 1959 to Sept. 1987 and May 1997 to current year.
Water-quality records.--Chemical data: Aug. 1967 to May 1984.

REVISED RECORDS.--WRD TX-81-3: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is NGVD of 1929. Prior to Sept. 29, 1959, nonrecording gage at same site and datum. Satellite telemeter at station.

REMARKS.--No estimated daily contents. Records good except those for Dec. 28 to Sept. 30, which are fair. The reservoir is formed by a rolled earthfill dam about 6,800 ft long. The dam was completed on Apr. 30, 1959. Closure and storage began in Feb. 1959. The capacity curve is based on U.S. Geological Survey topographic map surveyed in 1950: excavation for borrow, estimated not to exceed 1,200 acre-ft, is not included. The dam and reservoir are owned and operated by the Texas Electric Service Company. Water may be pumped from the reservoir through a 24-inch pipeline to Lake Colorado City (station 08123000, conservation pool storage 30,800 acre-ft) for municipal use and for cooling operations of a steam generating powerplant. There are two spillways. The uncontrolled emergency spillway, 450 ft wide and 800 ft long, is located at the right end of dam. The controlled service spillway is a cut channel 50 ft wide, about 1,800 ft long and 8 ft deep, and cut into the emergency spillway at the extreme right end. There is a controlled drop-inlet structure, 4.0 by 5.0 ft, with a side opening of 1.5 by 3.0 ft. Conservation pool storage is 41,600 acre-ft. Data regarding the dam are given in the following table:

	Elevation (feet)
Top of dam..	2,109.0
Design flood..	2,104.0
Crest of emergency spillway..	2,091.0
Crest of service spillway..	2,082.4
Lowest gated outlet (invert)...	2,020.0

COOPERATION.--The capacity table dated Apr. 14, 1959, was prepared from curve furnished by Freese and Nichols, Consulting Engineers, Fort Worth, Texas. Record of diversions into Lake Colorado City may be obtained from Texas Utilities Electric Co.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 47,060 acre-ft, June 29, 1982, elevation, 2,085.79 ft; minimum contents, 1,720 acre-ft, Apr. 11-15, 1971, elevation, 2,026.75 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 3,010 acre-ft, June 17, elevation, 2,033.18 ft; minimum contents, 1,990 acre-ft, May 27, elevation, 2,028.20 ft.

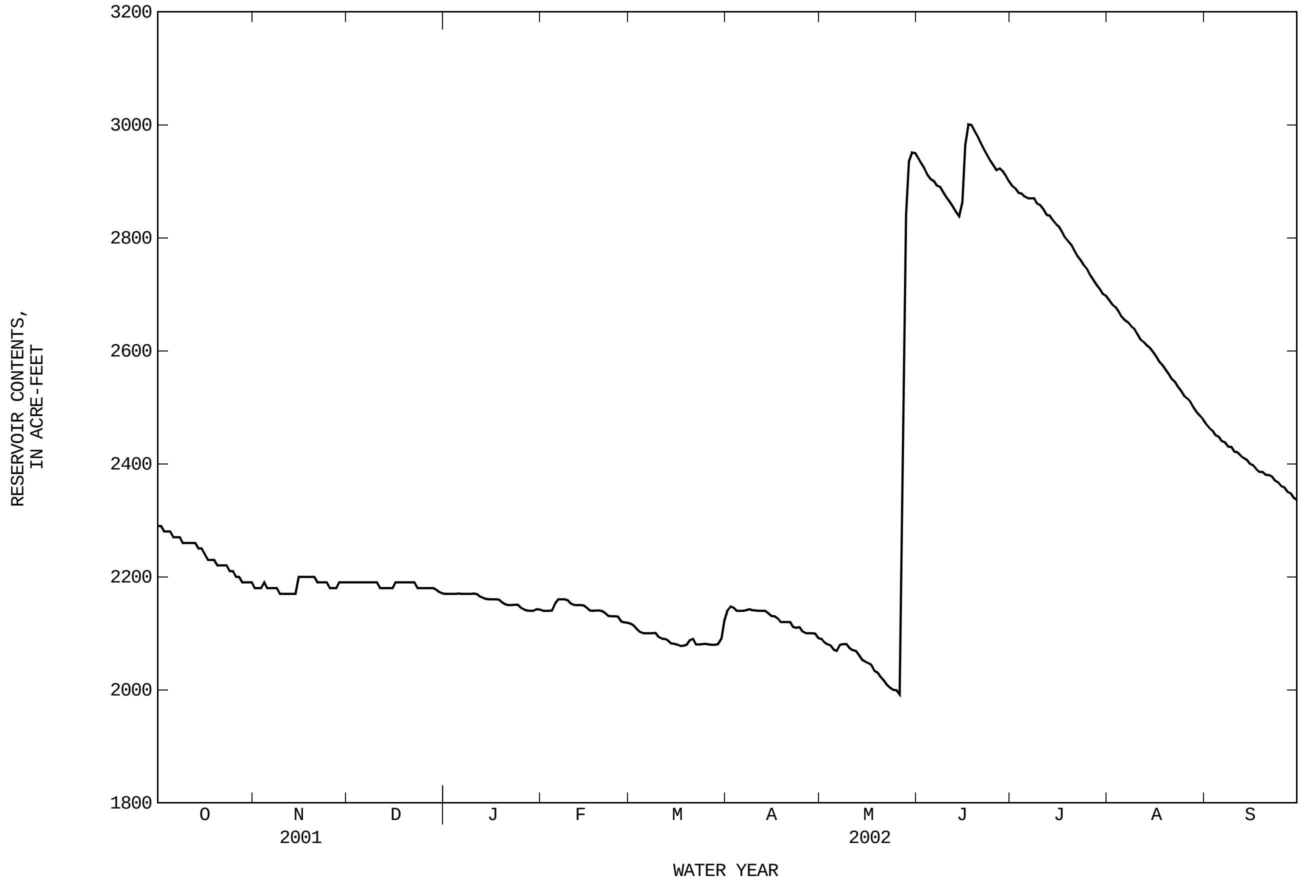
RESERVOIR STORAGE, in (ACRE-FEET), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2290	2180	2190	2170	2140	2120	2140	2090	2940	2890	2690	2470
2	2290	2180	2190	2170	2140	2110	2150	2080	2930	2890	2680	2460
3	2280	2180	2190	2170	2140	2110	2140	2080	2920	2880	2680	2460
4	2280	2190	2190	2170	2140	2100	2140	2080	2910	2880	2670	2450
5	2280	2180	2190	2170	2150	2100	2140	2070	2900	2870	2660	2450
6	2270	2180	2190	2170	2160	2100	2140	2070	2900	2870	2650	2440
7	2270	2180	2190	2170	2160	2100	2140	2080	2890	2870	2650	2440
8	2270	2180	2190	2170	2160	2100	2140	2080	2890	2870	2640	2430
9	2260	2170	2190	2170	2160	2100	2140	2080	2880	2860	2640	2430
10	2260	2170	2190	2170	2150	2090	2140	2070	2870	2860	2630	2420
11	2260	2170	2180	2170	2150	2090	2140	2070	2860	2850	2620	2420
12	2260	2170	2180	2160	2150	2090	2140	2070	2860	2840	2620	2410
13	2260	2170	2180	2160	2150	2090	2140	2060	2850	2840	2610	2410
14	2250	2170	2180	2160	2150	2080	2140	2050	2840	2830	2610	2410
15	2250	2200	2180	2160	2150	2080	2130	2050	2860	2820	2600	2400
16	2240	2200	2190	2160	2140	2080	2130	2050	2960	2820	2590	2400
17	2230	2200	2190	2160	2140	2080	2130	2040	3000	2810	2580	2390
18	2230	2200	2190	2160	2140	2080	2120	2030	3000	2800	2570	2390
19	2230	2200	2190	2150	2140	2080	2120	2030	2990	2790	2570	2390
20	2220	2200	2190	2150	2140	2090	2120	2020	2980	2790	2560	2380
21	2220	2190	2190	2150	2140	2090	2120	2020	2970	2780	2550	2380
22	2220	2190	2190	2150	2130	2080	2110	2010	2960	2770	2540	2380
23	2220	2190	2180	2150	2130	2080	2110	2000	2950	2760	2540	2370
24	2210	2190	2180	2150	2130	2080	2110	2000	2940	2750	2530	2370
25	2210	2180	2180	2140	2130	2080	2100	2000	2930	2740	2520	2360
26	2200	2180	2180	2140	2120	2080	2100	1990	2920	2730	2520	2360
27	2200	2180	2180	2140	2120	2080	2100	2250	2920	2730	2510	2350
28	2190	2190	2180	2140	2120	2080	2100	2840	2920	2720	2500	2350
29	2190	2190	2180	2140	---	2080	2100	2940	2910	2710	2490	2340
30	2190	2190	2170	2140	---	2090	2090	2950	2900	2700	2480	2340
31	2190	---	2170	2140	---	2120	---	2950	---	2700	2480	---
MEAN	2240	2180	2180	2160	2140	2090	2130	2170	2920	2810	2590	2400
MAX	2290	2200	2190	2170	2160	2120	2150	2950	3000	2890	2690	2470
MIN	2190	2170	2170	2140	2120	2080	2090	1990	2840	2700	2480	2340
(+)	2029.29	2029.32	2029.22	2029.07	2028.92	2028.96	2028.80	2032.95	2032.74	2031.84	2030.79	2030.08
(@)	-110	0	-20	-30	-20	0	-30	+860	-50	-200	-220	-140

CAL YR 2001 MAX 4480 MIN 2150 (@) -2210
WTR YR 2002 MAX 3000 MIN 1990 (@) +40

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

08123600 Champion Creek Reservoir near Colorado City, TX--Continued



08123755 Moss Creek Lake near Coahoma, TX

LOCATION.--Lat 32°14’37", long 101°18’41", Howard County, Hydrologic Unit 12080007, 195 ft left of service outlet structure at Moss Creek Dam on Moss Creek, 1.4 mi upstream from mouth, 3.4 mi south of Coahoma, and 7.4 mi east of Big Spring.

DRAINAGE AREA.--26.0 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 fair except those for estimated daily contents, which are poor. The lake is formed by a rolled earthfill dam 2,450 ft long. The dam was completed in 1939. The capacity curve was developed by Freese and Nichols in 1970. The dam and reservoir are owned by the city of Big Spring. The city of Big Spring operates the reservoir for recreational purposes. The Colorado River Municipal Water District owns the water rights for municipal and industrial use. The uncontrolled south emergency spillway is 250 ft wide through natural ground at right end of dam. The uncontrolled north emergency spillway is 400 ft wide with concrete sill at left end of dam. The service spillway is gate operated with a rectangular shaped inlet feeding into a pipe fitted inside the west conduit. Conservation pool storage is 3,522 acre-ft. Data regarding the dam are given in the following table:

	Elevation (feet)
Top of dam...	2,343.5
Crest of south emergency spillway....................................	2,338.7
Crest of north emergency spillway....................................	2,337.5
Crest of service outlet..	2,330.5

COOPERATION.--Capacity table furnished by Colorado River Municipal Water District.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 4,090 acre-ft, Mar. 23, 2000, elevation, 2,340.86 ft; minimum contents, 536 acre-ft, Sept. 21, 2001, elevation, 2,311.65 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 2,780 acre-ft, Apr. 18, elevation, 2,332.66 ft; minimum daily contents, 590 acre-ft, Jan. 8.

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

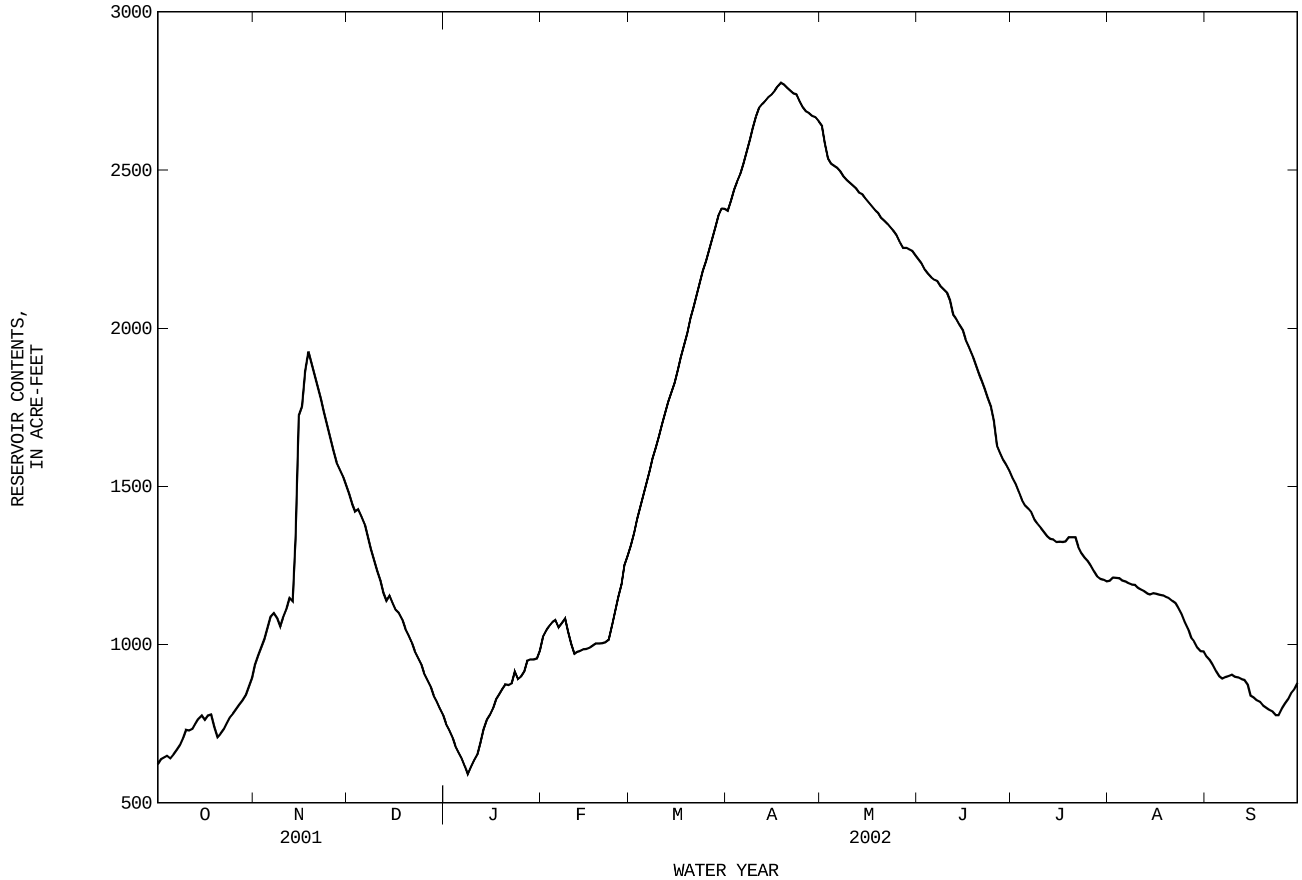
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	621	935	1480	e750	1020	1310	2370	2640	2220	1530	1200	962
2	637	965	1440	e730	1040	1350	2400	2590	2200	1510	1210	951
3	643	992	1420	e710	1060	1390	2440	2540	2190	1480	1210	935
4	648	1020	1430	e680	1070	1430	2460	2520	2170	1460	1210	916
5	640	1050	1410	e660	1080	1470	2490	2510	2160	1440	1200	899
6	652	1090	1380	e640	1050	1510	2520	2510	2150	1430	1200	892
7	667	1100	1340	e615	1070	1550	2560	2500	2150	1420	1190	898
8	682	1080	1300	590	1080	1590	2600	2480	2130	1390	1190	900
9	702	1060	1270	613	1040	1620	2630	2470	2120	1380	1190	905
10	730	1090	1230	635	1000	1660	2670	2460	2110	1370	1180	899
11	728	1110	1200	652	970	1700	2700	2450	2090	1360	1170	896
12	733	1150	1160	688	977	1730	2710	2440	2040	1340	1170	891
13	750	1140	1140	731	981	1770	2720	2430	2030	1330	1160	888
14	766	1340	1150	760	985	1800	2730	2420	2010	1330	1160	874
15	776	1720	1130	777	987	1830	2740	2410	1990	1320	1160	839
16	762	1750	e1110	798	990	1870	2750	2400	1960	1320	1160	832
17	776	1870	e1100	826	997	1910	2770	2390	1940	1320	1160	823
18	779	1930	e1080	841	1000	1940	2780	2370	1920	1330	1150	819
19	739	1890	e1050	859	1000	1980	2770	2360	1890	1340	1150	808
20	707	1850	e1030	874	1000	2030	2760	2350	1860	1340	1150	800
21	718	1810	e1010	872	1010	2070	2750	2340	1840	1340	1140	793
22	732	1780	e980	877	1010	2100	2740	2330	1810	1310	1130	788
23	751	1740	e960	915	1060	2140	2740	2320	1780	1290	1120	777
24	770	1700	e940	891	1110	2180	2720	2310	1750	1270	1100	776
25	782	1660	e910	899	1150	2210	2700	2290	1710	1260	1070	797
26	796	1610	e890	914	1190	2250	2690	2270	1630	1250	1050	813
27	809	1580	e870	949	e1250	2280	2680	2250	1610	1230	1020	827
28	823	1560	e840	953	1280	2320	2670	2250	1580	1220	1010	848
29	838	1530	e820	953	---	2360	2670	2250	1570	1210	991	859
30	867	1510	e800	956	---	2380	2660	2240	1550	1210	979	879
31	894	---	e780	981	---	2380	---	2230	---	1200	978	---
MEAN	739	1420	1120	793	1050	1870	2650	2400	1940	1340	1130	859
MAX	894	1930	1480	981	1280	2380	2780	2640	2220	1530	1210	962
MIN	621	935	780	590	970	1310	2370	2230	1550	1200	978	776
(+)	2316.33	2322.63	2314.95	2317.33	2320.47	2329.75	2331.75	2328.66	2323.03	2319.66	2317.30	2316.15
(@)	+287	+616	-730	+201	+299	+1100	+280	-430	-680	-350	-222	-99

CAL YR 2001 MAX 3060 MIN 543 (@) -2000
WTR YR 2002 MAX 2780 MIN 590 (@) +272

e Estimated

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

08123755 Moss Creek Lake near Coahoma, TX--Continued



08123800 Beals Creek near Westbrook, TX

LOCATION.--Lat 32°11’57", long 101°00’49", Mitchell County, Hydrologic Unit 12080007, on left bank at downstream side of bridge on State Highway 163, 2.1 mi downstream from Hackberry Creek, 10.8 mi south of Westbrook, 15.7 mi southwest of Colorado City, and 19.1 mi upstream from mouth.

DRAINAGE AREA.--9,802 mi^2, of which 7,814 mi^2 probably is noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Oct. 1958 to current year.

REVISED RECORDS.--WRD TX-72-1: 1971. WDR TX-81-3: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,048.74 ft above NGVD of 1929. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. No known regulation. Low flow is affected by diversion upstream from station. No flow at times most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1908, about 24.5 ft in 1922, 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	0.44	0.00	0.00	0.00	15	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	2.9	0.00	0.00	0.00	4.1	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	2.2	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	2.0	0.00	0.00	0.00	1.4	0.00	0.00	22	0.00	0.00
5	0.00	0.00	0.58	0.00	0.13	0.00	0.07	0.00	0.00	7.1	0.00	0.00
6	0.00	0.00	0.11	0.00	0.37	0.00	0.00	0.00	0.00	10	0.00	0.00
7	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	290	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	17	0.00	0.00
9	0.00	0.00	0.00	0.00	1.0	0.00	0.00	0.00	0.00	5.9	0.00	0.00
10	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	4.7	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.7	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.95	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.00	0.00
14	0.00	195	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99	0.00	0.00
15	0.00	1490	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.00	0.00
16	0.00	1660	16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	234	5.4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	462	0.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	47	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.4
20	0.00	16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.2
21	0.00	6.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26
22	0.00	2.4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
23	0.00	0.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	0.00	0.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.3	0.00
25	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.1	0.00
26	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00
27	0.00	0.03	0.00	0.00	0.00	0.00	0.00	5.1	134	0.00	0.00	0.00
28	0.00	0.14	0.00	0.00	0.00	0.00	0.00	116	27	0.00	0.00	0.00
29	0.00	0.16	0.00	0.00	---	0.00	0.00	5.5	2.0	0.00	0.00	0.00
30	0.00	0.88	0.00	0.00	---	0.00	0.00	0.61	0.14	0.00	0.00	0.00
31	0.00	---	0.00	0.00	---	21	---	0.03	---	0.00	0.00	---
TOTAL	0.00	4114.89	29.88	0.00	1.52	21.00	20.61	127.24	163.14	360.57	4.45	8.88
MEAN	0.000	137.2	0.964	0.000	0.054	0.677	0.687	4.105	5.438	11.63	0.144	0.296
MAX	0.00	1660	16	0.00	1.0	21	15	116	134	290	2.3	7.2
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	0.00	8160	59	0.00	3.0	42	41	252	324	715	8.8	18

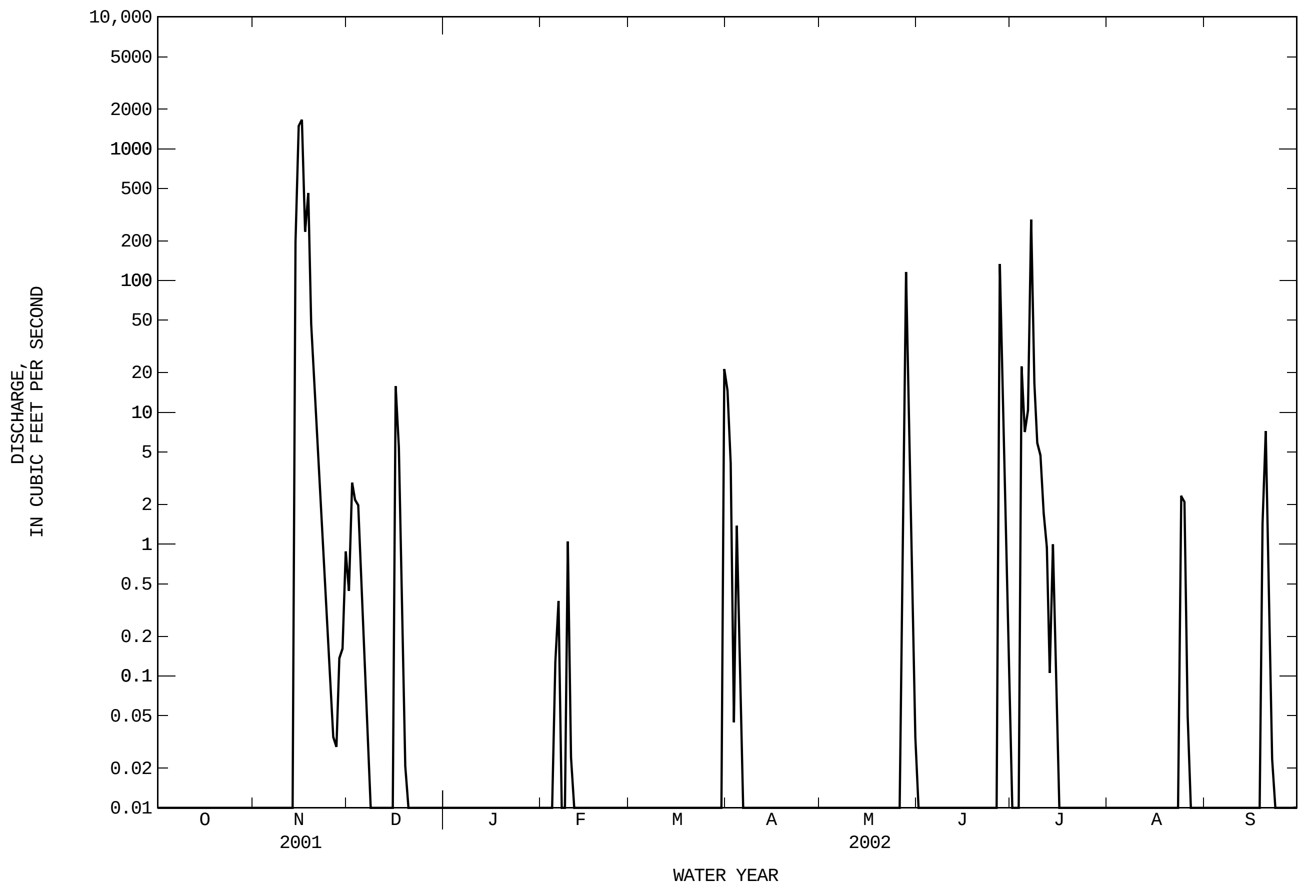
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1959 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	37.11	8.946	4.981	4.702	8.100	18.84	19.27	54.88	40.13	23.93	17.32	58.60
MAX	572	137	49.2	47.0	94.9	544	256	334	254	258	168	680
(WY)	1987	2002	1992	1987	1992	2000	1966	1994	1987	1961	1971	1980
MIN	0.000	0.000	0.000	0.000	0.000	0.005	0.012	0.14	0.000	0.000	0.000	0.000
(WY)	1964	2000	1999	1999	1999	2001	1998	1962	2001	1964	2000	1998

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1959 - 2002	
ANNUAL TOTAL	4425.10		4852.18			
ANNUAL MEAN	12.12		13.29		24.78	
HIGHEST ANNUAL MEAN					107	1987
LOWEST ANNUAL MEAN					1.20	2001
HIGHEST DAILY MEAN	1660	Nov 16	1660	Nov 16	7340	Mar 23 2000
LOWEST DAILY MEAN	0.00	Jan 1	0.00	Oct 1	0.00	Oct 1 1958
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00	Oct 1	0.00	Oct 1 1958
MAXIMUM PEAK FLOW			2060	Nov 16	c13000	Mar 23 2000
MAXIMUM PEAK STAGE			14.21	Nov 16	a23.70	Mar 23 2000
ANNUAL RUNOFF (AC-FT)	8780		9620		17950	
10 PERCENT EXCEEDS	0.88		1.2		22	
50 PERCENT EXCEEDS	0.00		0.00		2.0	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

c From rating curve extended above 5,840 ft^3/s.
a From floodmark.

08123800 Beals Creek near Westbrook, TX--Continued



08123800 Beals Creek near Westbrook, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--
CHEMICAL DATA: Nov. 1958 to current year.
BIOCHEMICAL DATA: Nov. 1974 to Oct. 1977.
SEDIMENT DATA: Oct. 1974 to Oct. 1977.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Nov. 1958 to Feb. 1981 (local observer) and Mar. 1981 to current year.
WATER TEMPERATURE: Nov. 1958 to Feb. 1981 (local observer) and Mar. 1981 to current year.

INSTRUMENTATION.--Water-quality monitor since Mar. 5, 1981.

REMARKS.--No estimated daily specific conductance or water temperature. Records good. Interruptions in the specific conductance and water temperature values were due to no flow. No flow for 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 computations 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, 24,500 microsiemens/cm, Aug. 9, 1989; minimum, 49 microsiemens/cm, June 27, 2002.
WATER TEMPERATURE: Maximum daily, 37.0°C, June 28, 1960, and July 3, 1976; minimum, 0.0°C, on many days during winter months.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 11,700 microsiemens/cm, Mar. 31; minimum, 49 microsiemens/cm, June 27.
WATER TEMPERATURE: Maximum, 33.7°C, Aug. 26; minimum, 1.1°C, Nov. 28.

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)
MAY													
28...	1110	215	675	--	18.1	--	--	130	34.5	11.1	67.6	3	6.26
29...	1230	5.1	395	--	23.8	--	--	99	27.9	7.08	34.3	2	5.66
JUN													
27...	1340	333	226	--	22.0	--	--	93	28.8	5.10	19.5	.9	4.89
28...	1140	17	746	7.6	25.2	4.9	65	180	50.6	13.9	88.3	3	6.17

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)
MAY					
28...	54.5	126	.4	5.3	352
29...	30.1	51.0	.4	4.7	210
JUN					
27...	12.9	27.3	.3	6.3	160
28...	72.2	152	.4	5.5	442

08123800 Beals Creek near Westbrook, TX--Continued

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

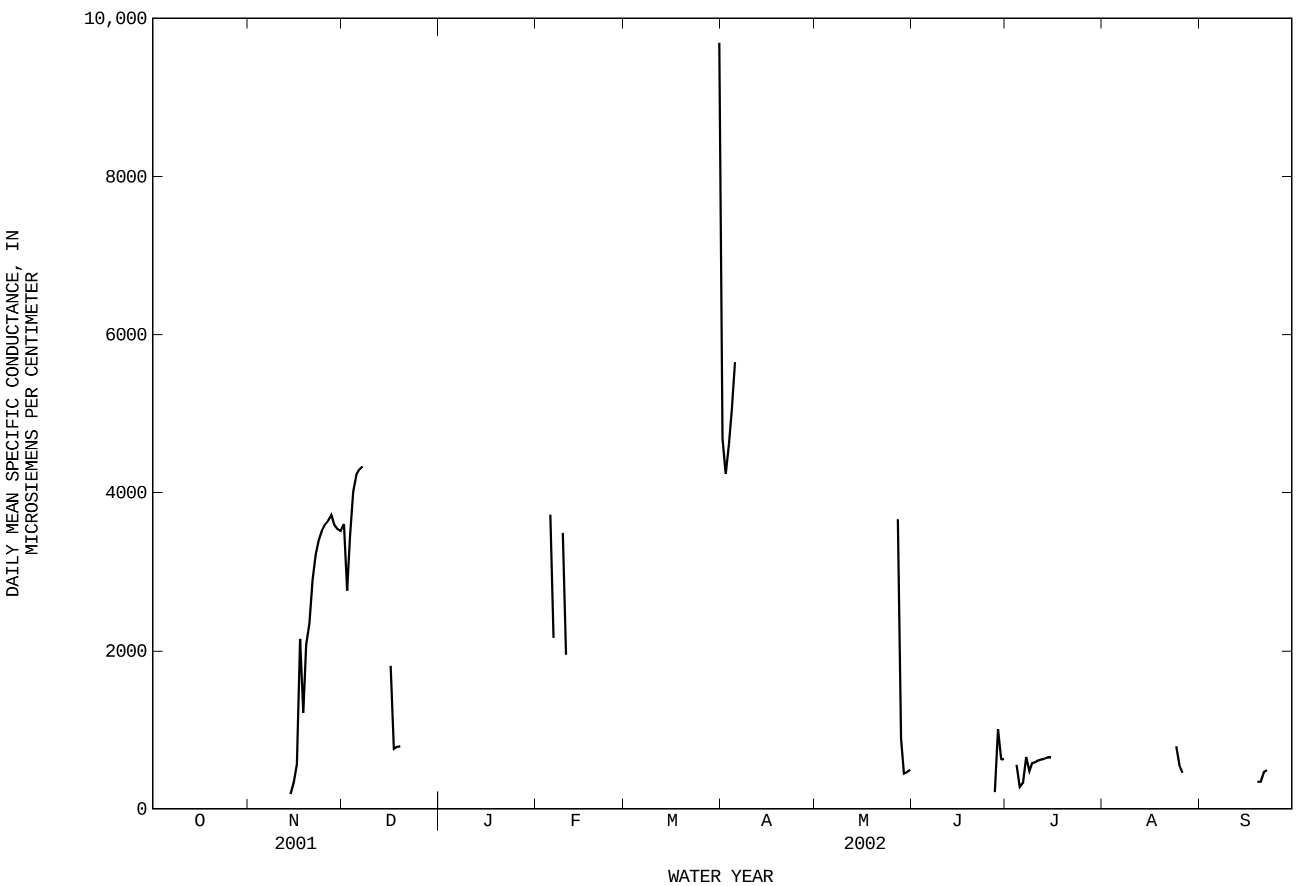
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	---	---	---	---	---	---	3630	3550	3600	---	---	---
2	---	---	---	---	---	---	3640	1910	2760	---	---	---
3	---	---	---	---	---	---	3720	3050	3450	---	---	---
4	---	---	---	---	---	---	4180	3720	4010	---	---	---
5	---	---	---	---	---	---	4270	4180	4230	---	---	---
6	---	---	---	---	---	---	4330	4270	4300	---	---	---
7	---	---	---	---	---	---	4370	4300	4330	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	636	108	186	---	---	---	---	---	---
15	---	---	---	789	235	333	---	---	---	---	---	---
16	---	---	---	1100	387	567	4810	362	1810	---	---	---
17	---	---	---	3310	1100	2150	948	570	755	---	---	---
18	---	---	---	2020	550	1210	813	770	784	---	---	---
19	---	---	---	2110	2020	2080	805	780	791	---	---	---
20	---	---	---	2650	2110	2340	---	---	---	---	---	---
21	---	---	---	3100	2650	2900	---	---	---	---	---	---
22	---	---	---	3320	3100	3230	---	---	---	---	---	---
23	---	---	---	3450	3320	3400	---	---	---	---	---	---
24	---	---	---	3570	3450	3510	---	---	---	---	---	---
25	---	---	---	3640	3550	3600	---	---	---	---	---	---
26	---	---	---	3660	3620	3640	---	---	---	---	---	---
27	---	---	---	3760	3640	3710	---	---	---	---	---	---
28	---	---	---	3780	3520	3590	---	---	---	---	---	---
29	---	---	---	3600	3500	3540	---	---	---	---	---	---
30	---	---	---	3560	3460	3520	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	---	---	---	7560	3780	4690	---	---	---
2	---	---	---	---	---	---	4620	3670	4240	---	---	---
3	---	---	---	---	---	---	4650	4580	4610	---	---	---
4	---	---	---	---	---	---	5430	4610	5040	---	---	---
5	5450	1480	3720	---	---	---	5760	5430	5650	---	---	---
6	2770	1460	2160	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	4430	2280	3490	---	---	---	---	---	---	---	---	---
10	2270	1810	1950	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	8290	318	3660
28	---	---	---	---	---	---	---	---	---	3280	383	890
29	---	---	---	---	---	---	---	---	---	460	436	442
30	---	---	---	---	---	---	---	---	---	477	451	464
31	---	---	---	11700	4480	9690	---	---	---	510	476	492
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

08123800 Beals Creek near Westbrook, 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	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	801	160	557	---	---	---	---	---	---
5	---	---	---	319	181	273	---	---	---	---	---	---
6	---	---	---	602	301	327	---	---	---	---	---	---
7	---	---	---	1090	406	653	---	---	---	---	---	---
8	---	---	---	534	426	477	---	---	---	---	---	---
9	---	---	---	601	534	582	---	---	---	---	---	---
10	---	---	---	604	573	591	---	---	---	---	---	---
11	---	---	---	622	601	613	---	---	---	---	---	---
12	---	---	---	638	613	627	---	---	---	---	---	---
13	---	---	---	645	616	636	---	---	---	---	---	---
14	---	---	---	665	641	651	---	---	---	---	---	---
15	---	---	---	666	627	651	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	491	225	342
20	---	---	---	---	---	---	---	---	---	437	233	342
21	---	---	---	---	---	---	---	---	---	490	437	465
22	---	---	---	---	---	---	---	---	---	496	478	488
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	911	623	792	---	---	---
25	---	---	---	---	---	---	623	458	552	---	---	---
26	---	---	---	---	---	---	465	453	457	---	---	---
27	532	49	209	---	---	---	---	---	---	---	---	---
28	2140	303	1010	---	---	---	---	---	---	---	---	---
29	668	611	625	---	---	---	---	---	---	---	---	---
30	643	617	631	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---



08123800 Beals Creek near Westbrook, TX--Continued

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

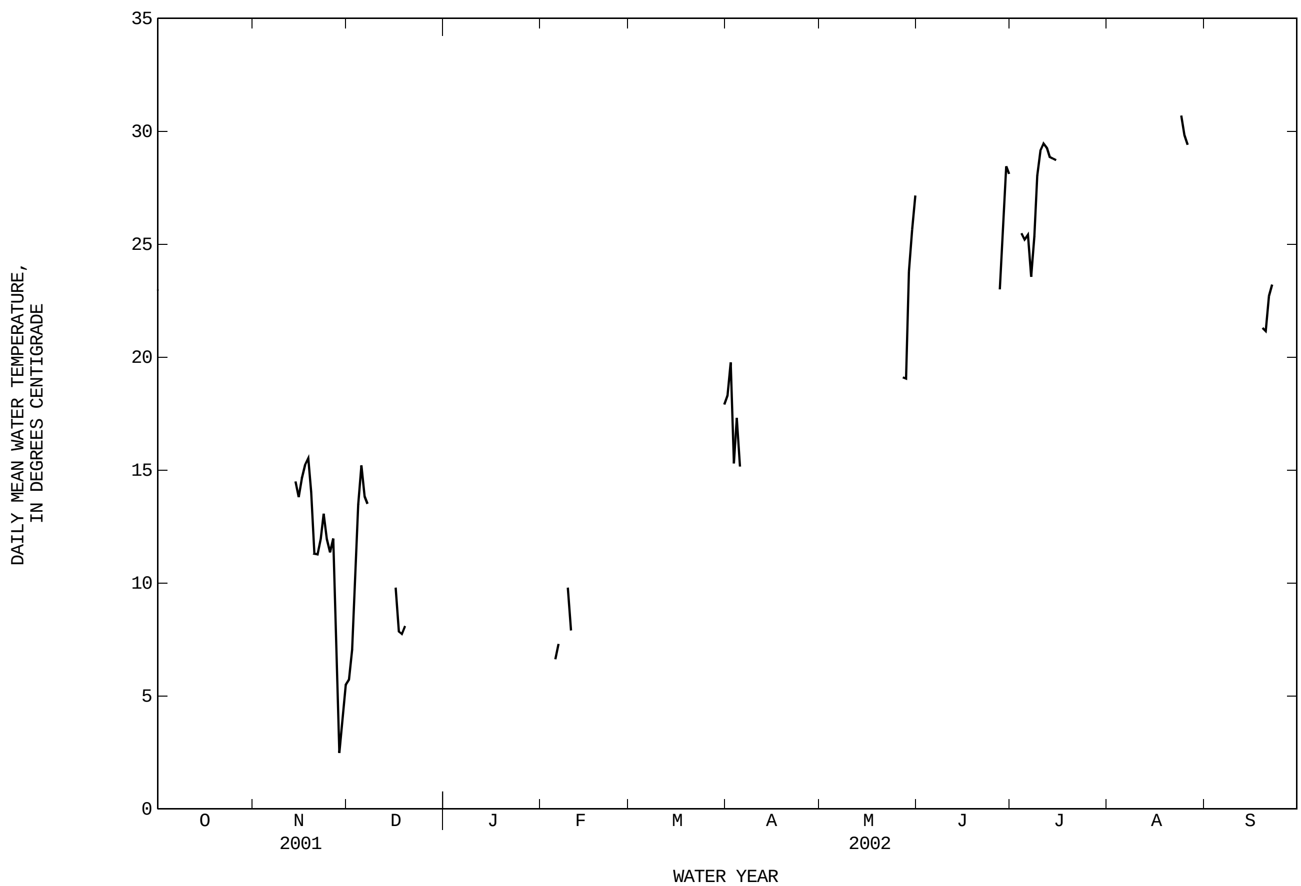
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	---	---	---	---	---	---	6.9	4.5	5.7	---	---	---
2	---	---	---	---	---	---	9.1	5.4	7.1	---	---	---
3	---	---	---	---	---	---	12.9	8.2	10.6	---	---	---
4	---	---	---	---	---	---	14.6	12.6	13.5	---	---	---
5	---	---	---	---	---	---	16.9	14.2	15.2	---	---	---
6	---	---	---	---	---	---	15.0	12.8	13.8	---	---	---
7	---	---	---	---	---	---	15.1	12.4	13.5	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	16.4	14.3	14.5	---	---	---	---	---	---
15	---	---	---	14.3	13.6	13.8	---	---	---	---	---	---
16	---	---	---	15.2	14.2	14.6	10.2	8.7	9.8	---	---	---
17	---	---	---	16.3	14.5	15.2	9.4	6.3	7.9	---	---	---
18	---	---	---	16.3	15.0	15.5	10.0	5.9	7.7	---	---	---
19	---	---	---	15.6	12.2	14.0	10.6	6.6	8.1	---	---	---
20	---	---	---	12.2	10.1	11.3	---	---	---	---	---	---
21	---	---	---	13.1	9.7	11.3	---	---	---	---	---	---
22	---	---	---	14.2	10.0	12.0	---	---	---	---	---	---
23	---	---	---	14.2	12.0	13.1	---	---	---	---	---	---
24	---	---	---	13.6	10.6	11.9	---	---	---	---	---	---
25	---	---	---	13.3	9.6	11.4	---	---	---	---	---	---
26	---	---	---	13.1	10.9	12.0	---	---	---	---	---	---
27	---	---	---	11.5	5.6	8.2	---	---	---	---	---	---
28	---	---	---	5.7	1.1	2.5	---	---	---	---	---	---
29	---	---	---	5.8	2.7	4.1	---	---	---	---	---	---
30	---	---	---	8.2	4.0	5.5	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	---	---	---	21.8	14.9	18.3	---	---	---
2	---	---	---	---	---	---	22.8	17.8	19.8	---	---	---
3	---	---	---	---	---	---	17.9	13.4	15.3	---	---	---
4	---	---	---	---	---	---	18.4	15.8	17.3	---	---	---
5	7.6	6.1	6.6	---	---	---	17.4	13.6	15.2	---	---	---
6	10.6	5.5	7.3	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	12.6	7.8	9.8	---	---	---	---	---	---	---	---	---
10	10.3	6.2	7.9	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	23.3	14.5	19.1
28	---	---	---	---	---	---	---	---	---	21.5	14.9	19.0
29	---	---	---	---	---	---	---	---	---	28.2	20.6	23.8
30	---	---	---	---	---	---	---	---	---	29.6	23.0	25.6
31	---	---	---	18.8	15.9	17.9	---	---	---	32.9	23.2	27.2
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

08123800 Beals Creek near Westbrook, 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	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	28.0	24.0	25.5	---	---	---	---	---	---
5	---	---	---	28.2	23.1	25.2	---	---	---	---	---	---
6	---	---	---	26.5	24.5	25.4	---	---	---	---	---	---
7	---	---	---	25.5	22.2	23.6	---	---	---	---	---	---
8	---	---	---	28.4	22.8	25.4	---	---	---	---	---	---
9	---	---	---	31.3	25.6	28.0	---	---	---	---	---	---
10	---	---	---	32.3	26.6	29.1	---	---	---	---	---	---
11	---	---	---	33.1	26.4	29.5	---	---	---	---	---	---
12	---	---	---	32.5	26.6	29.3	---	---	---	---	---	---
13	---	---	---	32.5	26.1	28.9	---	---	---	---	---	---
14	---	---	---	32.2	25.9	28.8	---	---	---	---	---	---
15	---	---	---	32.8	25.6	28.7	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	22.1	20.7	21.3
20	---	---	---	---	---	---	---	---	---	24.0	18.6	21.2
21	---	---	---	---	---	---	---	---	---	27.1	19.4	22.7
22	---	---	---	---	---	---	---	---	---	26.6	20.6	23.2
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	31.5	29.5	30.7	---	---	---
25	---	---	---	---	---	---	33.3	27.1	29.8	---	---	---
26	---	---	---	---	---	---	33.7	26.8	29.4	---	---	---
27	24.7	20.3	23.0	---	---	---	---	---	---	---	---	---
28	29.0	23.8	26.0	---	---	---	---	---	---	---	---	---
29	32.4	25.6	28.5	---	---	---	---	---	---	---	---	---
30	31.6	25.7	28.1	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---



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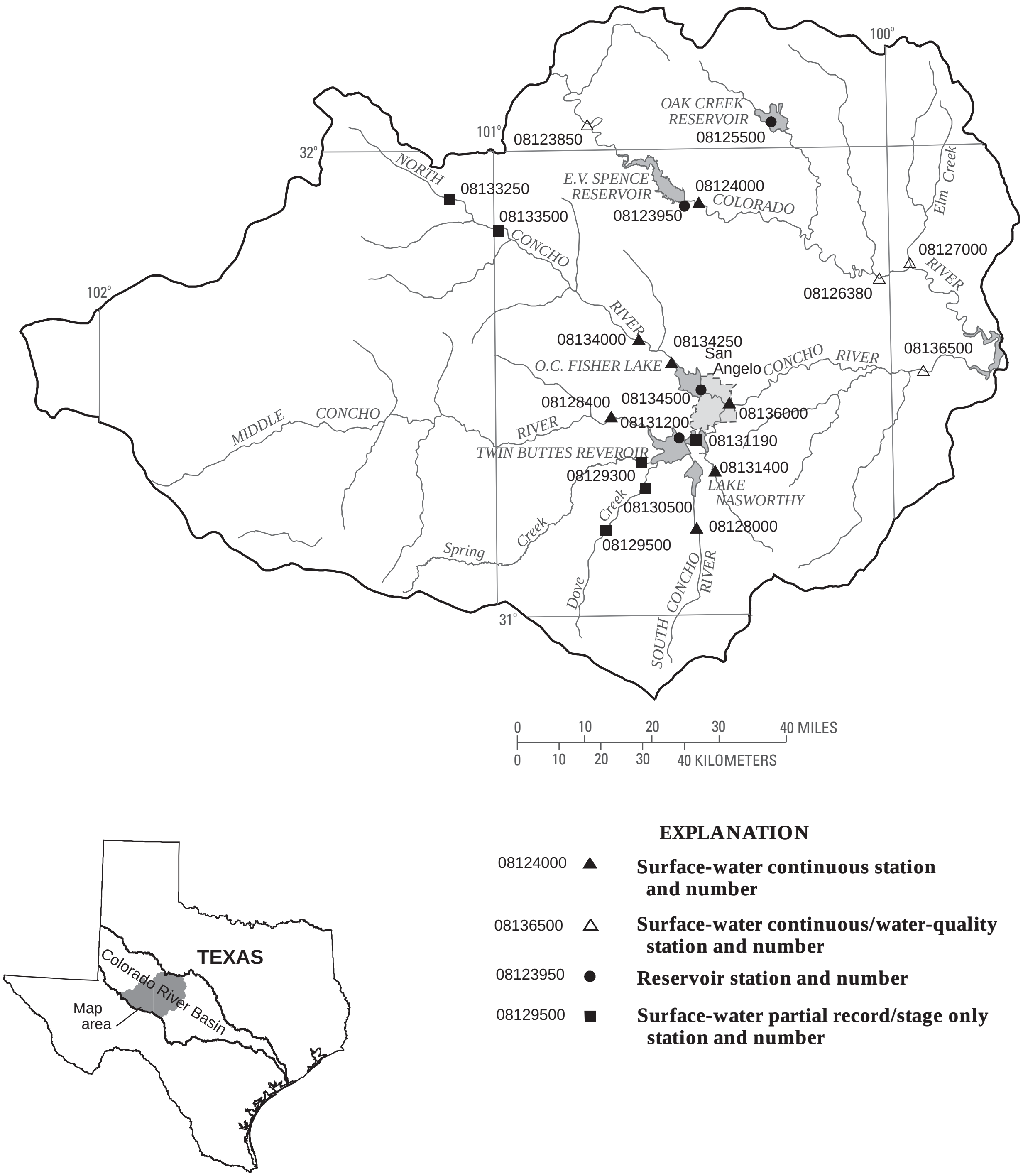


Figure 4.--Map showing location of gaging stations in the second section of the Colorado River Basin

08123850 Colorado River above Silver, TX

LOCATION.--Lat 32°03'13", long 100°45'42", Coke County, Hydrologic Unit 12080008, on right bank 25 ft downstream from Pan American Oil Co. bridge, 4.7 mi west of Silver, and at mile 756.0.

DRAINAGE AREA.--14,910 mi^2, of which 10,260 mi^2 probably is noncontributing.

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WDR TX-81-3: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,907.66 ft above NGVD of 1929. Prior to Oct. 4, 1972, water-stage recorder at site 0.5 mi downstream at same datum. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. Since installation of gage in Aug. 1967, at least 10% of contributing drainage area has been regulated. The Colorado River Municipal Water District diverts low flow into an off channel reservoir 3.0 mi above Colorado River at Colorado City (station 08121000) for brine disposal. There are numerous diversions from Lake J.B. Thomas (station 08118000) for municipal use and for oil field operations. 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	2.5	0.00	8.8	1.5	1.1	0.69	53	0.19	58	6.0	0.00	0.00
2	1.5	0.00	8.5	1.9	0.87	0.14	107	0.04	22	3.2	0.00	0.00
3	0.84	0.00	12	2.1	0.84	0.34	75	0.04	9.1	3.0	0.00	0.00
4	0.49	4.5	12	2.1	2.1	0.49	45	0.03	4.1	15	0.00	0.00
5	0.37	1.5	10	2.1	6.0	0.50	32	0.04	1.6	18	0.00	0.00
6	0.20	0.97	8.9	2.0	6.6	0.59	25	0.04	0.83	20	0.00	0.00
7	0.14	0.23	8.8	1.6	4.7	0.79	29	59	1.6	101	0.00	0.00
8	0.15	0.05	5.9	1.5	5.4	0.87	17	712	11	252	0.00	0.00
9	0.14	0.01	4.5	1.6	7.1	0.38	13	915	8.8	90	0.00	0.00
10	0.07	0.00	3.9	1.2	3.9	0.46	9.3	331	1.9	72	0.00	0.00
11	0.68	0.00	4.0	1.0	2.8	0.53	6.6	73	0.30	43	0.00	0.00
12	0.23	0.00	3.9	0.86	2.3	0.31	4.9	47	0.06	34	0.00	0.00
13	52	0.00	3.4	1.0	1.9	0.57	4.0	30	0.00	45	0.00	0.00
14	30	0.17	3.0	0.81	2.0	0.51	3.1	17	0.00	17	0.00	0.00
15	15	449	2.8	1.0	1.3	0.17	2.9	9.9	28	10	0.00	0.00
16	8.5	1300	4.2	0.93	1.2	0.20	2.8	6.4	1.9	7.6	0.00	0.00
17	5.6	1230	3.8	0.55	1.2	0.31	4.2	8.0	32	5.4	0.00	0.00
18	3.5	403	17	0.70	1.6	0.42	2.8	6.9	16	3.7	0.00	0.00
19	1.8	571	17	0.64	0.98	0.66	2.2	3.8	5.1	3.9	0.00	0.00
20	1.0	291	12	0.79	1.0	1.1	1.7	1.6	1.5	3.4	0.00	0.00
21	0.52	90	8.3	0.63	0.72	1.1	0.79	0.72	0.35	2.1	0.00	0.00
22	0.26	56	5.4	0.82	0.79	0.99	0.69	0.49	0.12	1.3	0.00	0.00
23	0.10	40	3.7	0.81	0.97	2.0	0.68	0.19	0.03	0.78	0.00	0.00
24	0.04	28	2.8	0.37	1.1	6.1	0.41	0.13	0.00	0.43	0.00	0.00
25	0.02	24	2.3	0.51	0.58	3.4	0.15	201	0.00	0.23	0.00	0.00
26	0.02	18	1.9	0.59	0.22	4.6	0.32	54	0.00	0.16	0.00	0.00
27	0.01	11	1.8	0.60	0.51	4.5	0.48	344	57	0.07	0.00	0.00
28	0.00	12	1.7	0.79	0.56	2.9	0.19	188	116	0.04	0.00	0.00
29	0.00	11	1.3	1.1	---	2.4	0.28	114	39	0.03	0.00	0.00
30	0.00	9.7	1.2	1.0	---	8.5	0.49	101	9.8	0.02	0.00	0.00
31	0.00	---	1.1	0.99	---	4.1	---	103	---	0.02	0.00	---
TOTAL	125.68	4551.13	185.9	34.09	60.34	50.62	444.98	3327.51	426.09	758.38	0.00	0.00
MEAN	4.054	151.7	5.997	1.100	2.155	1.633	14.83	107.3	14.20	24.46	0.000	0.000
MAX	52	1300	17	2.1	7.1	8.5	107	915	116	252	0.00	0.00
MIN	0.00	0.00	1.1	0.37	0.22	0.14	0.15	0.03	0.00	0.02	0.00	0.00
AC-FT	249	9030	369	68	120	100	883	6600	845	1500	0.00	0.00

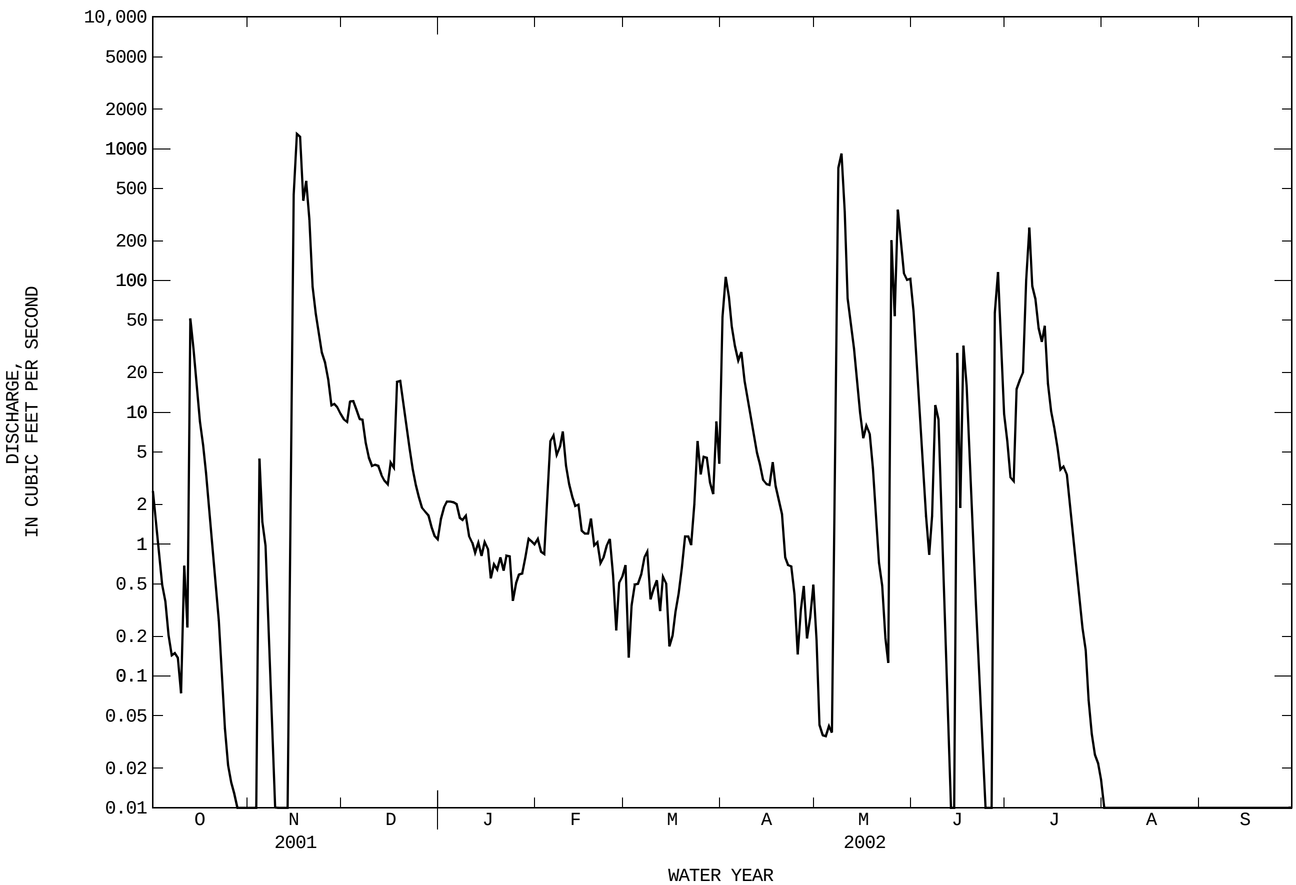
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	112.6	22.52	17.26	16.28	28.28	54.11	49.49	143.7	155.9	48.94	77.36	138.0
MAX	1834	152	120	90.7	256	999	599	681	1242	313	1122	1853
(WY)	1987	2002	1992	1987	1992	2000	1981	1994	1982	1988	1971	1980
MIN	0.000	0.000	0.30	1.10	1.02	0.36	0.70	1.91	0.048	0.000	0.000	0.000
(WY)	1969	1971	1971	2002	1971	1971	1998	1984	2001	1970	2002	1968

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1967 - 2002	
ANNUAL TOTAL	5812.39		9964.72			
ANNUAL MEAN	15.92		27.30		72.34	
HIGHEST ANNUAL MEAN					298	1987
LOWEST ANNUAL MEAN					4.69	1998
HIGHEST DAILY MEAN	1300	Nov 16	1300	Nov 16	15900	Sep 30 1980
LOWEST DAILY MEAN	0.00	May 22	0.00	Oct 28	0.00	Aug 2 1968
ANNUAL SEVEN-DAY MINIMUM	0.00	Jun 3	0.00	Oct 28	0.00	Aug 2 1968
MAXIMUM PEAK FLOW			1660	Nov 17	c18900	Sep 9 1980
MAXIMUM PEAK STAGE			7.98	Nov 17	22.73	Sep 9 1980
ANNUAL RUNOFF (AC-FT)	11530		19770		52400	
10 PERCENT EXCEEDS	12		39		90	
50 PERCENT EXCEEDS	1.7		1.0		7.8	
90 PERCENT EXCEEDS	0.00		0.00		0.09	

c From rating curve extended above 12,800 ft^3/s.

08123850 Colorado River above Silver, TX--Continued



08123850 Colorado River above Silver, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--
CHEMICAL DATA: Aug. 1967 to current year.
BIOCHEMICAL DATA: Nov. 1977 to current year.
PESTICIDE DATA: Oct. 1969 to Aug. 1981.
SEDIMENT DATA: Aug. 1977 to Aug. 1994.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Dec. 1967 to current year.
WATER TEMPERATURE: Dec. 1967 to May 1981 (local observer) and June 1981 to current year.

INSTRUMENTATION.--Specific conductance recorder since Dec. 1967. Water-temperature recorder since June 1981.

REMARKS.--No estimated daily specific conductance or water temperature. Records good except those for specific conductances from Nov. 4-9, which are fair. Interruptions in the record were due to no flow. No flow Oct. 28 to Nov. 3, Nov. 10-13, June 13-14, June 24-26, and Aug. 1 to Sept. 30. 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, 19,900 microsiemens/cm, Sept. 10, 1988; minimum, 154 microsiemens/cm, Sept. 21, 1990.
WATER TEMPERATURE: Maximum, 35.5°C, Aug. 2, 7, 1985; minimum, 0.0°C, on many days during winter months.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 10,500 microsiemens/cm, Apr. 1; minimum, 229 microsiemens/cm, Nov. 15.
WATER TEMPERATURE: Maximum, 33.1°C, July 24; minimum, 1.9°C, Nov. 28.

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)
FEB													
13...	1300	2.0	6740	8.1	8.2	10.5	97	1400	1300	355	127	930	11
MAR													
28...	1140	3.3	8500	8.2	17.7	7.9	92	1800	1700	455	170	1200	12
MAY													
08...	1300	721	--	--	--	--	--	160	--	47.4	8.97	56.6	2
09...	1200	990	479	7.8	20.7	6.3	76	120	31	40.1	5.86	42.1	2
JUL													
16...	1440	8.3	1280	8.4	30.6	7.1	103	250	--	69.5	18.5	162	4

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)
FEB													
13...	7.12	159	1260	1540	.4	1.0	4320	--	<.008	<.05	.10	.21	.31
MAR													
28...	8.38	150	1770	1860	.5	.8	5550	--	<.008	<.05	.10	.19	.28
MAY													
08...	8.26	--	66.9	86.1	.2	5.0	342	--	--	--	--	--	--
09...	6.72	93	37.1	55.8	.2	4.69	250	.14	.019	.15	.05	.26	.31
JUL													
16...	5.98	--	152	236	.4	5.45	723	--	<.008	<.05	<.04	--	.32

Date	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	ORTHO-PHOS-PHATE, DIS-SOLVED (MG/L AS P) (00671)	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)
FEB													
13...	<.06	<.02	--	--	11	74.4	--	<.1	<.8	--	E.8	<10	M
MAR													
28...	<.06	<.02	--	--	E2	56.6	--	<.1	.9	--	<1.0	<50	<1
MAY													
08...	--	--	--	--	--	--	--	--	--	--	--	--	--
09...	<.06	E.02	3	.29	2	85	<.10	<.07	<.8	.32	1.0	14	<.20
JUL													
16...	<.06	<.02	2	.34	3	212	<.06	<.04	<.8	.44	1.8	<10	.09

08123850 Colorado River above Silver, TX--Continued

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

Date	LITHIUM DIS-SOLVED (UG/L AS LI) (01130)	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)	STRON-TIUM, DIS-SOLVED (UG/L AS SR) (01080)	VANA-DIUM, DIS-SOLVED (UG/L AS V) (01085)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)	URANIUM NATURAL DIS-SOLVED (UG/L AS U) (22703)
FEB											
13...	--	14.0	<.01	--	--	4	<.1	--	--	<24	--
MAR											
28...	--	20.3	<.01	--	--	E3	<.1	--	--	<120	--
MAY											
08...	--	--	--	--	--	--	--	--	--	--	--
09...	6	1.1	<.01	1.4	1.65	<2	<2	313	E6	<2	.77
JUL											
16...	24	.6	<.01	3.1	1.00	<2	<1	1040	12	2	2.50

Remark codes used in this report:
< -- Less than
E -- Estimated value
M -- Presence verified, not quantified

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	6500	6230	6400	---	---	---	3260	3080	3190	4910	4810	4860
2	6240	5940	6120	---	---	---	3300	3260	3280	5130	4910	5020
3	5960	5750	5850	---	---	---	3400	3290	3340	5350	5100	5230
4	5750	5580	5670	5140	4660	5020	3560	3400	3490	5520	5350	5440
5	5580	5450	5510	4980	4520	4720	3760	3560	3640	5760	5510	5610
6	5460	5330	5400	4550	4370	4430	3920	3760	3850	6000	5720	5880
7	5370	5300	5340	4500	4410	4450	4010	3920	3950	6160	6000	6090
8	5320	5240	5280	4570	4490	4530	4180	4010	4100	6270	6210	6250
9	5250	5150	5200	4610	4550	4580	4260	4180	4220	6290	5910	6230
10	5160	5060	5110	---	---	---	4380	4240	4320	6400	5910	6190
11	5110	4940	5040	---	---	---	4480	4380	4440	6520	5990	6340
12	4990	4890	4940	---	---	---	4630	4480	4550	6680	6130	6460
13	5990	4480	5520	---	---	---	4770	4620	4700	6760	6680	6710
14	5570	4950	5180	4840	4710	4800	4870	4770	4810	6850	6760	6820
15	5710	5240	5560	4710	229	2330	4940	4860	4900	6870	6800	6840
16	5240	4490	4860	603	324	443	4940	4780	4880	6820	6240	6650
17	4500	4180	4340	1080	434	712	4790	4720	4750	6760	6650	6700
18	4200	3990	4110	4010	1080	2100	4920	4700	4800	6660	6580	6630
19	4020	3920	3980	2240	1280	1530	5230	4810	5030	6600	6480	6530
20	3980	3920	3950	1320	1070	1160	5590	5230	5410	6500	6420	6450
21	3950	3920	3940	1200	1070	1110	5740	5590	5680	6440	6350	6400
22	3990	3940	3960	1520	1200	1370	5790	5720	5760	6360	6260	6310
23	4040	3990	4010	1760	1520	1640	5820	5760	5790	6270	6200	6240
24	4120	4040	4080	2000	1760	1890	5770	5510	5630	6290	6210	6250
25	4180	4110	4150	2220	2000	2110	5520	5140	5290	6380	6270	6310
26	4240	4180	4210	2400	2220	2310	5160	4860	4970	6400	6300	6360
27	4310	4230	4270	2590	2400	2500	4880	4630	4720	6470	6390	6430
28	---	---	---	2680	2560	2600	4680	4570	4630	6510	6440	6470
29	---	---	---	2880	2680	2760	4620	4580	4600	6610	6500	6550
30	---	---	---	3090	2880	2980	4720	4600	4660	6760	6600	6690
31	---	---	---	---	---	---	4820	4720	4760	6870	6750	6800
MONTH	---	---	---	---	---	---	5820	3080	4590	6870	4810	6250

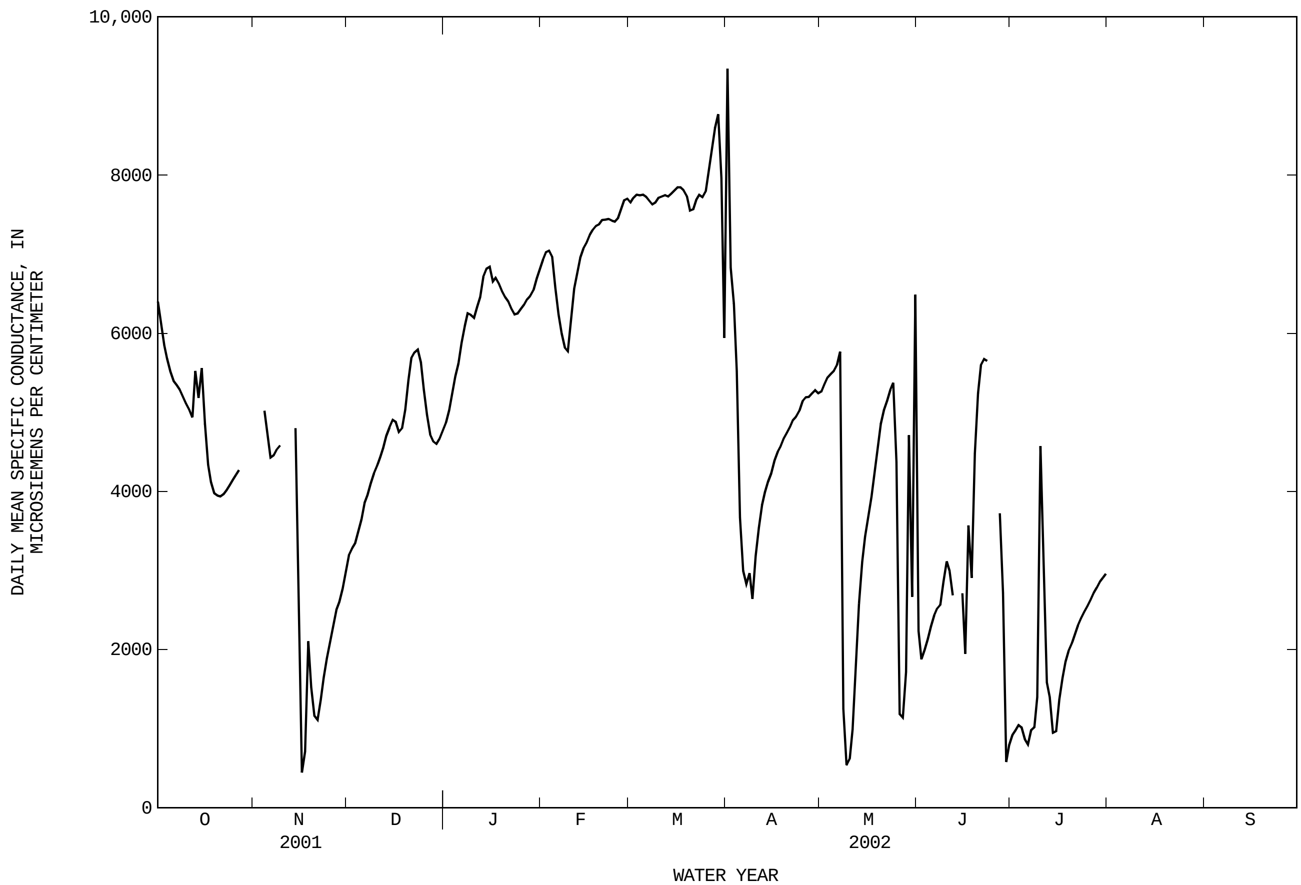
08123850 Colorado River above Silver, TX--Continued

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	6970	6870	6920	7700	7580	7650	10500	6460	9340	5310	5230	5260
2	7060	6970	7020	7770	7650	7720	9330	3770	6830	5410	5300	5350
3	7060	7020	7040	7820	7680	7750	7600	4000	6370	5490	5400	5440
4	7040	6800	6970	7800	7680	7750	6960	4380	5520	5520	5460	5490
5	6800	6360	6580	7790	7720	7750	4380	3180	3670	5560	5500	5530
6	6360	6150	6240	7770	7640	7730	3180	2880	2990	5630	5560	5590
7	6150	5880	5990	7720	7620	7670	2890	2780	2830	7580	5600	5770
8	5940	5740	5820	7650	7600	7630	3040	2890	2960	7380	647	1250
9	5940	5710	5770	7690	7560	7650	3020	2360	2640	900	465	538
10	6390	5940	6160	7740	7690	7710	3390	2780	3180	780	500	617
11	6680	6390	6570	7790	7650	7730	3680	3390	3540	1290	780	994
12	6830	6670	6770	7920	7650	7750	3980	3680	3830	2230	1290	1760
13	7030	6830	6950	7760	7680	7730	4080	3890	3990	2890	2230	2580
14	7110	7000	7070	7800	7730	7760	4280	4070	4130	3310	2890	3110
15	7190	7090	7140	7840	7760	7810	4320	4160	4230	3560	3310	3430
16	7350	7180	7240	7870	7820	7850	4480	4300	4390	3790	3560	3670
17	7360	7240	7310	7890	7810	7850	4530	4420	4500	4120	3790	3930
18	7400	7320	7360	7870	7780	7810	4630	4500	4570	4460	4120	4280
19	7410	7340	7380	7790	7680	7740	4710	4610	4670	4740	4440	4590
20	7490	7400	7430	7680	7470	7550	4770	4690	4740	4960	4740	4850
21	7460	7400	7440	7640	7510	7570	4870	4770	4820	5090	4940	5030
22	7490	7390	7450	7730	7620	7680	4940	4860	4910	5220	5000	5150
23	7470	7390	7420	7780	7710	7750	4980	4920	4950	5340	5210	5280
24	7440	7370	7410	7770	7600	7720	5070	4970	5020	5430	5340	5370
25	7500	7430	7460	7890	7680	7790	5210	5070	5140	5520	320	4370
26	7670	7500	7570	8270	7890	8050	5210	5170	5190	1430	540	1180
27	7700	7650	7680	8430	8190	8320	5230	5170	5200	1450	305	1140
28	7740	7650	7700	8710	8430	8590	5270	5210	5240	2220	717	1710
29	---	---	---	8820	8670	8770	5300	5240	5280	6370	2160	4710
30	---	---	---	8700	6240	7960	5270	5070	5240	5540	1930	2670
31	---	---	---	6460	5680	5940	---	---	---	8230	3600	6480
MONTH	7740	5710	7000	8820	5680	7770	10500	2360	4660	8230	305	3780

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	3600	1840	2240	929	899	914	---	---	---	---	---	---
2	1930	1850	1880	1020	929	976	---	---	---	---	---	---
3	2060	1930	1990	1070	1020	1040	---	---	---	---	---	---
4	2210	2050	2130	1120	629	1010	---	---	---	---	---	---
5	2360	2210	2300	978	623	869	---	---	---	---	---	---
6	2470	2360	2430	934	733	798	---	---	---	---	---	---
7	2560	2460	2520	2350	793	981	---	---	---	---	---	---
8	2670	2440	2570	1400	672	1020	---	---	---	---	---	---
9	3000	2660	2860	4080	771	1400	---	---	---	---	---	---
10	3170	3000	3120	5130	3900	4570	---	---	---	---	---	---
11	3160	2800	2990	3900	1980	2770	---	---	---	---	---	---
12	2800	2600	2680	1980	1460	1590	---	---	---	---	---	---
13	---	---	---	1460	1370	1400	---	---	---	---	---	---
14	---	---	---	1370	666	946	---	---	---	---	---	---
15	3050	2090	2710	1220	726	964	---	---	---	---	---	---
16	2390	1580	1950	1510	1220	1370	---	---	---	---	---	---
17	4280	2370	3570	1760	1510	1640	---	---	---	---	---	---
18	3760	2400	2900	1930	1760	1840	---	---	---	---	---	---
19	4920	3760	4480	2050	1920	1980	---	---	---	---	---	---
20	5550	4850	5240	2150	2030	2080	---	---	---	---	---	---
21	5700	5480	5590	2250	2140	2190	---	---	---	---	---	---
22	5760	5550	5670	2360	2230	2300	---	---	---	---	---	---
23	5850	5530	5650	2490	2320	2400	---	---	---	---	---	---
24	---	---	---	2590	2430	2470	---	---	---	---	---	---
25	---	---	---	2630	2490	2550	---	---	---	---	---	---
26	---	---	---	2680	2590	2630	---	---	---	---	---	---
27	5410	589	3720	2760	2670	2710	---	---	---	---	---	---
28	3910	680	2720	2820	2740	2780	---	---	---	---	---	---
29	680	532	577	2900	2810	2860	---	---	---	---	---	---
30	899	661	788	2970	2880	2910	---	---	---	---	---	---
31	---	---	---	2990	2910	2960	---	---	---	---	---	---
MONTH	---	---	---	5130	623	1900	---	---	---	---	---	---

08123850 Colorado River above Silver, TX--Continued



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

DAY	OCTOBER MAX	OCTOBER MIN	OCTOBER MEAN	NOVEMBER MAX	NOVEMBER MIN	NOVEMBER MEAN	DECEMBER MAX	DECEMBER MIN	DECEMBER MEAN	JANUARY MAX	JANUARY MIN	JANUARY MEAN
1	22.1	18.8	20.3	---	---	---	8.9	5.7	7.3	5.3	4.0	4.5
2	21.7	18.3	20.2	---	---	---	10.7	7.6	9.0	4.4	3.5	4.1
3	23.0	19.4	21.1	---	---	---	14.3	10.3	12.4	4.8	2.1	3.6
4	24.6	20.7	22.6	20.7	18.5	19.2	15.5	13.7	14.5	5.0	3.9	4.4
5	23.5	18.7	21.4	20.1	18.3	19.4	17.4	15.4	16.1	6.5	4.9	5.6
6	21.3	17.0	18.4	19.8	17.6	18.8	16.0	13.8	14.8	7.1	4.1	5.6
7	20.1	16.6	18.4	20.1	16.9	18.5	15.3	13.4	14.3	7.7	4.5	6.4
8	21.9	18.3	20.0	18.6	17.2	18.0	14.2	10.3	12.0	8.7	6.0	7.1
9	24.5	20.8	22.3	17.2	15.7	16.4	10.4	8.0	9.3	10.9	7.3	9.1
10	25.2	22.2	23.1	---	---	---	10.3	7.5	9.1	10.7	9.0	9.8
11	22.8	20.1	21.5	---	---	---	10.2	7.6	9.0	9.5	7.6	8.7
12	21.2	19.1	20.2	---	---	---	11.8	8.9	10.3	8.9	6.9	8.1
13	19.8	16.4	18.0	---	---	---	10.6	8.1	9.0	9.6	7.0	8.3
14	20.4	15.5	17.9	17.1	16.6	16.9	9.4	6.3	8.0	10.0	7.3	8.6
15	20.2	15.9	17.8	16.7	14.2	15.1	9.7	7.4	8.6	9.8	7.1	8.4
16	19.2	14.1	16.5	15.0	13.9	14.4	10.5	9.6	10.1	12.4	9.3	10.6
17	18.4	14.1	16.3	15.5	14.9	15.2	10.5	7.9	9.2	11.2	9.3	9.9
18	19.5	14.3	17.1	16.8	15.2	15.9	11.0	7.3	9.2	9.3	8.2	8.5
19	19.4	15.8	17.9	16.2	13.7	15.1	10.6	7.3	8.9	9.2	7.1	8.2
20	20.6	16.9	18.9	13.7	11.9	12.8	10.5	6.7	8.6	9.2	7.0	8.1
21	22.4	18.7	20.4	13.5	11.2	12.4	10.8	7.5	9.2	8.9	6.4	7.9
22	22.9	19.5	21.1	14.2	11.2	12.7	11.2	9.1	10.1	12.3	8.5	10.2
23	22.4	19.7	20.8	14.7	12.6	13.5	9.9	7.3	8.7	14.2	11.6	12.7
24	20.8	18.9	19.7	13.9	11.2	12.5	8.9	6.2	7.5	13.2	9.3	10.6
25	19.1	16.8	17.9	13.8	10.4	12.1	8.5	6.4	7.8	10.4	7.2	8.5
26	17.5	15.8	16.5	13.5	11.4	12.5	8.1	5.4	7.1	10.2	7.1	8.7
27	18.4	15.4	16.6	12.5	6.9	9.6	7.6	5.2	6.3	11.1	8.2	9.7
28	---	---	---	6.9	1.9	3.2	8.0	5.1	6.6	14.0	10.0	11.9
29	---	---	---	6.0	2.3	3.9	7.3	5.3	6.6	16.3	13.6	14.8
30	---	---	---	8.1	4.1	6.0	6.5	5.1	5.6	15.9	11.1	13.7
31	---	---	---	---	---	---	5.9	3.8	4.9	11.1	8.9	9.9
MONTH	---	---	---	---	---	---	17.4	3.8	9.4	16.3	2.1	8.6

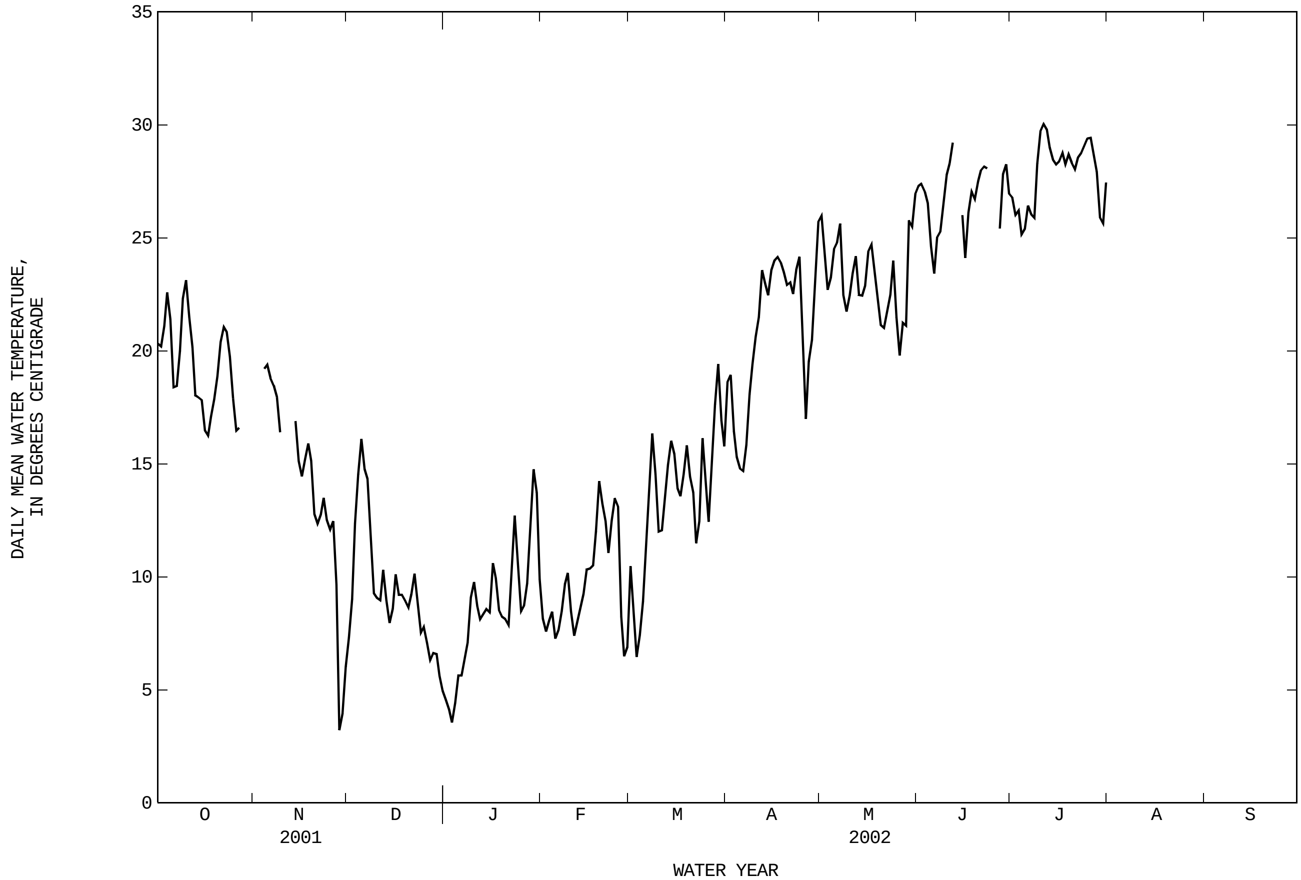
08123850 Colorado River above Silver, TX--Continued

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
		FEBRUARY			MARCH			APRIL			MAY	
1	9.4	6.7	8.1	13.8	7.9	10.5	21.7	16.0	18.6	28.0	24.1	26.0
2	8.4	7.1	7.6	11.8	6.6	8.1	20.4	17.8	18.9	26.4	22.9	24.5
3	9.0	7.3	8.1	8.3	4.6	6.5	17.9	15.3	16.4	25.0	21.2	22.7
4	8.9	8.1	8.5	9.4	5.2	7.4	17.2	13.8	15.3	25.8	20.9	23.2
5	8.1	6.7	7.3	10.9	6.8	8.9	16.1	13.6	14.8	26.6	22.7	24.5
6	9.8	6.0	7.6	14.6	9.3	11.6	15.4	14.1	14.7	26.0	23.4	24.8
7	10.6	6.7	8.5	16.3	12.0	14.0	18.7	13.5	15.8	28.4	23.2	25.6
8	12.5	7.3	9.7	17.9	15.1	16.3	21.5	15.2	18.1	25.8	20.5	22.5
9	11.8	8.6	10.2	17.0	13.0	14.5	23.0	16.6	19.4	23.2	20.3	21.7
10	9.8	6.9	8.5	13.4	10.7	12.0	24.0	17.5	20.6	24.2	21.1	22.5
11	9.8	4.8	7.4	14.1	10.0	12.0	25.3	18.7	21.5	25.6	21.9	23.4
12	9.9	6.0	8.0	17.6	11.1	13.6	27.4	21.2	23.6	25.9	22.9	24.2
13	10.1	6.4	8.6	17.0	12.9	15.0	25.1	21.7	23.0	25.1	20.1	22.5
14	11.1	7.2	9.2	18.0	14.0	16.0	26.3	20.0	22.5	25.2	20.0	22.4
15	11.4	8.4	10.3	16.8	13.9	15.4	25.7	21.3	23.6	26.4	19.7	22.9
16	11.8	8.7	10.4	14.9	13.0	13.9	26.9	21.6	24.0	28.0	21.3	24.4
17	11.6	9.3	10.5	14.6	12.6	13.6	26.4	21.7	24.2	26.9	22.6	24.7
18	14.5	9.8	12.0	15.8	13.5	14.5	25.3	22.5	23.9	26.8	20.6	23.3
19	15.3	13.2	14.2	16.4	15.3	15.8	24.9	22.3	23.5	25.0	19.1	22.1
20	14.8	11.3	13.2	15.7	13.1	14.4	23.7	22.1	22.9	23.9	18.5	21.1
21	13.5	11.5	12.5	14.9	12.6	13.7	24.9	21.4	23.0	23.8	18.4	21.0
22	12.9	9.3	11.1	13.1	9.9	11.5	23.9	20.7	22.5	24.7	19.0	21.7
23	15.3	10.5	12.5	15.2	10.0	12.5	26.3	21.7	23.6	23.7	21.0	22.5
24	15.7	11.7	13.5	20.0	13.1	16.1	26.2	22.4	24.2	27.2	21.3	24.0
25	14.8	11.8	13.1	18.2	12.5	14.3	24.1	18.1	20.8	25.3	10.3	21.5
26	11.8	6.2	8.2	16.3	8.8	12.4	18.1	16.2	17.0	25.3	14.4	19.8
27	7.7	5.0	6.5	18.1	12.1	15.1	23.4	17.2	19.5	23.6	17.3	21.2
28	8.6	5.2	6.9	20.4	14.4	17.6	22.3	18.8	20.5	26.0	18.1	21.1
29	---	---	---	21.0	18.1	19.4	26.8	20.5	23.0	28.5	23.6	25.8
30	---	---	---	19.0	15.5	16.9	28.4	23.9	25.7	27.1	23.8	25.5
31	---	---	---	18.9	14.1	15.8	---	---	---	29.2	24.9	26.9
MONTH	15.7	4.8	9.7	21.0	4.6	13.5	28.4	13.5	20.8	29.2	10.3	23.2

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	29.8	25.2	27.3	28.4	25.0	26.8	---	---	---	---	---	---
2	30.3	24.9	27.4	29.3	24.3	26.0	---	---	---	---	---	---
3	30.6	23.9	27.1	27.7	24.8	26.2	---	---	---	---	---	---
4	28.3	25.0	26.5	26.3	23.9	25.1	---	---	---	---	---	---
5	26.3	23.9	24.6	29.7	23.3	25.4	---	---	---	---	---	---
6	24.9	22.2	23.4	28.6	25.0	26.4	---	---	---	---	---	---
7	26.8	24.0	25.0	27.6	24.7	26.0	---	---	---	---	---	---
8	27.8	23.3	25.3	27.9	23.8	25.9	---	---	---	---	---	---
9	30.0	23.8	26.6	30.7	26.2	28.3	---	---	---	---	---	---
10	30.4	25.7	27.8	32.1	27.7	29.7	---	---	---	---	---	---
11	30.3	26.0	28.3	32.9	27.7	30.0	---	---	---	---	---	---
12	31.4	27.1	29.2	32.3	27.9	29.8	---	---	---	---	---	---
13	---	---	---	31.3	27.3	29.0	---	---	---	---	---	---
14	---	---	---	32.6	26.5	28.5	---	---	---	---	---	---
15	28.5	22.9	26.0	31.5	25.8	28.3	---	---	---	---	---	---
16	27.1	22.6	24.1	32.8	25.6	28.4	---	---	---	---	---	---
17	29.3	23.7	26.1	31.5	26.4	28.8	---	---	---	---	---	---
18	30.4	24.0	27.1	30.2	26.4	28.3	---	---	---	---	---	---
19	30.1	23.5	26.7	31.5	26.2	28.7	---	---	---	---	---	---
20	30.6	24.8	27.5	31.0	26.0	28.3	---	---	---	---	---	---
21	30.7	25.4	28.0	30.4	25.7	28.0	---	---	---	---	---	---
22	30.6	25.8	28.2	30.9	26.1	28.5	---	---	---	---	---	---
23	32.0	25.6	28.1	31.7	26.4	28.7	---	---	---	---	---	---
24	---	---	---	33.1	26.9	29.1	---	---	---	---	---	---
25	---	---	---	32.6	27.1	29.4	---	---	---	---	---	---
26	---	---	---	31.8	27.4	29.4	---	---	---	---	---	---
27	27.2	20.6	25.4	31.2	26.4	28.7	---	---	---	---	---	---
28	30.2	25.3	27.8	29.3	26.6	27.9	---	---	---	---	---	---
29	31.5	26.1	28.2	27.2	25.3	25.9	---	---	---	---	---	---
30	31.2	25.1	27.0	27.7	24.2	25.6	---	---	---	---	---	---
31	---	---	---	30.4	25.2	27.4	---	---	---	---	---	---
MONTH	---	---	---	33.1	23.3	27.8	---	---	---	---	---	---

08123850 Colorado River above Silver, TX--Continued



08123950 E.V. Spence Reservoir near Robert Lee, TX

LOCATION.--Lat 31°52′46", long 100°31′01", Coke County, Hydrologic Unit 12080008, in outlet works of Robert Lee Dam on the Colorado River, 2.2 mi west of Robert Lee, and at mile 716.0.

DRAINAGE AREA.--15,278 mi^2, approximately, of which 10,260 mi^2 probably is noncontributing.

PERIOD OF RECORD.--Dec. 1968 to current year.
Water-quality records.--Chemical data: Nov. 1969 to Aug. 1988. Biochemical data: Jan. 1978 to Aug. 1988.

REVISED RECORDS.--WDR TX-81-3: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is NGVD of 1929. Prior to June 24, 1969, nonrecording gage at same site and datum. 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 21,500 ft long. Closure was made Dec. 30, 1968, and dam was completed in June 1969. The dam is the property of the Colorado River Municipal Water District, which has a permit to divert 50,000 acre-ft annually for municipal, mining, and industrial uses. Inflow into the reservoir is partially regulated by Lake J.B. Thomas (station 08118000, conservation pool storage 199,931 acre-ft), Lake Colorado City (station 08123000, conservation pool storage 30,800 acre-ft), and Champion Creek Reservoir (station 08123600, conservation pool storage 41,600 acre-ft). There are two spillways: The controlled service spillway is a morning-glory type that is partially controlled by 12 lift gates, 14.48 by 22.0 ft, and discharges through a 28.0 ft diameter concrete conduit. The uncontrolled spillway is a 3,200 ft wide cut through natural ground near the right end of dam. Conservation pool storage is 517,272 acre-ft. Data regarding the dam are given in the following table:

	Elevation (feet)
Top of dam...	1,928.0
Crest of spillway...	1,908.0
Top of gates..	1,900.0
Crest of spillway...	1,878.0
Lowest gated outlet (invert)..	1,815.85

COOPERATION.--Capacity table dated Mar. 1972 was furnished by the Colorado River Municipal Water District. Records of diversions can be obtained from the city of San Angelo and from the Colorado River Municipal Water District. A volumetric survey by the Texas Water Development Board in July 1999 has not received final approval from the Colorado River Municipal Water District.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 355,300 acre-ft, June 16, 1987, elevation, 1,887.03 ft; minimum contents after initial filling, 45,970 acre-ft, Sept. 30, 2002, elevation, 1,838.99 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 62,020 acre-ft, Nov. 28, elevation, 1,844.32 ft; minimum contents, 45,970 acre-ft, Sept. 30, elevation, 1,838.99 ft.

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

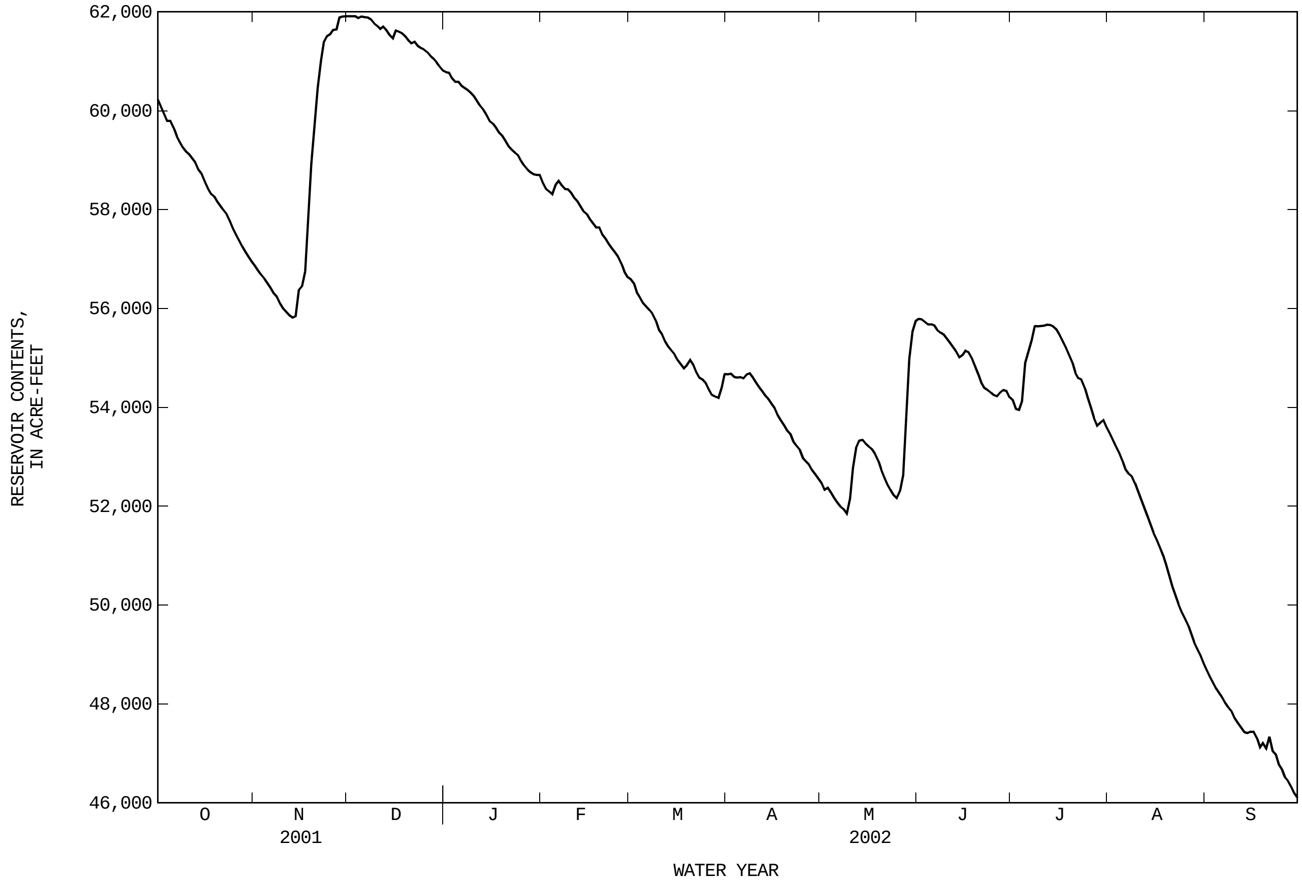
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	60230	56860	61920	60780	58540	56590	54670	52460	55790	e54150	53490	48690
2	60080	56760	61920	60770	58420	56510	54680	52330	55780	53970	53350	48560
3	59930	56680	61910	60660	58370	56320	54620	52370	55730	53950	53210	48430
4	59800	56600	61870	60590	58310	56220	54600	52270	55680	54120	53080	48310
5	59800	56510	61910	60590	58490	56110	54610	52160	55680	54890	52940	48220
6	59660	56420	61890	60500	58580	56040	54580	52080	55650	55130	52750	48130
7	59490	56310	61890	60460	58490	55960	54660	52000	55560	55350	52660	48010
8	59370	56230	61850	60420	58420	55890	54690	51940	55510	55650	52610	47910
9	59260	56100	61770	60360	58410	55760	54610	51850	55470	55640	52470	47830
10	59180	56010	61720	60290	58340	55570	54500	52160	55390	55640	52310	47710
11	59120	55930	61650	60180	58230	55480	54410	52770	55310	55660	52140	47610
12	59030	55860	61700	60100	58170	55330	54330	53180	55220	55670	51970	47520
13	58960	55810	61630	60020	58070	55230	54240	53330	55130	55670	51800	47430
14	58810	55840	61540	59920	57960	55150	54170	53340	55010	55630	51640	47410
15	58720	56370	61470	59790	57910	55070	54070	53270	55060	55580	51460	47430
16	58560	56450	61630	59740	57800	54950	53980	53210	55140	55470	51330	47440
17	58420	56750	61590	59660	57720	54880	53830	53160	55110	55330	51170	47310
18	58320	57880	61570	59560	57640	54790	53730	53060	54990	55220	51000	47120
19	58270	58920	61500	59490	57640	54850	53640	52920	54830	55070	50820	47200
20	58160	59720	61420	59390	57490	54950	53530	52750	54660	54920	50600	47100
21	58070	60460	61360	59280	57410	54860	53460	52590	54500	54700	50370	47330
22	57980	61000	61390	59220	57310	54710	53310	52440	54390	54590	50190	47040
23	57900	61380	61310	59160	57220	54600	53220	52330	e54350	54560	50020	46970
24	57770	61500	61270	59110	57130	54560	53140	52230	e54300	54400	49860	46780
25	57610	61540	61240	58980	57040	54490	52970	52160	e54250	54180	49740	46680
26	57480	61640	61190	58890	56910	54360	52900	52300	54220	53980	49600	46510
27	57370	61650	61110	58810	56750	54250	52840	52630	e54300	53790	49420	46430
28	57250	61890	61050	58760	56640	54210	52720	53840	54350	53630	49250	46310
29	57140	61910	60970	58710	---	54190	52640	54980	54330	53690	49110	46190
30	57040	61910	60890	58700	---	54390	52550	55530	54210	53740	48980	46100
31	56940	---	60810	58700	---	54680	---	55740	---	53600	48820	---
MEAN	58570	58300	61510	59730	57840	55190	53860	52880	55000	54760	51230	47390
MAX	60230	61910	61920	60780	58580	56590	54690	55740	55790	55670	53490	48690
MIN	56940	55810	60810	58700	56640	54190	52550	51850	54210	53600	48820	46100
(+)	1842.79	1844.29	1843.98	1843.36	1842.69	1842.05	1841.36	1842.39	1841.90	1841.70	1840.14	1839.05
(@)	-3420	+4970	-1100	-2110	-2060	-1960	-2130	+3190	-1530	-610	-4780	-2720

CAL YR 2001 MAX 85360 MIN 55810 (@) -24610
WTR YR 2002 MAX 61920 MIN 46100 (@) -14260

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

e Estimated

08123950 E.V. Spence Reservoir near Robert Lee, TX--Continued



08124000 Colorado River at Robert Lee, TX

LOCATION.--Lat 31°53'07", long 100°28'49", Coke County, Hydrologic Unit 12080008, on left bank 190 ft upstream from bridge on State Highway 208 in Robert Lee, 0.4 mi upstream from Mountain Creek, 2.7 mi downstream from Messbox Creek, 3.6 mi downstream from Robert Lee Dam, and at mile 712.4.

DRAINAGE AREA.--15,307 mi^2, of which 10,260 mi^2 probably is noncontributing.

PERIOD OF RECORD.--Oct. 1923 to Dec. 1927, Apr. 1939 to May 1956, Oct. 1968 to current year. Prior to Dec. 1927, published as "near Robert Lee".
Water-quality records.--Chemical data: Oct. 1947 to Sept. 1957.

REVISED RECORDS.--WSP 1723: 1925(M). WDR TX-81-3: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,771.70 ft above NGVD of 1929. Prior to Dec. 31, 1927, nonrecording gage at site 9.0 mi downstream at different datum. Apr. 18 to Sept. 26, 1939, nonrecording gage, and Sept. 27, 1939 to May 9, 1956, water-stage recorder at site 200 ft downstream at same datum. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. Since July 1952, at least 10% of contributing drainage area has been regulated. There are many diversions above station for municipal, mining, agricultural, and industrial uses. No flow at times.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--16 years (water years 1924-27, 1940-51) prior to completion of Lake J.B. Thomas, 234 ft^3/s (169,400 acre-ft/yr).

EXTREMES FOR PERIOD PRIOR TO REGULATION (WATER YEARS, 1924-27, 1940-51).--Maximum discharge, 32,500 ft^3/s, Sept. 6, 1926, gage height, 20.20 ft, site and datum then in use, from rating curve extended above 15,000 ft^3/s; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1907, 26.7 ft, Oct. 13, 1957, from floodmarks. Flood in Apr. 1922 reached a stage of 25.5 ft, present 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	8.2	8.0	9.3	12	12	11	11	7.7	22	11	9.8	10
2	7.6	8.1	9.5	11	13	11	11	7.8	22	11	9.6	10
3	7.8	8.3	9.5	12	12	11	12	13	22	12	9.6	12
4	7.5	8.4	9.5	12	13	11	11	8.2	21	12	9.6	10
5	7.8	8.8	9.3	12	15	11	12	7.8	21	14	9.6	11
6	7.8	9.0	9.0	12	13	11	12	7.4	21	11	9.9	10
7	7.6	9.1	9.5	12	12	11	12	7.2	21	12	10	10
8	7.3	9.4	8.8	12	11	10	12	7.1	21	11	10	9.9
9	7.2	9.8	8.9	11	11	9.8	12	7.2	20	10	10	9.1
10	7.2	10	9.1	12	12	9.7	12	6.9	20	9.9	10	9.1
11	7.8	10	9.6	12	12	10	11	6.9	19	10	10	9.1
12	7.3	10	9.5	13	11	11	10	7.1	18	10	9.9	9.0
13	7.4	10	10	12	11	11	10	7.1	18	12	9.9	8.9
14	7.0	11	9.7	12	11	10	11	7.0	18	12	9.8	9.2
15	7.4	18	9.9	13	11	11	12	7.0	22	11	9.7	9.7
16	7.4	14	11	12	12	12	11	6.7	15	11	9.7	9.1
17	7.4	13	9.9	13	11	11	11	6.8	13	10	9.5	9.1
18	7.4	9.4	10	12	11	11	11	6.8	13	10	9.5	8.7
19	7.6	10	9.9	12	10	15	10	6.7	12	10	20	13
20	7.7	12	9.6	12	9.9	15	10	6.7	12	10	10	9.4
21	7.7	11	9.9	12	11	11	10	6.7	11	10	19	9.9
22	7.7	10	9.8	12	10	10	9.4	6.7	10	10	9.9	9.9
23	7.7	9.8	11	12	10	10	9.3	6.9	9.9	9.6	16	10
24	8.1	10	11	11	10	11	9.0	11	9.9	9.3	11	10
25	8.1	10	10	12	10	11	8.3	9.1	9.2	8.9	9.6	10
26	8.2	9.8	11	12	10	10	9.7	11	9.3	9.0	9.5	10
27	8.4	9.6	11	12	11	11	8.8	64	9.8	9.6	9.4	10
28	8.6	11	11	12	11	11	8.6	58	10	8.5	9.5	10
29	8.5	9.5	11	12	---	11	8.6	21	11	18	10	10
30	8.2	9.3	12	13	---	13	7.7	21	11	12	29	11
31	8.2	---	12	12	---	12	---	21	---	10	11	---
TOTAL	239.8	306.3	311.2	373	316.9	344.5	313.4	385.5	472.1	334.8	350.0	297.1
MEAN	7.735	10.21	10.04	12.03	11.32	11.11	10.45	12.44	15.74	10.80	11.29	9.903
MAX	8.6	18	12	13	15	15	12	64	22	18	29	13
MIN	7.0	8.0	8.8	11	9.9	9.7	7.7	6.7	9.2	8.5	9.4	8.7
AC-FT	476	608	617	740	629	683	622	765	936	664	694	589

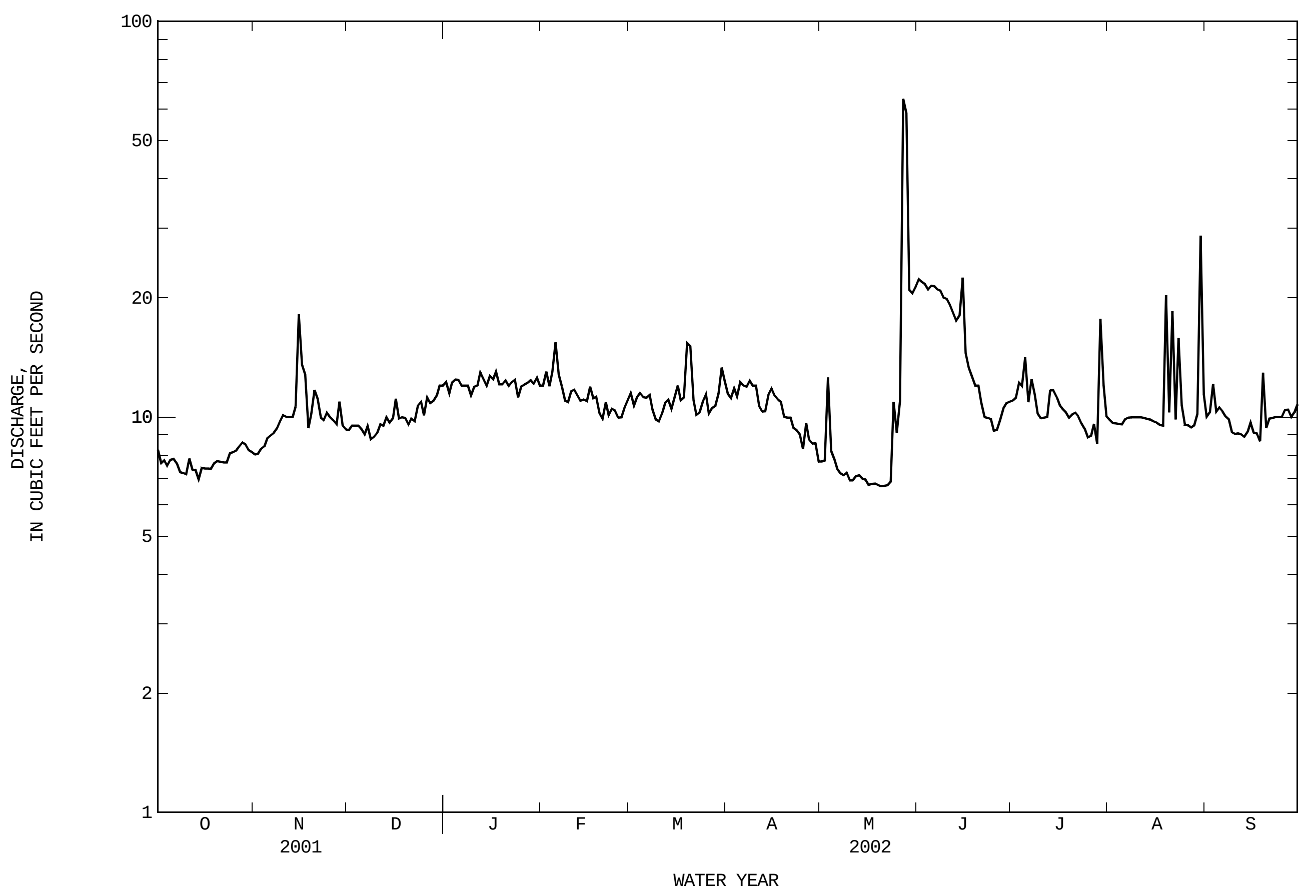
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1952 - 2002hz, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	36.72	10.19	3.217	2.540	4.892	9.302	27.66	87.63	37.60	39.82	49.29	33.25
MAX	578	219	16.9	12.2	102	250	714	1540	473	495	578	438
(WY)	1987	1987	2000	2001	1998	1998	1954	1954	1989	1988	1953	1986
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.011	0.000	0.000	0.000	0.000
(WY)	1955	1955	1952	1952	1952	1952	1956	1971	1980	1952	1952	1954

08124000 Colorado River at Robert Lee, TX--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1952 - 2002hz	
ANNUAL TOTAL	3720.7		4044.6			
ANNUAL MEAN	10.19		11.08		28.33	
HIGHEST ANNUAL MEAN					237	1954
LOWEST ANNUAL MEAN					1.04	1969
HIGHEST DAILY MEAN	41	Sep 5	64	May 27	13400	May 12 1954
LOWEST DAILY MEAN	1.4	Sep 13	6.7	May 16	0.00	Oct 1 1951
ANNUAL SEVEN-DAY MINIMUM	5.1	Sep 12	6.7	May 16	0.00	Oct 1 1951
MAXIMUM PEAK FLOW			287	May 27	c24500	Sep 9 1980
MAXIMUM PEAK STAGE			4.51	May 27	20.63	Sep 9 1980
ANNUAL RUNOFF (AC-FT)	7380		8020		20530	
10 PERCENT EXCEEDS	12		13		15	
50 PERCENT EXCEEDS	10		10		0.90	
90 PERCENT EXCEEDS	8.0		7.7		0.00	

h See PERIOD OF RECORD paragraph.
z Period of regulated streamflow.
c From rating curve extended above 19,200 ft^3/s.



08125500 Oak Creek Reservoir near Blackwell, TX

LOCATION.--Lat 32°03’25", long 100°17’37", Coke County, Hydrologic Unit 12080008, on left bank at municipal pump station, 1.9 mi upstream from dam on Oak Creek, 2.5 mi southeast of Blackwell, 14.0 mi north of Bronte, and 20.0 mi upstream from mouth.

DRAINAGE AREA.--238 mi^2.

PERIOD OF RECORD.--May 1953 to Sept. 1983, Mar. 1999 to current year.
Water-quality records.--Chemical data: Apr. 1964 to Jan. 1967 and Nov. 1970 to Apr. 1983.

REVISED RECORDS.--WDR TX-81-3: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is NGVD of 1929. May 1953 to Sept. 1983, nonrecording gage at same site and datum. Satellite telemeter at station.

REMARKS.--Records good except those for estimated daily contents and those for Apr. 21 to May 7, which are fair. Recorded elevations from pool of water at municipal pump station that became isolated or was isolated from pool of water at dam during the year. The reservoir is formed by a rolled earthfill dam 3,800 ft long. The dam was completed in May 1952, and deliberate impoundment began May 12, 1953. The uncontrolled emergency spillway is an 800-foot-wide cut through natural ground, located 1,200 ft from right end of dam. The service spillway is an uncontrolled cut channel through natural ground 300 ft wide, located 2,000 ft from right end of dam. The reservoir and dam are the property of city of Sweetwater. The dam was built to impound water for municipal and industrial uses by the cities of Sweetwater, Blackwell, and Bronte. Since Apr. 1962, West Texas Utilities Company has operated a steam generating power plant located on the reservoir. There is a gated outlet at the service spillway that can release water downstream to Oak Creek through a 24-inch concrete pipe. The capacity curve is based on a 1950 topographic survey. Conservation pool storage is 39,360 acre-ft. Data regarding the dam are given in the following table:

	Elevation (feet)
Top of dam..	2,014.0
Crest of spillway...	2,005.0
Crest of spillway (top of conservation pool)..........................	2,000.0
Lowest gated outlet (invert)...	1,951.0

COOPERATION.--Capacity table dated Nov. 9, 1953, prepared from curve furnished by city of Sweetwater.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 49,100 acre-ft, Oct. 13, 1957, elevation, 2,003.80 ft; minimum contents, 3,040 acre-ft, Aug. 27, 28, 2002, elevation, 1,967.48 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 4,710 acre-ft, Oct. 1, elevation, 1,971.85 ft; minimum contents, 3,040 acre-ft, Aug. 27, 28, elevation, 1,967.48 ft.

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

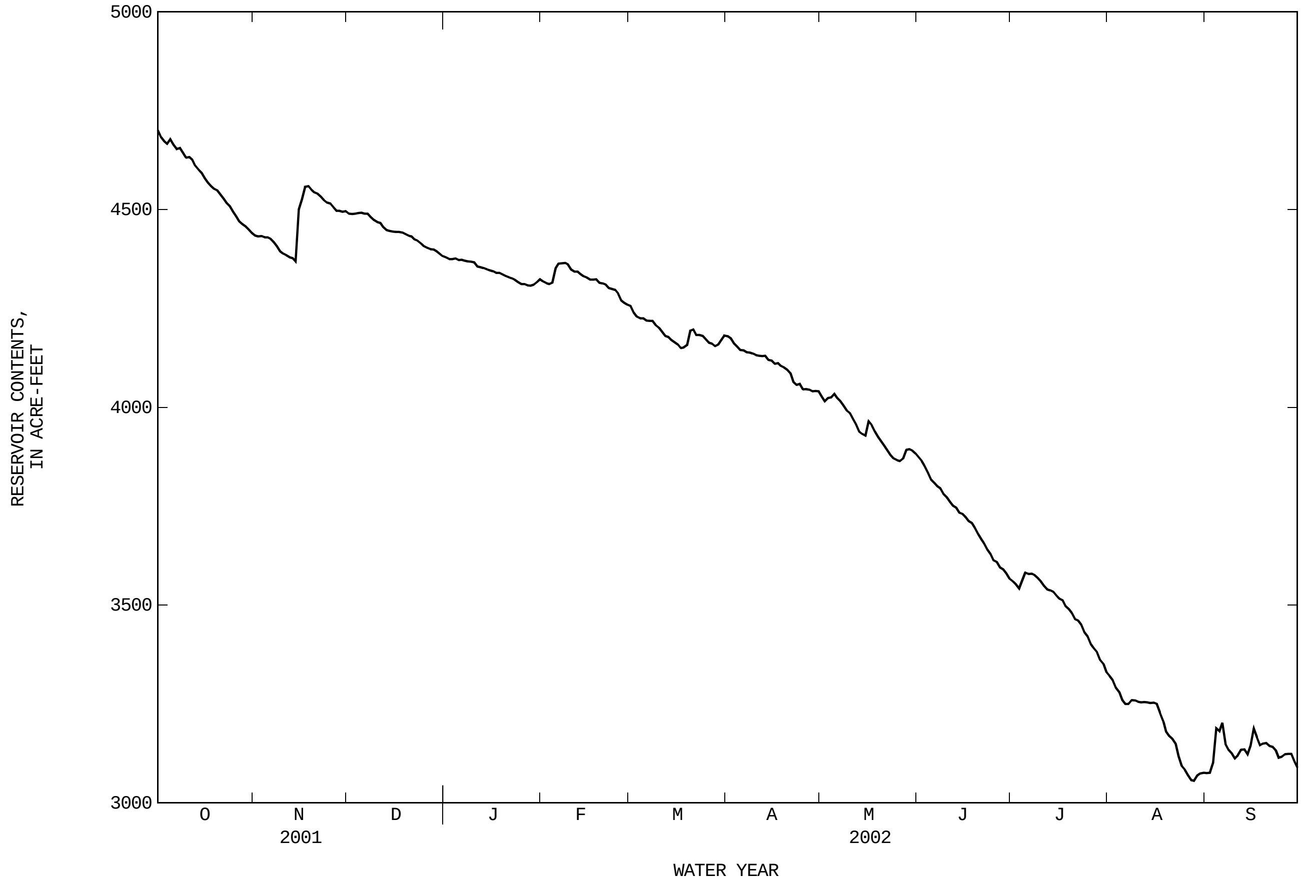
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4700	4430	4490	4380	4320	4260	4180	4030	3870	3560	e3320	3080
2	4680	4430	4490	4380	4310	4240	4170	4020	3860	3550	e3310	3080
3	4670	4430	4490	4370	4310	4230	4160	4020	3850	3540	e3290	3100
4	4670	4430	4490	4380	4320	4220	4150	4030	3830	3560	e3280	3190
5	4680	4430	4490	4370	4350	4230	4150	4030	3820	3580	e3260	3180
6	4660	4430	4490	4370	4360	4220	4140	4020	3810	3580	3250	3200
7	4650	4420	4490	4370	4360	4220	4140	4020	3800	3580	3250	3150
8	4660	4410	4480	4370	4370	4220	4140	4000	3790	3580	3260	3130
9	4640	4390	4470	4370	4360	4210	4140	3990	3780	3570	3260	3120
10	4630	4390	4470	4370	4350	4200	4130	3990	3770	3560	3260	3110
11	4630	4380	4470	4360	4340	4190	4130	3970	3760	3550	3250	3120
12	4630	4380	4460	4350	4340	4180	4130	3960	3750	3540	3250	3130
13	4610	4380	4450	4350	4340	4180	4130	3940	3750	3540	3250	3130
14	4600	4370	4450	4350	4330	4170	4120	3930	3730	3530	3250	3120
15	4590	4500	4440	4350	4330	4160	4120	3930	3730	3520	3250	3140
16	4580	4530	4440	4340	4320	4160	4110	3960	3720	3520	3250	3190
17	4570	4560	4440	4340	4320	4150	4110	3960	3710	3510	3230	3170
18	4560	4560	4440	4340	4320	4150	4100	3940	3710	3500	3210	3150
19	4550	4550	4440	4340	4310	4160	4100	3930	3690	3490	3180	3150
20	4550	4540	4430	4330	4310	4190	4090	3910	3680	3480	3170	3150
21	4540	4540	4430	4330	4310	4200	4090	3900	3670	3460	3160	3140
22	4530	4530	4420	4330	4300	4180	4060	3890	3650	3460	3150	3140
23	4520	4520	4420	4320	4300	4180	4060	3880	3640	e3450	3120	3130
24	4510	4520	4410	4320	4300	4180	4060	3870	3630	e3430	3090	3110
25	4490	4520	4410	4310	4290	4170	4050	3870	3610	e3420	3080	3120
26	4480	4510	4400	4310	4270	4160	4050	3860	3610	e3400	3070	3120
27	4470	4500	4400	4310	4260	4160	4040	3870	3600	e3390	3060	3120
28	4460	4500	4400	4310	4260	4150	4040	3890	3590	e3380	3060	3120
29	4460	4490	4390	4310	---	4160	4040	3890	3580	e3360	3070	3110
30	4450	4500	4390	4320	---	4170	4040	3890	3570	e3350	3070	3090
31	4440	---	4380	4320	---	4180	---	3880	---	e3330	3080	---
MEAN	4580	4470	4440	4340	4320	4190	4110	3940	3720	3490	3190	3130
MAX	4700	4560	4490	4380	4370	4260	4180	4030	3870	3580	3320	3200
MIN	4440	4370	4380	4310	4260	4150	4040	3860	3570	3330	3060	3080
(+)	1971.24	1971.36	1971.10	1970.96	1970.80	1970.60	1970.25	1969.85	1968.99	1968.31	1967.57	1967.61
(@)	-260	+60	-120	-60	-60	-80	-140	-160	-310	-240	-250	+10

CAL YR 2001 MAX 7580 MIN 4370 (@) -3210
WTR YR 2002 MAX 4700 MIN 3060 (@) -1610

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

e Estimated

08125500 Oak Creek Reservoir near Blackwell, TX--Continued



08126380 Colorado River near Ballinger, TX

LOCATION.--Lat 31°42'55", long 100°01'34", Runnels County, Hydrologic Unit 12090101, at right downstream end of bridge on Farm Road 2111, 0.4 mi upstream from Rocky Creek, 5.0 mi northwest of Ballinger, and at mile 665.8.

DRAINAGE AREA.--16,358 mi^2, approximately, of which 10,260 mi^2 probably is noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1907 to Sept. 1979 (published as "at Ballinger", station 08126500) and Oct. 1979 to current year. Monthly discharge only for some periods published in WSP 1312. Gage-height records collected in this vicinity from 1903-29 are contained in reports of the National Weather Service.

REVISED RECORDS.--WSP 1118: Drainage area. WSP 1512: 1916-17, 1919-20, 1921(M), 1922-25, 1928(M), 1930(M). WSP 1712: 1935, 1954-55(M). WDR TX-78-3: 1975-77.

GAGE.--Water-stage recorder. Datum of gage is 1,606.51 ft above NGVD of 1929. Prior to Nov. 29, 1930, nonrecording gages at several sites and at various datums near site 5.4 mi downstream. Nov. 29, 1930, to May 1, 1975, water-stage recorder at site 6.2 mi downstream and May 1, 1975, to Sept. 30, 1979, water-stage recorder at site 5.4 mi downstream, both at datum 12.77 ft lower. Oct. 1, 1979 to June 20, 2001, water-stage recorder at site 300 ft left at same datum. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good except those for Oct. 5 to Feb. 25 and July 22, which are fair. Since water year 1953, at least 10% of contributing drainage area has been regulated. Many diversions upstream from station for irrigation, municipal supplies, and oil field operations. Flow is also affected by Oak Creek Reservoir (station 08125500), and at times by discharge from the floodwater-retarding structures in the Kickapoo and Valley Creeks drainage basins. No flow at times.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--45 years (water years 1908-52) prior to completion of Lake J.B. Thomas, 387 ft^3/s (280,300 acre-ft/yr).

EXTREMES FOR PERIOD PRIOR TO REGULATION (WATER YEARS 1908-52).--Maximum discharge, 75,400 ft^3/s, Sept. 18, 1936, gage height, 28.6 ft, at former site and datum; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1882, about 36 ft sometime in 1884, at former site and datum, from information by local residents. Flood of Aug. 6, 1906, reached a stage of about 32.0 ft, at former site and datum, from floodmarks (backwater from Elm Creek).

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	6.9	7.8	7.6	7.3	8.1	8.3	9.6	4.9	17	0.60	14	0.40
2	6.0	7.4	8.8	7.6	8.0	8.4	8.8	4.0	8.9	0.68	11	0.40
3	6.1	6.6	8.7	7.8	9.4	8.7	7.8	2.0	6.1	29	5.0	0.39
4	6.6	7.0	8.8	8.3	9.3	7.8	7.6	1.3	5.0	42	2.8	0.37
5	7.8	7.9	9.0	8.8	14	8.1	7.5	4.7	4.5	16	1.7	0.37
6	7.0	8.6	8.3	8.2	15	8.3	7.6	11	4.2	7.8	0.75	0.39
7	6.4	7.6	7.9	7.7	13	8.6	8.6	6.8	3.3	7.7	0.52	0.38
8	6.7	7.8	7.2	7.5	13	8.4	9.2	4.0	5.1	8.8	0.65	0.68
9	7.6	6.9	7.0	8.0	12	8.9	9.1	2.8	3.7	12	1.3	6.7
10	8.0	6.7	6.5	7.9	9.3	8.6	8.4	1.7	2.4	5.5	0.52	3.4
11	10	7.4	6.7	7.9	7.8	7.5	7.9	1.5	5.9	3.7	0.41	2.1
12	13	7.0	7.0	7.3	7.3	7.0	7.4	1.4	4.6	3.1	0.38	2.1
13	16	8.6	6.4	7.3	7.4	7.8	7.6	1.1	3.7	3.1	0.44	1.7
14	10	9.0	6.5	7.0	7.9	8.4	7.5	1.2	2.8	6.9	0.76	1.5
15	7.5	37	6.6	7.2	7.8	8.0	6.7	1.2	5.0	5.4	0.37	2.3
16	7.6	100	8.2	7.5	8.0	8.1	6.1	1.3	5.0	2.6	0.37	4.0
17	6.6	52	8.0	7.1	7.7	8.3	5.5	1.2	7.1	2.0	0.36	7.2
18	6.5	75	7.3	6.7	8.1	8.9	5.2	1.1	16	2.0	0.34	6.0
19	6.8	36	7.0	6.5	8.7	63	5.3	1.1	7.6	2.0	0.33	4.4
20	7.1	16	7.6	5.6	8.3	193	5.2	1.1	4.1	1.7	0.32	5.6
21	7.1	9.0	7.4	6.4	8.4	87	5.7	1.2	3.6	1.4	0.33	19
22	7.2	7.5	7.9	7.2	8.4	30	5.4	1.3	2.5	1.2	0.32	11
23	7.2	7.0	6.5	7.1	8.1	16	5.2	1.4	1.7	0.53	0.32	5.9
24	6.7	6.5	6.3	9.0	7.8	12	4.8	1.3	1.8	0.47	0.31	3.5
25	7.2	6.4	6.1	7.6	7.6	9.2	4.5	1.5	0.85	0.54	0.31	2.3
26	6.0	6.6	6.0	7.2	7.8	8.4	5.1	1.8	0.65	0.74	0.31	1.9
27	6.0	5.7	6.2	7.3	8.6	7.4	5.3	41	0.53	0.59	0.34	1.6
28	6.2	7.3	6.9	7.5	8.3	8.0	5.4	70	0.80	0.49	0.40	1.6
29	6.6	8.0	6.7	8.1	---	7.8	4.9	301	1.7	0.87	0.45	1.5
30	6.9	7.5	6.5	8.7	---	16	4.9	102	0.67	13	0.40	1.6
31	7.0	---	6.8	9.9	---	9.7	---	44	---	13	0.38	---
TOTAL	234.3	493.8	224.4	235.2	255.1	615.6	199.8	621.9	136.80	195.41	46.19	100.28
MEAN	7.558	16.46	7.239	7.587	9.111	19.86	6.660	20.06	4.560	6.304	1.490	3.343
MAX	16	100	9.0	9.9	15	193	9.6	301	17	42	14	19
MIN	6.0	5.7	6.0	5.6	7.3	7.0	4.5	1.1	0.53	0.47	0.31	0.37
AC-FT	465	979	445	467	506	1220	396	1230	271	388	92	199

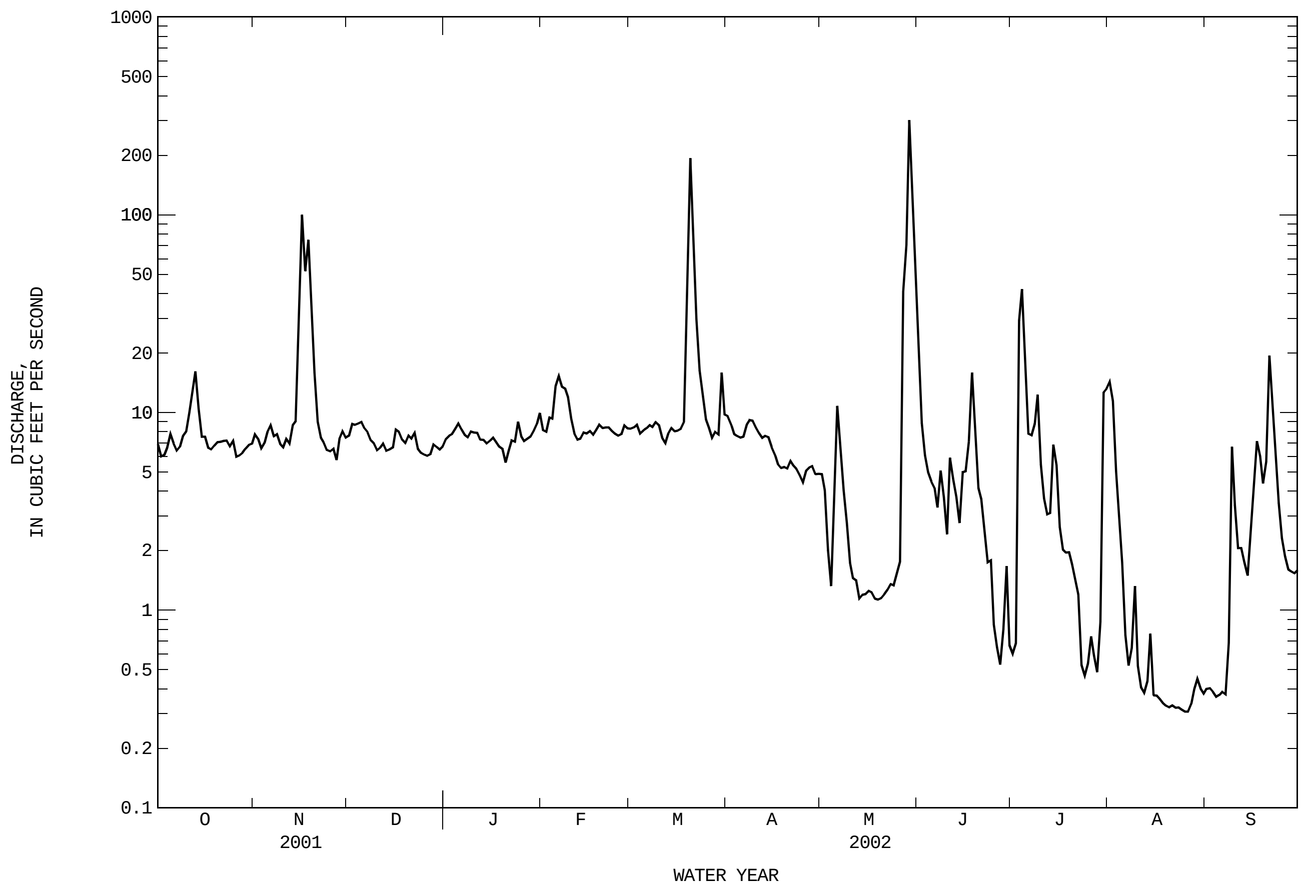
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1953 - 2002z, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	165.5	39.70	26.01	22.68	41.91	36.75	92.42	328.5	197.1	70.71	101.0	152.5
MAX	2098	374	259	159	756	299	1432	5068	2392	664	1224	1737
(WY)	1958	1987	1992	1992	1992	1987	1954	1957	1957	1961	1953	1962
MIN	0.000	0.66	0.000	0.000	0.050	0.000	0.47	1.07	0.007	0.000	0.000	0.000
(WY)	1955	1956	1955	1955	1953	1954	1980	1971	1953	1984	1984	1954

08126380 Colorado River near Ballinger, TX--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1953 - 2002z	
ANNUAL TOTAL	5120.82		3358.78			
ANNUAL MEAN	14.03		9.202		106.6	
HIGHEST ANNUAL MEAN					813	1957
LOWEST ANNUAL MEAN					7.18	1984
HIGHEST DAILY MEAN	794	Sep 6	301	May 29	45800	Oct 14 1957
LOWEST DAILY MEAN	0.66	Aug 4	0.31	Aug 24	0.00	Oct 15 1952
ANNUAL SEVEN-DAY MINIMUM	0.79	Aug 3	0.32	Aug 20	0.00	Oct 15 1952
MAXIMUM PEAK FLOW			422	May 29	g16600	Aug 3 1978
MAXIMUM PEAK STAGE			6.45	May 29	27.50	Sep 21 1990
ANNUAL RUNOFF (AC-FT)	10160		6660		77200	
10 PERCENT EXCEEDS	16		11		135	
50 PERCENT EXCEEDS	9.1		6.9		12	
90 PERCENT EXCEEDS	2.1		0.63		0.40	

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



08126380 Colorado River near Ballinger, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--
CHEMICAL DATA: Sept. 1961 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Oct. 1961 to Sept. 1997 (local observer), Feb. 2001 to current year.
WATER TEMPERATURE: Oct. 1961 to Sept. 1997 (local observer), Feb. 2001 to current year.
SUSPENDED SEDIMENT DISCHARGE: Jan. 1978 to Sept. 1981 (local observer).

INSTRUMENTATION.--Water-quality monitor since Feb. 9, 2001.

REMARKS.--Records good except those for specific conductance from Jan. 6-9 and water temperature on Jan. 8, 9, which are fair. Interruptions in the specific conductance and water temperature values were due to malfunction of the instrument. Mean monthly and annual concentrations and loads for selected chemical constituents have been computed for previous years using 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 Texas District Office upon request.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 13,500 microsiemens/cm, May 3, 1963; minimum daily, 244 microsiemens/cm, Sept. 9, 1980.
WATER TEMPERATURE: Maximum daily, 39.0°C, July 3, 1977; minimum daily, 0.0°C, Jan. 9-11, 1973.
SEDIMENT CONCENTRATION: Maximum daily mean, 3,740 mg/L, Sept. 9 1980; minimum daily mean, 4 mg/L, Feb. 2, 1980.
SEDIMENT LOADS: Maximum daily, 94,100 tons Aug. 3, 1978; minimum daily, 0 tons on many days during 1978 and 1980-81.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 6,110 microsiemens/cm, May 27; minimum, 722 microsiemens/cm, Mar. 21.
WATER TEMPERATURE: Maximum, 37.6°C, July 24; minimum, 3.3°C, Jan. 3.

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)	OXYGEN, DIS-SOLVED (MG/L) (00300)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	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)
OCT													
05...	1300	8.0	3920	22.2	--	920	212	95.6	444	6	12.8	807	824
MAR													
14...	1050	8.3	5060	21.8	--	1200	256	126	604	8	17.1	1040	1060
MAY													
28...	1420	62	4900	24.8	--	950	195	113	642	9	20.8	854	1110
JUN													
25...	1050	.65	2460	26.7	6.9	710	172	67.7	254	4	13.6	562	409

Date	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			
05...	.5	6.6	2460
MAR			
14...	.6	1.3	3160
MAY			
28...	.6	3.7	2990
JUN			
25...	.5	7.4	1560

08126380 Colorado River near Ballinger, TX--Continued

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

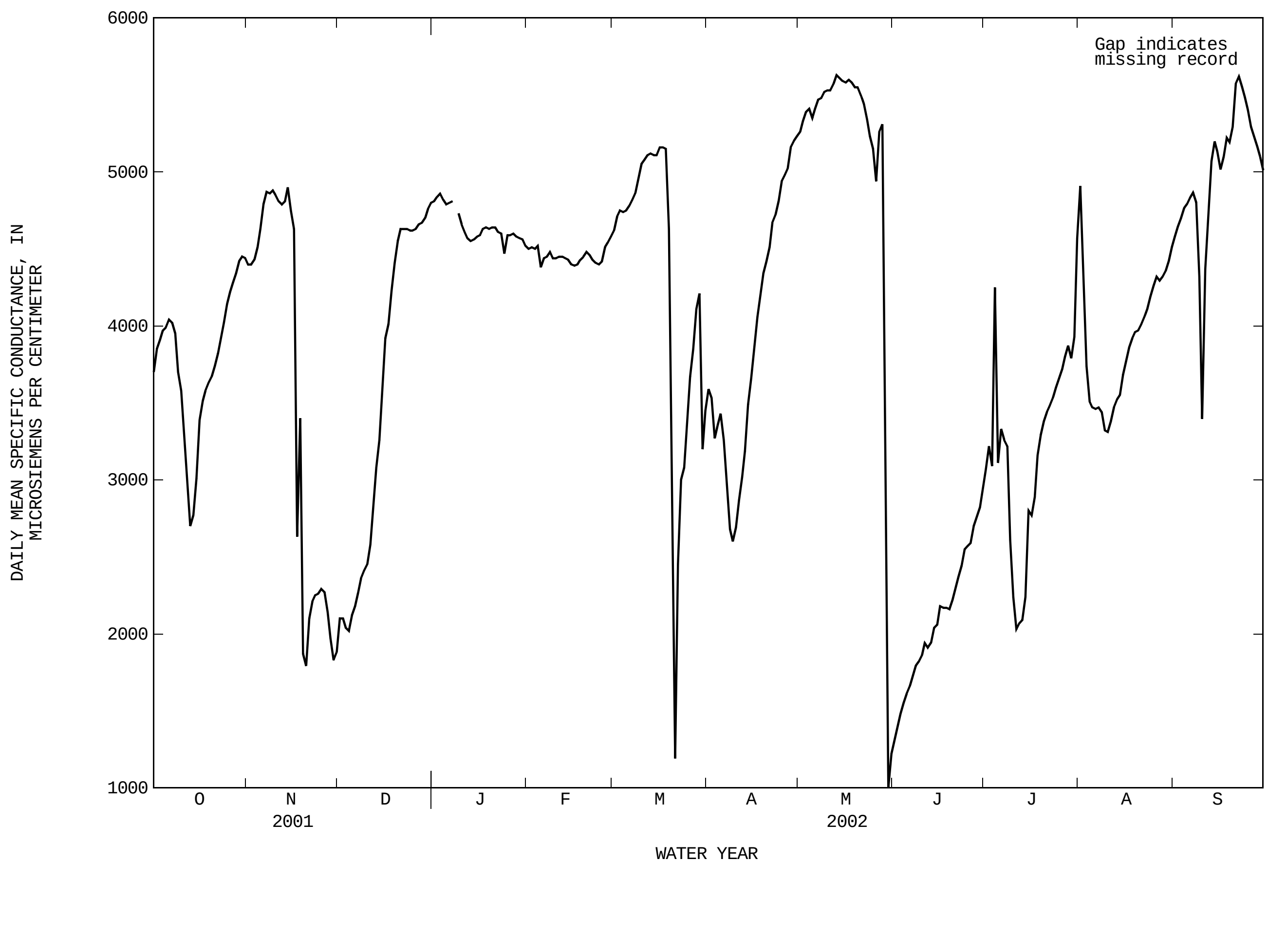
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	3800	3600	3700	4430	4360	4400	2130	2050	2100	4860	4780	4810
2	3910	3780	3850	4420	4370	4400	2130	2080	2100	4880	4810	4840
3	3940	3830	3910	4460	4400	4430	2080	2000	2040	4900	4840	4860
4	4020	3910	3970	4580	4450	4510	2060	2000	2020	4870	4780	4820
5	4030	3960	3990	4710	4570	4630	2170	2050	2120	4810	4760	4790
6	4070	4000	4040	4860	4710	4790	2200	2160	2180	4830	4780	4800
7	4040	3990	4020	4890	4850	4870	2320	2200	2260	4830	4780	4810
8	4010	3830	3950	4870	4840	4860	2410	2320	2360	---	---	---
9	3830	3610	3700	4900	4860	4880	2430	2390	2410	4770	4690	4730
10	3640	3530	3580	4880	4810	4850	2490	2420	2450	4690	4620	4660
11	3540	3090	3260	4840	4790	4810	2720	2490	2580	4650	4580	4610
12	3130	2690	2980	4810	4760	4790	2980	2720	2830	4600	4540	4570
13	2830	2640	2700	4850	4770	4810	3190	2980	3080	4570	4530	4550
14	2850	2710	2770	4950	4820	4900	3400	3180	3260	4580	4540	4560
15	3280	2850	3010	5030	4490	4750	3720	3400	3570	4600	4550	4580
16	3490	3280	3390	5040	3480	4630	4010	3720	3920	4610	4560	4590
17	3530	3480	3510	3480	2080	2630	4090	3980	4010	4640	4600	4630
18	3610	3530	3580	3830	2610	3400	4350	4090	4230	4660	4620	4640
19	3660	3600	3630	2610	1540	1870	4470	4350	4410	4660	4610	4630
20	3700	3620	3670	1990	1600	1790	4610	4470	4550	4670	4600	4640
21	3790	3660	3740	2160	1980	2100	4650	4600	4630	4660	4620	4640
22	3850	3790	3820	2260	2150	2210	4650	4610	4630	4640	4580	4610
23	3970	3830	3920	2270	2230	2250	4660	4610	4630	4620	4570	4600
24	4090	3960	4020	2290	2210	2260	4650	4600	4620	4620	4210	4470
25	4190	4070	4140	2300	2280	2290	4640	4600	4620	4620	4560	4590
26	4260	4180	4220	2330	2190	2270	4660	4600	4630	4610	4570	4590
27	4320	4220	4280	2190	2030	2140	4680	4640	4660	4620	4580	4600
28	4400	4300	4340	2030	1910	1970	4690	4650	4670	4600	4560	4580
29	4440	4390	4420	1920	1790	1830	4750	4680	4700	4590	4560	4570
30	4470	4410	4450	2050	1770	1880	4800	4730	4760	4590	4520	4560
31	4460	4370	4440	---	---	---	4840	4780	4800	4580	4450	4520
MONTH	4470	2640	3770	5040	1540	3540	4840	2000	3540	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	4530	4480	4500	4660	4600	4620	3660	3530	3590	5290	5220	5260
2	4520	4490	4510	4760	4650	4710	3700	3270	3530	5400	5260	5330
3	4520	4480	4500	4790	4710	4750	3300	3250	3270	5440	5320	5390
4	4540	4460	4520	4760	4690	4740	3420	3280	3350	5480	5320	5410
5	4470	4330	4380	4780	4710	4750	3480	3370	3430	5430	5150	5350
6	4460	4410	4440	4810	4740	4780	3370	3120	3260	5530	5100	5410
7	4490	4420	4450	4850	4790	4820	3120	2790	2950	5500	5430	5470
8	4520	4450	4480	4900	4830	4860	2790	2580	2680	5520	5430	5480
9	4480	4400	4440	5030	4900	4960	2620	2570	2600	5560	5470	5520
10	4470	4420	4440	5070	5030	5050	2790	2610	2690	5580	5470	5530
11	4490	4420	4450	5110	5040	5080	2950	2790	2870	5580	5470	5530
12	4480	4410	4450	5150	5080	5110	3080	2950	3020	5660	5510	5570
13	4470	4420	4440	5150	5080	5120	3380	3080	3190	5700	5540	5630
14	4460	4410	4430	5210	5020	5110	3610	3380	3490	5680	5520	5610
15	4420	4370	4400	5140	5080	5110	3750	3610	3660	5670	5510	5590
16	4410	4360	4390	5190	5140	5160	3960	3750	3860	5640	5500	5580
17	4440	4380	4400	5180	5140	5160	4120	3960	4060	5660	5550	5600
18	4450	4430	4430	5170	5140	5150	4250	4120	4190	5660	5460	5580
19	4480	4420	4450	5150	3100	4630	4380	4240	4340	5620	5460	5550
20	4510	4440	4480	4800	805	2590	4450	4380	4420	5620	5450	5550
21	4490	4430	4460	1790	722	1190	4600	4440	4510	5600	5390	5500
22	4460	4400	4430	3000	1790	2450	4710	4600	4670	5530	5320	5440
23	4440	4380	4410	3020	2980	3000	4750	4690	4720	5430	5230	5340
24	4420	4370	4400	3270	3000	3080	4890	4750	4810	5320	5120	5230
25	4460	4400	4420	3460	3270	3380	5010	4870	4940	5250	4830	5150
26	4570	4460	4510	3790	3460	3670	5010	4940	4980	5070	4790	4940
27	4570	4510	4540	4010	3790	3850	5080	4980	5020	6110	4620	5260
28	4620	4550	4580	4170	4010	4110	5200	5080	5160	5970	4810	5310
29	---	---	---	4320	4160	4210	5230	5140	5200	5040	1230	2780
30	---	---	---	4320	2180	3200	5260	5210	5230	1230	909	1000
31	---	---	---	3590	3260	3450	---	---	---	1280	1120	1220
MONTH	4620	4330	4450	5210	722	4250	5260	2570	3920	6110	909	5070

08126380 Colorado River near Ballinger, 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	1350	1280	1310	3150	3000	3070	5080	4740	4910	4630	4540	4580
2	1440	1350	1390	3300	3140	3220	4740	3960	4400	4670	4600	4640
3	1520	1440	1480	3620	2710	3090	3960	3520	3740	4740	4660	4700
4	1580	1520	1550	4570	3620	4250	3530	3480	3510	4800	4720	4760
5	1640	1560	1610	4210	2800	3110	3530	3420	3470	4840	4730	4790
6	1690	1630	1660	3430	3220	3330	3510	3420	3460	4880	4770	4830
7	1750	1680	1720	3330	3220	3260	3490	3420	3470	4910	4830	4860
8	1840	1750	1790	3380	2960	3220	3510	3200	3440	4920	4540	4800
9	1850	1780	1820	3020	2380	2610	3400	3260	3320	4790	2760	4320
10	1910	1810	1860	2380	2160	2240	3360	3290	3310	4080	2770	3390
11	1980	1900	1940	2200	1950	2030	3430	3340	3380	4580	4080	4370
12	1940	1900	1910	2100	1990	2070	3520	3430	3470	4930	4560	4700
13	1990	1920	1940	2110	2050	2090	3590	3220	3520	5220	4930	5070
14	2080	1980	2040	2630	2110	2240	3640	3240	3550	5250	4980	5200
15	2140	1740	2060	2840	2630	2800	3720	3640	3680	5160	5080	5130
16	2220	2120	2180	2830	2720	2770	3830	3720	3770	5090	4920	5020
17	2180	2140	2170	3040	2780	2890	3900	3820	3860	5200	5030	5100
18	2270	2120	2170	3230	3040	3160	3960	3880	3920	5250	5180	5220
19	2200	2140	2160	3340	3230	3290	4010	3900	3960	5290	5140	5190
20	2260	2180	2220	3420	3330	3380	4010	3930	3970	5410	5220	5290
21	2320	2260	2290	3470	3410	3440	4050	3980	4010	5650	5410	5570
22	2420	2310	2370	3510	3440	3480	4110	4020	4060	5670	5560	5620
23	2480	2370	2440	3570	3500	3530	4150	4070	4110	5610	5490	5550
24	2620	2480	2550	3640	3570	3600	4260	4140	4190	5530	5430	5490
25	2860	2490	2570	3690	3620	3660	4300	4220	4260	5490	5320	5400
26	2660	2550	2590	3770	3670	3720	4380	4270	4320	5360	5200	5290
27	2720	2660	2700	3850	3760	3800	4380	4220	4290	5290	5160	5230
28	2800	2720	2760	3900	3830	3870	4350	4280	4320	5220	5090	5160
29	2880	2800	2820	3930	3210	3790	4400	4310	4360	5160	5030	5100
30	3000	2880	2940	4290	3790	3930	4470	4390	4420	5080	4940	5010
31	---	---	---	4860	4160	4570	4560	4470	4510	---	---	---
MONTH	3000	1280	2100	4860	1950	3210	5080	3200	3900	5670	2760	4980



08126380 Colorado River near Ballinger, TX--Continued

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

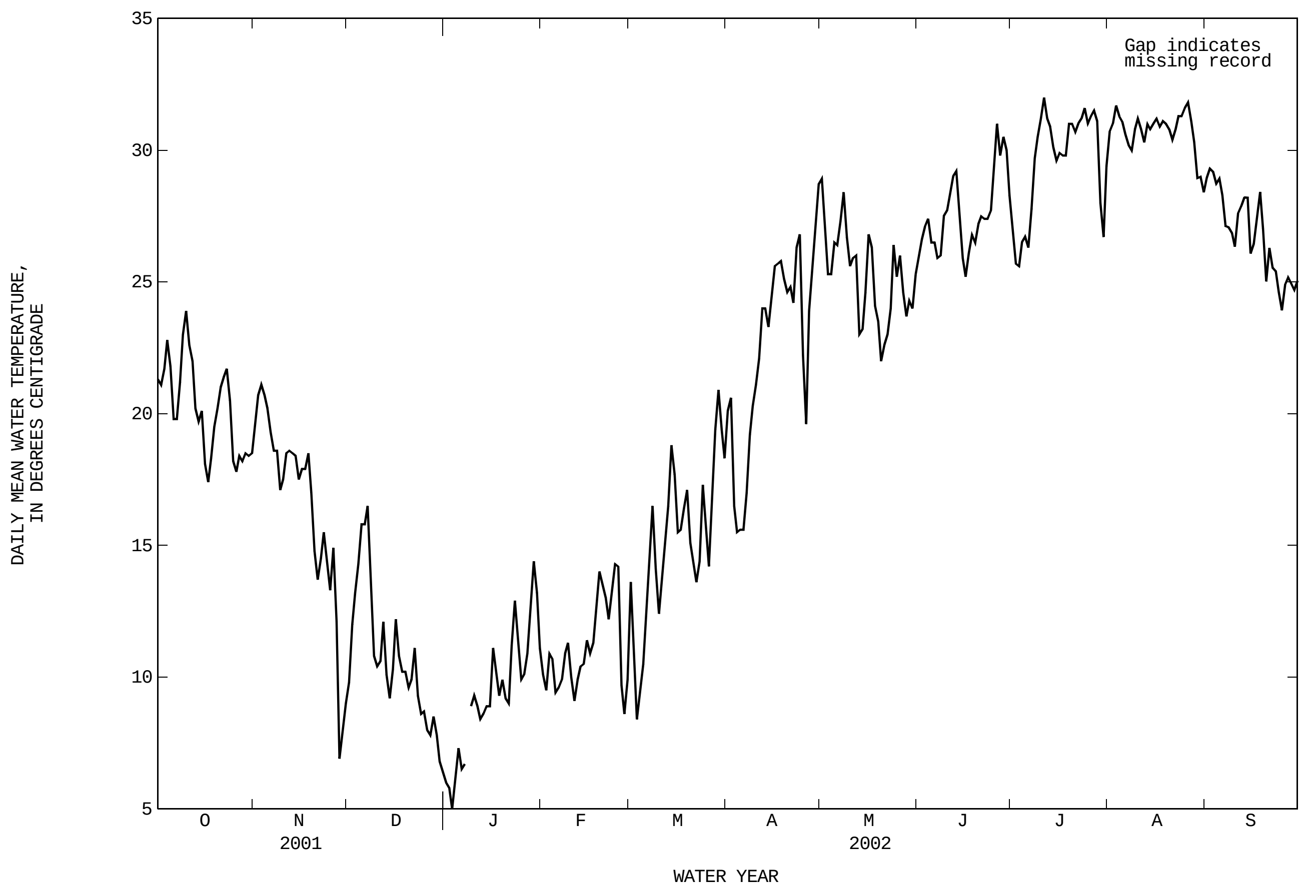
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	23.6	19.1	21.3	21.7	17.6	19.6	11.4	8.4	9.8	6.4	5.4	6.0
2	23.6	18.7	21.1	22.5	19.1	20.7	13.3	10.6	12.0	6.4	5.2	5.8
3	24.2	19.3	21.7	23.4	19.4	21.1	13.8	12.5	13.2	6.5	3.3	5.0
4	25.0	20.6	22.8	21.8	19.2	20.7	15.6	13.1	14.3	7.5	4.9	6.2
5	23.6	19.7	21.8	21.8	19.0	20.2	16.8	15.0	15.8	7.8	6.6	7.3
6	22.3	17.9	19.8	20.5	17.9	19.3	16.9	14.7	15.8	7.9	5.0	6.5
7	22.1	17.4	19.8	20.3	16.7	18.6	17.4	15.9	16.5	8.3	5.1	6.7
8	23.2	19.2	21.2	20.1	17.3	18.6	16.0	11.3	13.4	---	---	---
9	24.8	21.7	23.0	18.3	15.8	17.1	11.9	9.4	10.8	10.9	7.1	8.9
10	25.7	22.7	23.9	18.8	16.2	17.5	11.7	9.0	10.4	9.7	8.9	9.3
11	24.2	20.9	22.6	19.9	17.5	18.5	11.2	10.2	10.6	10.1	7.6	8.9
12	24.3	20.1	22.0	19.5	17.8	18.6	13.4	11.1	12.1	9.7	6.9	8.4
13	21.9	18.6	20.2	19.2	17.7	18.5	11.5	9.2	10.1	10.2	7.0	8.6
14	21.9	17.3	19.7	18.8	18.0	18.4	10.5	7.8	9.2	10.1	7.6	8.9
15	22.4	18.4	20.1	18.1	17.0	17.5	11.9	9.1	10.3	10.5	7.2	8.9
16	19.7	16.2	18.1	18.4	17.6	17.9	12.5	11.4	12.2	13.1	9.7	11.1
17	19.4	15.0	17.4	18.6	17.4	17.9	11.8	9.5	10.8	11.4	9.7	10.3
18	21.0	15.6	18.3	19.5	17.8	18.5	11.6	8.5	10.2	9.8	8.9	9.3
19	22.5	17.1	19.5	18.6	15.1	17.0	11.3	9.0	10.2	11.0	8.7	9.9
20	22.5	17.9	20.2	16.1	13.6	14.8	11.1	8.0	9.6	10.6	7.9	9.2
21	23.0	19.0	21.0	15.3	11.9	13.7	11.6	8.1	9.9	10.4	7.3	9.0
22	23.3	19.4	21.4	16.0	12.9	14.5	12.0	10.1	11.1	13.3	9.3	11.2
23	23.6	20.0	21.7	16.7	14.4	15.5	10.2	8.0	9.3	14.6	11.4	12.9
24	22.2	19.2	20.5	15.4	13.4	14.4	9.5	7.4	8.6	13.4	10.3	11.5
25	19.5	16.7	18.2	14.8	11.6	13.3	9.7	7.5	8.7	11.3	8.1	9.9
26	18.5	16.9	17.8	16.3	13.7	14.9	9.1	6.7	8.0	11.7	8.5	10.1
27	20.0	17.0	18.4	14.9	9.1	12.1	9.1	6.3	7.8	12.7	9.1	10.9
28	19.7	16.3	18.2	9.1	6.0	6.9	9.9	6.9	8.5	14.7	10.5	12.5
29	20.0	16.8	18.5	9.7	6.2	7.9	8.6	6.9	7.8	15.6	13.3	14.4
30	19.8	16.5	18.4	10.5	7.3	9.0	7.9	6.0	6.8	14.8	11.1	13.2
31	19.8	16.9	18.5	---	---	---	7.2	5.3	6.4	12.7	9.8	11.1
MONTH	25.7	15.0	20.2	23.4	6.0	16.4	17.4	5.3	10.7	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	11.4	8.5	10.1	16.8	11.1	13.6	24.2	16.7	20.1	32.5	25.7	28.9
2	10.2	8.3	9.5	14.1	8.4	10.4	22.9	18.5	20.6	29.6	24.7	27.1
3	12.1	10.0	10.9	10.9	6.1	8.4	18.5	15.3	16.5	30.4	22.4	25.3
4	11.3	10.1	10.7	12.4	6.9	9.5	16.6	14.7	15.5	31.1	21.0	25.3
5	10.1	9.0	9.4	13.3	7.5	10.5	17.3	14.3	15.6	30.8	23.3	26.5
6	11.2	8.4	9.6	15.8	10.3	12.9	16.4	14.5	15.6	27.7	24.6	26.4
7	12.2	7.5	9.9	17.6	12.6	15.0	20.8	14.3	17.0	30.9	24.8	27.3
8	13.2	8.5	10.9	17.7	15.7	16.5	22.5	16.4	19.2	32.7	25.7	28.4
9	13.1	9.4	11.3	16.2	12.2	14.1	23.2	17.8	20.3	29.7	24.3	26.7
10	11.3	8.3	10.0	14.0	10.6	12.4	24.3	18.2	21.1	28.8	23.0	25.6
11	11.1	6.9	9.1	17.2	11.4	13.8	26.0	19.2	22.1	30.5	23.0	25.9
12	12.2	7.7	9.9	18.8	11.7	15.1	27.3	21.3	24.0	30.1	23.0	26.0
13	11.8	8.8	10.4	19.7	13.3	16.5	25.8	22.2	24.0	29.1	18.3	23.0
14	12.6	8.3	10.5	22.1	15.6	18.8	25.9	21.2	23.3	28.8	18.6	23.2
15	12.8	10.1	11.4	19.5	16.1	17.7	27.8	21.8	24.5	30.8	19.8	24.6
16	12.6	9.1	10.9	17.1	13.7	15.5	29.3	23.1	25.6	33.2	22.2	26.8
17	12.9	9.5	11.3	17.0	14.4	15.6	29.5	22.7	25.7	30.3	23.0	26.3
18	13.7	11.2	12.5	17.5	15.4	16.4	28.1	23.5	25.8	30.0	19.7	24.1
19	15.6	12.8	14.0	17.8	16.3	17.1	26.3	24.2	25.1	29.6	18.9	23.5
20	15.7	11.2	13.5	16.4	14.0	15.1	27.1	22.9	24.6	27.9	17.9	22.0
21	13.8	11.9	13.0	16.6	12.8	14.3	26.2	23.6	24.8	28.6	18.0	22.6
22	14.5	9.8	12.2	16.3	11.3	13.6	27.0	21.6	24.2	28.6	20.1	23.0
23	16.0	10.8	13.3	18.1	10.8	14.4	29.5	23.4	26.3	29.1	21.0	24.0
24	16.2	12.3	14.3	20.7	13.8	17.3	31.1	24.2	26.8	32.5	22.4	26.4
25	16.4	12.6	14.2	19.3	13.4	15.8	25.1	19.8	22.2	29.9	22.8	25.2
26	12.7	7.9	9.7	17.5	11.2	14.2	21.4	18.1	19.6	32.8	21.7	26.0
27	10.5	6.5	8.6	19.7	14.2	16.8	29.0	20.6	23.9	26.3	23.5	24.6
28	11.9	7.9	9.9	22.9	16.1	19.4	28.8	22.1	25.4	25.5	22.6	23.7
29	---	---	---	22.4	19.6	20.9	32.2	23.0	27.0	25.1	23.3	24.3
30	---	---	---	20.7	17.1	19.4	32.5	25.5	28.7	25.3	23.4	24.0
31	---	---	---	20.3	16.7	18.3	---	---	---	28.5	23.2	25.3
MONTH	16.4	6.5	11.1	22.9	6.1	15.1	32.5	14.3	22.5	33.2	17.9	25.2

08126380 Colorado River near Ballinger, 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	30.3	22.5	26.0	29.2	25.2	27.1	34.0	28.1	30.7	33.8	25.1	28.9
2	30.0	23.3	26.6	27.1	24.7	25.7	34.6	27.9	31.0	34.3	25.4	29.3
3	30.6	24.6	27.1	27.1	24.3	25.6	34.7	29.2	31.7	33.7	25.3	29.2
4	30.6	25.0	27.4	27.8	25.9	26.5	34.7	28.8	31.3	32.2	25.6	28.7
5	28.2	24.9	26.5	28.6	25.2	26.7	34.6	28.5	31.1	33.5	25.5	28.9
6	29.8	24.0	26.5	27.2	25.7	26.3	34.6	27.0	30.6	32.2	24.8	28.3
7	27.5	24.8	25.9	30.5	25.7	27.8	33.1	27.3	30.2	28.8	25.1	27.1
8	29.2	23.7	26.0	33.2	26.7	29.7	35.8	26.5	30.0	31.1	25.1	27.1
9	31.6	24.5	27.5	33.7	27.4	30.5	34.9	28.0	30.8	28.9	25.7	26.9
10	30.5	25.7	27.7	34.2	28.7	31.2	36.6	27.7	31.2	28.1	25.0	26.3
11	31.2	25.8	28.3	36.2	28.7	32.0	36.2	27.2	30.8	31.4	24.9	27.6
12	32.2	26.4	29.0	33.7	29.2	31.2	35.9	25.8	30.3	31.3	25.4	27.9
13	32.6	26.7	29.2	34.6	28.1	30.9	37.1	27.0	31.0	32.3	25.4	28.2
14	29.6	25.8	27.5	32.4	28.1	30.1	36.2	26.9	30.8	32.9	25.4	28.2
15	28.4	22.8	25.9	32.0	27.3	29.6	36.2	27.1	31.0	27.0	25.4	26.1
16	27.3	23.5	25.2	33.7	27.3	29.9	36.1	27.7	31.2	30.4	24.0	26.4
17	29.8	23.2	26.1	32.1	28.1	29.8	36.4	27.3	30.9	30.4	24.9	27.4
18	30.2	23.4	26.8	33.6	27.4	29.8	36.7	27.1	31.1	31.4	26.1	28.4
19	30.3	23.2	26.5	35.7	28.0	31.0	36.6	27.3	31.0	28.7	25.1	27.0
20	30.1	24.9	27.2	35.5	28.0	31.0	36.2	26.8	30.8	28.5	22.0	25.0
21	31.2	24.7	27.5	35.1	27.6	30.7	34.9	27.0	30.4	29.4	23.8	26.3
22	30.8	25.0	27.4	35.5	27.7	31.0	36.0	26.8	30.8	28.1	23.2	25.5
23	31.6	23.9	27.4	36.5	26.9	31.2	37.1	27.0	31.3	27.6	23.2	25.4
24	32.7	24.0	27.7	37.6	26.6	31.6	36.7	27.0	31.3	27.9	22.4	24.6
25	35.0	24.0	29.2	36.3	27.0	31.0	37.2	27.2	31.6	27.3	20.8	23.9
26	36.3	26.6	31.0	36.5	27.2	31.3	37.4	27.2	31.8	29.9	21.2	24.9
27	34.7	26.2	29.8	37.0	27.6	31.5	36.1	26.9	31.1	30.1	21.5	25.2
28	36.5	26.5	30.5	37.5	27.4	31.1	35.9	26.4	30.3	28.9	21.7	24.9
29	33.5	27.7	30.0	30.5	26.6	28.0	34.0	25.0	28.9	28.6	21.7	24.7
30	31.6	26.4	28.3	27.8	25.4	26.7	33.8	25.6	29.0	28.6	22.5	25.0
31	---	---	---	33.3	26.6	29.4	32.7	24.5	28.4	---	---	---
MONTH	36.5	22.5	27.6	37.6	24.3	29.5	37.4	24.5	30.7	34.3	20.8	26.8



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08127000 Elm Creek at Ballinger, TX

LOCATION.--Lat 31°44’57", long 99°56’51", Runnels County, Hydrologic Unit 12090101, on right bank 1,000 ft upstream from storage dam at Ballinger and 1.9 mi upstream from mouth.

DRAINAGE AREA.--450 mi^2, of which 63.5 mi^2 is above Lake Winters Dam.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Apr. 1932 to current year.

REVISED RECORDS.--WSP 1442: 1935, 1946, 1954. WDR TX-81-3: Drainage area. WDR TX-96-3.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 1,617.72 ft above NGVD of 1929. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good except those below 10 ft^3/s, which are fair. The stage-discharge relation during periods of low flow are affected by wind action and by occasional accumulation of drift on dam. Since water year 1983, at least 10% of contributing drainage area has been regulated. Prior to June 1982, capacity of Old Lake Winters (just upstream from new dam) was 3,060 acre-ft. No flow at times most years.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--50 years (water years 1933-82) prior to completion of New Lake Winters, 47.6 ft^3/s (34,490 acre-ft/yr).

EXTREMES FOR PERIOD PRIOR TO REGULATION (WATER YEARS 1933-82).--Maximum discharge, 50,000 ft^3/s, Oct. 13, 1957, gage height, 14.20 ft, from floodmark; no flow at times. Highest stage not affected by backwater from the Colorado River since at least 1904, was that of Oct. 13, 1957, from information by local residents.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in Aug. 1906 reached a stage of 14.5 ft, affected by backwater from Colorado River.

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	0.00	0.00	1.7	0.00	5.7	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.95	0.00	4.4	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.70	1350	3.5	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.51	1390	2.7	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	24	0.35	499	2.2	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	427	0.25	160	2.0	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	37	0.17	814	1.6	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14	0.11	107	1.0	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.6	0.05	53	0.74	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.2	0.01	27	0.53	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.4	0.00	22	0.30	0.00
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.74	0.00	32	0.17	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41	0.00	37	0.13	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.00	35	2.8	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.00	35	2.8	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	56	1.7	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	52	1.2	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	41	0.71	0.00
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	31	0.40	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	25	0.21	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	21	0.09	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16	0.03	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13	0.00	0.00
24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.1	0.00	9.0	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	128	0.00	6.4	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	18	0.00	4.4	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	88	0.00	3.3	0.00	0.00
29	0.00	0.00	0.00	0.00	---	0.00	0.00	15	0.00	4.8	0.00	0.00
30	0.00	0.00	0.00	0.00	---	0.00	0.00	7.2	0.00	7.5	0.00	0.00
31	0.00	---	0.00	0.00	---	0.00	---	3.5	---	7.5	0.00	---
TOTAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	779.63	4.80	4869.90	34.91	0.00
MEAN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	25.15	0.160	157.1	1.126	0.000
MAX	0.00	0.00	0.00	0.00	0.00	0.00	0.00	427	1.7	1390	5.7	0.00
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1550	9.5	9660	69	0.00
CFSM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.35	0.00	0.00
IN.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.40	0.00	0.00

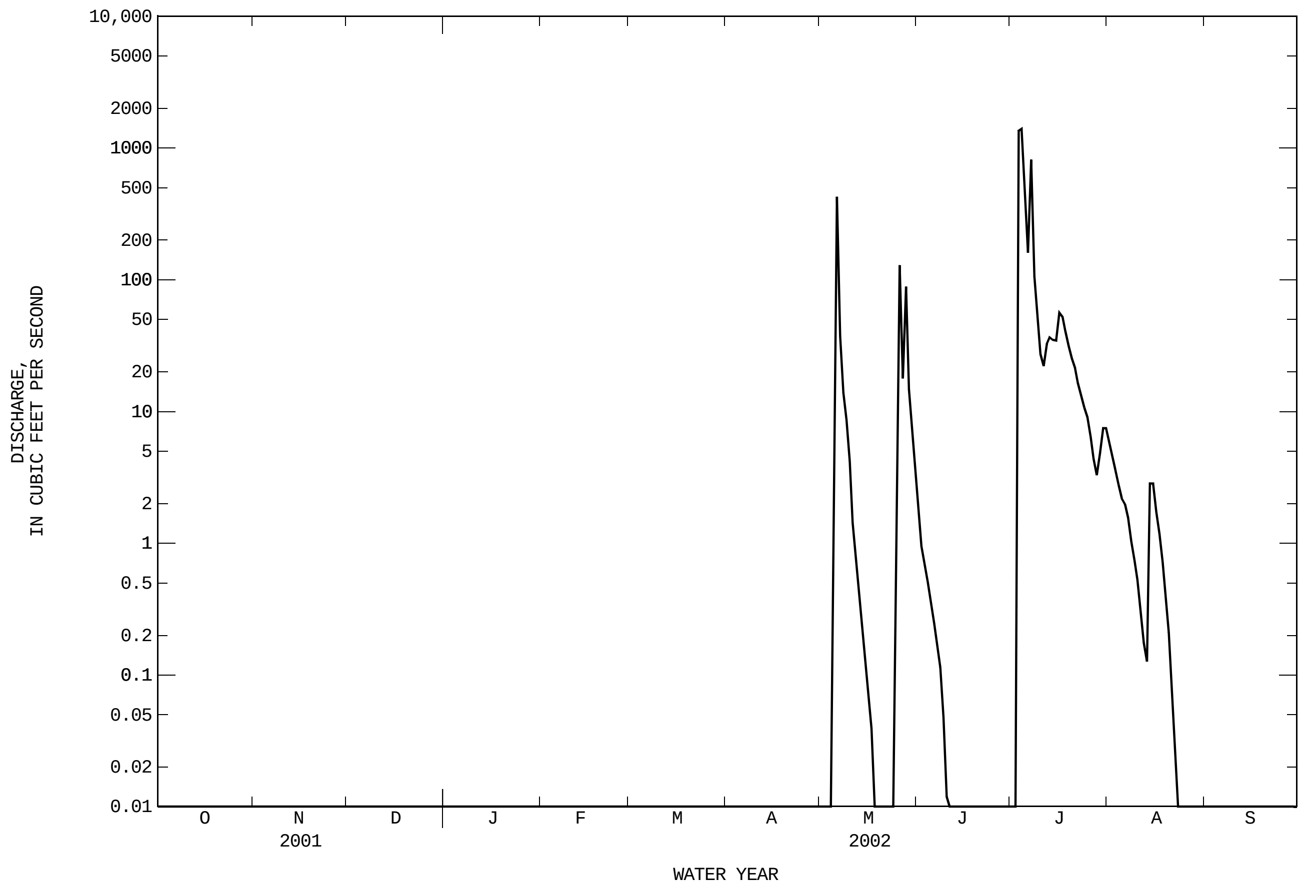
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 2002z, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	21.67	14.48	39.10	17.60	62.63	32.49	18.03	68.78	105.8	14.94	10.45	53.87
MAX	165	59.7	576	164	911	268	76.4	655	770	168	90.1	760
(WY)	1987	1987	1992	1992	1992	1992	1992	1994	1997	2002	1995	1996
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000
(WY)	1984	1989	1999	2000	2000	2000	2000	1984	2001	1984	1983	1983

08127000 Elm Creek at Ballinger, TX--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1983 - 2002z	
ANNUAL TOTAL	566.01		5689.24			
ANNUAL MEAN	1.551		15.59		38.03	
HIGHEST ANNUAL MEAN					188	1992
LOWEST ANNUAL MEAN					0.96	1984
HIGHEST DAILY MEAN	122	May 5	1390	Jul 4	12400	Sep 15 1996
LOWEST DAILY MEAN	0.00	Jun 4	0.00	Oct 1	0.00	Jul 20 1983
ANNUAL SEVEN-DAY MINIMUM	0.00	Jun 4	0.00	Oct 1	0.00	Jul 20 1983
MAXIMUM PEAK FLOW			5730	Jul 3	16700	Jun 23 1997
MAXIMUM PEAK STAGE			6.87	Jul 3	9.06	Jun 23 1997
ANNUAL RUNOFF (AC-FT)	1120		11280		27550	
ANNUAL RUNOFF (CFSM)	0.003		0.035		0.085	
ANNUAL RUNOFF (INCHES)	0.05		0.47		1.15	
10 PERCENT EXCEEDS	2.2		6.0		54	
50 PERCENT EXCEEDS	0.00		0.00		1.6	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

z Period of regulated streamflow.



08127000 Elm Creek at Ballinger, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--
CHEMICAL DATA: Oct. 1957 to Sept. 1991, Mar. 2001 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Oct. 1967 to Sept. 1991 (local observer), Feb. 2001 to current year.
WATER TEMPERATURE: Oct. 1967 to Sept. 1997 (local observer), Feb. 2001 to current year.

INSTRUMENTATION.--Water-quality monitor since Feb. 9, 2001.

REMARKS.--Records fair. Interruptions in the record were due to malfunction of the instrument and to no flow. No flow Oct. 1 to May 4, May 18-24, June 11 to July 2, Aug. 23 to Sept. 30. Specific conductance and water temperature are recorded near right bank in a large pool 1,000 ft upstream from a storage dam. Mean monthly and annual concentrations and loads for selected chemical constituents have been computed for previous years using 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 Texas District Office upon request.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 4,220 microsiemens/cm, Sept. 12, 17, 1970; minimum, 74 microsiemens/cm, July 4, 2002.
WATER TEMPERATURE: Maximum daily, 35.0°C, July 19, 1986; minimum daily, 0.0°C, Jan. 8, 1968, Jan. 10, 13, 1973, and Jan. 11, 14, 1982.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 2,360 microsiemens/cm, May 6; minimum, 74 microsiemens/cm, July 4.
WATER TEMPERATURE: Maximum, 33.3°C, Aug. 8; minimum, 21.4°C, May 26.

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)	SODIUM PERCENT (00932)	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)
MAY													
06...	1210	249	220	22.2	95	25.9	7.40	8.97	.4	16	5.62	13.2	11.0
28...	1215	63	420	22.5	140	37.2	11.9	20.6	.8	23	7.20	51.4	38.4
30...	1345	7.5	359	24.5	130	34.4	9.63	15.0	.6	20	6.81	40.0	29.2
JUL													
03...	0950	4440	--	22.0	110	28.6	10.3	22.5	.9	29	4.93	39.2	42.2

Date	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)
MAY			
06...	.3	6.1	130
28...	.2	6.6	227
30...	.2	7.6	194
JUL			
03...	.2	6.2	195

08127000 Elm Creek at Ballinger, TX--Continued

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

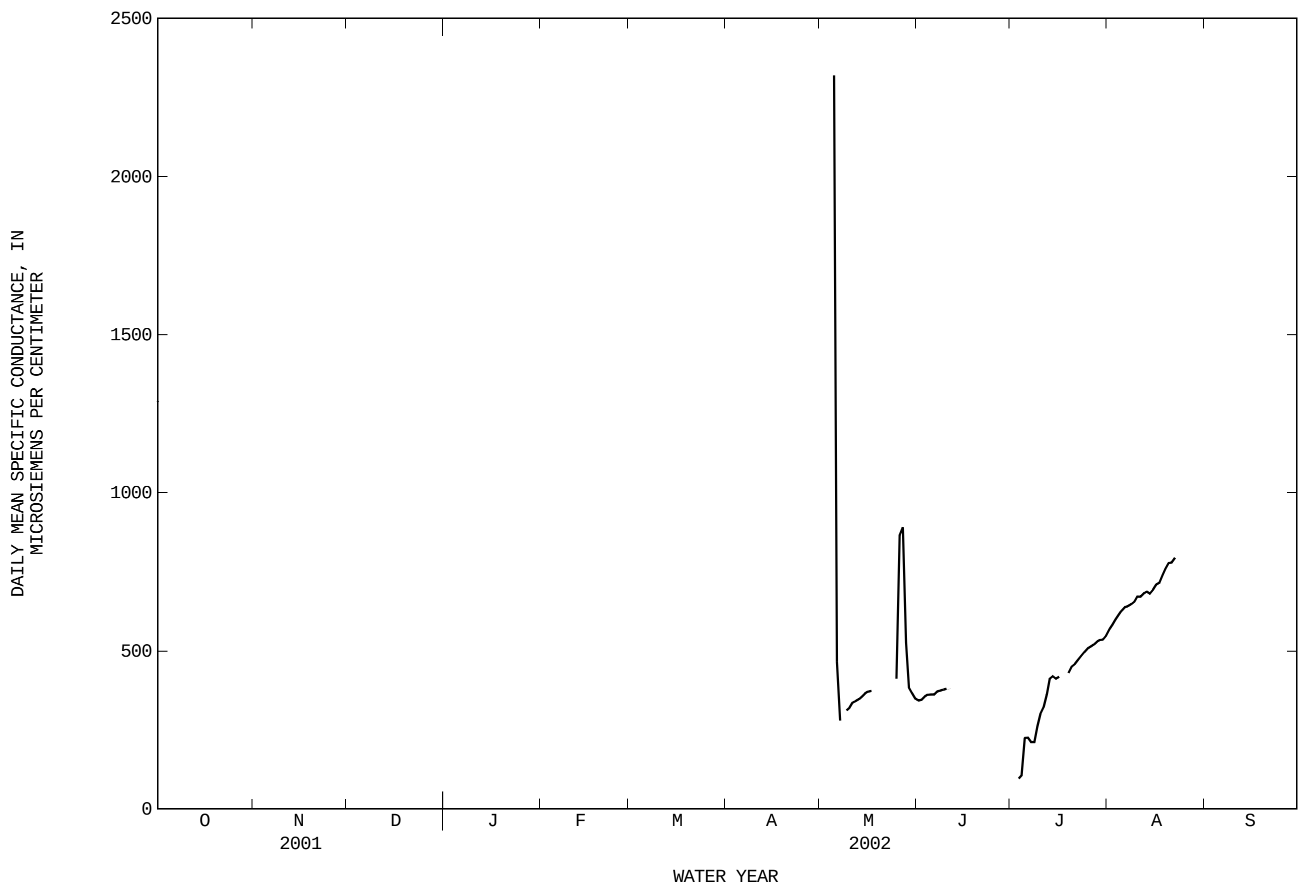
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
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	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	2340	2310	2320
6	---	---	---	---	---	---	---	---	---	2360	237	464
7	---	---	---	---	---	---	---	---	---	295	264	279
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	319	304	311
10	---	---	---	---	---	---	---	---	---	329	314	321
11	---	---	---	---	---	---	---	---	---	341	329	335
12	---	---	---	---	---	---	---	---	---	344	337	341
13	---	---	---	---	---	---	---	---	---	352	341	347
14	---	---	---	---	---	---	---	---	---	367	350	356
15	---	---	---	---	---	---	---	---	---	375	362	365
16	---	---	---	---	---	---	---	---	---	378	365	371
17	---	---	---	---	---	---	---	---	---	376	369	373
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	412	411	412
26	---	---	---	---	---	---	---	---	---	1100	408	865
27	---	---	---	---	---	---	---	---	---	919	863	890
28	---	---	---	---	---	---	---	---	---	876	398	524
29	---	---	---	---	---	---	---	---	---	411	351	384
30	---	---	---	---	---	---	---	---	---	374	346	366
31	---	---	---	---	---	---	---	---	---	362	340	349
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

08127000 Elm Creek at Ballinger, 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	356	332	343	---	---	---	582	555	567	---	---	---
2	354	339	345	---	---	---	587	575	582	---	---	---
3	361	348	355	187	80	96	607	586	598	---	---	---
4	366	353	361	183	74	106	621	607	614	---	---	---
5	365	356	362	305	183	225	638	612	627	---	---	---
6	369	355	362	241	211	226	642	633	638	---	---	---
7	376	365	371	275	183	211	644	635	641	---	---	---
8	376	366	374	234	193	211	652	638	647	---	---	---
9	381	374	378	286	229	259	661	644	655	---	---	---
10	382	378	380	315	282	300	689	659	672	---	---	---
11	---	---	---	336	314	322	678	660	671	---	---	---
12	---	---	---	393	336	362	687	673	682	---	---	---
13	---	---	---	437	393	411	695	673	687	---	---	---
14	---	---	---	431	407	420	694	674	681	---	---	---
15	---	---	---	422	407	411	703	681	693	---	---	---
16	---	---	---	425	412	418	719	700	709	---	---	---
17	---	---	---	---	---	---	738	687	716	---	---	---
18	---	---	---	---	---	---	759	729	739	---	---	---
19	---	---	---	445	406	430	786	748	759	---	---	---
20	---	---	---	455	445	450	783	770	778	---	---	---
21	---	---	---	465	454	458	788	773	780	---	---	---
22	---	---	---	481	464	470	807	781	794	---	---	---
23	---	---	---	493	480	484	---	---	---	---	---	---
24	---	---	---	502	489	496	---	---	---	---	---	---
25	---	---	---	514	501	506	---	---	---	---	---	---
26	---	---	---	518	507	513	---	---	---	---	---	---
27	---	---	---	526	514	519	---	---	---	---	---	---
28	---	---	---	536	522	528	---	---	---	---	---	---
29	---	---	---	536	532	534	---	---	---	---	---	---
30	---	---	---	540	527	536	---	---	---	---	---	---
31	---	---	---	560	539	547	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---



08127000 Elm Creek at Ballinger, TX--Continued

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

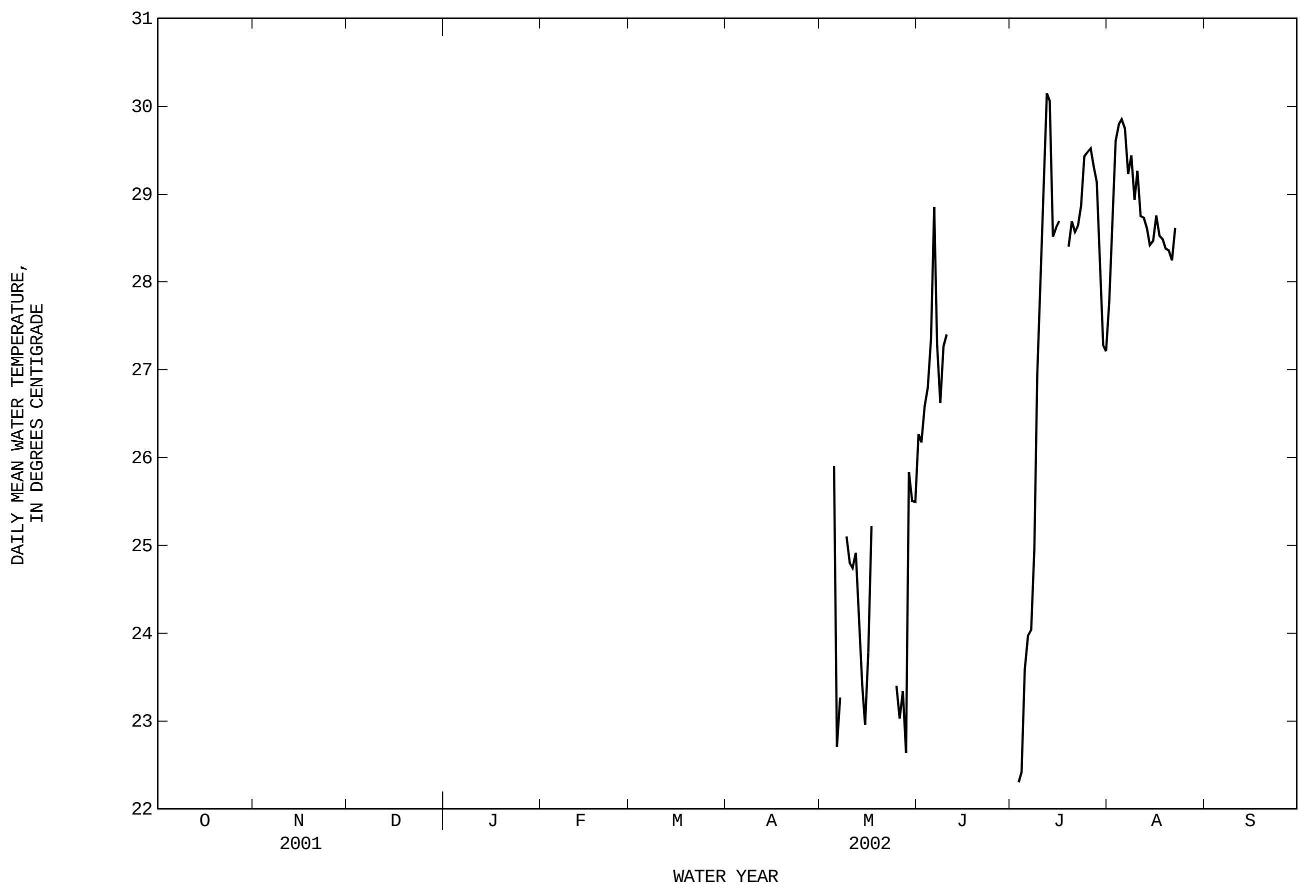
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
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	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	26.0	25.9	25.9
6	---	---	---	---	---	---	---	---	---	26.0	21.6	22.7
7	---	---	---	---	---	---	---	---	---	24.2	22.7	23.3
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	27.0	24.0	25.1
10	---	---	---	---	---	---	---	---	---	26.5	24.1	24.8
11	---	---	---	---	---	---	---	---	---	26.5	23.8	24.7
12	---	---	---	---	---	---	---	---	---	26.8	24.3	24.9
13	---	---	---	---	---	---	---	---	---	26.1	23.0	24.2
14	---	---	---	---	---	---	---	---	---	25.9	22.3	23.4
15	---	---	---	---	---	---	---	---	---	25.2	21.6	23.0
16	---	---	---	---	---	---	---	---	---	27.3	22.6	23.8
17	---	---	---	---	---	---	---	---	---	27.7	23.3	25.2
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	23.5	23.4	23.4
26	---	---	---	---	---	---	---	---	---	25.0	21.4	23.0
27	---	---	---	---	---	---	---	---	---	24.6	22.9	23.3
28	---	---	---	---	---	---	---	---	---	23.2	22.4	22.6
29	---	---	---	---	---	---	---	---	---	31.7	22.3	25.8
30	---	---	---	---	---	---	---	---	---	27.5	24.2	25.5
31	---	---	---	---	---	---	---	---	---	28.7	24.0	25.5
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

08127000 Elm Creek at Ballinger, 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	29.1	25.6	26.3	---	---	---	28.8	26.8	27.8	---	---	---
2	29.3	25.1	26.2	---	---	---	29.6	27.8	28.6	---	---	---
3	29.6	25.4	26.6	25.0	21.9	22.3	32.6	28.7	29.6	---	---	---
4	29.4	25.5	26.8	23.2	21.7	22.4	32.2	28.8	29.8	---	---	---
5	29.4	26.1	27.4	24.3	23.2	23.6	32.7	28.4	29.8	---	---	---
6	32.4	26.5	28.9	24.3	23.8	24.0	32.8	28.4	29.7	---	---	---
7	29.6	26.0	27.3	24.6	23.5	24.0	31.2	28.2	29.2	---	---	---
8	29.4	25.5	26.6	27.4	24.2	25.0	33.3	28.1	29.4	---	---	---
9	29.3	26.0	27.3	27.8	26.4	26.9	31.1	28.0	28.9	---	---	---
10	29.5	26.6	27.4	28.7	27.6	27.9	32.0	28.0	29.3	---	---	---
11	---	---	---	30.9	28.4	29.0	31.2	27.6	28.7	---	---	---
12	---	---	---	33.2	28.9	30.1	31.6	27.6	28.7	---	---	---
13	---	---	---	32.7	28.3	30.1	31.6	27.5	28.6	---	---	---
14	---	---	---	29.3	28.0	28.5	30.6	27.0	28.4	---	---	---
15	---	---	---	29.8	28.0	28.6	30.5	27.4	28.5	---	---	---
16	---	---	---	29.7	28.2	28.7	30.3	27.8	28.8	---	---	---
17	---	---	---	---	---	---	30.2	27.6	28.5	---	---	---
18	---	---	---	---	---	---	30.2	27.6	28.5	---	---	---
19	---	---	---	29.7	27.7	28.4	30.7	27.4	28.4	---	---	---
20	---	---	---	30.0	28.1	28.7	30.2	27.4	28.4	---	---	---
21	---	---	---	29.6	28.1	28.6	29.9	27.1	28.2	---	---	---
22	---	---	---	29.4	28.2	28.6	31.1	27.3	28.6	---	---	---
23	---	---	---	30.1	28.2	28.9	---	---	---	---	---	---
24	---	---	---	31.0	28.2	29.4	---	---	---	---	---	---
25	---	---	---	31.9	28.6	29.5	---	---	---	---	---	---
26	---	---	---	31.0	28.8	29.5	---	---	---	---	---	---
27	---	---	---	31.3	28.4	29.3	---	---	---	---	---	---
28	---	---	---	31.3	28.3	29.1	---	---	---	---	---	---
29	---	---	---	28.9	27.4	28.1	---	---	---	---	---	---
30	---	---	---	27.6	27.0	27.3	---	---	---	---	---	---
31	---	---	---	28.0	26.7	27.2	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---



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08128000 South Concho River at Christoval, TX

LOCATION.--Lat 31°11’13", long 100°30’06", Tom Green County, Hydrologic Unit 12090102, on left upstream side of U.S. Highway 277 bridge, 9.5 mi upstream from Twin Buttes Dam, and 23.7 mi upstream from mouth.

DRAINAGE AREA.--413 mi^2, of which 58.6 mi^2 probably is noncontributing.

PERIOD OF RECORD.--Feb. 1930 to Sept. 1995, Oct. 1995 to Apr. 2001 (peak discharges greater than base discharge), May 2001 to current year.

REVISED RECORDS.--WSP 1118: 1943(M). WDR TX-81-3: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 2,010.22 ft above NGVD of 1929. Prior to July 17, 1930, nonrecording gage at same site and datum. Water-stage recorder at same site and datum from July 17, 1930, to Nov. 15, 1977, at site 160 ft downstream at same datum from Nov. 16, 1977, to May 5, 1987. Satellite telemeter at station.

REMARKS.--Records good except those for estimated daily discharges, which are fair. No known regulation. Low flow is affected by diversions to the South Concho Irrigation Company canal 800 ft upstream from station. No flow Feb. 28 and Mar. 1, 1955.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1882, about 23 ft Aug. 6, 1906 (discharge, 115,000 ft^3/s), from rating curve extended above 15,100 ft^3/s on basis of slope-area measurement of 80,100 ft^3/s, 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	6.6	8.2	9.5	5.7	5.7	4.4	5.4	16	3.8	2.4	3.4	3.2
2	6.4	8.3	9.6	5.6	5.7	4.1	5.5	15	3.3	3.2	3.5	1.8
3	6.4	8.4	9.7	5.9	5.8	4.5	4.9	16	3.1	75	3.5	1.1
4	6.2	8.1	9.1	6.9	6.2	4.1	4.7	17	3.0	16	3.5	1.4
5	19	8.3	9.0	6.4	8.3	5.3	4.8	15	3.6	6.3	3.2	1.4
6	5.2	9.1	8.3	6.3	6.7	4.6	5.5	6.6	3.4	6.7	3.0	1.5
7	5.0	9.3	7.5	6.4	6.1	5.3	5.7	6.8	3.5	8.6	2.6	1.4
8	5.6	9.6	7.3	6.8	6.3	5.3	5.5	6.9	4.5	7.4	2.4	2.5
9	6.0	9.4	7.5	7.2	6.7	5.2	5.5	7.2	3.6	6.8	2.9	2.3
10	6.0	9.6	7.7	6.9	5.8	4.7	5.7	6.6	3.2	6.9	3.5	2.5
11	6.2	9.9	8.2	6.9	5.7	4.2	7.8	6.2	3.1	7.5	4.1	2.3
12	7.2	11	8.1	6.3	5.9	4.2	15	6.0	3.0	7.2	1.7	2.5
13	7.1	10	8.3	6.7	6.3	5.6	31	5.0	3.2	7.4	1.7	2.6
14	6.8	13	8.4	6.8	6.9	5.8	23	5.3	2.8	6.1	1.9	2.8
15	6.3	8.9	9.1	6.7	6.5	5.6	27	5.2	2.7	4.9	2.2	3.0
16	6.3	4.5	9.4	6.0	6.4	5.5	31	5.3	2.8	4.9	2.9	3.1
17	6.8	5.6	8.9	6.0	6.5	5.1	33	5.0	2.8	4.7	1.9	3.0
18	7.0	6.3	8.9	5.7	6.5	5.2	32	5.2	2.7	4.7	1.5	2.7
19	7.1	8.1	8.9	5.3	6.2	12	32	5.0	2.5	e4.0	1.3	2.7
20	6.9	6.4	9.1	5.1	5.5	8.7	32	4.2	2.5	3.5	1.2	2.6
21	6.9	6.9	8.7	5.1	5.0	7.1	25	4.3	2.4	3.6	1.2	2.1
22	6.8	7.6	8.1	5.3	4.6	7.0	16	4.1	2.4	3.6	1.2	1.4
23	7.2	8.1	6.6	5.2	4.6	6.9	16	3.8	2.4	3.6	0.99	1.3
24	7.5	8.3	5.4	9.4	5.2	7.5	16	3.8	2.7	3.5	1.0	1.2
25	7.9	7.9	5.8	6.8	4.9	8.0	15	3.6	3.0	3.4	1.2	1.4
26	8.1	7.6	5.8	5.8	4.4	7.6	15	3.9	3.6	3.3	1.5	1.6
27	8.2	7.6	6.4	6.2	3.8	7.9	15	3.5	4.6	3.2	1.7	1.8
28	8.1	9.0	6.0	6.8	4.0	8.4	14	3.6	5.2	3.3	1.7	1.9
29	8.2	8.6	5.9	7.7	---	7.1	17	3.8	4.8	3.8	2.2	1.9
30	8.7	9.2	5.4	8.1	---	6.6	16	4.9	2.4	3.8	2.2	2.0
31	8.5	---	5.6	7.4	---	5.6	---	4.4	---	3.8	2.2	---
TOTAL	226.2	252.8	242.2	199.4	162.2	189.1	482.0	209.2	96.6	233.1	68.99	63.0
MEAN	7.297	8.427	7.813	6.432	5.793	6.100	16.07	6.748	3.220	7.519	2.225	2.100
MAX	19	13	9.7	9.4	8.3	12	33	17	5.2	75	4.1	3.2
MIN	5.0	4.5	5.4	5.1	3.8	4.1	4.7	3.5	2.4	2.4	0.99	1.1
AC-FT	449	501	480	396	322	375	956	415	192	462	137	125

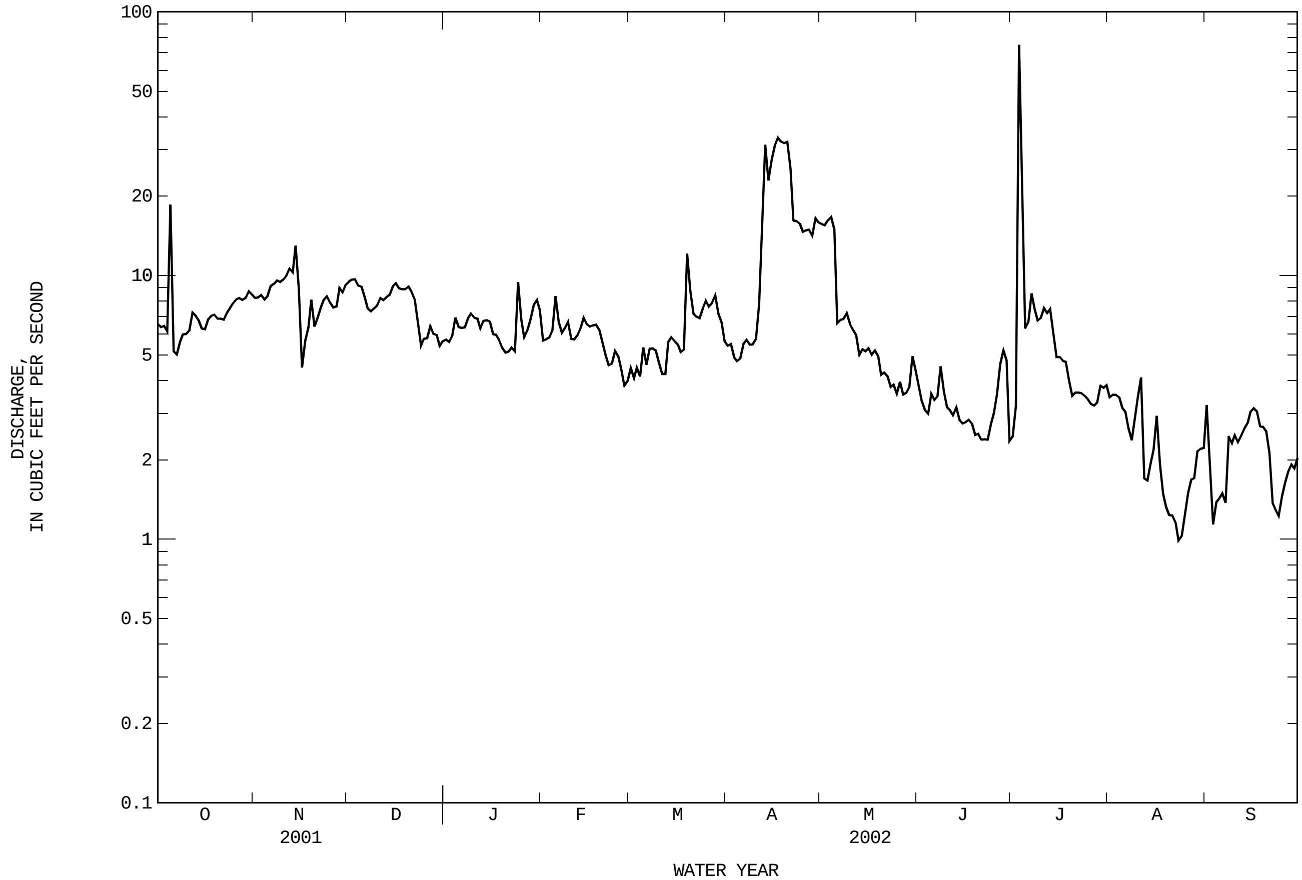
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 2002h, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	47.13	21.56	21.18	19.79	20.44	20.10	28.04	41.40	26.77	39.91	20.04	63.83
MAX	851	146	126	100	91.5	88.4	479	1116	189	1445	162	2352
(WY)	1931	1975	1975	1975	1975	1992	1957	1957	1958	1938	1971	1936
MIN	0.54	0.51	0.57	0.40	0.35	0.39	1.09	2.83	1.08	1.08	1.08	0.85
(WY)	1955	1955	1955	1955	1955	1955	1955	1954	1954	1952	1952	1954

SUMMARY STATISTICS	FOR 2002 WATER YEAR		WATER YEARS 1930 - 2002h	
ANNUAL TOTAL	2424.79			
ANNUAL MEAN	6.643		31.05	
HIGHEST ANNUAL MEAN			207	1936
LOWEST ANNUAL MEAN			3.20	1952
HIGHEST DAILY MEAN	75	Jul 3	29500	Jul 23 1938
LOWEST DAILY MEAN	0.99	Aug 23	0.10	Feb 27 1955
ANNUAL SEVEN-DAY MINIMUM	1.2	Aug 19	0.19	Feb 25 1955
MAXIMUM PEAK FLOW	179	Jul 3	c100000	Jul 23 1938
MAXIMUM PEAK STAGE	2.49	Jul 3	a21.95	Jul 23 1938
ANNUAL RUNOFF (AC-FT)	4810		22500	
10 PERCENT EXCEEDS	9.5		40	
50 PERCENT EXCEEDS	5.7		14	
90 PERCENT EXCEEDS	2.3		3.6	

e Estimated
h See PERIOD OF RECORD paragraph.
c From rating curve extended above 15,100 ft^3/s on basis of slope-area measurement of 80,100 ft^3/s.
a From floodmark.

08128000 South Concho River at Christoval, TX--Continued



08128400 Middle Concho River above Tankersley, TX

LOCATION.--Lat 31°25’38", long 100°42’39", Irion County, Hydrologic Unit 12090103, on left bank 0.3 mi upstream from East Rocky Creek, 0.5 mi southwest of Tullos Ranch Headquarters, 6.7 mi northwest of Tankersley, and 20.9 mi upstream from mouth.

DRAINAGE AREA.--2,084 mi^2, of which 968 mi^2 probably is noncontributing.

PERIOD OF RECORD.--Mar. 1961 to Sept. 1995, Oct. 1995 to Mar. 2001 (peak discharges greater than base discharge), Apr. 2001 to current year.
Water-quality records.--Chemical data: Aug. 1964 to Apr. 1965.

REVISED RECORDS.--WDR TX-81-3: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,986.47 ft above NGVD of 1929. Satellite telemeter at station.

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

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1900, 29.5 ft, Sept. 26, 1936. A flood in 1900 reached the same stage, 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	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	0.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	0.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	0.19	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	0.24	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.25	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	0.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	0.02	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	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	4.84	0.00	0.00	0.00	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MEAN	0.156	0.000	0.000	0.000	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MAX	0.58	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.00	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	9.6	0.00	0.00	0.00	0.2	0.00	0.00	0.00	0.00	0.00	0.00	0.00

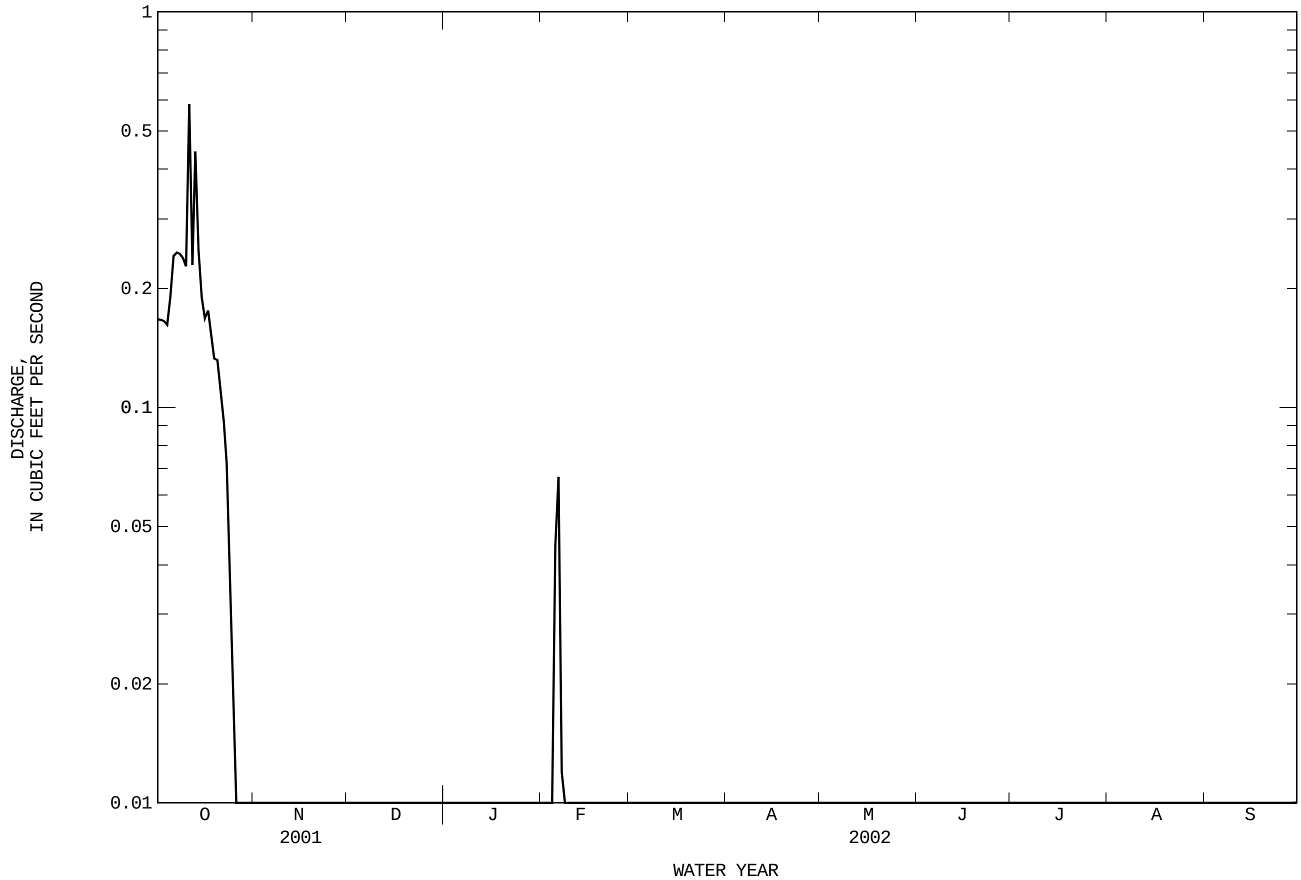
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 2002h, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	25.76	8.565	7.932	8.091	13.33	11.28	15.57	18.50	18.46	3.100	9.083	53.47
MAX	363	107	59.4	44.3	169	86.7	143	134	375	27.2	115	1181
(WY)	1975	1975	1975	1975	1992	1987	1992	1965	1986	1992	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)	1962	1962	1962	1962	1962	1962	1961	1961	1962	1961	1961	1962

SUMMARY STATISTICS	FOR 2002 WATER YEAR		WATER YEARS 1961 - 2002h	
ANNUAL TOTAL	4.96			
ANNUAL MEAN	0.014		16.18	
HIGHEST ANNUAL MEAN			110	1974
LOWEST ANNUAL MEAN			0.000	1962
HIGHEST DAILY MEAN	0.58	Oct 11	12900	Sep 21 1974
LOWEST DAILY MEAN	0.00	Oct 26	0.00	Apr 1 1961
ANNUAL SEVEN-DAY MINIMUM	0.00	Oct 26	0.00	Apr 1 1961
MAXIMUM PEAK FLOW	1.4	Oct 11	c15500	Sep 21 1974
MAXIMUM PEAK STAGE	6.39	Oct 11	24.98	Sep 21 1974
ANNUAL RUNOFF (AC-FT)	9.8		11720	
10 PERCENT EXCEEDS	0.00		19	
50 PERCENT EXCEEDS	0.00		1.4	
90 PERCENT EXCEEDS	0.00		0.00	

h See PERIOD OF RECORD paragraph.
c From rating curve extended above 12,400 ft^3/s.

08128400 Middle Concho River above Tankersley, TX--Continued



08129300 Spring Creek above Tankersley, TX
(Flood-hydrograph partial-record station)

LOCATION.--Lat 31°19’48", long 100°38’24", Tom Green County, Hydrologic Unit 12090102, on right bank at downstream side of bridge on Farm Road 2335, 1.4 mi south of Tankersley, 2.5 mi upstream from Dove Creek, and 10.4 mi upstream from mouth.

DRAINAGE AREA.--425 mi^2, of which 19.7 mi^2 probably is noncontributing.

PERIOD OF RECORD.--Oct. 1960 to Sept. 1995 (daily mean discharge), Oct. 1995 to current year (peak discharges greater than base discharge).
Water-quality records.--Chemical data: Sept. 1964 to May 1967.

REVISED RECORDS.--WDR TX-81-3: Drainage area.

GAGE.--Water-stage recorder, crest-stage gage, and concrete control. Datum of gage is 1,964.72 ft above NGVD of 1929. Prior to Nov. 10, 1960, nonrecording gage at same site and datum. Satellite telemeter at station.

REMARKS.--Records good. No known regulation. There are many small diversions above station for irrigation.

AVERAGE DISCHARGE.--35 years (water years 1961-95), 13.1 ft^3/s (9,490 acre-ft/year).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 30,400 ft^3/s, Aug. 12, 1971, gage height, 16.57 ft; no flow at times most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Notable floods since at least 1853 occurred in 1882 and 1884. Flood of Oct. 3, 1959, reached a stage of 18.4 ft, from floodmarks. At former gage near Tankersley 8.0 mi downstream, the flood of Oct. 3, 1959, had a discharge of 82,100 ft^3/s and was found to be about 3.0 ft lower than the 1882 flood, the greatest at that location since at least 1853.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 100 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.				Dec. 12	1415	*8.4	*4.14

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08130500 Dove Creek at Knickerbocker, TX
(Flood-hydrograph partial-record station)

LOCATION.--Lat 31°16’26", long 100°37’50", Tom Green County, Hydrologic Unit 12090102, on left downstream end of bridge on Farm Road 2335, 0.5 mi west of Knickerbocker, and 5.7 mi upstream from mouth.

DRAINAGE AREA.--226 mi^2, of which 8.4 mi^2 probably is noncontributing.

PERIOD OF RECORD.--Oct. 1960 to Sept. 1995 (daily mean discharge), Oct. 1995 to current year (peak discharges greater than base discharge).

REVISED RECORDS.--WDR TX-81-3: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 2,001.45 ft above NGVD of 1929. Prior to Nov. 10, 1960, nonrecording gage, Nov. 10, 1960, to Mar. 17, 1986, water-stage recorder, both at site 278 ft to the right at present datum. Satellite telemeter at station.

REMARKS.--Records good. No known regulation. Flow is affected by diversions from two small upstream channel dams, and by small upstream diversions (for irrigation). Flow is sustained by springflow from Dove Creek Spring about 9.0 mi upstream.

AVERAGE DISCHARGE.--35 years (water years 1961-95), 16.2 ft^3/s (11,740 acre-ft/year).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,500 ft^3/s, Aug. 12, 1971, gage height, 20.66 ft; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1882, 30.4 ft in 1906 and Oct. 3, 1959; floods in 1882 and 1884 reached about the same stage, from information by local resident.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 100 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Aug. 14	0245	*153	*5.19	No other peak greater than base discharge.			

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08131190 South Concho River above Gardner Dam near San Angelo, TX

LOCATION.--Lat 31°16’58", long 100°30’27", Tom Green County, Hydrologic Unit 12090102, on left bank 0.2 mi above Gardner Dam, 2.5 mi above Twin Buttes Dam, 6.0 mi south of Mathis Airport, and 10.0 mi south of San Angelo.

DRAINAGE AREA.--434 mi^2.

PERIOD OF RECORD.--Oct. 1999 to Sept. 2000, Oct. 2001 to current year (gage heights only).

GAGE.--Water-stage recorder. Datum of gage is 1,922.42 ft above NGVD of 1929. Prior to Oct. 2001, datum 4.28 ft higher. Satellite telemeter at station.

REMARKS.--Records good. Interruptions in the maximum and minimum gage heights were due to malfunction of the instrument except for July 20-25, which were due to no flow. On Sept. 17, 2001 the right end of the masonry dam was found breached. From Oct. 1965 to Dec. 1971 periodic discharge measurements were made and from Apr. 1971 to Jan. 1974 there was a recording gage at site on left bank 0.2 mi downstream from present gage at datum 2.78 ft higher, data not published. No known regulations. There are diversions above station for agricultural use.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 7.25 ft, July 29, 2002; minimum gage height, 0.73 ft, Sept. 10, 2000.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 7.25 ft, July 29; minimum recorded gage height, 1.98 ft, Sept. 3.

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	3.71	3.67	3.51	3.48	3.62	3.61	3.67	3.64	3.59	3.56	3.49	3.45
2	3.68	3.66	3.51	3.49	3.62	3.61	3.67	3.66	3.57	3.55	3.53	3.47
3	3.68	3.65	3.49	3.47	3.63	3.61	3.66	3.64	3.57	3.55	3.50	3.47
4	3.67	3.65	3.48	3.44	3.64	3.60	3.65	3.61	3.60	3.56	3.48	3.45
5	3.78	3.65	3.46	3.44	3.62	3.59	3.70	3.64	3.69	3.60	3.47	3.44
6	4.13	3.69	3.46	3.44	3.63	3.62	3.67	3.66	3.69	3.65	3.46	3.43
7	3.70	3.65	3.46	3.43	3.63	3.60	3.67	3.65	3.65	3.64	3.46	3.43
8	3.65	3.62	3.45	3.43	3.63	3.59	3.67	3.61	3.64	3.60	3.47	3.43
9	3.65	3.62	3.48	3.45	3.60	3.58	3.63	3.59	3.66	3.58	3.48	3.41
10	3.65	3.62	3.46	3.43	3.60	3.57	3.63	3.59	3.69	3.62	3.46	3.40
11	3.65	3.63	3.47	3.43	3.59	3.56	3.63	3.60	3.62	3.60	3.45	3.40
12	3.68	3.62	3.47	3.43	3.60	3.56	3.63	3.59	3.61	3.59	3.44	3.41
13	3.68	3.62	3.45	3.43	3.60	3.58	3.61	3.57	3.64	3.60	3.42	3.38
14	3.62	3.59	3.81	3.43	3.60	3.56	3.61	3.58	3.61	3.57	3.43	3.38
15	3.61	3.59	3.94	3.71	3.60	3.57	3.60	3.54	3.64	3.56	3.45	3.42
16	3.61	3.59	3.71	3.58	3.61	3.58	3.59	3.54	3.60	3.58	3.43	3.40
17	3.61	3.58	3.61	3.57	3.61	3.59	3.60	3.59	3.59	3.56	3.41	3.39
18	3.59	3.57	3.60	3.58	3.60	3.57	3.60	3.58	3.57	3.53	3.39	3.38
19	3.61	3.57	3.70	3.59	3.60	3.58	3.61	3.57	3.59	3.56	3.65	3.38
20	3.62	3.58	3.70	3.63	3.60	3.58	3.58	3.54	3.57	3.53	3.68	3.51
21	3.58	3.55	3.64	3.61	3.60	3.56	3.58	3.55	3.64	3.54	3.53	3.49
22	3.61	3.56	3.62	3.59	3.61	3.55	3.57	3.54	3.56	3.53	3.50	3.47
23	3.59	3.55	3.61	3.59	3.61	3.59	3.59	3.56	3.53	3.51	3.49	3.42
24	3.57	3.54	3.63	3.59	3.62	3.59	3.68	3.58	3.51	3.46	3.46	3.41
25	3.57	3.53	3.59	3.54	3.62	3.59	3.66	3.60	3.54	3.49	3.51	3.46
26	3.56	3.54	3.59	3.54	3.61	3.59	3.60	3.56	3.56	3.50	3.49	3.46
27	3.55	3.53	3.60	3.57	3.67	3.61	3.57	3.55	3.50	3.47	3.47	3.43
28	3.53	3.49	3.64	3.58	3.70	3.67	3.58	3.56	3.50	3.45	3.45	3.44
29	3.51	3.48	3.62	3.59	3.71	3.63	3.59	3.54	---	---	3.50	3.43
30	3.52	3.49	3.61	3.57	3.66	3.63	3.61	3.59	---	---	3.52	3.49
31	3.52	3.49	---	---	3.66	3.64	3.62	3.59	---	---	3.51	3.48
MONTH	4.13	3.48	3.94	3.43	3.71	3.55	3.70	3.54	3.69	3.45	3.68	3.38

08131190 South Concho River above Gardner Dam near San Angelo, 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	3.49	3.44	3.27	3.23	3.03	2.95	3.00	2.96	---	---	---	---
2	3.48	3.44	3.25	3.22	2.96	2.90	3.06	2.98	---	---	---	---
3	3.46	3.42	3.23	3.20	2.93	2.90	3.17	3.05	---	---	2.00	1.98
4	3.43	3.41	3.23	3.19	2.97	2.91	3.40	2.72	---	---	2.02	1.99
5	3.42	3.40	3.21	3.16	2.93	2.90	2.72	2.53	---	---	2.09	2.02
6	3.42	3.40	3.20	3.18	2.95	2.91	2.54	2.51	---	---	2.11	2.08
7	3.43	3.39	3.20	3.15	2.99	2.95	2.52	2.50	---	---	2.11	2.08
8	3.44	3.41	3.16	3.11	3.01	2.96	2.53	2.50	---	---	2.11	2.08
9	3.44	3.41	3.13	3.10	3.02	2.97	2.52	2.48	---	---	2.16	2.11
10	3.43	3.39	3.18	3.12	2.98	2.94	2.48	2.43	---	---	2.21	2.15
11	3.42	3.40	3.17	3.10	2.97	2.93	2.46	2.42	---	---	2.23	2.20
12	3.43	3.39	3.11	3.03	2.96	2.92	2.45	2.42	---	---	2.20	2.17
13	3.57	3.43	3.05	3.03	2.97	2.89	2.47	2.43	---	---	2.17	2.13
14	3.55	3.47	3.08	3.03	2.97	2.90	2.51	2.46	---	---	2.44	2.12
15	3.47	3.41	3.04	3.00	2.93	2.88	2.49	2.45	---	---	2.43	2.17
16	3.46	3.42	3.07	3.00	2.90	2.87	2.48	2.44	---	---	2.17	2.16
17	3.43	3.41	3.07	2.98	2.94	2.90	2.44	2.41	---	---	2.19	2.16
18	3.45	3.41	3.02	2.98	2.91	2.85	2.43	2.41	---	---	2.17	2.14
19	3.43	3.40	3.09	3.02	2.86	2.81	2.42	2.41	---	---	2.20	2.13
20	3.42	3.38	3.07	3.00	2.85	2.81	---	---	---	---	2.19	2.17
21	3.41	3.36	3.01	2.97	2.93	2.85	---	---	---	---	2.19	2.16
22	3.45	3.41	3.02	2.97	2.99	2.91	---	---	---	---	2.20	2.17
23	3.43	3.38	3.04	2.98	3.03	2.96	---	---	---	---	2.18	2.17
24	3.42	3.38	2.99	2.97	2.96	2.90	---	---	---	---	2.19	2.16
25	3.41	3.37	3.03	2.97	2.91	2.88	---	---	---	---	2.17	2.15
26	3.42	3.37	3.03	2.98	2.93	2.88	2.52	2.41	---	---	2.18	2.15
27	3.41	3.35	3.01	2.98	3.00	2.93	2.47	2.42	---	---	2.16	2.13
28	3.37	3.30	3.04	2.99	3.02	2.92	5.74	2.43	---	---	2.16	2.13
29	3.31	3.27	3.07	3.03	2.96	2.90	7.25	2.40	---	---	2.14	2.10
30	3.29	3.24	3.06	3.02	3.00	2.96	2.40	2.29	---	---	2.13	2.09
31	---	---	3.07	3.02	---	---	2.29	2.26	---	---	---	---
MONTH	3.57	3.24	3.27	2.97	3.03	2.81	7.25	2.26	---	---	2.44	1.98
YEAR	7.25	1.98										

08131200 Twin Buttes Reservoir near San Angelo, TX

LOCATION.--Lat 31°22'55", long 100°32'17", Tom Green County, Hydrologic Unit 12090102, in outlet control tower at Twin Buttes Dam on Middle Concho River, Spring Creek, and South Concho River, 3.8 mi upstream from Lake Nasworthy Dam, 8.1 mi southwest of San Angelo, and 75.0 mi upstream from mouth.

DRAINAGE AREA.--3,868 mi^2, of which 1,055 mi^2 probably is noncontributing.

PERIOD OF RECORD.--Oct. 1962 to current year.
Water-quality records.--Chemical data: May 1965 to Nov. 1966 and July 1970 to Apr. 1984.

REVISED RECORDS.--WDR TX-81-3: Drainage area.

GAGE.--Water-stage recorder and nonrecording gage on Middle Concho-Spring Creek pool and nonrecording gage on South Concho pool. Datum of gage is NGVD of 1929. Satellite telemeter at station.

REMARKS.--No estimated daily contents. Records good except those for Aug. 3 to Sept. 30, which are fair when water-stage recorder was isolated at an elevation of 1,888.08 ft. The reservoir is formed by a rolled earthfill dam 8.1 mi long, including a 200-foot-wide uncontrolled off-channel concrete gravity spillway with ogee weir section. Outlet works consist of three 15.5-foot concrete conduits, each controlled by a 12.0- by 15.0-foot fixed-wheel gate and a 12.0- by 15.0-foot radial gate, located in the Middle Concho-Spring Creek pool. Low-flow releases are made through 2.0- by 2.0-foot gates located in the center of three fixed- wheel gates. The South Concho and Middle Concho-Spring Creek pools are connected by a 3.22-mile equalizing channel. The South Concho and Middle Concho-Spring Creek pools were not equalized at an elevation of 1,926.5 ft during the year. Daily contents were obtained from capacity tables for South Concho and Middle Concho-Spring Creek pools and summed to obtain combined daily contents. Lake level elevations below 1,926.5 ft represent Middle Concho-Spring Creek pool only. Deliberate impoundment of water began on Dec. 1, 1962; dam was completed Feb. 13, 1963. In June 1999, construction of a cutoff wall to stop seepage was completed. Capacity curve is based on a survey made in 1958. Reservoir is owned by the city of San Angelo and was built for flood control, irrigation, and municipal uses. Conservation pool storage is 177,800 acre-ft. Data regarding the dam are given in the following table:

	Elevation (feet)
Top of dam..	1,991.0
Crest of spillway...	1,969.1
Bottom of equalizing channel (Middle Concho-Spring Creek pool)........	1,926.5
Dead storage in South Concho pool..................................	1,926.5
Lowest gated outlet (invert at Middle Concho-Spring Creek pool).......	1,885.0

COOPERATION.--Capacity curve dated Mar. 1964 furnished by the U.S. Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 205,200 acre-ft, May 12, 1975, elevation, 1,942.20 ft; minimum since first appreciable storage, 2,120 acre-ft, Apr. 15, 1971.

EXTREMES FOR CURRENT YEAR.--Maximum combined daily mean contents, 13,890 acre-ft, Apr. 1; minimum combined daily mean contents, 5,310 acre-ft, Sept. 30.

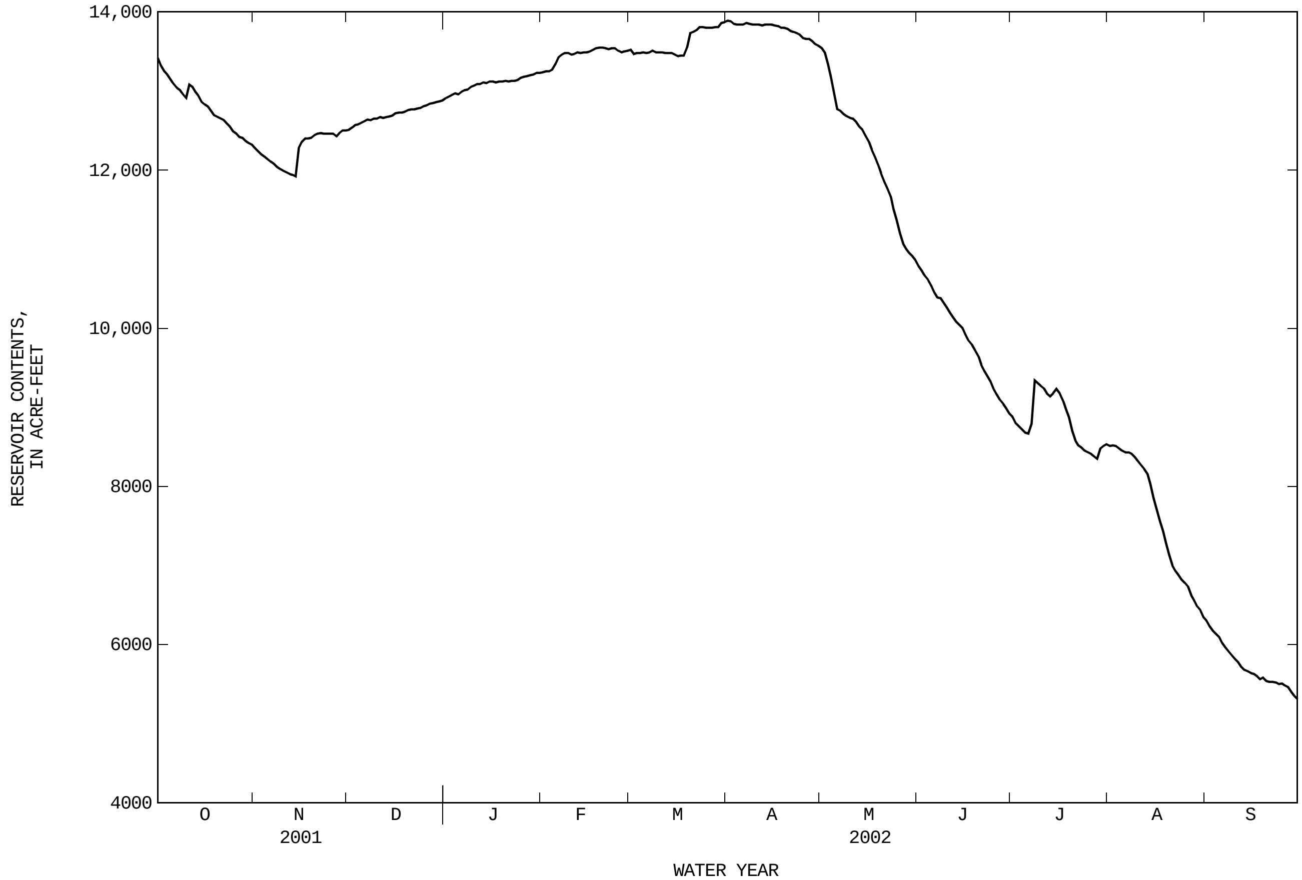
RESERVOIR STORAGE FROM DCP, in (ACRE-FEET), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13420	12280	12510	12910	13240	13520	13890	13540	10780	8880	8510	6300
2	13320	12240	12540	12930	13250	13470	13880	13490	10730	8800	8520	6230
3	13250	12200	12570	12950	13250	13480	13850	13340	10660	8760	8510	6170
4	13210	12170	12580	12970	13270	13480	13840	13160	10610	8720	8480	6130
5	13150	12140	12600	12960	13340	13490	13840	12960	10540	8680	8450	6090
6	13090	12110	12620	12990	13430	13480	13840	12770	10450	8670	8430	6020
7	13040	12080	12640	13010	13460	13490	13860	12750	10390	8790	8430	5960
8	13010	12040	12630	13020	13480	13510	13850	12710	10380	9340	8410	5910
9	12960	12010	12650	13050	13480	13490	13840	12680	10320	9310	8370	5860
10	12910	11990	12650	13070	13460	13490	13840	12660	10260	9270	8320	5820
11	13080	11970	12670	13090	13470	13490	13840	12650	10200	9240	8270	5780
12	13050	11950	12660	13090	13490	13480	13830	12610	10140	9170	8220	5720
13	12990	11940	12670	13110	13480	13480	13840	12550	10080	9140	8160	5680
14	12940	11920	12680	13100	13490	13480	13840	12510	10040	9180	8030	5660
15	12860	12280	12690	13120	13490	13460	13840	12440	10000	9230	7850	5640
16	12830	12360	12720	13120	13500	13440	13830	12370	9920	9180	7710	5630
17	12800	12400	12730	13110	13520	13450	13820	12260	9840	9090	7560	5600
18	12750	12400	12730	13120	13540	13450	13800	12170	9790	8980	7430	5560
19	12690	12410	12740	13120	13550	13550	13800	12070	9720	8870	7280	5580
20	12670	12440	12760	13130	13550	13730	13790	11960	9650	8700	7130	5540
21	12650	12460	12770	13120	13540	13750	13760	11860	9540	8580	7000	5530
22	12630	12470	12770	13130	13530	13770	13750	11770	9460	8520	6930	5530
23	12590	12460	12780	13130	13540	13810	13730	11670	9390	8490	6880	5520
24	12550	12460	12790	13140	13540	13810	13710	11500	9320	8450	6820	5500
25	12490	12460	12810	13170	13510	13800	13670	11360	9230	8430	6780	5510
26	12460	12460	12820	13180	13490	13800	13660	11200	9160	8410	6730	5480
27	12420	12430	12840	13190	13500	13800	13660	11070	9090	8380	6620	5460
28	12410	12470	12850	13200	13510	13810	13630	11000	9040	8350	6560	5400
29	12370	12500	12860	13210	---	13810	13590	10950	8980	8480	6480	5350
30	12340	12500	12870	13230	---	13860	13570	10910	8920	8510	6430	5310
31	12320	---	12880	13230	---	13870	---	10860	---	8530	6340	---
MEAN	12810	12270	12710	13090	13460	13610	13780	12190	9890	8810	7600	5720
MAX	13420	12500	12880	13230	13550	13870	13890	13540	10780	9340	8520	6300
MIN	12320	11920	12510	12910	13240	13440	13570	10860	8920	8350	6340	5310
(+)	1889.85	1889.87	1890.29	1890.67	1891.00	1891.45	1891.27	1888.93	1888.38	1888.09	1886.33	1885.79
(@)	-1180	+180	+380	+350	+280	+360	-300	-2710	-1940	-390	-2190	-1030

CAL YR 2001 MAX 17330 MIN 6200 (@) +50
WTR YR 2002 MAX 13890 MIN 5310 (@) -8190

(+) Elevation, in feet, at end of month of Middle Concho and Spring Creek pool.
(@) Change in combined contents, in acre-feet.

08131200 Twin Buttes Reservoir near San Angelo, TX--Continued



08131400 Pecan Creek near San Angelo, TX

LOCATION.--Lat 31°18'32", long 100°26'44", Tom Green County, Hydrologic Unit 12090102, on left bank 200 ft upstream from U.S. Highway 277, 3.7 mi upstream from mouth, and 10.5 mi south of San Angelo.

DRAINAGE AREA.--81.1 mi^2.

PERIOD OF RECORD.--June 1961 to Sept. 1986, July 2001 to current year.

REVISED RECORDS.--WDR TX-75-3: 1971, 1972(M). WDR TX-81-3: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 1,930.72 ft above NGVD of 1929. Prior to Apr. 30, 1968, at site 1.2 mi downstream at datum 20.21 ft lower. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good except those for daily discharges below 5.0 ft^3/s, which are fair. No known regulation or diversions. No flow many days each year.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1908, 14.36 ft, Sept. 15, 1936, former site and datum, (discharge, 30,500 ft^3/s) by slope-area measurement.

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	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00
MEAN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.033
MAX	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.0

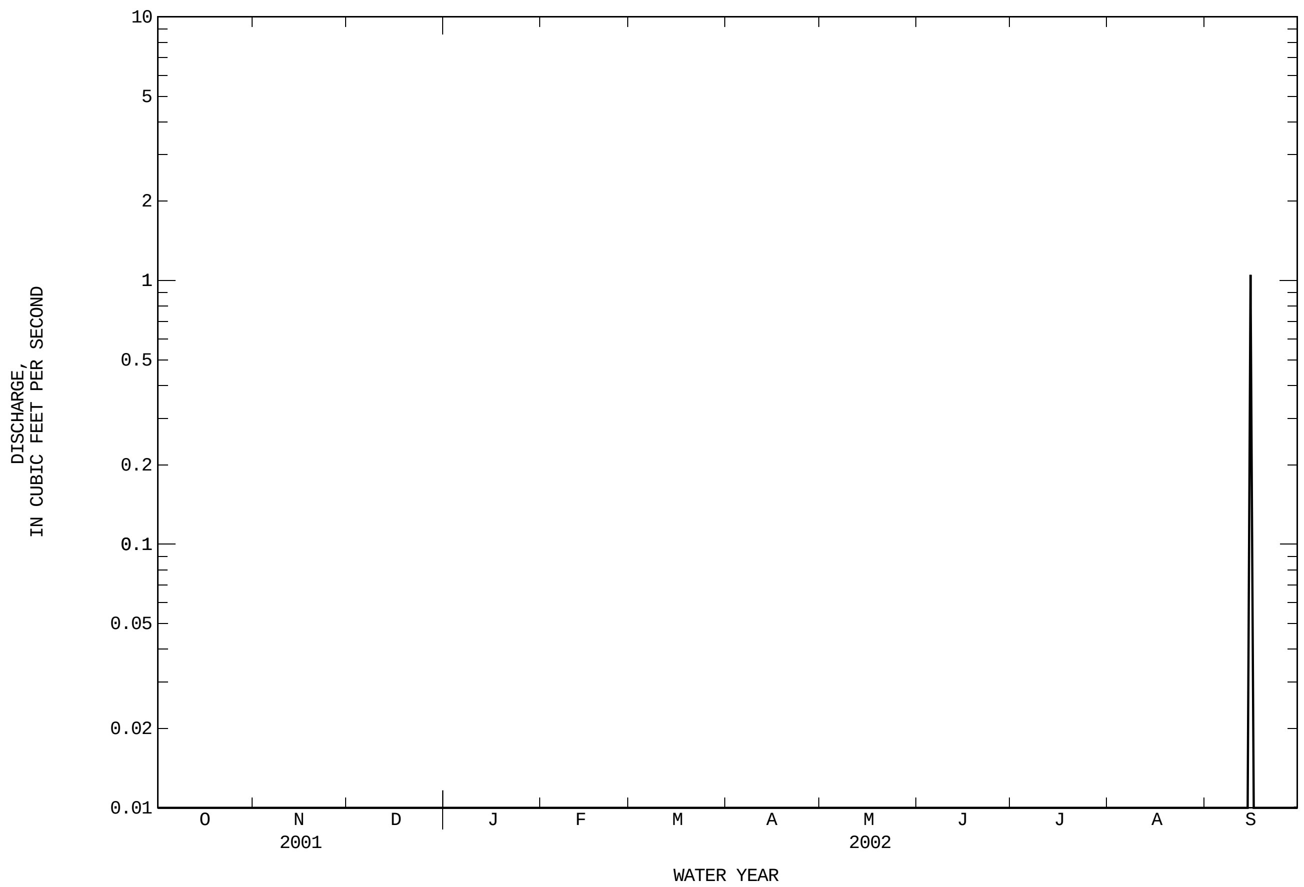
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 2002h, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2.507	1.593	1.611	1.167	0.900	0.722	1.801	1.461	0.875	0.477	2.636	9.404
MAX	37.7	24.9	16.0	12.6	9.25	7.84	29.8	12.5	6.57	3.46	47.5	189
(WY)	1975	1975	1975	1975	1975	1975	1977	1975	1986	1971	2001	1980
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)	1963	1962	1962	1962	1962	1962	1962	1962	1962	1961	1961	1962

SUMMARY STATISTICS	FOR 2002 WATER YEAR		WATER YEARS 1961 - 2002h	
ANNUAL TOTAL	1.00			
ANNUAL MEAN	0.003		2.008	
HIGHEST ANNUAL MEAN			15.7	1980
LOWEST ANNUAL MEAN			0.000	1969
HIGHEST DAILY MEAN	1.0	Sep 15	3940	Sep 8 1980
LOWEST DAILY MEAN	0.00	Oct 1	0.00	Jul 1 1961
ANNUAL SEVEN-DAY MINIMUM	0.00	Oct 1	0.00	Jul 1 1961
MAXIMUM PEAK FLOW	6.5	Sep 15	c25600	Sep 8 1980
MAXIMUM PEAK STAGE	0.66	Sep 15	10.63	Sep 8 1980
ANNUAL RUNOFF (AC-FT)	2.0		1450	
10 PERCENT EXCEEDS	0.00		2.4	
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 17,300 ft^3/s on basis of slope-area measurement of 30,500 ft^3/s.

08131400 Pecan Creek near San Angelo, TX--Continued



08133250 North Concho River above Sterling City, TX
(Low-flow partial-record station)

LOCATION.--Lat 31°53’50", long 101°06’17", Sterling County, Hydrologic Unit 12090104, on left bank 0.2 mi southwest of U.S. Highway 87, 2.1 mi upstream from Willow Creek, 3.3 mi upstream from Chalk Creek, 5.0 mi above State Highway 158, 5.5 mi downstream from Sand Bluff Draw, and 8.0 mi northwest of Sterling City.

DRAINAGE AREA.--201 mi^2.

PERIOD OF RECORD.--Feb. 2000 to Sept. 2001 (daily mean discharges less than 10 ft^3/s), Oct. 2001 to current year (daily mean discharges less than 500 ft^3/s).

GAGE.--Water-stage recorder and concrete dam. Datum of gage is 2,353.99 ft (Texas Department of Transportation benchmark, vertical control datum unknown). Satellite telemeter at station.

REMARKS.--Records fair. No flow many days.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 13.88 ft, Mar. 23, 2000, from floodmark (discharge not determined); minimum, no flow many days.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 6.43 ft, Nov. 16 (discharge not determined); minimum, no flow many days.

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	e0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00
15	0.00	---	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00
16	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	1.6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	0.00	---	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00
MEAN	0.000	---	0.000	0.000	0.000	0.000	0.003	0.000	0.000	0.000	0.000	0.000
MAX	0.00	---	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	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
AC-FT	0.00	---	0.00	0.00	0.00	0.00	0.2	0.00	0.00	0.00	0.00	0.00

e Estimated

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08133500 North Concho River at Sterling City, TX
(Flood-hydrograph partial-record station)

LOCATION.--Lat 31°49’48", long 100°59’36", Sterling County, Hydrologic Unit 12090104, on right bank 100 ft upstream from bridge on State Highway 163, 0.5 mi south of Sterling City, 4.0 mi upstream from Sterling Creek, 5.1 mi downstream from Lacy Creek, and at mile 57.2.

DRAINAGE AREA.--588 mi^2, of which 19.6 mi^2 probably is noncontributing.

PERIOD OF RECORD.--Sept. 1939 to Sept. 1985, Oct. 1985 to Sept. 1995 (daily discharges greater than 100 ft^3/s), Oct. 1995 to current year (peak discharges greater than base discharge).

REVISED RECORDS.--WSP 1512: 1945, 1948. WDR TX-81-3: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,242.36 ft above NGVD of 1929. Prior to Dec. 6, 1939, nonrecording gage at same site and datum. Satellite telemeter at station.

AVERAGE DISCHARGE.--46 years (water years 1940-85), 7.80 ft^3/s (5,650 acre-ft/year).

REMARKS.--Records good. No known regulation. There are several small diversions above station for irrigation.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,300 ft^3/s, July 6, 1948, gage height, 23.70 ft; no flow at times each year. Maximum stage since at least 1891, that of July 6, 1948.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 300 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 16	1530	*1,130	*11.42	No other peak greater than base discharge.			

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08134000 North Concho River near Carlsbad, TX
(Hydrologic index station)

LOCATION.--Lat 31°35’33", long 100°38’12", Tom Green County, Hydrologic Unit 12090104, near left bank at downstream side of bridge on county road, 0.6 mi southeast of Carlsbad, 1.5 mi upstream from Mule Creek, 2.5 mi upstream from Grape Creek, 16.2 mi upstream from O.C. Fisher Dam, and 21.3 mi upstream from mouth.

DRAINAGE AREA.--1,266 mi^2, of which 75.1 mi^2 probably is noncontributing.

PERIOD OF RECORD.--Mar. 1924 to current year.
Water-quality records.--Chemical data: Apr. 1980 to July 1982. Biochemical data: Apr. 1980 to July 1982.

REVISED RECORDS.--WSP 1512: 1924(M), 1925, 1926(M), 1928, 1930, 1932(M), 1935, 1937-38(M), 1941(M), 1945(M), 1947-49(M). WDR TX-81-3: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,968.02 ft above NGVD of 1929. Prior to Feb. 4, 1925, and Sept. 27, 1936, to Feb. 7, 1937, nonrecording gage; Feb. 4, 1925, to Sept. 26, 1936, and Feb. 8, 1937, to Nov. 6, 1955, water-stage recorder, all at site 2.5 mi upstream at datum 32.76 ft higher. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. No known regulation. There are several diversions (by pumping) upstream from station. No flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since June 1853, that of Sept. 26, 1936.

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	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	95	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	273	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	18	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	164	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	15	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.2	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	429	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	6.2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	2.7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.04	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.04	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	0.00	498.27	0.05	0.00	0.00	0.00	0.00	0.00	0.00	567.41	0.00	0.00
MEAN	0.000	16.61	0.002	0.000	0.000	0.000	0.000	0.000	0.000	18.30	0.000	0.000
MAX	0.00	429	0.03	0.00	0.00	0.00	0.00	0.00	0.00	273	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	0.00	988	0.1	0.00	0.00	0.00	0.00	0.00	0.00	1130	0.00	0.00

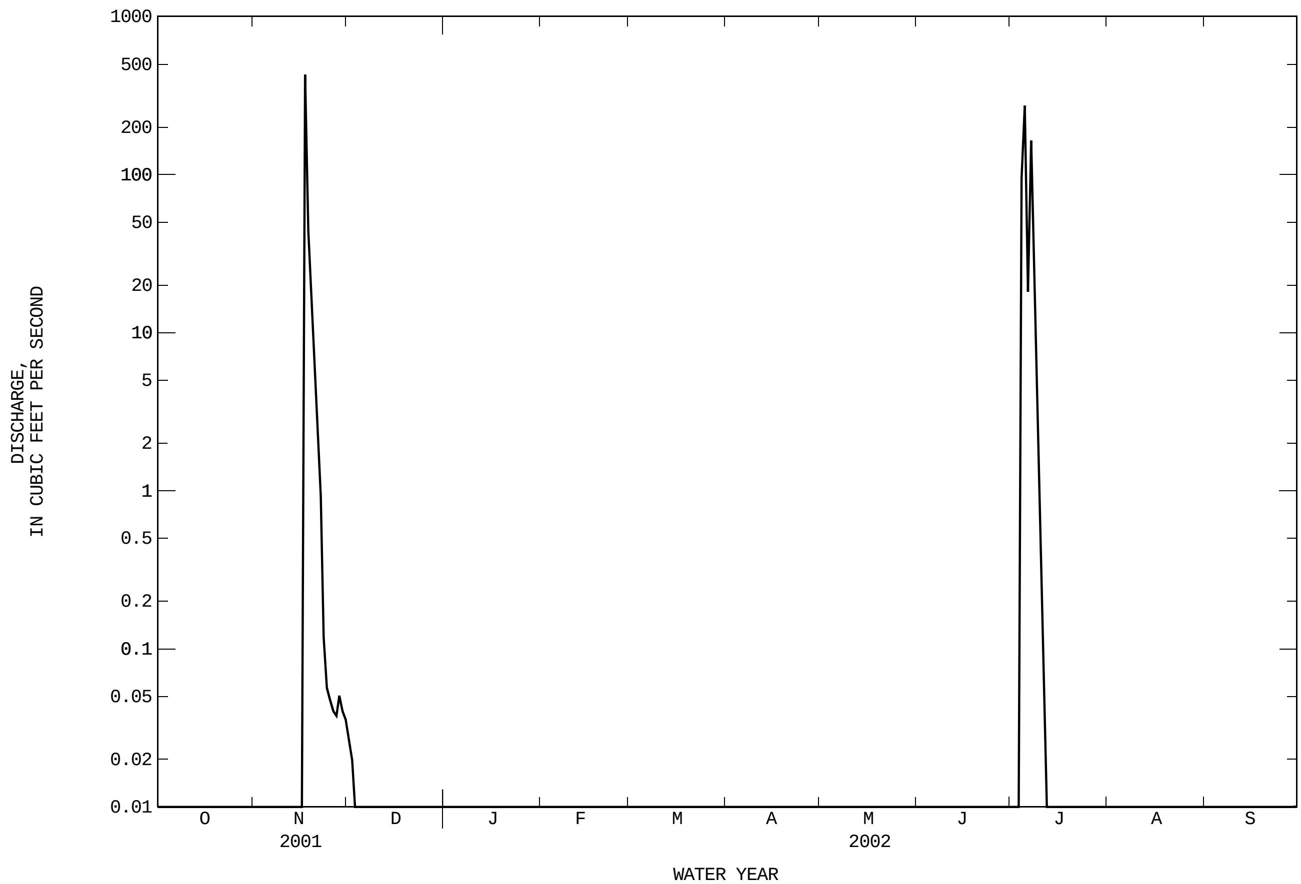
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1924 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	35.74	4.148	3.991	3.820	6.507	11.98	33.92	75.64	25.80	38.31	15.81	79.37
MAX	1463	65.2	20.1	16.0	85.0	307	631	1355	252	1195	255	4019
(WY)	1958	1935	1931	1937	1935	1926	1925	1925	1937	1948	1953	1936
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)	1934	1934	1953	1953	1953	1953	1963	1967	1934	1924	1929	1930

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1924 - 2002	
ANNUAL TOTAL	934.45		1065.73			
ANNUAL MEAN	2.560		2.920		28.11	
HIGHEST ANNUAL MEAN					336	1936
LOWEST ANNUAL MEAN					0.000	1970
HIGHEST DAILY MEAN	429	Nov 17	429	Nov 17	62900	Sep 17 1936
LOWEST DAILY MEAN	0.00	May 17	0.00	Oct 1	0.00	Jun 20 1924
ANNUAL SEVEN-DAY MINIMUM	0.00	May 17	0.00	Oct 1	0.00	Jun 20 1924
MAXIMUM PEAK FLOW			1950	Jul 4	c94600	Sep 26 1936
MAXIMUM PEAK STAGE			10.26	Jul 4	a29.10	Sep 26 1936
ANNUAL RUNOFF (AC-FT)	1850		2110		20360	
10 PERCENT EXCEEDS	1.9		0.00		12	
50 PERCENT EXCEEDS	0.00		0.00		1.4	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

c From rating curve extended above 15,000 ft^3/s on basis of slope-area measurements of 55,200 and 94,600 ft^3/s at former site.
a From floodmark at present site.

08134000 North Concho River near Carlsbad, TX--Continued
(Hydrologic index station)



08134250 North Concho River near Grape Creek, TX

LOCATION.--Lat 31°32'33", long 100°33'17", Tom Green County, Hydrologic Unit 12090104, on left bank at downstream side of bridge on FM 2288, 1.2 mi upstream from Bald Eagle Creek, 1.3 mi south of U.S. Hwy 87 at community of Grape Creek, 2.8 mi downstream from Grape Creek, and 6.0 mi upstream from O.C. Fisher Dam.

DRAINAGE AREA.--1,400 mi^2, of which 75.1 mi^2 probably is noncontributing.

PERIOD OF RECORD.--Feb. 2000 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,895.83 ft (Texas Department of Transportation benchmark, vertical control datum unknown). Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. No known regulation. There are several diversions (by pumping) upstream from station.

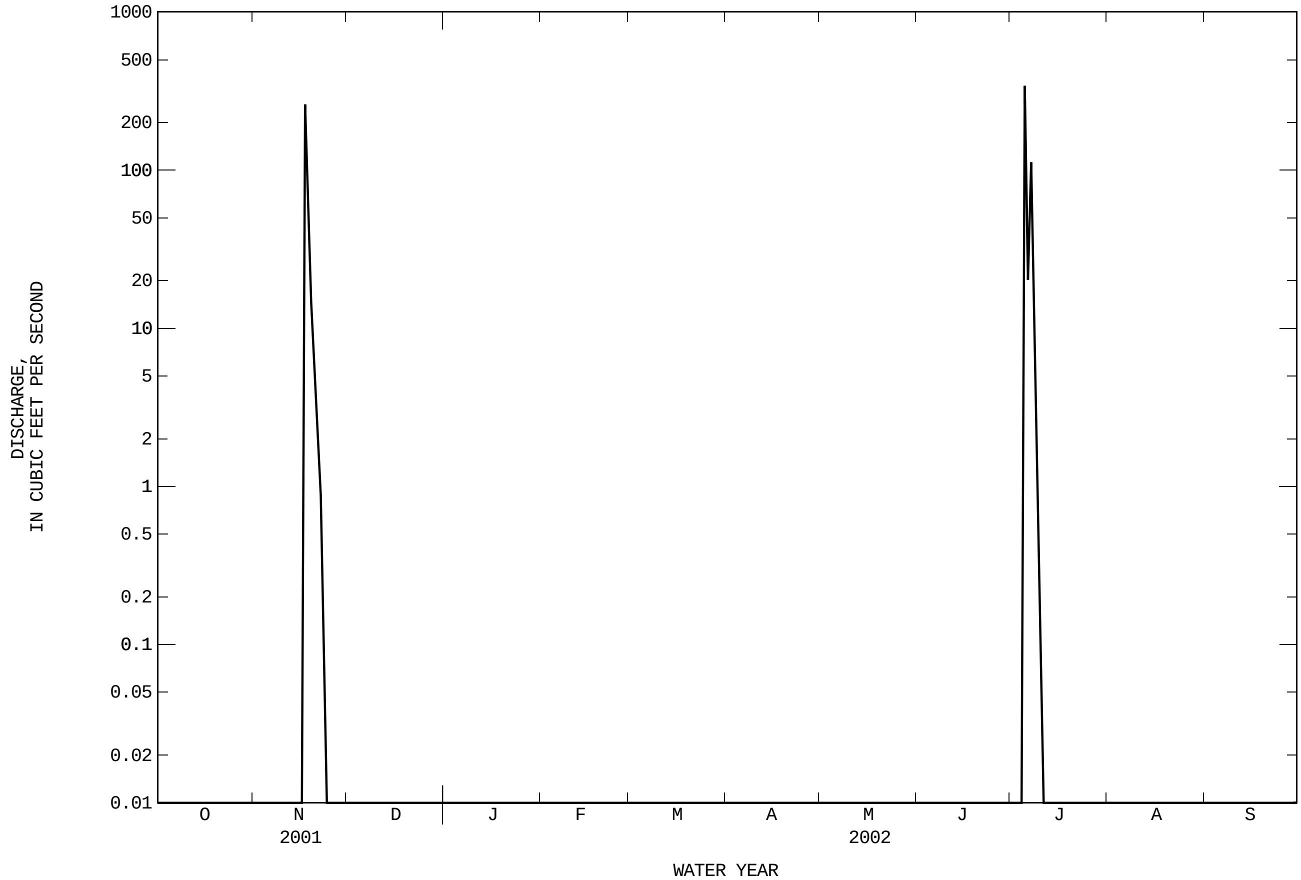
EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,400 ft^3/s, Mar. 24, 2000, gage height, 24.50 ft, observed; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,640, ft^3/s, July 5, gage height, 13.21 ft; 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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	340	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	20	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	17	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.8	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	260	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	6.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	2.6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.09	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	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	0.00	340.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	491.92	0.00	0.00
MEAN	0.000	11.35	0.000	0.000	0.000	0.000	0.000	0.000	0.000	15.87	0.000	0.000
MAX	0.00	260	0.00	0.00	0.00	0.00	0.00	0.00	0.00	340	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	0.00	676	0.00	0.00	0.00	0.00	0.00	0.00	0.00	976	0.00	0.00

08134250 North Concho River near Grape Creek, TX--Continued



08134500 O.C. Fisher Lake at San Angelo, TX

LOCATION.--Lat 31°29'04", long 100°28'53", Tom Green County, Hydrologic Unit 12090104, at intake structure of O.C. Fisher Dam on North Concho River, 0.1 mi west of Glenna Drive, 3.1 mi northwest of center of San Angelo, and 6.6 mi upstream from mouth.

DRAINAGE AREA.--1,488 mi^2, of which 105 mi^2 probably is noncontributing.

PERIOD OF RECORD.--Feb. 1952 to Sept. 2000 (U.S. Army Corps of Engineers furnished contents), Oct. 2000 to current year. Published as "San Angelo Reservoir" prior to Oct. 1970, and as "San Angelo Lake", Oct. 1970 to Sept. 1974.

REVISED RECORDS.--WSP 1922: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is NGVD of 1929. Prior to May 12, 1953, nonrecording gage at same site and datum. Prior to Aug. 16, 2001, water-stage recorder inside intake structure at same datum. Satellite telemeter at station.

REMARKS.--Records good except those for estimated daily contents, which are fair. The lake is formed by a rolled earthfill dam 40,885 ft long, including spillway. Closure was completed Mar. 7, 1951, and the dam was completed May 3, 1951. Deliberate impoundment began Feb. 1, 1952. The dam is owned by the U.S. Army Corps of Engineers. The lake is operated for flood control and recreation with part as municipal supply for the city of San Angelo. The spillway is an uncontrolled off-channel concrete gravity dam with ogee weir section 1,150 ft wide located to the right and upstream from the right end of dam. The spillway is designed to discharge 356,000 ft^3/s at maximum design flood level. The control outlet works consist of six gate-controlled outlets, 7.5 by 14.5 ft, opening into two 18.0-foot-diameter concrete conduits, and two 2.5-foot gate-controlled outlets for water-supply outlets. Since Feb. 1973, the capacity is based on a survey made in 1962. Prior to 1973, the capacity was based on a survey made in 1944. Conservation pool storage is 115,743 acre-ft. Data regarding the dam are given in the following table:

	Elevation (feet)
Top of dam...	1,964.0
Design flood...	1,958.0
Crest of spillway..	1,938.5
Top of conservation pool...	1,908.0
Lowest gated outlet (invert)...	1,840.0

COOPERATION.--The capacity table dated 1972 was furnished by the U.S. Army Corps of Engineers and is based on a resurvey of the lake in 1962.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 174,100 acre-ft, Oct. 14, 1957, elevation, 1,916.47 ft; minimum since first appreciable storage, lake dry July 16, 1970, to Apr. 15, 1971.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 5,370 acre-ft, July 9, elevation, 1,863.21 ft; minimum contents, 3,010 acre-ft, July 3-5, elevation, 1,858.58 ft.

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

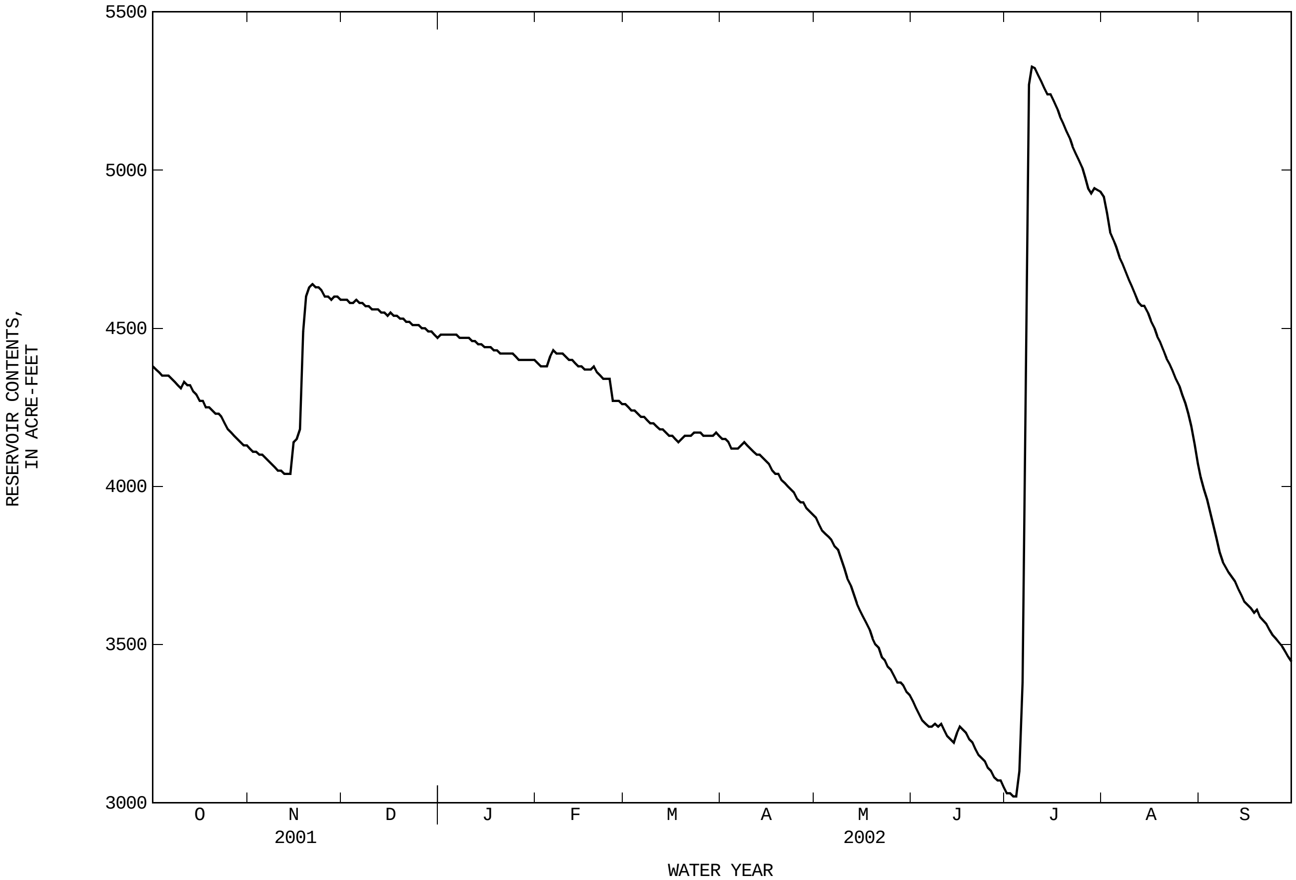
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4380	4120	4590	4480	4390	e4260	4150	3900	3320	3030	4920	4030
2	4370	4110	4590	4480	4380	e4250	4150	3880	3300	3030	4860	3990
3	4360	4110	4580	4480	4380	e4240	4140	3860	3280	3020	4800	3960
4	4350	4100	4580	4480	4380	e4240	4120	3850	3260	3020	4780	3920
5	4350	4100	4590	4480	4410	e4230	4120	3840	3250	3100	4760	3870
6	4350	4090	4580	4480	4430	e4220	4120	3830	3240	3380	4720	3840
7	4340	4080	4580	4470	4420	e4220	4130	3810	3240	4190	4700	3790
8	4330	4070	4570	4470	4420	e4210	4140	3800	3250	5270	4680	3760
9	4320	4060	4570	4470	4420	e4200	4130	3770	3240	5330	4650	3740
10	4310	4050	4560	4470	4410	e4200	4120	3740	3250	5320	4630	3730
11	4330	4050	4560	4460	4400	e4190	4110	3710	3230	5300	4610	3710
12	4320	4040	4560	4460	4400	e4180	4100	3690	3210	5280	4580	3700
13	4320	4040	4550	4450	4390	e4180	4100	3660	3200	5260	4570	3680
14	4300	4040	4550	4450	4380	e4170	4090	3630	3190	5240	4570	3660
15	4290	4140	4540	4440	4380	e4160	4080	3610	3220	5240	4550	3640
16	4270	4150	4550	4440	4370	e4160	4070	3590	3240	5220	4520	3630
17	4270	4180	4540	4440	4370	e4150	4050	3570	3230	5200	4500	3610
18	4250	4490	4540	4430	4370	4140	4040	3550	3220	5170	4480	3600
19	4250	4600	4530	4430	4380	e4150	4040	3520	3200	5150	4460	3610
20	4240	4630	4530	4420	4360	e4160	4020	3500	3190	5120	4430	3590
21	4230	4640	4520	4420	4350	e4160	4010	3490	3170	5100	4410	3570
22	4230	4630	4520	4420	4340	4160	4000	3460	3150	5080	4390	3560
23	4220	4630	4510	4420	4340	e4170	3990	3450	3140	5050	4370	3550
24	4200	4620	4510	4420	4340	e4170	3980	3430	3130	5030	4340	3530
25	4180	4600	4510	4410	4270	4170	3960	3420	3110	5010	4320	3520
26	4170	4600	4500	4400	e4270	4160	3950	3400	3100	4980	4290	3510
27	4160	4590	4500	4400	4270	4160	3950	3380	3080	4940	4260	3490
28	4150	4600	4490	4400	e4260	4160	3930	3380	3070	4930	4230	3480
29	4140	4600	4490	4400	---	4160	3920	3370	3070	4940	4190	3460
30	4130	4590	4480	4400	---	4170	3910	3350	3050	4940	4130	3450
31	4130	---	4470	4400	---	4160	---	3340	---	4930	4070	---
MEAN	4270	4310	4540	4440	4370	4180	4050	3610	3190	4700	4510	3670
MAX	4380	4640	4590	4480	4430	4260	4150	3900	3320	5330	4920	4030
MIN	4130	4040	4470	4400	4260	4140	3910	3340	3050	3020	4070	3450
(+)	1860.93	1861.84	1861.61	1861.46	1861.19	1860.99	1860.50	1859.31	1858.67	1862.45	1860.82	1859.55
(@)	-260	+460	-120	-70	-140	-100	-250	-570	-290	+1880	-860	-620

CAL YR 2001 MAX 10050 MIN 4040 (@) -5590
WTR YR 2002 MAX 5330 MIN 3020 (@) -940

e Estimated

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

08134500 O.C. Fisher Lake at San Angelo, TX--Continued



08136000 Concho River at San Angelo, TX

LOCATION.--Lat 31°27'16", long 100°24'37", Tom Green County, Hydrologic Unit 12090105, on left bank 0.4 mi downstream from confluence of North and South Concho Rivers, 1.8 mi southeast of Tom Green County Courthouse, in San Angelo at Rio Concho Sports Complex on Rio Concho Dr. below Bell St. bridge, and 61.9 mi upstream from mouth.

DRAINAGE AREA.--5,542 mi^2, of which 1,131 mi^2 probably is noncontributing.

PERIOD OF RECORD.--Sept. 1915 to current year. Prior to Oct. 1969, published as "near San Angelo".

REVISED RECORDS.--WSP 568: 1915-16, 1919-22. WSP 1148: 1916-22(M), 1924(M), 1925-26, 1929(M), 1930-32, 1935-37. WSP 1512: 1917-18. WSP 1712: 1936. WDR TX-81-3: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 1,776.79 ft above NGVD of 1929. Prior to Aug. 11, 1917, nonrecording gage at same site and datum. Aug. 11, 1917, to May 15, 1963, water-stage recorder on right bank at same datum. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good except those above 500 ft^3/s, which are fair. Since water year 1931, at least 10% of contributing drainage area has been regulated. There are many diversions upstream from station for irrigation, industrial, and municipal supply. No flow at times.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--15 years (water years 1916-30) prior to completion of Lake Nasworthy, 142 ft^3/s (102,600 acre-ft/yr).

EXTREMES FOR PERIOD PRIOR TO REGULATION (WATER YEARS, 1916-30).--Maximum discharge, 92,000 ft^3/s Apr. 26, 1922, gage height, 36.8 ft, from floodmarks, on basis of slope-area measurements of 167,000 and 230,000 ft^3/s in 1936; no flow at times in 1921.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1853, 47.5 ft, Aug. 6, 1906, discharge, about 246,000 ft^3/s, from information by local resident. Other large floods are known to have occurred in June 1853, Aug. 1882, and Apr. 1900.

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	0.06	0.06	2.2	2.4	0.09	0.08	1.3	0.06	0.08	0.08	1.1	0.03
2	0.06	0.06	1.4	2.4	0.06	0.09	0.26	0.06	0.08	0.05	8.6	0.04
3	0.06	0.04	1.3	1.9	0.06	0.09	0.10	0.06	0.08	0.06	10	0.04
4	0.05	0.03	1.1	1.4	0.07	0.11	0.08	18	0.09	0.07	1.5	0.04
5	0.45	0.02	1.1	1.1	28	0.11	0.06	100	0.09	45	0.53	0.07
6	0.02	0.02	0.66	0.09	30	0.07	0.06	3.4	0.07	17	0.58	0.08
7	0.02	0.02	1.2	0.08	4.2	0.06	0.06	0.60	35	215	0.08	0.08
8	0.02	0.02	0.84	0.18	0.11	0.10	0.06	0.37	56	77	0.07	0.09
9	0.02	0.02	1.1	0.07	0.50	0.15	0.08	0.13	3.1	7.4	0.06	0.09
10	0.02	0.02	1.8	0.07	0.32	0.17	0.07	0.09	0.92	3.8	0.05	0.05
11	198	0.02	2.0	0.06	0.09	0.12	0.06	0.08	0.34	5.0	0.06	0.06
12	19	0.02	4.0	0.07	0.07	0.17	0.06	0.08	0.48	3.8	0.06	0.05
13	10	0.03	1.0	0.07	0.05	0.09	0.07	0.09	0.20	3.3	0.06	0.04
14	5.2	6.1	1.8	0.06	0.05	0.10	0.06	0.10	0.10	3.0	0.05	0.05
15	3.0	284	2.2	0.07	0.06	0.09	0.05	0.12	214	2.8	0.04	0.07
16	1.9	19	3.0	0.07	0.06	0.09	0.05	0.22	32	2.0	0.02	0.05
17	1.3	21	2.1	0.07	0.05	0.11	0.05	0.13	4.6	1.7	0.02	0.04
18	1.1	6.3	2.6	0.08	0.06	0.12	0.05	0.11	2.1	0.76	0.04	0.04
19	0.86	3.7	2.0	0.08	0.06	246	0.06	0.11	1.00	0.08	0.02	0.10
20	0.91	2.3	2.5	0.08	0.06	104	0.06	0.17	0.26	0.47	0.02	0.06
21	0.62	1.9	2.6	0.07	0.06	15	0.06	0.16	0.18	0.93	0.03	0.05
22	0.02	1.6	3.1	0.07	0.06	3.0	0.06	0.09	0.11	0.66	0.03	0.05
23	0.02	1.6	1.7	0.08	0.08	1.6	0.07	0.08	0.11	0.45	0.03	0.05
24	0.09	0.81	2.0	0.31	0.11	1.6	0.07	0.07	0.11	0.30	0.03	0.05
25	0.02	0.58	2.9	0.08	0.08	1.0	0.06	0.08	0.11	0.04	0.03	0.05
26	0.02	0.66	1.7	0.06	0.06	0.42	0.07	0.07	0.12	0.03	0.05	0.05
27	0.02	0.50	2.3	0.05	0.05	0.27	0.09	0.07	0.13	0.03	0.05	0.05
28	0.02	2.2	2.3	0.05	0.07	0.19	0.12	0.07	0.11	36	0.05	0.06
29	0.02	2.1	1.6	0.06	---	0.30	0.10	2.7	0.10	71	0.05	0.06
30	0.02	3.2	1.3	0.06	---	14	0.07	3.2	0.09	16	0.05	0.06
31	0.04	---	1.1	0.07	---	6.6	---	1.1	---	3.0	0.05	---
TOTAL	242.96	357.93	58.50	11.36	64.59	395.90	3.47	131.67	351.76	516.81	23.41	1.70
MEAN	7.837	11.93	1.887	0.366	2.307	12.77	0.116	4.247	11.73	16.67	0.755	0.057
MAX	198	284	4.0	2.4	30	246	1.3	100	214	215	10	0.10
MIN	0.02	0.02	0.66	0.05	0.05	0.06	0.05	0.06	0.07	0.03	0.02	0.03
AC-FT	482	710	116	23	128	785	6.9	261	698	1030	46	3.4

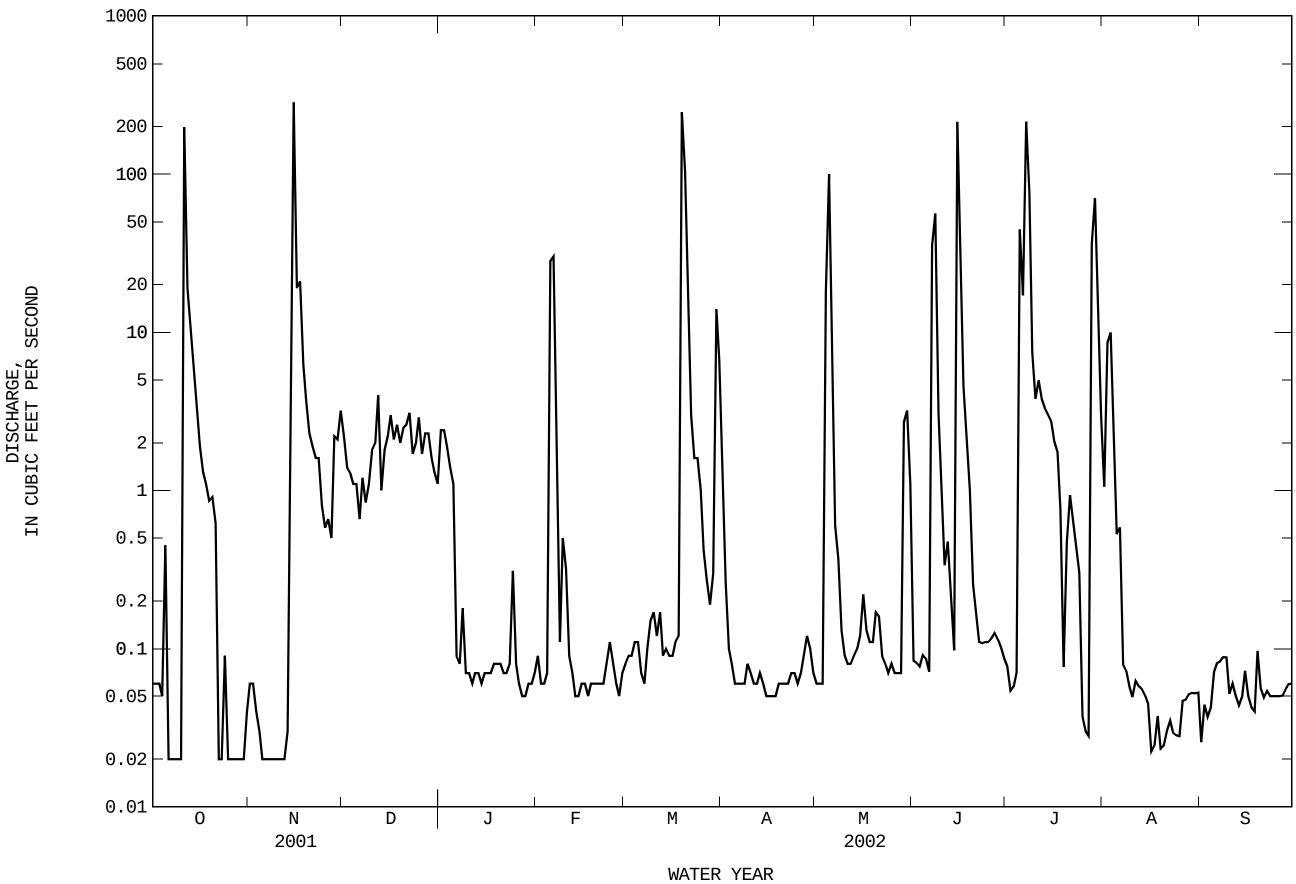
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 2002z, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	117.3	32.15	32.77	29.29	34.68	28.07	91.13	182.6	83.17	101.0	39.02	248.3
MAX	2659	434	274	205	213	242	1604	3984	1132	2137	900	13190
(WY)	1960	1975	1975	1938	1975	1941	1949	1957	1941	1938	1942	1936
MIN	0.051	0.047	0.095	0.055	0.034	0.050	0.042	0.083	0.090	0.069	0.040	0.034
(WY)	2000	2000	1974	1974	2000	1971	2000	1971	1971	1969	1999	1999

08136000 Concho River at San Angelo, TX--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1931 - 2002z	
ANNUAL TOTAL	2679.71		2160.06			
ANNUAL MEAN	7.342		5.918		85.03	
HIGHEST ANNUAL MEAN					1132	1936
LOWEST ANNUAL MEAN					1.55	2000
HIGHEST DAILY MEAN	284	Nov 15	284	Nov 15	128000	Sep 17 1936
LOWEST DAILY MEAN	0.00	Mar 15	0.02	Oct 6	0.00	Sep 14 1952
ANNUAL SEVEN-DAY MINIMUM	0.02	Mar 11	0.02	Nov 5	0.00	Sep 16 1952
MAXIMUM PEAK FLOW			914	Mar 19	c230000	Sep 17 1936
MAXIMUM PEAK STAGE			4.20	Mar 19	a46.60	Sep 17 1936
ANNUAL RUNOFF (AC-FT)	5320		4280		61600	
10 PERCENT EXCEEDS	17		3.9		66	
50 PERCENT EXCEEDS	0.58		0.09		6.6	
90 PERCENT EXCEEDS	0.02		0.04		0.10	

z Period of regulated streamflow.
a From floodmark.
c From rating curve extended above 105,000 ft^3/s on basis of slope-area measurements of 167,000 and 230,000 ft^3/s.



08136500 Concho River at Paint Rock, TX

LOCATION.--Lat 31°30′57", long 99°55′09", Concho County, Hydrologic Unit 12090105, near left bank at downstream end of pier of bridge on U.S. Highway 83, 0.5 mi north of Concho County Courthouse in Paint Rock, 2.7 mi downstream from Kickapoo Creek, and 20.0 mi upstream from mouth.

DRAINAGE AREA.--6,574 mi^2, of which 1,131 mi^2 probably is noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Sept. 1915 to current year. Prior to Oct. 1970, published as "near Paint Rock".

REVISED RECORDS.--WSP 458: 1915-16. WSP 568: 1919-20. WSP 1712: 1922(M). WSP 1732: 1918(M), 1923(M). WDR TX-81-3: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 1,574.36 ft above NGVD of 1929. See WSP 1922 for history of changes prior to Jan. 15, 1940. Satellite telemeter at station.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Since water year 1931, at least 10% of contributing drainage area has been regulated. Flow affected at times by discharge from the flood-detention pools of two floodwater-retarding structures. These structures control runoff from 16.5 mi^2 in the Willow Creek drainage basin. No flow at times.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--15 years (water years 1916-30) prior to construction of Lake Nasworthy, 186 ft^3/s (134,700 acre-ft/yr).

EXTREMES FOR PERIOD PRIOR TO REGULATION (WATER YEARS 1916-30).--Maximum discharge, 76,500 ft^3/s, Apr. 27, 1922, gage height, 27.50 ft; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in Aug. 1882 reached a stage of about 39.9 ft, and flood in Aug. 1906 reached a stage of 39.5 ft, from information by local resident. Maximum stage since at least 1853, 43.4 ft Sept. 17, 1936.

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	6.7	0.11	6.1	4.5	0.82	0.19	9.6	0.00	9.3	0.03	70	0.00
2	5.1	0.10	6.1	5.2	0.96	0.05	8.4	0.00	5.4	0.12	32	0.00
3	5.0	0.22	6.0	4.9	0.82	0.04	4.6	0.00	1.8	318	18	0.00
4	4.9	0.62	5.5	4.8	0.88	0.09	1.4	0.60	0.42	246	12	0.00
5	5.2	0.76	5.5	4.7	3.4	0.09	0.88	119	0.40	98	6.9	0.00
6	4.7	0.45	8.2	4.6	6.1	0.12	0.55	14	0.64	82	5.7	0.00
7	3.1	0.22	9.5	4.0	4.4	0.08	0.68	5.9	31	263	7.2	0.00
8	2.2	0.12	7.0	4.5	2.2	0.07	0.41	3.6	44	224	6.4	0.00
9	1.8	0.04	3.7	5.2	1.2	0.05	0.17	10	15	187	4.5	0.00
10	1.5	0.06	2.1	5.4	2.0	0.02	0.22	9.0	6.9	75	1.2	0.00
11	3.5	0.15	2.4	4.3	10	0.02	0.21	5.9	2.6	46	0.44	0.00
12	10	0.17	2.8	3.7	8.2	0.00	0.25	4.6	1.4	26	0.07	0.00
13	112	0.16	4.4	2.7	6.6	0.01	0.27	2.8	0.75	19	0.00	0.00
14	49	0.14	3.5	2.1	5.1	0.02	0.20	1.7	0.33	16	0.02	0.00
15	30	5.5	2.8	1.4	3.9	0.00	0.18	0.81	0.76	8.0	0.02	0.00
16	23	38	4.1	1.3	2.9	0.00	0.12	0.37	0.30	3.7	0.03	0.00
17	20	105	3.8	1.2	1.9	0.00	0.06	0.17	85	1.4	0.03	0.00
18	14	43	3.1	0.81	1.5	0.01	0.06	0.03	42	0.57	0.02	0.00
19	13	28	2.0	0.52	2.2	0.39	0.07	0.00	19	0.64	0.00	0.00
20	12	25	1.2	0.36	1.4	44	0.06	0.00	10	0.18	0.00	0.00
21	8.1	19	1.2	0.33	0.98	189	0.09	0.00	4.6	0.08	0.00	0.00
22	5.3	14	1.3	0.57	0.85	57	0.07	0.00	1.4	0.06	0.00	0.00
23	4.4	12	1.2	0.63	0.58	28	0.09	0.00	0.47	0.05	0.00	0.00
24	6.1	9.1	2.2	1.1	0.22	17	0.08	0.00	0.09	0.06	0.00	0.00
25	4.0	7.3	3.7	1.2	0.19	8.7	0.02	0.00	0.04	0.08	0.00	0.00
26	3.8	6.5	4.0	1.2	0.10	7.4	0.00	0.00	0.01	0.00	0.00	0.00
27	2.9	4.9	4.0	1.0	0.11	5.7	0.00	e0.00	0.00	0.00	0.00	0.00
28	0.40	5.7	4.0	1.0	0.14	4.5	0.00	e325	0.00	0.00	0.00	0.00
29	0.18	6.7	3.9	1.1	---	2.7	0.00	85	0.00	0.00	0.00	0.00
30	0.13	6.0	3.7	0.91	---	5.5	0.00	33	0.00	542	0.00	0.00
31	0.13	---	3.6	0.42	---	6.4	---	15	---	196	0.00	---
TOTAL	362.14	339.02	122.6	75.65	69.65	377.15	28.74	636.48	283.61	2352.97	164.53	0.00
MEAN	11.68	11.30	3.955	2.440	2.487	12.17	0.958	20.53	9.454	75.90	5.307	0.000
MAX	112	105	9.5	5.4	10	189	9.6	325	85	542	70	0.00
MIN	0.13	0.04	1.2	0.33	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	718	672	243	150	138	748	57	1260	563	4670	326	0.00

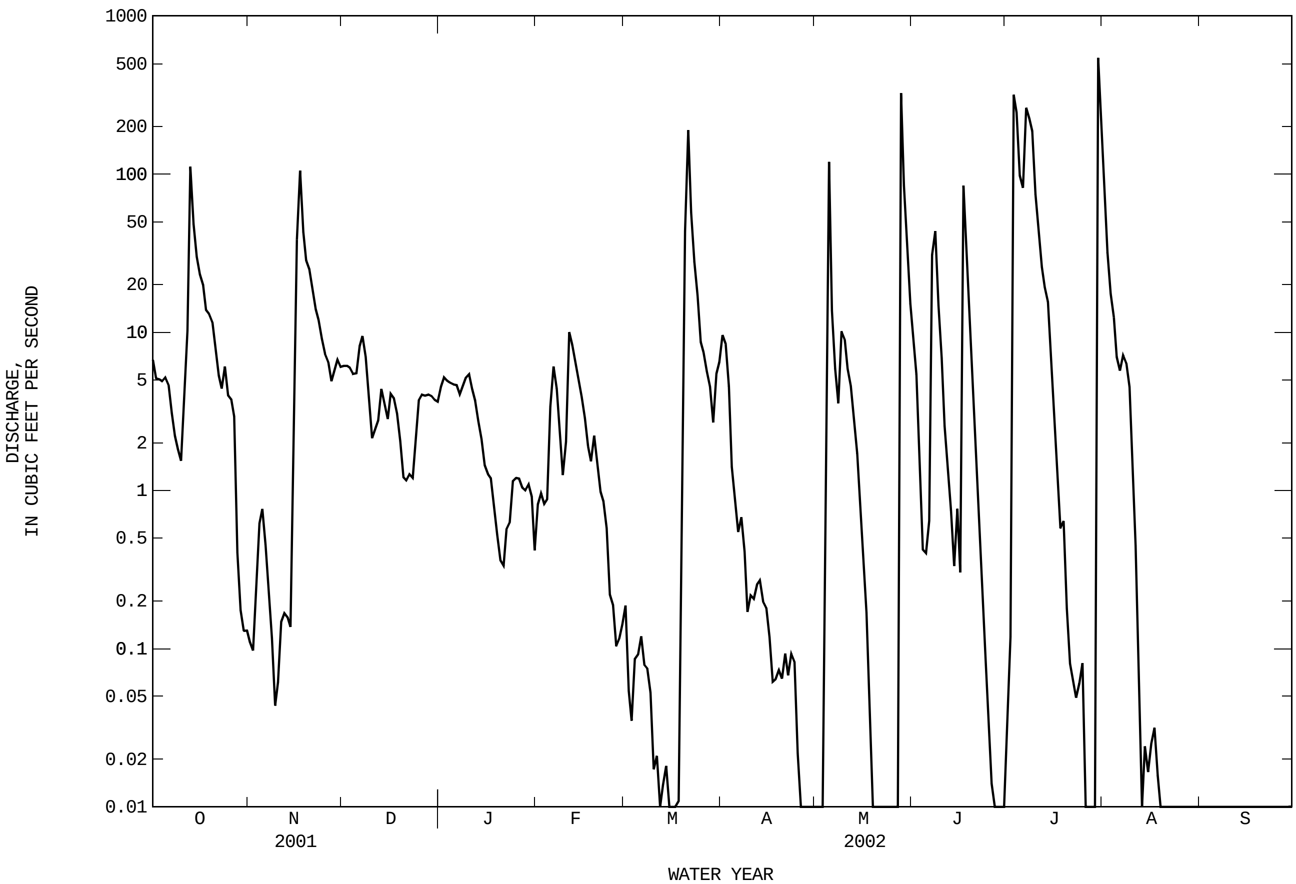
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 2002z, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	192.5	57.01	55.53	51.62	64.57	51.68	132.6	288.6	132.7	146.9	56.40	362.3
MAX	3805	615	367	274	740	318	2131	4756	1227	3519	980	17220
(WY)	1931	1975	1975	1975	1992	1992	1949	1957	1941	1938	1942	1936
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)	1935	1952	1952	1955	1955	1955	1955	2000	1967	1934	1952	1954

08136500 Concho River at Paint Rock, TX--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1931 - 2002z	
ANNUAL TOTAL	4195.01		4812.54			
ANNUAL MEAN	11.49		13.19		132.8	
HIGHEST ANNUAL MEAN					1470	1936
LOWEST ANNUAL MEAN					7.56	2000
HIGHEST DAILY MEAN	469	Jun 2	542	Jul 30	134000	Sep 17 1936
LOWEST DAILY MEAN	0.00	May 25	0.00	Mar 12	0.00	Sep 28 1931
ANNUAL SEVEN-DAY MINIMUM	0.00	May 25	0.00	Apr 26	0.00	Sep 28 1931
MAXIMUM PEAK FLOW			1210	Jul 3	c301000	Sep 17 1936
MAXIMUM PEAK STAGE			14.20	Jul 3	a43.40	Sep 17 1936
ANNUAL RUNOFF (AC-FT)	8320		9550		96200	
10 PERCENT EXCEEDS	22		19		125	
50 PERCENT EXCEEDS	3.7		1.1		24	
90 PERCENT EXCEEDS	0.00		0.00		0.10	

e Estimated
z Period of regulated streamflow.
a From floodmark.
c From rating curve extended above 98,000 ft^3/s on basis of slope-area measurements of 144,000 and 301,000 ft^3/s.



08136500 Concho River at Paint Rock, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--
CHEMICAL DATA: Apr. 1946 to Oct. 1949, Mar. 1964 to current year.
BIOCHEMICAL DATA: Mar. 1964 to July 2002 (discontinued).
PESTICIDE DATA: Apr. 1968 to Oct. 1981.
SEDIMENT DATA: Feb. 1978 to Sept. 1981.

INSTRUMENTATION.--Water-quality monitor since Feb. 6, 2001.

REMARKS.--Records fair. Interruptions in the record were due to malfunction of the instrument and to no flow. No flow Mar. 12, 15-17, Apr. 26 to May 3, May 19-27, June 27-30, July 26-29, Aug. 13, Aug. 19 to Sept. 30. Specific conductance and water temperature are recorded near the left bank in a large pool 1,300 ft upstream from a storage dam. Mean monthly and annual concentrations and loads for selected chemical constituents have been computed for previous years using 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 Texas District Office upon request.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Apr. 1946 to Oct. 1949, Oct. 1967 to Sept. 1990 (local observer), Feb. 2001 to current year.
WATER TEMPERATURE: Apr. 1946 to Oct. 1949, Oct. 1967 to Sept. 1990 (local observer), Feb. 2001 to current year.
SUSPENDED SEDIMENT DISCHARGE: Feb. 1978 to Sept. 1981 (local observer).

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 3,690 microsiemens/cm, June 28, Aug. 12, 1984; minimum, 264 microsiemens/cm, July 8, 2002.
WATER TEMPERATURE: Maximum daily, 35.0°C, on several days during summer months; minimum daily, 0.0°C, on many days during winter months.
SEDIMENT CONCENTRATION: Maximum daily mean, 4,190 mg/L, Sept. 9, 1980; minimum daily mean, 3 mg/L, Feb. 2, 1979.
SEDIMENT LOADS: Maximum daily, 269,000 tons Sept. 9, 1980; minimum daily, 0.0 tons on several days during Sept. 1980.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 2,780 microsiemens/cm, Mar. 21; minimum, 264 microsiemens/cm, July 8.
WATER TEMPERATURE: Maximum, 34.7°C, July 12; minimum, 3.5°C, Jan. 3.

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)
NOV													
08...	1400	.09	1490	8.5	22.8	11.2	138	2.0	480	380	102	54.5	110
FEB													
14...	1150	6.2	1770	7.7	9.7	10.4	98	2.8	560	400	126	58.1	146
MAR													
27...	1210	5.6	1670	9.0	19.2	12.7	146	3.9	510	350	111	54.9	139
MAY													
13...	1330	1.8	647	8.7	26.7	9.8	129	1.7	200	100	48.8	18.5	61.0
28...	1030	402	--	--	--	--	--	--	180	--	51.6	13.4	47.5
JUL													
02...	1050	.10	1450	8.2	24.8	6.3	81	--	480	360	111	48.9	125
30...	1300	910	706	7.6	24.9	6.1	78	4.0	220	--	52.9	21.0	56.1

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, 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)
NOV													
08...	2	8.87	102	270	239	.4	10.6	858	--	<.008	<.05	<.04	--
FEB													
14...	3	5.87	152	245	319	.4	5.50	1010	1.59	.029	1.62	.04	.51
MAR													
27...	3	7.30	153	237	341	.4	4.01	992	.57	.028	.60	E.03	--
MAY													
13...	2	6.04	96	65.6	122	.2	7.56	388	--	E.006	E.02	<.04	--
28...	2	6.86	--	73.2	98.4	.2	9.0	350	--	--	--	--	--
JUL													
02...	2	8.10	116	256	270	.4	15.5	907	--	<.008	<.05	<.04	--
30...	2	6.84	--	76.8	118	.3	11.9	405	.59	.041	.63	.15	.46

08136500 Concho River at Paint Rock, TX--Continued

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

Date	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)	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)
NOV													
08...	.64	<.06	<.02	--	--	7	--	--	--	--	--	--	<10
FEB													
14...	.56	<.06	<.02	1	.39	E1	155	<.06	<.04	<.8	.35	1.5	<10
MAR													
27...	.48	<.06	<.02	--	--	3n	--	--	--	--	--	--	<10
MAY													
13...	.49	<.06	<.02	--	--	6	--	--	--	--	--	--	<10
28...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL													
02...	.65	<.06	<.02	5	.44	10	217	<.06	.15	<.8	.51	2.8	<10
30...	.62	<.06	E.01	--	--	4	--	--	--	--	--	--	<10

Date	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	LITHIUM DIS-SOLVED (UG/L AS LI) (01130)	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)	STRON-TIUM, DIS-SOLVED (UG/L AS SR) (01080)	VANA-DIUM, DIS-SOLVED (UG/L AS V) (01085)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)	URANIUM NATURAL DIS-SOLVED (UG/L AS U) (22703)
NOV												
08...	--	38	--	<.01	--	--	<2	--	2310	11	--	--
FEB												
14...	.14	45	4.1	<.01	3.5	.30	4	<1	2510	E5	2	2.87
MAR												
27...	--	38	--	<.01	--	--	E2	--	2160	E7	--	--
MAY												
13...	--	14	--	<.01	--	--	E1	--	779	E8	--	--
28...	--	--	--	--	--	--	--	--	--	--	--	--
JUL												
02...	E.05	39	.9	<.01	3.4	2.07	<2	<1	2270	8	4	1.17
30...	--	19	--	<.01	--	--	2	--	912	8	--	--

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

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

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	1700	1670	1690	---	---	---	1920	1890	1910	1880	1860	1880
2	1700	1670	1690	---	---	---	1910	1880	1900	1880	1860	1870
3	1700	1670	1690	---	---	---	1930	1910	1920	1870	1850	1870
4	1700	1670	1690	---	---	---	1940	1920	1930	1870	1850	1860
5	1700	1670	1690	---	---	---	1960	1940	1950	1860	1840	1850
6	1710	1680	1700	---	---	---	1960	1950	1960	1850	1820	1840
7	1710	1690	1710	---	---	---	1960	1940	1950	1850	1820	1830
8	1720	1700	1710	---	---	---	1960	1940	1950	1830	1810	1820
9	1720	1710	1720	1490	1460	1480	1970	1950	1960	1820	1800	1810
10	1730	1720	1720	1500	1490	1500	1980	1950	1970	1800	1790	1800
11	1730	1710	1720	1520	1500	1510	1970	1970	1970	1800	1790	1790
12	1730	1700	1720	1530	1510	1520	1970	1970	1970	1800	1790	1790
13	2140	1730	1910	1540	1530	1530	1980	1970	1970	1800	1780	1790
14	---	---	---	1550	1530	1540	1980	1970	1970	1800	1780	1790
15	---	---	---	1540	1490	1520	1980	1960	1970	1790	1780	1790
16	---	---	---	1550	1510	1510	1970	1950	1970	1790	1780	1790
17	---	---	---	1990	1550	1750	1950	1930	1940	1800	1790	1790
18	---	---	---	2150	1930	2070	1940	1930	1930	1810	1790	1800
19	---	---	---	1990	1870	1910	1940	1920	1930	1810	1790	1800
20	---	---	---	1880	1750	1830	1940	1910	1920	1820	1810	1810
21	---	---	---	1750	1730	1740	1930	1910	1920	1830	1810	1820
22	---	---	---	1760	1740	1750	1920	1910	1920	1820	1810	1820
23	---	---	---	1780	1760	1770	1920	1910	1910	1830	1810	1820
24	---	---	---	1800	1780	1790	1920	1910	1920	1820	1800	1810
25	---	---	---	1810	1780	1800	1920	1910	1920	1820	1800	1800
26	---	---	---	1840	1800	1820	1920	1910	1910	1820	1800	1810
27	---	---	---	1860	1820	1850	1920	1900	1910	1820	1800	1810
28	---	---	---	1870	1840	1850	1910	1890	1900	1820	1790	1810
29	---	---	---	1880	1850	1870	1900	1890	1900	1810	1780	1810
30	---	---	---	1910	1880	1890	1900	1870	1880	1820	1800	1810
31	---	---	---	---	---	---	1890	1860	1880	1830	1800	1810
MONTH	---	---	---	---	---	---	1980	1860	1930	1880	1780	1820

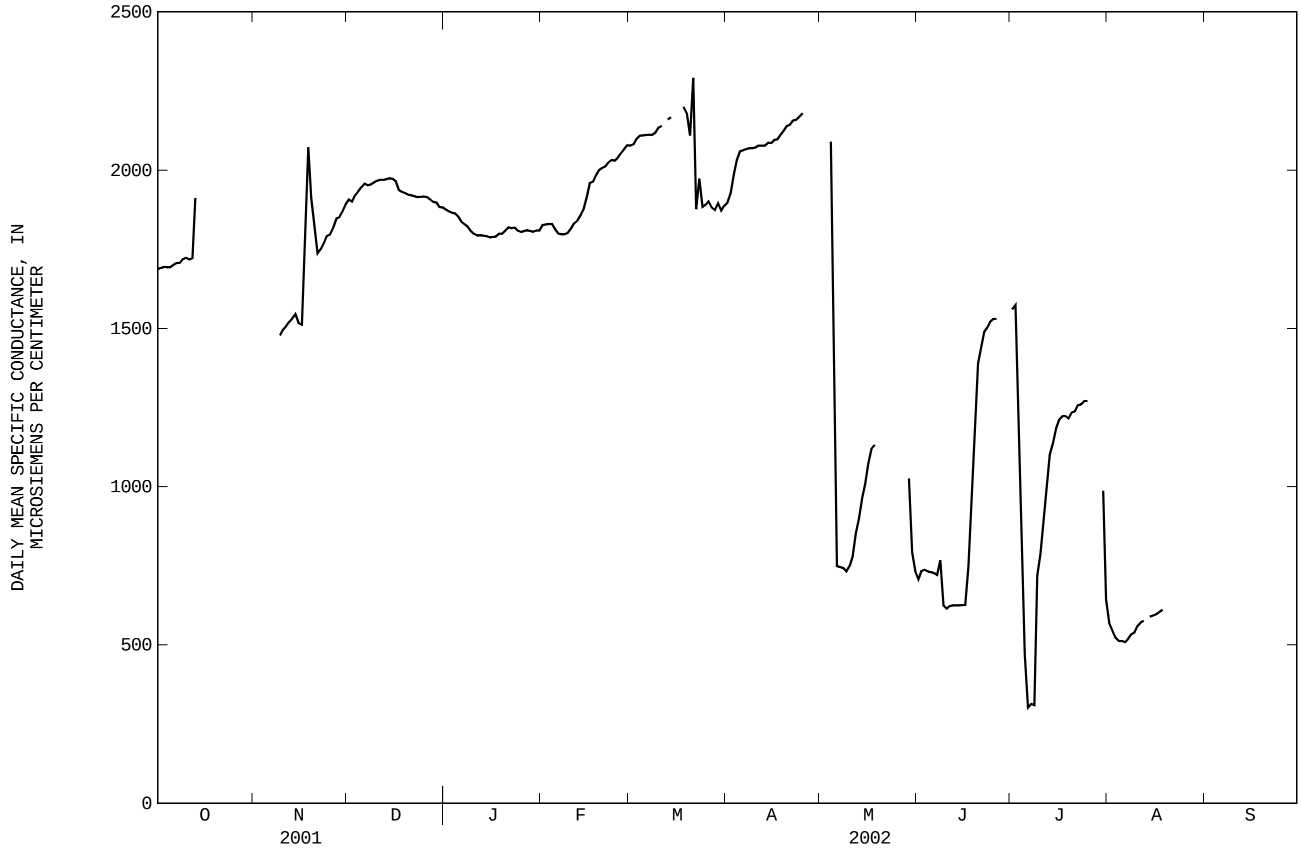
08136500 Concho River at Paint Rock, TX--Continued

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	1830	1820	1830	2090	2070	2080	1910	1880	1900	---	---	---
2	1830	1820	1830	2090	2070	2080	1960	1910	1930	---	---	---
3	1840	1820	1830	2110	2070	2100	2010	1960	1990	---	---	---
4	1840	1810	1830	2120	2100	2110	2050	2000	2030	2110	2020	2090
5	1830	1800	1810	2120	2100	2110	2070	2050	2060	2220	771	1110
6	1800	1800	1800	2120	2100	2110	2080	2060	2060	774	736	750
7	1810	1780	1800	2120	2100	2110	2080	2050	2070	755	736	746
8	1810	1790	1800	2120	2110	2110	2070	2060	2070	754	728	743
9	1810	1790	1800	2130	2110	2120	2080	2050	2070	747	725	732
10	1830	1800	1810	2140	2120	2130	2080	2050	2070	762	735	750
11	1840	1830	1830	2150	2140	2140	2090	2070	2080	831	754	779
12	1850	1830	1840	---	---	---	2090	2060	2080	890	824	852
13	1870	1840	1860	2170	2140	2160	2080	2070	2080	1000	876	900
14	1900	1860	1880	2180	2160	2170	2090	2080	2090	1020	929	965
15	1950	1890	1910	---	---	---	2100	2070	2090	1060	976	1010
16	1980	1940	1960	---	---	---	2110	2090	2100	1100	1050	1070
17	1980	1950	1960	---	---	---	2110	2090	2100	1160	1080	1120
18	2000	1960	1980	2210	2190	2200	2120	2100	2110	1160	1110	1130
19	2010	1990	2000	2200	2140	2180	2140	2120	2120	---	---	---
20	2020	2000	2010	2190	2090	2110	2140	2140	2140	---	---	---
21	2020	2000	2010	2780	1700	2290	2160	2140	2140	---	---	---
22	2040	2020	2020	2000	1670	1880	2160	2150	2160	---	---	---
23	2040	2020	2030	2000	1930	1970	2170	2150	2160	---	---	---
24	2040	2030	2030	1930	1860	1880	2180	2150	2170	---	---	---
25	2050	2020	2040	1900	1880	1890	2190	2170	2180	---	---	---
26	2070	2040	2060	1910	1880	1900	---	---	---	---	---	---
27	2080	2060	2070	1940	1820	1880	---	---	---	---	---	---
28	2090	2060	2080	1900	1850	1870	---	---	---	---	---	---
29	---	---	---	1900	1890	1900	---	---	---	1230	858	1030
30	---	---	---	1900	1840	1870	---	---	---	858	749	793
31	---	---	---	1900	1870	1890	---	---	---	757	719	733
MONTH	2090	1780	1920	---	---	---	---	---	---	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	739	680	708	1570	1540	1560	619	538	569	---	---	---
2	741	723	734	1580	1560	1570	592	525	546	---	---	---
3	745	731	737	1580	561	1320	555	482	523	---	---	---
4	738	728	732	1200	623	974	540	458	512	---	---	---
5	736	723	730	623	394	469	545	480	513	---	---	---
6	733	722	727	394	287	302	523	490	508	---	---	---
7	730	688	721	360	288	313	538	499	519	---	---	---
8	869	653	767	539	264	309	556	510	533	---	---	---
9	654	607	625	854	539	719	561	526	539	---	---	---
10	622	609	615	849	740	788	568	546	559	---	---	---
11	627	620	623	935	849	899	579	559	570	---	---	---
12	628	618	625	1060	935	1010	584	568	576	---	---	---
13	630	616	625	1150	1060	1100	---	---	---	---	---	---
14	635	605	625	1170	1100	1140	595	580	590	---	---	---
15	637	612	626	1220	1160	1180	599	585	593	---	---	---
16	637	604	627	1230	1190	1210	603	590	597	---	---	---
17	910	628	750	1230	1200	1220	611	598	604	---	---	---
18	1140	910	995	1240	1200	1220	613	606	611	---	---	---
19	1370	1140	1220	1240	1170	1220	---	---	---	---	---	---
20	1440	1360	1390	1250	1190	1230	---	---	---	---	---	---
21	1500	1390	1440	1260	1220	1240	---	---	---	---	---	---
22	1500	1440	1490	1260	1240	1260	---	---	---	---	---	---
23	1530	1470	1500	1270	1250	1260	---	---	---	---	---	---
24	1530	1500	1520	1280	1240	1270	---	---	---	---	---	---
25	1550	1510	1530	1270	1250	1270	---	---	---	---	---	---
26	1540	1510	1530	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	1490	650	987	---	---	---	---	---	---
31	---	---	---	683	611	644	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

08136500 Concho River at Paint Rock, 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	26.2	21.0	22.7	21.9	18.1	19.5	11.7	8.3	9.7	6.4	5.3	5.9
2	24.1	20.2	21.6	22.5	18.7	20.0	13.0	10.0	11.1	6.0	4.8	5.4
3	23.8	20.3	21.6	22.2	19.2	20.2	14.4	11.2	12.6	6.8	3.5	5.2
4	23.8	21.0	22.2	24.0	19.1	20.3	14.1	12.6	13.4	6.7	4.7	5.8
5	22.4	20.9	21.8	21.7	18.9	19.7	16.7	13.6	15.1	6.7	5.8	6.3
6	23.5	19.9	21.0	21.1	18.3	19.2	17.4	15.2	16.2	7.6	4.9	6.0
7	22.0	18.9	20.2	20.9	18.1	19.0	16.7	15.9	16.3	10.0	5.1	6.9
8	21.8	19.6	20.5	19.4	17.8	18.5	15.9	13.4	14.5	8.5	5.6	7.0
9	23.2	20.5	21.5	19.4	17.4	18.1	14.1	12.0	12.9	10.4	6.7	8.4
10	23.5	21.5	22.2	19.3	17.3	18.1	14.5	10.9	12.0	9.5	8.7	9.0
11	24.6	20.9	22.5	20.3	17.6	18.5	11.3	10.6	10.9	9.6	8.2	8.8
12	25.3	21.4	22.8	19.5	18.0	18.6	12.1	10.8	11.3	9.8	7.9	8.8
13	21.9	20.0	20.5	18.9	18.0	18.4	11.3	9.8	10.6	9.9	7.8	8.9
14	23.0	19.5	20.9	18.3	17.8	18.0	11.0	9.0	9.9	11.4	8.1	9.4
15	21.3	19.4	20.4	17.8	17.2	17.4	10.9	9.4	10.0	10.6	8.0	9.3
16	21.3	18.2	19.5	18.5	17.3	17.7	10.9	10.4	10.6	11.9	9.5	10.5
17	20.3	17.2	18.4	18.4	17.5	17.9	11.7	9.8	10.7	10.8	10.0	10.4
18	21.5	17.0	18.9	20.3	17.6	18.7	11.6	9.6	10.6	10.1	9.5	9.9
19	23.4	17.8	20.0	18.9	15.8	17.4	11.6	9.7	10.4	10.9	9.3	10.0
20	22.2	18.6	20.2	17.9	14.0	15.5	13.1	9.1	10.6	11.4	8.9	9.9
21	23.2	18.9	20.4	16.5	13.0	14.3	11.5	9.0	10.2	12.5	8.9	10.3
22	22.8	19.6	21.0	15.7	13.1	14.4	11.3	10.1	10.7	12.0	9.7	10.7
23	22.6	20.3	21.4	15.3	14.0	14.7	10.9	9.5	10.1	13.2	11.0	12.2
24	22.1	20.7	21.3	14.9	13.8	14.4	10.1	8.6	9.3	12.9	11.3	11.8
25	21.6	19.6	20.3	15.4	13.0	14.2	9.6	8.1	8.8	12.8	10.3	11.5
26	19.8	18.9	19.3	15.8	13.8	14.6	9.4	7.6	8.5	13.4	10.1	11.5
27	20.5	18.3	19.0	14.7	11.8	13.4	8.6	7.2	8.0	14.6	10.0	11.8
28	20.2	17.8	18.8	11.8	8.2	9.9	8.9	7.1	8.0	17.0	11.1	13.5
29	20.5	17.7	18.7	8.9	7.6	8.2	8.1	7.3	7.8	16.4	13.0	14.4
30	20.9	17.7	18.7	9.8	7.8	8.7	7.6	6.6	7.1	15.2	12.5	14.1
31	19.7	17.8	18.4	---	---	---	7.9	6.1	6.8	12.8	11.1	12.1
MONTH	26.2	17.0	20.5	24.0	7.6	16.6	17.4	6.1	10.8	17.0	3.5	9.5

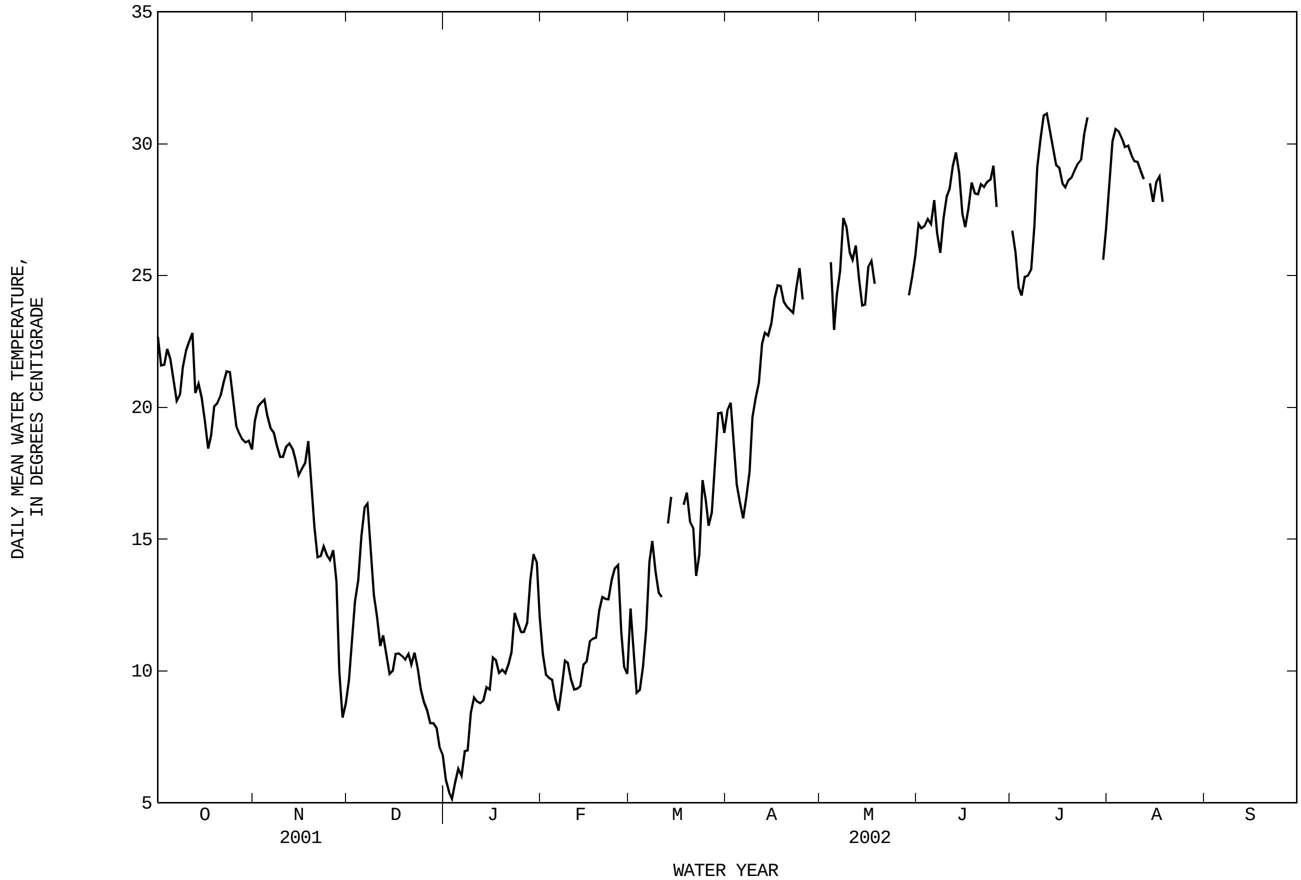
08136500 Concho River at Paint Rock, TX--Continued

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
		FEBRUARY			MARCH			APRIL			MAY	
1	11.5	9.9	10.6	15.5	10.2	12.4	22.3	17.9	19.9	---	---	---
2	10.2	9.3	9.9	13.0	9.5	10.7	21.1	19.4	20.2	---	---	---
3	10.1	9.4	9.7	10.3	8.2	9.2	19.9	17.8	18.4	---	---	---
4	9.9	9.5	9.7	11.0	7.9	9.3	17.8	16.6	17.1	25.6	25.1	25.5
5	9.5	8.3	8.9	12.4	8.4	10.2	17.4	15.7	16.4	25.1	20.6	22.9
6	9.1	7.9	8.5	13.5	9.8	11.6	16.4	15.2	15.8	26.7	22.6	24.3
7	11.2	7.7	9.4	16.2	12.5	14.1	19.7	15.0	16.6	27.2	23.8	25.2
8	12.4	8.7	10.4	15.9	14.3	14.9	18.9	16.3	17.6	30.8	24.5	27.2
9	11.1	9.4	10.3	15.1	12.9	13.8	23.2	17.7	19.6	28.5	25.8	26.8
10	10.3	9.0	9.7	13.8	12.4	13.0	23.1	18.5	20.4	26.8	25.2	25.9
11	10.5	8.0	9.3	14.5	11.9	12.8	23.2	19.1	20.9	26.8	24.6	25.6
12	10.8	8.1	9.3	---	---	---	24.9	20.7	22.4	28.6	25.0	26.1
13	10.4	8.7	9.4	17.6	13.9	15.6	23.9	22.0	22.8	27.6	23.7	24.9
14	12.3	8.6	10.2	18.4	14.9	16.6	24.4	21.7	22.7	25.6	22.8	23.9
15	11.2	9.7	10.4	---	---	---	24.9	21.8	23.2	25.8	22.6	23.9
16	13.1	9.7	11.1	---	---	---	26.4	22.5	24.1	28.7	23.2	25.3
17	13.7	9.8	11.2	---	---	---	26.2	23.3	24.6	27.8	24.1	25.6
18	12.0	10.5	11.3	16.8	16.0	16.3	25.4	24.0	24.6	27.0	23.3	24.7
19	13.1	11.5	12.3	18.0	16.3	16.8	24.5	23.6	24.0	---	---	---
20	14.1	11.5	12.8	16.5	15.3	15.7	24.8	22.9	23.8	---	---	---
21	13.1	12.3	12.7	16.8	14.2	15.4	24.1	23.2	23.7	---	---	---
22	14.0	11.3	12.7	15.3	12.2	13.6	25.1	22.5	23.6	---	---	---
23	16.3	11.7	13.4	16.2	12.7	14.4	25.9	23.3	24.5	---	---	---
24	14.9	12.8	13.9	20.1	14.9	17.2	28.0	23.7	25.3	---	---	---
25	15.5	12.8	14.0	19.0	15.2	16.5	25.6	23.1	24.1	---	---	---
26	13.4	10.4	11.5	17.9	14.1	15.5	---	---	---	---	---	---
27	11.1	9.2	10.2	17.6	14.5	16.0	---	---	---	---	---	---
28	11.1	8.8	9.9	20.2	15.9	17.9	---	---	---	---	---	---
29	---	---	---	21.2	18.8	19.8	---	---	---	27.3	22.1	24.3
30	---	---	---	20.9	18.8	19.8	---	---	---	26.3	23.9	24.9
31	---	---	---	20.2	18.4	19.0	---	---	---	29.3	23.7	25.8
MONTH	16.3	7.7	10.8	---	---	---	---	---	---	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	30.4	25.3	27.0	27.1	26.3	26.7	31.3	26.7	28.6	---	---	---
2	29.2	25.2	26.8	26.5	25.5	25.9	32.1	28.6	30.1	---	---	---
3	28.8	25.2	26.9	25.5	23.3	24.5	32.9	29.1	30.6	---	---	---
4	28.4	25.9	27.1	25.4	23.6	24.2	33.9	28.9	30.5	---	---	---
5	27.8	25.9	27.0	25.8	24.1	24.9	33.8	28.5	30.2	---	---	---
6	30.8	26.0	27.9	25.6	24.6	25.0	32.1	28.5	29.9	---	---	---
7	27.5	26.1	26.6	26.2	24.4	25.2	32.7	28.1	29.9	---	---	---
8	27.4	24.4	25.9	29.0	25.3	26.9	32.7	28.2	29.6	---	---	---
9	29.4	25.5	27.2	32.1	26.8	29.1	31.5	27.9	29.3	---	---	---
10	29.3	27.0	28.0	32.2	28.1	30.2	31.7	27.8	29.3	---	---	---
11	29.6	27.0	28.3	34.1	29.3	31.1	31.0	27.8	29.0	---	---	---
12	31.5	27.3	29.1	34.7	29.4	31.1	30.9	27.2	28.7	---	---	---
13	32.8	27.9	29.7	32.4	29.1	30.6	---	---	---	---	---	---
14	31.7	27.5	28.9	32.6	28.8	29.9	33.2	26.9	28.5	---	---	---
15	28.7	26.2	27.3	30.3	28.0	29.2	29.7	27.0	27.8	---	---	---
16	29.3	25.6	26.8	31.9	27.8	29.1	29.9	27.6	28.5	---	---	---
17	30.2	25.8	27.6	29.7	27.7	28.5	30.5	27.5	28.8	---	---	---
18	30.1	27.3	28.5	30.0	27.2	28.3	29.2	27.3	27.8	---	---	---
19	30.2	26.7	28.1	30.4	27.3	28.6	---	---	---	---	---	---
20	29.6	27.0	28.1	30.3	27.5	28.7	---	---	---	---	---	---
21	30.5	27.0	28.5	31.4	27.6	29.0	---	---	---	---	---	---
22	30.0	27.2	28.4	32.2	27.7	29.2	---	---	---	---	---	---
23	31.6	26.8	28.5	33.3	27.5	29.4	---	---	---	---	---	---
24	32.5	26.2	28.6	34.6	27.8	30.4	---	---	---	---	---	---
25	33.4	26.3	29.2	33.1	28.6	31.0	---	---	---	---	---	---
26	30.6	26.8	27.6	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	27.3	24.9	25.6	---	---	---	---	---	---
31	---	---	---	31.3	24.6	26.8	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

08136500 Concho River at Paint Rock, TX--Continued



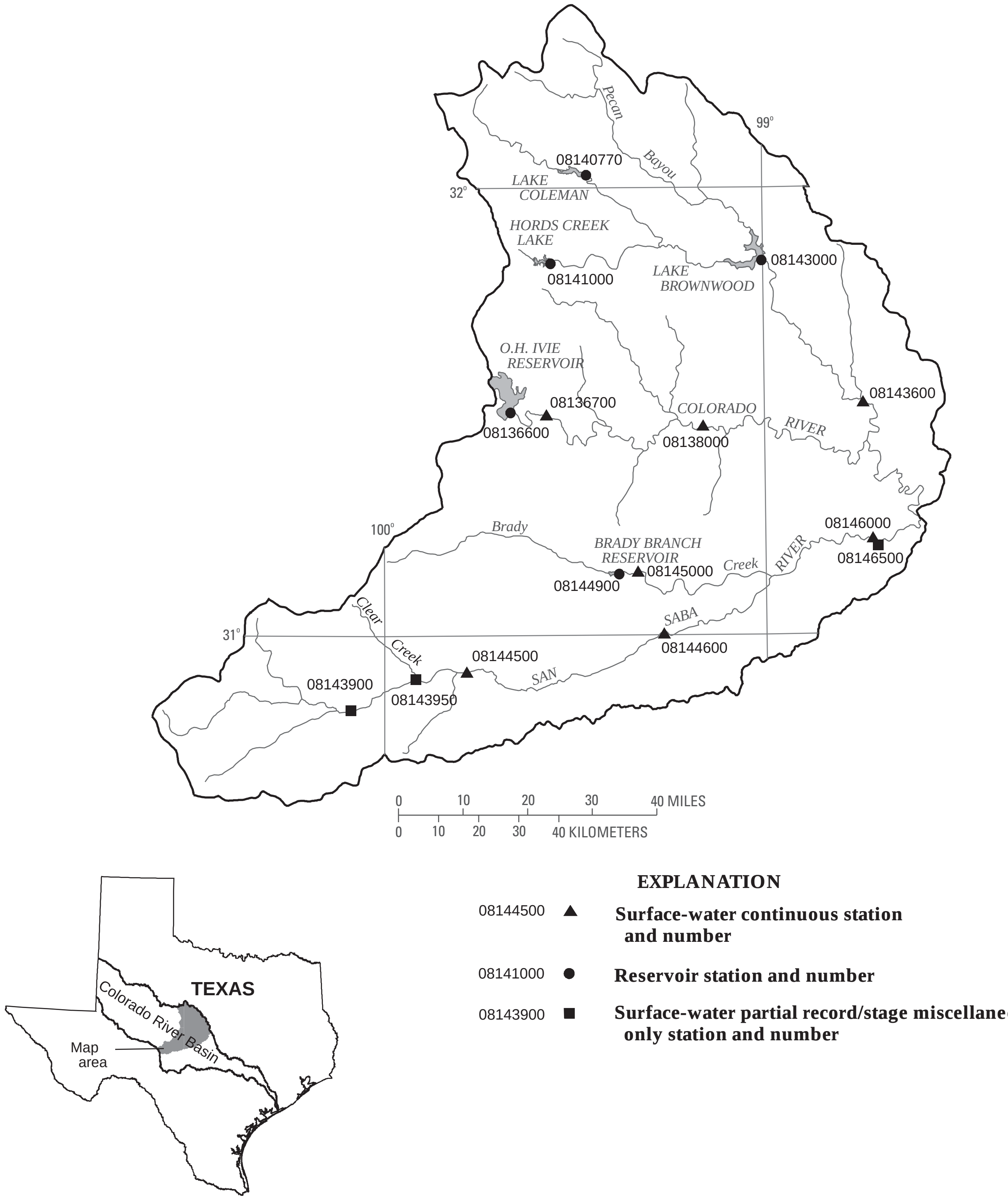


Figure 5.--Map showing location of gaging stations in the third section of the Colorado River Basin

08136600 O.H. Ivie Reservoir near Voss, TX

LOCATION.--Lat 31°30'00", long 99°40'05", Coleman County, Hydrologic Unit 12090106, on left bank, in outlet structure of Freese-Nichols Dam on Colorado River, 8.0 mi northeast of Millersview, 10.0 mi southwest of Voss, and at mile 615.1.

DRAINAGE AREA.--24,038 mi^2, of which 11,391 mi^2 probably is noncontributing.

PERIOD OF RECORD.--Sept. 1990 to current year.

GAGE.--Water-stage recorder. Datum of gage is 0.00 ft from Colorado River Municipal Water District survey point (vertical control datum unknown). Satellite telemeter at station.

REMARKS.--Records good except those for estimated daily contents, which are fair. The lake is formed by a concrete dam and spillway with six 50- by 40-foot tainter gates, and a 6,000 ft overflow spillway with a 2,000 ft tapered fuse plug release feature. Total length of the dam is 12,000 ft. The dam was completed and storage began Mar. 15, 1990. Recording equipment was installed May 30, 1990, but water did not reach the sensing point until Sept. 21, 1990 (at an elevation of 1,502.05 ft). The dam is owned by the Colorado River Municipal Water District. Water is utilized for municipal use for several West Texas communities, the city of San Angelo being the largest user. The capacity curve is based on a survey made in 1989 by Freese and Nichols, Consulting Engineers, Fort Worth, TX. Conservation pool storage is 554,340 acre-ft. Data regarding the dam are given in the following table:

	Elevation (feet)
Top of dam	1,584.0
Crest of overflow spillway	1,563.0
Top of conservation storage	1,551.5
Crest of spillway (tainter gates sill)	1,528.0
Lowest gated outlet (service outlet)	1,440.0

COOPERATION.--The capacity table dated Sept. 15, 1990 was furnished by the Colorado River Municipal Water District.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 574,700 acre-ft, June 26, 1997, elevation, 1,552.55 ft; minimum contents after initial filling, 214,700 acre-ft, Sept. 30, 2002, elevation, 1,527.86 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 271,800 acre-ft, Oct. 1, elevation, 1,533.12 ft; minimum contents, 214,700 acre-ft, Sept. 30, elevation, 1,527.86 ft.

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

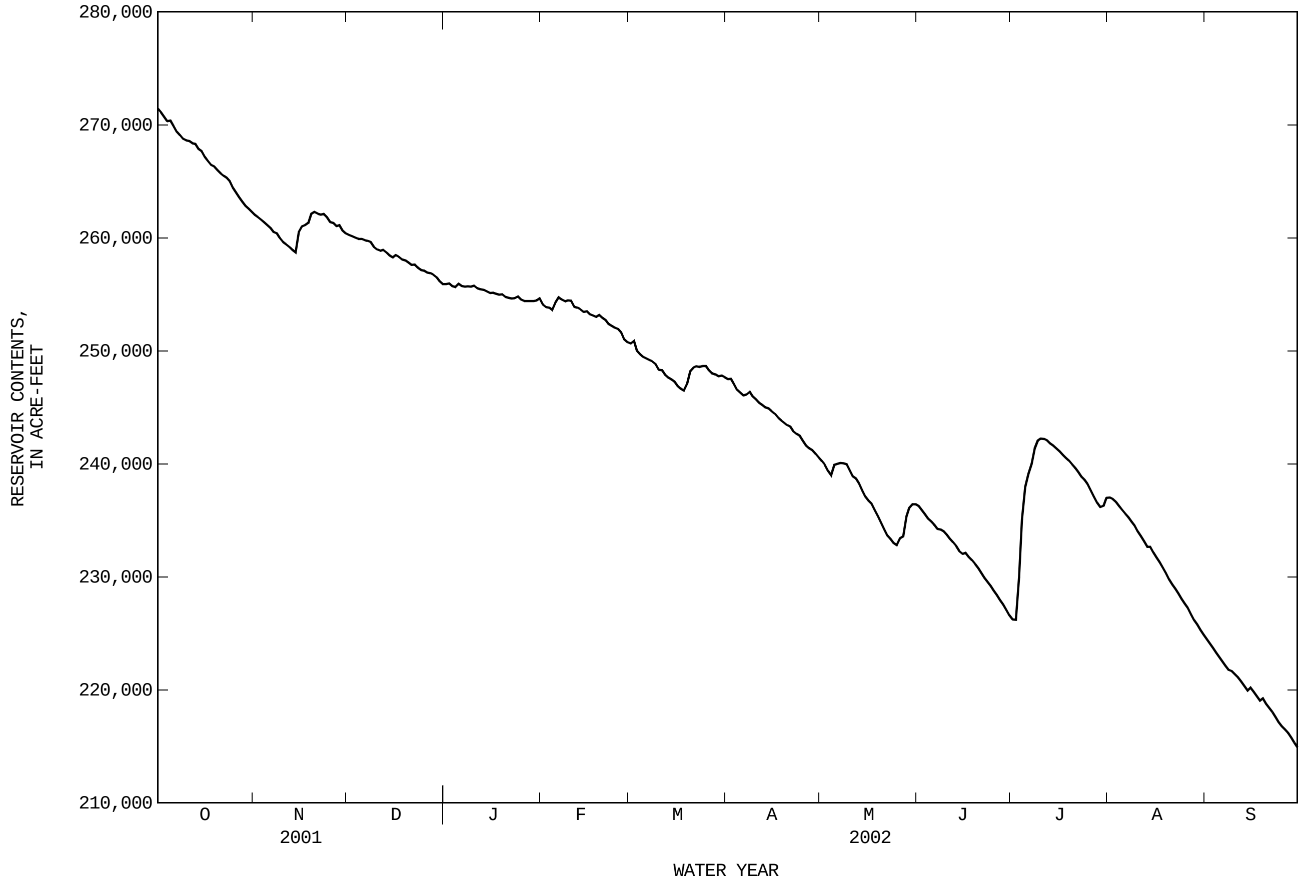
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	271400	262000	260200	255900	254100	250700	247500	240300	236200	226200	237000	224500
2	271100	261800	260100	256000	253900	250900	247500	239900	235900	226200	236900	224100
3	270700	261600	260000	255700	253800	250000	247000	239400	235500	230000	236600	223700
4	270300	261400	259900	255700	253600	249700	246600	239000	235100	235100	236300	223300
5	270400	261100	259900	255900	254300	249400	246300	239900	234900	237900	235900	222900
6	269900	260900	259800	255700	254700	249300	246000	240000	234600	239100	235600	222500
7	269400	260500	259800	255700	254500	249200	246100	240100	234200	240000	235300	222100
8	269100	260400	259600	255700	254400	249100	246400	240100	234200	241400	234900	221800
9	268800	259900	259200	255700	254500	248800	246000	240000	234000	242000	234500	221600
10	268600	259600	259000	255800	254400	248300	245700	239400	233700	242200	234000	221400
11	268600	259400	258900	255500	253900	248300	245400	238900	233400	242200	233600	221100
12	268400	259200	258900	255400	253800	247900	245200	238700	233100	242000	233100	220700
13	268300	258900	258700	255400	253700	247600	245000	238200	232700	241800	232700	220300
14	267900	258700	258400	255300	253500	247500	244900	237600	232300	241600	232700	219900
15	267700	260500	258300	255100	253500	247300	244700	237100	232000	241400	232100	220200
16	267200	261000	258500	255100	253200	246900	244400	236700	232100	241100	231700	219800
17	266800	261100	258300	255100	253100	246600	244100	236500	231800	240800	231300	219400
18	266500	261300	258100	255000	253000	246500	243900	235900	231500	240500	230800	219000
19	266300	262100	e258000	255000	253200	247100	243600	235300	231100	240300	230300	219200
20	266000	262300	e257800	254800	252900	248200	243400	234800	230800	239900	229800	218800
21	265700	262100	257600	254700	252700	248500	243300	234200	230400	239600	229300	218400
22	265500	262100	257600	254600	252400	248600	242900	233700	229900	239300	228900	218000
23	265300	262100	257400	254700	252200	248600	242700	233300	229500	238900	228500	217500
24	265000	261800	257200	254800	252000	248700	242500	233000	229200	238600	228000	217100
25	264400	261400	257100	254500	251900	248700	242000	232800	228800	238200	227600	216800
26	264000	261300	256900	254400	251600	248300	241600	233400	228400	237600	227200	216500
27	263600	261000	256900	254400	251000	248000	241400	233500	227900	237100	226600	216200
28	263200	261100	256700	254400	250700	247900	241200	235300	227500	236600	226200	215700
29	262800	260700	256500	254400	---	247700	240900	236100	227000	236200	225800	215300
30	262600	260400	256200	254500	---	247800	240600	236400	226600	236300	225300	214900
31	262300	---	255900	254600	---	247700	---	236400	---	237000	224900	---
MEAN	267000	260900	258300	255100	253200	248400	244300	237000	231800	238300	231400	219800
MAX	271400	262300	260200	256000	254700	250900	247500	240300	236200	242200	237000	224500
MIN	262300	258700	255900	254400	250700	246500	240600	232800	226600	226200	224900	214900
(+)	1532.30	1532.14	1531.74	1531.63	1531.28	1531.01	1530.35	1529.97	1529.03	1530.02	1528.87	1527.88
(@)	-9500	-1900	-4500	-1300	-3900	-3000	-7100	-4200	-9800	+10400	-12100	-10000

CAL YR 2001 MAX 320500 MIN 255900 (@) -63100
WTR YR 2002 MAX 271400 MIN 214900 (@) -56900

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

e Estimated

08136600 O.H. Ivie Reservoir near Voss, TX--Continued



08136700 Colorado River near Stacy, TX

LOCATION.--Lat 31°29’37", long 99°34’25", Coleman County, Hydrologic Unit 12090106, on left bank at downstream side of bridge on Farm Road 503, 1.2 mi upstream from Bois d’Arc Creek, 1.8 mi northeast of Stacy, 10.5 mi downstream from O.H. Ivie Reservoir, 24.0 mi downstream from Concho River, and at mile 604.8.

DRAINAGE AREA.--24,193 mi^2, of which approximately 11,391 mi^2 probably is noncontributing.

PERIOD OF RECORD.--Mar. 1968 to current year. Prior to Oct. 1970, published as "at Stacy".
Water-quality records.--Chemical data: Dec. 1961 to July 1994. Biochemical data: Oct. 1974 to Aug. 1977. Pesticide data: Apr. 1975 to Aug. 1977. Sediment data: Oct. 1974 to Oct. 1977. Specific conductance: Apr. 1968 to Sept. 1994. Water temperature: Apr. 1968 to Sept. 1994.

REVISED RECORDS.--WDR TX-81-3: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,394.66 ft above NGVD of 1929 (Texas Department of Transportation bridge plans). Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records fair. Since installation of gage in Mar. 1968, at least 10% of contributing drainage area has been regulated by upstream reservoirs, and since Mar. 15, 1990, flow completely regulated by O.H. Ivie Reservoir (station 08136600, conservation pool storage 554,340 acre-ft), 10.5 mi upstream. There are many diversions above station for irrigation, municipal, and oil field operations. Wastewater effluent is returned to the river from numerous wastewater plants above station. At times flow may be slightly affected by discharge from the flood-detention pools of 42 floodwater-retarding structures with a combined detention capacity of 56,730 acre-ft. These structures control runoff from 277 mi^2 above this station. No flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since at least 1882, 356,000 ft^3/s Sept. 18, 1936 (gage height, 64.59 ft), by slope-area measurement of peak flow. The flood of Sept. 18, 1936, was 4 ft higher than the 1906 flood and 7 to 8 ft higher than the 1882 flood, 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	14	6.2	6.1	6.5	5.8	5.4	5.4	11	14	12	16	15
2	12	6.2	6.3	6.8	5.8	4.9	5.1	11	14	19	14	16
3	7.2	6.4	6.5	6.8	5.9	4.7	4.1	11	12	251	14	15
4	5.9	6.4	6.6	6.7	6.2	4.7	4.3	13	12	145	14	16
5	7.0	6.5	6.5	6.6	11	4.8	5.0	179	12	98	14	16
6	7.1	6.5	6.3	6.4	12	5.0	8.4	58	13	51	14	16
7	6.4	6.2	6.5	6.4	8.3	5.2	14	25	14	29	14	17
8	6.1	6.2	6.2	6.2	6.4	5.4	15	15	16	23	14	18
9	6.4	5.8	5.8	6.2	5.8	5.0	14	12	19	21	14	21
10	6.7	21	5.8	6.3	5.1	4.8	13	12	18	14	14	21
11	6.4	12	6.3	6.1	5.2	4.7	13	11	14	13	14	18
12	6.5	7.7	6.6	6.1	5.3	4.2	13	11	12	14	14	17
13	7.0	7.0	6.8	6.2	5.3	4.5	13	10	12	17	14	17
14	6.4	7.0	6.9	6.1	5.4	4.2	12	10	11	32	45	18
15	5.8	63	6.5	6.2	5.5	3.8	13	10	15	16	19	25
16	5.1	34	6.7	6.4	5.4	3.8	12	11	19	14	14	22
17	5.3	11	6.8	6.2	5.5	4.1	12	11	14	14	14	19
18	5.5	7.2	6.7	6.3	5.7	5.0	11	11	13	14	13	18
19	5.6	17	6.2	6.2	6.0	21	11	11	12	14	14	19
20	6.1	22	6.2	6.2	5.7	40	13	11	11	14	14	19
21	6.2	11	6.2	6.0	5.3	12	12	11	12	14	14	18
22	6.1	7.0	6.2	6.2	5.1	5.6	13	11	12	15	14	17
23	5.8	6.1	5.9	6.5	5.3	4.9	13	11	12	14	15	18
24	5.3	5.3	6.0	6.7	5.3	4.8	12	11	13	14	15	18
25	4.9	5.3	5.9	6.6	5.1	4.6	11	12	12	14	14	18
26	4.9	5.6	5.9	6.3	4.4	4.5	11	16	12	14	14	18
27	5.0	5.4	6.0	6.0	4.6	4.6	13	28	12	13	14	18
28	4.8	6.3	6.0	6.2	5.0	4.8	12	323	13	12	14	18
29	4.8	6.8	5.8	6.3	---	4.9	12	68	12	13	16	17
30	4.9	6.7	5.8	6.3	---	6.3	12	28	12	17	16	18
31	5.5	---	6.0	6.0	---	5.7	---	17	---	20	15	---
TOTAL	196.7	330.8	194.0	196.0	167.4	207.9	332.3	990	399	985	478	541
MEAN	6.345	11.03	6.258	6.323	5.979	6.706	11.08	31.94	13.30	31.77	15.42	18.03
MAX	14	63	6.9	6.8	12	40	15	323	19	251	45	25
MIN	4.8	5.3	5.8	6.0	4.4	3.8	4.1	10	11	12	13	15
AC-FT	390	656	385	389	332	412	659	1960	791	1950	948	1070

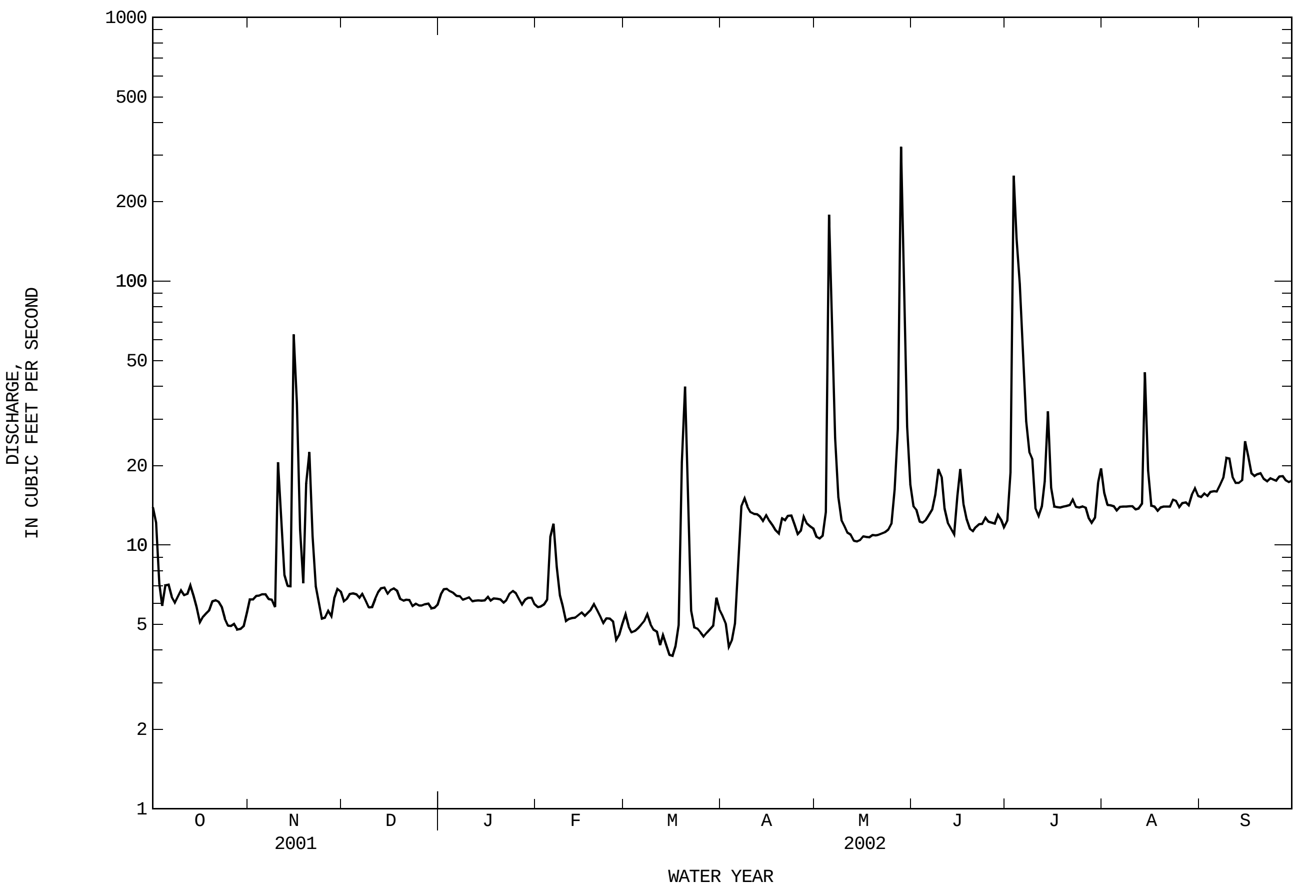
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	215.1	110.6	94.22	95.18	97.18	133.8	131.8	305.6	347.4	108.5	158.5	250.4
MAX	1475	1344	562	470	666	732	873	1440	1783	623	1516	2953
(WY)	1987	1975	1975	1975	1975	1987	1977	1987	1996	1987	1978	1980
MIN	4.42	4.57	2.07	2.09	2.19	2.78	0.41	0.000	0.000	0.000	2.24	0.000
(WY)	1999	1999	1999	1999	1999	2000	1986	1984	1984	1974	1983	1983

08136700 Colorado River near Stacy, TX--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1968 - 2002	
ANNUAL TOTAL	3604.4		5018.1			
ANNUAL MEAN	9.875		13.75		169.0	
HIGHEST ANNUAL MEAN					719	1987
LOWEST ANNUAL MEAN					12.1	2001
HIGHEST DAILY MEAN	80	Sep 22	323	May 28	31300	Sep 10 1980
LOWEST DAILY MEAN	2.0	Mar 23	3.8	Mar 15	0.00	Jun 22 1974
ANNUAL SEVEN-DAY MINIMUM	2.2	Mar 21	4.2	Mar 11	0.00	Jun 22 1974
MAXIMUM PEAK FLOW			726	May 28	c45000	Sep 10 1980
MAXIMUM PEAK STAGE			6.41	May 28	28.00	Sep 10 1980
ANNUAL RUNOFF (AC-FT)	7150		9950		122400	
10 PERCENT EXCEEDS	16		18		337	
50 PERCENT EXCEEDS	8.8		11		39	
90 PERCENT EXCEEDS	3.1		5.1		5.8	

c From rating curve extended above 36,600 ft^3/s.



08138000 Colorado River at Winchell, TX

LOCATION.--Lat 31°28'04", long 99°09'43", McCulloch-Brown County line, Hydrologic Unit 12090106, near left bank at downstream end of pier of old abandoned bridge, 300 ft upstream from bridge on U.S. Highway 377, 0.3 mi south of Winchell, 5.9 mi downstream from Home Creek, and at mile 560.7.

DRAINAGE AREA.--25,179 mi^2, approximately, of which 11,391 mi^2 probably is noncontributing.

PERIOD OF RECORD.--Nov. 1923 to Sept. 1934 published as "near Milburn", June 1939 to Sept. 1993, and Oct. 1997 to current year.
Water-quality records.--Chemical data: Nov. 1967 to Sept. 1985, Dec. 1990 to Sept. 1993. Biochemical data: Dec. 1990 to Aug. 1993. Specific conductance: Feb. 1991 to Sept. 1993. Water temperature: Feb. 1991 to Sept. 1993.

REVISED RECORDS.--WDR TX-81-3: Drainage area. WDR TX-88-3: 1985.

GAGE.--Water-stage recorder. Datum of gage is 1,264.86 ft above NGVD of 1929. Nov. 1923 to Sept. 1934, nonrecording gage at site 4.2 mi downstream at datum 10.14 ft lower. Jan. 13, 1939, to Mar. 24, 1940, nonrecording gage at present site and datum. Radio telemeter at station. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good except those for daily discharges above 10,000 ft^3/s, which are fair. Since water year 1931, at least 10% of contributing drainage area has been regulated. At times, flow may also be affected by discharge from the flood-detention pools of 89 floodwater-retarding structures. These flood-detention structures control runoff from 512 mi^2 above this station. There are many diversions above station for irrigation, municipal supply, and oil field operation. No flow at times.

COOPERATION.--Lower Colorado River Authority provides operation and maintenance of the gage and verification of stage-discharge relation at low stages. U.S. Geological Survey maintains stage-discharge relation at medium to high stages, and computes and publishes streamflow record.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--6 years (water years 1925-30) prior to construction of Lake Nasworthy, 798 ft^3/s (578,400 acre-ft/yr).

EXTREMES FOR PERIOD PRIOR TO REGULATION (WATER YEARS 1925-30).--Maximum discharge, 42,300 ft^3/s, June 15, 1930, gage height, 38.3 ft, at site 4.2 mi downstream at datum 10.14 ft lower; no flow, Aug. 8-10, Sept. 1-5, 1929.

EXTREMES OUTSIDE PERIOD OF RECORD.--Highest stages since 1882 were 62.2 ft Sept. 19, 1936, and 56.2 ft Aug. 8, 1906, at railway bridge 1,000 ft upstream and converted to present site and datum, from information by Gulf, Colorado, and Santa Fe Railway 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	7.7	4.1	11	8.9	9.1	9.1	31	8.7	30	5.4	12	9.5
2	7.6	4.2	11	9.0	9.0	8.5	22	8.7	24	16	10	9.4
3	7.6	4.4	11	9.0	9.0	7.7	16	8.4	18	6700	9.1	7.9
4	7.6	4.2	11	9.0	9.0	7.6	14	8.7	16	4510	8.9	7.3
5	8.2	4.1	11	9.0	12	8.2	12	592	13	1900	8.3	6.9
6	7.8	3.6	11	8.8	13	8.2	11	328	13	1390	7.8	6.4
7	7.7	3.1	11	9.0	14	8.0	11	94	13	1460	7.5	6.4
8	7.6	3.0	10	9.0	15	7.8	13	38	12	902	7.6	7.0
9	7.5	3.1	9.5	9.0	15	8.3	11	25	11	658	7.4	8.1
10	6.9	2.9	9.2	9.0	13	8.2	11	20	27	513	7.3	9.0
11	6.0	3.1	9.4	9.0	12	7.9	11	16	21	391	8.3	9.5
12	9.4	5.4	9.2	9.0	12	7.8	13	12	16	253	8.6	9.3
13	31	7.9	9.3	8.9	11	7.0	14	11	13	181	8.1	11
14	15	13	9.6	9.0	11	6.5	13	11	12	1120	7.3	9.6
15	8.9	383	9.5	8.7	11	6.7	12	9.6	13	368	7.0	9.6
16	6.9	1050	18	8.7	10	6.5	12	8.4	14	182	6.6	9.2
17	6.2	176	20	8.7	9.8	6.2	11	7.5	14	96	6.1	9.8
18	5.8	66	17	9.0	9.5	6.2	11	7.0	16	56	7.8	10
19	5.6	67	14	8.9	9.4	346	11	6.6	16	36	9.1	11
20	5.3	119	12	8.7	9.3	488	11	6.5	13	22	7.3	9.7
21	5.2	64	12	8.8	9.3	145	9.9	7.0	11	17	6.1	8.8
22	5.2	36	11	8.7	9.4	53	9.8	7.3	9.8	14	5.4	8.0
23	5.2	26	11	8.8	9.8	32	9.8	7.6	8.3	12	4.8	7.6
24	5.2	21	10	10	10	25	9.8	7.5	7.5	11	4.6	7.6
25	5.0	17	9.8	13	9.9	20	9.5	7.0	6.9	11	4.2	7.6
26	4.5	15	9.4	13	9.4	17	9.8	338	6.0	9.1	3.9	7.5
27	4.3	13	9.0	12	9.0	15	9.9	186	5.9	7.8	4.0	7.6
28	4.1	12	9.0	11	9.1	12	9.8	3140	5.8	7.4	5.1	7.6
29	4.1	11	9.0	10	---	12	9.7	679	5.5	7.2	7.0	7.2
30	4.1	11	8.8	9.8	---	75	9.1	140	5.4	7.8	7.3	7.2
31	4.1	---	8.8	9.5	---	52	---	55	---	9.2	6.8	---
TOTAL	227.3	2153.1	341.5	292.9	299.0	1428.4	368.1	5801.5	397.1	20872.9	221.3	253.3
MEAN	7.332	71.77	11.02	9.448	10.68	46.08	12.27	187.1	13.24	673.3	7.139	8.443
MAX	31	1050	20	13	15	488	31	3140	30	6700	12	11
MIN	4.1	2.9	8.8	8.7	9.0	6.2	9.1	6.5	5.4	5.4	3.9	6.4
AC-FT	451	4270	677	581	593	2830	730	11510	788	41400	439	502

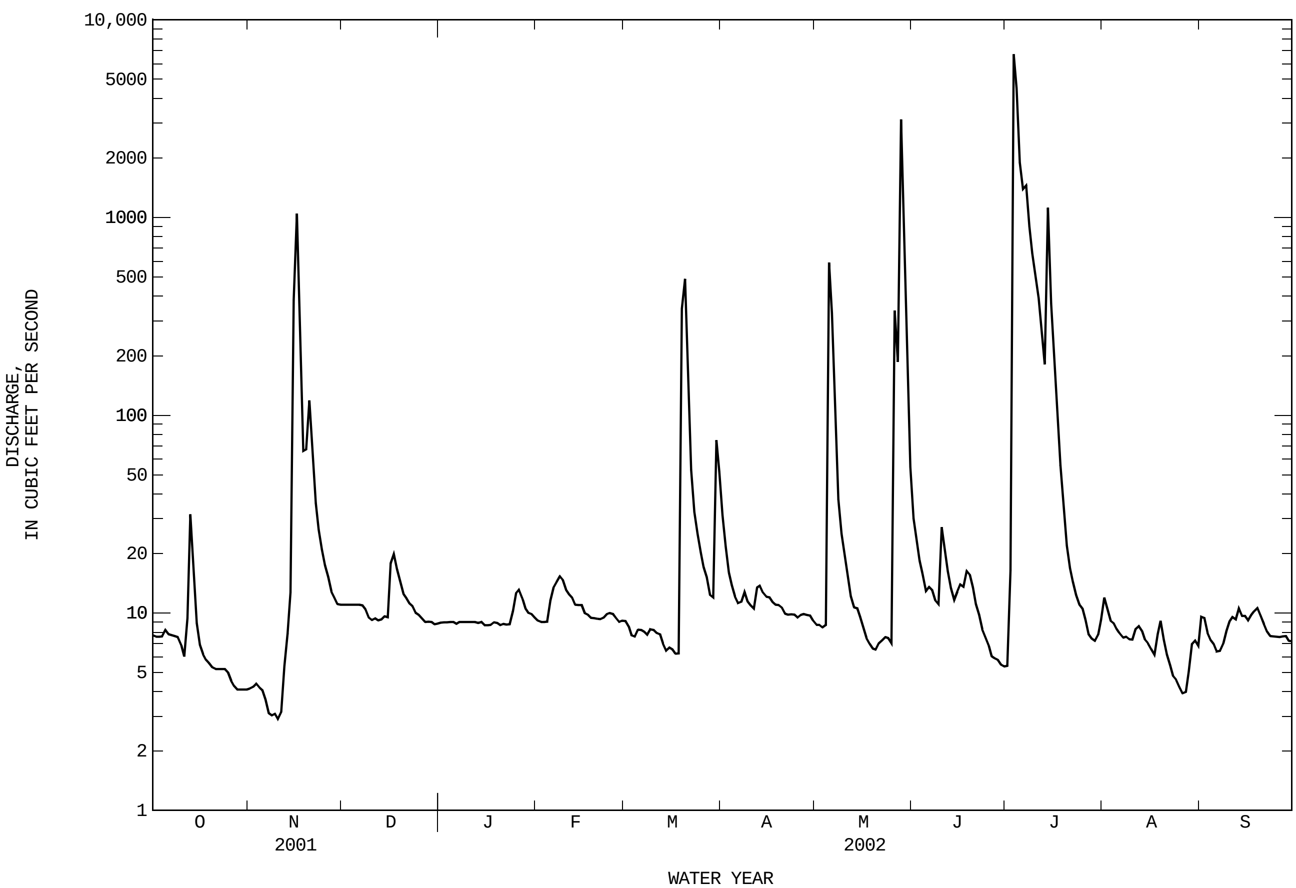
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 2002hz, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	689.5	155.2	153.4	144.7	169.5	190.5	468.0	1252	737.8	414.9	258.3	533.2
MAX	9878	1515	1907	1718	2453	1069	4576	13910	5313	4746	2227	6020
(WY)	1931	1975	1992	1968	1992	1987	1949	1957	1941	1945	1942	1932
MIN	0.074	1.09	0.000	0.000	0.000	0.000	0.29	0.000	0.000	0.000	0.000	0.000
(WY)	1964	1952	1952	1952	1952	1952	1959	1984	1984	1974	1952	1954

08138000 Colorado River at Winchell, TX--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1931 - 2002hz	
ANNUAL TOTAL	12120.10		32656.4			
ANNUAL MEAN	33.21		89.47		428.3	
HIGHEST ANNUAL MEAN					2070	1957
LOWEST ANNUAL MEAN					19.6	1999
HIGHEST DAILY MEAN	1050	Nov 16	6700	Jul 3	67000	Oct 14 1930
LOWEST DAILY MEAN	0.00	Jul 20	2.9	Nov 10	0.00	Aug 15 1934
ANNUAL SEVEN-DAY MINIMUM	0.00	Jul 20	3.3	Nov 5	0.00	Aug 15 1934
MAXIMUM PEAK FLOW			16500	Jul 3	c76100	Oct 15 1930
MAXIMUM PEAK STAGE			22.77	Jul 3	aa51.80	Oct 15 1930
ANNUAL RUNOFF (AC-FT)	24040		64770		310300	
10 PERCENT EXCEEDS	80		54		634	
50 PERCENT EXCEEDS	12		9.4		56	
90 PERCENT EXCEEDS	0.00		5.8		2.6	

h See PERIOD OF RECORD paragraph.
z Period of regulated streamflow.
c From rating curve extended above 8,600 ft^3/s at site then in use.
aa From floodmark at present site and datum.



08140770 Lake Coleman near Novice, TX

LOCATION.--Lat 32°01'48", long 99°27'54", Coleman County, Hydrologic Unit 12090108, 800 ft left of service outlet structure at Coleman Dam on Jim Ned Creek, 2.0 mi upstream from Salt Branch, 2.5 mi west of U.S. Highway 283, 3.0 mi south of Coleman and Callahan County line, 10.0 mi northeast of Novice, and 14.0 mi north of Coleman.

DRAINAGE AREA.--292 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 and those for Oct. 1 to Feb. 1, which are fair. The lake is formed by a rolled earthfill dam 3,200 ft long. Impoundment began Apr. 1966 and dam was completed in May 1966. The top of the dam was raised 2.0 ft in 1975. The dam and reservoir are owned and operated by the city of Coleman. The uncontrolled emergency spillway is 1,500 ft long across natural earth. The uncontrolled morning glory service spillway is 28 ft wide at the crest. A service outlet is provided for small releases through a 24-inch conduit. Water may be pumped from reservoir for municipal and industrial use. Conservation pool storage is 40,000 acre-ft. Data regarding the dam are given in the following table:

	Elevation (feet)
Top of dam	1,742.0
Crest of emergency spillway	1,726.0
Crest of service spillway	1,717.5
Lowest gated outlet (invert)	1,662.5

COOPERATION.--The capacity table based on area and capacity table furnished by city of Coleman was revised to reflect topography from recent quadrangle maps east of longitude 99°30'. Record of diversions may be obtained from city of Coleman.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 53,740 acre-ft, July 7, 2002, elevation, 1,724.10 ft; minimum contents, 12,750 acre-ft, May 2, 3, 2002, elevation, 1,698.57 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 53,740 acre-ft, July 7, elevation, 1,724.10 ft; minimum contents, 12,750 acre-ft, May 2, 3, elevation, 1,698.57 ft.

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

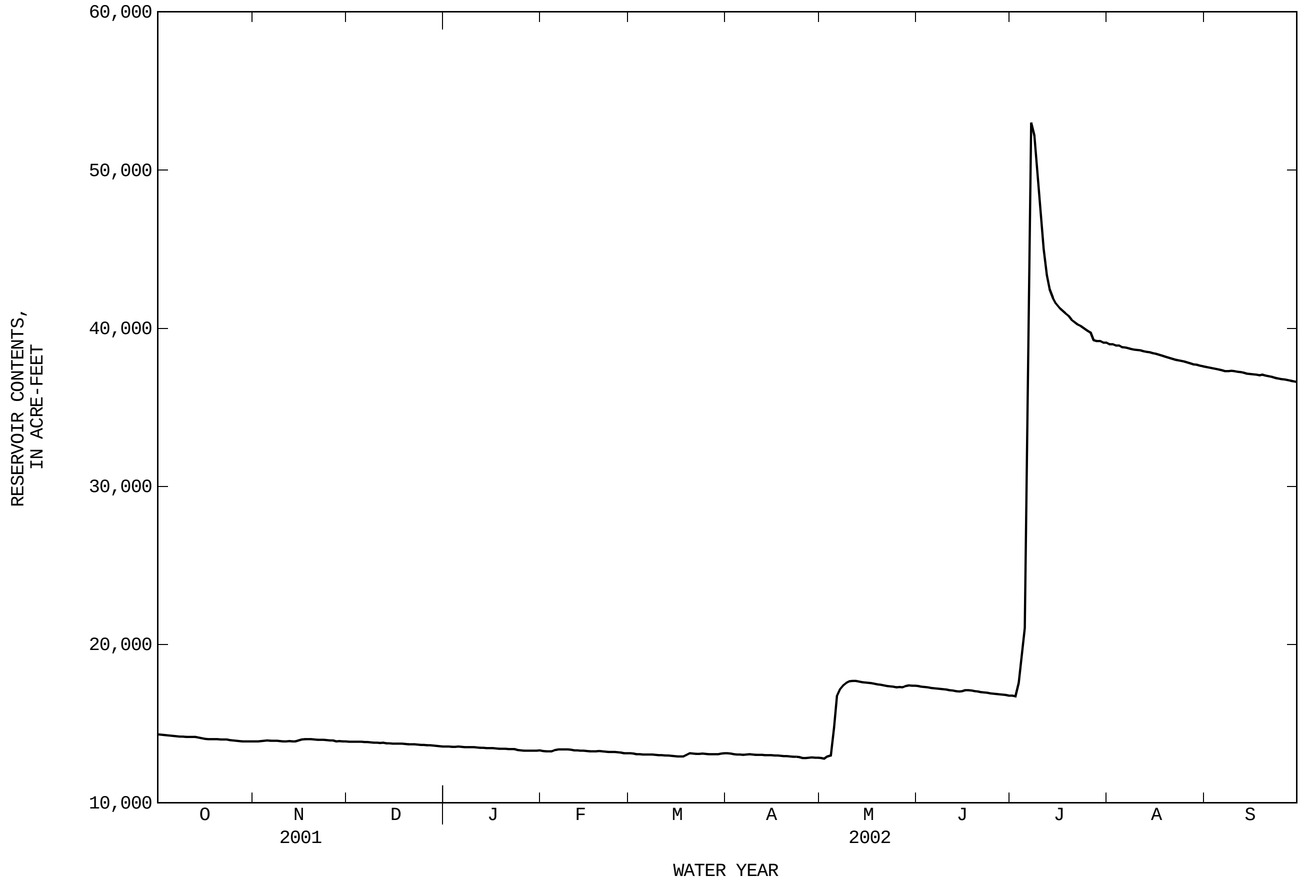
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14320	13880	13850	13550	13280	13130	13120	12830	17370	16770	e39000	37560
2	14300	13880	13850	13550	13260	13110	13110	12790	17340	16740	e39000	37520
3	14280	13890	13860	13540	13260	13060	13070	12930	17310	17570	e38900	37470
4	14260	13920	13850	13530	13250	13060	13050	12980	17290	19290	e38900	37430
5	14250	13930	13850	13550	13330	13050	13040	14750	17250	21040	e38800	37390
6	14230	13920	13840	13530	13370	13040	13030	16730	17230	31160	38780	37350
7	14210	13910	13840	13520	13370	13050	13050	17170	17210	53000	38740	37290
8	14190	13910	13810	13520	13370	13050	13060	17420	17200	52190	38690	37280
9	14190	13890	13790	13520	13370	13020	13040	17580	17180	49610	38650	37320
10	14170	13880	13790	13510	13350	13000	13030	17690	17150	47230	38630	37290
11	14170	13880	13770	13490	13310	13010	13030	17710	17120	45030	38600	37260
12	14170	13890	13790	13480	13310	12990	13030	17700	17090	43360	38550	37230
13	14160	13880	13760	13480	13290	12980	13010	17660	17060	42460	38500	37180
14	14120	13870	13750	13460	13290	12970	13010	17630	17040	41920	38490	&37140
15	14090	13940	13730	13450	13280	12950	13000	17610	17050	41550	38430	37120
16	14050	13990	13740	13450	13260	12930	12990	17590	17120	41300	38380	37090
17	14030	14020	13740	13430	13260	12930	12980	17560	17120	41120	38320	37070
18	14020	14020	13740	13420	13250	12920	12960	17520	17090	40960	38260	37030
19	14010	14010	13720	13420	13280	13020	12950	17480	17060	40800	38210	37070
20	14010	13990	13700	13410	13260	13130	12940	17450	17030	40530	38140	37020
21	14000	13980	13700	13400	13240	13110	12920	17410	17000	40360	38080	36970
22	13990	13980	13700	13400	13220	13090	12910	17380	16980	40230	38030	36920
23	13990	13980	13670	13400	13220	13090	12900	17350	16950	40120	37990	36870
24	13960	13950	13660	13340	13210	13110	12890	17330	16920	39980	37940	36820
25	13930	13930	13660	13310	13190	13080	12830	17300	16900	39840	37890	36780
26	13910	13930	13640	13300	13160	13060	12830	17320	e16880	39710	37840	36760
27	13890	13880	13630	13300	13130	13060	12850	17300	e16860	39250	37780	36720
28	13880	13890	13620	13300	13120	13060	12860	17380	16840	39190	37720	36680
29	13880	13870	13600	13300	---	13060	12850	17420	16810	e39200	37690	36640
30	13870	13870	13570	13290	---	13100	12850	17400	16780	e39100	37640	36590
31	13870	---	13560	13310	---	13130	---	17390	---	e39100	37600	---
MEAN	14080	13930	13730	13430	13270	13040	12970	16770	17070	38060	38330	37100
MAX	14320	14020	13860	13550	13370	13130	13120	17710	17370	53000	39000	37560
MIN	13870	13870	13560	13290	13120	12920	12830	12790	16780	16740	37600	36590
(+)	1699.80	1699.80	1699.46	1699.20	1698.98	1698.99	1698.67	1703.28	1702.72	1717.42	1716.65	1716.14
(@)	-470	0	-310	-250	-190	+10	-280	+4540	-610	+22320	-1500	-1010

CAL YR 2001 MAX 18200 MIN 13560 (@) -3980
WTR YR 2002 MAX 53000 MIN 12790 (@) +22250

e Estimated
& Value was computed from affected unit values.

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

08140770 Lake Coleman near Novice, TX--Continued



08141000 Hords Creek Lake near Valera, TX

LOCATION.--Lat 31°49’58", long 99°33’38", Coleman County, Hydrologic Unit 12090108, at outlet-works structure near right end of dam on Hords Creek, 5.6 mi north of Valera, and 8.8 mi west of Coleman.

DRAINAGE AREA.--48 mi^2.

PERIOD OF RECORD.--Apr. 1948 to Sept. 2000 (U.S. Army Corps of Engineers furnished contents), Oct. 2000 to current year. Prior to Oct. 1970, published as "Hords Creek Reservoir".
Water-quality records.--Chemical data: Oct. 1969 to Aug. 1982.

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 6,800 ft long, including spillway. Deliberate impoundment of water began Apr. 7, 1948, and the dam was completed in June 1948. The spillway is an excavated channel through natural ground, 500 ft wide, located about 600 ft from the right end of dam. The spillway consists of three concrete conduits; two controlled by 5.0- by 6.0-foot slide gates, and a third uncontrolled ogee spillway 4.0 ft wide and 19.5 ft high. The dam is owned by the U.S. Army Corps of Engineers. The lake is operated for flood control and municipal water supply for the city of Coleman. The capacity table of Aug. 1974 based on a sedimentation survey was made in 1948. Flow is affected at times by discharge from the flood-detention pool of one floodwater-retarding structure with a detention capacity of 1,370 acre-ft. This structure controls runoff from 6.82 mi^2 in the Jim Ned Creek drainage basin. Conservation pool storage is 8,112 acre-ft. Data regarding the dam are given in the following table:

	Elevation (feet)
Top of dam..	1,939.0
Design flood..	1,933.6
Crest of spillway...	1,920.0
Crest of spillway (top of conservation pool).........................	1,900.0
Lowest gated outlet (invert).......................................	1,856.0

COOPERATION.--Capacity table dated May 2, 1990 was furnished by U.S. Army Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 12,790 acre-ft, May 1, 1956, elevation, 1906.86 ft; maximum elevation, Mar. 4, 1992, elevation, 1907.31 ft; minimum since first appreciable storage in June 1951, 1,550 acre-ft, Sept. 2, 1984, elevation, 1878.01 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 3,410 acre-ft, Oct. 1, elevation, 1,887.27 ft; minimum contents, 2,480 acre-ft, Sept. 29, 30, elevation, 1,883.27 ft.

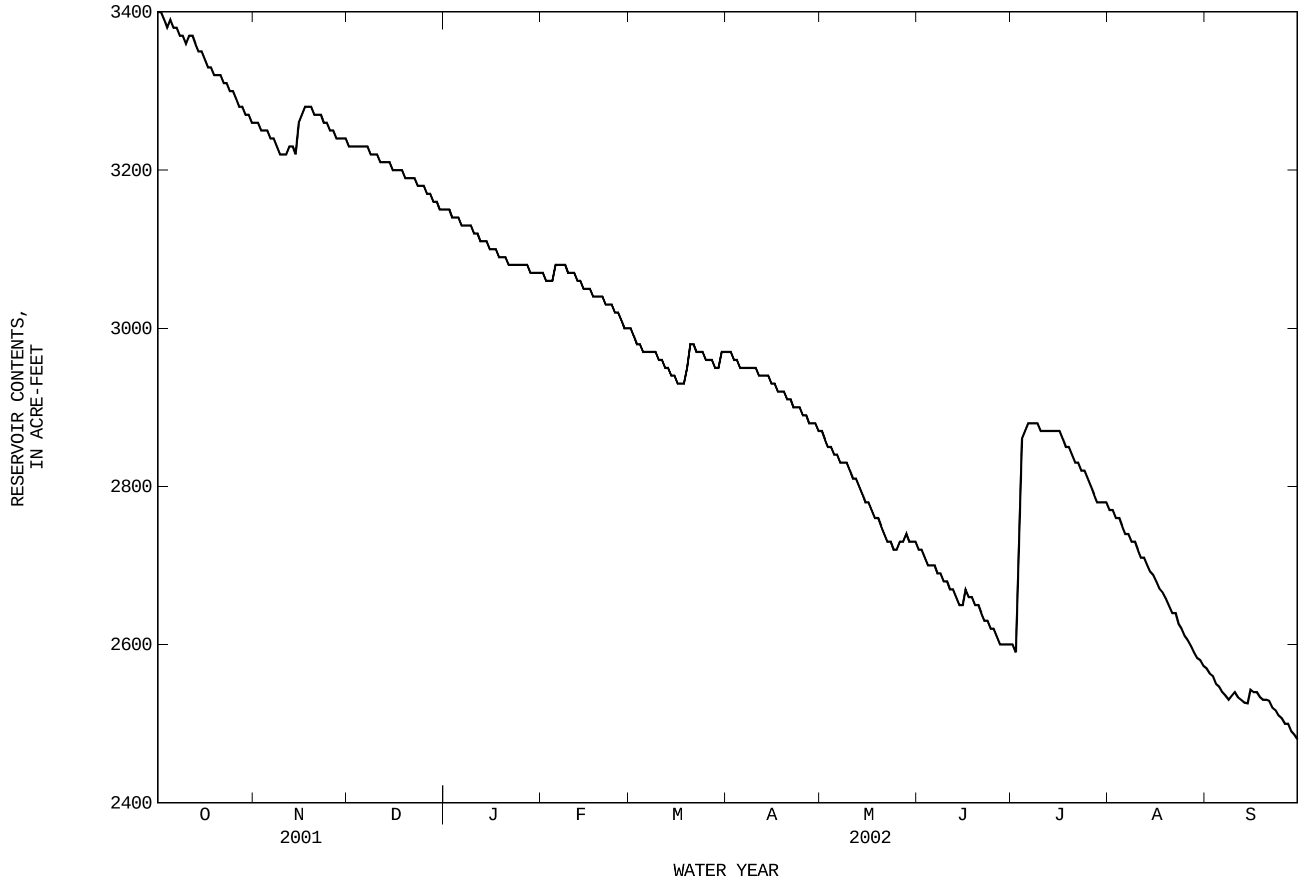
RESERVOIR STORAGE, in (ACRE-FEET), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3400	3260	3230	3150	3070	3000	2970	2870	2720	2600	2770	2570
2	3400	3260	3230	3150	3060	2990	2970	2860	2720	2590	2770	2560
3	3390	3250	3230	3140	3060	2980	2960	2850	2710	2760	2760	2560
4	3380	3250	3230	3140	3060	2980	2960	2850	2700	2860	2760	2550
5	3390	3250	3230	3140	3080	2970	2950	2840	2700	2870	2750	2550
6	3380	3240	3230	3130	3080	2970	2950	2840	2700	2880	2740	2540
7	3380	3240	3230	3130	3080	2970	2950	2830	2690	2880	2740	2540
8	3370	3230	3220	3130	3080	2970	2950	2830	2690	2880	2730	2530
9	3370	3220	3220	3130	3070	2970	2950	2830	2680	2880	2730	2540
10	3360	3220	3220	3120	3070	2960	2950	2820	2680	2870	2720	2540
11	3370	3220	3210	3120	3070	2960	2940	2810	2670	2870	2710	2530
12	3370	3230	3210	3110	3060	2950	2940	2810	2670	2870	2710	2530
13	3360	3230	3210	3110	3060	2950	2940	2800	2660	2870	2700	2530
14	3350	3220	3210	3110	3050	2940	2940	2790	2650	2870	2690	2530
15	3350	3260	3200	3100	3050	2940	2930	2780	2650	2870	2690	2540
16	3340	3270	3200	3100	3050	2930	2930	2780	2670	2870	2680	2540
17	3330	3280	3200	3100	3040	2930	2920	2770	2660	2860	2670	2540
18	3330	3280	3200	3090	3040	2930	2920	2760	2660	2850	2670	2530
19	3320	3280	3190	3090	3040	2950	2920	2760	2650	2850	2660	2530
20	3320	3270	3190	3090	3040	2980	2910	2750	2650	2840	2650	2530
21	3320	3270	3190	3080	3030	2980	2910	2740	2640	2830	2640	2530
22	3310	3270	3190	3080	3030	2970	2900	2730	2630	2830	2640	2520
23	3310	3260	3180	3080	3030	2970	2900	2730	2630	2820	2630	2520
24	3300	3260	3180	3080	3020	2970	2900	2720	2620	2820	2620	2510
25	3300	3250	3180	3080	3020	2960	2890	2720	2620	2810	2610	2510
26	3290	3250	3170	3080	3010	2960	2890	2730	2610	2800	2600	2500
27	3280	3240	3170	3080	3000	2960	2880	2730	2600	2790	2600	2500
28	3280	3240	3160	3070	3000	2950	2880	2740	2600	2780	2590	2490
29	3270	3240	3160	3070	---	2950	2880	2730	2600	2780	2580	2490
30	3270	3240	3150	3070	---	2970	2870	2730	2600	2780	2580	2480
31	3260	---	3150	3070	---	2970	---	2730	---	2780	2570	---
MEAN	3340	3250	3200	3100	3050	2960	2920	2780	2660	2820	2680	2530
MAX	3400	3280	3230	3150	3080	3000	2970	2870	2720	2880	2770	2570
MIN	3260	3220	3150	3070	3000	2930	2870	2720	2600	2590	2570	2480
(+)	1886.72	1886.61	1886.25	1885.93	1885.62	1885.51	1885.08	1884.43	1883.85	1884.66	1883.71	1883.26
(@)	-150	-20	-90	-80	-70	-30	-100	-140	-130	+180	-210	-90

CAL YR 2001 MAX 4530 MIN 3150 (@) -990
WTR YR 2002 MAX 3400 MIN 2480 (@) -930

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

08141000 Hords Creek Lake near Valera, TX--Continued



08143000 Lake Brownwood near Brownwood, TX

LOCATION.--Lat 31°50′13", long 99°00′13", Brown County, Hydrologic Unit 12090107, on abandoned service outlet structure near center of dam on Pecan Bayou, 0.2 mi downstream from Jim Ned Creek, 8.0 mi north of Brownwood, and 57.1 mi upstream from mouth.

DRAINAGE AREA.--1,565 mi^2.

PERIOD OF RECORD.--July 1933 to May 1941, Nov. 1944 to Sept. 1986, and Feb. 1999 to current year. Fragmentary records July 1934 to Apr. 1935 and Oct. 1940 to May 1941. Prior to Oct. 1970, published as "Brownwood Reservoir".
Water-quality records.--Chemical data: Oct. 1970 to Apr. 1984.

REVISED RECORDS.--WSP 1212: 1948-50. WDR TX-81-3: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is NGVD of 1929. From July 1933 to May 1941, July 23, 1946 to May 12, 1948, non-recording gage at irrigation outlet structure near right end of dam, Nov. 21, 1944 to July 22, 1946, water-stage recorder on irrigation outlet structure near right end of dam, May 13, 1948 to June 30, 1949, water-stage recorder in right downstream corner of outlet control tower, July 1, 1949 to Sept. 30, 1986, non-recording gage at irrigation outlet structure near right end of dam all at datum 0.50 ft higher. Satellite telemeter at station.

REMARKS.--No estimated daily contents. Records good. The lake is formed by a rolled earthfill dam, 1,580 ft long. The dam was completed in 1933 and deliberate impoundment began in July 1933. In Aug. 1983, work was completed to reinforce backside of dam and dam was raised 20 ft. The uncontrolled emergency spillway is a broad-crested weir 479 ft long located 800 ft to left of dam. The controlled service spillway consists of two 48-inch horseshoe-shaped concrete conduits. Water is used for irrigation, municipal, and industrial supply. Flow is affected at times by discharge from the flood-detention pools of 59 floodwater-retarding structures with a combined capacity of 73,310 acre-ft. These structures control runoff from 353 mi^2 in the Jim Ned Creek and Pecan Bayou drainage basins. The dam is owned by Brown County WID No. 1. Conservation pool storage is 131,430 acre-ft. Data regarding the dam are given in the following table:

	Elevation (feet)
Top of dam..	1,470.0
Crest of spillway...	1,424.6
Lowest gated outlet (invert)......................................	1,329.5

COOPERATION.--The capacity table dated Feb. 23, 1999, was furnished by Brown County Water Improvement District No. 1 and is based on a volumetric survey of Apr. 1997 by Texas Water Development Board. Records of diversions may be obtained from the city of Brownwood.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 198,000 acre-ft, July 7, 2002, elevation, 1,432.12 ft; minimum contents observed, 11,900 acre-ft, July 15, 1934, elevation, 1,389.0 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 198,000 acre-ft, July 7, elevation, 1,432.12 ft; minimum contents, 105,800 acre-ft, Mar. 18, elevation, 1,420.35 ft.

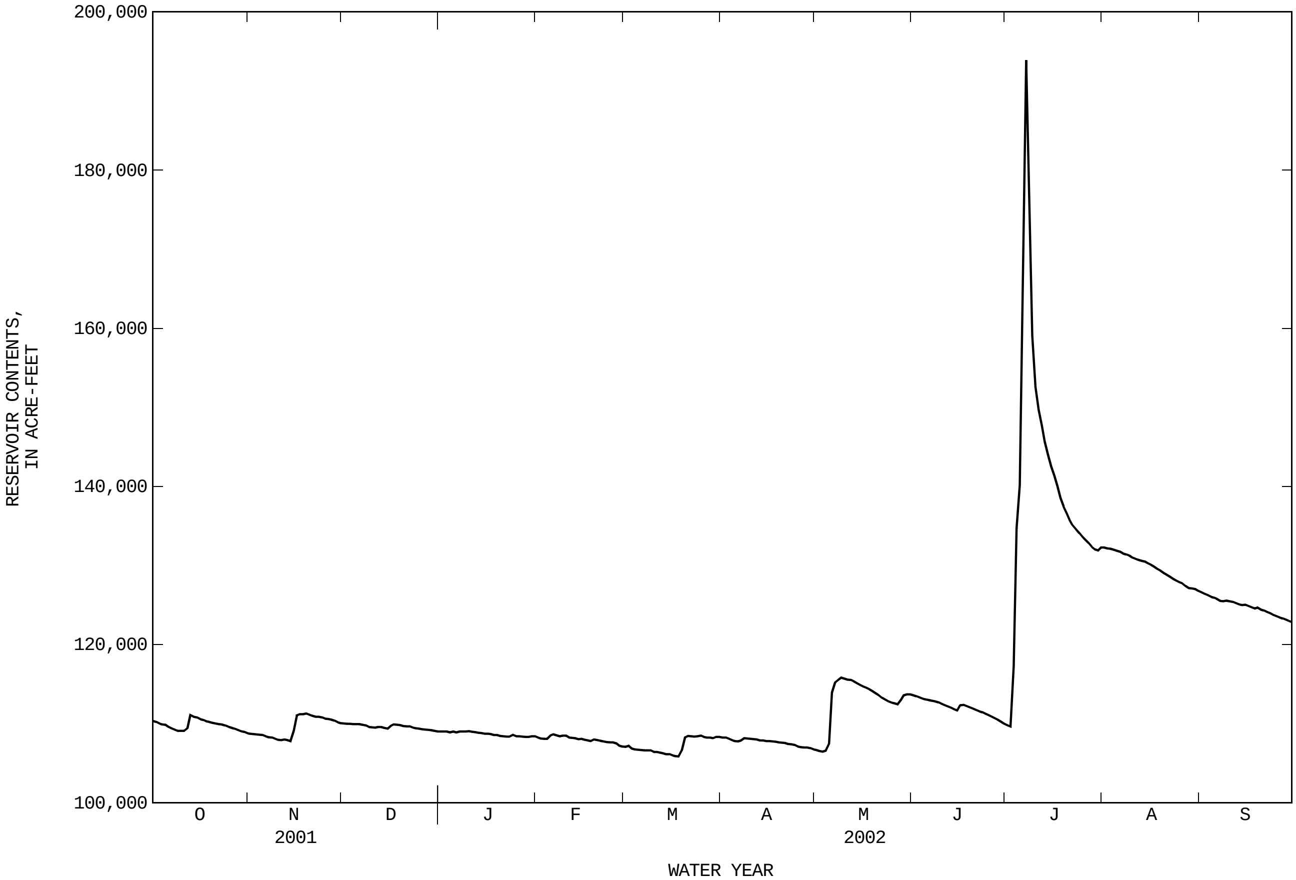
RESERVOIR STORAGE FROM DCP, in (ACRE-FEET), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	110300	108700	110000	109000	108200	107100	108200	106700	113600	109800	132300	126600
2	110200	108700	110000	109000	108100	107200	108200	106600	113500	109600	132200	126400
3	110000	108700	110000	109000	108100	106800	108100	106500	113300	117200	132100	126200
4	109900	108600	109900	108900	108100	106800	107900	106600	113100	134700	132000	126000
5	109900	108600	110000	109000	108500	106700	107800	107400	113100	140200	131900	125900
6	109600	108400	109900	108900	108700	106700	107700	113900	113000	157200	131700	125700
7	109400	108300	109900	109000	108500	106600	107900	115200	112900	193900	131500	125500
8	109200	108200	109800	109000	108400	106600	108200	115500	112800	176200	131400	125500
9	109100	108100	109600	109000	108500	106600	108100	115800	112700	159100	131200	125600
10	109100	108000	109500	109000	108500	106400	108100	115700	112500	152600	131000	125500
11	109100	107900	109500	109000	108200	106400	108000	115600	112300	149700	130800	125400
12	109400	108000	109600	108900	108200	106300	108000	115500	112200	147700	130700	125200
13	111100	107900	109600	108900	108200	106300	107900	115300	112000	145700	130600	125100
14	110900	107800	109500	108800	108000	106100	107900	115100	111800	144000	130500	125000
15	110800	109100	109400	108700	108100	106100	107800	114900	111700	142500	130300	125000
16	110600	111000	109700	108700	108000	106000	107800	114700	112300	141300	130000	124900
17	110500	111200	109900	108700	107900	105900	107800	114500	112400	140000	129800	124700
18	110300	111200	109900	108600	107800	105800	107700	114300	112200	138500	129500	124600
19	110200	111300	109800	108600	108000	106600	107600	114100	112000	137500	129300	124700
20	110100	111100	109700	108400	107900	108200	107600	113800	111900	136600	129100	124400
21	110000	111000	109600	108400	107900	108400	107500	113600	111700	135700	128800	124300
22	109900	110900	109700	108400	107800	108400	107400	113300	111600	135100	128600	124100
23	109900	110900	109500	108400	107700	108400	107400	113000	111400	134500	128300	123900
24	109800	110800	109400	108600	107600	108400	107300	112800	111300	134100	128100	123700
25	109600	110600	109400	108400	107600	108500	107100	112700	111100	133600	127900	123600
26	109500	110600	109300	108400	107500	108300	107000	112600	110900	133200	127700	123400
27	109400	110500	109200	108400	107200	108200	107000	112400	110700	132900	127400	123300
28	109200	110400	109200	108300	107100	108200	107000	113000	110500	132400	127100	123100
29	109100	110200	109200	108300	---	108200	106900	113600	110200	132000	127100	123000
30	109000	110100	109100	108400	---	108300	106800	113700	110000	131900	127000	122800
31	108800	---	109000	108400	---	108300	---	113700	---	132300	126800	---
MEAN	109800	109600	109600	108700	108000	107200	107700	113000	112000	140100	129800	124800
MAX	111100	111300	110000	109000	108700	108500	108200	115800	113600	193900	132300	126600
MIN	108800	107800	109000	108300	107100	105800	106800	106500	110000	109600	126800	122800
(+)	1420.87	1421.07	1420.90	1420.80	1420.58	1420.78	1420.52	1421.67	1421.06	1424.62	1423.78	1423.15
(@)	-1700	+1300	-1100	-600	-1300	+1200	-1500	+6900	-3700	+22300	-5500	-4000

CAL YR 2001 MAX 133600 MIN 107500 (@) +900
WTR YR 2002 MAX 193900 MIN 105800 (@) +12300

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

08143000 Lake Brownwood near Brownwood, TX--Continued



08143600 Pecan Bayou near Mullin, TX

LOCATION.--Lat 31°31′02", long 98°44′25", Mills County, Hydrologic Unit 12090107, on right bank 44 ft downstream from bridge on Farm Road 573, 0.6 mi downstream from Blanket Creek, 5.5 mi southwest of Mullin, and 13.6 mi upstream from mouth.

DRAINAGE AREA.--2,073 mi^2.

PERIOD OF RECORD.--Oct. 1967 to current year.
Water-quality records.--Chemical data: Oct. 1967 to Aug. 1996. Biochemical data: Nov. 1991 to Aug. 1996. Specific conductance: Oct. 1967 to Sept. 1991. Water temperature: Oct. 1967 to Sept. 1991.

REVISED RECORDS.--WDR TX-81-3: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,202.93 ft above NGVD of 1929. Radio telemeter at station. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. Since installation of gage in water year 1968, at least 10% of contributing drainage area has been regulated. In addition, flow from 152 mi^2 (from an intervening drainage area of 641 mi^2) above this station and below Lake Brownwood is partly controlled by 41 floodwater-retarding structures. No flow at times.

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

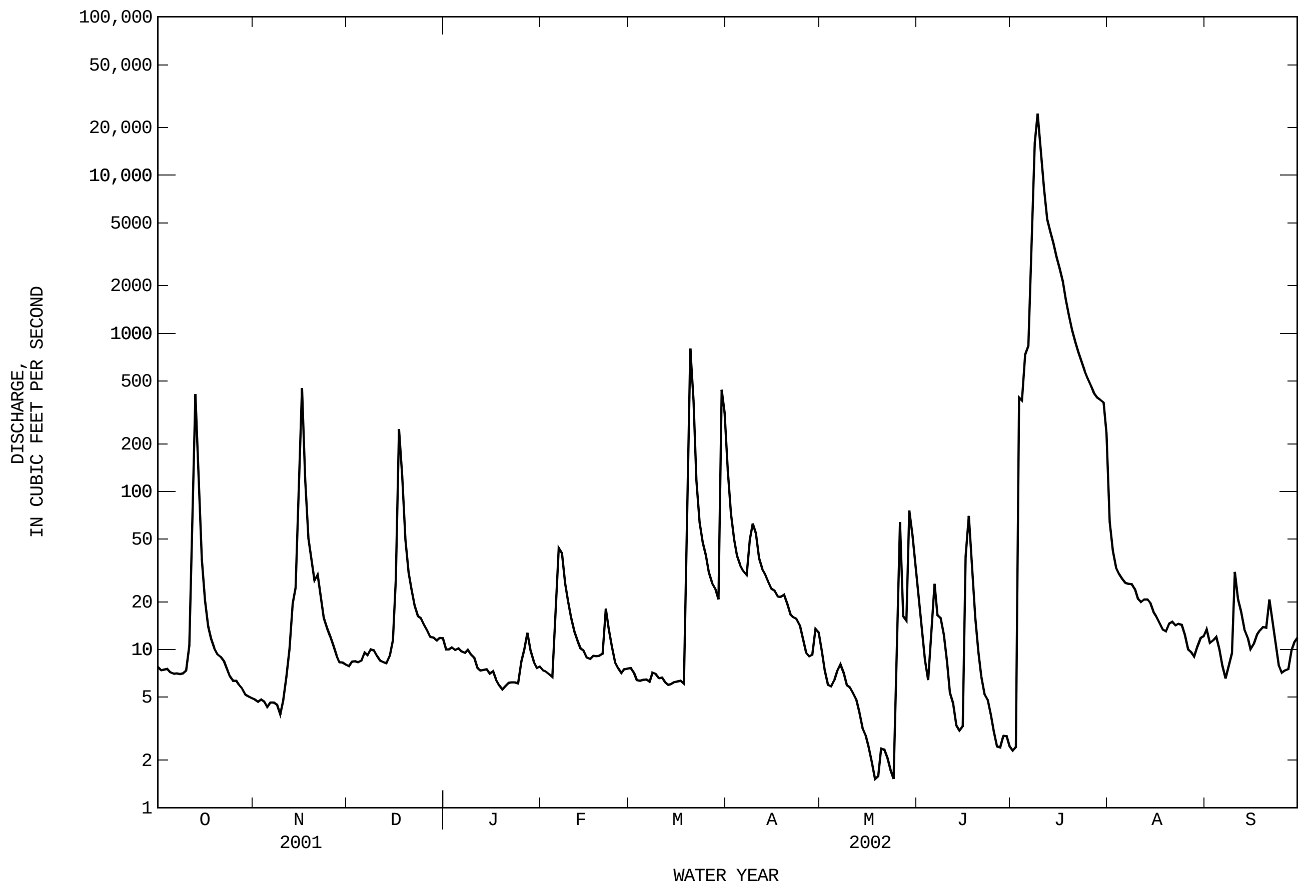
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.8	4.8	7.8	10	7.4	7.7	136	9.7	21	2.3	64	13
2	7.4	4.7	8.4	10	7.2	7.1	72	7.4	13	2.4	42	11
3	7.5	4.8	8.4	10	7.0	6.4	50	6.0	8.6	393	33	11
4	7.5	4.7	8.3	9.9	6.7	6.4	39	5.8	6.4	376	30	12
5	7.2	4.3	8.5	10	16	6.4	34	6.4	14	732	28	10
6	7.0	4.6	9.6	9.7	44	6.5	31	7.3	26	829	26	7.9
7	7.1	4.6	9.2	9.5	41	6.3	30	8.0	16	4890	26	6.5
8	7.0	4.5	10	10	26	7.1	50	7.1	16	16000	26	7.9
9	7.1	3.9	9.9	9.3	20	7.0	63	6.0	12	24400	24	9.5
10	7.4	4.7	9.1	8.9	16	6.6	54	5.7	8.4	14900	21	31
11	11	6.7	8.5	7.6	13	6.7	38	5.3	5.3	8200	20	21
12	119	10	8.3	7.4	11	6.2	32	4.9	4.6	5240	21	17
13	412	20	8.2	7.4	10	6.0	30	4.0	3.3	4430	21	13
14	98	25	9.1	7.5	9.8	6.1	27	3.2	3.1	3720	20	12
15	37	109	11	7.0	8.9	6.2	24	2.9	3.3	3040	17	10
16	20	450	28	7.3	8.7	6.3	24	2.4	39	2550	16	11
17	14	118	247	6.5	9.1	6.4	22	1.9	70	2110	15	12
18	12	51	124	5.9	9.1	6.1	22	1.5	36	1630	13	13
19	10	37	49	5.6	9.1	177	22	1.6	16	1290	13	14
20	9.3	27	31	5.9	9.4	801	19	2.4	9.6	1040	15	14
21	9.0	30	24	6.2	18	377	17	2.3	6.7	875	15	21
22	8.5	21	19	6.2	14	117	16	2.1	5.2	762	14	15
23	7.6	16	16	6.2	10	64	16	1.7	4.8	661	15	11
24	6.8	14	16	6.1	8.3	47	14	1.5	3.9	578	14	8.0
25	6.4	12	14	8.3	7.6	39	12	9.5	3.0	516	12	7.1
26	6.4	11	13	9.9	7.1	31	9.5	64	2.4	467	10	7.4
27	5.9	9.2	12	13	7.5	26	9.0	16	2.4	418	9.6	7.5
28	5.6	8.3	12	9.8	7.6	24	9.3	15	2.9	391	9.0	9.9
29	5.2	8.3	11	8.4	---	21	14	76	2.8	380	10	11
30	5.0	8.0	12	7.7	---	439	13	53	2.5	366	12	12
31	4.9	---	12	7.8	---	317	---	32	---	233	12	---
TOTAL	886.6	1037.1	774.3	255.0	369.5	2597.5	948.8	372.6	368.2	101421.7	623.6	366.7
MEAN	28.60	34.57	24.98	8.226	13.20	83.79	31.63	12.02	12.27	3272	20.12	12.22
MAX	412	450	247	13	44	801	136	76	70	24400	64	31
MIN	4.9	3.9	7.8	5.6	6.7	6.0	9.0	1.5	2.4	2.3	9.0	6.5
AC-FT	1760	2060	1540	506	733	5150	1880	739	730	201200	1240	727

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	143.9	83.62	178.7	134.4	224.1	232.0	215.1	271.5	331.9	145.4	25.30	74.95
MAX	987	1227	4741	1965	4416	2361	3510	1975	2898	3309	195	980
(WY)	1975	1975	1992	1968	1992	1992	1990	1994	1997	2002	1971	1991
MIN	0.59	4.79	3.90	4.57	6.52	5.45	3.63	0.12	0.000	0.000	0.000	0.000
(WY)	1989	1989	1984	1986	2000	1996	1984	1984	1984	1974	1980	2000

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1968 - 2002	
ANNUAL TOTAL	17379.00		110021.6			
ANNUAL MEAN	47.61		301.4		171.3	
HIGHEST ANNUAL MEAN					1245	1992
LOWEST ANNUAL MEAN					9.01	1984
HIGHEST DAILY MEAN	722	Apr 23	24400	Jul 9	37000	Apr 27 1990
LOWEST DAILY MEAN	0.06	Aug 6	1.5	May 18	0.00	Jun 29 1974
ANNUAL SEVEN-DAY MINIMUM	0.25	Aug 1	1.9	May 18	0.00	Jun 29 1974
MAXIMUM PEAK FLOW			27500	Jul 9	38300	Apr 27 1990
MAXIMUM PEAK STAGE			37.61	Jul 9	42.15	Apr 27 1990
ANNUAL RUNOFF (AC-FT)	34470		218200		124100	
10 PERCENT EXCEEDS	119		199		252	
50 PERCENT EXCEEDS	14		10		14	
90 PERCENT EXCEEDS	2.7		4.9		2.7	

08143600 Pecan Bayou near Mullin, TX--Continued



08144500 San Saba River at Menard, TX

LOCATION.--Lat 30°55'08", long 99°47'07", Menard County, Hydrologic Unit 12090109, at downstream side of bridge on U.S. Highway 83 in Menard, 1.1 mi downstream from Las Moras Creek, 1.9 mi upstream from Volkmann Draw, and 116.3 mi upstream from mouth.

DRAINAGE AREA.--1,135 mi^2, of which 6.6 mi^2 probably is noncontributing.

PERIOD OF RECORD.--Sept. 1915 to Sept. 1993, Oct. 1997 to current year.
Water-quality records.--Chemical data: Nov. 1964 to July 1967.

REVISED RECORDS.--WDR TX-81-3: Drainage area. WSP 1512: 1918-20, 1922-25, 1926(M), 1927-32, 1934(M), 1936, 1938(M).

GAGE.--Water-stage recorder. Datum of gage is 1,863.05 ft above NGVD of 1929. Sept. 14, 1915, to Mar. 12, 1924, nonrecording gage at site 635 ft downstream at datum 2.20 ft lower. Mar. 13, 1924, to Feb. 21, 1939, nonrecording gage at site 1,000 ft upstream at datum 2.00 ft higher. Feb. 22, 1939, to Jan. 25, 1940, nonrecording gage at present site and datum. Jan. 26, 1940, to Sept. 19, 1957, water-stage recorder at site 240 ft to right at present datum. Feb. 8, 1962, to Jan. 22, 1963, nonrecording gage at site 600 ft downstream at present datum. Radio telemeter at station. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. Since about 1890, low flow regulated during irrigation season by diversions to Noyes Canal at Menard (discontinued station 08144000) 4.6 mi upstream and diversions by pumping at several locations upstream. No flow at times.

COOPERATION.--Lower Colorado River Authority provides operation and maintenance of the gage and verification of stage-discharge relation at low stages. U.S. Geological Survey maintains stage-discharge relation at medium to high stages and computes and publishes streamflow record.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1880, 23.3 ft, June 6, 1899, 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	41	27	25	21	19	20	25	15	10	16	8.4	6.6
2	41	28	24	21	19	20	24	14	8.3	11	8.0	6.1
3	40	28	24	20	19	20	22	13	8.5	10	6.5	7.0
4	41	29	24	20	20	20	22	13	8.3	13	6.6	7.5
5	44	28	24	21	24	20	22	14	7.4	13	6.3	7.3
6	45	29	24	21	28	20	23	14	8.0	12	7.0	7.2
7	43	28	25	20	25	20	30	15	23	10	13	7.1
8	37	28	26	19	22	21	34	15	19	9.0	12	8.5
9	26	29	26	19	21	21	30	15	12	8.3	9.9	13
10	30	29	27	20	20	20	28	15	11	7.5	9.4	15
11	30	30	27	21	19	20	27	14	9.8	7.6	8.8	13
12	30	30	28	21	19	20	26	13	9.1	7.9	8.2	13
13	31	30	29	21	19	20	26	13	8.2	7.7	8.0	11
14	32	30	24	22	20	20	66	12	7.8	11	7.6	9.9
15	31	62	24	21	25	20	58	13	8.0	15	8.0	13
16	30	43	24	22	25	20	23	13	8.7	11	9.2	13
17	32	34	24	23	22	20	15	12	9.1	14	7.3	15
18	33	29	24	22	17	21	14	11	8.3	11	7.2	15
19	33	26	23	23	20	28	14	10	6.9	9.2	6.3	13
20	29	25	22	23	21	41	15	10	5.3	7.9	6.8	13
21	30	24	22	23	20	36	14	11	4.6	7.3	6.9	12
22	30	24	22	21	20	27	14	11	4.3	6.7	6.9	10
23	30	24	22	22	20	24	15	11	4.4	6.3	6.6	9.7
24	29	24	22	24	19	24	15	11	4.3	5.9	6.6	9.5
25	28	24	22	24	17	24	15	11	4.3	5.7	6.0	9.2
26	27	24	22	24	17	23	16	11	3.9	5.5	6.1	9.1
27	27	24	22	23	18	23	17	11	3.6	5.1	6.3	8.0
28	27	24	22	23	20	23	16	13	4.5	4.3	5.9	7.5
29	27	25	21	20	---	23	16	13	6.5	4.6	5.9	7.5
30	27	25	21	21	---	24	16	13	6.7	8.5	6.2	7.9
31	27	---	20	20	---	25	---	12	---	7.5	6.4	---
TOTAL	1008	864	736	666	575	708	698	392	243.8	279.5	234.3	304.6
MEAN	32.52	28.80	23.74	21.48	20.54	22.84	23.27	12.65	8.127	9.016	7.558	10.15
MAX	45	62	29	24	28	41	66	15	23	16	13	15
MIN	26	24	20	19	17	20	14	10	3.6	4.3	5.9	6.1
AC-FT	2000	1710	1460	1320	1140	1400	1380	778	484	554	465	604

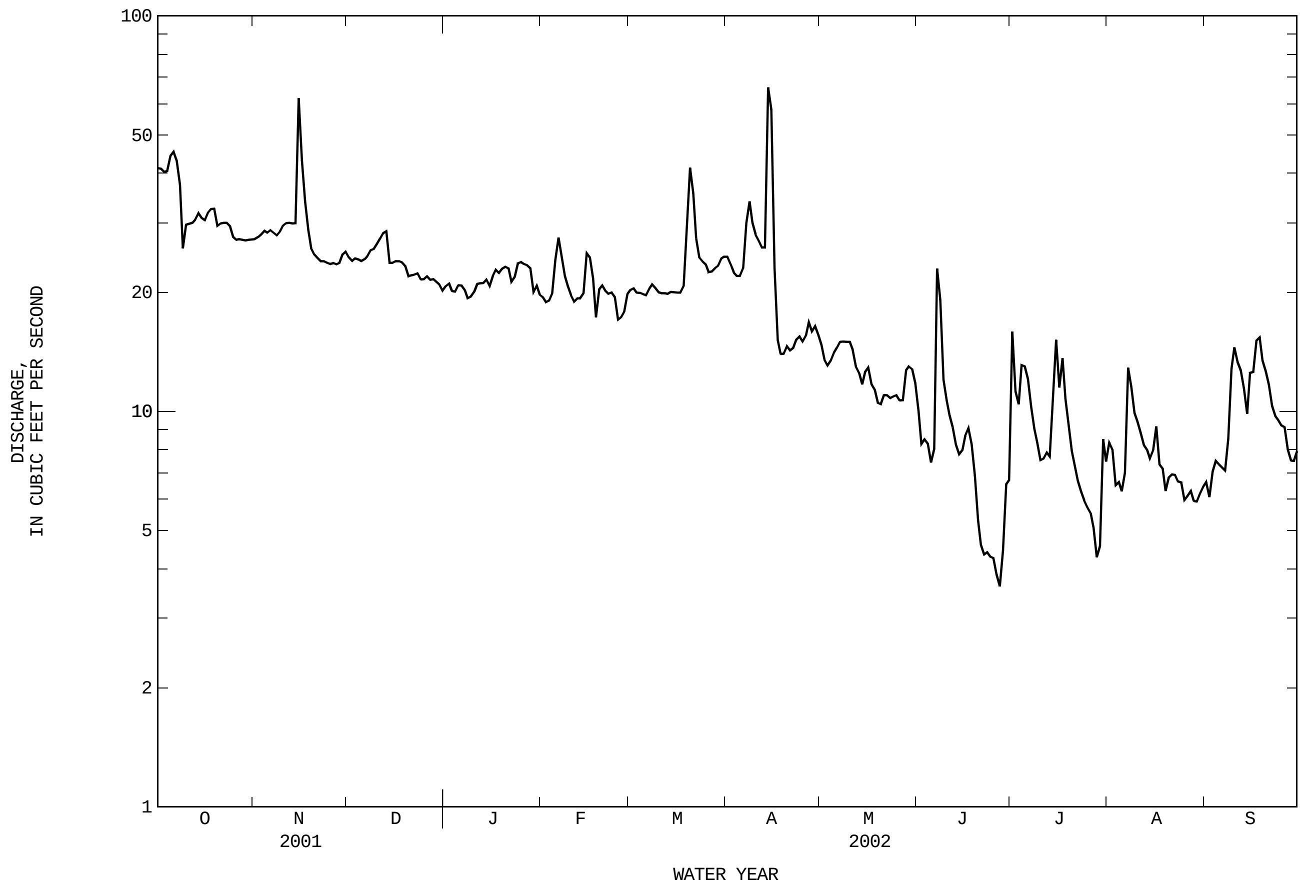
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1916 - 2002h, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	87.62	45.26	31.79	31.87	37.93	32.76	67.24	75.58	56.16	100.4	41.83	132.5
MAX	914	778	152	80.4	261	251	1206	1631	667	5140	869	2870
(WY)	1942	2001	1985	1985	1958	1922	1922	1957	1958	1938	1974	1936
MIN	0.000	0.000	0.000	0.035	0.82	0.99	0.89	1.22	0.000	0.000	0.000	0.000
(WY)	1957	1957	1955	1957	1955	1956	1955	1964	1953	1952	1952	1954

08144500 San Saba River at Menard, TX--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1916 - 2002h	
ANNUAL TOTAL	13244.9		6709.2			
ANNUAL MEAN	36.29		18.38		61.78	
HIGHEST ANNUAL MEAN					485	1938
LOWEST ANNUAL MEAN					6.12	1952
HIGHEST DAILY MEAN	2690	Sep 9	66	Apr 14	53300	Jul 23 1938
LOWEST DAILY MEAN	3.2	Aug 1	3.6	Jun 27	0.00	Jul 12 1918
ANNUAL SEVEN-DAY MINIMUM	3.8	Jul 30	4.2	Jun 22	0.00	Jul 19 1918
MAXIMUM PEAK FLOW			99	Nov 15	c130000	Jul 23 1938
MAXIMUM PEAK STAGE			4.20	Nov 15	a22.20	Jul 23 1938
ANNUAL RUNOFF (AC-FT)	26270		13310		44750	
10 PERCENT EXCEEDS	49		29		59	
50 PERCENT EXCEEDS	25		20		22	
90 PERCENT EXCEEDS	6.4		6.9		2.2	

h See PERIOD OF RECORD paragraph.
c From rating curve extended above 56,000 ft^3/s on basis of slope-area measurement of 130,000 ft^3/s.
a From floodmark.



08144600 San Saba River near Brady, TX

LOCATION.--Lat 31°00'14", long 99°16'07", McCulloch County, Hydrologic Unit 12090109, on right bank at downstream side of bridge on U.S. Highways 87 and 377, 0.4 mi upstream from Hudson Branch, and 8.4 mi southeast of Brady, and 72.9 mi upstream from mouth.

DRAINAGE AREA.--1,633 mi^2, of which 6.60 mi^2 probably is noncontributing.

PERIOD OF RECORD.--July 1979 to Sept. 1993, Oct. 1997 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,530.98 ft above NGVD of 1929. Radio telemeter at station. Satellite telemeter at station.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. No known regulation. Since about 1890, water diverted to Noyes Canal at Menard (discontinued station 08144000) during irrigation season.

COOPERATION.--Lower Colorado River Authority provides operation and maintenance of the gage and verification of stage-discharge relation at low stages. U.S. Geological Survey maintains stage-discharge relation at medium to high stages, and computes and publishes streamflow record.

EXTREMES OUTSIDE PERIOD OF RECORD.--Highest stage since June 1899, 33.8 ft, July 23, 1938, from floodmark on left bank 150 ft upstream from present site.

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	34	19	36	e33	33	31	35	21	9.3	0.59	2.9	0.22
2	34	19	34	33	32	32	34	19	11	1.9	2.4	0.20
3	31	20	35	33	33	32	33	18	9.0	2.4	2.0	0.20
4	31	20	35	34	33	32	33	17	7.0	7.9	1.6	0.20
5	31	19	35	34	42	31	30	17	5.7	7.1	1.3	0.21
6	36	19	35	33	48	30	30	15	4.4	7.4	1.2	0.17
7	53	19	34	33	44	31	34	14	4.9	5.6	1.1	0.23
8	40	19	34	33	43	31	38	13	8.4	4.9	1.1	1.0
9	38	23	33	33	41	29	37	12	8.6	17	1.1	0.73
10	37	24	33	31	38	28	42	13	6.5	13	1.0	0.47
11	28	23	34	30	38	26	39	11	7.4	11	0.90	0.65
12	23	25	35	30	37	24	37	10	15	9.1	0.76	0.61
13	25	27	35	30	36	25	107	9.7	11	13	0.65	0.44
14	25	28	36	27	35	28	302	13	6.8	11	0.54	0.29
15	23	206	37	27	35	28	68	12	6.0	12	0.47	0.22
16	24	166	43	27	35	27	55	12	5.3	21	0.42	0.31
17	23	89	39	29	37	27	61	12	4.4	23	0.36	0.44
18	23	62	35	31	39	29	49	9.8	3.3	23	0.30	0.48
19	24	52	34	31	39	44	41	7.6	2.3	19	0.25	0.43
20	24	46	35	32	38	78	38	5.8	1.7	15	0.23	0.35
21	24	41	35	32	32	58	37	6.2	1.2	13	0.21	0.23
22	23	40	35	33	34	56	33	6.4	0.85	11	0.20	0.17
23	21	38	34	33	34	52	34	5.3	0.62	8.9	0.18	0.16
24	19	37	33	34	34	44	33	4.8	0.47	7.3	0.18	0.15
25	19	34	33	37	33	38	27	7.8	0.38	6.0	0.17	0.15
26	19	34	33	33	32	35	26	9.7	0.34	4.7	0.18	0.15
27	19	34	34	34	31	34	27	5.4	0.30	3.8	0.17	0.16
28	18	35	34	34	30	34	27	7.9	0.29	4.4	0.17	0.14
29	19	36	33	35	---	34	29	11	0.28	4.0	0.28	0.14
30	19	35	33	36	---	36	24	7.1	0.62	4.2	0.38	0.14
31	19	---	e33	37	---	34	---	7.8	---	4.3	0.29	---
TOTAL	826	1289	1077	1002	1016	1098	1440	341.3	143.35	296.49	22.99	9.44
MEAN	26.65	42.97	34.74	32.32	36.29	35.42	48.00	11.01	4.778	9.564	0.742	0.315
MAX	53	206	43	37	48	78	302	21	15	23	2.9	1.0
MIN	18	19	33	27	30	24	24	4.8	0.28	0.59	0.17	0.14
AC-FT	1640	2560	2140	1990	2020	2180	2860	677	284	588	46	19

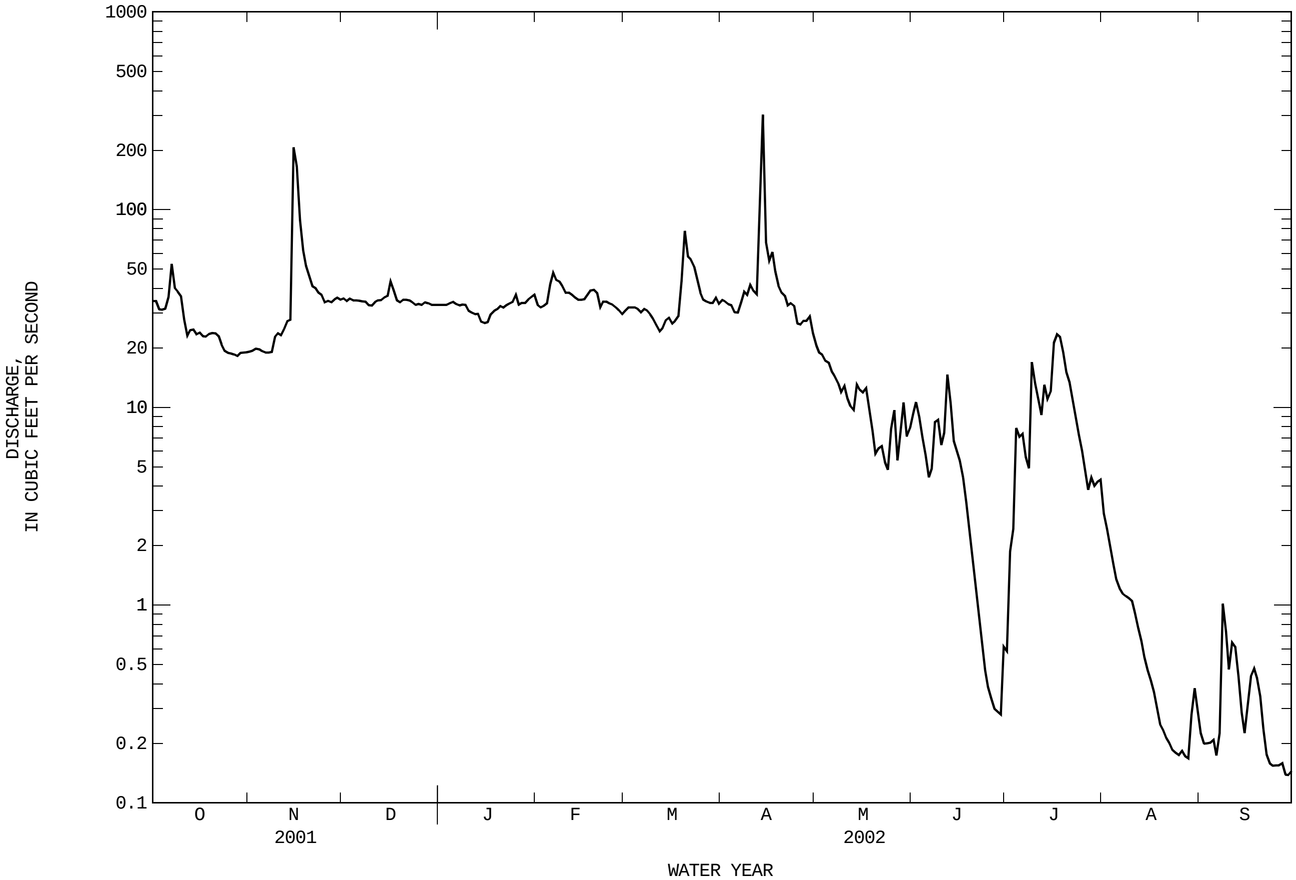
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1979 - 2002h, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	52.59	114.2	80.43	63.32	69.75	59.77	49.19	58.49	86.36	70.38	47.69	173.1
MAX	188	1397	516	282	400	160	144	167	511	901	543	1631
(WY)	2001	2001	1985	1985	1992	1992	1992	1987	1987	1990	1990	1980
MIN	3.35	16.5	22.6	24.0	23.3	18.3	16.3	6.35	0.75	0.49	0.13	0.074
(WY)	2000	2000	1986	2000	2000	2000	1986	1984	1984	1998	2000	1984

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1979 - 2002h	
ANNUAL TOTAL	17561.02		8561.57			
ANNUAL MEAN	48.11		23.46		77.33	
HIGHEST ANNUAL MEAN					256	1990
LOWEST ANNUAL MEAN					15.4	2000
HIGHEST DAILY MEAN	1390	Sep 9	302	Apr 14	23900	Sep 8 1980
LOWEST DAILY MEAN	0.89	Aug 26	0.14	Sep 28	0.00	Sep 26 1999
ANNUAL SEVEN-DAY MINIMUM	1.0	Jul 31	0.15	Sep 24	0.00	Sep 26 1999
MAXIMUM PEAK FLOW			1230	Apr 13	66000	Sep 8 1980
MAXIMUM PEAK STAGE			4.93	Apr 13	25.50	Sep 8 1980
ANNUAL RUNOFF (AC-FT)	34830		16980		56020	
10 PERCENT EXCEEDS	62		38		89	
50 PERCENT EXCEEDS	36		24		37	
90 PERCENT EXCEEDS	1.6		0.33		3.7	

e Estimated
h See PERIOD OF RECORD paragraph.

08144600 San Saba River near Brady, TX--Continued



08144900 Brady Creek Reservoir near Brady, TX

LOCATION.--Lat 31°08'17", long 99°23'07", McCulloch County, Hydrologic Unit 12090110, at mouth of Bear Creek on Brady Creek, 280 ft upstream from Farm Road 3022 over Brady Creek Dam, 3.0 mi west of Brady, and 34.1 mi upstream from mouth.

DRAINAGE AREA.--523 mi^2.

PERIOD OF RECORD.--May 1963 to Sept. 1983, Jan. 1999 to current year.
Water-quality records.--Chemical data: Sept. 1964 to Apr. 1983.

REVISED RECORDS.--WDR TX-81-3: Drainage area.

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 compacted earthfill dam 8,400 ft long. The dam was completed and storage began in May 1963. The dam was built by the city of Brady in cooperation with the Natural Resources Conservation Service and the Farmers Home Administration for flood control, municipal, and industrial water supply. The spillway is a cut channel through natural ground 1,000 ft wide located at right end of dam. The service spillway is an uncontrolled concrete drop-inlet structure that discharges through a 7.0 by 7.0-foot concrete box conduit and is designed to discharge 4,000 ft^3/s at a 19.4-ft head. The gated outlet is a 36-inch pipe that extends through the embankment and is equipped with three sluice gates for controlled releases downstream. Flow into reservoir is affected at times by discharge from the flood-detention pools of 35 floodwater-retarding structures with a combined detention capacity of 77,950 acre-ft. These structures were built during the period Feb. 1955 to July 1962 and control runoff from 263 mi^2 in the Brady Creek watershed above this station. Conservation pool storage is 30,430 acre-ft. Data regarding the dam are given in the following table:

	Elevation (feet)
Top of dam..	1,783.0
Crest of emergency spillway...	1,762.4
Crest of service spillway...	1,743.0
Lowest gated outlet (invert)..	1,712.0

COOPERATION.--The capacity table dated May 22, 1963, was prepared from curve obtained from the city of Brady. The capacity curve is based on U.S. Geological Survey topographic map but was not adjusted for earth material that might have been moved. Records of diversions may be obtained from the city of Brady.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 40,880 acre-ft, Sept. 24, 1971, elevation, 1,747.70 ft; minimum contents, 1,030 acre-ft, Sept. 18, 1964, elevation, 1,710.40 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 25,450 acre-ft, Nov. 19, elevation, 1,740.39 ft; minimum estimated daily contents, 20,100 acre-ft, Sept. 30.

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

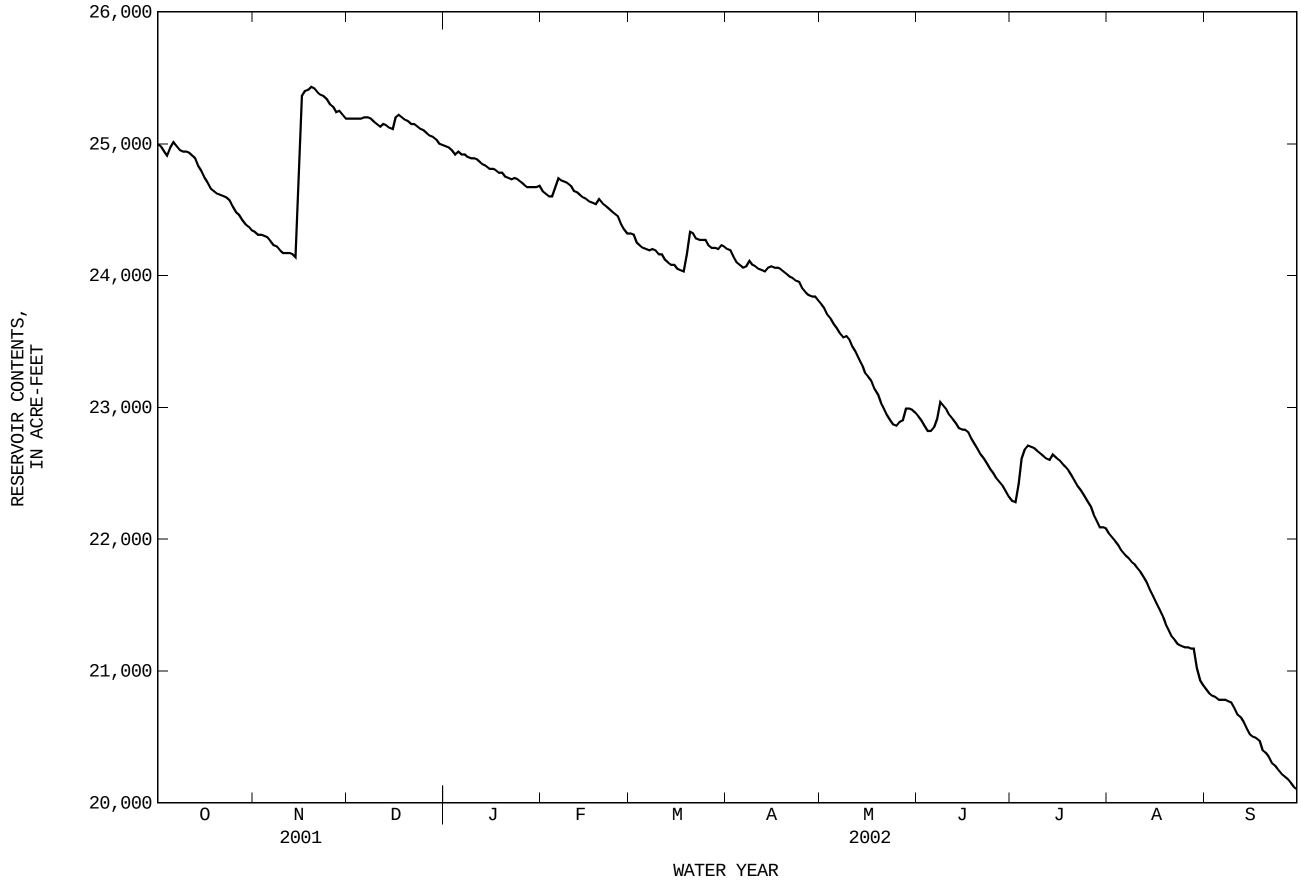
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25000	24330	25190	24980	24640	24320	24200	23780	22930	22290	22040	20860
2	24980	24310	25190	24970	24620	24310	24190	23750	22900	22280	22010	20830
3	24940	24310	25190	24950	24600	24250	24140	23700	22860	22420	21980	20810
4	24910	24300	25190	24920	24600	24230	24100	23670	22820	22610	21950	20800
5	24970	24290	25190	24940	24670	24210	24080	23630	22820	22680	21910	20780
6	25010	24260	25200	24920	24740	24200	24060	23600	22850	22710	21880	20780
7	24980	24230	25200	24920	24720	24190	24070	23560	22910	22700	21860	20780
8	24950	24220	25190	24900	24710	24200	24110	23530	23040	22690	21830	20770
9	24940	24190	25170	24890	24700	24190	24080	23540	23010	22670	21810	20760
10	24940	24170	25150	24890	24680	24160	24070	23510	22980	22650	21780	20720
11	24930	24170	25130	24880	24640	24160	24050	23460	22940	22630	21750	20670
12	24910	24170	25150	24860	24630	24120	24040	23420	22910	22610	21710	20650
13	24890	24160	25140	24840	24610	24100	24030	23370	22880	22600	21670	20610
14	24830	24140	25120	24830	24590	24080	24060	23320	22840	22640	21620	20560
15	24790	24750	25110	24810	24580	24080	24070	23260	22830	22620	21570	20520
16	24740	25360	25200	24810	24560	24050	24060	23230	22830	22600	21520	20500
17	24700	25400	25220	24800	24550	24040	24060	23200	22810	22570	21470	20490
18	24660	25410	25200	24780	24540	24030	24050	23140	22760	22550	21420	20470
19	24640	25430	25180	24780	24580	24160	24030	23100	22720	22520	21360	20400
20	24620	25420	25170	24750	24550	24330	24010	23040	22680	22480	21310	e20380
21	24610	25390	25150	24740	24530	24320	23990	22990	22640	22440	21260	e20350
22	24600	25370	25150	24730	24510	24280	23980	22940	22610	22400	21230	e20300
23	24590	25360	25130	24740	24490	24270	23960	22900	22570	22370	21200	e20280
24	24570	25340	25110	24730	24470	24270	23950	22870	22530	22330	21190	e20250
25	24520	25300	25100	24710	24450	24270	23900	22860	22500	22290	21180	e20220
26	24480	25280	25080	24690	24390	24230	23870	22890	22460	22250	21180	e20200
27	24460	25240	25060	24670	24350	24210	23850	22900	22430	22190	21170	e20180
28	24420	25250	25050	24670	24320	24210	23840	22990	22400	22140	21170	e20150
29	24390	25220	25030	24670	---	24200	23840	22990	22360	22090	21020	e20120
30	24370	25190	25000	24670	---	24230	23810	22980	22320	22090	20930	e20100
31	24340	---	24990	24680	---	24220	---	22960	---	22080	20890	---
MEAN	24730	24800	25140	24810	24570	24200	24020	23260	22740	22460	21510	20510
MAX	25010	25430	25220	24980	24740	24330	24200	23780	23040	22710	22040	20860
MIN	24340	24140	24990	24670	24320	24030	23810	22860	22320	22080	20890	20100
(+)	1739.77	1740.25	1740.14	1739.96	1739.76	1739.70	1739.46	1738.96	1738.58	1738.43	1737.69	1737.19
(@)	-690	+850	-200	-310	-360	-100	-410	-850	-640	-240	-1190	-790

CAL YR 2001 MAX 29750 MIN 24140 (@) -4160
WTR YR 2002 MAX 25430 MIN 20100 (@) -4930

e Estimated

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

08144900 Brady Creek Reservoir near Brady, TX--Continued



08145000 Brady Creek at Brady, TX

LOCATION.--Lat 31°08'17", long 99°20'05", McCulloch County, Hydrologic Unit 12090110, on left bank 60 ft upstream from bridge on U.S. Highway 377 on North Bridge Street in Brady, 0.4 mi downstream from Live Oak Creek, and 30.4 mi upstream from mouth.

DRAINAGE AREA.--588 mi^2.

PERIOD OF RECORD.--May 1939 to Sept. 1986, Apr. 2001 to current year.

REVISED RECORDS.--WSP 1512: 1941(M), 1951(M). WDR TX-81-3: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,646.50 ft above NGVD of 1929. Prior to July 9, 1940, nonrecording gage at site 3,600 ft upstream at datum 8.24 ft higher. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records poor. The city of Brady returns sewage effluent downstream from the gage. 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 several flood-retarding structures above this station. No flow at times most years.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--23 years (water years 1940-62) prior to completion of Brady Creek Reservoir, 25.2 ft^3/s (18,260,000 acre-ft/yr).

EXTREMES FOR PERIOD PRIOR TO REGULATION (WATER YEARS 1939-62).--Maximum discharge, 39,100 ft^3/s, Sept. 10, 1952, gage height, 24.80 ft; no flow at times most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1882, 29.1 ft, July 23, 1938, present site and datum, discharge at site 5.0 mi downstream, 86,000 ft^3/s, by slope-area measurement. Flood of Oct. 6, 1930, second highest since 1882, reached a stage of 25.9 ft, discharge, 50,300 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	0.12	0.00	0.17	0.42	0.37	0.25	1.1	0.12	0.54	0.00	0.00	0.00
2	0.06	0.00	0.17	0.42	0.37	0.27	2.2	0.08	0.40	0.00	0.00	0.00
3	0.02	0.00	0.18	0.43	0.37	0.27	0.71	0.05	0.29	0.00	0.00	0.00
4	0.00	0.00	0.17	0.43	0.37	0.27	0.28	0.04	0.22	5.3	0.00	0.00
5	0.00	0.00	0.16	0.44	0.83	0.27	0.15	0.02	0.26	3.5	0.00	0.00
6	0.00	0.00	0.20	0.44	0.76	0.27	0.13	0.00	0.30	1.4	0.00	0.00
7	0.00	0.00	0.19	0.43	0.60	0.21	0.14	0.00	0.28	1.2	0.00	0.00
8	0.00	0.00	0.19	0.44	0.53	0.13	0.20	0.00	0.30	0.70	0.00	0.00
9	0.00	0.00	0.18	0.46	0.48	0.09	0.14	0.03	0.24	0.00	0.00	0.00
10	0.00	0.00	0.16	0.46	0.45	0.08	0.02	0.03	0.18	0.00	0.00	0.00
11	0.00	0.00	0.17	0.48	0.43	0.10	0.02	0.01	0.14	0.00	0.00	0.00
12	0.00	0.00	0.18	0.51	0.43	0.12	0.02	0.00	0.11	0.00	0.00	0.00
13	0.00	0.00	0.21	0.53	0.43	0.11	0.01	0.00	0.07	0.20	0.00	0.00
14	0.00	0.00	0.23	0.46	0.40	0.09	0.02	0.00	0.04	1.6	0.00	0.00
15	0.00	11	0.23	0.40	0.40	0.10	0.02	0.00	0.05	1.1	0.00	0.00
16	0.00	6.9	0.71	0.40	0.41	0.10	0.03	0.00	0.12	0.90	0.00	0.00
17	0.00	0.65	0.82	0.40	0.36	0.13	0.03	0.00	0.10	0.89	0.00	0.00
18	0.00	0.28	0.76	0.40	0.30	0.16	0.02	0.00	0.06	0.90	0.00	0.00
19	0.00	0.25	0.81	0.35	0.31	10	0.01	0.00	0.03	0.57	0.00	0.00
20	0.00	0.29	0.81	0.40	0.42	4.9	0.00	0.00	0.00	0.14	0.00	0.00
21	0.00	0.27	0.78	0.40	0.33	0.43	0.00	0.00	0.00	0.10	0.00	0.00
22	0.00	0.23	0.76	0.40	0.29	0.33	0.00	0.00	0.00	0.07	0.00	0.00
23	0.00	0.20	0.72	0.39	0.27	0.38	0.00	0.00	0.00	0.04	0.00	0.00
24	0.00	0.18	0.66	0.37	0.25	0.41	0.00	0.00	0.00	0.02	0.00	0.00
25	0.00	0.15	0.61	0.36	0.23	0.46	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	0.11	0.53	0.31	0.23	0.46	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.08	0.46	0.28	0.23	0.46	0.26	1.8	0.00	0.00	0.00	0.00
28	0.00	0.14	0.45	0.25	0.24	0.47	0.31	3.0	0.00	0.00	0.00	0.00
29	0.00	0.20	0.43	0.27	---	0.45	0.25	0.99	0.00	0.00	0.00	0.00
30	0.00	0.19	0.43	0.34	---	0.58	0.18	0.84	0.00	0.00	0.00	0.00
31	0.00	---	0.43	0.35	---	0.66	---	0.69	---	0.00	0.00	---
TOTAL	0.20	21.12	12.96	12.42	11.09	23.01	6.25	7.70	3.73	18.63	0.00	0.00
MEAN	0.006	0.704	0.418	0.401	0.396	0.742	0.208	0.248	0.124	0.601	0.000	0.000
MAX	0.12	11	0.82	0.53	0.83	10	2.2	3.0	0.54	5.3	0.00	0.00
MIN	0.00	0.00	0.16	0.25	0.23	0.08	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	0.4	42	26	25	22	46	12	15	7.4	37	0.00	0.00

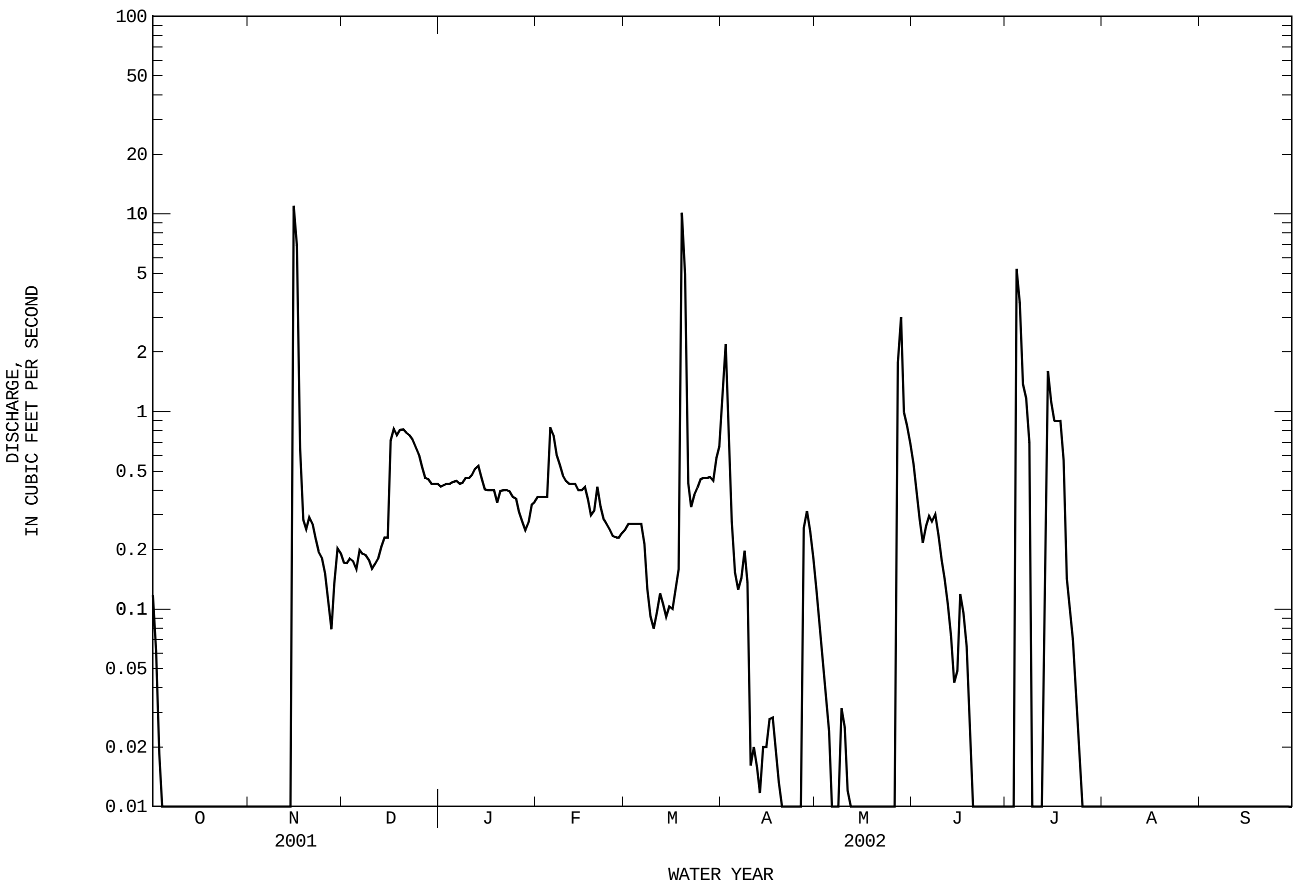
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1963 - 2002hz, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	13.31	3.989	3.405	4.084	3.018	3.736	5.598	7.899	6.112	16.16	13.08	18.91
MAX	134	60.8	32.8	50.4	43.0	26.1	82.3	95.7	90.6	388	300	364
(WY)	1974	1975	1985	1968	1975	1977	1975	1975	1986	1971	1971	1971
MIN	0.000	0.000	0.000	0.000	0.007	0.000	0.000	0.035	0.001	0.000	0.000	0.000
(WY)	1969	1971	1971	1963	1963	1963	1984	1971	1984	1963	1963	1963

08145000 Brady Creek at Brady, TX--Continued

SUMMARY STATISTICS	FOR 2002 WATER YEAR		WATER YEARS 1963 - 2002hz	
ANNUAL TOTAL	117.11			
ANNUAL MEAN	0.321		8.505	
HIGHEST ANNUAL MEAN			88.4	1971
LOWEST ANNUAL MEAN			0.034	1963
HIGHEST DAILY MEAN	11	Nov 15	4580	Jul 26 1971
LOWEST DAILY MEAN	0.00	Oct 4	0.00	Oct 1 1962
ANNUAL SEVEN-DAY MINIMUM	0.00	Oct 4	0.00	Oct 1 1962
MAXIMUM PEAK FLOW	69	Mar 19	24700	Jul 26 1971
MAXIMUM PEAK STAGE	7.33	Mar 19	19.80	Jul 26 1971
ANNUAL RUNOFF (AC-FT)	232		6160	
10 PERCENT EXCEEDS	0.60		5.3	
50 PERCENT EXCEEDS	0.09		0.09	
90 PERCENT EXCEEDS	0.00		0.00	

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



08146000 San Saba River at San Saba, TX

LOCATION.--Lat 31°12′47", long 98°43′09", San Saba County, Hydrologic Unit 12090109, on left bank near left downstream end of bridge on State Highway 16, 1.2 mi north of San Saba, 2.7 mi upstream from Mill Creek, 4.8 mi downstream from China Creek, and 16.8 mi upstream from mouth.

DRAINAGE AREA.--3,046 mi^2, of which 6.6 mi^2 probably is noncontributing.

PERIOD OF RECORD.--Dec. 1904 to Dec. 1906 (gage heights only), Sept. 1915 to Sept. 1993, and Oct. 1997 to current year. Published as "near San Saba" Dec. 1904 to Dec. 1906 and Sept. 1915 to Aug. 1930.
Water-quality records.--Chemical data: Sept. 1947 to Feb. 1949, Nov. 1958 to Sept. 1969. Water temperature: Sept. 1962 to Sept. 1969.

REVISED RECORDS.--WSP 458: 1915-16. WSP 1282: WDR TX-81-3: Drainage area. WSP 1512: 1918-19(M), 1922, 1931(M), 1935. WSP 1922: 1917. WDR TX-00-4: 1992.

GAGE.--Water-stage recorder. Datum of gage is 1,162.16 ft above NGVD of 1929. See WSP 1922 for brief history of changes prior to July 8, 1953. From Oct. 1956 to Sept. 1993, at site 250 ft to right and supplementary water-stage recorder 2,780 ft to right of main channel gage used for floodflows at same datum. Radio telemeter at station. Satellite telemeter at station.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Since water year 1963, at least 10% of contributing drainage area has been regulated. Many diversions above station for irrigation and municipal use affect low flows. No flow at times.

COOPERATION.--Lower Colorado River Authority provides operation and maintenance of the gage and verification of stage-discharge relation at low stages. U.S. Geological Survey maintains stage-discharge relation at medium to high stages, and computes and publishes streamflow record.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--47 years (water years 1916-1962) prior to completion of Brady Creek Reservoir, 248 ft^3/s (179,900 acre-ft/yr).

EXTREMES FOR PERIOD PRIOR TO REGULATION (WATER YEARS 1916-1962).--Maximum discharge, 203,000 ft^3/s, July 23, 1938, gage height, 39.30 ft, from floodmarks, at site then in use, adjusted to present datum, from rating curve extended above 40,600 ft^3/s on basis of slope-area measurement of 203,000 ft^3/s; no flow at times in 1918, 1930, 1954-56.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 6, 1899, reached a stage of 36.7 ft, 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	e75	52	e90	79	109	81	98	60	68	42	64	48
2	e72	51	e90	79	95	81	94	58	58	57	61	46
3	e88	49	e90	78	85	76	87	54	51	417	61	46
4	e75	53	e90	80	80	75	83	53	44	344	65	46
5	87	53	e92	81	94	79	81	67	40	518	70	42
6	137	54	e94	82	137	79	82	70	38	1200	68	44
7	117	54	92	81	146	80	86	61	40	473	67	48
8	101	53	89	81	144	86	87	53	57	273	78	340
9	119	55	87	78	133	82	85	50	66	182	89	132
10	107	50	85	76	126	83	88	46	48	140	73	84
11	98	53	86	74	115	78	86	41	43	122	63	59
12	91	64	88	74	108	77	85	41	41	105	55	54
13	85	75	88	76	102	70	85	40	35	100	53	51
14	73	64	90	70	100	66	81	38	35	382	52	50
15	66	103	90	71	97	64	455	37	40	1000	53	48
16	60	981	97	73	93	63	238	39	54	343	51	49
17	60	488	111	71	90	67	159	40	50	228	50	50
18	59	305	112	70	92	70	125	38	53	191	49	50
19	60	240	107	70	94	77	125	37	47	189	49	50
20	60	189	95	72	99	153	115	36	39	166	47	48
21	59	155	92	73	96	208	95	33	37	143	46	43
22	59	137	93	72	92	223	85	33	34	126	44	43
23	61	124	92	74	86	158	83	32	35	122	42	40
24	59	114	88	80	79	135	77	32	32	111	40	37
25	57	103	85	97	83	123	68	30	31	103	41	36
26	53	97	84	95	80	117	66	33	31	95	42	37
27	49	94	76	88	80	107	67	167	30	88	41	38
28	51	89	76	84	78	98	66	234	30	84	39	39
29	51	89	80	83	---	94	64	375	32	73	41	38
30	53	e90	79	83	---	96	61	162	38	72	50	39
31	53	---	79	116	---	99	---	98	---	71	46	---
TOTAL	2295	4178	2787	2461	2813	3045	3157	2188	1277	7560	1690	1775
MEAN	74.03	139.3	89.90	79.39	100.5	98.23	105.2	70.58	42.57	243.9	54.52	59.17
MAX	137	981	112	116	146	223	455	375	68	1200	89	340
MIN	49	49	76	70	78	63	61	30	30	42	39	36
AC-FT	4550	8290	5530	4880	5580	6040	6260	4340	2530	15000	3350	3520

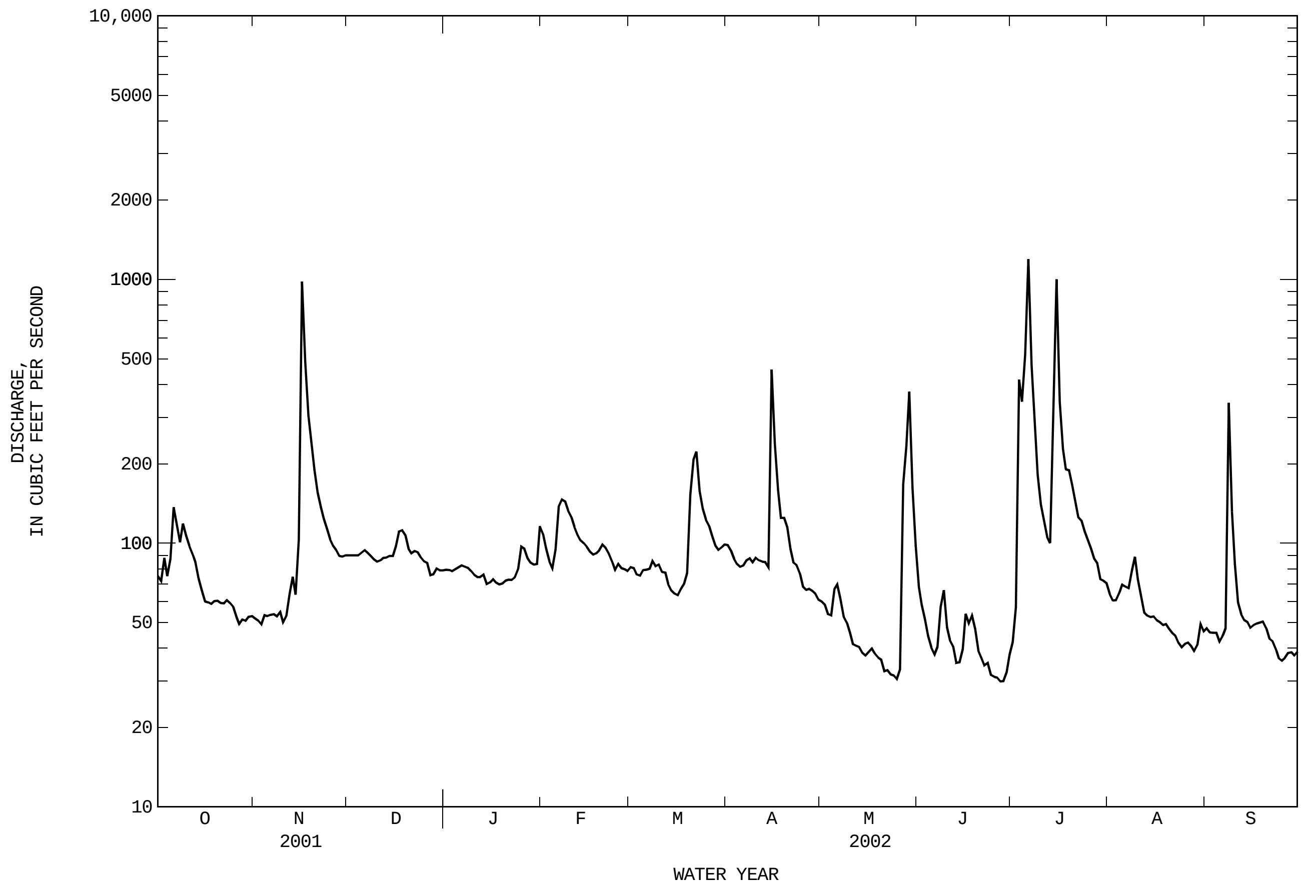
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1963 - 2002hz, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	210.0	182.6	151.9	156.9	176.7	163.4	155.0	197.8	160.6	146.8	161.4	298.1
MAX	1716	2290	935	896	1542	635	777	1195	695	1201	1768	2144
(WY)	1974	2001	1992	1968	1992	1992	1977	1965	1992	1971	1971	1974
MIN	17.6	32.7	47.8	46.1	44.9	34.7	23.4	10.3	5.31	0.32	9.43	11.1
(WY)	1964	2000	1964	1964	1984	1986	1986	1984	1984	1964	1980	1984

08146000 San Saba River at San Saba, TX--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1963 - 2002hz	
ANNUAL TOTAL	44850.8		35226			
ANNUAL MEAN	122.9		96.51		179.9	
HIGHEST ANNUAL MEAN					493	1974
LOWEST ANNUAL MEAN					29.2	1984
HIGHEST DAILY MEAN	1510	Sep 10	1200	Jul 6	32700	Nov 4 2000
LOWEST DAILY MEAN	9.8	Jul 25	30	May 25	0.00	Jul 17 1963
ANNUAL SEVEN-DAY MINIMUM	13	Jul 21	32	Jun 23	0.00	Jul 25 1963
MAXIMUM PEAK FLOW			1960	Jul 6	c46200	Nov 4 2000
MAXIMUM PEAK STAGE			8.86	Jul 6	29.94	Sep 18 1990
ANNUAL RUNOFF (AC-FT)	88960		69870		130300	
10 PERCENT EXCEEDS	194		138		269	
50 PERCENT EXCEEDS	100		77		88	
90 PERCENT EXCEEDS	22		40		26	

e Estimated
h See PERIOD OF RECORD paragraph.
z Period of regulated streamflow.
c From rating curve extended above 40,600 ft^3/s on basis of slope-area measurement of 203,000 ft^3/s.



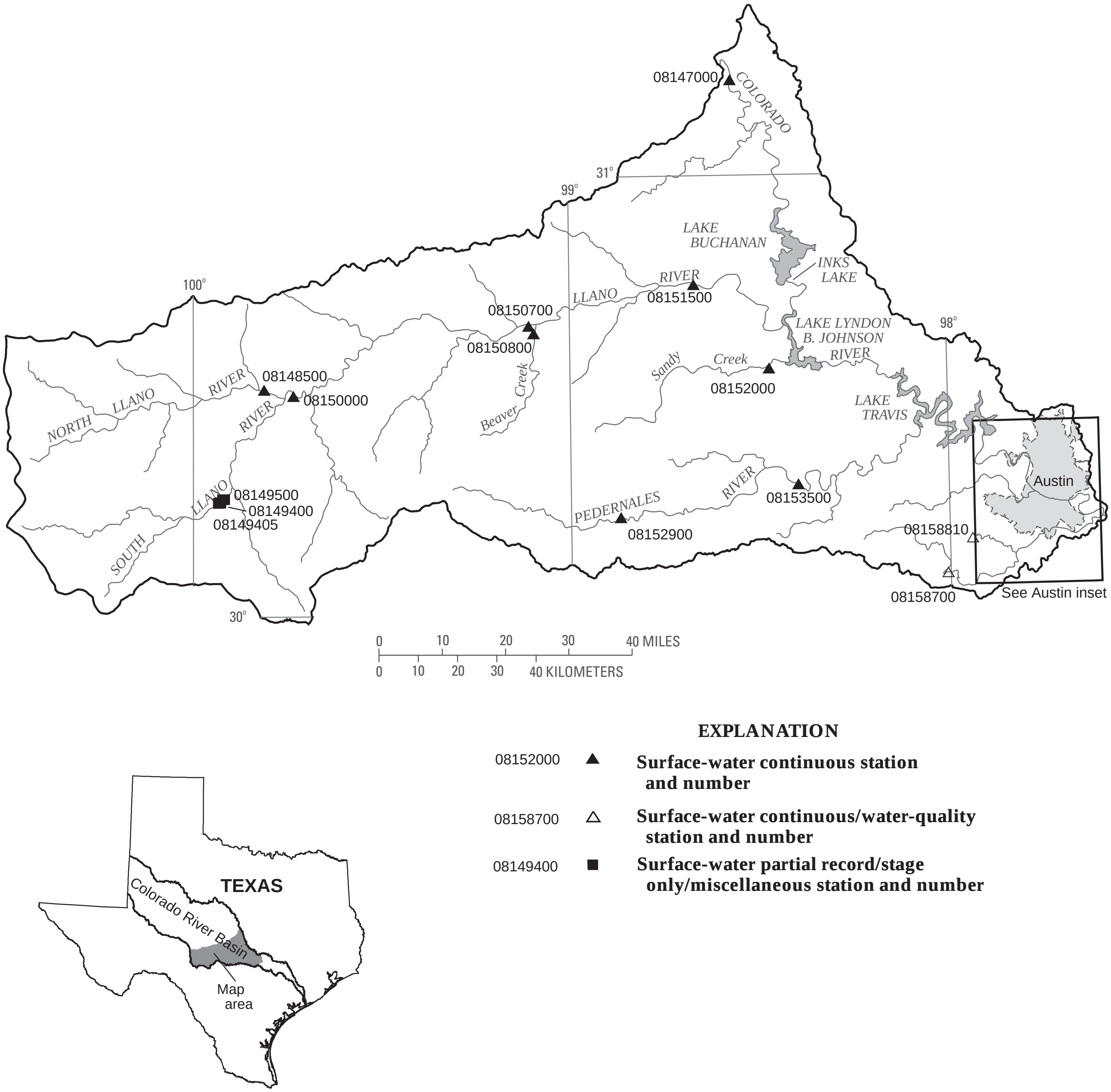
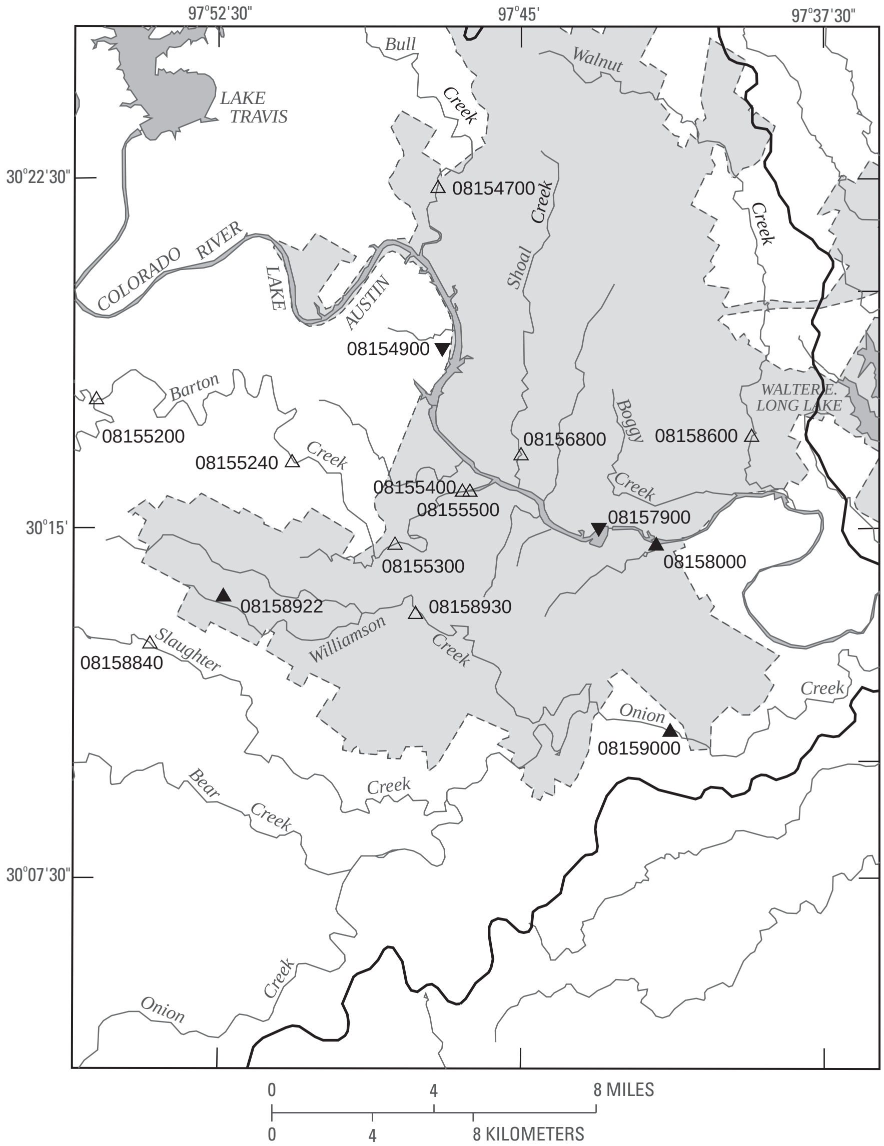


Figure 6.--Map showing location of gaging stations in the fourth section of the Colorado River Basin



EXPLANATION

08158000	▲	**Surface-water continuous station and number**
08155500	△	**Surface-water continuous/water-qualit station and number**
08157900	▼	**Water-quality station and number**

Figure 7.--Map showing location of gaging stations in the Austin inset of the Colorado River Basin

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08147000 Colorado River near San Saba, TX

LOCATION.--Lat 31°13'04", long 98°33'51", San Saba-Lampasas County line, Hydrologic Unit 12090201, on left bank at downstream side of bridge on U.S. Highway 190, 5.2 mi downstream from San Saba River, 9.2 mi east of San Saba, and at mile 474.3.

DRAINAGE AREA.--31,217 mi^2, approximately, of which 11,398 mi^2 probably is noncontributing.

PERIOD OF RECORD.--Oct. 1915 to Oct. 1922, published as "near Chadwick", Oct. 1923 to Aug. 1930, published as "near Tow", Sept. 1930 to current year. Monthly discharge only for some periods, published in WSP 1312.
Water-quality records.--Chemical data: Aug. 1941, Sept. 1947 to Sept. 1967, Jan. 1968 to Aug. 1993. Biochemical data: Jan. 1968 to Aug. 1993. Pesticide data: Jan. 1968 to Apr. 1982. Sediment data: May 1951 to Oct. 1962 and Oct. 1977 to Aug. 1993. Suspended sediment discharge: Dec. 1950 to Sept. 1962. Specific conductance: Sept. 1947 to Sept. 1992. Water temperature: Sept. 1947 to Sept. 1992.

REVISED RECORDS.--WSP 458: 1916. WSP 858: 1900(M), 1936(M). WDR TX-81-3: Drainage area. WSP 1512: 1916-18(M), 1936. WSP 1732: 1925-26(M).

GAGE.--Water-stage recorder. Datum of gage is 1,096.22 ft above NGVD of 1929. See WSP 1922 for brief history of changes prior to May 23, 1940. From May 1940 to Nov. 1996, at site 150 ft right at same datum. Radio telemeter at station. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. Since water year 1931, at least 10% of contributing drainage area has been regulated. Flow is also affected at times by discharge from the flood-detention pools of 187 floodwater-retarding structures. These flood-detention structures control runoff from an 944 mi^2 area above this station. There are many diversions above station for irrigation, municipal use, and for oil field operations. No flow at times.

COOPERATION.--Lower Colorado River Authority provides operation and maintenance of the gage and verification of stage-discharge relation of low stages. U.S. Geological Survey maintains stage-discharge relation at medium to high stages, and computes and publishes streamflow record.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--12 years (water years 1917-19, 1921-22, 1924-30) prior to completion of Lake Nasworthy, 1,440 ft^3/s (1,040,000 acre-ft/yr).

EXTREMES FOR PERIOD PRIOR TO REGULATION (WATER YEARS 1917-19, 1921-22, 1924-30).--Maximum discharge, 130,000 ft^3/s, Apr. 26, 1922, gage height about 54.0 ft, present site, from information by local residents; minimum observed discharge, 1.5 ft^3/s, Aug. 22, 23, 1918.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage during period 1878 to July 22, 1938, 58.4 ft, Sept. 25, 1900, discharge, 184,000 ft^3/s, present site, from floodmarks at former site.

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	103	62	134	113	195	86	603	97	325	60	278	56
2	92	58	132	113	126	86	376	93	224	97	180	54
3	88	53	130	113	111	82	273	93	174	12000	140	51
4	88	49	130	112	105	81	221	90	142	15000	124	48
5	92	56	128	114	130	81	189	210	113	13200	114	46
6	100	58	126	112	166	83	172	95	101	7740	110	47
7	118	58	127	110	161	84	166	480	92	6800	105	53
8	109	59	124	108	173	84	164	365	101	10800	104	544
9	94	56	122	108	163	83	158	229	113	17100	116	265
10	103	59	121	106	141	81	167	169	113	22600	115	160
11	100	57	123	104	132	82	178	137	95	18600	110	103
12	95	61	124	104	127	79	168	113	85	8550	105	86
13	201	68	125	104	121	78	157	99	75	5590	100	83
14	849	176	125	103	118	76	154	91	64	5190	95	78
15	261	226	125	99	114	73	289	79	70	6570	100	73
16	163	2160	177	100	108	72	315	69	173	4090	92	69
17	121	2470	134	101	104	72	211	62	112	2920	86	68
18	101	1010	212	99	102	75	172	55	132	2340	84	69
19	89	608	318	99	104	83	157	50	121	1890	77	68
20	83	458	238	97	103	2250	155	46	108	1540	74	68
21	79	405	188	97	103	3180	148	47	87	1190	71	68
22	75	376	164	97	101	1090	140	45	74	955	69	64
23	71	311	154	97	98	595	133	44	65	800	66	63
24	70	248	145	99	95	405	121	42	58	675	62	62
25	68	210	137	103	92	324	110	41	51	593	61	61
26	67	182	131	124	89	270	102	44	48	486	60	59
27	63	162	125	120	88	236	102	64	47	432	61	57
28	59	153	115	111	87	208	102	319	46	387	63	57
29	58	144	116	108	---	192	104	2710	43	361	66	56
30	64	139	116	109	---	235	101	1460	51	345	65	53
31	66	---	114	1550	---	1050	---	570	---	326	60	---
TOTAL	3790	10192	4480	4734	3357	11556	5608	8108	3103	169227	3013	2689
MEAN	122.3	339.7	144.5	152.7	119.9	372.8	186.9	261.5	103.4	5459	97.19	89.63
MAX	849	2470	318	1550	195	3180	603	2710	325	22600	278	544
MIN	58	49	114	97	87	72	101	41	43	60	60	46
AC-FT	7520	20220	8890	9390	6660	22920	11120	16080	6150	335700	5980	5330

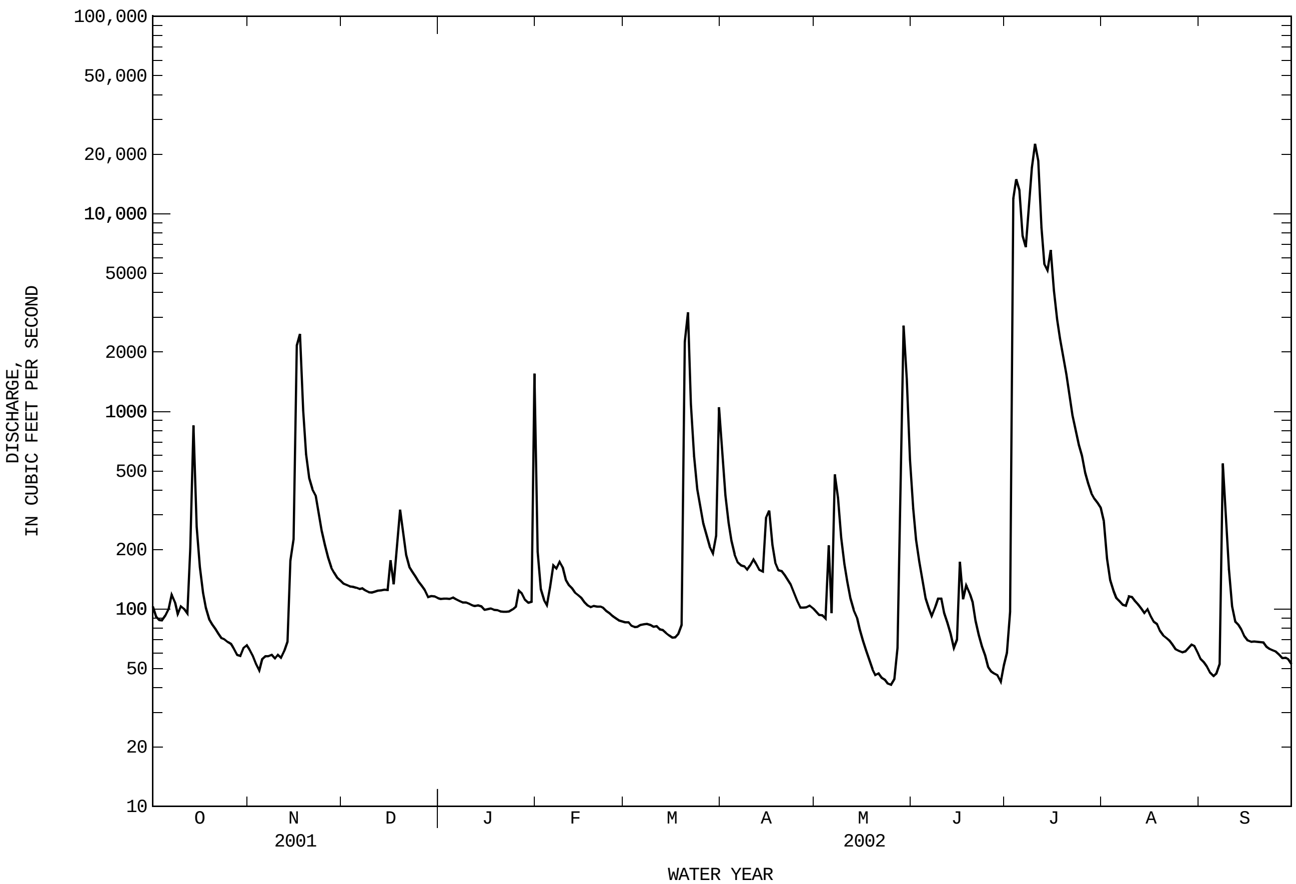
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 2002z, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1321	460.7	461.0	503.6	642.9	611.3	967.1	2306	1676	1300	464.4	1481
MAX	15300	4362	9242	5105	10760	5002	6907	23620	10940	32210	3915	29380
(WY)	1931	2001	1992	1968	1992	1992	1957	1957	1935	1938	1971	1936
MIN	29.5	39.3	31.8	41.5	40.5	24.4	33.6	11.2	4.16	2.06	2.68	11.9
(WY)	1952	1952	1955	1955	1952	1952	1986	1984	1984	1964	1952	1954

08147000 Colorado River near San Saba, TX--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1931 - 2002z	
ANNUAL TOTAL	95508		229857			
ANNUAL MEAN	261.7		629.7		1018	
HIGHEST ANNUAL MEAN					3880	1938
LOWEST ANNUAL MEAN					84.1	1984
HIGHEST DAILY MEAN	2470	Nov 17	22600	Jul 10	191000	Jul 23 1938
LOWEST DAILY MEAN	22	Aug 11	41	May 25	0.00	Aug 27 1954
ANNUAL SEVEN-DAY MINIMUM	26	Aug 7	44	May 20	0.00	Aug 3 1963
MAXIMUM PEAK FLOW			23400	Jul 10	c224000	Jul 23 1938
MAXIMUM PEAK STAGE			19.82	Jul 10	aa62.24	Jul 23 1938
ANNUAL RUNOFF (AC-FT)	189400		455900		737300	
10 PERCENT EXCEEDS	567		594		1570	
50 PERCENT EXCEEDS	170		108		218	
90 PERCENT EXCEEDS	39		59		52	

z Period of regulated streamflow.
c From rating curve extended above 215,000 ft^3/s.
aa From floodmarks at site then in use adjusted to present datum.



08148500 North Llano River near Junction, TX

LOCATION.--Lat 30°31'02", long 99°48'21", Kimble County, Hydrologic Unit 12090202, on left bank 50 ft south of Ranch Road 1674, 600 ft west of county road KC 171, 1.7 mi northwest of Junction, and 3.7 mi upstream from confluence with South Llano River.

DRAINAGE AREA.--914 mi^2.

PERIOD OF RECORD.--Sept. 1915 to Sept. 1977, June 2001 to current year.

REVISED RECORDS.--WSP 568: 1920, 1922. WSP 1512: 1915, 1918-19, 1923(M), 1924-26, 1928, 1930(M), 1931-33, 1934(M), 1935. WDR TX-76-3: 1942(M), 1948(M), 1957(M), 1958(P), 1959(M), 1961(M), 1964(M), 1970-71(M), 1974(P).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,709.92 ft above NGVD of 1929. Prior to Aug. 1925, nonrecording gage at site 1,450 ft upstream at datum 10 ft lower. Aug. 1925 to Sept. 1936, water-stage recorder 1,450 ft upstream at datum 10 ft lower. Sept. 1936 to June 1940, nonrecording gages at various sites at datum 10 ft lower. June 1940 to Sept. 1977, water-stage recorder at site 2,000 ft upstream at datum 10 ft lower. Satellite telemeter at station.

REMARKS.--Records good except those for discharges above 1,000 ft^3/s, which are fair and those for estimated daily discharges, which are poor. No known regulation. Low flow affected by diversions from irrigation. No flow at times most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1875, that of Sept. 16, 1936; maximum stage during period 1875 to Sept. 15, 1936, 27 ft in 1889, at former site, from information by local resident.

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	21	22	50	27	26	22	e25	13	3.8	1.0	14	2.7
2	21	22	50	26	25	24	20	12	3.8	2.1	14	2.8
3	21	22	48	25	24	24	23	12	4.2	5.4	13	3.0
4	21	23	46	25	26	21	21	12	3.7	119	13	2.7
5	28	25	44	25	30	21	21	12	3.6	772	11	2.4
6	45	25	43	24	31	20	22	11	3.8	197	11	2.3
7	76	25	43	22	28	21	22	11	5.6	119	10	2.1
8	54	25	46	21	26	23	21	11	5.8	80	11	3.4
9	47	27	45	21	25	23	20	10	4.9	60	11	4.1
10	41	26	42	22	24	22	20	9.7	4.6	48	11	3.3
11	39	27	36	21	24	21	19	9.2	4.2	39	11	2.6
12	38	25	36	22	24	19	17	8.8	4.8	34	9.3	2.8
13	36	24	37	22	23	18	17	8.4	4.2	31	8.6	2.5
14	34	27	36	21	23	18	20	8.3	3.7	35	8.3	2.6
15	31	114	35	21	23	20	19	8.1	3.7	28	8.0	2.6
16	28	400	38	20	23	21	21	7.7	3.5	29	8.5	3.2
17	28	147	36	21	23	22	19	7.6	3.8	28	8.0	3.5
18	28	98	35	22	23	22	20	6.7	4.0	26	7.1	3.7
19	27	82	34	21	23	37	19	6.4	3.7	25	6.6	4.0
20	26	71	32	21	22	29	18	6.2	3.5	23	6.4	3.7
21	25	63	33	21	22	24	20	6.0	3.4	21	6.5	3.7
22	25	60	31	20	22	21	18	5.6	2.6	21	5.7	3.8
23	24	59	30	22	21	19	16	5.4	1.5	20	5.5	3.9
24	23	55	31	25	20	17	16	5.3	0.71	19	4.8	4.1
25	22	54	30	23	21	19	16	5.0	0.55	18	4.6	4.3
26	21	53	30	23	23	19	15	5.6	0.89	15	4.0	4.5
27	21	52	30	22	22	17	13	5.4	0.64	15	3.3	4.4
28	21	57	29	22	23	16	13	6.1	1.1	14	3.3	4.4
29	20	53	27	22	---	17	13	4.7	0.69	14	3.2	4.6
30	21	51	27	24	---	31	13	4.5	0.77	16	3.4	4.8
31	22	---	27	27	---	30	---	4.1	---	15	2.8	---
TOTAL	935	1814	1137	701	670	678	557	248.8	95.75	1889.5	247.9	102.5
MEAN	30.16	60.47	36.68	22.61	23.93	21.87	18.57	8.026	3.192	60.95	7.997	3.417
MAX	76	400	50	27	31	37	25	13	5.8	772	14	4.8
MIN	20	22	27	20	20	16	13	4.1	0.55	1.0	2.8	2.1
AC-FT	1850	3600	2260	1390	1330	1340	1100	493	190	3750	492	203

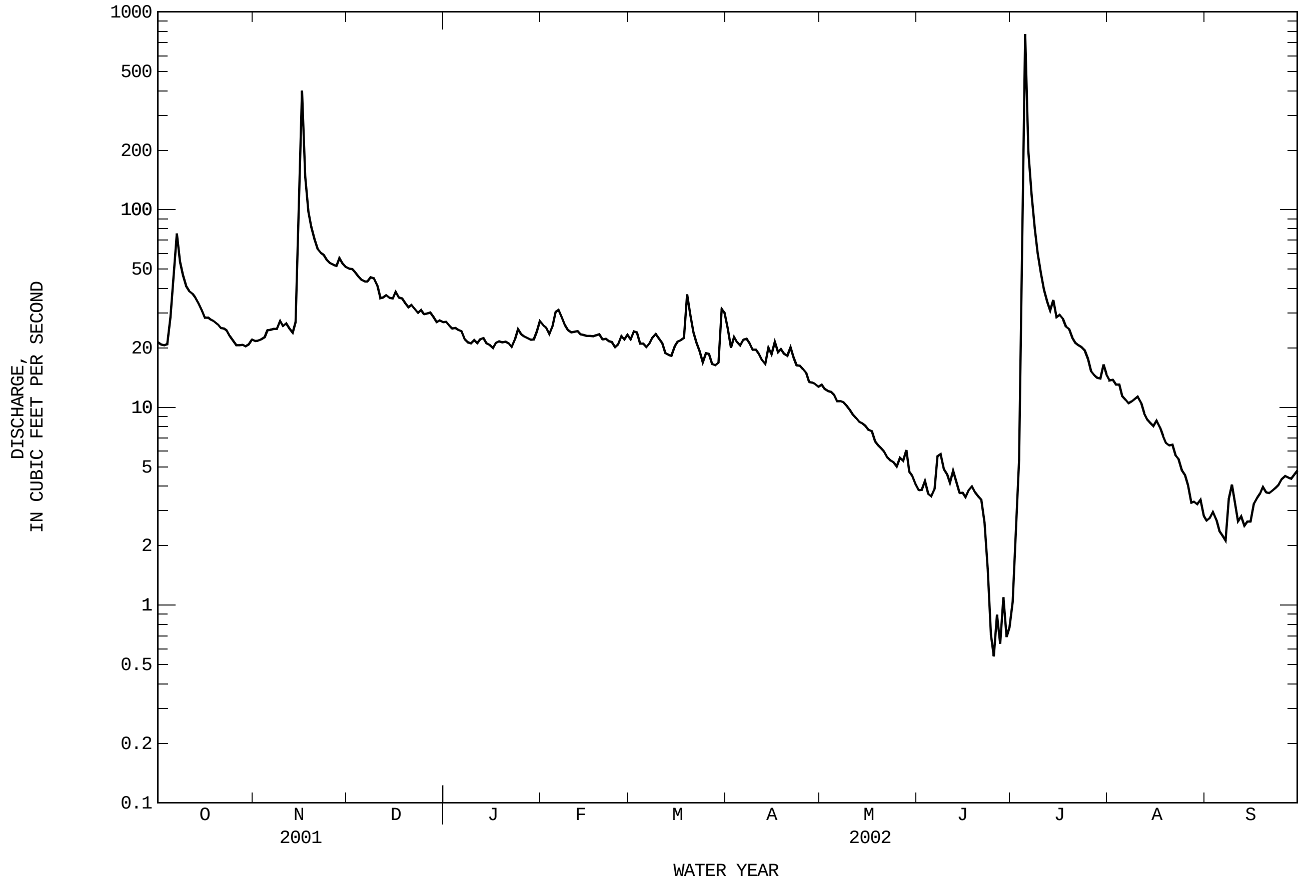
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1916 - 2002h, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	84.31	43.65	30.97	29.52	34.49	30.19	61.71	110.6	110.3	81.82	60.21	159.0
MAX	944	662	203	124	450	134	886	1524	1938	2924	1456	2730
(WY)	1931	1924	1924	1924	1958	1941	1918	1925	1935	1938	1974	1932
MIN	0.000	0.000	0.000	0.000	0.000	0.18	0.35	4.67	0.46	0.000	0.000	0.000
(WY)	1935	1918	1955	1955	1955	1957	1955	1927	1953	1953	1917	1934

SUMMARY STATISTICS	FOR 2002 WATER YEAR		WATER YEARS 1916 - 2002h	
ANNUAL TOTAL	9076.45			
ANNUAL MEAN	24.87		70.07	
HIGHEST ANNUAL MEAN			298	1938
LOWEST ANNUAL MEAN			0.80	1954
HIGHEST DAILY MEAN	772	Jul 5	42400	May 29 1925
LOWEST DAILY MEAN	0.55	Jun 25	0.00	Jul 16 1917
ANNUAL SEVEN-DAY MINIMUM	0.76	Jun 24	0.00	Jul 16 1917
MAXIMUM PEAK FLOW	cc1820	Jul 5	c94800	Sep 16 1936
MAXIMUM PEAK STAGE	11.07	Jul 5	g29.20	Sep 16 1936
ANNUAL RUNOFF (AC-FT)	18000		50760	
10 PERCENT EXCEEDS	42		72	
50 PERCENT EXCEEDS	21		20	
90 PERCENT EXCEEDS	3.7		0.80	

e Estimated
h See PERIOD OF RECORD paragraph.
cc From rating curve extended above 603 ft^3/s on basis of slope-area measurement of 94,800 ft^3/s.
c From rating curve extended above 68,000 ft^3/s on basis of slope-area measurement of 94,800 ft^3/s.
g At former site and datum based on gage-height relation curve.

08148500 North Llano River near Junction, TX--Continued



08150000 Llano River near Junction, TX

LOCATION.--Lat 30°30'15", long 99°44'03", Kimble County, Hydrologic Unit 12090204, on right bank 960 ft upstream from abandoned low-water crossing, 1.0 mi east of Junction, 2.6 mi downstream from bridge on Interstate Highway 10, 2.8 mi downstream from confluence of North and South Llano Rivers, 5.3 mi upstream from Johnson Fork, and 114.8 mi upstream from mouth.

DRAINAGE AREA.--1,854 mi^2, of which 5.1 mi^2 probably is noncontributing.

PERIOD OF RECORD.--Sept. 1915 to May 1993, Oct. 1997 to current year.

REVISED RECORDS.--WSP 568: 1915-16, 1918-20, 1922. WDR TX-81-3: Drainage area. WSP 1922: 1920, 1923.

GAGE.--Water-stage recorder. Datum of gage is 1,634.32 ft above NGVD of 1929. Prior to Aug. 14, 1925, nonrecording gage, and Aug. 14, 1925, to May 17, 1940, and Aug. 18, 1944, to Oct. 12, 1981, water-stage recorder at site 5,330 ft downstream at datum 6.0 ft lower, designated as regular gage (destroyed by flood of Oct. 13, 1981). Prior to June 13, 1990, at datum 2.0 ft higher. Radio telemeter at station. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. No known regulation. There are diversions above station for irrigation.

COOPERATION.--Lower Colorado River Authority provides operation and maintenance of the gage and verification of stage-discharge relation at low stages. U.S. Geological Survey maintains stage-discharge relation at medium to high stages, and computes and publishes streamflow record.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1875, that of June 14, 1935. A major flood in 1889 was the highest known prior to June 14, 1935.

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	124	133	138	129	145	139	138	95	90	93	109	81
2	123	133	140	130	144	138	133	92	85	92	104	80
3	122	134	138	134	144	136	130	91	83	187	102	80
4	122	135	132	133	145	137	130	91	82	163	100	79
5	132	136	131	135	154	137	130	93	81	1680	101	78
6	151	137	129	135	156	136	129	90	82	722	101	74
7	162	137	128	134	152	137	130	90	85	290	99	78
8	158	141	131	133	148	138	126	88	84	322	99	98
9	151	145	128	135	145	136	125	96	81	236	100	112
10	147	141	129	135	142	134	123	97	77	193	100	95
11	144	139	132	134	142	133	121	97	77	172	98	89
12	140	139	132	137	142	132	120	97	76	159	94	87
13	141	137	127	138	141	131	117	96	75	152	93	84
14	138	141	123	139	139	130	124	96	73	154	91	83
15	135	11600	126	141	137	129	121	94	74	151	90	82
16	132	5630	135	141	136	129	117	90	74	145	90	83
17	133	901	129	139	136	130	115	91	75	158	89	83
18	133	414	127	139	136	132	114	90	76	137	86	82
19	132	289	127	140	139	166	114	91	74	130	91	86
20	132	233	125	140	139	161	112	89	72	124	90	83
21	131	202	125	139	138	146	112	89	72	118	86	81
22	130	186	125	142	138	139	113	89	71	116	84	79
23	129	172	124	143	139	136	111	90	71	111	84	78
24	129	160	126	141	138	132	109	92	71	109	83	78
25	128	154	128	141	137	129	110	91	70	107	82	78
26	127	149	127	141	137	129	114	90	69	104	79	79
27	127	144	128	140	137	128	113	89	70	100	79	78
28	128	145	131	140	139	124	109	106	80	99	77	74
29	129	146	130	140	---	127	102	99	86	96	78	73
30	130	142	131	141	---	144	95	95	84	123	81	74
31	131	---	131	149	---	146	---	93	---	120	81	---
TOTAL	4171	22595	4013	4278	3965	4221	3557	2877	2320	6663	2821	2469
MEAN	134.5	753.2	129.5	138.0	141.6	136.2	118.6	92.81	77.33	214.9	91.00	82.30
MAX	162	11600	140	149	156	166	138	106	90	1680	109	112
MIN	122	133	123	129	136	124	95	88	69	92	77	73
AC-FT	8270	44820	7960	8490	7860	8370	7060	5710	4600	13220	5600	4900
CFSM	0.07	0.41	0.07	0.07	0.08	0.07	0.06	0.05	0.04	0.12	0.05	0.04
IN.	0.08	0.45	0.08	0.09	0.08	0.08	0.07	0.06	0.05	0.13	0.06	0.05

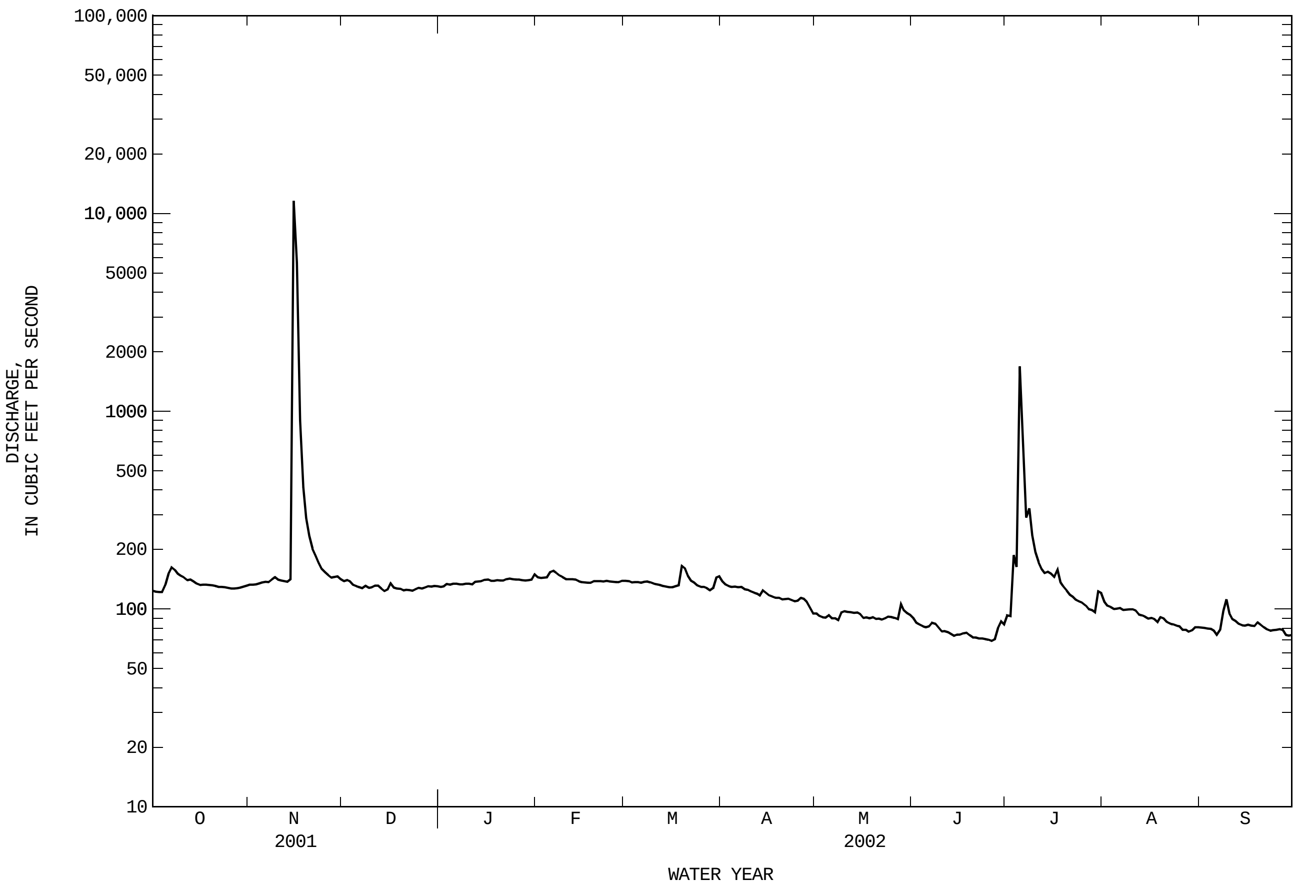
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1916 - 2002h, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	272.7	191.8	141.7	125.1	132.4	117.8	170.0	237.6	285.4	203.4	181.5	329.3
MAX	2708	3723	1229	641	816	428	1222	2395	5797	4236	2299	4298
(WY)	1924	2001	1985	1968	1958	1992	1977	1925	1935	1938	1974	1932
MIN	15.8	21.5	25.3	26.2	27.9	27.0	21.3	30.3	12.4	10.5	11.4	13.1
(WY)	1957	1957	1957	1957	1954	1954	1955	1954	1953	1956	1956	1956

08150000 Llano River near Junction, TX--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1916 - 2002h	
ANNUAL TOTAL	74294		63950			
ANNUAL MEAN	203.5		175.2		199.1	
HIGHEST ANNUAL MEAN					708	1935
LOWEST ANNUAL MEAN					29.8	1953
HIGHEST DAILY MEAN	11600	Nov 15	11600	Nov 15	124000	Jun 14 1935
LOWEST DAILY MEAN	85	Jun 6	69	Jun 26	3.7	Aug 17 1956
ANNUAL SEVEN-DAY MINIMUM	93	Jun 3	71	Jun 21	4.2	Aug 11 1956
MAXIMUM PEAK FLOW			49700	Nov 15	c319000	Jun 14 1935
MAXIMUM PEAK STAGE			a22.51	Nov 15	a43.30	Jun 14 1935
ANNUAL RUNOFF (AC-FT)	147400		126800		144300	
ANNUAL RUNOFF (CFSM)	0.11		0.095		0.11	
ANNUAL RUNOFF (INCHES)	1.49		1.29		1.46	
10 PERCENT EXCEEDS	217		148		221	
50 PERCENT EXCEEDS	142		128		99	
90 PERCENT EXCEEDS	101		80		43	

h See PERIOD OF RECORD paragraph.
c From rating curve extended above 54,000 ft^3/s on basis of slope-area measurements of 154,000 and 319,000 ft^3/s.
a From floodmark.



08150700 Llano River near Mason, TX

LOCATION.--Lat 30°39'38", long 99°06'32", Mason County, Hydrologic Unit 12090204, on right bank 98 ft downstream from downstream bridge on U.S. Highway 87, 1.0 mi upstream from Beaver Creek, 9.1 mi southeast of Mason, 10.2 mi downstream from James River, and 61.1 mi upstream from mouth.

DRAINAGE AREA.--3,247 mi^2, of which 5.1 mi^2 probably is noncontributing.

PERIOD OF RECORD.--Mar. 1968 to May 1993, Oct. 1997 to current year.

REVISED RECORDS.--WDR TX-75-3: 1968(P). WDR TX-81-3: Drainage area. WDR TX-01-4: 1980.

GAGE.--Water-stage recorder. Datum of gage is 1,230.36 ft above NGVD of 1929. Prior to Jan. 19, 1971, at site 190 ft upstream at same datum. Radio telemeter at station. Satellite telemeter at station.

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

COOPERATION.--Lower Colorado River Authority provides operation and maintenance of the gage and verification of stage-discharge relation at low stages. U.S. Geological Survey maintains stage-discharge relation at medium to high stages and computes and publishes streamflow record.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1875, about 46 ft, June 14, 1935, discharge, about 380,000 ft^3/s, from information by Texas Department of Transportation; at site 17.0 mi downstream discharge was 388,000 ft^3/s by slope-area measurement. Discharges for other floods are 258,000 ft^3/s, 1952; 218,000 ft^3/s, 1889.

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	137	131	245	184	201	167	168	136	104	83	148	111
2	134	130	248	184	178	168	167	133	101	233	146	112
3	134	131	246	184	172	165	162	125	98	246	138	112
4	133	132	236	184	171	165	159	119	95	839	132	112
5	132	131	226	184	184	165	159	117	96	3880	130	110
6	135	131	214	182	203	166	159	119	98	3580	131	109
7	147	131	210	182	192	167	162	119	100	1250	131	112
8	148	138	217	183	184	168	162	118	127	516	130	143
9	153	159	207	182	179	168	162	118	105	372	131	150
10	153	146	205	181	175	165	159	118	98	285	129	152
11	153	143	204	181	172	165	155	116	95	215	130	149
12	149	140	204	181	171	163	155	115	90	199	130	135
13	150	138	202	179	170	162	154	114	86	190	128	129
14	141	137	200	179	168	162	170	111	83	184	125	125
15	138	19200	198	178	169	162	172	109	85	230	122	120
16	136	19100	245	178	169	160	166	109	86	260	120	118
17	133	3160	254	178	169	160	161	108	84	267	118	119
18	131	1720	215	178	169	162	158	107	83	299	117	119
19	132	1130	203	178	171	165	155	105	82	192	116	118
20	132	832	200	177	169	194	154	102	79	176	115	115
21	132	654	197	176	169	196	153	100	77	167	112	118
22	135	539	197	176	166	178	153	99	75	161	112	117
23	134	451	194	177	167	170	152	99	73	157	111	115
24	132	391	192	191	168	166	149	99	73	154	110	112
25	130	346	191	187	168	165	147	99	73	149	109	111
26	129	320	191	178	167	163	145	101	73	146	108	112
27	128	295	189	175	164	162	145	98	72	143	108	112
28	129	272	187	174	165	161	145	122	71	140	107	111
29	130	264	187	174	---	161	144	112	70	136	109	111
30	130	256	187	176	---	168	141	109	81	135	114	110
31	130	---	185	488	---	168	---	109	---	136	115	---
TOTAL	4240	50848	6476	5889	4870	5177	4693	3465	2613	15120	3782	3599
MEAN	136.8	1695	208.9	190.0	173.9	167.0	156.4	111.8	87.10	487.7	122.0	120.0
MAX	153	19200	254	488	203	196	172	136	127	3880	148	152
MIN	128	130	185	174	164	160	141	98	70	83	107	109
AC-FT	8410	100900	12850	11680	9660	10270	9310	6870	5180	29990	7500	7140

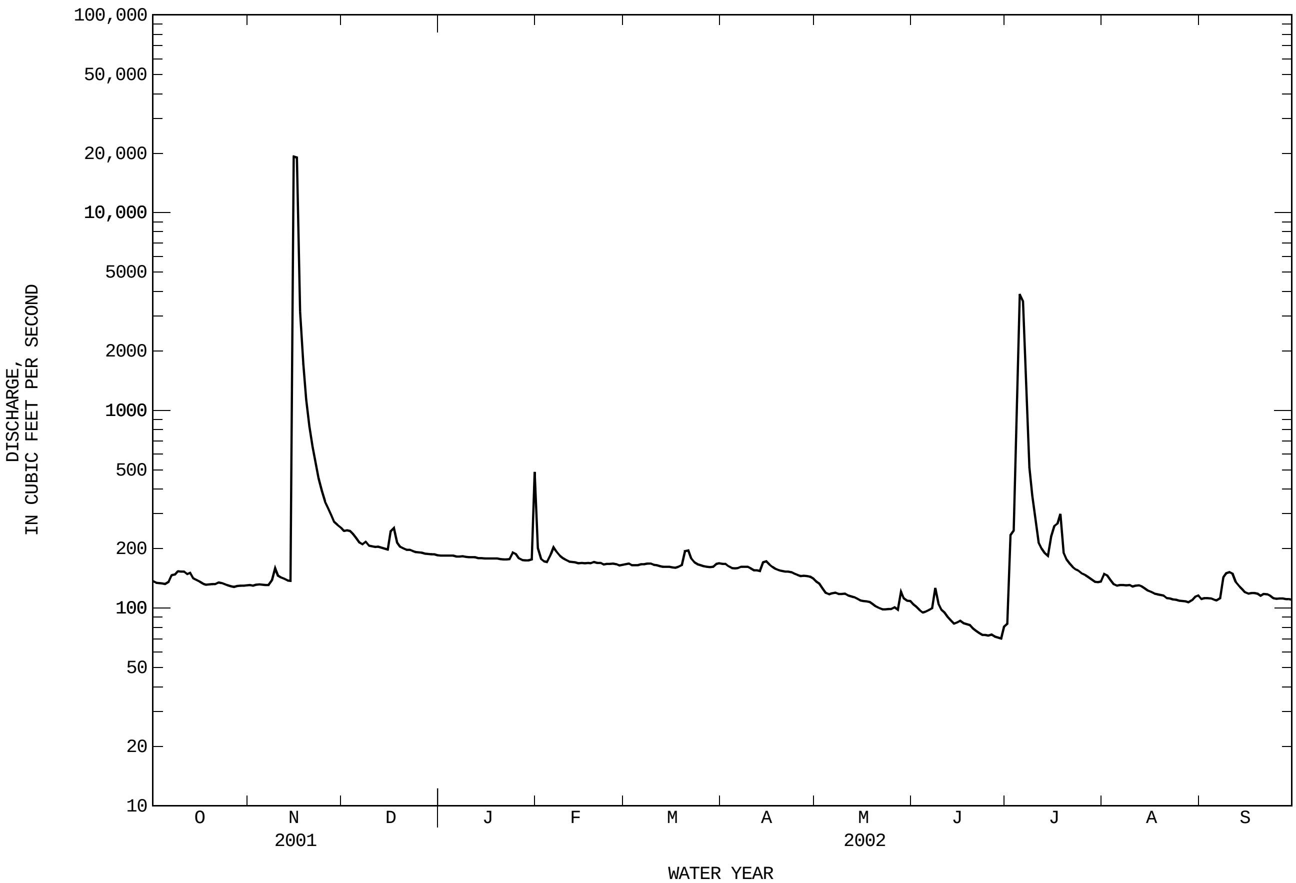
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 2002h, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	535.2	464.0	300.3	239.1	259.2	235.3	286.8	352.3	330.5	241.9	382.5	381.3
MAX	3222	5707	1929	1053	1530	875	2097	1559	1791	1439	3331	3280
(WY)	1974	2001	1985	1985	1992	1992	1977	1990	1987	1988	1974	1980
MIN	72.9	105	108	118	98.5	89.0	71.5	66.0	49.1	38.4	31.2	38.1
(WY)	1984	1969	1984	1984	1984	1984	1984	1984	1984	1980	1980	1984

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1968 - 2002h	
ANNUAL TOTAL	135577		110772			
ANNUAL MEAN	371.4		303.5		336.2	
HIGHEST ANNUAL MEAN					870	2001
LOWEST ANNUAL MEAN					77.7	1984
HIGHEST DAILY MEAN	19200	Nov 15	19200	Nov 15	80800	Nov 4 2000
LOWEST DAILY MEAN	104	Aug 26	70	Jun 29	10	Jul 17 1984
ANNUAL SEVEN-DAY MINIMUM	109	Jul 31	72	Jun 23	18	Jul 12 1984
MAXIMUM PEAK FLOW			60100	Nov 15	c215000	Sep 8 1980
MAXIMUM PEAK STAGE			17.74	Nov 15	a37.00	Sep 8 1980
ANNUAL RUNOFF (AC-FT)	268900		219700		243600	
10 PERCENT EXCEEDS	408		228		419	
50 PERCENT EXCEEDS	225		153		172	
90 PERCENT EXCEEDS	119		103		90	

h See PERIOD OF RECORD paragraph.
c From rating curve extended above 145,000 ft^3/s.
a From floodmark.

08150700 Llano River near Mason, TX--Continued



08150800 Beaver Creek near Mason, TX

LOCATION.--Lat 30°38'36", long 99°05'44", Mason County, Hydrologic Unit 12090204, on left bank at downstream side of downstream bridge on U.S. Highway 87, 1.8 mi upstream from Llano River, 6.4 mi downstream from Spring Creek, and 11.1 mi southeast of Mason.

DRAINAGE AREA.--215 mi^2.

PERIOD OF RECORD.--July 1963 to current year.

REVISED RECORDS.--WSP 2122: 1964-65. WDR TX-81-3: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,253.24 ft above NGVD of 1929. Prior to Aug. 3, 1978, at site 300 ft upstream at same datum. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good except those for Nov. 15, July 5, 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	1.9	7.1	6.5	21	6.2	13	2.3	1.8	12	1.9	1.6
2	1.8	1.9	7.5	6.7	13	6.1	9.2	1.8	1.4	12	1.8	1.4
3	1.7	2.0	8.7	6.8	10	5.4	7.2	1.6	1.1	8.4	1.7	1.1
4	1.8	1.9	8.0	6.8	9.9	5.0	6.6	1.7	0.76	31	1.6	0.88
5	2.0	2.0	7.0	7.2	14	5.1	7.0	1.8	0.72	1620	1.5	0.72
6	2.5	2.1	6.4	7.2	21	5.1	7.5	1.9	1.4	189	1.5	0.68
7	4.3	2.1	6.3	6.7	15	5.4	8.4	1.9	1.7	55	1.6	1.6
8	3.3	2.7	11	6.4	13	5.7	8.3	1.6	1.4	34	1.7	33
9	2.6	6.6	8.3	6.3	11	5.7	6.7	1.4	1.0	25	1.9	40
10	2.9	4.6	6.5	6.2	9.9	5.1	6.1	1.4	0.92	19	4.7	20
11	4.4	3.5	7.5	5.9	9.2	4.7	5.8	1.4	0.69	15	3.4	11
12	3.8	2.9	9.5	5.7	9.1	4.7	5.4	1.3	0.55	14	2.3	6.6
13	5.1	2.9	8.6	5.5	9.0	4.5	5.1	0.97	0.44	11	1.7	4.6
14	4.9	2.9	7.4	5.4	8.7	4.3	6.0	0.88	0.37	17	1.4	3.6
15	3.8	2040	7.4	5.3	8.3	4.2	10	0.80	0.35	19	1.2	3.0
16	2.6	181	14	5.5	7.9	4.5	8.4	0.76	0.37	15	1.1	2.6
17	2.2	51	16	5.7	7.8	4.6	7.5	0.70	0.30	18	0.89	2.5
18	2.0	30	12	5.9	7.8	5.1	6.2	0.63	0.34	15	0.78	2.4
19	2.0	21	9.8	5.9	8.5	6.7	5.2	0.65	0.36	11	0.67	2.3
20	2.1	18	9.0	5.7	8.4	16	5.0	0.60	0.36	7.9	0.58	2.2
21	2.1	14	8.6	5.4	7.0	16	4.9	0.57	0.35	6.3	0.53	2.1
22	2.0	12	8.4	5.5	6.4	9.2	5.2	0.53	0.36	5.2	0.51	1.9
23	2.0	11	7.9	5.9	6.4	6.9	5.6	0.52	0.35	4.4	0.48	1.7
24	1.9	9.4	7.2	6.4	5.9	6.2	5.0	0.54	0.32	3.9	0.45	1.5
25	1.8	8.2	7.4	6.1	5.5	5.7	3.9	0.62	0.30	3.8	0.41	1.4
26	1.7	7.7	7.5	5.3	5.2	5.5	3.8	1.6	0.28	3.5	0.39	1.4
27	1.5	7.3	7.3	5.1	5.1	6.0	4.1	1.5	0.30	2.9	0.36	1.4
28	1.5	6.8	7.1	5.2	5.4	5.8	3.7	9.2	0.33	2.5	0.34	1.4
29	1.6	7.8	6.9	5.7	---	5.6	3.4	5.6	0.32	2.3	0.35	1.4
30	1.7	7.8	6.7	6.1	---	9.2	2.7	4.0	0.85	2.2	0.36	1.3
31	1.8	---	6.5	31	---	26	---	2.5	---	2.0	0.36	---
TOTAL	77.2	2473.0	259.5	211.0	269.4	216.2	186.9	53.27	20.09	2187.3	38.46	157.28
MEAN	2.490	82.43	8.371	6.806	9.621	6.974	6.230	1.718	0.670	70.56	1.241	5.243
MAX	5.1	2040	16	31	21	26	13	9.2	1.8	1620	4.7	40
MIN	1.5	1.9	6.3	5.1	5.1	4.2	2.7	0.52	0.28	2.0	0.34	0.68
AC-FT	153	4910	515	419	534	429	371	106	40	4340	76	312
CFSM	0.01	0.38	0.04	0.03	0.04	0.03	0.03	0.01	0.00	0.33	0.01	0.02
IN.	0.01	0.43	0.04	0.04	0.05	0.04	0.03	0.01	0.00	0.38	0.01	0.03

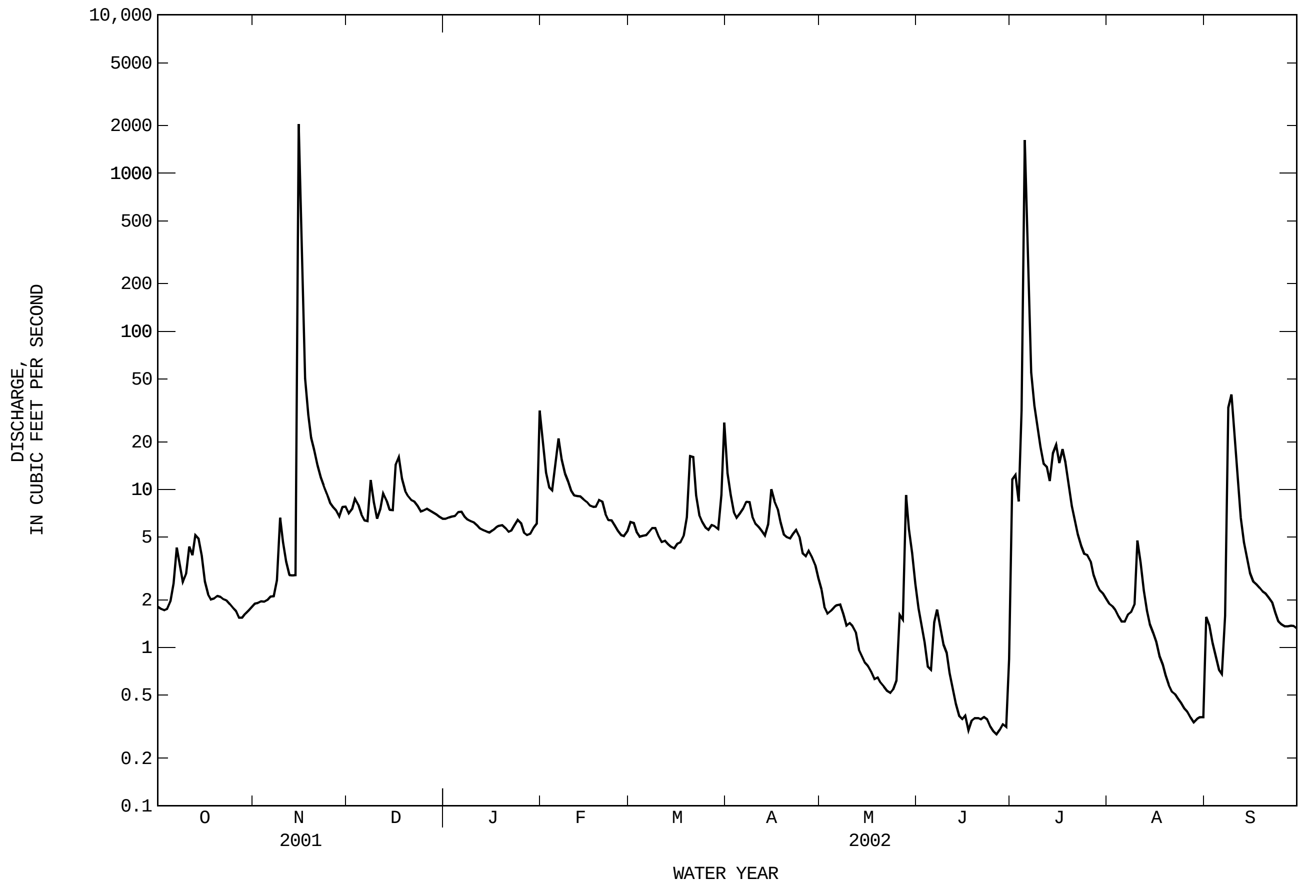
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1963 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	28.94	15.17	14.19	13.17	22.82	22.38	18.94	27.84	26.32	5.392	18.58	10.35
MAX	329	215	220	183	285	164	132	197	327	70.6	443	167
(WY)	1997	2001	1992	1968	1992	1997	1977	1975	1987	2002	1978	1964
MIN	0.37	0.91	1.44	1.84	1.41	1.29	0.49	0.72	0.21	0.003	0.000	0.021
(WY)	1983	1980	1983	1971	1984	1967	1984	1996	1971	1964	1985	1977

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1963 - 2002	
ANNUAL TOTAL	7970.35		6149.60			
ANNUAL MEAN	21.84		16.85		18.70	
HIGHEST ANNUAL MEAN					91.5	1997
LOWEST ANNUAL MEAN					1.97	1967
HIGHEST DAILY MEAN	2040	Nov 15	2040	Nov 15	12800	Aug 3 1978
LOWEST DAILY MEAN	0.04	Aug 10	0.28	Jun 26	0.00	Aug 3 1963
ANNUAL SEVEN-DAY MINIMUM	0.05	Aug 7	0.31	Jun 23	0.00	Aug 3 1963
MAXIMUM PEAK FLOW			16800	Nov 15	c66900	Aug 3 1978
MAXIMUM PEAK STAGE			a11.16	Nov 15	a24.00	Aug 3 1978
ANNUAL RUNOFF (AC-FT)	15810		12200		13550	
ANNUAL RUNOFF (CFSM)	0.10		0.078		0.087	
ANNUAL RUNOFF (INCHES)	1.38		1.06		1.18	
10 PERCENT EXCEEDS	36		13		23	
50 PERCENT EXCEEDS	8.4		5.0		3.2	
90 PERCENT EXCEEDS	0.56		0.63		0.20	

c From rating curve extended above 7,430 ft^3/s based on slope-area measurements of 20,100 and 66,900 ft^3/s.
a From floodmark.

08150800 Beaver Creek near Mason, TX--Continued



08151500 Llano River at Llano, TX

LOCATION.--Lat 30°45'04", long 98°40'10", Llano County, Hydrologic Unit 12090204, on right bank in Llano, 0.4 mi downstream from bridge on State Highway 16, 7.0 mi upstream from Little Llano River, and 29.3 mi upstream from mouth.

DRAINAGE AREA.--4,197 mi^2, of which 5.1 mi^2 probably is noncontributing.

PERIOD OF RECORD.--Sept. 1939 to current year.
Water-quality records.--Chemical data: Apr. 1948 to Oct. 1967, Apr. 1979 to Sept. 1986. Biochemical data: Apr. 1979 to Sept. 1986. Sediment data: Sept. 1964, Apr. 1979 to Sept. 1986. Specific conductance: Apr. 1979 to Sept. 1980. Water temperature: Apr. 1979 to Sept. 1980.

REVISED RECORDS.--WDR TX-81-3: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 970.01 ft above NGVD of 1929. Radio telemeter at station. Satellite telemeter at station.

COOPERATION.--Lower Colorado River Authority provides operation and maintenance of the gage and verification of stage-discharge relation at low stages. U.S. Geological Survey maintains stage-discharge relation at medium to high stages, computes and publishes streamflow record.

REMARKS.--Records good except those for estimated daily discharges, which are poor. No known regulation or diversions. Part of low flow of the Llano River disappears into various formations, many of which are faulted, between this station and Llano River near Junction (station 08150000). No flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1879, 41.5 ft, June 14, 1935, discharge, 380,000 ft^3/s, 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	142	142	342	231	727	200	217	128	119	105	119	84
2	141	143	350	229	376	202	200	121	110	94	130	83
3	139	144	353	230	284	198	194	114	100	173	140	78
4	139	145	354	228	252	193	182	111	95	3470	127	79
5	141	147	344	234	303	195	174	106	92	9590	115	80
6	147	145	328	233	596	194	172	102	120	7360	109	79
7	150	145	311	228	461	198	180	101	136	3000	108	95
8	162	145	368	220	352	205	184	104	121	1780	146	170
9	181	154	318	215	302	204	182	106	158	1110	136	152
10	178	189	284	217	268	195	178	105	133	695	116	177
11	200	178	312	212	242	193	173	105	102	544	110	173
12	183	170	335	205	230	187	164	106	88	414	106	157
13	203	172	327	202	228	186	188	101	81	348	107	137
14	176	164	313	200	221	185	328	98	71	336	104	120
15	164	10100	302	197	218	187	258	97	70	298	100	112
16	157	29300	363	196	217	183	236	95	92	378	97	105
17	154	6200	478	198	219	180	201	92	75	423	93	101
18	150	2640	418	196	219	181	183	90	70	461	90	98
19	148	1600	357	199	223	192	171	89	65	422	86	99
20	148	1160	317	198	220	230	164	88	63	292	83	95
21	148	870	290	196	220	282	159	83	61	239	81	93
22	149	753	282	197	212	276	156	86	58	212	81	90
23	150	628	275	199	204	234	154	85	55	195	77	93
24	151	542	262	207	201	212	150	86	53	182	77	92
25	146	473	258	249	203	201	143	e87	50	173	77	87
26	144	432	254	260	199	196	141	e87	50	161	76	86
27	143	404	253	222	196	188	140	e128	64	151	71	85
28	140	373	249	216	193	183	141	e146	57	142	70	85
29	138	361	248	211	---	181	136	152	53	136	77	85
30	140	351	240	210	---	197	134	149	106	130	77	84
31	141	---	237	858	---	205	---	124	---	122	79	---
TOTAL	4793	58370	9722	7293	7786	6243	5383	3272	2568	33136	3065	3154
MEAN	154.6	1946	313.6	235.3	278.1	201.4	179.4	105.5	85.60	1069	98.87	105.1
MAX	203	29300	478	858	727	282	328	152	158	9590	146	177
MIN	138	142	237	196	193	180	134	83	50	94	70	78
AC-FT	9510	115800	19280	14470	15440	12380	10680	6490	5090	65730	6080	6260

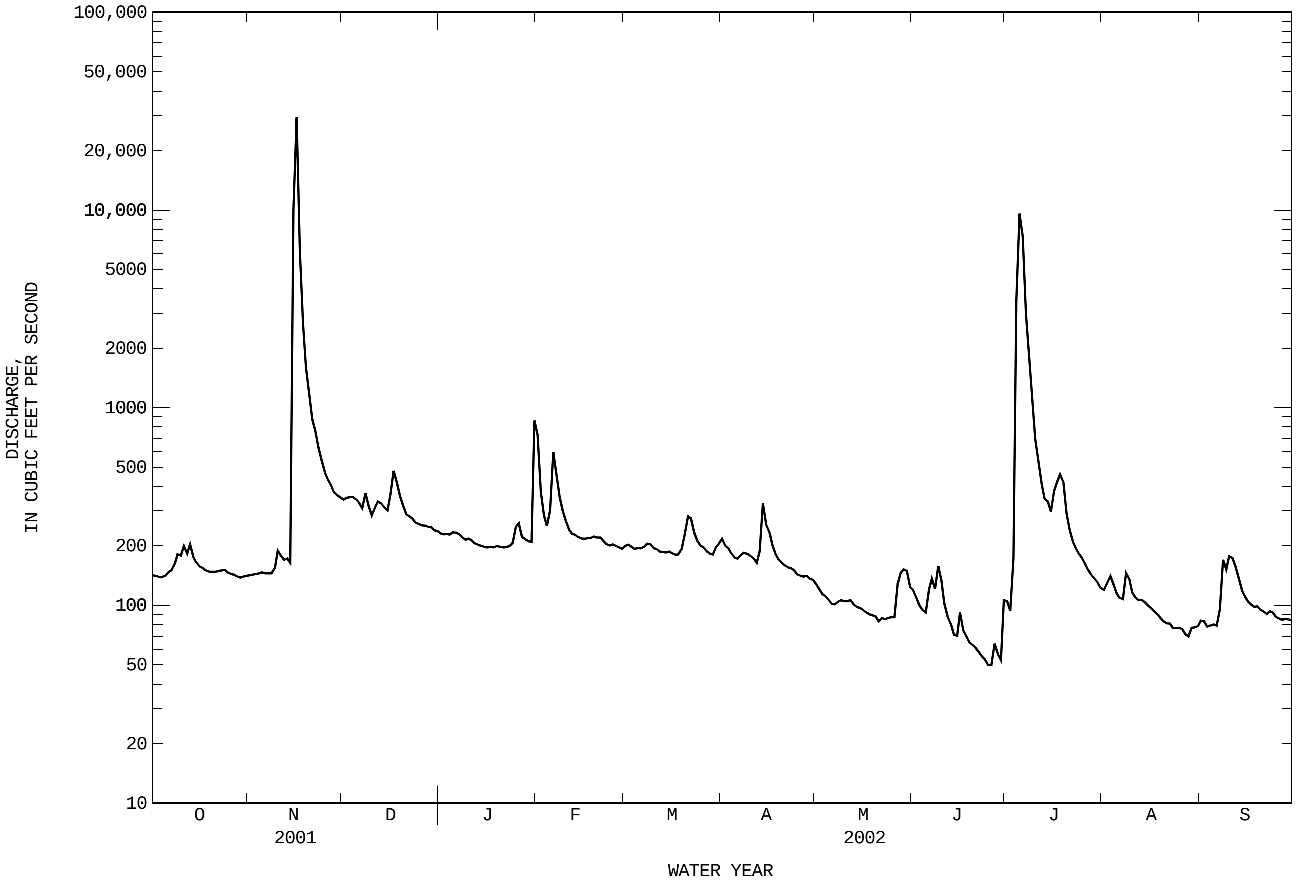
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	534.7	368.8	296.3	284.8	384.6	330.3	372.8	505.3	552.8	238.0	309.7	431.9
MAX	3700	7149	3179	2483	3754	2798	3115	3350	4620	1796	3605	3891
(WY)	1974	2001	1992	1968	1992	1997	1977	1957	1997	1988	1974	1952
MIN	18.0	20.7	27.5	31.7	37.7	23.7	20.9	41.0	7.93	0.000	0.087	0.56
(WY)	1952	1957	1955	1957	1954	1954	1955	1984	1953	1956	1952	1954

08151500 Llano River at Llano, TX--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1939 - 2002	
ANNUAL TOTAL	173672		144785			
ANNUAL MEAN	477.1		396.7		383.7	
HIGHEST ANNUAL MEAN					1308	1997
LOWEST ANNUAL MEAN					50.0	1954
HIGHEST DAILY MEAN	29300	Nov 16	29300	Nov 16	88500	Nov 4 2000
LOWEST DAILY MEAN	81	Aug 6	50	Jun 25	0.00	Aug 5 1952
ANNUAL SEVEN-DAY MINIMUM	83	Jul 31	55	Jun 23	0.00	Aug 27 1952
MAXIMUM PEAK FLOW			61700	Nov 16	260000	Jun 23 1997
MAXIMUM PEAK STAGE			18.81	Nov 16	38.86	Jun 23 1997
ANNUAL RUNOFF (AC-FT)	344500		287200		278000	
10 PERCENT EXCEEDS	648		362		538	
50 PERCENT EXCEEDS	274		173		156	
90 PERCENT EXCEEDS	104		85		42	

e Estimated



08152000 Sandy Creek near Kingsland, TX

LOCATION.--Lat 30°33'27", long 98°28'19", Llano County, Hydrologic Unit 12090201, at right downstream end of bridge on State Highway 71, 6.6 mi upstream from mouth.

DRAINAGE AREA.--346 mi^2.

PERIOD OF RECORD.--Oct. 1966 to Mar. 1993, Oct. 1997 to current year.
Water-quality records.--Sediment data: Jan. 1968 to Sept. 1975.

REVISED RECORDS.--WDR TX-81-3: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 862.31 ft above NGVD of 1929. Radio telemeter at station. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good except those for daily discharges below 1 ft^3/s, which are fair. No known regulation. There are several small diversions above station for irrigation. No flow at times.

COOPERATION.--Lower Colorado River Authority provides operation and maintenance of the gage and verification of stage-discharge relation at low stages. U.S. Geological Survey maintains stage-discharge relation at medium to high stages, computes and publishes streamflow record.

EXTREMES OUTSIDE PERIOD OF RECORD.--The flood of Sept. 11, 1952, the highest since at least 1881, reached a stage of 34.2 ft; discharge, 163,000 ft^3/s, from slope-area measurement at gage site. The flood of May 29, 1995, reached a stage of 31.22 ft; discharge 107,000 ft^3/s, from slope-area measurement at gage site.

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	17	29	19	40	10	11	2.9	0.08	97	23	5.5
2	1.8	20	29	18	28	9.8	10	2.3	0.09	235	22	3.6
3	2.1	20	33	18	22	9.5	10	2.1	0.10	882	22	2.9
4	1.9	19	33	18	20	9.8	9.3	3.6	0.13	10300	19	2.6
5	2.0	18	30	19	26	9.6	8.5	2.9	0.16	7820	16	2.0
6	1.9	16	27	19	34	9.6	9.2	2.0	0.23	1460	17	1.8
7	2.7	15	24	18	31	10	11	0.77	0.24	766	20	8.9
8	3.2	17	34	18	24	11	12	1.6	0.30	1090	28	836
9	1.4	22	28	16	20	11	11	1.3	0.34	406	35	359
10	1.3	37	22	16	18	9.7	11	1.3	0.38	207	24	87
11	373	27	23	15	17	9.8	13	1.2	0.40	175	18	38
12	112	27	27	15	16	9.2	12	1.1	0.40	132	16	26
13	98	24	29	14	15	8.2	11	0.96	0.41	106	14	18
14	69	22	31	13	14	8.4	10	0.78	0.42	161	14	14
15	46	2660	35	12	13	8.4	8.9	0.68	0.45	398	14	14
16	35	980	53	12	13	8.0	8.9	0.74	0.89	142	13	14
17	31	225	46	12	13	8.4	8.6	0.75	0.73	172	11	14
18	29	146	40	12	13	9.2	8.6	0.70	0.60	119	9.3	14
19	26	108	35	13	13	11	3.2	0.64	0.51	104	8.4	15
20	23	87	32	13	12	18	3.5	0.50	0.66	86	7.4	21
21	22	73	31	12	12	20	3.4	0.44	0.44	77	4.9	17
22	20	64	29	12	11	18	3.2	0.55	0.37	74	3.6	14
23	19	56	28	13	11	16	3.0	0.51	0.37	65	2.5	11
24	19	46	26	13	10	15	3.7	0.66	0.46	56	1.9	8.8
25	17	37	25	12	10	15	3.4	0.47	0.31	48	2.0	6.4
26	15	32	24	12	10	14	3.2	0.73	0.31	45	1.7	4.9
27	14	28	23	11	10	11	3.2	0.55	0.41	39	1.2	4.4
28	13	25	23	11	10	9.8	3.1	3.7	0.33	32	1.1	4.4
29	12	26	22	11	---	8.9	3.6	1.1	0.30	30	10	4.3
30	12	28	21	12	---	10	3.4	0.12	212	27	8.4	3.9
31	17	---	20	24	---	11	---	0.08	---	25	8.9	---
TOTAL	1043.2	4922	912	453	486	347.3	223.9	37.73	222.82	25376	397.3	1576.4
MEAN	33.65	164.1	29.42	14.61	17.36	11.20	7.463	1.217	7.427	818.6	12.82	52.55
MAX	373	2660	53	24	40	20	13	3.7	212	10300	35	836
MIN	1.3	15	20	11	10	8.0	3.0	0.08	0.08	25	1.1	1.8
AC-FT	2070	9760	1810	899	964	689	444	75	442	50330	788	3130
CFSM	0.10	0.47	0.09	0.04	0.05	0.03	0.02	0.00	0.02	2.37	0.04	0.15
IN.	0.11	0.53	0.10	0.05	0.05	0.04	0.02	0.00	0.02	2.73	0.04	0.17

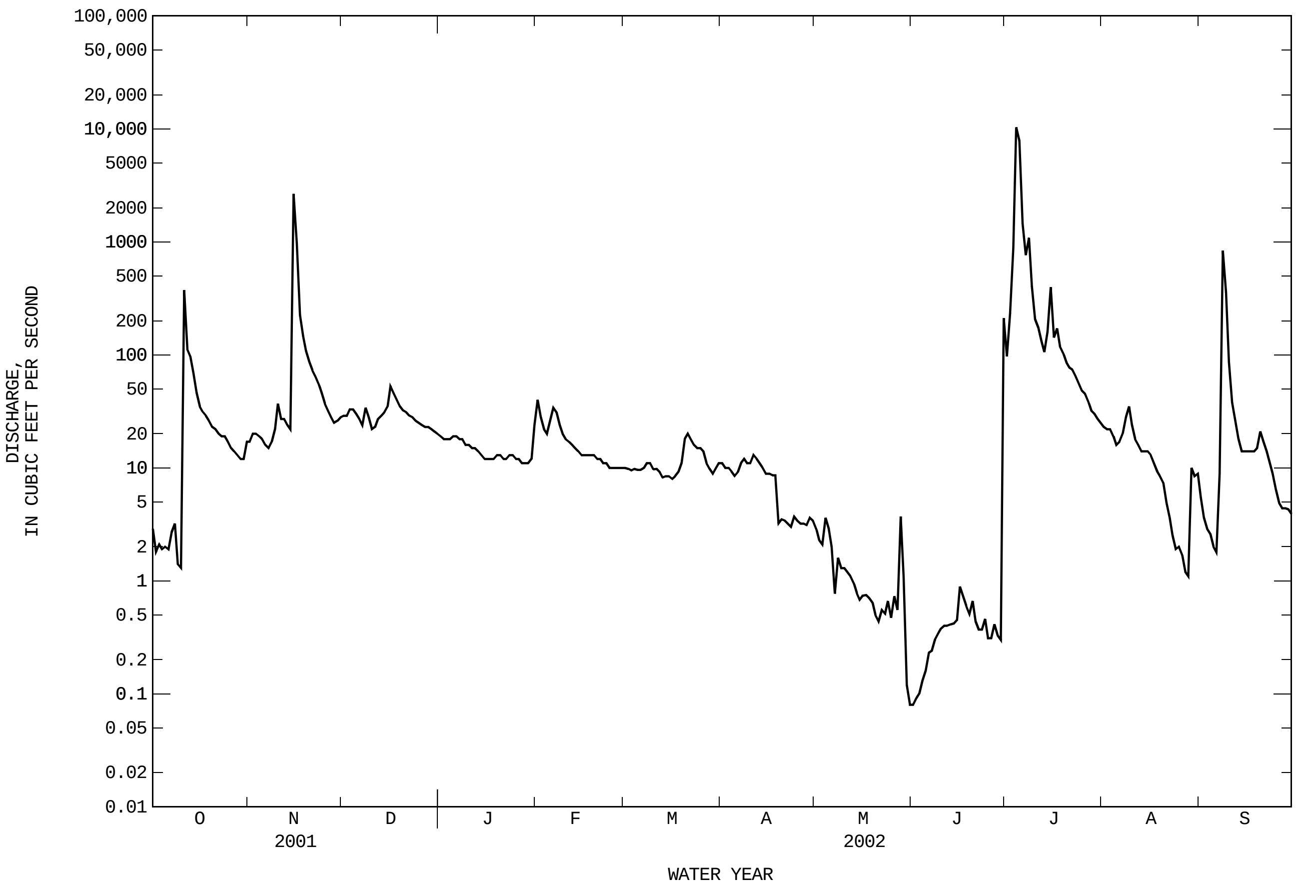
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 2002h, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	62.10	45.89	75.10	57.79	87.16	83.26	58.05	118.0	109.5	48.17	21.89	28.14
MAX	306	277	1074	511	936	425	528	510	862	819	358	188
(WY)	1972	2001	1992	1968	1992	1992	1977	1975	1987	2002	1974	1976
MIN	0.045	0.045	1.10	1.06	4.19	1.86	1.41	0.71	0.055	0.10	0.000	0.000
(WY)	1990	1989	1990	1990	1967	1967	1984	1984	1971	1980	1989	1989

08152000 Sandy Creek near Kingsland, TX--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1967 - 2002h	
ANNUAL TOTAL	24965.12		35997.65			
ANNUAL MEAN	68.40		98.62		66.19	
HIGHEST ANNUAL MEAN					279	1992
LOWEST ANNUAL MEAN					3.62	1984
HIGHEST DAILY MEAN	2660	Nov 15	10300	Jul 4	14200	Dec 21 1991
LOWEST DAILY MEAN	0.00	Aug 3	0.08	May 31	0.00	Jul 16 1967
ANNUAL SEVEN-DAY MINIMUM	0.00	Aug 2	0.11	May 30	0.00	Jul 16 1967
MAXIMUM PEAK FLOW			27600	Jul 4	39500	Dec 20 1991
MAXIMUM PEAK STAGE			a15.57	Jul 4	17.63	Jun 16 1987
ANNUAL RUNOFF (AC-FT)	49520		71400		47950	
ANNUAL RUNOFF (CFSM)	0.20		0.29		0.19	
ANNUAL RUNOFF (INCHES)	2.68		3.87		2.60	
10 PERCENT EXCEEDS	121		71		95	
50 PERCENT EXCEEDS	27		13		11	
90 PERCENT EXCEEDS	0.16		0.66		0.10	

a From floodmark.
h See PERIOD OF RECORD paragraph.



08152900 Pedernales River near Fredericksburg, TX

LOCATION.--Lat 30°13'13", long 98°52'10", Gillespie County, Hydrologic Unit 12090206, on left bank at downstream side of bridge on U.S. Highway 87, 2.0 mi upstream from Mueseback Creek, 3.8 mi south of Fredericksburg, and 88.7 mi upstream from mouth.

DRAINAGE AREA.--369 mi^2.

PERIOD OF RECORD.--July 1979 to May 1993, Mar. 1998 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,564,96 ft above NGVD of 1929. Radio telemeter at station. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. No known regulation or diversion above station. No flow at times.

COOPERATION.--Lower Colorado River Authority provides operation and maintenance of the gage and verification of stage-discharge relation at low stages. U.S. Geological Survey maintains stage-discharge relation at medium to high stages, computes and publishes streamflow record.

EXTREMES OUTSIDE PERIOD OF RECORD.--The flood of Aug. 2, 1978, which is the highest since 1907, reached a stage of 41.6 ft (discharge not determined). The highest known discharge was 64,000 ft^3/s, June 1, 1979, gage height, 34.4 ft, from floodmark, from rating curve extended above a discharge measurement of 42,300 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	9.3	7.2	38	32	61	39	38	15	12	375	67	30
2	8.4	7.6	38	31	44	39	35	15	10	5600	65	29
3	7.9	7.7	43	29	39	39	33	14	8.9	440	62	29
4	7.7	7.7	42	30	37	38	31	13	8.2	10200	58	28
5	7.7	7.6	38	30	42	38	30	13	7.7	14500	56	27
6	7.3	7.2	38	31	54	40	31	12	7.4	1260	55	27
7	7.0	7.1	38	30	53	41	33	12	7.3	718	53	32
8	7.0	7.7	40	30	47	42	38	11	7.2	484	50	65
9	7.1	14	43	30	44	41	35	11	6.9	378	50	84
10	7.3	11	38	30	41	39	30	10	6.5	298	51	52
11	179	10	37	29	39	38	28	9.5	6.4	246	53	41
12	66	9.8	44	29	38	38	27	9.3	6.1	180	48	37
13	159	9.4	44	28	39	38	26	8.6	5.8	186	47	34
14	27	10	41	28	40	37	28	8.1	5.2	229	45	33
15	18	8060	38	28	40	38	39	7.9	5.1	345	44	32
16	14	745	40	28	41	36	35	7.6	5.2	271	43	32
17	12	225	45	29	41	35	32	7.6	5.0	239	41	32
18	11	144	41	29	41	36	30	7.7	4.8	201	40	32
19	10	108	38	31	44	40	27	7.5	4.6	178	39	33
20	10	86	36	30	43	47	25	7.3	4.4	162	38	33
21	9.6	72	36	30	42	50	25	7.2	4.2	152	37	30
22	9.4	64	37	29	39	43	23	7.0	4.1	143	36	28
23	9.4	59	37	31	38	39	23	6.9	4.0	133	34	27
24	9.4	52	34	32	38	37	21	7.0	4.0	116	34	26
25	9.3	46	34	31	39	37	20	7.0	4.0	99	33	25
26	8.5	44	34	32	38	34	20	9.7	4.0	91	32	25
27	7.6	41	34	32	37	34	19	8.5	4.6	86	30	25
28	7.7	38	33	33	36	34	18	30	8.7	81	28	24
29	7.5	40	33	35	---	34	17	28	6.9	77	29	24
30	7.3	38	33	35	---	35	16	19	233	75	31	24
31	7.0	---	32	48	---	36	---	15	---	70	32	---
TOTAL	675.4	9986.0	1177	960	1175	1192	833	352.4	412.2	37613	1361	1000
MEAN	21.79	332.9	37.97	30.97	41.96	38.45	27.77	11.37	13.74	1213	43.90	33.33
MAX	179	8060	45	48	61	50	39	30	233	14500	67	84
MIN	7.0	7.1	32	28	36	34	16	6.9	4.0	70	28	24
AC-FT	1340	19810	2330	1900	2330	2360	1650	699	818	74610	2700	1980

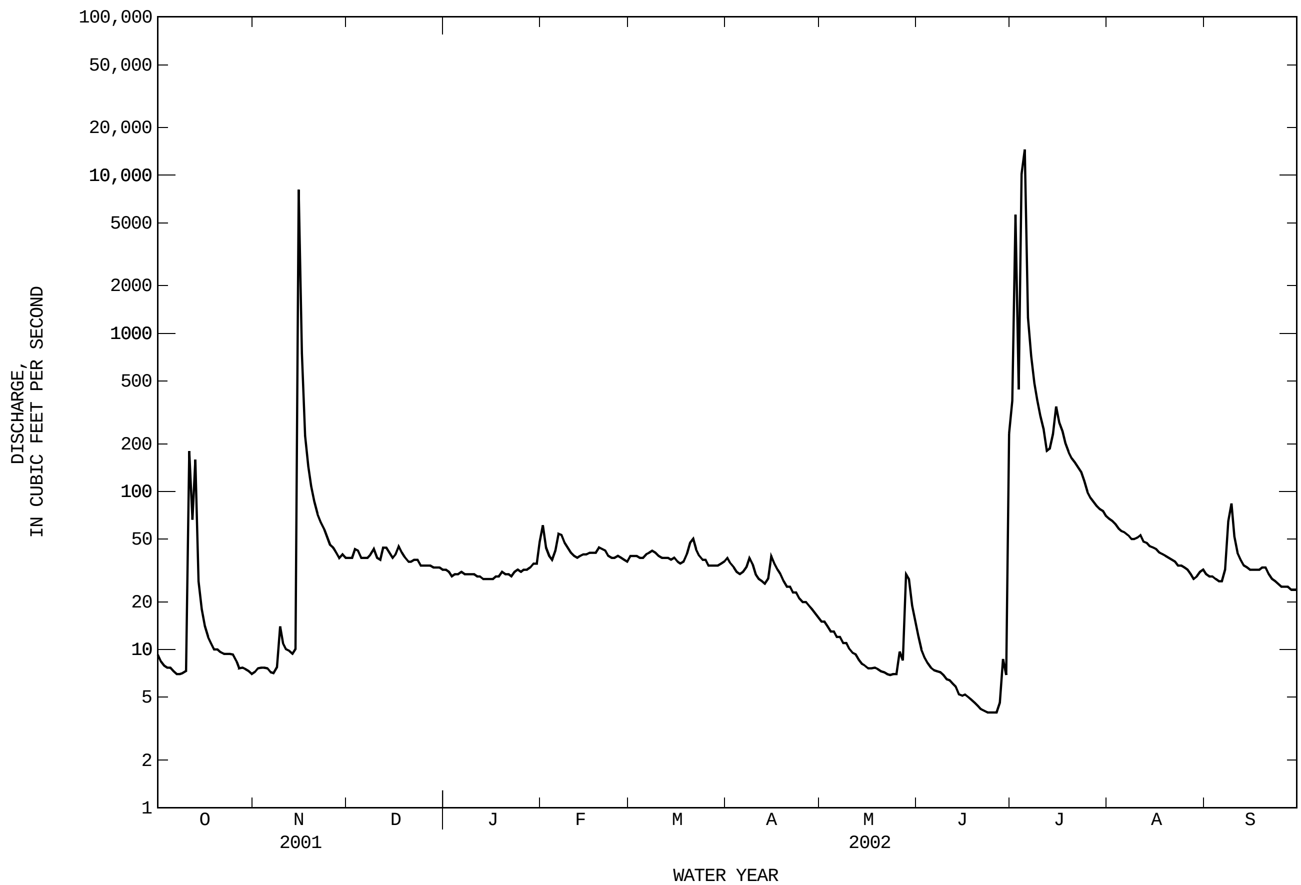
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 2002h, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	58.72	61.15	94.24	41.68	71.40	71.27	48.36	81.26	98.16	101.0	15.47	17.54
MAX	408	333	993	173	631	370	224	261	635	1213	48.2	48.8
(WY)	1986	2002	1992	1992	1992	1992	1992	1990	1987	2002	1987	1981
MIN	3.25	5.70	7.18	8.78	8.32	9.77	5.96	2.95	2.33	0.78	0.23	0.31
(WY)	2000	2000	1990	1990	1984	1984	1984	1984	1984	2000	1985	1984

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1980 - 2002h	
ANNUAL TOTAL	26815.4		56737.0			
ANNUAL MEAN	73.47		155.4		63.33	
HIGHEST ANNUAL MEAN					244	1992
LOWEST ANNUAL MEAN					5.31	1984
HIGHEST DAILY MEAN	8060	Nov 15	14500	Jul 5	14800	Dec 20 1991
LOWEST DAILY MEAN	7.0	Oct 7	4.0	Jun 23	0.00	Jul 13 1984
ANNUAL SEVEN-DAY MINIMUM	7.3	Oct 4	4.1	Jun 20	0.00	Sep 2 2000
MAXIMUM PEAK FLOW			c55700	Jul 5	c55700	Jul 5 2002
MAXIMUM PEAK STAGE			a27.42	Jul 5	32.09	Dec 20 1991
ANNUAL RUNOFF (AC-FT)	53190		112500		45880	
10 PERCENT EXCEEDS	106		85		88	
50 PERCENT EXCEEDS	38		33		22	
90 PERCENT EXCEEDS	9.6		7.3		3.2	

h See PERIOD OF RECORD paragraph.
c From rating curve extended above measurement of 33,300 ft^3/s based on velocity-area study.
a From floodmark.

08152900 Pedernales River near Fredericksburg, TX--Continued



08153500 Pedernales River near Johnson City, TX

LOCATION.--Lat 30°17'30", long 98°23'57", Blanco County, Hydrologic Unit 12090206, near left downstream end of bridge on U.S. Highway 281, 0.2 mi downstream from Towhead Creek, 1.1 mi northeast of Johnson City, 3.4 mi downstream from Buffalo Creek, and 48.0 mi upstream from mouth.

DRAINAGE AREA.--901 mi^2.

PERIOD OF RECORD.--May 1939 to current year.
Water-quality records.--Chemical data: Apr. 1948 to Sept. 1950, Oct. 1971 to Sept. 1985.

REVISED RECORDS.--WSP 1632: 1953(M), 1957, 1958(M). WDR TX-81-3: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 1,096.70 ft above NGVD of 1929. May 4 to Sept. 13, 1939, nonrecording gage, and Sept. 14, 1939, to Sept. 10, 1952, water-stage recorder at upstream side of bridge at same datum. Sept. 11, 1952, to June 29, 1953, nonrecording gage, and June 30, 1953, to Oct. 7, 1954, water-stage recorder at site 360 ft downstream at same datum. Radio telemeter at station. Satellite telemeter at station.

REMARKS.--Records good except those for daily discharges below 20 ft^3/s, which are fair. There are diversions above station for irrigation. During the year, the city of Fredericksburg discharged varying amounts of wastewater effluent into the river upstream from station. The city of Johnson City diverts varying amounts of water from the pool at gage and discharges wastewater effluent into river below the gage. Flow is affected at times by discharge from the flood-detention pools of four floodwater-retarding structures. These structures control runoff from 15.6 mi^2 in the Williamson Creek drainage basin. No flow at times.

COOPERATION.--Lower Colorado River Authority provides operation and maintenance of the gage and verification of stage-discharge relation at low stages. U.S. Geological Survey maintains stage-discharge relation at medium to high stages, computes and publishes streamflow record.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 1869, reached a stage of 33 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	50	32	142	101	82	64	67	37	46	1700	217	81
2	42	33	150	99	95	e54	61	35	39	20400	204	76
3	33	32	161	100	95	54	55	32	34	9510	194	69
4	37	32	159	101	88	59	56	32	32	49100	183	66
5	59	31	147	102	96	60	55	33	28	31200	175	64
6	80	32	135	107	109	62	57	32	27	6960	178	61
7	109	31	129	103	112	62	65	30	24	2420	173	78
8	33	32	155	101	106	63	68	29	24	1850	167	211
9	11	33	147	99	96	58	69	29	22	1440	171	298
10	20	41	135	98	74	59	70	28	20	1230	185	280
11	243	45	139	93	81	62	63	25	18	1140	244	154
12	604	44	162	89	82	59	59	25	17	965	172	117
13	5900	39	148	91	76	59	54	20	16	1280	150	103
14	1130	62	153	89	78	58	50	25	14	1100	137	93
15	521	18700	148	88	73	54	53	24	11	1230	132	85
16	355	6360	235	89	75	52	64	24	14	1240	126	84
17	293	1020	193	87	75	59	65	23	21	1250	121	84
18	262	635	171	86	77	61	66	17	17	1150	115	82
19	246	462	155	83	78	64	62	21	13	748	111	83
20	240	365	140	85	74	74	60	22	10	626	108	92
21	227	320	136	83	70	84	52	23	8.1	564	96	87
22	211	285	135	86	66	72	53	24	6.5	516	92	68
23	209	260	128	87	67	75	53	23	5.6	471	88	63
24	233	228	122	86	67	72	49	22	4.6	423	86	59
25	182	207	119	88	64	61	45	21	3.7	373	86	55
26	21	192	118	86	e60	58	47	21	4.2	345	82	53
27	15	153	119	88	58	62	47	56	7.6	330	79	53
28	17	137	116	90	59	61	42	84	13	311	75	52
29	20	149	109	91	---	58	42	90	13	281	79	51
30	22	151	107	88	---	71	39	67	9980	248	86	50
31	25	---	104	83	---	62	---	56	---	231	89	---
TOTAL	11450	30143	4417	2847	2233	1933	1688	1030	10493.3	140632	4201	2852
MEAN	369.4	1005	142.5	91.84	79.75	62.35	56.27	33.23	349.8	4537	135.5	95.07
MAX	5900	18700	235	107	112	84	70	90	9980	49100	244	298
MIN	11	31	104	83	58	52	39	17	3.7	231	75	50
AC-FT	22710	59790	8760	5650	4430	3830	3350	2040	20810	278900	8330	5660

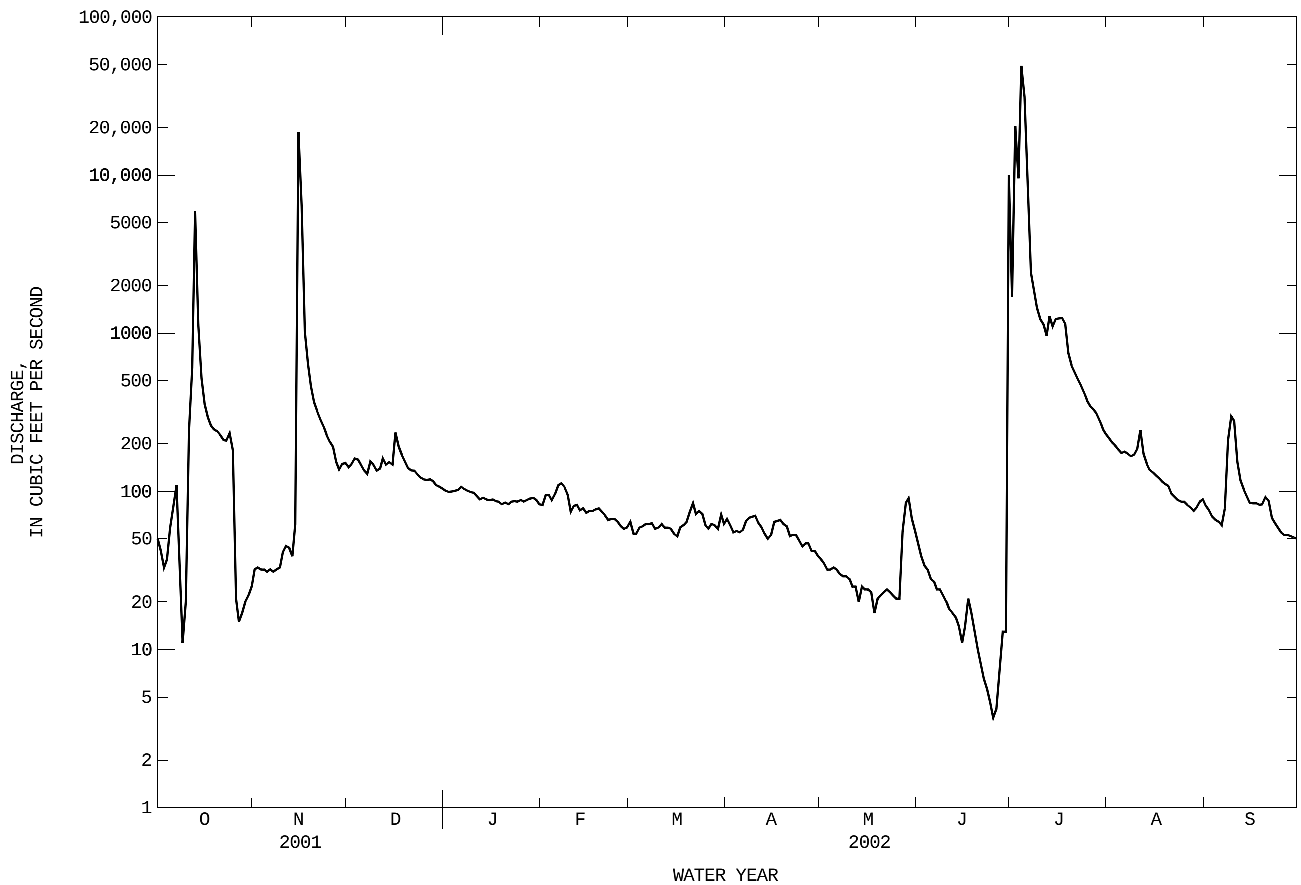
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	225.0	117.6	176.1	127.5	207.0	177.0	234.3	320.3	323.6	167.0	112.5	194.7
MAX	2041	1005	3161	1177	2794	1289	2368	1673	2905	4537	1953	6332
(WY)	1960	2002	1992	1968	1992	1992	1977	1975	1987	2002	1978	1952
MIN	0.44	2.51	2.44	1.68	4.83	2.07	0.060	2.05	0.52	0.001	0.000	0.000
(WY)	1952	1952	1955	1957	1957	1956	1956	1956	1971	1971	1954	1984

08153500 Pedernales River near Johnson City, TX--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1939 - 2002	
ANNUAL TOTAL	90408.17		213919.3			
ANNUAL MEAN	247.7		586.1		198.4	
HIGHEST ANNUAL MEAN					840	1992
LOWEST ANNUAL MEAN					4.12	1956
HIGHEST DAILY MEAN	18700	Nov 15	49100	Jul 4	129000	Sep 11 1952
LOWEST DAILY MEAN	0.26	Aug 11	3.7	Jun 25	0.00	Aug 8 1951
ANNUAL SEVEN-DAY MINIMUM	0.32	Aug 6	5.8	Jun 21	0.00	Aug 8 1951
MAXIMUM PEAK FLOW			108000	Jul 4	441000	Sep 11 1952
MAXIMUM PEAK STAGE			p26.00	Jul 4	42.50	Sep 11 1952
ANNUAL RUNOFF (AC-FT)	179300		424300		143700	
10 PERCENT EXCEEDS	300		359		280	
50 PERCENT EXCEEDS	109		81		51	
90 PERCENT EXCEEDS	4.4		23		4.6	

e Estimated
p Observed



08154700 Bull Creek at Loop 360 near Austin, TX

LOCATION.--Lat 30°22'19", long 97°47'04", Travis County, Hydrologic Unit 12090205, on right bank at downstream side of bridge at Loop 360, 1.0 mi upstream from West Fork Bull Creek and Farm Road 2222, and 7.1 mi northwest of the State Capitol Building in Austin.

DRAINAGE AREA.--22.3 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Apr. 1976 to July 1978 (peak discharge greater than base discharge), July 1978 to current year.

GAGE.--Water-stage recorder, concrete control, and crest-stage gage. Datum of gage is 534.08 ft above NGVD of 1929 (levels from city of Austin benchmark). Satellite telemeter at station.

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

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.8	3.5	26	17	11	7.6	11	1.5	1.1	110	2.9	0.20
2	1.8	3.4	31	16	10	7.8	9.9	1.4	0.94	490	2.6	0.26
3	1.8	3.3	36	15	9.5	7.1	8.8	1.5	0.82	231	8.7	0.34
4	1.7	3.2	31	15	9.1	7.0	7.9	1.6	0.67	116	11	0.28
5	1.8	3.2	29	41	16	7.1	7.7	1.6	0.38	82	3.7	0.17
6	1.8	2.7	28	21	20	7.1	7.8	1.5	0.29	60	3.0	0.17
7	1.7	2.9	26	18	14	7.1	9.2	1.5	0.24	e45	2.7	12
8	1.8	3.0	e51	18	13	7.6	30	1.5	0.19	e37	2.5	302
9	2.0	8.2	e49	17	12	7.2	14	1.6	0.58	29	2.6	41
10	2.0	3.8	e39	17	11	6.3	11	1.4	0.76	25	3.0	15
11	130	3.7	48	15	10	6.7	9.6	1.3	0.63	21	2.9	9.0
12	27	3.7	52	16	10	6.6	8.0	1.1	0.37	18	2.7	7.0
13	71	3.6	48	16	10	6.1	7.3	1.1	0.17	16	2.4	6.2
14	27	4.0	37	14	9.8	6.1	7.8	1.0	0.13	16	2.1	5.4
15	16	864	204	14	9.9	6.5	7.6	0.80	0.11	15	2.1	4.8
16	11	419	144	13	9.0	8.1	7.3	0.62	25	15	2.0	4.7
17	9.6	167	87	13	9.1	9.7	9.3	0.59	3.6	20	1.8	4.7
18	8.1	96	64	12	9.1	9.2	16	0.55	2.1	16	1.6	5.3
19	7.6	62	e49	15	8.7	14	13	0.47	1.6	12	1.5	7.6
20	5.5	40	40	16	8.5	22	4.3	0.37	1.4	10	1.3	10
21	4.9	30	35	13	8.2	10	4.3	0.29	1.1	8.7	1.2	6.1
22	4.2	27	32	13	8.4	8.4	3.5	0.26	0.86	7.8	1.1	4.9
23	4.1	26	28	13	8.6	7.3	3.4	0.25	0.66	7.1	0.95	4.1
24	3.9	24	26	13	8.2	6.6	3.0	0.24	0.48	6.5	0.85	4.0
25	3.6	22	24	12	10	5.9	2.7	0.24	0.38	5.9	0.63	4.0
26	3.4	21	23	11	7.6	5.9	2.7	0.30	1.5	5.4	0.47	4.3
27	3.4	19	22	9.4	7.5	5.5	2.5	0.25	6.6	4.9	0.34	3.7
28	3.2	69	21	9.3	7.6	5.8	2.3	15	2.6	4.3	0.28	2.9
29	3.3	36	19	9.1	---	5.6	2.1	4.3	2.0	4.1	0.26	2.6
30	3.1	29	18	9.3	---	31	1.9	2.5	208	3.4	0.23	2.6
31	3.2	---	18	11	---	15	---	1.6	---	3.2	0.22	---
TOTAL	371.3	2003.2	1385	462.1	285.8	273.9	235.9	48.23	265.26	1445.3	69.63	475.32
MEAN	11.98	66.77	44.68	14.91	10.21	8.835	7.863	1.556	8.842	46.62	2.246	15.84
MAX	130	864	204	41	20	31	30	15	208	490	11	302
MIN	1.7	2.7	18	9.1	7.5	5.5	1.9	0.24	0.11	3.2	0.22	0.17
AC-FT	736	3970	2750	917	567	543	468	96	526	2870	138	943

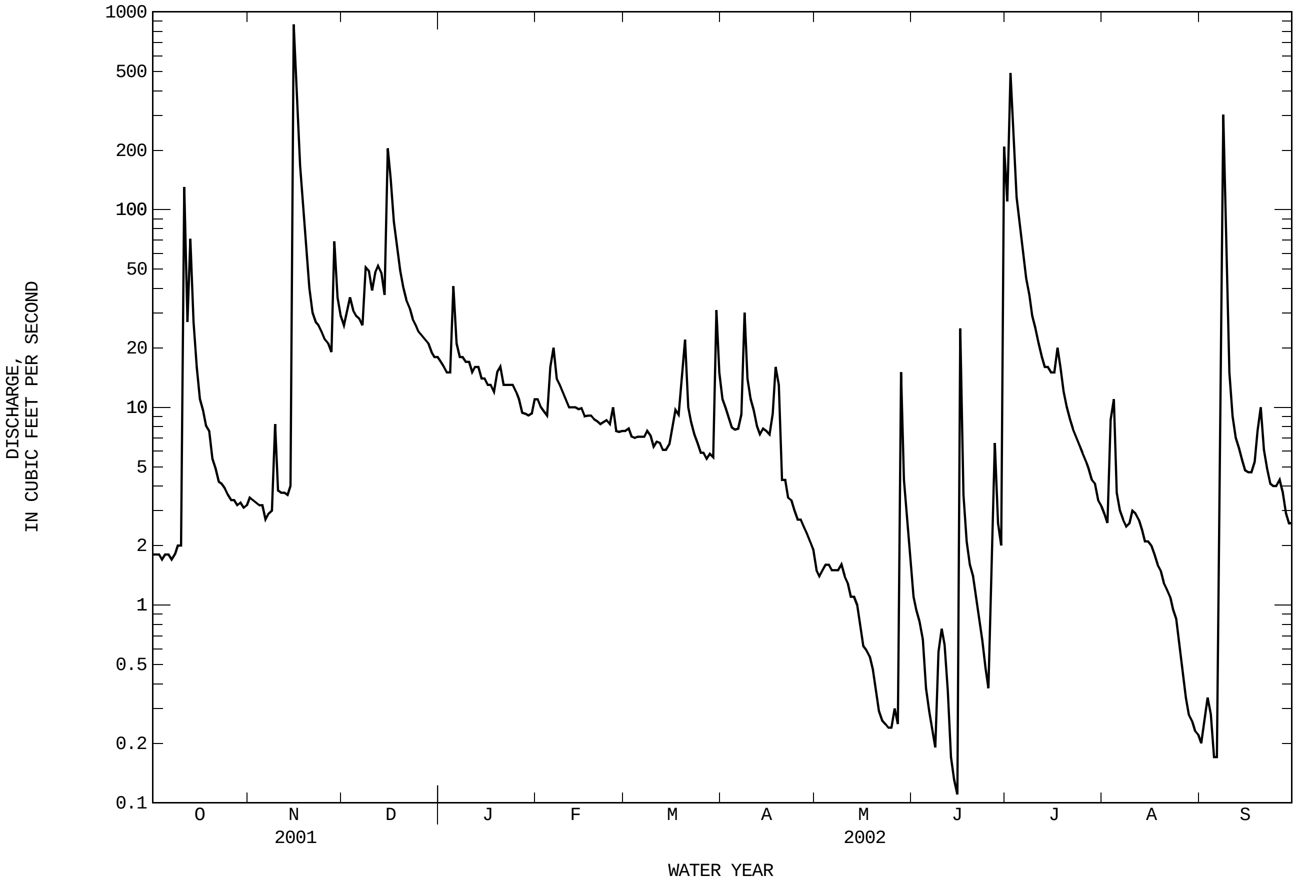
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1978 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	16.39	15.38	17.96	13.79	16.94	16.97	12.19	23.45	24.99	5.656	3.931	4.466
MAX	120	73.0	130	55.9	114	64.7	69.4	58.9	141	46.6	26.3	15.8
(WY)	1999	2001	1992	1992	1992	1992	1997	1992	1987	2002	1991	2002
MIN	0.17	0.061	0.64	1.08	1.92	2.06	1.28	0.33	0.57	0.043	0.006	0.009
(WY)	2000	2000	1990	1990	1996	1996	1984	1984	1998	1994	2000	1999

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1978 - 2002	
ANNUAL TOTAL	10064.71		7320.94			
ANNUAL MEAN	27.57		20.06		14.24	
HIGHEST ANNUAL MEAN					40.6	1992
LOWEST ANNUAL MEAN					0.75	1978
HIGHEST DAILY MEAN	864	Nov 15	864	Nov 15	1180	Oct 17 1998
LOWEST DAILY MEAN	0.04	Aug 10	0.11	Jun 15	0.00	Jul 4 1984
ANNUAL SEVEN-DAY MINIMUM	0.06	Aug 6	0.23	Aug 31	0.00	Jul 4 1984
MAXIMUM PEAK FLOW			5390	Nov 15	13700	May 13 1982
MAXIMUM PEAK STAGE			a10.42	Nov 15	12.31	Oct 7 1994
ANNUAL RUNOFF (AC-FT)	19960		14520		10320	
10 PERCENT EXCEEDS	52		35		27	
50 PERCENT EXCEEDS	18		7.2		4.2	
90 PERCENT EXCEEDS	0.38		0.63		0.25	

e Estimated
a From floodmark.

08154700 Bull Creek at Loop 360 near Austin, TX--Continued



08154700 Bull Creek at Loop 360 near Austin, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--
CHEMICAL DATA: Apr. 1978 to current year.
BIOCHEMICAL DATA: Apr. 1978 to current year.
RADIOCHEMICAL DATA: Jan. to Apr. 1980.
PESTICIDE DATA: June 1978 to Sept. 1986, Jan. 1993 to June 1995.
SEDIMENT DATA: Oct. 1998 to current year.

INSTRUMENTATION.--Stage-activated automatic sampler.

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

Date	Time	DIS-CHARGE, IN CUBIC FEET PER SECOND (00060)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	COLOR (PLAT-INUM-COBALT UNITS) (00080)	TURBID-ITY LAB HACH 2100AN (NTU) (99872)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L) (00340)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	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)
MAR													
30-30	1050	70	447	7.8	50	30	30	138	94	--	E.005	.48	.06
SEP													
08-08	1020	842	227	7.6	250	380	80	72	378	.92	.010	.93	.05

Date	NITRO-GEN, TOTAL (MG/L AS N) (00600)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N) (00605)	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)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	CADMIUM WATER UNFLTRD TOTAL (UG/L AS CD) (01027)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU) (01042)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB) (01051)
MAR													
30-30	1.4	.83	.89	.09	<.06	<.02	--	10.6	17.3	91	<.1	2.2	2
SEP													
08-08	4.0	3.0	3.0	.47	.06	.06	.172	37.5	1290	566	.2	7.2	8

Date	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN) (01092)
MAR	
30-30	14
SEP	
08-08	46

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

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08154900 Lake Austin at Austin, TX

LOCATION.--Lat 30°18'55", long 97°47'10", Travis County, Hydrologic Unit 12090205, at city of Austin Waterplant No. 2 and 1.5 mi upstream from Tom Miller Dam on the Colorado River at Austin.

DRAINAGE AREA.--38,846 mi^2, of which 11,403 mi^2 probably is noncontributing.

PERIOD OF RECORD.--
CHEMICAL DATA: Oct. 1978 to Aug. 1990, Oct. 1990 to current year.
BIOCHEMICAL DATA: Oct. 1978 to Aug. 1990, Oct. 1990 to current year.
PESTICIDE DATA: Oct. 1978 to Aug. 1990.

REMARKS.--Trace metal and pesticide analyses of bottom sediments at selected sites July 2002.

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

301739097471201 -- Lk Austin Site AC

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)	TURBID-ITY LAB HACH 2100AN (NTU) (99872)	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)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L) (00530)
OCT													
11...	1310	1.00	446	7.9	21.7	2.2	8.2	95	E56k	E47k	150	260	<10
11...	1312	10.0	447	7.9	21.5	--	8.1	93	--	--	--	--	--
11...	1314	20.0	447	7.9	21.2	--	7.8	89	--	--	--	--	--
11...	1316	30.0	449	7.7	20.6	--	6.9	78	--	--	--	--	--
11...	1318	40.0	448	7.7	20.6	--	6.8	77	--	--	--	--	--
11...	1320	50.0	449	7.7	20.6	12	6.5	73	--	--	155	260	46
JUL													
24...	1004	1.00	304	7.7	27.6	14	5.8	73	--	--	116	173	<10
24...	1006	10.0	302	7.5	25.8	--	4.2	52	--	--	--	--	--
24...	1008	20.0	300	7.5	25.5	--	3.9	48	--	--	--	--	--
24...	1010	30.0	301	7.4	25.4	--	3.9	48	--	--	--	--	--
24...	1012	40.0	300	7.4	25.4	--	3.9	47	--	--	--	--	--
24...	1014	49.0	301	7.4	25.4	15	3.8	46	--	--	116	178	<10
24...	1032	--	--	--	--	--	--	--	--	--	--	--	--

301739097471201 -- Lk Austin Site AC

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, TOTAL (MG/L AS N) (00600)	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, INORG + ORGANIC TOT. IN BOT MAT (GM/KG AS C) (00693)	CHLOR-A PHYTO-PLANK-TON CHROMO FLUOROM (UG/L) (70953)	CHLOR-B PHYTO-PLANK-TON CHROMO FLUOROM (UG/L) (70954)
OCT													
11...	<.008	.06	<.04	.35	.29	<.06	<.06	<.02	--	4.1	--	1.6	<.1
11...	--	--	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--	--	--
11...	<.008	.05	E.03	.42	.37	E.04	<.06	<.02	--	8.6	--	--	--
JUL													
24...	<.008	.16	<.04	.51	.35	E.04	<.06	E.01	--	4.9	--	1.3	.2
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
24...	<.008	.17	<.04	.63	.45	E.05	<.06	.02	.055	5.0	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	87	--	--

301739097471201 -- Lk Austin Site AC

Date	BED MAT. SIEVE DIAM. % FINER THAN .062 MM (80164)	BED MAT. SIEVE DIAM. % FINER THAN .125 MM (80165)	BED MAT. SIEVE DIAM. % FINER THAN .250 MM (80166)	BED MAT. SIEVE DIAM. % FINER THAN .500 MM (80167)	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM (80168)	CADMIUM RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CD) (01028)	CHRO-MIUM, RECOV. FM BOT-TOM MA-TERIAL (UG/G) (01029)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU) (01042)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)	COPPER, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CU) (01043)	IRON, SEDIMT, BED MA-TERIAL (UG/G AS FE) (01170)	LEAD, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS PB) (01052)	MANGA-NESE, RECOV. FM BOT-TOM MA-TERIAL (UG/G) (01053)
OCT													
11...	--	--	--	--	--	--	--	4.0	3.8	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	5.5	4.8	--	--	--	--
JUL													
24...	--	--	--	--	--	--	--	5.5	4.6	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	8.3	6.4	--	--	--	--
24...	94	100	100	100	100	.234	<.4	--	--	12	17000	21	1800

08154900 Lake Austin at Austin, TX--Continued

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

301739097471201 -- Lk Austin Site AC

Date	MERCURY RECOV. FM BOT-TOM MA-TERIAL (UG/G AS HG) (71921)	ZINC, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS ZN) (01093)
OCT		
11...	--	--
11...	--	--
11...	--	--
11...	--	--
11...	--	--
11...	--	--
JUL		
24...	--	--
24...	--	--
24...	--	--
24...	--	--
24...	--	--
24...	--	--
24...	.03	92

301739097470901 -- Lk Austin 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)
OCT							
11...	1340	1.00	442	8.0	21.8	8.8	102
11...	1342	10.0	447	7.9	21.6	7.9	91
11...	1344	18.0	447	7.9	21.6	7.6	87
JUL							
24...	1044	1.00	305	7.6	26.9	5.1	64
24...	1046	10.0	302	7.5	25.6	4.1	51
24...	1048	21.0	304	7.5	25.6	4.1	51

301739097471601 -- Lk Austin Site AR

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)
OCT							
11...	1300	1.00	451	7.9	21.8	7.9	91
11...	1302	10.0	448	7.9	21.6	8.0	92
11...	1304	20.0	447	7.9	21.4	7.9	91
11...	1306	25.0	447	7.9	21.4	7.8	89
JUL							
24...	0950	1.00	304	7.6	26.9	5.3	66
24...	0952	10.0	302	7.5	26.1	4.3	53
24...	0954	24.0	302	7.4	25.6	3.7	45

302043097472401 -- Lk Austin Site BC

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)	TURBID-ITY LAB HACH 2100AN (NTU) (99872)	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)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L) (00530)
OCT													
11...	1400	1.00	460	8.0	22.4	3.4	8.1	95	200	E140k	--	260	<10
11...	1402	10.0	447	8.0	21.5	--	8.1	93	--	--	--	--	--
11...	1404	20.0	448	7.7	20.3	--	6.6	74	--	--	--	--	--
11...	1406	29.0	448	7.6	20.5	8.2	6.4	72	--	--	--	256	<10
JUL													
24...	1116	1.00	299	7.5	26.1	10	4.3	53	--	--	114	165	<10
24...	1118	10.0	298	7.5	25.3	--	4.0	49	--	--	--	--	--
24...	1120	20.0	297	7.5	25.3	--	4.0	49	--	--	--	--	--
24...	1122	29.0	298	7.5	25.2	17	4.0	49	--	--	116	174	<10
24...	1135	--	--	--	--	--	--	--	--	--	--	--	--

08154900 Lake Austin at Austin, TX--Continued

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

302043097472401 -- Lk Austin Site BC

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, TOTAL (MG/L AS N) (00600)	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, INORG + ORGANIC TOT. IN BOT MAT (GM/KG AS C) (00693)	CHLOR-A PHYTO-PLANK-TON CHROMO FLUOROM (UG/L) (70953)	CHLOR-B PHYTO-PLANK-TON CHROMO FLUOROM (UG/L) (70954)
OCT													
11...	<.008	E.04	<.04	--	.34	E.04	<.06	<.02	--	5.5	--	2.4	<.1
11...	--	--	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--	--	--
11...	<.008	.05	<.04	.42	.37	<.06	<.06	<.02	--	6.5	--	--	--
JUL													
24...	<.008	.19	<.04	.52	.33	E.04	<.06	.02	.055	4.7	--	.2	<.1
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
24...	<.008	.19	<.04	.59	.40	E.04	<.06	.02	.061	5.1	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	81	--	--

302043097472401 -- Lk Austin Site BC

Date	BED MAT. SIEVE DIAM. % FINER THAN .062 MM (80164)	BED MAT. SIEVE DIAM. % FINER THAN .125 MM (80165)	BED MAT. SIEVE DIAM. % FINER THAN .250 MM (80166)	BED MAT. SIEVE DIAM. % FINER THAN .500 MM (80167)	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM (80168)	CADMIUM RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CD) (01028)	CHRO-MIUM, RECOV. FM BOT-TOM MA-TERIAL (UG/G) (01029)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU) (01042)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)	COPPER, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CU) (01043)	IRON, SEDIMT, BED MA-TERIAL AS FE) (01170)	LEAD, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS PB) (01052)	MANGA-NESE, RECOV. FM BOT-TOM MA-TERIAL (UG/G) (01053)
OCT													
11...	--	--	--	--	--	--	--	3.4	2.9	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	3.8	3.9	--	--	--	--
JUL													
24...	--	--	--	--	--	--	--	4.5	4.3	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	5.1	5.7	--	--	--	--
24...	100	100	100	100	100	.171	<.4	--	--	10	8000	17	500

302043097472401 -- Lk Austin Site BC

Date	MERCURY RECOV. FM BOT-TOM MA-TERIAL (UG/G AS HG) (71921)	ZINC, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS ZN) (01093)
OCT		
11...	--	--
11...	--	--
11...	--	--
11...	--	--
JUL		
24...	--	--
24...	--	--
24...	--	--
24...	--	--
24...	.02	39

302044097472301 -- Lk Austin Site BL

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)
OCT							
11...	1355	1.00	449	8.0	22.4	8.4	98
11...	1357	10.0	447	8.0	21.6	8.1	93
11...	1359	19.0	450	7.7	20.7	6.4	72
JUL							
24...	1102	1.00	319	7.5	26.3	4.5	56
24...	1104	10.0	302	7.5	25.3	3.9	48
24...	1106	19.0	301	7.5	25.6	4.2	52

08154900 Lake Austin at Austin, TX--Continued

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

301926097502201 -- Lk Austin 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)	TURBID-ITY LAB HACH 2100AN (NTU) (99872)	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)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L) (00530)
OCT													
11...	1430	1.00	440	8.0	21.6	1.3	8.4	97	E30k	E20k	153	260	<10
11...	1432	10.0	449	7.8	20.2	--	7.2	81	--	--	--	--	--
11...	1434	23.0	448	7.6	20.0	4.8	6.3	70	--	--	156	256	<10
JUL													
24...	1210	1.00	297	7.5	26.0	9.8	5.2	64	--	--	116	169	<10
24...	1212	10.0	297	7.5	25.2	--	4.6	56	--	--	--	--	--
24...	1214	23.0	295	7.5	25.3	11	4.5	55	--	--	113	174	<10
24...	1245	--	--	--	--	--	--	--	--	--	--	--	--

301926097502201 -- Lk Austin Site CC

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, TOTAL (MG/L AS N) (00600)	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, INORG + ORGANIC TOT. IN BOT MAT (GM/KG AS C) (00693)	CHLOR-A PHYTO-PLANK-TON CHROMO FLUOROM (UG/L) (70953)	CHLOR-B PHYTO-PLANK-TON CHROMO FLUOROM (UG/L) (70954)
OCT													
11...	<.008	.05	<.04	.29	.25	<.06	<.06	<.02	--	4.8	--	2.1	<.1
11...	--	--	--	--	--	--	--	--	--	--	--	--	--
11...	<.008	.07	E.02	.36	.29	<.06	<.06	<.02	--	4.7	--	--	--
JUL													
24...	<.008	.21	<.04	.63	.42	<.06	<.06	.02	.058	4.6	--	.2	<.1
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
24...	<.008	.20	<.04	.53	.33	E.03	<.06	.02	.058	4.6	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	41	--	--

301926097502201 -- Lk Austin Site CC

Date	BED MAT. SIEVE DIAM. % FINER THAN .062 MM (80164)	BED MAT. SIEVE DIAM. % FINER THAN .125 MM (80165)	BED MAT. SIEVE DIAM. % FINER THAN .250 MM (80166)	BED MAT. SIEVE DIAM. % FINER THAN .500 MM (80167)	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM (80168)	CADMIUM RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CD) (01028)	CHRO-MIUM, RECOV. FM BOT-TOM MA-TERIAL (UG/G) (01029)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU) (01042)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)	COPPER, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CU) (01043)	IRON, SEDIMT, BED MA-TERIAL AS FE) (01170)	LEAD, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS PB) (01052)	MANGA-NESE, RECOV. FM BOT-TOM MA-TERIAL (UG/G) (01053)
OCT													
11...	--	--	--	--	--	--	--	3.0	2.8	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	3.8	4.5	--	--	--	--
JUL													
24...	--	--	--	--	--	--	--	4.1	4.2	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	5.2	4.1	--	--	--	--
24...	100	100	100	100	100	.086	<.4	--	--	6	7200	5.4	360

301926097502201 -- Lk Austin Site CC

Date	MERCURY RECOV. FM BOT-TOM MA-TERIAL (UG/G AS HG) (71921)	ZINC, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS ZN) (01093)
OCT		
11...	--	--
11...	--	--
11...	--	--
JUL		
24...	--	--
24...	--	--
24...	--	--
24...	<.01	21

08154900 Lake Austin at Austin, TX--Continued

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

302021097540001 -- Lk Austin 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)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (GM/KG AS C) (00693)	BED MAT. SIEVE DIAM. % FINER THAN .062 MM (80164)	BED MAT. SIEVE DIAM. % FINER THAN .125 MM (80165)	BED MAT. SIEVE DIAM. % FINER THAN .250 MM (80166)	BED MAT. SIEVE DIAM. % FINER THAN .500 MM (80167)	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM (80168)
OCT													
11...	1500	1.00	441	7.9	21.3	7.9	91	--	--	--	--	--	--
11...	1502	10.0	443	7.8	20.0	7.4	83	--	--	--	--	--	--
11...	1504	16.0	447	7.8	19.7	7.1	79	--	--	--	--	--	--
JUL													
24...	1304	1.00	287	7.5	24.9	4.4	53	--	--	--	--	--	--
24...	1306	10.0	287	7.5	24.7	4.4	53	--	--	--	--	--	--
24...	1308	16.0	287	7.5	24.7	4.4	53	--	--	--	--	--	--
24...	1333	--	--	--	--	--	--	22	100	100	100	100	100

302021097540001 -- Lk Austin Site DC

Date	CADMIUM RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CD) (01028)	CHRO-MIUM, RECOV. FM BOT-TOM MA-TERIAL (UG/G) (01029)	COPPER, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CU) (01043)	IRON, SEDIMT, BED MA-TERIAL AS FE) (01170)	LEAD, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS PB) (01052)	MANGA-NESE, RECOV. FM BOT-TOM MA-TERIAL (UG/G) (01053)	MERCURY RECOV. FM BOT-TOM MA-TERIAL (UG/G AS HG) (71921)	ZINC, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS ZN) (01093)
OCT								
11...	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--
JUL								
24...	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--
24...	.057	<.4	4	4800	3.6	290	<.01	15

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

Value qualifier codes used in this report:
  k -- Counts outside acceptable range

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08155200 Barton Creek at State Highway 71 near Oak Hill, TX

LOCATION.--Lat 30°17’46", long 97°55’31", Travis County, Hydrologic Unit 12090205, at upstream side of bridge on State Highway 71, 0.1 mi downstream from Little Barton Creek, and 5.8 mi northwest of Oak Hill.

DRAINAGE AREA.--89.7 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Aug. 1975 to Feb. 1978 (peak discharge greater than base discharge), Feb. 1978 to Sept. 1982, Jan. 1989 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 737.04 ft above NGVD of 1929. Satellite telemeter at station.

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

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.6	4.5	64	79	e33	16	16	3.4	2.2	295	53	8.1
2	1.6	4.4	82	75	e31	16	11	6.5	1.9	5220	50	7.0
3	1.4	4.4	119	72	e29	14	9.5	4.0	1.8	2200	45	6.4
4	1.4	4.3	106	69	27	13	8.8	3.4	1.5	787	40	6.3
5	1.5	4.3	101	141	35	13	8.5	3.1	1.4	1650	36	6.0
6	1.4	4.2	96	108	47	13	8.6	2.9	1.3	698	32	5.4
7	1.3	4.1	93	88	39	13	9.6	2.8	1.2	601	28	e6.7
8	1.2	4.0	419	82	33	13	17	2.6	1.2	371	27	e20
9	1.2	4.4	212	76	32	13	16	2.3	1.2	324	33	e32
10	1.2	4.3	177	74	28	12	12	2.0	1.1	340	28	15
11	6.1	4.4	179	69	26	12	10	1.8	1.0	322	26	11
12	8.6	4.4	197	66	26	12	9.4	1.7	0.94	266	22	8.7
13	41	4.4	181	65	25	11	8.8	1.6	0.94	254	19	7.8
14	21	5.2	173	63	24	11	8.2	1.5	0.91	249	17	7.0
15	10	3140	246	62	24	10	7.9	1.4	0.83	238	16	6.6
16	7.3	790	307	61	22	9.9	7.7	1.4	1.6	352	14	6.4
17	6.2	216	251	59	22	9.5	7.4	1.3	1.2	326	13	6.4
18	5.8	151	218	57	22	9.9	7.0	1.3	1.1	302	12	6.4
19	5.7	127	191	52	22	10	6.7	1.2	1.0	236	11	6.7
20	5.6	115	174	49	21	15	6.4	1.3	0.93	203	9.9	8.1
21	5.6	103	164	47	19	14	6.2	1.2	0.91	177	9.4	8.1
22	5.6	96	154	46	18	11	6.1	1.2	0.89	159	8.7	6.6
23	5.5	e90	143	46	18	9.9	5.7	0.96	0.83	140	8.3	5.8
24	5.4	e87	131	44	17	9.7	5.2	0.94	0.77	123	7.7	5.4
25	5.2	79	125	41	16	9.5	5.0	0.88	0.71	110	7.2	5.3
26	5.1	72	117	39	15	9.0	4.9	1.1	1.0	98	7.3	4.9
27	4.5	65	111	38	15	8.3	4.5	1.0	1.3	88	6.4	4.8
28	4.4	84	104	37	15	8.0	4.3	5.8	1.2	80	6.2	4.6
29	4.3	78	96	36	---	8.0	3.9	3.5	3.0	72	6.9	4.6
30	4.3	69	89	33	---	14	3.7	3.4	649	67	9.4	4.6
31	4.3	---	84	34	---	23	---	2.9	---	58	10	---
TOTAL	185.3	5423.3	4904	1908	701	370.7	246.0	70.38	684.86	16406	619.4	242.7
MEAN	5.977	180.8	158.2	61.55	25.04	11.96	8.200	2.270	22.83	529.2	19.98	8.090
MAX	41	3140	419	141	47	23	17	6.5	649	5220	53	32
MIN	1.2	4.0	64	33	15	8.0	3.7	0.88	0.71	58	6.2	4.6
AC-FT	368	10760	9730	3780	1390	735	488	140	1360	32540	1230	481

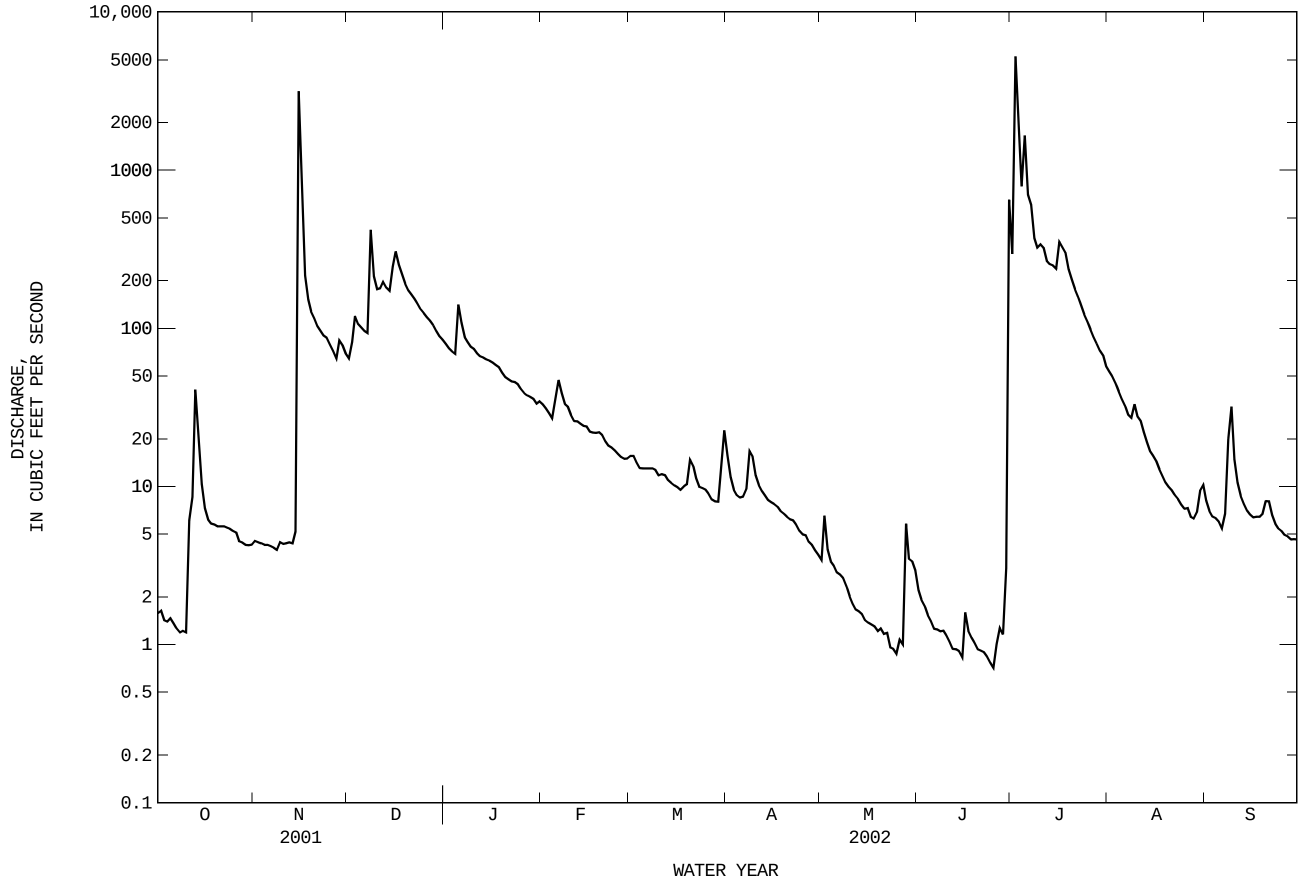
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1978 - 2002h, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	20.22	31.45	57.83	50.17	58.56	60.86	45.31	63.15	91.84	38.95	3.556	2.561
MAX	192	181	520	293	465	338	196	226	613	529	20.0	24.2
(WY)	1999	2002	1992	1992	1992	1992	1979	1992	1981	2002	2002	1991
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.040	0.001	0.000	0.000	0.000	0.000
(WY)	1991	2000	2000	2000	1978	2000	2000	1996	1996	1978	1996	1999

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1978 - 2002h	
ANNUAL TOTAL	25298.25		31761.64			
ANNUAL MEAN	69.31		87.02		43.70	
HIGHEST ANNUAL MEAN					182	1992
LOWEST ANNUAL MEAN					0.023	1983
HIGHEST DAILY MEAN	3140	Nov 15	5220	Jul 2	5220	Jul 2 2002
LOWEST DAILY MEAN	0.00	Jul 30	0.71	Jun 25	0.00	Feb 7 1978
ANNUAL SEVEN-DAY MINIMUM	0.00	Jul 30	0.86	Jun 19	0.00	Feb 7 1978
MAXIMUM PEAK FLOW			25300	Jul 2	25300	Jul 2 2002
MAXIMUM PEAK STAGE			a22.82	Jul 2	a22.82	Jul 2 2002
ANNUAL RUNOFF (AC-FT)	50180		63000		31660	
10 PERCENT EXCEEDS	132		175		97	
50 PERCENT EXCEEDS	57		11		4.6	
90 PERCENT EXCEEDS	0.36		1.3		0.00	

e Estimated
a From floodmark.
h See PERIOD OF RECORD paragraph.

08155200 Barton Creek at State Highway 71 near Oak Hill, TX--Continued



08155200 Barton Creek at State Highway 71 near Oak Hill, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--
CHEMICAL DATA: Apr. 1978 to Sept. 1982, Feb. 1989 to current year.
BIOCHEMICAL DATA: Apr. 1978 to Sept. 1982, Feb. 1989 to current year.
RADIOCHEMICAL DATA: Oct. 1979 to Sept. 1980.
PESTICIDE DATA: Apr. 1978 to Sept. 1982, Jan. 1998 to Sept. 2000, Oct. 2001 to current year.
SUSPENDED SEDIMENT CHEMISTRY: Nov. 1998 to current year.
SEDIMENT DATA: Nov. 1998 to current year.

INSTRUMENTATION.--Stage-activated automatic sampler.

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

Date	Time	DIS-CHARGE, IN CUBIC FEET PER SECOND (00060)	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)	TURBID-ITY LAB HACH 2100AN (NTU) (99872)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L) (00340)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	E COLI, MTEC MF WATER (COL/ 100 ML) (31633)
NOV													
06...	1155	--	4.2	561	7.7	18.8	8	.8	7.8	84	<10	36	24
NOV													
15-16	1155	4610	--	170	7.9	--	175	270	--	--	90	1500k	2400
FEB													
13...	0815	--	25	587	8.0	9.4	<1	2.5	11.0	97	<10	--	--
14...	0900	--	24	--	--	--	--	--	--	--	--	3	4
APR													
10...	1017	--	12	561	7.8	19.3	5	2.7	7.5	82	<10	32	42
JUN													
30-30	0505	930	--	275	7.9	--	75	550	--	--	50	E3440k	E1700k
JUL													
16-17	0855	358	--	510	8.0	--	12	11	--	--	20	59000	39000
AUG													
28...	1116	--	6.3	522	7.8	29.0	8	.6	6.4	85	<10	37	37

Date	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	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,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)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
NOV													
06...	202	<10	--	<.008	<.05	E.03	--	--	.14	<.06	<.06	E.01	4.2
NOV													
15-16	65	1120	--	E.005	.10	.07	3.4	3.2	3.3	.44	<.06	<.02	42.4
FEB													
13...	214	<10	--	<.008	.09	<.04	.21	--	.11	<.06	<.06	<.02	1.1
14...	--	--	--	--	--	--	--	--	--	--	--	--	--
APR													
10...	191	<10	--	<.008	E.03	<.04	--	--	.11	<.06	<.06	<.02	1.5
JUN													
30-30	90	576	.25	.010	.26	<.04	2.4	--	2.2	.34	E.05	E.02	24.0
JUL													
16-17	216	<40	--	<.008	.34	<.04	1.4	--	1.0	<.06	<.06	E.01	11.1
AUG													
28...	196	<10	--	<.008	<.05	<.04	--	--	.12	<.06	<.06	<.02	1.7

Date	CHLOR-A PHYTO-PLANK-TON CHROMO FLUOROM (UG/L) (70953)	CHLOR-B PHYTO-PLANK-TON CHROMO FLUOROM (UG/L) (70954)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	CADMIUM WATER UNFLTRD TOTAL (UG/L AS CD) (01027)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU) (01042)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB) (01051)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN) (01092)	2,4-D, DIS-SOLVED (UG/L) (39732)	2,4-DB WATER, FLTRD, GF 0.7U REC (UG/L) (38746)	2,6-DI-ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	3HYDRXY CARBO-FURAN WAT,FLT GF 0.7U REC (UG/L) (49308)	ACETO-CHLOR, WATER FLTRD REC (UG/L) (49260)
NOV													
06...	<.1	<.1	--	--	<.1	<1.0	<1	V97	--	--	--	--	--
NOV													
15-16	--	--	14900	1200	.2	9.5	14	35	--	--	--	--	--
FEB													
13...	<.1	<.1	--	--	<.1	<1.0	<1	1	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--	--	--
APR													
10...	--	--	--	--	<.1	<1.0	<1	2	--	--	--	--	--
JUN													
30-30	--	--	1680	669	E.1	6.6	8	20	<.02	<.02	<.006	<.006	<.006
JUL													
16-17	--	--	297	307	.8	3.0	4	22	<.02	<.02	<.006	<.006	<.006
AUG													
28...	<.1	<.1	--	--	E.1	E.7	<1	1	--	--	--	--	--

08155200 Barton Creek at State Highway 71 near Oak Hill, TX--Continued

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

Date	ACIFL-UORFEN WATER, FLTRD, GF 0.7U REC (UG/L) (49315)	ALA-CHLOR, WATER, DISS, REC, (UG/L) (46342)	ALDI-CARB, WATER, FLTRD, GF 0.7U REC (UG/L) (49312)	ALDI-CARB SULFONE WAT,FLT GF 0.7U REC (UG/L) (49313)	ALDICA-RB SUL-FOXIDE, WAT,FLT GF 0.7U REC (UG/L) (49314)	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)	BENTA-ZON, WATER, FLTRD, GF 0.7U REC (UG/L) (38711)	BRO-MACIL, WATER, DISS, REC (UG/L) (04029)	BRO-MOXYNIL WATER, FLTRD, GF 0.7U REC (UG/L) (49311)	BUTYL-ATE, WATER, DISS, REC (UG/L) (04028)
NOV 06...	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV 15-16	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 13...	--	--	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--	--	--
APR 10...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN 30-30	<.007	<.004	<.04	<.02	<.008	<.005	.013	<.050	<.010	<.01	<.03	<.02	<.002
JUL 16-17	<.007	<.004	<.04	<.02	<.008	<.005	E.006	<.050	<.010	<.01	<.03	<.02	<.002
AUG 28...	--	--	--	--	--	--	--	--	--	--	--	--	--

Date	CAR-BARYL, WATER, FLTRD, GF 0.7U REC (UG/L) (49310)	CAR-BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBO-FURAN, WATER, FLTRD, GF 0.7U REC (UG/L) (49309)	CARBO-FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	CHLORO-THALO-NIL, WAT,FLT GF 0.7U REC (UG/L) (49306)	CHLOR-PYRIFOS DIS-SOLVED (UG/L) (38933)	PER-METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	CLOPYR-ALID, WATER, FLTRD, GF 0.7U REC (UG/L) (49305)	CYANA-ZINE, WATER, DISS, REC (UG/L) (04041)	DACTHAL MONO-ACID, WAT,FLT GF 0.7U REC (UG/L) (49304)	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)
NOV 06...	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV 15-16	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 13...	--	--	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--	--	--
APR 10...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN 30-30	.07	E.230	<.006	<.020	<.04	<.005	<.006	<.01	<.018	<.01	<.003	<.006	.010
JUL 16-17	<.03	<.041	<.006	<.020	<.04	.013	<.006	<.01	<.018	<.01	<.003	<.006	E.004
AUG 28...	--	--	--	--	--	--	--	--	--	--	--	--	--

Date	DICAMBA WATER, FLTRD, GF 0.7U REC (UG/L) (38442)	DICHLOR PROP, WATER, FLTRD, GF 0.7U REC (UG/L) (49302)	DI-ELDRIN DIS-SOLVED (UG/L) (39381)	DINOSEB WATER, FLTRD, GF 0.7U REC (UG/L) (49301)	DISUL-FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	DIURON, WATER, FLTRD, GF 0.7U REC (UG/L) (49300)	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)	FEN-URON, WATER, FLTRD, GF 0.7U REC (UG/L) (49297)	FLUO-METURON WATER, FLTRD, GF 0.7U REC (UG/L) (38811)	FONOFOS WATER DISS REC (UG/L) (04095)	LINDANE DIS-SOLVED (UG/L) (39341)
NOV 06...	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV 15-16	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 13...	--	--	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--	--	--
APR 10...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN 30-30	<.01	<.01	<.005	<.01	<.02	<.01	<.002	<.009	<.005	<.03	<.03	<.003	<.004
JUL 16-17	<.01	<.01	<.005	<.01	<.02	<.01	<.002	<.009	<.005	<.03	E.01	<.003	<.004
AUG 28...	--	--	--	--	--	--	--	--	--	--	--	--	--

08155200 Barton Creek at State Highway 71 near Oak Hill, TX--Continued

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

Date	LINURON WATER, FLTRD, GF 0.7U REC (UG/L) (38478)	LIN-URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA-THION, DIS-SOLVED (UG/L) (39532)	MCPA, WATER, FLTRD, GF 0.7U REC (UG/L) (38482)	MCPB, WATER, FLTRD, GF 0.7U REC (UG/L) (38487)	METHIO-CARB, WATER, FLTRD, GF 0.7U REC (UG/L) (38501)	METH-OMYL, WATER, FLTRD, GF 0.7U REC (UG/L) (49296)	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)	NEB-URON, WATER, FLTRD, GF 0.7U REC (UG/L) (49294)	NORFLUR AZON, WATER, FLTRD, GF 0.7U REC (UG/L) (49293)
NOV													
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV													
15-16	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB													
13...	--	--	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--	--	--
APR													
10...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN													
30-30	<.01	<.035	<.027	<.02	<.01	<.008	<.004	E.009n	<.006	<.002	<.007	<.01	<.02
JUL													
16-17	<.01	<.035	<.027	<.02	<.01	<.008	<.004	<.013	<.006	<.002	<.007	<.01	<.02
AUG													
28...	--	--	--	--	--	--	--	--	--	--	--	--	--

Date	ORY-ZALIN, WATER, FLTRD, GF 0.7U REC (UG/L) (49292)	OXAMYL, WATER, FLTRD, GF 0.7U REC (UG/L) (38866)	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)	PIC-LORAM, WATER, FLTRD, GF 0.7U REC (UG/L) (49291)	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)
NOV													
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV													
15-16	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB													
13...	--	--	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--	--	--
APR													
10...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN													
30-30	<.02	<.01	<.003	<.010	<.006	<.004	<.022	<.011	<.02	<.01	<.010	<.011	<.02
JUL													
16-17	<.02	<.01	<.003	<.010	<.006	<.004	<.022	<.011	<.02	<.01	<.010	<.011	<.02
AUG													
28...	--	--	--	--	--	--	--	--	--	--	--	--	--

Date	PRO-PHAM, WATER, FLTRD, GF 0.7U REC (UG/L) (49236)	PRO-POXUR, WATER, FLTRD, GF 0.7U REC (UG/L) (38538)	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-CLOPYR, WATER, FLTRD, GF 0.7U REC (UG/L) (49235)	TRI-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)
NOV											
06...	--	--	--	--	--	--	--	--	--	--	--
NOV											
15-16	--	--	--	--	--	--	--	--	--	--	--
FEB											
13...	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--
APR											
10...	--	--	--	--	--	--	--	--	--	--	--
JUN											
30-30	<.010	<.008	<.004	<.005	<.02	<.034	<.02	<.005	<.002	<.02	<.009
JUL											
16-17	<.010	<.008	<.004	<.005	<.02	<.034	<.02	<.005	<.002	.04	<.009
AUG											
28...	--	--	--	--	--	--	--	--	--	--	--

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

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

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08155240 Barton Creek at Lost Creek Boulevard, Austin, TX

LOCATION.--Lat 30°16'26", long 97°50'40", Travis County, Hydrologic Unit 12090205, 1.4 mi southwest of intersection of Lost Creek Boulevard and Loop 360, and 6.2 mi west of State Capitol Building in Austin.

DRAINAGE AREA.--107 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Jan. 1979 to Sept. 1980 (periodic gage heights and discharge measurements only), Dec. 1988 to current year.

GAGE.--Water-stage recorder. Datum of gage is 600 ft above NGVD of 1929, from topographic map. Satellite telemeter at station.

REMARKS.--Records fair except for those daily discharges below 15 ft^3/s, which are poor. No known regulation or diversions. No flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--The flood of May 28, 1929, was probably the highest since that date (discharge 39,400 ft^3/s), based on slope-area measurement of peak flow at a site about 2.1 mi downstream.

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	2.8	7.9	75	85	44	22	29	6.2	4.8	332	105	13
2	2.5	7.9	82	82	41	22	23	5.9	3.9	5770	95	9.6
3	2.6	7.2	129	80	41	21	18	10	2.9	2400	95	7.5
4	2.4	7.7	121	77	40	20	16	8.9	2.3	1060	69	6.5
5	2.2	6.6	116	150	47	26	15	6.4	1.7	1580	51	6.0
6	1.8	6.5	111	135	55	32	14	5.2	1.3	751	48	5.6
7	1.7	5.9	106	101	52	32	16	4.4	1.0	673	44	7.6
8	1.5	5.4	485	92	45	20	21	4.1	1.1	454	43	14
9	1.4	6.4	268	88	42	18	25	3.7	1.5	393	49	33
10	1.3	5.4	216	87	39	17	23	3.2	1.4	402	45	30
11	5.5	5.0	207	84	38	17	19	2.7	0.81	391	43	19
12	13	5.1	235	79	37	17	18	2.4	0.63	272	38	15
13	57	4.7	211	77	36	17	17	2.1	0.64	237	35	12
14	52	3.9	208	72	36	17	16	1.9	0.52	218	31	10
15	36	1090	351	70	34	16	15	1.5	0.43	189	e27	9.2
16	25	2930	463	68	32	15	14	1.7	1.6	311	25	8.9
17	19	256	337	66	31	14	14	1.8	1.1	335	23	8.8
18	16	182	277	64	32	14	13	1.2	0.81	383	21	8.2
19	15	140	241	62	31	18	12	1.0	0.60	302	19	8.7
20	14	119	214	60	30	23	12	1.1	0.52	260	17	8.4
21	13	107	196	58	27	21	11	1.5	0.41	240	16	9.1
22	11	97	183	55	25	19	11	1.4	0.36	198	15	9.5
23	11	91	159	56	24	16	11	0.97	0.30	165	13	7.2
24	11	85	149	56	24	18	11	0.92	0.39	160	12	5.9
25	8.5	77	143	53	24	16	10	0.85	0.32	135	11	5.2
26	8.0	73	134	49	21	14	9.9	0.81	4.6	123	11	4.7
27	8.1	67	121	48	21	14	9.5	0.77	19	146	10	4.3
28	7.7	e70	113	47	21	14	8.7	3.7	7.1	150	8.6	3.8
29	7.3	88	104	46	---	13	7.6	7.2	3.9	104	8.8	3.8
30	6.7	83	96	47	---	23	6.6	6.4	551	116	9.0	3.6
31	6.9	---	91	48	---	29	---	5.3	---	114	11	---
TOTAL	371.9	5640.6	5942	2242	970	595	446.3	105.22	616.94	18364	1048.4	298.1
MEAN	12.00	188.0	191.7	72.32	34.64	19.19	14.88	3.394	20.56	592.4	33.82	9.937
MAX	57	2930	485	150	55	32	29	10	551	5770	105	33
MIN	1.3	3.9	75	46	21	13	6.6	0.77	0.30	104	8.6	3.6
AC-FT	738	11190	11790	4450	1920	1180	885	209	1220	36420	2080	591

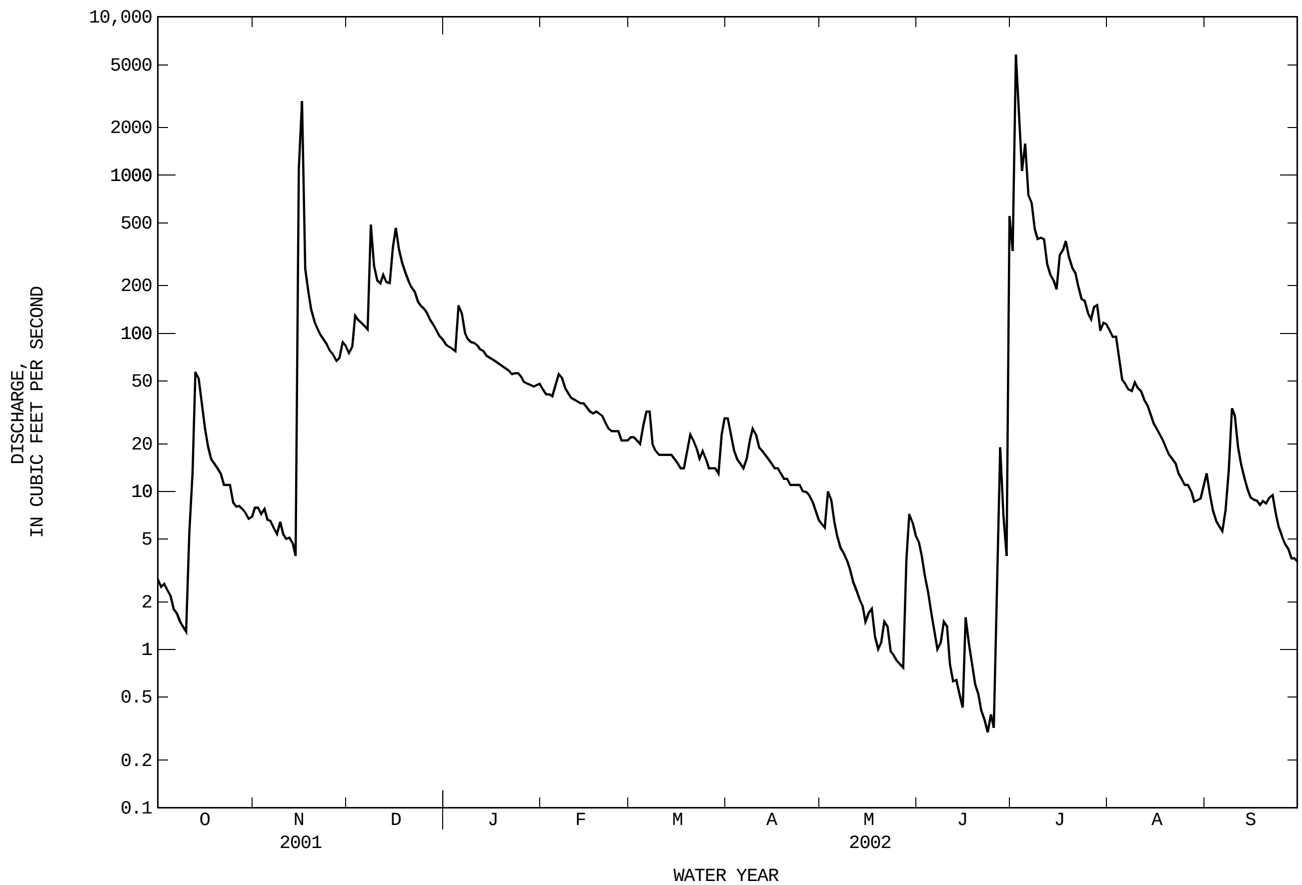
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	27.18	45.43	84.18	69.73	88.72	75.67	57.90	81.08	98.56	53.55	5.434	3.747
MAX	269	188	627	307	581	381	247	264	701	592	33.8	25.6
(WY)	1999	1999	1992	1992	1992	1992	1997	1992	1997	2002	2002	1991
MIN	0.025	0.23	0.22	0.40	0.96	0.81	0.84	0.42	0.93	0.17	0.005	0.001
(WY)	2000	2000	1990	1990	1996	1996	1996	1996	1998	1996	1998	2000

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1989 - 2002	
ANNUAL TOTAL	29492.93		36640.46			
ANNUAL MEAN	80.80		100.4		57.54	
HIGHEST ANNUAL MEAN					212	1992
LOWEST ANNUAL MEAN					1.14	1996
HIGHEST DAILY MEAN	2930	Nov 16	5770	Jul 2	7000	Dec 21 1991
LOWEST DAILY MEAN	0.00	Aug 1	0.30	Jun 23	0.00	Aug 24 1993
ANNUAL SEVEN-DAY MINIMUM	0.00	Aug 1	0.41	Jun 19	0.00	Aug 24 1993
MAXIMUM PEAK FLOW			c26600	Jul 2	c26600	Jul 2 2002
MAXIMUM PEAK STAGE			a15.90	Jul 2	a15.90	Jul 2 2002
ANNUAL RUNOFF (AC-FT)	58500		72680		41690	
10 PERCENT EXCEEDS	174		207		132	
50 PERCENT EXCEEDS	43		19		6.5	
90 PERCENT EXCEEDS	0.22		1.7		0.19	

e Estimated
a From floodmark.
c From rating curve extended above 17,400 ft^3/s on basis of velocity-area study.

08155240 Barton Creek at Lost Creek Boulevard, Austin, TX--Continued



08155240 Barton Creek at Lost Creek Boulevard, Austin, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--
CHEMICAL DATA: Dec. 1988 to current year.
BIOCHEMICAL DATA: Dec. 1988 to current year.
PESTICIDE DATA: Jan. 1993 to May 1995.
SEDIMENT DATA: May 1999 to current year.

INSTRUMENTATION.--Stage-activated automatic sampler.

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

Date	Time	DIS-CHARGE, IN CUBIC FEET PER SECOND (00060)	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)	TURBID-ITY LAB HACH 2100AN (NTU) (99872)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L) (00340)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	E COLI, MTEC MF WATER (COL/ 100 ML) (31633)
NOV													
06...	1330	--	6.8	640	7.7	18.6	10	.8	7.9	85	<10	56	29
NOV													
15-16	1635	6780	--	188	7.8	--	250	350	--	--	110	3530	4300
FEB													
13...	0955	--	36	594	8.0	10.0	5	.5	11.0	98	<10	--	--
14...	1000	--	35	--	--	--	--	--	--	--	--	11	9
APR													
10...	1242	--	21	579	7.9	19.4	5	1.9	7.9	86	<10	22	E16k
JUN													
30-30	0350	599	--	329	7.9	--	52	360	--	--	20	10000	E5400k
JUL													
16-16	1035	397	--	522	8.0	--	10	64	--	--	<10	--	--
AUG													
27...	1030	--	11	530	7.8	29.2	5	1.1	5.9	78	<10	32	E11k

Date	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	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 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)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	CHLOR-A PHYTO-PLANK-TON CHROMO FLUOROM (UG/L) (70953)
NOV													
06...	202	<10	--	<.008	.17	<.04	.31	.14	<.06	<.06	<.02	2.4	<.1
NOV													
15-16	68	1190	--	E.004	.10	E.03	4.5	4.4	.53	<.06	<.02	54.7	--
FEB													
13...	212	<10	--	<.008	.20	E.02	.34	.14	<.06	<.06	<.02	1.2	<.1
14...	--	--	--	--	--	--	--	--	--	--	--	--	--
APR													
10...	195	<10	--	<.008	.09	<.04	.23	.14	<.06	<.06	<.02	1.2	--
JUN													
30-30	111	440	.31	.008	.32	<.04	1.9	1.6	.21	<.06	<.02	19.6	--
JUL													
16-16	210	17	--	E.004	.23	<.04	.56	.33	E.03	<.06	E.01	4.9	--
AUG													
27...	190	<10	--	<.008	.07	<.04	.20	.13	<.06	<.06	<.02	2.0	E.1

Date	CHLOR-B PHYTO-PLANK-TON CHROMO FLUOROM (UG/L) (70954)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	CADMIUM WATER UNFLTRD TOTAL (UG/L AS CD) (01027)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU) (01042)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB) (01051)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN) (01092)
NOV							
06...	<.1	--	--	<.1	<1.0	<1	10
NOV							
15-16	--	--	--	.2	10.3	17	39
FEB							
13...	<.1	--	--	<.1	<1.0	<1	13
14...	--	--	--	--	--	--	--
APR							
10...	--	--	--	<.1	3.4	<1	3
JUN							
30-30	--	699	432	<.1	3.9	6	21
JUL							
16-16	--	86.7	81	<.1	E1.1	1	6
AUG							
27...	<.1	--	--	<.1	E.7	<1	1

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

Value qualifier codes used in this report:
k -- Counts outside acceptable range

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08155300 Barton Creek at Loop 360, Austin, TX

LOCATION.--Lat 30°14’40", long 97°48’07", Travis County, Hydrologic Unit 12090205, on Loop 360, 0.9 mi west of the intersection of Ben White and Lamar Boulevards, and 4.3 mi southwest of the State Capitol Building in Austin.

DRAINAGE AREA.--116 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1975 to Jan. 1977 (peak discharge greater than base discharge), Feb. 1977 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 510.32 ft above NGVD of 1929 (Texas Department of Transportation bench mark). Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records fair except for those daily discharges below 5.0 ft^3/s, which are poor. No known regulation or diversions. No flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--The flood of May 28, 1929, was probably the highest since that date (discharge 39,400 ft^3/s), based on a slope-area measurement of peak flow at a site about 2 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	0.0	0.0	54	67	25	7.8	13	0.0	0.0	305	35	0.0
2	0.0	0.0	65	61	23	8.4	6.4	0.0	0.0	4680	32	0.0
3	0.0	0.0	101	59	22	7.9	2.0	0.0	0.0	2320	32	0.0
4	0.0	0.0	94	58	21	7.1	0.43	0.0	0.0	920	30	0.0
5	0.0	0.0	82	140	25	6.5	0.17	0.0	0.0	1370	24	0.0
6	0.0	0.0	75	136	33	5.9	0.13	0.0	0.0	706	21	0.0
7	0.0	0.0	72	94	32	5.1	0.89	0.0	0.0	611	19	0.01
8	0.0	0.0	492	84	27	4.7	4.6	0.0	0.0	385	16	0.0
9	0.0	0.0	291	78	24	4.0	5.8	0.0	0.0	322	17	0.0
10	0.0	0.0	216	72	21	3.5	5.5	0.0	0.0	317	18	0.95
11	1.8	0.0	216	66	20	3.6	2.3	0.0	0.0	371	15	0.01
12	0.01	0.0	257	62	19	3.1	0.50	0.0	0.0	244	12	0.0
13	1.0	0.0	218	60	18	2.7	0.11	0.0	0.0	205	8.2	0.0
14	7.3	0.0	213	56	17	1.9	0.0	0.0	0.0	200	5.0	0.0
15	0.53	882	388	52	17	0.92	0.0	0.0	0.0	172	2.8	0.0
16	0.0	2800	511	49	16	0.18	0.0	0.0	0.46	256	1.1	0.0
17	0.0	283	363	47	15	0.15	0.0	0.0	0.0	275	0.17	0.0
18	0.0	181	289	44	14	0.11	0.0	0.0	0.0	316	0.04	0.0
19	0.0	138	244	42	13	0.55	0.0	0.0	0.0	217	0.0	0.0
20	0.0	115	210	41	12	9.5	0.0	0.0	0.0	179	0.0	0.0
21	0.0	96	190	39	11	3.0	0.0	0.0	0.0	156	0.0	0.0
22	0.0	83	170	37	10	2.6	0.0	0.0	0.0	138	0.0	0.0
23	0.0	73	150	35	10	1.6	0.0	0.0	0.0	117	0.0	0.0
24	0.0	63	134	34	9.1	0.58	0.0	0.0	0.0	103	0.0	0.0
25	0.0	55	125	32	8.3	0.14	0.0	0.0	0.0	91	0.0	0.0
26	0.0	48	116	31	7.2	0.11	0.0	0.0	0.12	79	0.0	0.0
27	0.0	45	106	29	7.6	0.07	0.0	0.0	0.0	68	0.0	0.0
28	0.0	113	98	28	7.2	0.02	0.0	0.52	0.0	61	0.0	0.0
29	0.0	81	89	27	---	0.0	0.0	0.0	0.0	52	0.0	0.0
30	0.0	63	77	25	---	2.8	0.0	0.0	507	45	0.0	0.0
31	0.0	---	72	25	---	9.0	---	0.0	---	40	0.0	---
TOTAL	10.64	5119.0	5778	1710	484.4	103.53	41.83	0.52	507.58	15321	288.31	0.97
MEAN	0.343	170.6	186.4	55.16	17.30	3.340	1.394	0.017	16.92	494.2	9.300	0.032
MAX	7.3	2800	511	140	33	9.5	13	0.52	507	4680	35	0.95
MIN	0.00	0.00	54	25	7.2	0.00	0.00	0.00	0.00	40	0.00	0.00
AC-FT	21	10150	11460	3390	961	205	83	1.0	1010	30390	572	1.9
CFSM	0.00	1.47	1.61	0.48	0.15	0.03	0.01	0.00	0.15	4.26	0.08	0.00
IN.	0.00	1.64	1.85	0.55	0.16	0.03	0.01	0.00	0.16	4.91	0.09	0.00

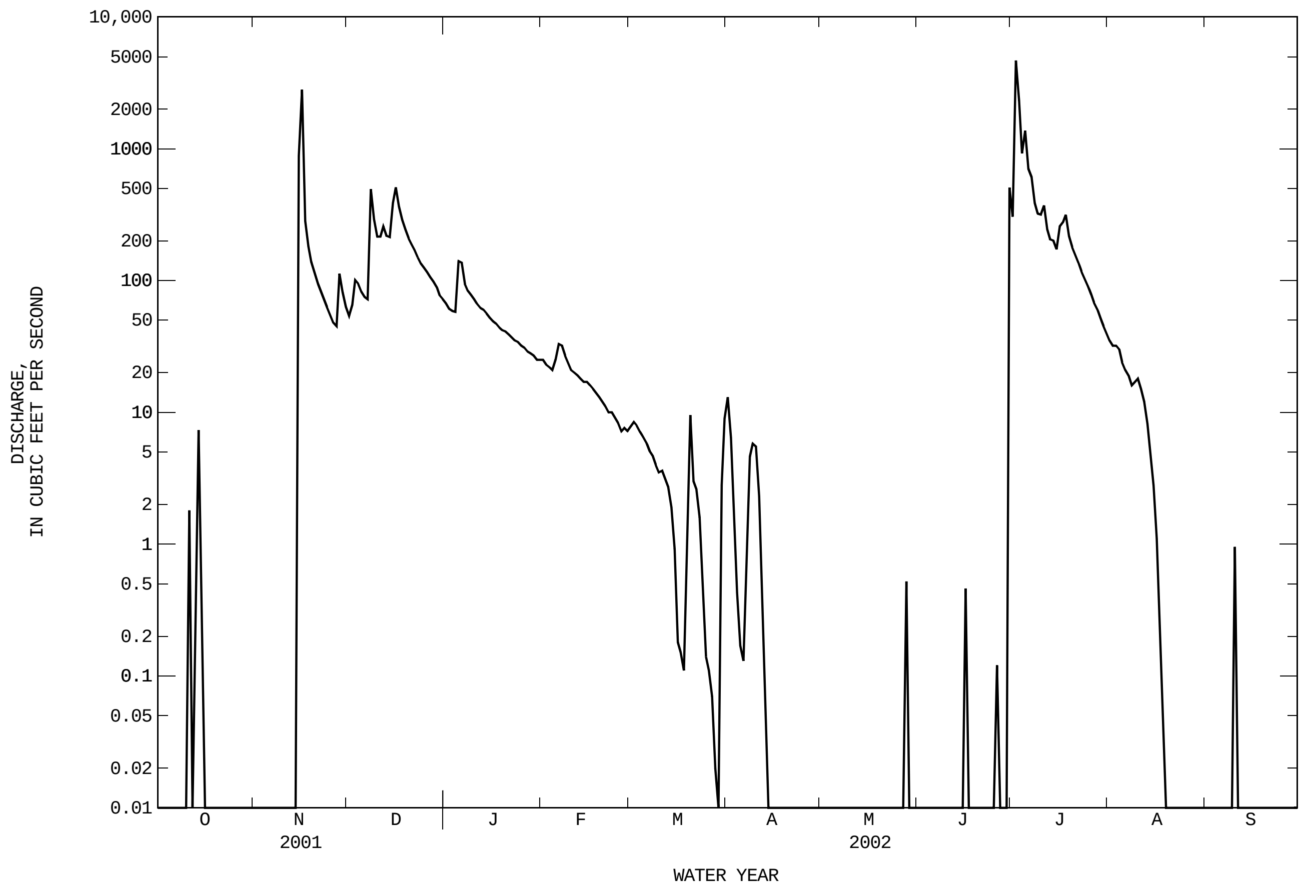
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1977 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	25.23	26.11	73.83	43.12	60.04	53.18	46.34	72.14	139.8	26.34	1.253	0.458
MAX	282	204	865	281	609	342	319	321	1142	494	13.9	7.57
(WY)	1999	1999	1992	1992	1992	1992	1977	1992	1987	2002	1991	1983
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	1978	1978	1978	1978	1978	1978	1978	1978	1978	1977	1977	1977

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1977 - 2002	
ANNUAL TOTAL	23520.50		29365.78			
ANNUAL MEAN	64.44		80.45		47.23	
HIGHEST ANNUAL MEAN					229	1992
LOWEST ANNUAL MEAN					0.000	1978
HIGHEST DAILY MEAN	2800	Nov 16	4680	Jul 2	10800	Dec 21 1991
LOWEST DAILY MEAN	0.00	Jun 5	0.00	Oct 1	0.00	Apr 11 1977
ANNUAL SEVEN-DAY MINIMUM	0.00	Jun 5	0.00	Oct 1	0.00	Jun 10 1977
MAXIMUM PEAK FLOW			i17200	Jul 2	18100	May 25 1981
MAXIMUM PEAK STAGE			17.88	Jul 2	17.88	Jul 2 2002
ANNUAL RUNOFF (AC-FT)	46650		58250		34210	
ANNUAL RUNOFF (CFSM)	0.56		0.69		0.41	
ANNUAL RUNOFF (INCHES)	7.54		9.42		5.53	
10 PERCENT EXCEEDS	137		185		101	
50 PERCENT EXCEEDS	22		1.1		0.00	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

i From field determination, based on 2-section slope-area measurement of peak flow made at site 4 miles downstream.

08155300 Barton Creek at Loop 360, Austin, TX--Continued



08155300 Barton Creek at Loop 360, Austin, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--
CHEMICAL DATA: Jan. 1979 to current year.
BIOCHEMICAL DATA: Jan. 1979 to current year.
RADIOCHEMICAL DATA: Apr. 1980.
PESTICIDE DATA: Jan. 1979 to Sept. 1986.
SEDIMENT DATA: June 1999 to current year.

INSTRUMENTATION.--Stage-activated automatic sampler.

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

Date	Time	DIS-CHARGE, IN CUBIC FEET PER SECOND (00060)	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)	TURBID-ITY LAB HACH 2100AN (NTU) (99872)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L) (00340)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	E COLI, MTEC MF WATER (COL/ 100 ML) (31633)
NOV													
15-16	1525	4820	--	185	7.8	--	125	330	--	--	110	--	--
FEB													
13...	1158	--	18	580	8.2	10.2	<1	.8	11.1	99	<10	5k	2k
APR													
10...	1420	--	5.6	553	8.1	20.6	8	1.4	8.6	97	<10	E18k	E22k
JUN													
30-30	0725	690	--	303	7.8	--	40	350	--	--	40	E10600k	E2700k

Date	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	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 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)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155)
NOV													
15-16	67	1200	--	E.005	.18	E.03	4.4	4.2	.57	<.06	<.02	51.3	19600
FEB													
13...	204	<10	--	<.008	.17	<.04	.29	.12	<.06	<.06	<.02	1.4	--
APR													
10...	180	<10	--	<.008	.07	<.04	.23	.17	<.06	<.06	<.02	1.9	--
JUN													
30-30	105	396	.30	.008	.31	<.04	2.1	1.7	.22	<.06	<.02	19.1	736

Date	SEDI-MENT, SUS-PENDED (MG/L) (80154)	CADMIUM WATER UNFLTRD TOTAL (UG/L AS CD) (01027)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU) (01042)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB) (01051)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN) (01092)
NOV					
15-16	1510	.3	11.2	18	47
FEB					
13...	--	<.1	<1.0	<1	2
APR					
10...	--	<.1	E1.0	<1	<1
JUN					
30-30	395	<.1	4.2	6	20p

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

Value qualifier codes used in this report:
k -- Counts outside acceptable range
p -- Value reported is preferred

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08155400 Barton Creek above Barton Springs, Austin, TX

LOCATION.--Lat 30°15'48", long 97°46'19", Travis County, Hydrologic Unit 12090205, on left bank of Barton Creek approximately 200 ft above Barton Springs Pool.

DRAINAGE AREA.--125 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Sept. 1981 to Oct. 1984 (daily mean discharge less than base discharge), Sept. 1998 to current year.

GAGE.--Water-stage recorder. Datum of gage is 430.5 ft above NGVD of 1929. Satellite telemeter at station.

REMARKS.--Records poor. 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	0.71	1.0	38	61	21	4.9	4.5	2.8	2.1	155	28	3.7
2	0.72	1.1	47	56	19	4.6	4.3	3.0	2.0	4440	25	3.6
3	0.76	1.0	67	51	19	3.9	3.9	2.9	2.0	3160	27	3.5
4	0.77	1.0	65	48	18	3.6	3.8	2.7	1.9	1780	27	3.2
5	0.78	1.0	57	155	23	3.3	3.7	2.6	1.9	1850	16	3.2
6	0.78	1.0	50	167	32	3.3	3.9	2.6	1.8	1410	13	3.1
7	0.77	1.0	46	88	32	3.3	4.2	2.5	2.0	1290	11	3.8
8	0.79	1.1	114	73	27	3.2	4.6	2.9	2.3	1060	7.9	4.3
9	0.79	0.95	e101	68	24	3.9	4.5	3.6	2.6	923	5.6	4.2
10	0.79	0.92	e90	64	21	5.2	4.1	3.5	2.2	680	9.7	4.0
11	1.3	0.88	e89	59	18	5.2	4.0	3.4	2.1	645	6.9	3.8
12	1.1	0.85	e102	53	18	4.9	3.8	3.7	2.1	354	5.4	3.4
13	2.0	0.79	143	50	17	4.9	3.8	3.7	2.2	268	4.0	2.9
14	1.7	0.83	147	47	19	5.0	3.6	3.5	2.2	191	3.5	2.9
15	1.4	732	422	43	15	4.9	3.7	3.2	2.2	154	3.4	2.6
16	1.2	2950	818	40	13	4.7	4.2	3.3	3.2	263	3.5	2.2
17	1.1	611	534	39	12	4.9	3.9	3.2	3.1	279	3.4	2.0
18	1.1	385	395	37	12	4.9	4.1	3.1	2.9	338	3.5	2.0
19	1.1	236	331	35	12	4.7	4.1	3.0	2.7	208	3.6	2.3
20	1.1	217	275	34	9.7	6.8	4.1	2.9	2.7	161	3.7	2.3
21	1.1	204	245	32	9.1	5.5	3.7	2.8	2.6	141	3.5	1.9
22	1.1	196	221	31	7.1	5.2	3.2	2.8	2.3	130	3.4	1.1
23	1.2	145	190	30	6.2	5.3	3.0	2.8	2.1	119	3.4	1.2
24	1.1	53	162	29	6.0	5.5	3.0	2.9	1.9	109	3.5	1.1
25	1.0	43	147	26	5.9	5.5	2.9	2.9	2.0	97	3.6	1.1
26	1.0	37	132	25	4.8	5.3	2.9	2.7	2.4	83	3.6	1.1
27	1.0	33	115	24	4.7	5.2	2.8	2.4	2.6	67	3.6	1.1
28	1.0	105	96	24	4.7	5.2	3.8	3.1	2.5	50	3.6	1.1
29	1.0	62	83	23	---	5.1	3.7	2.7	2.4	44	3.6	1.0
30	1.0	44	73	22	---	5.1	3.1	2.4	469	41	3.5	1.0
31	1.0	---	66	21	---	4.8	---	2.2	---	34	3.6	---
TOTAL	32.26	6066.42	5461	1555	430.2	147.8	112.9	91.8	536.0	20524	250.0	74.7
MEAN	1.041	202.2	176.2	50.16	15.36	4.768	3.763	2.961	17.87	662.1	8.065	2.490
MAX	2.0	2950	818	167	32	6.8	4.6	3.7	469	4440	28	4.3
MIN	0.71	0.79	38	21	4.7	3.2	2.8	2.2	1.8	34	3.4	1.0
AC-FT	64	12030	10830	3080	853	293	224	182	1060	40710	496	148

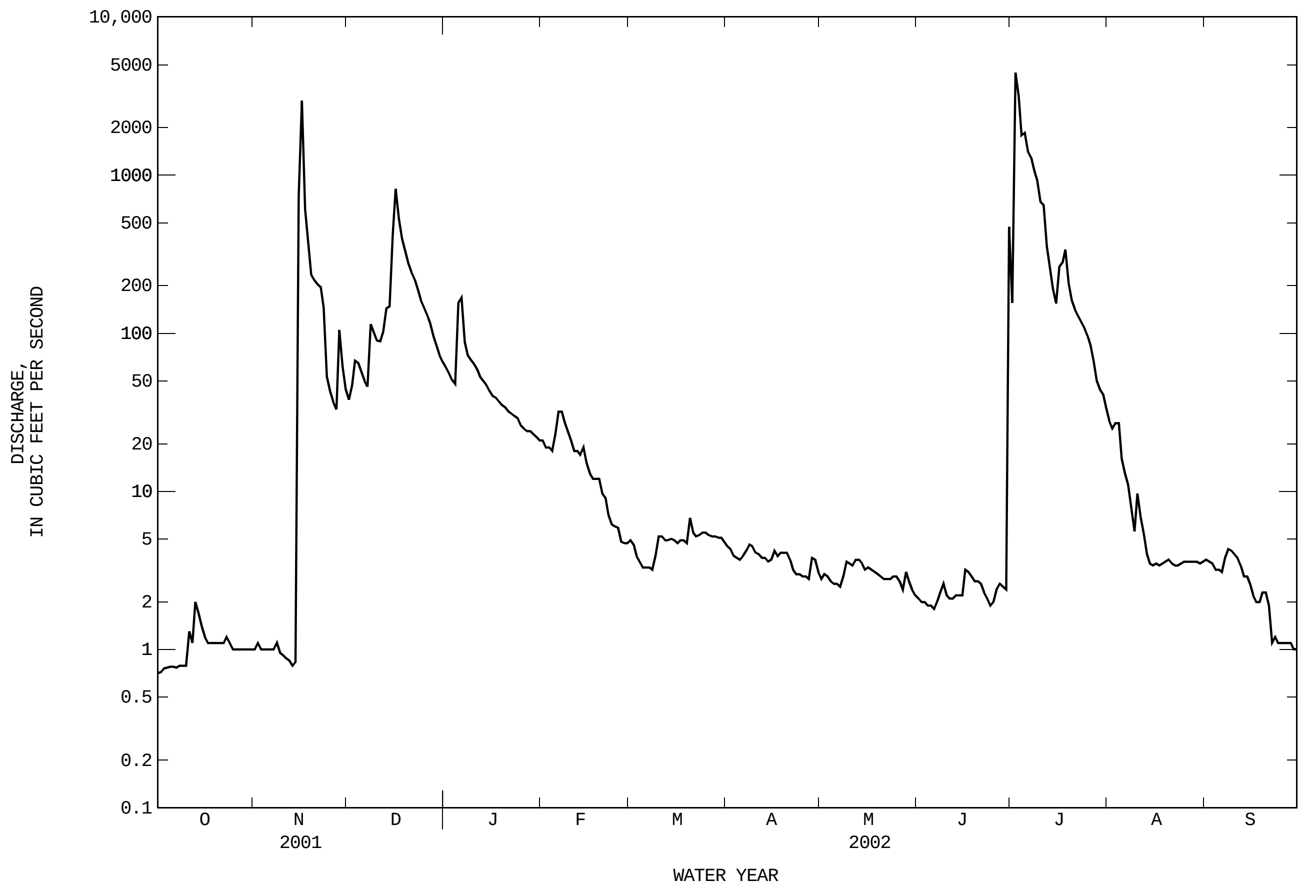
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1998 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	105.7	215.2	96.82	56.00	20.12	36.06	17.83	11.06	14.70	166.5	4.327	1.157
MAX	422	566	176	162	63.5	138	65.7	35.1	32.5	662	9.05	2.49
(WY)	1999	1999	2002	2001	2001	2001	2001	2001	2000	2002	2001	2002
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.31	3.07	0.001	0.000	0.000
(WY)	2000	2000	2000	2000	2000	2000	2000	2000	2001	2000	2000	2000

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1998 - 2002	
ANNUAL TOTAL	26184.14		35282.08			
ANNUAL MEAN	71.74		96.66		62.14	
HIGHEST ANNUAL MEAN					96.9	1999
LOWEST ANNUAL MEAN					1.40	1998
HIGHEST DAILY MEAN	2950	Nov 16	4440	Jul 2	4440	Jul 2 2002
LOWEST DAILY MEAN	0.71	Oct 1	0.71	Oct 1	0.00	Sep 4 1999
ANNUAL SEVEN-DAY MINIMUM	0.75	Sep 28	0.76	Oct 1	0.00	Sep 6 1999
MAXIMUM PEAK FLOW			i17200	Jul 2	i17200	Jul 2 2002
MAXIMUM PEAK STAGE			a18.21	Jul 2	a18.21	Jul 2 2002
ANNUAL RUNOFF (AC-FT)	51940		69980		45020	
10 PERCENT EXCEEDS	164		164		148	
50 PERCENT EXCEEDS	19		4.1		2.2	
90 PERCENT EXCEEDS	0.98		1.1		0.00	

a From floodmark.
e Estimated
i Field determination based on slope-area measurement of peak flow.

08155400 Barton Creek above Barton Springs, Austin, TX--Continued



08155400 Barton Creek above Barton Springs, Austin, TX

WATER-QUALITY RECORDS

DRAINAGE AREA.--125 mi^2.

PERIOD OF RECORD.--
CHEMICAL DATA: Oct. 1998 to current year.
BIOCHEMICAL DATA: Oct. 1998 to current year.
PESTICIDE DATA: Oct. 1998 to current year.
SUSPENDED SEDIMENT CHEMISTRY: May 1999 to current year.
SEDIMENT DATA: May 1999 to current year.

INSTRUMENTATION.--Stage-activated automatic sampler.

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

Date	Time	DIS-CHARGE, IN CUBIC FEET PER SECOND (00060)	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)	TURBID-ITY LAB HACH 2100AN (NTU) (99872)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L) (00340)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	E COLI, MTEC MF WATER (COL/ 100 ML) (31633)
NOV 07...	0935	--	1.0	649	7.5	18.9	12	.8	7.8	84	<10	45	28
NOV 15-15	1540	1880	--	122	7.9	--	150	140	--	--	50	18800	16000
FEB 13...	1400	--	17	590	7.8	15.3	<1	.6	11.4	114	<10	12	7
APR 11...	1106	--	4.1	618	7.2	20.3	<1	1.4	6.4	71	<10	43	37
JUN 30-30	0455	580	--	305	7.6	--	50	240	--	--	30	16800	14000
AUG 27...	1312	--	3.6	617	7.3	25.7	2	3.1	6.6	82	<10	111	48

Date	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	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 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)
NOV 07...	284	<10	--	<.008	1.97	E.02	--	E.07	<.06	<.06	<.02	--	2.7
NOV 15-15	42	248	--	E.006	.55	E.02	2.1	1.6	.44	E.05	.05	.141	29.3
FEB 13...	220	<10	--	<.008	.62	<.04	.73	.10	<.06	<.06	<.02	--	1.2
APR 11...	262	<10	--	E.006	1.23	<.04	--	E.10	<.06	<.06	<.02	--	1.0
JUN 30-30	102	282	.29	.010	.30	<.04	2.0	1.7	.18	<.06	<.02	--	13.5
AUG 27...	262	<10	--	<.008	1.18	<.04	1.3	.10	<.06	<.06	<.02	--	1.4

Date	CHLOR-A PHYTO-PLANK-TON CHROMO FLUOROM (UG/L) (70953)	CHLOR-B PHYTO-PLANK-TON CHROMO FLUOROM (UG/L) (70954)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	CADMIUM WATER UNFLTRD TOTAL (UG/L AS CD) (01027)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU) (01042)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB) (01051)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN) (01092)	2,4-D, DIS-SOLVED (UG/L) (39732)	2,4-DB WATER, FLTRD, GF 0.7U REC (UG/L) (38746)	2,6-DI-ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	3HYDRXY CARBO-FURAN WAT,FLT GF 0.7U REC (UG/L) (49308)	ACETO-CHLOR, WATER FLTRD REC (UG/L) (49260)
NOV 07...	.1	<.1	--	--	<.1	<1.0	<1	2	--	--	--	--	--
NOV 15-15	--	--	2780	547	.2	6.5	16	44	--	--	--	--	--
FEB 13...	E.2	<.1	--	--	<.1	<1.0	<1	1	--	--	--	--	--
APR 11...	--	--	--	--	<.1	<1.0	<1	<1	--	--	--	--	--
JUN 30-30	--	--	404	258	<.1	3.6	4	13	<.02	<.02	<.006	<.006	<.006
AUG 27...	E.2	<.1	--	--	<.1	E.7	<1	2	--	--	--	--	--

08155400 Barton Creek above Barton Springs, Austin, TX--Continued

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

Date	ACIFL- UORFEN WATER, FLTRD, GF 0.7U REC (UG/L) (49315)	ALA- CHLOR, WATER, DISS, REC, (UG/L) (46342)	ALDI- CARB, WATER, FLTRD, GF 0.7U REC (UG/L) (49312)	ALDI- CARB SULFONE WAT,FLT GF 0.7U REC (UG/L) (49313)	ALDICA- RB SUL- FOXIDE, WAT,FLT GF 0.7U REC (UG/L) (49314)	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)	BENTA- ZON, WATER, FLTRD, GF 0.7U REC (UG/L) (38711)	BRO- MACIL, WATER, DISS, REC (UG/L) (04029)	BRO- MOXYNIL WATER, FLTRD, GF 0.7U REC (UG/L) (49311)	BUTYL- ATE, WATER, DISS, REC (UG/L) (04028)
NOV 07...	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV 15-15	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 13...	--	--	--	--	--	--	--	--	--	--	--	--	--
APR 11...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN 30-30	<.007	<.004	<.04	<.02	<.008	<.005	.113	<.050	<.010	<.01	<.03	<.02	<.002
AUG 27...	--	--	--	--	--	--	--	--	--	--	--	--	--

Date	CAR- BARYL, WATER, FLTRD, GF 0.7U REC (UG/L) (49310)	CAR- BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBO- FURAN, WATER, FLTRD, GF 0.7U REC (UG/L) (49309)	CARBO- FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	CHLORO- THALO- NIL, WAT,FLT GF 0.7U REC (UG/L) (49306)	CHLOR- PYRIFOS DIS- SOLVED (UG/L) (38933)	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	CLOPYR- ALID, WATER, FLTRD, GF 0.7U REC (UG/L) (49305)	CYANA- ZINE, WATER, DISS, REC (UG/L) (04041)	DACTHAL MONO- ACID, WAT,FLT GF 0.7U REC (UG/L) (49304)	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)
NOV 07...	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV 15-15	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 13...	--	--	--	--	--	--	--	--	--	--	--	--	--
APR 11...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN 30-30	.05	E.144	<.006	<.020	<.04	<.005	<.006	<.01	<.018	<.01	<.003	E.008	.011
AUG 27...	--	--	--	--	--	--	--	--	--	--	--	--	--

Date	DICAMBA WATER, FLTRD, GF 0.7U REC (UG/L) (38442)	DICHLOR PROP, WATER, FLTRD, GF 0.7U REC (UG/L) (49302)	DI- ELDRIN DIS- SOLVED (UG/L) (39381)	DINOSEB WATER, FLTRD, GF 0.7U REC (UG/L) (49301)	DISUL- FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	DIURON, WATER, FLTRD, GF 0.7U REC (UG/L) (49300)	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)	FEN- URON, WATER, FLTRD, GF 0.7U REC (UG/L) (49297)	FLUO- METURON WATER, FLTRD, GF 0.7U REC (UG/L) (38811)	FONOFOS WATER DISS REC (UG/L) (04095)	LINDANE DIS- SOLVED (UG/L) (39341)
NOV 07...	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV 15-15	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 13...	--	--	--	--	--	--	--	--	--	--	--	--	--
APR 11...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN 30-30	<.01	<.01	<.005	<.01	<.02	<.01	<.002	<.009	<.005	<.03	<.03	<.003	<.004
AUG 27...	--	--	--	--	--	--	--	--	--	--	--	--	--

Date	LINURON WATER, FLTRD, GF 0.7U REC (UG/L) (38478)	LIN- URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA- THION, DIS- SOLVED (UG/L) (39532)	MCPA, WATER, FLTRD, GF 0.7U REC (UG/L) (38482)	MCPB, WATER, FLTRD, GF 0.7U REC (UG/L) (38487)	METHIO- CARB, WATER, FLTRD, GF 0.7U REC (UG/L) (38501)	METH- OMYL, WATER, FLTRD, GF 0.7U REC (UG/L) (49296)	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)	NEB- URON, WATER, FLTRD, GF 0.7U REC (UG/L) (49294)	NORFLUR AZON, WATER, FLTRD, GF 0.7U REC (UG/L) (49293)
NOV 07...	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV 15-15	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 13...	--	--	--	--	--	--	--	--	--	--	--	--	--
APR 11...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN 30-30	<.01	<.035	<.027	<.02	<.01	<.008	<.004	<.013	<.006	<.002	<.007	<.01	<.02
AUG 27...	--	--	--	--	--	--	--	--	--	--	--	--	--

08155400 Barton Creek above Barton Springs, Austin, TX--Continued

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

Date	ORYZALIN, WATER, FLTRD, GF 0.7U REC (UG/L) (49292)	OXAMYL, WATER, FLTRD, GF 0.7U REC (UG/L) (38866)	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)	PICLORAM, WATER, FLTRD, GF 0.7U REC (UG/L) (49291)	PROMETON, WATER, DISS, REC (UG/L) (04037)	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)
NOV 07...	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV 15-15	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 13...	--	--	--	--	--	--	--	--	--	--	--	--	--
APR 11...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN 30-30	<.02	<.01	<.003	<.010	<.006	<.004	<.022	<.011	<.02	<.01	<.010	<.011	<.02
AUG 27...	--	--	--	--	--	--	--	--	--	--	--	--	--

Date	PROPHAM, WATER, FLTRD, GF 0.7U REC (UG/L) (49236)	PROPOXUR, WATER, FLTRD, GF 0.7U REC (UG/L) (38538)	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)	TRICLOPYR, WATER, FLTRD, GF 0.7U REC (UG/L) (49235)	TRIFLURALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)
NOV 07...	--	--	--	--	--	--	--	--	--	--	--
NOV 15-15	--	--	--	--	--	--	--	--	--	--	--
FEB 13...	--	--	--	--	--	--	--	--	--	--	--
APR 11...	--	--	--	--	--	--	--	--	--	--	--
JUN 30-30	<.010	<.008	<.004	<.005	<.02	<.034	<.02	<.005	<.002	<.02	<.009
AUG 27...	--	--	--	--	--	--	--	--	--	--	--

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

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08155500 Barton Springs at Austin, TX

LOCATION.--Lat 30°15′48", long 97°46′16", Travis County, Hydrologic Unit 12090205, at ground-water well (YD 58-42-903), on right bank 0.4 mi upstream from Barton Springs Road bridge over Barton Creek, 0.7 mi upstream from mouth, and 1.8 mi southwest of the State Capitol Building in Austin.

DRAINAGE AREA.--Not applicable. Only springflow is published for this station.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Nov. 1894 to Apr. 1917 and Oct. 1918 to Feb. 1978 (discharge measurements only), May 1917 to Sept. 1918 (published as "Barton Creek"), Mar. 1978 to Sept. 1994, Oct. 1994 to Sept. 1999 (discharge at 1200 hours), Oct. 1999 to current year.

GAGE.--Water-stage recorder. Datum of gage, at ground-water well (YD-58-42-903), is 462.34 ft above NGVD of 1929. May 1917 to Sep 1918, nonrecording gage at site 1,000 ft downstream at different datum. Satellite telemeter at station.

REMARKS.--Records poor. Only springflow from the Edwards and associated limestones in the Balcones Fault Zone is published for this station. Operation of Barton Springs pool significantly affects level recorded in well. Pool is drained at closing and allowed to fill after cleaning operations. Under normal conditions gage height is in direct relation with discharge. Determination of flow from spring is considered best when pool/well level has stabilized at 1200 hrs. From Oct. 1, 1994, to Sept. 30, 1999, daily flow was determined using the recorded level at 1200 hrs. Beginning Oct. 1, 1999, flow is determined from daily mean.

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	63	e102	111	112	95	101	95	86	e77	105	95
2	70	63	e103	111	112	95	101	94	85	e79	105	94
3	70	62	e103	111	112	95	100	94	85	e81	104	94
4	70	62	e103	111	112	95	100	94	84	e83	104	94
5	69	62	e103	111	112	96	100	94	83	e84	105	94
6	69	61	e103	111	112	96	99	93	83	e87	104	95
7	68	61	e103	111	112	95	99	93	83	e88	104	95
8	68	61	e102	112	112	99	100	93	83	e89	104	96
9	67	61	e103	112	111	106	100	92	82	e90	104	96
10	67	61	e103	112	111	107	99	92	82	e91	104	95
11	68	61	e103	112	111	107	99	92	82	e93	103	94
12	69	61	e103	112	111	106	99	92	81	e94	103	94
13	71	62	e103	112	111	106	98	92	80	e96	102	94
14	72	62	e103	112	111	105	98	92	80	e97	102	94
15	70	e75	e103	112	111	105	98	91	79	e99	102	93
16	70	e88	e103	112	111	104	98	91	80	e100	101	93
17	69	e94	e103	112	110	104	98	91	80	e102	101	92
18	69	e95	e103	112	110	104	98	90	79	e103	100	91
19	68	e96	e103	112	110	104	98	90	78	e105	100	90
20	68	e97	108	112	110	104	97	89	77	105	99	92
21	67	e97	109	112	109	104	97	89	77	105	99	91
22	67	e98	110	112	108	103	97	88	76	105	98	91
23	67	e98	110	112	108	103	96	88	76	105	98	91
24	e66	e98	110	112	108	103	96	88	75	105	97	90
25	65	e99	110	112	97	102	96	88	75	105	98	90
26	65	e99	110	112	95	102	96	87	74	105	97	89
27	64	e99	110	112	95	101	96	87	78	105	96	87
28	64	e100	111	112	95	101	95	88	77	105	96	85
29	64	e101	111	112	---	101	95	87	76	105	96	85
30	64	e102	111	112	---	101	95	87	e76	105	95	85
31	63	---	111	112	---	101	---	86	---	105	95	---
TOTAL	2099	2399	3276	3465	3039	3150	2939	2807	2392	2998	3121	2759
MEAN	67.71	79.97	105.7	111.8	108.5	101.6	97.97	90.55	79.73	96.71	100.7	91.97
MAX	72	102	111	112	112	107	101	95	86	105	105	96
MIN	63	61	102	111	95	95	95	86	74	77	95	85
AC-FT	4160	4760	6500	6870	6030	6250	5830	5570	4740	5950	6190	5470

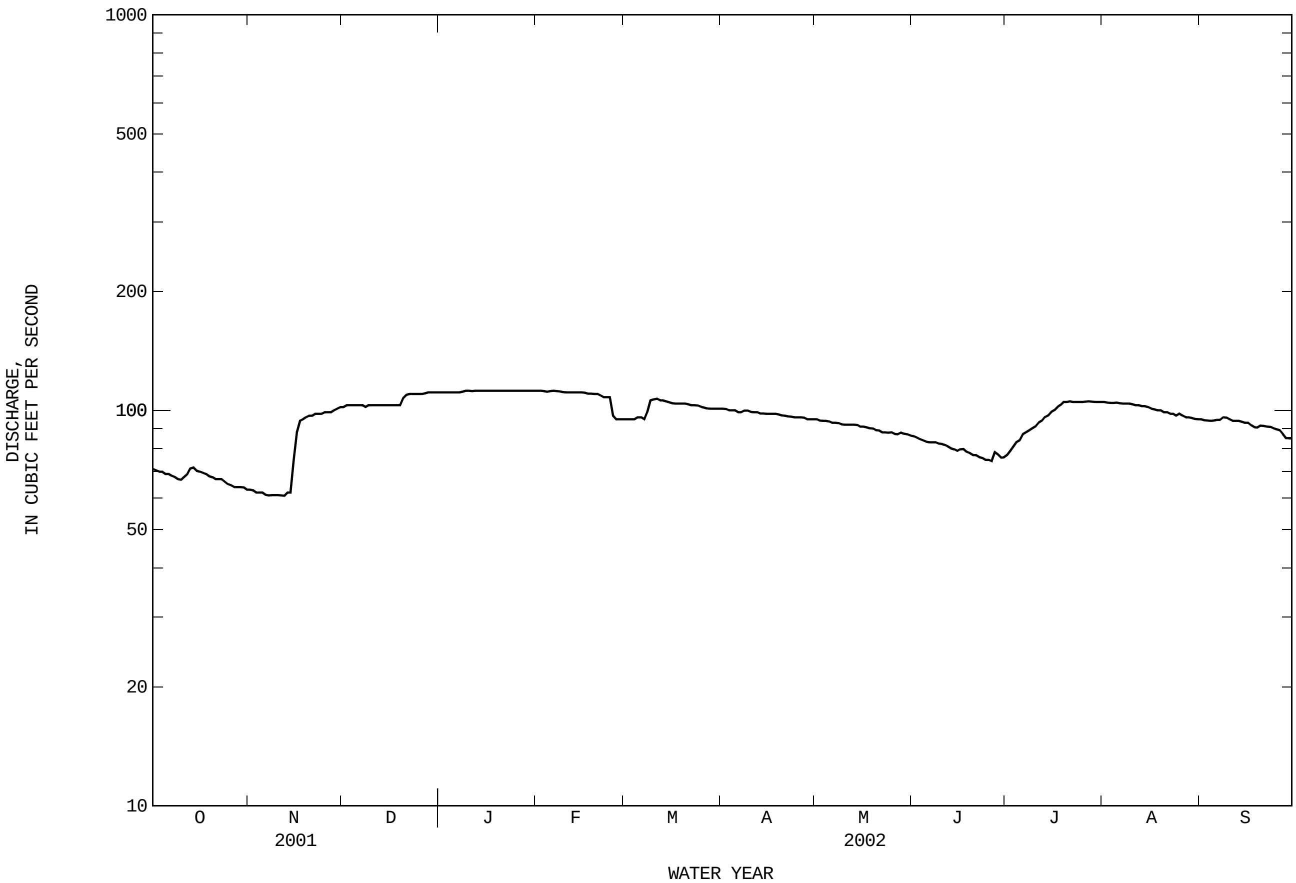
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1978 - 2002h, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	54.22	56.65	57.88	61.07	63.70	65.60	67.08	69.72	72.48	68.45	62.42	56.89
MAX	116	104	106	112	120	106	108	108	106	112	126	123
(WY)	1993	1999	2002	2002	1992	1993	1993	1993	1987	1997	1992	1992
MIN	18.5	20.6	18.2	15.8	16.8	21.6	25.2	20.7	26.2	21.0	21.5	21.1
(WY)	1990	1990	1990	1990	1990	1990	1996	1996	1996	1996	1996	2000

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1978 - 2002h	
ANNUAL TOTAL	33122		34444			
ANNUAL MEAN	90.75		94.37		63.08	
HIGHEST ANNUAL MEAN					99.3	1993
LOWEST ANNUAL MEAN					26.8	1990
HIGHEST DAILY MEAN	111	Dec 28	112	Jan 8	130	Dec 24 1991
LOWEST DAILY MEAN	61	Nov 6	61	Nov 6	14	Dec 30 1989
ANNUAL SEVEN-DAY MINIMUM	61	Nov 6	61	Nov 6	15	Jan 9 1990
ANNUAL RUNOFF (AC-FT)	65700		68320		45700	
10 PERCENT EXCEEDS	103		111		102	
50 PERCENT EXCEEDS	96		97		63	
90 PERCENT EXCEEDS	69		69		26	

e Estimated
h See PERIOD OF RECORD paragraph.

08155500 Barton Springs at Austin, TX--Continued



08155500 Barton Springs at Austin, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--
CHEMICAL DATA: Oct. 1903, Jun 1941 to Feb. 1959, Dec. 1978 to current year.
BIOCHEMICAL DATA: Dec. 1978 to current year.
RADIOCHEMICAL DATA: Jan. to Sept. 1980.
PESTICIDE DATA: Dec. 1978 to Nov. 1994, Aug. 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)	COLOR (PLAT-INUM-COBALT UNITS) (00080)	TURBID-ITY LAB HACH 2100AN (NTU) (99872)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L) (00340)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML) (31625)	E COLI, MTEC MF WATER (COL/100 ML) (31633)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)
NOV 07...	1030	61	641	7.0	21.0	8	.7	5.8	65	<10	11k	7k	267
NOV 16...	1200	88	458	7.3	--	125	56	--	--	<10	9200	7600	192
APR 11...	1014	99	628	6.9	20.5	<1	1.7	6.4	72	<10	E10k	E11k	262
JUN 30...	1600	87	600	7.2	--	--	--	--	--	--	E296k	E230k	265

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 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)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	CHLOR-A PHYTO-PLANK-TON CHROMO FLUOROM (UG/L) (70953)	CHLOR-B PHYTO-PLANK-TON CHROMO FLUOROM (UG/L) (70954)	CADMIUM WATER UNFLTRD TOTAL (UG/L AS CD) (01027)
NOV 07...	<10	<.008	1.42	<.04	--	<.10	E.03	<.06	<.02	.8	<.1	<.1	<.1
NOV 16...	152	<.008	1.80	<.04	2.3	.51	.15	<.06	E.01	6.7	--	--	<.1
APR 11...	<10	<.008	1.25	<.04	--	<.10	<.06	<.06	E.01	.6	--	--	<.1
JUN 30...	--	--	--	--	--	--	--	--	--	--	--	--	<.04

Date	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU) (01042)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB) (01051)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN) (01092)	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)
NOV 07...	<1.0	<1	15	--	--	--	--	--	--	--	--	--	--
NOV 16...	4.6	4	10	<.002	<.004	<.002	<.005	.052	<.050	<.010	<.002	<.041	<.020
APR 11...	<1.0	<1	<1	--	--	--	--	--	--	--	--	--	--
JUN 30...	1.1	<1	2	--	--	--	--	--	--	--	--	--	--

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)
NOV 07...	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV 16...	<.005	<.006	<.018	<.003	E.010	.007	<.005	<.02	<.002	<.009	<.005	<.003	<.004
APR 11...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN 30...	--	--	--	--	--	--	--	--	--	--	--	--	--

08155500 Barton Springs at Austin, TX--Continued

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

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)
NOV 07...	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV 16...	<.035	<.027	E.002	<.006	<.002	<.007	<.003	<.007	<.006	<.002	<.010	<.011	M
APR 11...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN 30...	--	--	--	--	--	--	--	--	--	--	--	--	--

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)
NOV 07...	--	--	--	--	--	--	--	--	--	--	--
NOV 16...	<.010	<.011	<.02	<.004	.082	<.02	<.034	<.02	<.005	<.002	<.009
APR 11...	--	--	--	--	--	--	--	--	--	--	--
JUN 30...	--	--	--	--	--	--	--	--	--	--	--

Remark codes used in this report:
- < -- Less than
- E -- Estimated value
- M -- Presence verified, not quantified

Value qualifier codes used in this report:
- k -- Counts outside acceptable range

08156800 Shoal Creek at 12th Street, Austin, TX

LOCATION.--Lat 30°16'35", long 97°45'00", Travis County, Hydrologic Unit 12090205, on left bank at downstream side of bridge at 12th Street, and 0.6 mi west of the State Capitol Building in Austin.

DRAINAGE AREA.--12.3 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Nov. 1974 to Mar. 1975 (periodic discharge measurements, and associated peak discharges along with annual maximum), Apr. 1975 to Sept. 1984 (peak discharges greater than base discharge), Oct. 1984 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 455.33 ft above NGVD of 1929. Satellite telemeter at station.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 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	0.29	0.07	0.06	0.08	0.14	0.10	0.00	127	0.00	0.00
2	0.00	0.00	21	0.07	0.07	0.08	0.14	0.08	0.00	565	0.00	0.00
3	0.00	0.00	5.5	0.06	0.06	0.07	0.12	0.07	0.00	47	2.6	0.00
4	0.00	0.00	1.1	0.07	0.06	0.08	0.13	0.08	0.00	7.0	6.5	0.00
5	0.00	0.00	0.46	117	20	0.08	0.13	0.07	0.00	7.3	0.05	0.00
6	0.00	0.00	0.22	4.0	5.2	0.08	0.18	0.06	0.00	1.5	0.0	0.00
7	0.00	0.00	0.21	1.00	0.14	0.09	1.3	0.05	0.00	0.52	0.00	80
8	0.00	0.00	139	0.16	0.07	0.09	16	0.03	0.00	0.87	0.09	212
9	0.00	0.12	3.6	0.10	0.06	0.09	0.18	0.0	0.00	1.3	0.0	9.1
10	0.00	0.00	1.1	0.08	0.06	0.08	0.13	0.00	0.00	0.74	16	1.5
11	79	0.00	41	0.08	0.06	0.10	0.13	0.00	0.00	0.45	0.78	0.83
12	2.6	0.42	8.4	0.23	0.06	0.08	0.13	0.00	0.00	0.35	0.12	0.71
13	74	0.00	13	0.06	0.06	0.08	0.12	0.00	0.00	0.28	0.08	0.70
14	0.78	0.00	3.3	0.06	0.06	0.09	0.14	0.00	0.00	0.33	0.06	0.55
15	0.00	1040	191	0.05	0.07	0.10	0.17	0.00	0.00	0.31	0.04	0.46
16	0.00	91	95	0.05	0.07	0.10	0.23	0.00	105	0.63	0.01	0.40
17	0.00	5.7	9.5	0.05	0.07	0.11	0.25	0.00	1.1	2.1	0.00	0.39
18	0.00	2.0	3.9	0.05	0.08	0.13	0.26	0.00	0.21	2.0	0.00	0.36
19	0.00	0.37	2.0	0.06	0.08	14	0.26	0.00	0.12	0.35	0.00	1.7
20	0.00	0.18	1.1	0.06	0.08	18	0.21	0.00	0.10	0.27	0.00	1.0
21	0.00	0.13	0.72	0.06	0.08	0.17	0.22	0.00	0.08	0.22	0.00	0.72
22	0.00	0.10	0.42	0.06	0.08	0.09	0.21	0.00	0.08	0.17	0.00	0.60
23	0.00	0.10	0.20	0.06	0.08	0.08	0.19	0.00	0.08	0.12	0.00	0.48
24	0.00	0.11	0.15	0.06	0.08	0.08	0.17	0.00	0.08	0.07	0.00	0.34
25	0.00	0.10	0.14	0.06	0.08	0.08	0.41	0.00	0.08	0.05	0.00	0.26
26	0.00	0.07	0.11	0.06	0.07	0.07	0.13	0.00	3.6	0.03	0.00	0.15
27	0.00	0.06	0.12	0.06	0.07	0.07	0.10	0.26	4.8	0.01	0.00	0.09
28	0.00	170	0.10	0.06	0.07	0.08	0.11	55	0.18	0.00	0.00	0.05
29	0.00	9.8	0.10	0.06	---	0.09	0.10	0.24	0.30	0.00	0.00	0.03
30	0.00	1.2	0.08	0.06	---	4.0	0.10	0.03	318	0.00	0.00	0.00
31	0.00	---	0.08	0.11	---	0.61	---	0.00	---	0.00	0.00	---
TOTAL	156.38	1321.46	542.90	124.07	27.08	39.03	22.09	56.07	433.81	765.97	26.33	312.42
MEAN	5.045	44.05	17.51	4.002	0.967	1.259	0.736	1.809	14.46	24.71	0.849	10.41
MAX	79	1040	191	117	20	18	16	55	318	565	16	212
MIN	0.00	0.00	0.08	0.05	0.06	0.07	0.10	0.00	0.00	0.00	0.00	0.00
AC-FT	310	2620	1080	246	54	77	44	111	860	1520	52	620

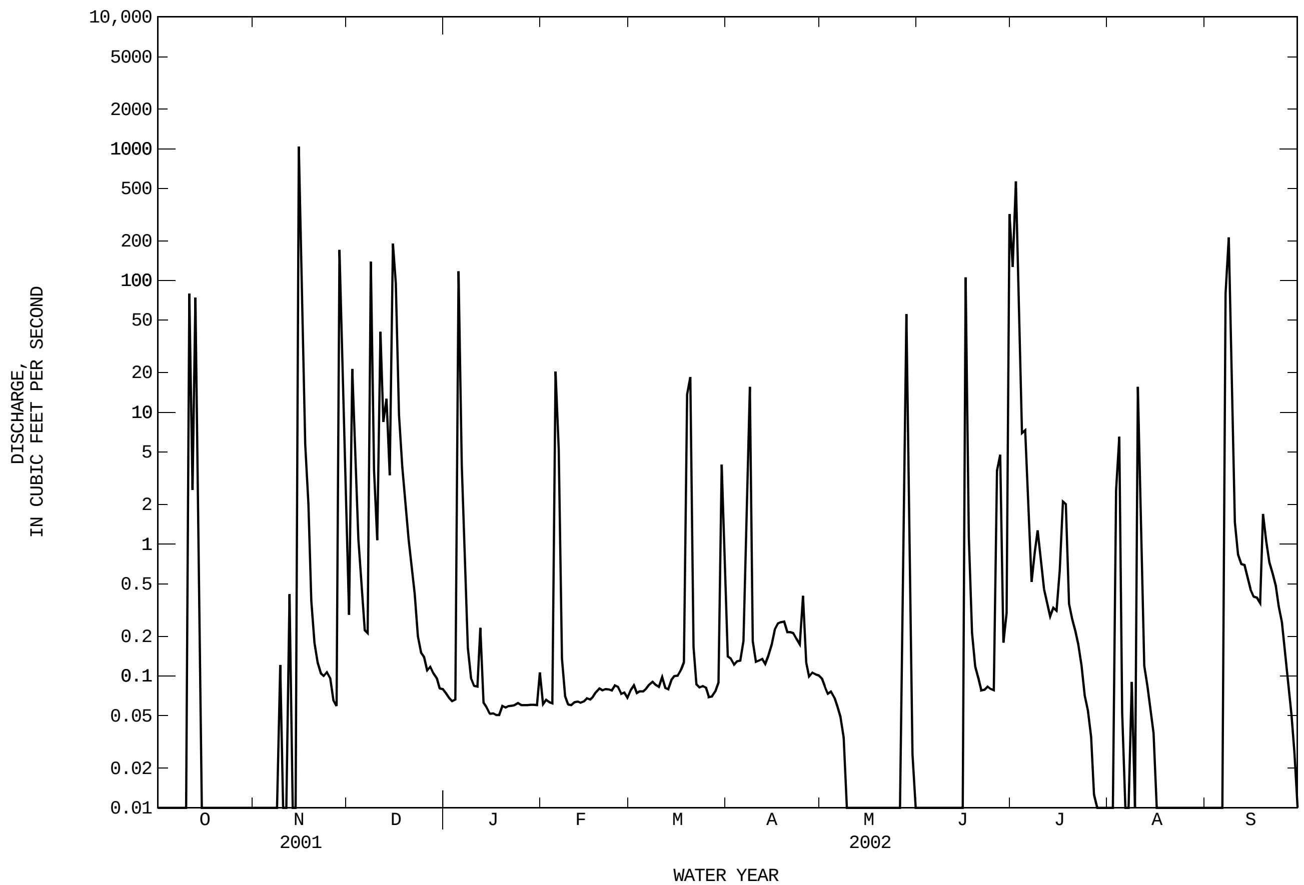
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1985 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	13.42	9.401	10.14	5.226	5.294	5.960	4.895	15.11	10.62	3.488	7.015	5.341
MAX	67.6	44.0	70.8	22.6	29.2	25.4	18.2	38.7	46.1	24.7	38.9	12.5
(WY)	1999	2002	1992	1991	1992	2001	1997	1995	1987	2002	1996	1986
MIN	0.22	0.000	0.065	0.000	0.000	0.012	0.41	0.11	0.29	0.000	0.000	0.000
(WY)	1997	2000	1996	1996	1999	1996	1998	1998	2001	1989	1993	1999

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1985 - 2002	
ANNUAL TOTAL	4560.14		3827.61			
ANNUAL MEAN	12.49		10.49		8.018	
HIGHEST ANNUAL MEAN					15.7	1992
LOWEST ANNUAL MEAN					3.26	1988
HIGHEST DAILY MEAN	1040	Nov 15	1040	Nov 15	1040	Nov 15 2001
LOWEST DAILY MEAN	0.00	Jan 1	0.00	Oct 1	0.00	Oct 1 1984
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00	Oct 1	0.00	May 6 1985
MAXIMUM PEAK FLOW			8710	Nov 15	16000	May 24 1981
MAXIMUM PEAK STAGE			a19.22	Nov 15	23.11	May 24 1981
ANNUAL RUNOFF (AC-FT)	9050		7590		5810	
10 PERCENT EXCEEDS	19		4.3		12	
50 PERCENT EXCEEDS	0.01		0.08		0.01	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

a From floodmark.

08156800 Shoal Creek at 12th Street, Austin, TX--Continued



08156800 Shoal Creek at 12th Street, Austin, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--
CHEMICAL DATA: Feb. 1943, Nov. 1974 to current year.
BIOCHEMICAL DATA: Feb. 1943, Nov. 1974 to current year.
RADIOCHEMICAL DATA: Apr. 1980.
PESTICIDE DATA: Jan. 1975 to Sept. 1985, Jan. 1993 to May 1996, Dec. 1997 to current year.
SUSPENDED SEDIMENT CHEMISTRY: Mar. 1999 to Mar. 2001.
SEDIMENT DATA: Oct. 1998 to current year.

INSTRUMENTATION.--Stage-activated automatic sampler.

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

Date	Time	DIS- CHARGE, IN CUBIC FEET PER SECOND (00060)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	COLOR (PLAT- INUM- COBALT UNITS) (00080)	TURBID- ITY LAB HACH 2100AN (NTU) (99872)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	E COLI, MTEC MF WATER (COL/ 100 ML) (31633)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	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)
OCT													
11-11	0510	212	181	7.3	50	79	90	430000	510000	55	294	.56	.022
MAR													
19-20	2100	89	--	--	--	--	--	--	--	--	--	--	--
JUN													
16-16	0355	50	--	--	--	--	--	--	--	--	--	--	--
JUN													
30-30	0125	647	134	7.7	50	320	30	--	--	42	508	--	E.006

Date	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 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)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY) (80155)	SEDI- MENT, SUS- PENDED (MG/L) (80154)	CADMIUM WATER UNFLTRD TOTAL (UG/L AS CD) (01027)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)
OCT													
11-11	.59	<.04	2.9	2.3	.64	.14	.11	.350	27.2	--	--	.3	30.0
MAR													
19-20	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN													
16-16	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN													
30-30	.21	<.04	1.6	1.4	.50	E.05	.04	.135	19.2	1010	580	.2	10.4

Date	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	2,4-D, DIS- SOLVED (UG/L) (39732)	2,4-DB WATER, FLTRD, GF 0.7U REC (UG/L) (38746)	2,6-DI- ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	3HYDRXY CARBO- FURAN WAT,FLT GF 0.7U REC (UG/L) (49308)	ACETO- CHLOR, WATER FLTRD REC (UG/L) (49260)	ACIFL- UORFEN WATER, FLTRD, GF 0.7U REC (UG/L) (49315)	ALA- CHLOR, WATER, DISS, REC, (UG/L) (46342)	ALDI- CARB, WATER, FLTRD, GF 0.7U REC (UG/L) (49312)	ALDI- CARB SULFONE WAT,FLT GF 0.7U REC (UG/L) (49313)	ALDICA- RB SUL- FOXIDE, WAT,FLT GF 0.7U REC (UG/L) (49314)	ALPHA BHC DIS- SOLVED (UG/L) (34253)
OCT													
11-11	60	129	--	--	--	--	--	--	--	--	--	--	--
MAR													
19-20	--	--	.31	<.02	<.006	<.006	<.006	<.200	.026	<.04	<.02	<.008	<.005
JUN													
16-16	--	--	<.02	<.02	<.006	<.006	<.006	<.007	<.004	<.04	<.02	<.008	<.005
JUN													
30-30	19	216	--	--	--	--	--	--	--	--	--	--	--

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)	BENTA- ZON, WATER, FLTRD, GF 0.7U REC (UG/L) (38711)	BRO- MACIL, WATER, DISS, REC (UG/L) (04029)	BRO- MOXYNIL WATER, FLTRD, GF 0.7U REC (UG/L) (49311)	BUTYL- ATE, WATER, DISS, REC (UG/L) (04028)	CAR- BARYL, WATER, FLTRD, GF 0.7U REC (UG/L) (49310)	CAR- BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBO- FURAN, WATER, FLTRD, GF 0.7U REC (UG/L) (49309)	CARBO- FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	CHLORO- THALO- NIL, WAT,FLT GF 0.7U REC (UG/L) (49306)	CHLOR- PYRIFOS DIS- SOLVED (UG/L) (38933)
OCT													
11-11	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR													
19-20	.779	<.050	<.010	<.01	<.03	<.02	<.002	E.01	E.038	<.006	<.020	<.04	<.005
JUN													
16-16	.035	<.050	<.010	<.01	<.03	<.02	<.002	E.37	E.876	<.006	<.020	<.04	<.005
JUN													
30-30	--	--	--	--	--	--	--	--	--	--	--	--	--

08156800 Shoal Creek at 12th Street, Austin, TX--Continued

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

Date	PER-METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	CLOPYR-ALID, WATER, FLTRD, GF 0.7U REC (UG/L) (49305)	CYANA-ZINE, WATER, DISS, REC (UG/L) (04041)	DACTHAL MONO-ACID, WAT,FLT GF 0.7U REC (UG/L) (49304)	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)	DICAMBA WATER, FLTRD, GF 0.7U REC (UG/L) (38442)	DICHLOR PROP, WATER, FLTRD, GF 0.7U REC (UG/L) (49302)	DI-ELDRIN DIS-SOLVED (UG/L) (39381)	DINOSEB WATER, FLTRD, GF 0.7U REC (UG/L) (49301)	DISUL-FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	DIURON, WATER, FLTRD, GF 0.7U REC (UG/L) (49300)
OCT 11-11	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR 19-20	<.006	<.01	<.018	<.01	<.003	E.018	.041	<.01	<.01	<.005	<.01	<.02	.03
JUN 16-16	<.006	<.01	<.018	<.01	<.003	<.007	.177	<.01	<.01	<.005	<.01	<.02	<.01
JUN 30-30	--	--	--	--	--	--	--	--	--	--	--	--	--

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)	FEN-URON, WATER, FLTRD, GF 0.7U REC (UG/L) (49297)	FLUO-METURON WATER, FLTRD, GF 0.7U REC (UG/L) (38811)	FONOFOS WATER DISS REC (UG/L) (04095)	LINDANE DIS-SOLVED (UG/L) (39341)	LINURON WATER, FLTRD, GF 0.7U REC (UG/L) (38478)	LIN-URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA-THION, DIS-SOLVED (UG/L) (39532)	MCPA, WATER, FLTRD, GF 0.7U REC (UG/L) (38482)	MCPB, WATER, FLTRD, GF 0.7U REC (UG/L) (38487)	METHIO-CARB, WATER, FLTRD, GF 0.7U REC (UG/L) (38501)
OCT 11-11	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR 19-20	<.002	<.009	<.005	<.03	<.03	<.003	<.004	<.01	<.035	<.027	<.20	<.01	<.008
JUN 16-16	<.002	<.009	<.005	<.03	<.03	<.003	<.004	<.01	<.035	.068	<.02	<.01	<.008
JUN 30-30	--	--	--	--	--	--	--	--	--	--	--	--	--

Date	METH-OMYL, WATER, FLTRD, GF 0.7U REC (UG/L) (49296)	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)	NEB-URON, WATER, FLTRD, GF 0.7U REC (UG/L) (49294)	NORFLUR AZON, WATER, FLTRD, GF 0.7U REC (UG/L) (49293)	ORY-ZALIN, WATER, FLTRD, GF 0.7U REC (UG/L) (49292)	OXAMYL, WATER, FLTRD, GF 0.7U REC (UG/L) (38866)	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)
OCT 11-11	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR 19-20	<.004	.020	<.006	<.002	<.007	<.01	<.02	<.02	<.01	<.003	<.010	<.006	<.004
JUN 16-16	<.004	<.013	<.006	<.002	<.007	<.01	<.02	<.02	<.01	<.003	<.010	<.006	<.004
JUN 30-30	--	--	--	--	--	--	--	--	--	--	--	--	--

Date	PENDI-METH-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PIC-LORAM, WATER, FLTRD, GF 0.7U REC (UG/L) (49291)	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)	PRO-PHAM, WATER, FLTRD, GF 0.7U REC (UG/L) (49236)	PRO-POXUR, WATER, FLTRD, GF 0.7U REC (UG/L) (38538)	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)
OCT 11-11	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR 19-20	E.013n	<.011	<.02	<.01	<.010	<.011	<.07	<.010	.029	<.004	<.005	<.02	<.034
JUN 16-16	<.022	<.011	<.02	<.01	<.010	<.011	<.02	<.010	E.034	<.004	<.005	<.02	<.034
JUN 30-30	--	--	--	--	--	--	--	--	--	--	--	--	--

08156800 Shoal Creek at 12th Street, Austin, TX--Continued

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

Date	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-CLOPYR, WATER, FLTRD, GF 0.7U REC (UG/L) (49235)	TRI-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)
OCT					
11-11	--	--	--	--	--
MAR					
19-20	<.02	<.005	<.002	<.02	<.009
JUN					
16-16	<.02	<.005	<.002	<.02	<.009
JUN					
30-30	--	--	--	--	--

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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08157900 Town Lake at Austin, TX

LOCATION.--Lat 30°14'56", long 97°43'03", Travis County, Hydrologic Unit 12090205, at Longhorn Dam on the Colorado River at Austin, 1.5 mi downstream from Interstate Highway 35, and 2.3 mi southeast of the State Capitol Building in Austin.

DRAINAGE AREA.--39,003 mi^2, approximately, of which 11,403 mi^2 probably is noncontributing.

PERIOD OF RECORD.--
CHEMICAL DATA: Feb. 1975 to Aug. 1990, Oct. 1990 to Dec. 2001 (discontinued).
BIOCHEMICAL DATA: Feb. 1975 to Aug. 1990, Oct. 1990 to Dec. 2001 (discontinued).
PESTICIDE DATA: Feb. 1975 to Aug. 1990, Feb. 1991 to Dec. 2001 (discontinued).

REMARKS.--Trace metal and pesticide analyses of bottom sediments at selected sites Feb. 1991 to Dec. 2001 (discontinued).

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

301500097424801 -- Twn Lk AC

Date	Time	SAMPLING DEPTH (FEET) (00003)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE WATER (DEG C) (00010)	TURBIDITY LAB HACH 2100AN (NTU) (99872)	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)	ALKALINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L) (70300)	RESIDUE TOTAL AT 105 DEG. C, SUSPENDED (MG/L) (00530)
DEC													
16...	0930	1.00	445	7.4	15.4	13	7.2	73	2100	2100	162	254	16
16...	0932	10.0	436	7.4	15.0	--	7.3	73	--	--	--	--	--
16...	0934	20.0	431	7.4	15.0	--	7.4	74	--	--	--	--	--
16...	0936	28.0	431	7.4	15.0	21	7.5	75	--	--	158	228	20

301500097424801 -- Twn Lk AC

Date	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, TOTAL (MG/L AS N) (00600)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOSPHORUS TOTAL (MG/L AS P) (00665)	PHOSPHORUS DISSOLVED (MG/L AS P) (00666)	ORTHOPHOSPHATE, DISSOLVED (MG/L AS P) (00671)	PHOSPHATE, ORTHO, DISSOLVED (MG/L AS PO4) (00660)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	CHLOR-A PHYTOPLANKTON CHROMO FLUOROM (UG/L) (70953)	CHLOR-B PHYTOPLANKTON CHROMO FLUOROM (UG/L) (70954)	COPPER, TOTAL RECOVERABLE (UG/L AS CU) (01042)
DEC													
16...	E.007	.39	E.02	.65	.26	<.06	<.06	.02	.074	3.3	.5	<.1	3.3
16...	--	--	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--	--	--
16...	E.007	.40	<.04	.72	.32	E.05	E.03	.02	.074	3.6	--	--	3.8

301500097424801 -- Twn Lk AC

Date	COPPER, DISSOLVED (UG/L AS CU) (01040)
DEC	
16...	2.9
16...	--
16...	--
16...	3.3

301559097424801 -- Town Lk AR

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)
DEC							
16...	0955	1.00	450	7.4	15.5	7.3	74
16...	0957	10.0	443	7.4	15.0	7.2	72
16...	0959	20.0	437	7.4	15.0	7.2	72

08157900 Town Lake at Austin, TX--Continued

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

301503097424701 -- Twn Lk 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)
DEC							
16...	1005	1.00	434	7.4	15.0	7.5	75
16...	1007	10.0	431	7.4	15.0	7.6	76
16...	1009	18.0	431	7.4	15.0	7.6	76

301504097440901 -- Twn Lk 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)
DEC							
16...	1020	1.00	411	7.4	15.5	7.7	78
16...	1022	10.0	412	7.4	15.5	7.7	78
16...	1024	20.0	419	7.4	15.5	7.6	77
16...	1026	28.0	428	7.4	15.5	7.6	77

301544097445201 -- Town Lk CR

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)
DEC							
16...	1055	1.00	469	7.5	15.5	7.6	77
16...	1057	13.0	471	7.4	15.5	7.3	74

301546097445101 -- Town Lk CC

Date	Time	SAMPLING DEPTH (FEET) (00003)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE WATER (DEG C) (00010)	TURBIDITY LAB HACH 2100AN (NTU) (99872)	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)	ALKALINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L) (70300)	RESIDUE TOTAL AT 105 DEG. C, SUSPENDED (MG/L) (00530)
DEC													
16...	1037	1.00	353	7.5	16.1	25	7.6	78	E1330k	E1100k	118	206	22
16...	1039	10.0	456	7.4	15.0	--	7.0	70	--	--	--	--	--
16...	1041	16.0	464	7.4	15.4	9.3	7.2	73	--	--	171	250	14

301546097445101 -- Town Lk CC

Date	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, TOTAL (MG/L AS N) (00600)	NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOSPHORUS TOTAL (MG/L AS P) (00665)	PHOSPHORUS DISSOLVED (MG/L AS P) (00666)	ORTHOPHOSPHATE, DISSOLVED (MG/L AS P) (00671)	PHOSPHATE, ORTHO, DISSOLVED (MG/L AS PO4) (00660)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	CHLOR-A PHYTOPLANKTON CHROMO FLUOROM (UG/L) (70953)	CHLOR-B PHYTOPLANKTON CHROMO FLUOROM (UG/L) (70954)
DEC													
16...	.39	.008	.40	<.04	.67	.27	<.06	E.04	.03	.089	3.5	.3	<.1
16...	--	--	--	--	--	--	--	--	--	--	--	--	--
16...	--	E.007	.38	<.04	.70	.31	<.06	<.06	E.01	--	3.4	--	--

08157900 Town Lake at Austin, TX--Continued

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

301546097445101 -- Town Lk CC

Date	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)
DEC		
16...	3.3	2.8
16...	--	--
16...	3.4	3.1

301556097452301 -- Town Lk DR

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)
DEC							
16...	1120	1.00	528	7.5	15.5	8.2	84
16...	1122	13.0	523	7.5	15.5	8.2	84

301558097452201 -- Town Lk 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)	TURBID- ITY LAB HACH 2100AN (NTU) (99872)	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)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDED (MG/L) (00530)
DEC													
16...	1105	1.00	517	7.5	15.6	21	8.0	81	E1330k	E920k	202	292	24
16...	1107	10.0	522	7.5	15.5	--	8.2	84	--	--	--	--	--
16...	1109	18.0	520	7.5	15.6	27	8.1	82	--	--	208	292	76

301558097452201 -- Town Lk DC

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, TOTAL (MG/L AS N) (00600)	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)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	CHLOR-A PHYTO- PLANK- TON CHROMO FLUOROM (UG/L) (70953)	CHLOR-B PHYTO- PLANK- TON CHROMO FLUOROM (UG/L) (70954)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)
DEC													
16...	E.004	.53	<.04	.81	.29	<.06	<.06	<.02	3.4	.2	<.1	3.2	3.5
16...	--	--	--	--	--	--	--	--	--	--	--	--	--
16...	E.004	.59	<.04	1.2	.65	.09	<.06	E.01	3.5	--	--	3.6	3.5

301712097470701 -- Town Lk 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)	TURBID- ITY LAB HACH 2100AN (NTU) (99872)	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)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDED (MG/L) (00530)
DEC													
16...	1140	1.00	471	7.2	15.8	4.0	6.6	67	E317k	E170k	160	256	<10
16...	1142	10.0	456	7.3	15.5	--	6.6	67	--	--	--	--	--
16...	1144	18.0	461	7.3	15.5	3.6	6.6	67	--	--	159	246	10

08157900 Town Lake at Austin, TX--Continued

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

301712097470701 -- Town Lk EC

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,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)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	CHLOR-A PHYTO-PLANK-TON CHROMO FLUOROM (UG/L) (70953)	CHLOR-B PHYTO-PLANK-TON CHROMO FLUOROM (UG/L) (70954)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU) (01042)
DEC													
16...	.37	.009	.38	<.04	.61	.23	<.06	<.06	E.01	3.1	.1	<.1	3.6
16...	--	--	--	--	--	--	--	--	--	--	--	--	--
16...	.30	.010	.31	<.04	.55	.24	<.06	<.06	E.01	3.2	--	--	3.5

301712097470701 -- Town Lk EC

Date	COPPER, DIS-SOLVED (UG/L AS CU) (01040)
DEC	
16...	4.0
16...	--
16...	3.6

301601097454001 -- Town Lk 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)
DEC							
16...	1125	2.00	569	7.5	16.0	8.6	89

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

Value qualifier codes used in this report:
k -- Counts outside acceptable range

08158000 Colorado River at Austin, TX

LOCATION.--Lat 30°14'40", long 97°41'39", Travis County, Hydrologic Unit 12090205, on right bank 1,000 ft upstream from upstream bridge on U.S. Highway 183 in Austin, 1.4 mi downstream from Longhorn Dam, and at mile 290.3.

DRAINAGE AREA.-39,009 mi^2, approximately, of which 11,403 mi^2 probably is noncontributing.

PERIOD OF RECORD.--Feb. 1898 to current year. Records of daily discharge for Dec. 13-26, 1914, and Feb. 9-17, 1915, published in WSP 408, have been found unreliable and should not be used.
Water-quality records.--Chemical data: Oct. 1947 to Sept. 1993. Specific conductance: Oct. 1947 to Sept. 1991. Water temperature: Oct. 1947 to Sept. 1991.

REVISED RECORDS.--WSP 508: 1915(m). WSP 528: 1900(M), 1918(m). WSP 548: 1901-16. WSP 1342: Drainage area. WSP 1562: 1908, 1929(M), 1936.

GAGE.--Water-stage recorder. Datum of gage is 402.27 ft above NGVD of 1929. Prior to June 19, 1939, all records collected at or near Congress Avenue bridge 3.9 mi upstream at datum 19.6 ft higher; prior to June 18, 1915, nonrecording gages, recording gages thereafter; June 20, 1939, to Oct. 16, 1963, at site 1,000 ft downstream from present site at datum 5.0 ft higher. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records fair. Since installation of gage in 1898, at least 10% of contributing drainage area has been regulated by Town Lake, Lake Austin, Lake Travis, and other reservoirs. The city of Austin diverts water for municipal use upstream from station and returns wastewater effluent downstream. There are many other diversions above Lake Buchanan for irrigation, municipal supplies, and oil field operations.

COOPERATION.--Lower Colorado River Authority provides operation and maintenance of the gage and verification of stage-discharge relation at low stages. U.S. Geological Survey maintains stage-discharge relation at medium to high stages, computes and publishes streamflow record.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1833, 51 ft July 7, 1869, present site and datum (adjusted to present site on basis of record for flood of June 15, 1935), determined from information concerning stage at former site furnished by Dean T.U. Taylor.

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	668	518	270	2100	884	560	951	1790	1880	2110	2890	1330
2	1190	429	628	2030	573	297	918	1730	1850	9330	3020	1290
3	729	289	499	1320	199	666	764	1620	1280	5270	2970	1290
4	856	407	1160	1650	422	453	729	1700	1490	5990	3100	1040
5	745	439	663	2000	586	381	913	1900	1640	12000	2860	1540
6	771	352	1150	1720	629	525	1000	1940	1780	18600	2990	1270
7	752	406	1260	1310	272	492	902	2780	1840	25500	1900	1530
8	722	348	2130	223	229	589	278	2390	1880	25700	1540	2070
9	486	442	1030	519	187	329	255	2450	2080	26800	1420	983
10	275	203	1330	900	179	521	247	2530	2160	26400	1600	1290
11	1360	265	1740	1020	283	463	546	2430	1910	26600	1390	1310
12	115	472	1980	1040	293	491	624	2530	2020	26000	1460	1280
13	1100	420	2010	197	283	498	973	2500	2290	23700	1230	1210
14	246	357	1730	736	282	409	927	2540	2160	19400	1350	1290
15	363	8430	2820	992	300	609	928	2430	2450	18200	1240	1250
16	436	6590	2570	1100	299	856	952	2030	2970	18300	1240	1270
17	234	5870	2520	1050	295	974	1020	2230	2280	15400	1250	1310
18	152	5690	3440	995	298	892	1040	2110	2350	12000	1230	1080
19	98	5660	518	445	246	1020	1060	2100	2200	11200	1250	1480
20	209	5470	367	203	332	1010	1130	2110	2170	12400	1210	1260
21	324	5410	408	522	322	750	1190	2010	2230	7830	1240	1130
22	308	5370	294	449	258	741	1290	1870	2330	7610	1200	1250
23	687	3580	368	525	208	755	1380	2140	2220	5870	1230	1250
24	1080	3150	355	330	279	806	1470	1920	2160	5350	1220	1180
25	314	3110	387	834	315	952	1320	2040	2070	4950	1230	1240
26	1090	3110	1620	421	381	898	1340	2020	2180	4610	1260	1290
27	466	3220	3520	197	442	943	1670	1860	2230	2740	1210	1110
28	403	3850	3890	494	477	882	1690	2980	1930	3130	1260	1110
29	560	1740	4080	491	---	946	1810	1960	1890	3270	1260	1030
30	603	399	3910	231	---	961	1810	2010	3750	3070	1300	661
31	619	---	1990	601	---	822	---	1930	---	3030	1310	---
TOTAL	17961	75996	50637	26645	9753	21491	31127	66580	63670	392360	50860	37624
MEAN	579.4	2533	1633	859.5	348.3	693.3	1038	2148	2122	12660	1641	1254
MAX	1360	8430	4080	2100	884	1020	1810	2980	3750	26800	3100	2070
MIN	98	203	270	197	179	297	247	1620	1280	2110	1200	661
AC-FT	35630	150700	100400	52850	19350	42630	61740	132100	126300	778200	100900	74630

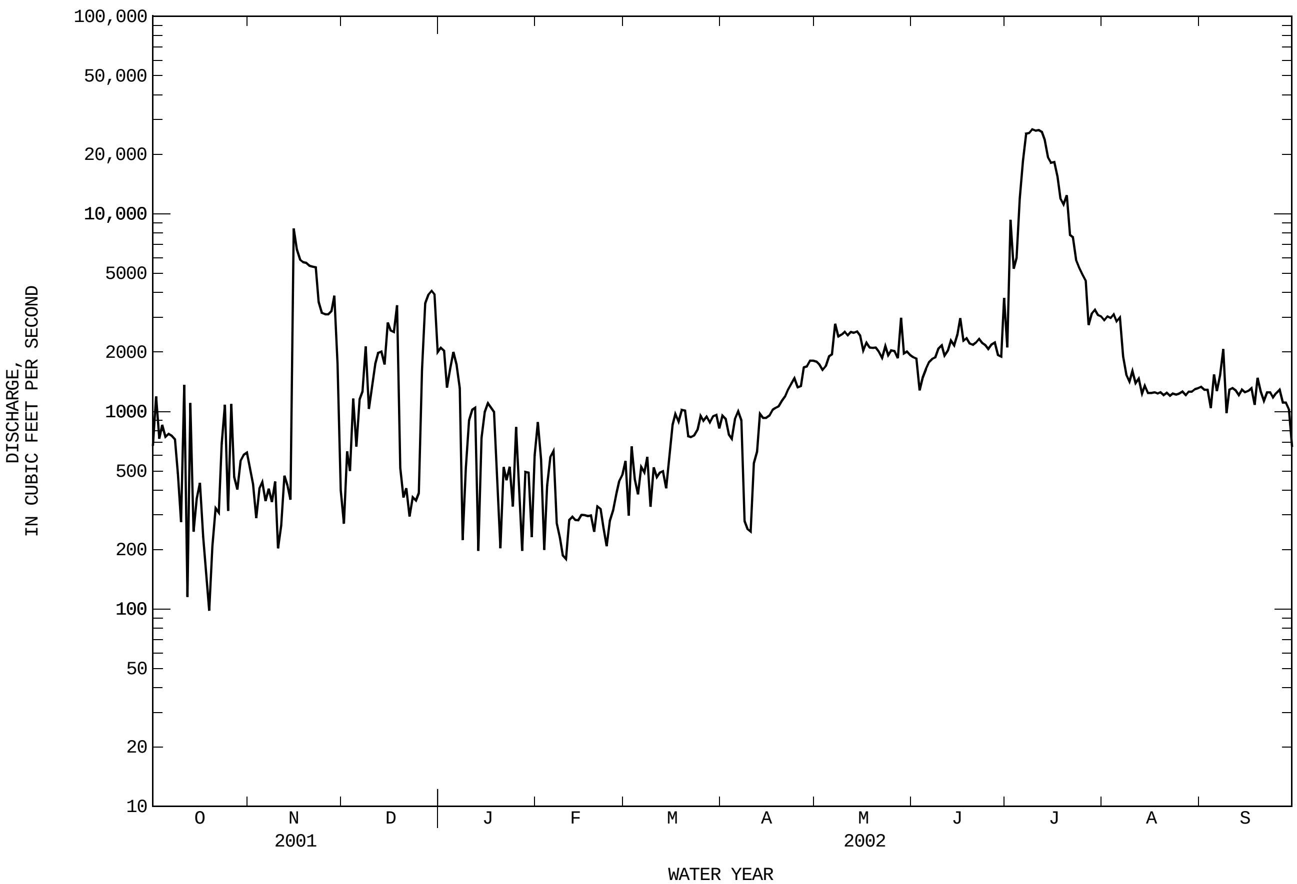
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1898 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1952	1467	1334	1218	1462	1530	2650	4111	3780	2822	1787	2536
MAX	20080	11050	23800	15080	25890	13640	21800	30710	31940	36110	12310	42630
(WY)	1931	1919	1914	1992	1992	1992	1900	1922	1935	1938	1906	1936
MIN	57.5	38.7	43.9	46.2	49.7	55.0	145	964	238	256	70.3	156
(WY)	1935	1990	1964	1967	1964	1964	1907	1921	1910	1933	1917	1907

08158000 Colorado River at Austin, TX--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1898 - 2002	
ANNUAL TOTAL	680725		844704			
ANNUAL MEAN	1865		2314		2184	
HIGHEST ANNUAL MEAN					7535	1914
LOWEST ANNUAL MEAN					590	1917
HIGHEST DAILY MEAN	8430	Nov 15	26800	Jul 9	323000	Jun 15 1935
LOWEST DAILY MEAN	98	Oct 19	98	Oct 19	0.00	Sep 29 1914
ANNUAL SEVEN-DAY MINIMUM	197	Feb 9	247	Feb 7	18	Oct 25 1990
MAXIMUM PEAK FLOW			c34900	Nov 15	481000	Jun 15 1935
MAXIMUM PEAK STAGE			24.58	Nov 15	a50.00	Jun 15 1935
ANNUAL RUNOFF (AC-FT)	1350000		1675000		1582000	
10 PERCENT EXCEEDS	3560		3870		3810	
50 PERCENT EXCEEDS	1630		1240		1130	
90 PERCENT EXCEEDS	401		299		175	

c From rating curve extended above discharge determination of 26,800 ft^3/s.
a From floodmark.



08158600 Walnut Creek at Webberville Road, Austin, TX

LOCATION.--Lat 30°16’59", long 97°39’17", Travis County, Hydrologic Unit 12090205, on left bank 190 ft downstream from bridge on Farm Road 969, 0.8 mi downstream from Little Walnut Creek, 2.8 mi upstream from Colorado River, 5.2 mi east of the State Capitol Building in Austin, and 2.8 mi upstream from mouth.

DRAINAGE AREA.--51.3 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1966 to current year.

REVISED RECORDS.--WDR TX-00-4: (daily mean discharge, Feb. 11, 1999).

GAGE.--Water-stage recorder. Datum of gage is 425.96 ft above NGVD of 1929. Satellite telemeter at station.

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

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 15, 1935, reached a stage of 24 ft due to backwater from Colorado River. A flood in 1919 reached a stage of 22 ft, from information by local residents. Maximum stage since at least 1891, that of May 25, 1981.

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

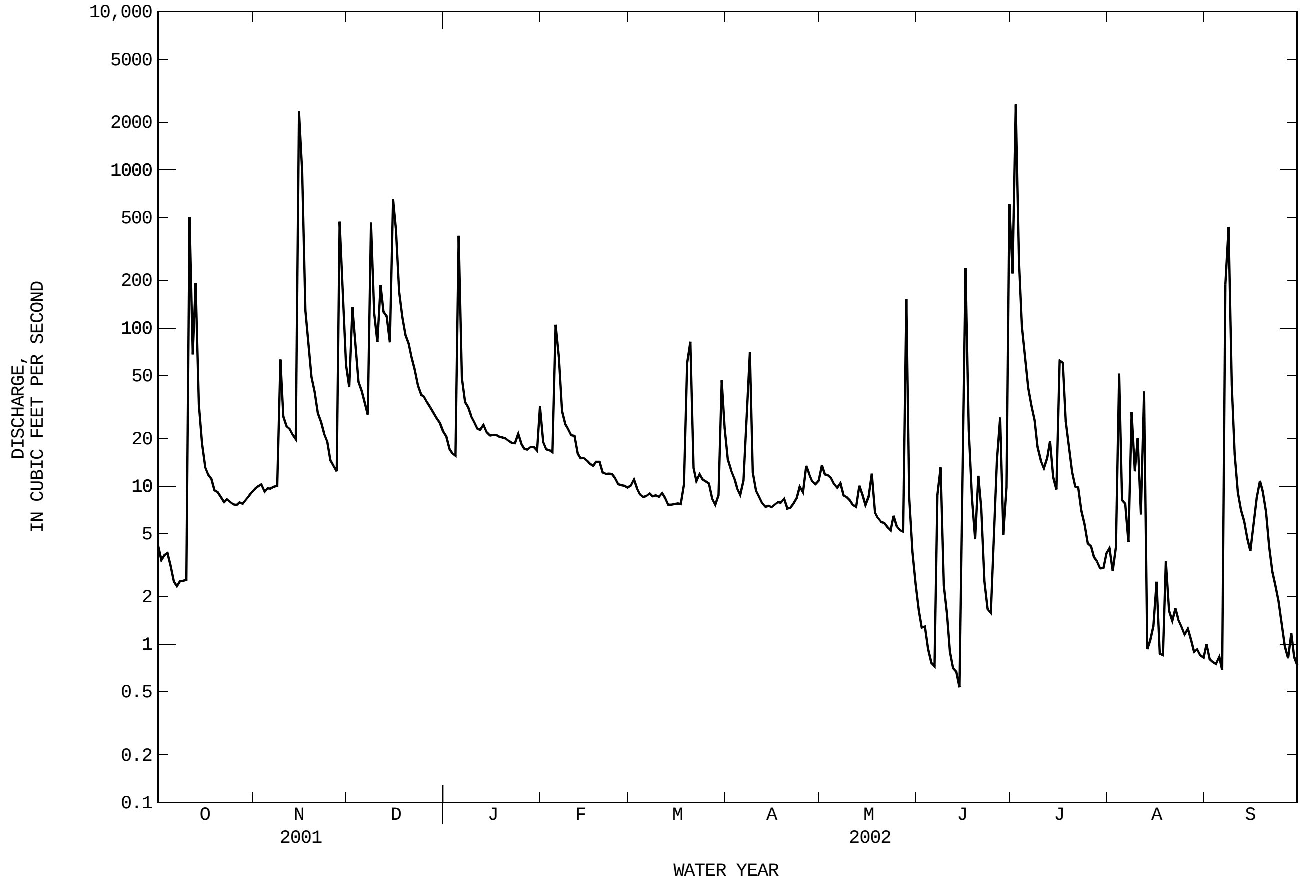
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.2	9.7	42	21	19	10	15	14	1.6	221	4.0	1.0
2	3.4	9.9	136	17	17	11	13	12	1.3	2580	2.9	0.80
3	3.7	10	86	16	17	9.7	11	12	1.3	264	4.1	0.77
4	3.8	9.2	45	16	16	8.9	9.7	11	0.93	103	51	0.75
5	3.1	9.7	40	382	105	8.5	8.8	10	0.77	64	8.2	0.83
6	2.5	9.7	33	48	66	8.7	11	9.8	0.73	42	7.8	0.69
7	2.3	9.9	28	34	30	9.0	26	10	8.8	32	4.4	189
8	2.5	10	464	32	25	8.6	70	8.7	13	26	29	433
9	2.5	63	124	28	23	8.8	12	8.5	2.4	18	12	43
10	2.6	27	81	25	21	8.6	9.4	8.1	1.6	15	20	16
11	504	24	187	23	21	9.1	8.6	7.6	0.90	13	6.6	9.1
12	68	23	127	23	16	8.4	7.8	7.4	0.71	15	40	7.0
13	192	21	119	24	15	7.6	7.4	10	0.67	19	0.93	6.0
14	33	20	81	22	15	7.6	7.5	8.8	0.53	11	1.1	4.6
15	19	2330	654	21	15	7.7	7.4	7.6	3.9	9.5	1.3	3.9
16	13	969	420	21	14	7.8	7.7	8.6	238	62	2.5	5.8
17	12	129	169	21	13	7.7	7.9	12	23	60	0.87	8.5
18	11	76	117	21	14	10	7.8	6.8	8.4	26	0.85	11
19	9.4	49	90	20	14	60	8.3	6.2	4.6	18	3.4	9.2
20	9.1	39	79	20	12	82	7.2	5.9	12	12	1.6	6.9
21	8.5	29	65	19	12	13	7.3	5.8	7.3	9.9	1.4	4.1
22	7.9	25	54	19	12	11	7.7	5.5	2.5	9.8	1.7	2.9
23	8.3	22	43	19	12	12	8.4	5.3	1.7	7.0	1.4	2.3
24	8.0	19	38	21	11	11	10	6.5	1.6	5.7	1.3	1.9
25	7.7	15	37	19	10	11	9.2	5.6	3.8	4.4	1.2	1.3
26	7.6	13	34	17	10	10	13	5.3	15	4.2	1.2	0.97
27	7.9	12	31	17	10	8.4	12	5.1	27	3.6	1.1	0.81
28	7.7	470	29	18	9.8	7.6	11	152	4.9	3.3	0.90	1.2
29	8.2	139	27	18	---	8.8	10	8.4	9.8	3.0	0.93	0.83
30	8.7	58	25	17	---	47	11	3.8	607	3.0	0.85	0.74
31	9.2	---	22	32	---	23	---	2.4	---	3.7	0.82	---
TOTAL	990.8	4650.1	3527	1051	574.8	462.5	363.1	390.7	1005.74	3668.1	215.35	774.89
MEAN	31.96	155.0	113.8	33.90	20.53	14.92	12.10	12.60	33.52	118.3	6.947	25.83
MAX	504	2330	654	382	105	82	70	152	607	2580	51	433
MIN	2.3	9.2	22	16	9.8	7.6	7.2	2.4	0.53	3.0	0.82	0.69
AC-FT	1970	9220	7000	2080	1140	917	720	775	1990	7280	427	1540

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	33.45	28.36	36.06	29.92	30.98	28.49	24.17	56.39	41.79	13.99	13.34	14.11
MAX	215	161	367	237	203	121	90.0	170	435	118	100	51.7
(WY)	1999	1975	1992	1968	1992	1992	1977	1981	1981	2002	2001	1973
MIN	1.37	1.03	1.22	1.07	1.88	1.06	1.79	0.58	0.23	0.052	0.32	0.59
(WY)	1979	1967	1967	1967	1967	1967	1971	1971	1967	1971	1977	1999

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1966 - 2002	
ANNUAL TOTAL	21438.63		17674.08			
ANNUAL MEAN	58.74		48.42		29.19	
HIGHEST ANNUAL MEAN					94.6	1992
LOWEST ANNUAL MEAN					1.91	1967
HIGHEST DAILY MEAN	2330	Nov 15	2580	Jul 2	4330	Dec 21 1991
LOWEST DAILY MEAN	0.72	Jul 30	0.53	Jun 14	0.00	Jun 17 1967
ANNUAL SEVEN-DAY MINIMUM	0.79	Jul 21	0.81	Aug 31	0.00	Jun 17 1967
MAXIMUM PEAK FLOW			9390	Jul 2	14300	May 25 1981
MAXIMUM PEAK STAGE			25.14	Jul 2	27.24	May 25 1981
ANNUAL RUNOFF (AC-FT)	42520		35060		21150	
10 PERCENT EXCEEDS	115		69		45	
50 PERCENT EXCEEDS	21		10		7.6	
90 PERCENT EXCEEDS	3.0		1.5		1.0	

08158600 Walnut Creek at Webberville Road, Austin, TX--Continued



08158600 Walnut Creek at Webberville Road, Austin, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--
CHEMICAL DATA: Apr. 1976 to current year.
BIOCHEMICAL DATA: Apr. 1976 to current year.
RADIOCHEMICAL DATA: Jan. 1980.
PESTICIDE DATA: Nov. 1976 to Sept. 1986.
SUSPENDED SEDIMENT CHEMISTRY: May 1999 to current year.
SEDIMENT DATA: Dec. 1977 to July 1982.

INSTRUMENTATION.--Stage-activated automatic sampler.

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

Date	Time	DIS- CHARGE, IN CUBIC FEET PER SECOND (00060)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	COLOR (PLAT- INUM- COBALT UNITS) (00080)	TURBID- ITY LAB HACH 2100AN (NTU) (99872)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	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)
APR													
07-08	2235	175	362	7.9	125	400	50	109	712	.74	.025	.77	.15
MAY													
28-28	0215	96	258	7.7	30	1300	90	71	1100	.66	.025	.69	.14

Date	NITRO- GEN, TOTAL (MG/L AS N) (00600)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	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)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY) (80155)	SEDI- MENT, SUS- PENDED (MG/L) (80154)	CADMIUM WATER UNFLTRD TOTAL (UG/L AS CD) (01027)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)
APR													
07-08	2.9	2.0	2.1	.55	<.06	<.02	--	295	623	.2	8.8	13	54
MAY													
28-28	3.1	2.3	2.5	.90	<.06	E.01	36.1	301	1160	.2	15.0	19	86

Date	2,4-D, DIS- SOLVED (UG/L) (39732)	2,4-DB WATER, FLTRD, GF 0.7U REC (UG/L) (38746)	2,6-DI- ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	3HYDRXY CARBO- FURAN WAT,FLT GF 0.7U REC (UG/L) (49308)	ACETO- CHLOR, WATER FLTRD REC (UG/L) (49260)	ACIFL- UORFEN WATER, FLTRD, GF 0.7U REC (UG/L) (49315)	ALA- CHLOR, WATER, DISS, REC, (UG/L) (46342)	ALDI- CARB, WATER, FLTRD, GF 0.7U REC (UG/L) (49312)	ALDI- CARB SULFONE WAT,FLT GF 0.7U REC (UG/L) (49313)	ALDICA- RB SUL- FOXIDE, WAT,FLT GF 0.7U REC (UG/L) (49314)	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)
APR													
07-08	.12	<.02	<.006	<.006	<.006	<.127	.045	<.04	<.02	<.008	<.005	.694	<.050
MAY													
28-28	.55	<.02	<.006	<.006	<.006	<.007	<.004	<.04	<.02	<.008	<.005	.432	<.050

Date	BEN- FLUR- ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)	BENTA- ZON, WATER, FLTRD, GF 0.7U REC (UG/L) (38711)	BRO- MACIL, WATER, DISS, REC (UG/L) (04029)	BRO- MOXYNIL WATER, FLTRD, GF 0.7U REC (UG/L) (49311)	BUTYL- ATE, WATER, DISS, REC (UG/L) (04028)	CAR- BARYL, WATER, FLTRD, GF 0.7U REC (UG/L) (49310)	CAR- BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBO- FURAN, WATER, FLTRD, GF 0.7U REC (UG/L) (49309)	CARBO- FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	CHLORO- THALO- NIL, WAT,FLT GF 0.7U REC (UG/L) (49306)	CHLOR- PYRIFOS DIS- SOLVED (UG/L) (38933)	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	CLOPYR- ALID, WATER, FLTRD, GF 0.7U REC (UG/L) (49305)
APR													
07-08	<.010	<.01	<.03	<.02	<.002	.06	E.182	<.006	<.020	<.04	<.005	<.006	<.01
MAY													
28-28	<.010	E.04	<.03	<.02	<.002	.28	E.419	<.006	<.020	<.04	.024	<.006	<.01

Date	CYANA- ZINE, WATER, DISS, REC (UG/L) (04041)	DACTHAL MONO- ACID, WAT,FLT GF 0.7U REC (UG/L) (49304)	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)	DICAMBA WATER, FLTRD, GF 0.7U REC (UG/L) (38442)	DICHLOR PROP, WATER, FLTRD, GF 0.7U REC (UG/L) (49302)	DI- ELDRIN DIS- SOLVED (UG/L) (39381)	DINOSEB WATER, FLTRD, GF 0.7U REC (UG/L) (49301)	DISUL- FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	DIURON, WATER, FLTRD, GF 0.7U REC (UG/L) (49300)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	ETHAL- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)
APR													
07-08	<.018	<.01	<.003	E.018	.100	<.01	<.01	<.005	<.01	<.02	<.01	<.002	<.009
MAY													
28-28	<.018	<.01	<.003	E.029	.140	.19	<.01	<.005	<.01	<.02	.37	<.002	<.009

08158600 Walnut Creek at Webberville Road, Austin, TX--Continued

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

Date	ETHO- PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	FEN- URON, WATER, FLTRD, GF 0.7U REC (UG/L) (49297)	FLUO- METURON WATER, FLTRD, GF 0.7U REC (UG/L) (38811)	FONOFOS WATER DISS REC (UG/L) (04095)	LINDANE DIS- SOLVED (UG/L) (39341)	LINURON WATER, FLTRD, GF 0.7U REC (UG/L) (38478)	LIN- URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA- THION, DIS- SOLVED (UG/L) (39532)	MCPA, WATER, FLTRD, GF 0.7U REC (UG/L) (38482)	MCPB, WATER, FLTRD, GF 0.7U REC (UG/L) (38487)	METHIO- CARB, WATER, FLTRD, GF 0.7U REC (UG/L) (38501)	METH- OMYL, WATER, FLTRD, GF 0.7U REC (UG/L) (49296)	METO- LACHLOR WATER DISSOLV (UG/L) (39415)
APR													
07-08	<.005	<.03	<.03	<.003	<.004	<.01	<.035	<.027	<.10	<.01	<.008	<.004	.015
MAY													
28-28	<.005	<.03	<.03	<.003	<.004	<.01	<.035	.077	<.02	<.01	<.008	<.004	E.005n

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)	NEB- URON, WATER, FLTRD, GF 0.7U REC (UG/L) (49294)	NORFLUR AZON, WATER, FLTRD, GF 0.7U REC (UG/L) (49293)	ORY- ZALIN, WATER, FLTRD, GF 0.7U REC (UG/L) (49292)	OXAMYL, WATER, FLTRD, GF 0.7U REC (UG/L) (38866)	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)
APR													
07-08	<.006	<.002	<.007	<.01	<.02	<.02	<.01	<.003	<.010	<.006	<.004	<.022	<.011
MAY													
28-28	<.006	<.002	<.007	<.01	<.02	<.02	<.01	<.003	<.010	<.006	<.004	<.022	<.011

Date	PIC- LORAM, WATER, FLTRD, GF 0.7U REC (UG/L) (49291)	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)	PRO- PHAM, WATER, FLTRD, GF 0.7U REC (UG/L) (49236)	PRO- POXUR, WATER, FLTRD, GF 0.7U REC (UG/L) (38538)	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)
APR													
07-08	<.02	E.01n	<.010	<.011	<.02	<.010	.009	<.004	.017	<.02	<.034	<.02	<.005
MAY													
28-28	<.02	<.02	<.010	.015	<.02	<.010	.031	<.004	.019	<.02	<.034	<.02	<.005

Date	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI- CLOPYR, WATER, FLTRD, GF 0.7U REC (UG/L) (49235)	TRI- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)
APR			
07-08	<.002	.06	<.009
MAY			
28-28	<.002	.17	<.009

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

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

08158700 Onion Creek near Driftwood, TX

LOCATION.--Lat 30°04'58", long 98°00'27", Hays County, Hydrologic Unit 12090205, on left bank, 160 ft left of the upstream side of bridge at low-water crossing on Farm Road 150, 3.2 mi southeast of Driftwood, and 10 mi west of Buda.

DRAINAGE AREA.--124 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Apr. 1958, Nov. 1961 to June 1979 (periodic discharge measurements only), July 1979 to current year.

GAGE.--Water-stage recorder. Datum of gage is 878.13 ft above NGVD of 1929. Satellite telemeter at station.

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

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

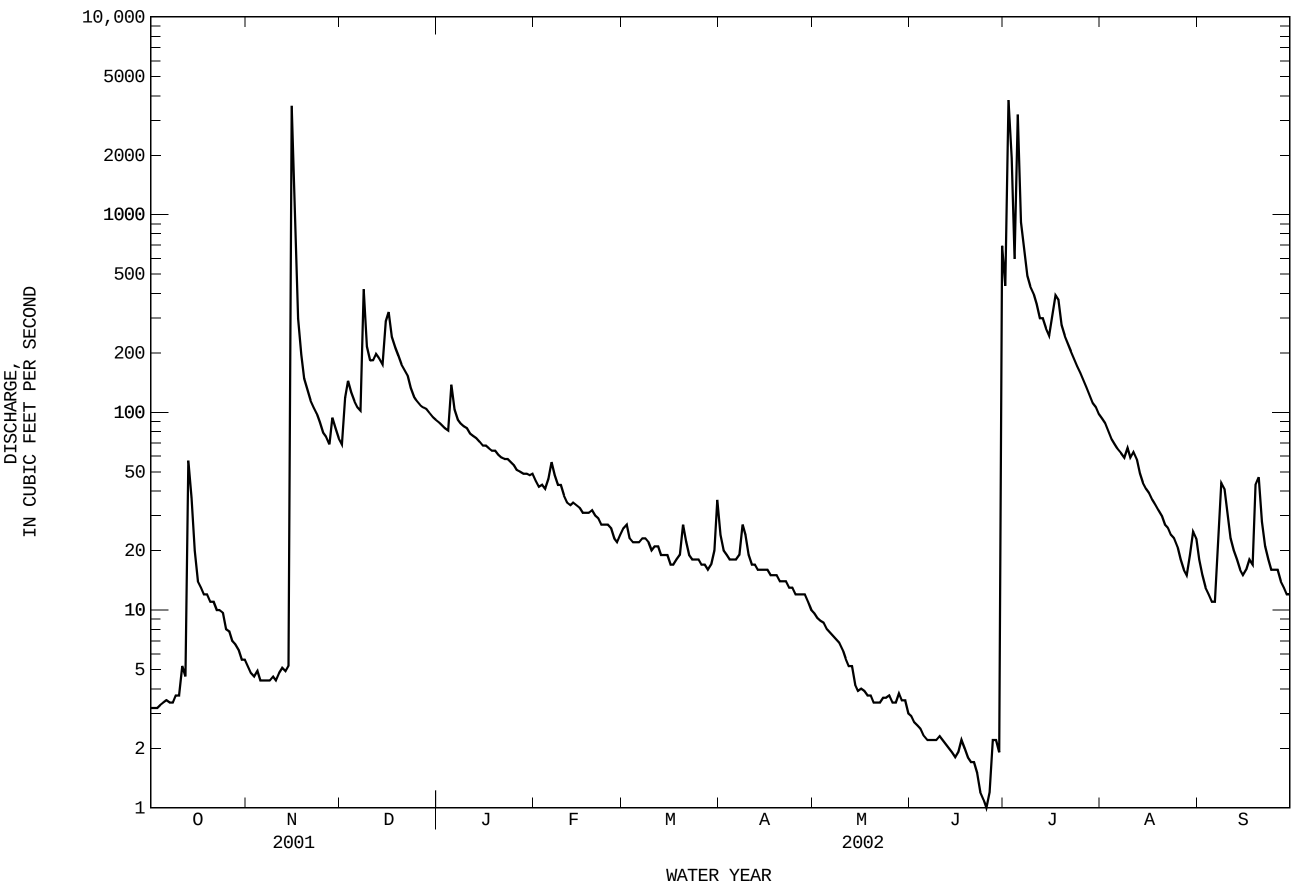
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.2	5.2	69	89	45	26	24	9.6	2.9	436	93	18
2	3.2	4.8	119	86	42	27	20	9.1	2.7	3790	88	15
3	3.2	4.6	144	83	43	23	19	8.8	2.6	1930	80	13
4	3.3	4.9	126	81	41	22	18	8.6	2.5	597	73	12
5	3.4	4.4	114	138	46	22	18	8.0	2.3	3200	69	11
6	3.5	4.4	106	103	56	22	18	7.7	2.2	916	65	11
7	3.4	4.4	102	92	48	23	19	7.4	2.2	664	62	23
8	3.4	4.4	418	88	43	23	27	7.1	2.2	489	59	44
9	3.7	4.6	215	85	43	22	24	6.8	2.2	435	66	41
10	3.7	4.4	183	83	38	20	19	6.3	2.3	400	59	31
11	5.2	4.8	184	78	35	21	17	5.7	2.2	353	63	23
12	4.6	5.1	197	76	34	21	17	5.2	2.1	299	58	20
13	57	4.9	187	74	35	19	16	5.2	2.0	299	49	18
14	37	5.2	175	71	34	19	16	4.2	1.9	267	44	16
15	20	3550	289	68	33	19	16	3.9	1.8	245	41	15
16	14	815	321	68	31	17	16	4.0	1.9	312	39	16
17	13	298	240	66	31	17	15	3.9	2.2	392	36	18
18	12	196	214	64	31	18	15	3.7	2.0	372	34	17
19	12	148	194	64	32	19	15	3.7	1.8	276	32	43
20	11	130	175	61	30	27	14	3.4	1.7	244	30	47
21	11	115	165	59	29	22	14	3.4	1.7	222	27	28
22	10	106	154	58	27	19	14	3.4	1.5	204	26	21
23	10	99	133	58	27	18	13	3.6	1.2	187	24	18
24	9.7	89	120	56	27	18	13	3.6	1.1	171	23	16
25	8.0	79	114	54	26	18	12	3.7	1.0	158	21	16
26	7.8	75	109	51	23	17	12	3.4	1.2	145	18	16
27	7.0	69	106	50	22	17	12	3.4	2.2	134	16	14
28	6.7	94	104	49	24	16	12	3.8	2.2	122	15	13
29	6.3	83	99	49	---	17	11	3.5	1.9	111	19	12
30	5.6	74	95	48	---	20	10	3.5	694	106	25	12
31	5.6	---	92	49	---	36	---	3.0	---	98	23	---
TOTAL	307.5	6086.1	5063	2199	976	645	486	160.6	751.7	17574	1377	618
MEAN	9.919	202.9	163.3	70.94	34.86	20.81	16.20	5.181	25.06	566.9	44.42	20.60
MAX	57	3550	418	138	56	36	27	9.6	694	3790	93	47
MIN	3.2	4.4	69	48	22	16	10	3.0	1.0	98	15	11
AC-FT	610	12070	10040	4360	1940	1280	964	319	1490	34860	2730	1230
CFSM	0.08	1.64	1.32	0.57	0.28	0.17	0.13	0.04	0.20	4.57	0.36	0.17
IN.	0.09	1.83	1.52	0.66	0.29	0.19	0.15	0.05	0.23	5.27	0.41	0.19

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1979 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	32.67	42.12	71.73	57.10	67.62	70.83	49.21	69.39	134.6	47.18	6.961	7.869
MAX	391	320	548	316	506	356	231	202	792	567	44.4	49.8
(WY)	1999	1999	1992	1992	1992	1992	1997	1992	1987	2002	2002	1998
MIN	0.020	0.10	0.10	0.25	0.26	0.40	0.25	0.27	0.089	0.13	0.055	0.006
(WY)	2001	1989	1989	2000	2000	2000	2000	1996	1996	1996	1996	1994

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1979 - 2002	
ANNUAL TOTAL	28716.06		36243.9			
ANNUAL MEAN	78.67		99.30		54.27	
HIGHEST ANNUAL MEAN					196	1992
LOWEST ANNUAL MEAN					1.11	2000
HIGHEST DAILY MEAN	3550	Nov 15	3790	Jul 2	5060	Dec 21 1991
LOWEST DAILY MEAN	0.28	Aug 24	1.0	Jun 25	0.00	Aug 21 1984
ANNUAL SEVEN-DAY MINIMUM	0.32	Aug 19	1.3	Jun 20	0.00	Sep 14 1984
MAXIMUM PEAK FLOW			13900	Nov 15	15800	Oct 17 1998
MAXIMUM PEAK STAGE			22.42	Nov 15	25.10	Oct 17 1998
ANNUAL RUNOFF (AC-FT)	56960		71890		39320	
ANNUAL RUNOFF (CFSM)	0.63		0.80		0.44	
ANNUAL RUNOFF (INCHES)	8.61		10.87		5.95	
10 PERCENT EXCEEDS	158		187		125	
50 PERCENT EXCEEDS	53		23		9.5	
90 PERCENT EXCEEDS	2.2		3.4		0.29	

08158700 Onion Creek near Driftwood, TX--Continued



08158700 Onion Creek near Driftwood, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--
CHEMICAL DATA: Jan. 1974 to current year.
BIOCHEMICAL DATA: Jan. 1974 to current year.
RADIOCHEMICAL DATA: Jan. 1980.
PESTICIDE DATA: Jan. 1978 to Sept. 1986.
SEDIMENT DATA: Nov. 2000 to current year.

INSTRUMENTATION.--Stage-activated automatic sampler.

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

Date	Time	DIS-CHARGE, IN CUBIC FEET PER SECOND (00060)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	COLOR (PLAT-INUM-COBALT UNITS) (00080)	TURBID-ITY LAB HACH 2100AN (NTU) (99872)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L) (00340)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	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)
JUN													
30-30	0525	1110	208	7.8	75	550	50	78	744	.32	.013	.34	<.04

Date	NITRO-GEN, TOTAL (MG/L AS N) (00600)	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)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	CADMIUM WATER UNFLTRD TOTAL (UG/L AS CD) (01027)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU) (01042)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB) (01051)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN) (01092)
JUN												
30-30	5.1	4.7	.46	<.06	<.02	48.9	3370	1120	.2	8.0	10	44

Remark codes used in this report:
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08158810 Bear Creek below Farm Road 1826, near Driftwood, TX

LOCATION.--Lat 30°09'19", long 97°56'23", Hays County, Hydrologic Unit 12090205, 0.8 mi southeast of Farm Road 1826 and 5.9 mi northeast of Driftwood.

DRAINAGE AREA.--12.2 mi^2.

PERIOD OF RECORD.--Mar. 1978 to Sept. 1978 (periodic discharge measurements only), Oct. 1978 to June 1979 (peak discharges greater than base discharge), July 1979 to current year.
Water-quality records.--Chemical data: Mar. 1978 to June 1997. Biochemical data: Mar. 1978 to June 1997. Radiochemical data: Jan. 1980. Pesticide data: June 1978 to Sept. 1986.

GAGE.--Water-stage recorder. Elevation of gage is 860 ft above NGVD of 1929 from topographic map. Satellite telemeter at station.

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

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 9, 1939, reached a stage of 16.2 ft, discharge, 14,200 ft^3/s, and is the highest since at least 1924, from information by local resident. A flood in 1915 was reported to be 2.0 ft higher than the 1939 flood, 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	0.37	0.53	9.9	13	5.0	3.2	2.0	0.79	0.23	175	8.7	1.4
2	0.39	0.53	28	13	4.9	3.2	1.9	0.71	0.20	997	8.1	1.3
3	0.38	0.67	27	12	4.9	2.8	1.7	0.75	0.33	147	7.5	1.2
4	0.37	0.58	24	12	4.8	2.9	1.6	0.78	0.13	59	7.2	1.1
5	0.34	0.45	21	28	5.9	2.9	1.6	0.80	0.07	54	6.9	0.95
6	0.32	0.40	19	16	6.1	2.8	1.6	0.73	0.05	42	6.3	0.88
7	0.32	0.42	18	14	5.4	2.7	2.5	0.63	0.03	35	5.7	2.8
8	0.30	0.44	119	14	5.0	2.7	2.9	0.58	0.02	30	5.4	4.7
9	0.33	0.45	42	13	4.9	2.5	1.9	0.57	0.02	26	5.2	3.4
10	0.32	0.45	34	13	4.6	2.2	1.7	0.49	0.02	24	4.9	2.1
11	0.59	0.47	43	12	4.4	2.4	1.7	0.44	0.01	22	4.8	1.8
12	0.40	0.47	40	11	4.4	2.3	1.6	0.44	0.01	22	4.5	1.5
13	1.3	0.48	39	11	4.3	2.2	1.6	0.40	0.0	21	4.1	1.3
14	0.65	0.57	34	10	4.1	2.2	1.6	0.39	0.0	19	3.8	1.1
15	0.61	101	170	9.8	4.1	2.2	1.6	0.37	0.0	18	3.7	1.1
16	0.53	30	89	9.6	3.7	2.0	1.6	0.38	0.0	21	3.4	1.2
17	0.53	13	58	9.5	3.7	2.1	1.5	0.33	0.01	31	3.1	1.2
18	0.56	11	48	8.9	3.7	2.3	1.5	0.28	0.01	25	2.9	1.1
19	0.53	10	39	8.6	3.7	2.9	1.4	0.25	0.0	23	2.7	3.3
20	0.54	8.9	34	8.2	3.3	3.2	1.2	0.22	0.0	21	2.5	2.1
21	0.57	8.4	31	8.1	3.2	2.4	1.2	0.22	0.0	19	2.4	1.3
22	0.57	8.1	28	8.1	3.3	2.2	1.3	0.20	0.0	17	2.2	1.1
23	0.61	7.9	25	8.1	3.2	2.2	1.1	0.20	0.0	16	2.1	1.1
24	0.55	6.9	23	e7.5	3.1	2.2	1.0	0.20	0.0	15	1.9	0.98
25	0.64	6.3	21	e6.6	3.0	2.2	1.0	0.18	0.0	14	1.8	0.94
26	0.53	6.2	19	e6.1	2.8	2.0	1.0	0.18	0.02	13	1.6	0.88
27	0.40	5.6	18	e5.9	2.9	1.9	0.95	0.18	0.01	12	1.4	0.89
28	0.43	17	18	e5.9	3.0	1.9	0.90	0.65	0.07	11	1.4	0.83
29	0.47	12	16	5.7	---	2.0	0.89	0.55	0.06	11	2.2	0.85
30	0.50	11	15	5.5	---	2.5	0.84	0.43	164	10	1.7	0.85
31	0.53	---	14	5.6	---	2.1	---	0.28	---	9.2	1.5	---
TOTAL	15.48	270.21	1163.9	319.7	115.4	75.3	44.88	13.60	165.30	1959.2	121.6	45.25
MEAN	0.499	9.007	37.55	10.31	4.121	2.429	1.496	0.439	5.510	63.20	3.923	1.508
MAX	1.3	101	170	28	6.1	3.2	2.9	0.80	164	997	8.7	4.7
MIN	0.30	0.40	9.9	5.5	2.8	1.9	0.84	0.18	0.00	9.2	1.4	0.83
AC-FT	31	536	2310	634	229	149	89	27	328	3890	241	90
CFSM	0.04	0.74	3.08	0.85	0.34	0.20	0.12	0.04	0.45	5.18	0.32	0.12
IN.	0.05	0.82	3.55	0.97	0.35	0.23	0.14	0.04	0.50	5.97	0.37	0.14

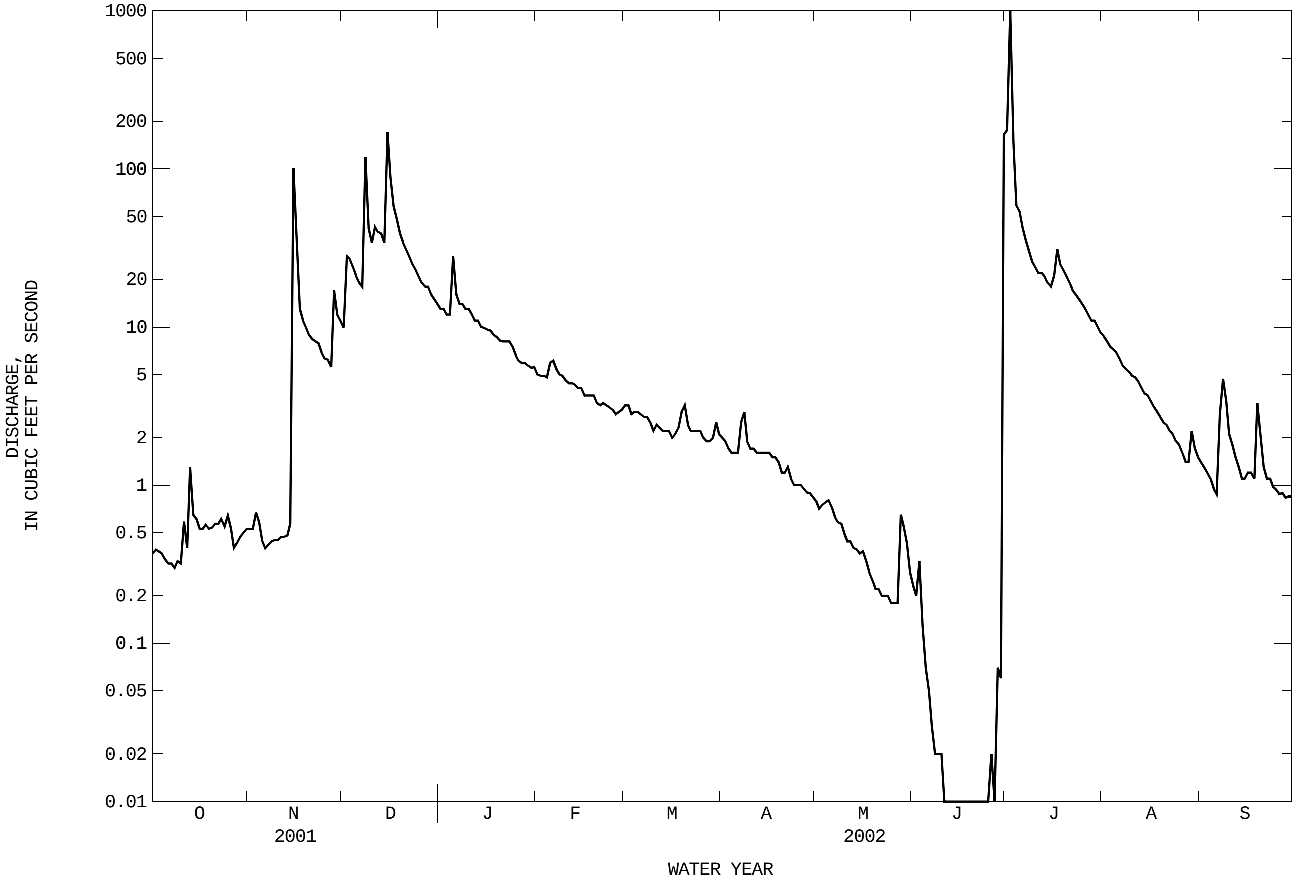
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1979 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	4.089	4.624	10.34	6.799	8.022	7.509	5.686	7.529	16.76	4.960	0.821	0.580
MAX	46.3	30.5	91.8	33.3	49.4	32.3	26.2	23.7	144	63.2	3.92	2.71
(WY)	1999	2001	1992	1992	1992	1992	1991	1992	1981	2002	2002	1991
MIN	0.000	0.000	0.000	0.000	0.017	0.053	0.048	0.013	0.001	0.000	0.000	0.000
(WY)	1989	1989	1989	1989	1990	1996	1996	1996	1984	1984	1984	1984

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1979 - 2002	
ANNUAL TOTAL	3141.07		4309.82			
ANNUAL MEAN	8.606		11.81		6.415	
HIGHEST ANNUAL MEAN					22.3	1992
LOWEST ANNUAL MEAN					0.10	1996
HIGHEST DAILY MEAN	170	Dec 15	997	Jul 2	1000	Dec 20 1991
LOWEST DAILY MEAN	0.00	Jul 16	0.00	Jun 13	0.00	Aug 28 1980
ANNUAL SEVEN-DAY MINIMUM	0.00	Jul 16	0.00	Jun 19	0.00	Aug 28 1980
MAXIMUM PEAK FLOW			c10300	Jul 2	c10300	Jul 2 2002
MAXIMUM PEAK STAGE			a14.27	Jul 2	a14.27	Jul 2 2002
ANNUAL RUNOFF (AC-FT)	6230		8550		4650	
ANNUAL RUNOFF (CFSM)	0.71		0.97		0.53	
ANNUAL RUNOFF (INCHES)	9.58		13.14		7.14	
10 PERCENT EXCEEDS	19		23		14	
50 PERCENT EXCEEDS	3.8		2.2		1.2	
90 PERCENT EXCEEDS	0.00		0.24		0.00	

e Estimated
a From floodmark.
c From rating curve extended above 10,200 ft^3/s on basis of slope-area measurement of 10,200 ft^3/s.

08158810 Bear Creek below Farm Road 1826, near Driftwood, TX--Continued



08158810 Bear Creek Below FM 1826 nr. Driftwood, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--
CHEMICAL DATA: Mar. 1978 to June 1997, Mar. 2000 to current year.
BIOCHEMICAL DATA: Mar. 1978 to June 1997, Mar. 2000 to current year.
PESTICIDE DATA: June 1983 to Sept. 1986.
SUSPENDED SEDIMENT CHEMISTRY: Nov. 2001 to current year.

INSTRUMENTATION.--Stage-activated automatic sampler.

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

Date	Time	DIS-CHARGE, IN CUBIC FEET PER SECOND (00060)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	COLOR (PLAT-INUM-COBALT UNITS) (00080)	TURBID-ITY LAB HACH 2100AN (NTU) (99872)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L) (00340)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	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)
JUN													
30-30	0510	375	209	7.7	60	160	30	75	168	.64	.012	.65	<.04
JUL													
17-17	1630	66	564	8.0	35	250	20	242	184	--	E.005	.23	<.04

Date	NITRO-GEN, TOTAL (MG/L AS N) (00600)	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)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	CADMIUM WATER UNFLTRD TOTAL (UG/L AS CD) (01027)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU) (01042)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB) (01051)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN) (01092)
JUN												
30-30	2.0	1.4	.13	E.03	E.01	16.2	187	185	<.1	2.5	3	22
JUL												
17-17	1.1	.84	.13	<.06	E.02	10.5	8.2	46	<.1	E.8	M	34

Remark codes used in this report:
< -- Less than
E -- Estimated value
M -- Presence verified, not quantified

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08158840 Slaughter Creek at Farm to Market Road 1826 near Austin, TX

LOCATION.--Lat 30°12'32", long 97°54'11", Travis County, Hydrologic Unit 12090205, 1.7 mi south of the intersection on U.S. Highway 290 and Farm Road 1826, and 11.9 mi southwest of the State Capitol Building in Austin.

DRAINAGE AREA.--8.24 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Jan. 1978 to current year.

GAGE.--Water-stage recorder. Datum of gage is 876.14 ft above NGVD of 1929. Satellite telemeter at station.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001
DAILY MEAN VALUES

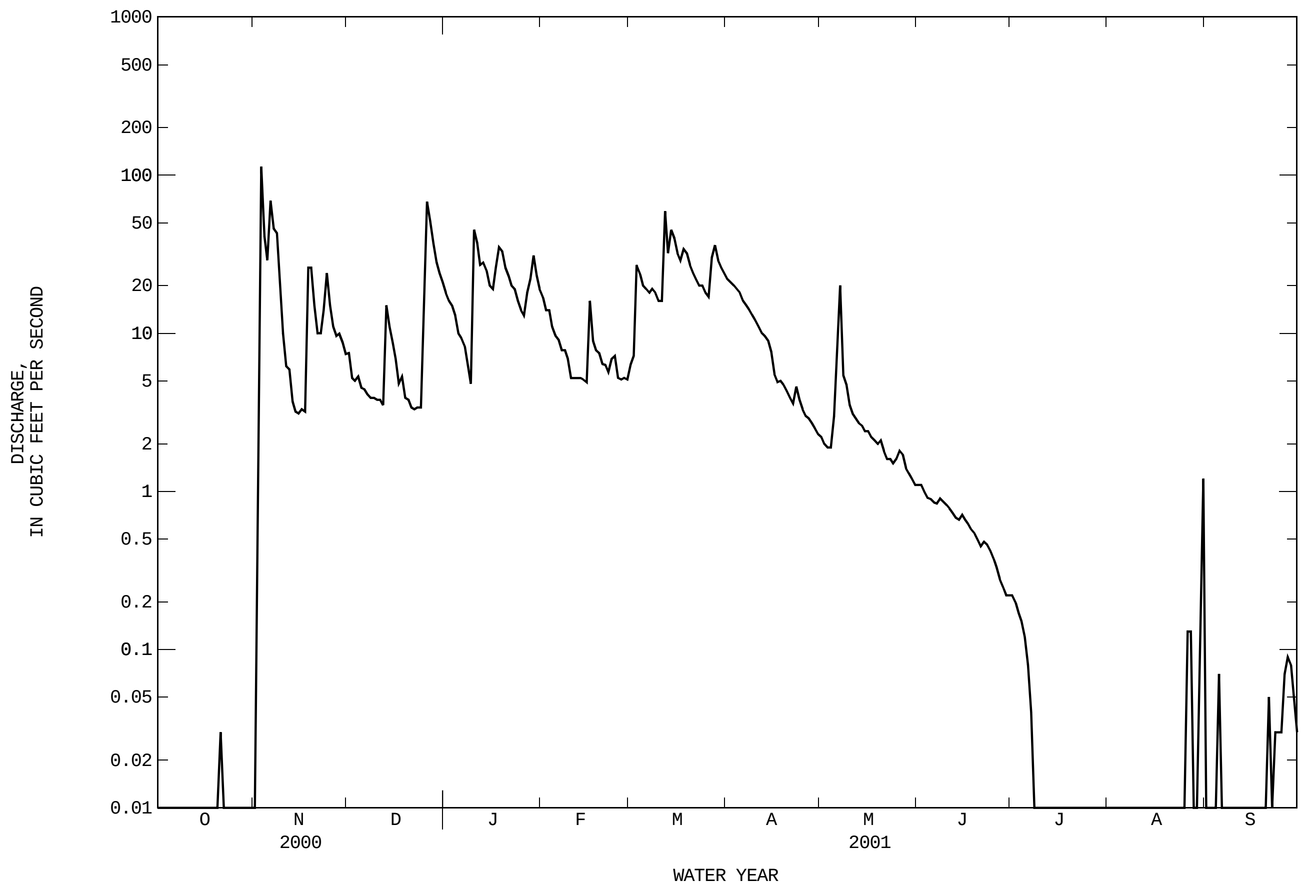
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.0	0.0	7.5	18	17	6.3	22	2.2	1.1	0.22	0.0	0.01
2	0.0	12	5.2	16	14	7.2	21	2.0	1.1	0.20	0.0	0.0
3	0.0	113	5.0	15	14	27	20	1.9	0.99	0.17	0.0	0.0
4	0.0	41	5.3	13	11	24	19	1.9	0.91	0.15	0.0	0.0
5	0.0	29	4.5	10	9.7	20	18	3.0	0.89	0.12	0.0	0.07
6	0.0	69	4.4	9.3	9.1	19	16	6.4	0.85	0.08	0.0	0.0
7	0.0	46	4.1	8.3	7.8	18	15	20	0.84	0.04	0.0	0.0
8	0.0	43	3.9	6.3	7.8	19	14	5.4	0.90	0.0	0.0	0.0
9	0.0	20	3.9	4.8	6.9	18	13	4.7	0.86	0.0	0.0	0.0
10	0.0	10	3.8	45	5.2	16	12	3.5	0.82	0.0	0.0	0.0
11	0.0	6.2	3.8	37	5.2	16	11	3.1	0.78	0.0	0.0	0.0
12	0.0	5.9	3.5	27	5.2	59	10	2.9	0.73	0.0	0.0	0.0
13	0.0	3.7	15	28	5.2	32	9.6	2.7	0.68	0.0	0.0	0.0
14	0.0	3.2	11	25	5.1	45	9.0	2.6	0.66	0.0	0.0	0.0
15	0.0	3.1	8.7	20	4.9	40	7.6	2.4	0.71	0.0	0.0	0.0
16	0.0	3.3	6.9	19	16	32	5.5	2.4	0.66	0.0	0.0	0.0
17	0.0	3.2	4.8	26	8.9	29	4.9	2.2	0.62	0.0	0.0	0.0
18	0.0	26	5.3	35	7.8	34	5.0	2.1	0.57	0.0	0.0	0.0
19	0.0	26	3.9	33	7.5	32	4.7	2.0	0.54	0.0	0.0	0.0
20	0.0	15	3.8	26	6.4	27	4.3	2.1	0.49	0.0	0.0	0.0
21	0.03	10	3.4	23	6.3	24	3.9	1.8	0.45	0.0	0.0	0.05
22	0.01	10	3.3	20	5.7	22	3.6	1.6	0.48	0.0	0.0	0.01
23	0.0	14	3.4	19	6.9	20	4.6	1.6	0.46	0.0	0.0	0.03
24	0.0	24	3.4	16	7.2	20	3.8	1.5	0.42	0.0	0.0	0.03
25	0.0	15	19	14	5.2	18	3.3	1.6	0.38	0.0	0.0	0.03
26	0.0	11	68	13	5.1	17	3.0	1.8	0.33	0.0	0.13	0.07
27	0.0	9.6	51	18	5.2	30	2.9	1.7	0.28	0.0	0.13	0.09
28	0.0	9.9	37	22	5.1	36	2.7	1.4	0.25	0.0	0.0	0.08
29	0.0	8.8	28	31	---	29	2.5	1.3	0.22	0.0	0.0	0.05
30	0.0	7.4	24	23	---	26	2.3	1.2	0.22	0.0	0.15	0.03
31	0.0	---	21	19	---	24	---	1.1	---	0.0	1.2	---
TOTAL	0.04	598.3	375.8	639.7	221.4	786.5	274.2	92.1	19.19	0.98	1.61	0.55
MEAN	0.001	19.94	12.12	20.64	7.907	25.37	9.140	2.971	0.640	0.032	0.052	0.018
MAX	0.03	113	68	45	17	59	22	20	1.1	0.22	1.2	0.09
MIN	0.00	0.00	3.3	4.8	4.9	6.3	2.3	1.1	0.22	0.00	0.00	0.00
AC-FT	0.08	1190	745	1270	439	1560	544	183	38	1.9	3.2	1.1
CFSM	0.00	2.42	1.47	2.50	0.96	3.08	1.11	0.36	0.08	0.00	0.01	0.00
IN.	0.00	2.70	1.70	2.89	1.00	3.55	1.24	0.42	0.09	0.00	0.01	0.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1978 - 2001, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	4.115	3.152	8.250	5.569	6.198	6.429	4.629	9.524	15.05	1.090	0.343	0.386
MAX	35.5	19.9	75.0	24.4	40.6	25.4	27.1	33.0	101	5.31	2.28	4.33
(WY)	1987	2001	1992	1992	1992	2001	1979	1995	1981	1979	1983	1991
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.009	0.002	0.000	0.000	0.000
(WY)	1983	1989	1989	1990	1996	1989	1996	2000	1996	1984	1980	1984

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1978 - 2001	
ANNUAL TOTAL	1358.34		3010.37			
ANNUAL MEAN	3.711		8.248		5.537	
HIGHEST ANNUAL MEAN					17.9	1992
LOWEST ANNUAL MEAN					0.003	1996
HIGHEST DAILY MEAN	151	Jun 9	113	Nov 3	901	Jun 11 1981
LOWEST DAILY MEAN	0.00	Jan 1	0.00	Oct 1	0.00	Jan 26 1978
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00	Oct 1	0.00	Jan 26 1978
MAXIMUM PEAK FLOW			316	Nov 3	6330	Dec 20 1991
MAXIMUM PEAK STAGE			5.84	Nov 3	10.79	Jun 11 1981
ANNUAL RUNOFF (AC-FT)	2690		5970		4010	
ANNUAL RUNOFF (CFSM)	0.45		1.00		0.67	
ANNUAL RUNOFF (INCHES)	6.13		13.59		9.13	
10 PERCENT EXCEEDS	9.1		24		11	
50 PERCENT EXCEEDS	0.00		3.0		0.34	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

08158840 Slaughter Creek at Farm to Market Road 1826 near Austin, TX--Continued



08158840 Slaughter Creek at Farm to Market Road 1826 near Austin, TX--Continued

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

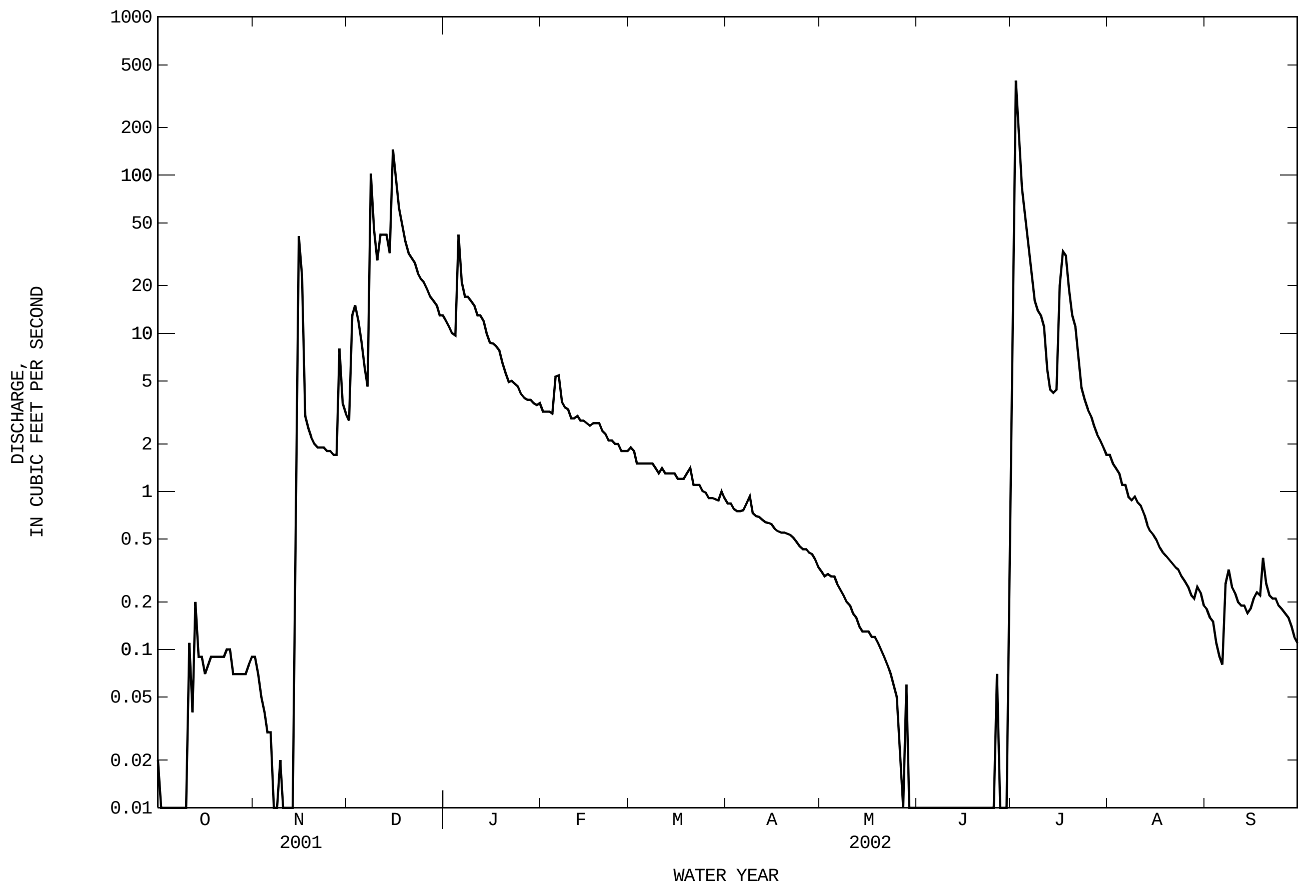
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.02	0.09	2.8	12	3.2	1.9	0.84	0.31	0.0	34	1.7	0.18
2	0.01	0.07	13	11	3.2	1.8	0.84	0.29	0.0	396	1.5	0.16
3	0.0	0.05	15	10	3.2	1.5	0.77	0.30	0.0	167	1.4	0.15
4	0.0	0.04	12	9.7	3.1	1.5	0.75	0.29	0.0	83	1.3	0.11
5	0.0	0.03	8.8	42	5.3	1.5	0.75	0.29	0.0	55	1.1	0.09
6	0.0	0.03	6.0	21	5.4	1.5	0.76	0.26	0.0	36	1.1	0.08
7	0.0	0.01	4.6	17	3.7	1.5	0.84	0.24	0.0	24	0.92	0.26
8	0.0	0.0	102	17	3.4	1.5	0.93	0.22	0.0	16	0.88	0.32
9	0.0	0.02	45	16	3.3	1.4	0.73	0.20	0.0	14	0.93	0.25
10	0.0	0.0	29	15	2.9	1.3	0.70	0.19	0.0	13	0.85	0.23
11	0.11	0.0	42	13	2.9	1.4	0.69	0.17	0.0	11	0.81	0.20
12	0.04	0.0	42	13	3.0	1.3	0.66	0.16	0.0	5.9	0.72	0.19
13	0.20	0.0	42	12	2.8	1.3	0.64	0.14	0.0	4.4	0.61	0.19
14	0.09	0.06	32	9.9	2.8	1.3	0.63	0.13	0.0	4.2	0.56	0.17
15	0.09	41	145	8.7	2.7	1.3	0.62	0.13	0.0	4.4	0.53	0.18
16	0.07	23	96	8.6	2.6	1.2	0.58	0.13	0.0	20	0.49	0.21
17	0.08	3.0	62	8.3	2.7	1.2	0.56	0.12	0.0	33	0.44	0.23
18	0.09	2.5	48	7.8	2.7	1.2	0.55	0.12	0.0	31	0.41	0.22
19	0.09	2.2	38	6.5	2.7	1.3	0.55	0.11	0.0	19	0.39	0.38
20	0.09	2.0	32	5.6	2.4	1.4	0.54	0.10	0.0	13	0.37	0.26
21	0.09	1.9	30	4.9	2.3	1.1	0.53	0.09	0.0	11	0.35	0.22
22	0.09	1.9	28	5.0	2.1	1.1	0.51	0.08	0.0	7.4	0.33	0.21
23	0.10	1.9	24	4.8	2.1	1.1	0.48	0.07	0.0	4.5	0.32	0.21
24	0.10	1.8	22	4.6	2.0	1.0	0.45	0.06	0.0	3.8	0.29	0.19
25	0.07	1.8	21	4.1	2.0	0.98	0.43	0.05	0.0	3.3	0.27	0.18
26	0.07	1.7	19	3.9	1.8	0.91	0.43	0.02	0.07	3.0	0.25	0.17
27	0.07	1.7	17	3.8	1.8	0.91	0.41	0.0	0.0	2.6	0.22	0.16
28	0.07	8.0	16	3.8	1.8	0.89	0.40	0.06	0.0	2.3	0.21	0.14
29	0.07	3.6	15	3.6	---	0.88	0.37	0.01	0.0	2.1	0.25	0.12
30	0.08	3.1	13	3.5	---	1.0	0.33	0.0	1.4	1.9	0.23	0.11
31	0.09	---	13	3.6	---	0.91	---	0.0	---	1.7	0.19	---
TOTAL	1.88	101.50	1035.2	309.7	79.9	39.08	18.27	4.34	1.47	1027.5	19.92	5.77
MEAN	0.061	3.383	33.39	9.990	2.854	1.261	0.609	0.140	0.049	33.15	0.643	0.192
MAX	0.20	41	145	42	5.4	1.9	0.93	0.31	1.4	396	1.7	0.38
MIN	0.00	0.00	2.8	3.5	1.8	0.88	0.33	0.00	0.00	1.7	0.19	0.08
AC-FT	3.7	201	2050	614	158	78	36	8.6	2.9	2040	40	11
CFSM	0.01	0.41	4.05	1.21	0.35	0.15	0.07	0.02	0.01	4.02	0.08	0.02
IN.	0.01	0.46	4.67	1.40	0.36	0.18	0.08	0.02	0.01	4.64	0.09	0.03

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1978 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	3.946	3.161	9.298	5.632	6.066	6.223	4.468	9.149	14.45	2.372	0.355	0.378
MAX	35.5	19.9	75.0	24.4	40.6	25.4	27.1	33.0	101	33.1	2.28	4.33
(WY)	1987	2001	1992	1992	1992	2001	1979	1995	1981	2002	1983	1991
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.009	0.002	0.000	0.000	0.000
(WY)	1983	1989	1989	1990	1996	1989	1996	2000	1996	1984	1980	1984

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1978 - 2002	
ANNUAL TOTAL	3174.81		2644.53			
ANNUAL MEAN	8.698		7.245		5.451	
HIGHEST ANNUAL MEAN					17.9	1992
LOWEST ANNUAL MEAN					0.003	1996
HIGHEST DAILY MEAN	145	Dec 15	396	Jul 2	901	Jun 11 1981
LOWEST DAILY MEAN	0.00	Jul 8	0.00	Oct 3	0.00	Jan 26 1978
ANNUAL SEVEN-DAY MINIMUM	0.00	Jul 8	0.00	Oct 3	0.00	Jan 26 1978
MAXIMUM PEAK FLOW			2840	Jul 2	6330	Dec 20 1991
MAXIMUM PEAK STAGE			8.94	Jul 2	10.79	Jun 11 1981
ANNUAL RUNOFF (AC-FT)	6300		5250		3950	
ANNUAL RUNOFF (CFSM)	1.06		0.88		0.66	
ANNUAL RUNOFF (INCHES)	14.33		11.94		8.99	
10 PERCENT EXCEEDS	26		17		11	
50 PERCENT EXCEEDS	1.9		0.84		0.36	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

08158840 Slaughter Creek at Farm to Market Road 1826 near Austin, TX--Continued



08158840 Slaughter Creek at Farm to Market Road 1826 near Austin, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--
CHEMICAL DATA: June 1983 to current year.
BIOCHEMICAL DATA: June 1983 to current year.
PESTICIDE DATA: June 1983 to Sept. 1986.
SEDIMENT DATA: June 2000 to current year.

INSTRUMENTATION.--Stage-activated automatic sampler.

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

Date	Time	DIS-CHARGE, IN CUBIC FEET PER SECOND (00060)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	COLOR (PLAT-INUM-COBALT UNITS) (00080)	TURBID-ITY LAB HACH 2100AN (NTU) (99872)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L) (00340)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	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)
NOV													
15-15	1650	135	208	7.8	75	46	30	73	98	E.004	.09	<.04	.87

Date	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)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	CADMIUM WATER UNFLTRD TOTAL (UG/L AS CD) (01027)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU) (01042)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB) (01051)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN) (01092)
NOV											
15-15	.78	.09	<.06	E.01	13.9	34.0	93	<.1	2.1	2	11

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

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08158922 Williamson Creek at Brush Country Boulevard, Oak Hill, TX

LOCATION.--Lat 30°13'34", long 97°50'28", Travis County, Hydrologic Unit 12090205, at downstream side of bridge on Brush Country Boulevard near Oak Hill, and 7.7 mi southwest of the State Capitol Building in Austin.

DRAINAGE AREA.--6.79 mi^2.

PERIOD OF RECORD.--Mar. 1993 to current year.
Water-quality records.--Chemical data: Oct. 1993 to Sept. 2001. Biochemical data: Oct. 1993 to Sept. 2000. Sediment data: May 1999 to May 2001.

GAGE.--Water-stage recorder. Datum of gage is 740.25 ft above NGVD of 1929, city of Austin bench mark. Satellite telemeter at station.

REMARKS.--Records poor. 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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	31	0.00	0.00
2	0.0	0.0	5.9	0.0	0.0	0.0	0.0	0.0	0.0	177	0.00	0.00
3	0.0	0.0	1.9	0.0	0.0	0.0	0.0	0.0	0.0	89	0.01	0.00
4	0.0	0.0	0.08	0.0	0.0	0.0	0.0	0.0	0.0	27	0.00	0.00
5	0.0	0.0	0.0	16	0.01	0.0	0.0	0.0	0.0	13	0.00	0.00
6	0.0	0.0	0.0	1.7	0.0	0.0	0.0	0.0	0.0	4.0	0.00	0.00
7	0.0	0.0	0.0	0.83	0.0	0.0	0.01	0.0	0.0	0.74	0.00	0.01
8	0.0	0.0	68	0.52	0.0	0.0	0.0	0.0	0.0	0.17	0.00	0.00
9	0.0	0.0	18	0.26	0.0	0.0	0.0	0.0	0.0	0.41	0.00	0.00
10	0.0	0.0	6.0	0.10	0.0	0.0	0.0	0.0	0.0	3.9	0.00	0.00
11	0.01	0.0	17	0.04	0.0	0.0	0.0	0.0	0.0	1.2	0.00	0.00
12	0.01	0.0	11	0.02	0.0	0.0	0.0	0.0	0.0	0.38	0.00	0.00
13	1.5	0.0	9.0	0.01	0.0	0.0	0.0	0.0	0.0	0.14	0.00	0.00
14	0.0	0.0	4.9	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.00	0.00
15	0.0	102	67	0.0	0.0	0.0	0.0	0.0	0.0	0.07	0.00	0.00
16	0.0	90	50	0.0	0.0	0.0	0.0	0.0	0.01	5.6	e0.0	0.00
17	0.0	6.9	19	0.0	0.0	0.0	0.0	0.0	0.0	7.7	e0.0	0.00
18	0.0	0.0	8.7	0.0	0.0	0.0	0.0	0.0	0.0	3.3	e0.0	0.00
19	0.0	0.0	3.5	0.0	0.0	1.2	0.0	0.0	0.0	1.1	0.00	0.0
20	0.0	0.0	1.5	0.0	0.0	0.57	0.0	0.0	0.0	0.33	0.00	0.00
21	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00
22	0.0	0.0	0.59	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00
23	0.0	0.0	0.31	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00
24	0.0	0.0	0.23	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00
25	0.0	0.0	0.14	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00
26	0.0	0.0	0.09	0.0	0.0	0.0	0.0	0.0	7.0	0.00	0.00	0.00
27	0.0	0.0	0.07	0.0	0.0	0.0	0.0	0.0	2.4	0.00	0.00	0.00
28	0.0	13	0.03	0.0	0.0	0.0	0.0	0.01	0.0	0.00	0.00	0.00
29	0.0	1.4	0.0	0.0	---	0.0	0.0	0.0	0.0	0.00	0.00	0.00
30	0.0	0.04	0.0	0.0	---	0.21	0.0	0.0	50	0.00	0.00	0.00
31	0.0	---	0.0	0.0	---	0.0	---	0.0	---	0.00	0.00	---
TOTAL	1.52	213.34	293.94	19.48	0.01	1.98	0.01	0.01	59.41	367.14	0.01	0.01
MEAN	0.049	7.111	9.482	0.628	0.000	0.064	0.000	0.000	1.980	11.84	0.000	0.000
MAX	1.5	102	68	16	0.01	1.2	0.01	0.01	50	177	0.01	0.01
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	3.0	423	583	39	0.02	3.9	0.02	0.02	118	728	0.02	0.02

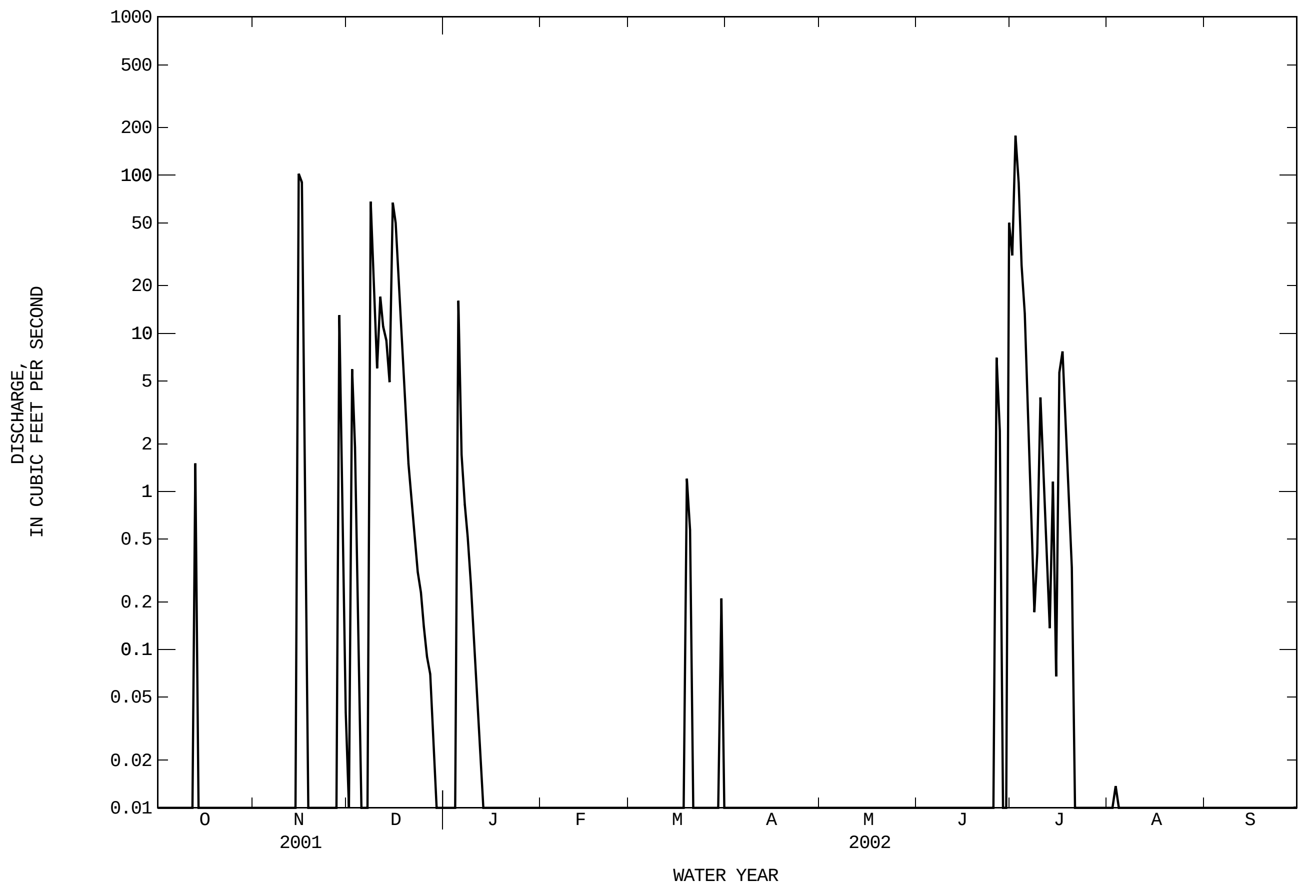
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1993 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	3.323	2.689	1.637	0.431	1.783	0.766	0.383	2.062	2.323	1.187	0.335	0.026
MAX	24.8	12.2	9.48	1.76	15.9	4.88	3.48	10.3	13.1	11.8	2.75	0.14
(WY)	1999	2001	2002	1998	1998	1998	1997	1997	1997	2002	2001	1994
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)	1997	2000	1996	1994	1999	1996	1999	2002	2001	1993	1999	1993

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1993 - 2002	
ANNUAL TOTAL	724.21		956.86			
ANNUAL MEAN	1.984		2.622		1.387	
HIGHEST ANNUAL MEAN					2.62	2002
LOWEST ANNUAL MEAN					0.025	1993
HIGHEST DAILY MEAN	102	Nov 15	177	Jul 2	455	Oct 17 1998
LOWEST DAILY MEAN	0.00	Jan 3	0.00	Oct 1	0.00	Mar 11 1993
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 3	0.00	Oct 1	0.00	Mar 11 1993
MAXIMUM PEAK FLOW			1370	Jul 2	2700	Oct 17 1998
MAXIMUM PEAK STAGE			a5.77	Jul 2	7.10	Oct 17 1998
ANNUAL RUNOFF (AC-FT)	1440		1900		1010	
10 PERCENT EXCEEDS	2.1		1.3		0.07	
50 PERCENT EXCEEDS	0.00		0.00		0.00	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

e Estimated
a From floodmark.

08158922 Williamson Creek at Brush Country Boulevard, Oak Hill, TX--Continued



08158930 Williamson Creek at Manchaca Road, Austin, TX

LOCATION.--Lat 30°13'16", long 97°47'36", Travis County, Hydrologic Unit 12090205, on downstream side of the bridge on Manchaca Road, 0.7 mile south of the intersection of Ben White Boulevard and Manchaca Road, and 4.9 miles southwest of the State Capitol Building in Austin.

WATER-DISCHARGE RECORDS

DRAINAGE AREA.--19.0 mi^2.

PERIOD OF RECORD.--May 1975 to Sept. 1985 (selected storm events), Oct. 1984 to Sept. 1985, Jan. 2000 to current year.

GAGE.--Water-stage recorder. Datum of gage is 618.39 ft above NGVD of 1929. Satellite telemeter at gage.

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

EXTREMES FOR PERIOD OF SELECTED STORM EVENT RECORD (WATER YEARS 1975-85).--Maximum discharge, 8,490 ft^3/s, June 11, 1981, gage height, 16.00 ft; minimum discharge, 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	0.00	0.03	1.5	2.1	0.20	0.06	0.10	0.00	0.00	58	0.00	0.00
2	0.00	0.02	30	2.1	0.14	0.06	0.09	0.00	0.00	476	0.00	0.00
3	0.00	0.0	10	2.0	0.13	0.05	0.06	0.00	0.00	127	0.00	0.00
4	0.00	0.00	2.3	2.0	0.14	0.04	0.04	0.00	0.00	21	0.00	0.00
5	0.00	0.00	2.3	44	7.2	0.05	0.01	0.00	0.00	6.9	0.00	0.00
6	0.00	0.00	2.3	4.7	0.90	0.06	0.00	0.00	0.00	2.7	0.00	0.00
7	0.00	0.00	2.3	3.4	0.28	0.04	6.7	0.00	4.8	0.62	0.00	9.2
8	0.00	0.01	118	23	0.19	0.04	1.6	0.00	0.20	0.58	0.50	2.7
9	0.00	1.5	31	12	0.16	0.03	0.10	0.00	5.1	2.4	0.26	0.53
10	0.00	0.17	9.0	0.18	0.14	0.03	0.08	0.00	0.14	4.2	2.2	0.11
11	19	0.11	45	0.13	0.13	0.04	0.07	0.00	0.0	1.3	0.34	0.00
12	2.9	1.1	32	0.15	0.13	0.03	0.06	0.00	0.00	0.46	0.08	0.00
13	19	0.48	13	0.16	0.13	0.01	0.06	0.00	0.00	0.28	0.00	0.00
14	0.54	0.22	6.0	0.17	0.12	0.02	0.04	0.00	0.00	1.3	0.00	0.00
15	0.41	1230	148	0.18	0.11	0.02	0.0	0.00	0.00	0.39	0.00	0.00
16	0.29	270	91	0.20	0.10	0.00	0.00	0.00	13	1.1	0.00	0.00
17	0.19	12	29	0.21	0.11	0.00	0.00	0.00	0.09	4.0	0.00	0.00
18	0.17	2.1	10	0.21	0.15	0.00	0.00	0.00	0.01	2.1	0.00	0.00
19	0.16	2.4	2.8	0.19	0.13	9.9	0.00	0.00	0.00	0.46	0.00	2.6
20	0.15	2.2	2.0	0.18	0.09	0.91	0.00	0.00	0.00	0.26	0.00	0.60
21	0.14	2.0	2.1	0.19	0.08	0.10	0.00	0.00	0.00	0.15	0.00	0.11
22	0.13	2.1	2.4	0.21	0.08	0.09	0.00	0.00	0.00	0.09	0.00	0.00
23	0.12	2.1	2.3	0.25	0.07	0.09	0.00	0.00	0.00	0.07	0.00	0.00
24	0.10	2.3	2.3	0.23	0.07	0.08	0.00	0.00	0.00	0.04	0.00	0.00
25	0.08	2.3	2.3	0.21	0.08	0.08	0.00	0.00	0.00	0.00	0.00	0.00
26	0.07	2.3	2.3	0.17	0.05	0.06	0.00	0.00	11	0.00	0.00	0.00
27	0.06	2.2	2.1	0.16	0.05	0.06	0.00	0.00	10	0.00	0.00	0.00
28	0.05	92	2.1	0.17	0.05	0.06	0.00	e22	0.11	0.00	0.00	0.00
29	0.04	11	2.1	0.18	---	0.05	0.00	e0.01	0.90	0.00	0.00	0.00
30	0.03	1.6	2.0	0.18	---	0.33	0.00	0.00	262	0.00	0.00	0.00
31	0.03	---	2.1	0.98	---	0.13	---	0.00	---	0.00	0.00	---
TOTAL	43.66	1642.24	611.6	100.19	11.21	12.52	9.01	22.01	307.35	711.40	3.38	15.85
MEAN	1.408	54.74	19.73	3.232	0.400	0.404	0.300	0.710	10.24	22.95	0.109	0.528
MAX	19	1230	148	44	7.2	9.9	6.7	22	262	476	2.2	9.2
MIN	0.00	0.00	1.5	0.13	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	87	3260	1210	199	22	25	18	44	610	1410	6.7	31

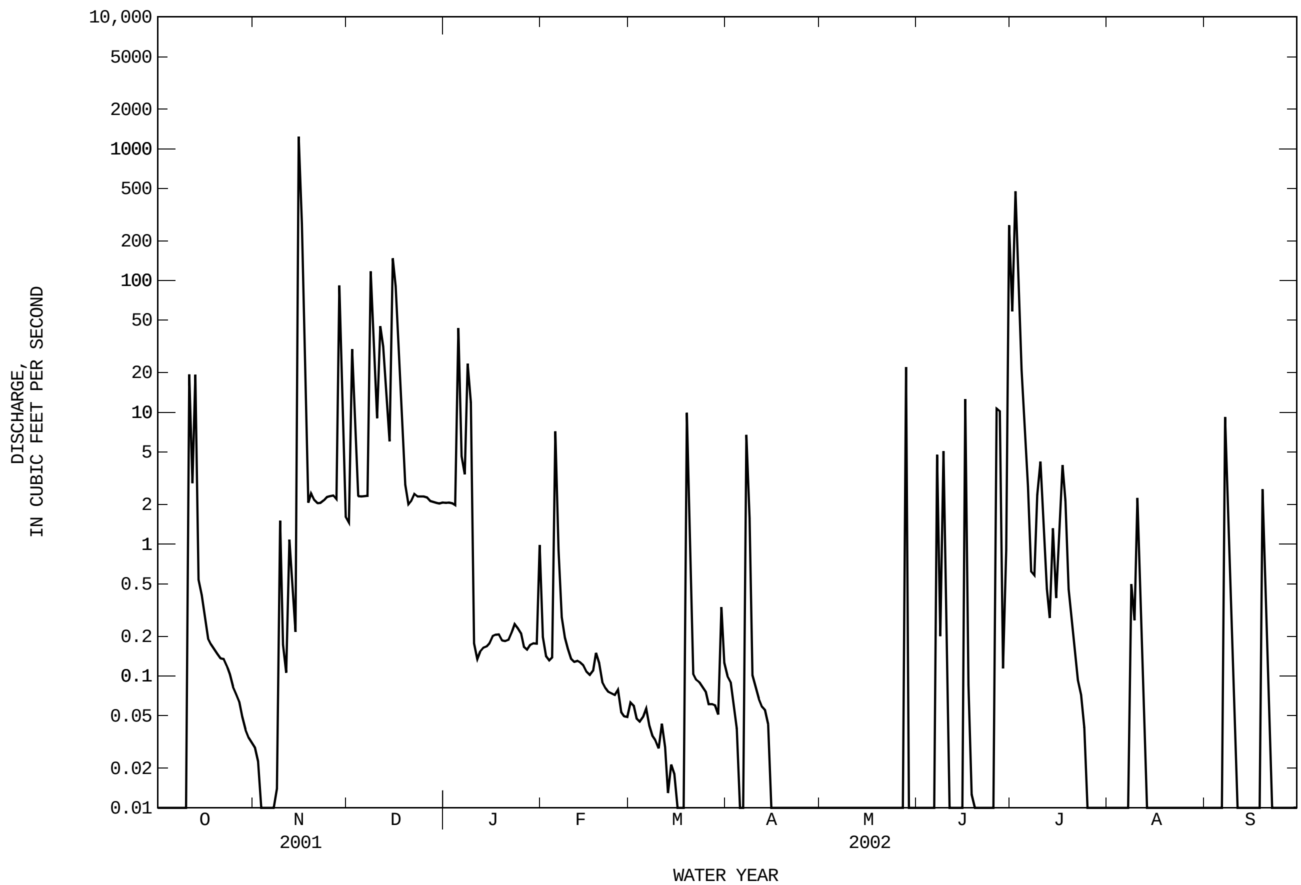
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1985 - 2002h, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	21.47	30.95	12.04	4.714	4.136	4.754	2.961	4.514	12.58	7.778	8.178	3.041
MAX	60.8	54.7	19.7	7.43	14.5	15.2	10.7	9.65	27.2	22.9	27.0	10.7
(WY)	1985	2002	2002	1985	1985	1985	1985	1985	1985	2002	2001	1985
MIN	1.41	6.91	5.45	3.23	0.40	0.40	0.14	0.71	0.14	0.000	0.085	0.000
(WY)	2002	1985	2001	2002	2002	2002	2001	2002	2001	2000	2000	2000

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1985 - 2002h	
ANNUAL TOTAL	3537.90		3490.42			
ANNUAL MEAN	9.693		9.563		10.61	
HIGHEST ANNUAL MEAN					15.7	1985
LOWEST ANNUAL MEAN					6.61	2001
HIGHEST DAILY MEAN	1230	Nov 15	1230	Nov 15	1230	Nov 15 2001
LOWEST DAILY MEAN	0.00	Jun 5	0.00	Oct 1	0.00	Apr 22 2000
ANNUAL SEVEN-DAY MINIMUM	0.00	Jun 12	0.00	Oct 1	0.00	Apr 22 2000
MAXIMUM PEAK FLOW			i5830	Nov 15	i5830	Nov 15 2001
MAXIMUM PEAK STAGE			a16.85	Nov 15	a16.85	Nov 15 2001
ANNUAL RUNOFF (AC-FT)	7020		6920		7690	
10 PERCENT EXCEEDS	6.4		6.3		11	
50 PERCENT EXCEEDS	0.18		0.08		0.51	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

a From floodmark.
i From field determination, on basis of contracted-opening measurement of peak flow.
h See PERIOD OF RECORD paragraph.

08158930 Williamson Creek at Manchaca Road, Austin, TX--Continued



08158930 Williamson Creek at Manchaca Road, Austin, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--
CHEMICAL DATA: Mar. 2002 to June 2002.
BIOCHEMICAL DATA: Mar. 2002 to June 2002.
PESTICIDE DATA: Mar. 2002 to June 2002.
SUSPENDED SEDIMENT CHEMISTRY: May 2000 to current year.
SEDIMENT DATA: Mar. 2000 to current year.

INSTRUMENTATION.--Stage-activated automatic sampler.

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

Date	Time	DIS-CHARGE, IN CUBIC FEET PER SECOND (00060)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	COLOR (PLAT-INUM-COBALT UNITS) (00080)	TURBID-ITY LAB HACH 2100AN (NTU) (99872)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L) (00340)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	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)
MAR													
19-20	2115	50	183	7.8	125	130	40	53	204	.39	.011	.40	.14
JUN													
16-16	0455	58	135	7.3	35	43	30	54	63	.38	.018	.40	.15

Date	NITRO-GEN, TOTAL (MG/L AS N) (00600)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N) (00605)	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)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	CADMIUM WATER UNFLTRD TOTAL (UG/L AS CD) (01027)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU) (01042)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB) (01051)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN) (01092)
MAR													
19-20	1.7	1.1	1.3	.30	.09	.09	.261	20.4	150	E.1	5.3	11	49
JUN													
16-16	1.4	.83	.98	.17	.07	.06	.181	8.4	54	<.1	2.9	3	23

Date	2,4-D, DIS-SOLVED (UG/L) (39732)	2,4-DB WATER, FLTRD, GF 0.7U REC (UG/L) (38746)	2,6-DI-ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	3HYDRXY CARBO-FURAN WAT,FLT GF 0.7U REC (UG/L) (49308)	ACETO-CHLOR, WATER FLTRD REC (UG/L) (49260)	ACIFL-UORFEN WATER, FLTRD, GF 0.7U REC (UG/L) (49315)	ALA-CHLOR, WATER, DISS, REC, (UG/L) (46342)	ALDI-CARB, WATER, FLTRD, GF 0.7U REC (UG/L) (49312)	ALDI-CARB SULFONE WAT,FLT GF 0.7U REC (UG/L) (49313)	ALDICA-RB SUL-FOXIDE, WAT,FLT GF 0.7U REC (UG/L) (49314)	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)
MAR													
19-20	.69	<.02	<.006	<.006	<.006	<.200	.024	<.04	<.02	<.008	<.005	1.66	<.050
JUN													
16-16	.20	<.02	<.006	<.006	<.006	<.007	<.004	<.04	<.02	<.008	<.005	.098	<.050

Date	BEN-FLUR-ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)	BENTA-ZON, WATER, FLTRD, GF 0.7U REC (UG/L) (38711)	BRO-MACIL, WATER, DISS, REC (UG/L) (04029)	BRO-MOXYNIL WATER, FLTRD, GF 0.7U REC (UG/L) (49311)	BUTYL-ATE, WATER, DISS, REC (UG/L) (04028)	CAR-BARYL, WATER, FLTRD, GF 0.7U REC (UG/L) (49310)	CAR-BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBO-FURAN, WATER, FLTRD, GF 0.7U REC (UG/L) (49309)	CARBO-FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	CHLORO-THALO-NIL, WAT,FLT GF 0.7U REC (UG/L) (49306)	CHLOR-PYRIFOS DIS-SOLVED (UG/L) (38933)	PER-METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	CLOPYR-ALID, WATER, FLTRD, GF 0.7U REC (UG/L) (49305)
MAR													
19-20	<.010	<.01	<.03	<.02	<.002	E.03	E.094	<.006	<.020	<.04	<.005	<.006	<.01
JUN													
16-16	<.010	<.01	<.03	<.02	<.002	<.03	E.048	<.006	<.020	<.04	<.005	<.006	<.01

Date	CYANA-ZINE, WATER, DISS, REC (UG/L) (04041)	DACTHAL MONO-ACID, WAT,FLT GF 0.7U REC (UG/L) (49304)	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)	DICAMBA WATER, FLTRD, GF 0.7U REC (UG/L) (38442)	DICHLOR PROP, WATER, FLTRD, GF 0.7U REC (UG/L) (49302)	DI-ELDRIN DIS-SOLVED (UG/L) (39381)	DINOSEB WATER, FLTRD, GF 0.7U REC (UG/L) (49301)	DISUL-FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	DIURON, WATER, FLTRD, GF 0.7U REC (UG/L) (49300)	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													
19-20	<.018	<.01	<.003	E.030	.158	<.01	<.01	<.005	<.01	<.02	.07	<.002	<.009
JUN													
16-16	<.018	<.01	<.003	<.011	.047	<.01	<.01	<.005	<.01	<.02	<.01	<.002	<.009

08158930 Williamson Creek at Manchaca Road, Austin, TX--Continued

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

Date	ETHO- PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	FEN- URON, WATER, FLTRD, GF 0.7U REC (UG/L) (49297)	FLUO- METURON WATER, FLTRD, GF 0.7U REC (UG/L) (38811)	FONOFOS WATER DISS REC (UG/L) (04095)	LINDANE DIS- SOLVED (UG/L) (39341)	LINURON WATER, FLTRD, GF 0.7U REC (UG/L) (38478)	LIN- URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA- THION, DIS- SOLVED (UG/L) (39532)	MCPA, WATER, FLTRD, GF 0.7U REC (UG/L) (38482)	MCPB, WATER, FLTRD, GF 0.7U REC (UG/L) (38487)	METHIO- CARB, WATER, FLTRD, GF 0.7U REC (UG/L) (38501)	METH- OMYL, WATER, FLTRD, GF 0.7U REC (UG/L) (49296)	METO- LACHLOR WATER DISSOLV (UG/L) (39415)
MAR													
19-20	<.005	<.03	<.03	<.003	<.004	<.01	<.035	<.030	<.20	<.01	<.008	<.004	E.008n
JUN													
16-16	<.005	<.03	<.03	<.003	<.004	<.01	<.035	.092	<.02	<.01	<.008	<.004	<.013

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)	NEB- URON, WATER, FLTRD, GF 0.7U REC (UG/L) (49294)	NORFLUR AZON, WATER, FLTRD, GF 0.7U REC (UG/L) (49293)	ORY- ZALIN, WATER, FLTRD, GF 0.7U REC (UG/L) (49292)	OXAMYL, WATER, FLTRD, GF 0.7U REC (UG/L) (38866)	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)
MAR													
19-20	<.006	<.002	<.007	<.01	<.02	<.02	<.01	<.003	<.010	<.006	<.004	<.022	<.011
JUN													
16-16	<.006	<.002	<.007	<.01	<.02	<.02	<.01	<.003	<.010	<.006	<.004	<.022	<.011

Date	PIC- LORAM, WATER, FLTRD, GF 0.7U REC (UG/L) (49291)	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)	PRO- PHAM, WATER, FLTRD, GF 0.7U REC (UG/L) (49236)	PRO- POXUR, WATER, FLTRD, GF 0.7U REC (UG/L) (38538)	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													
19-20	<.02	<.01	<.010	<.011	<.05	<.010	.029	<.004	.072	<.02	<.040	<.02	<.005
JUN													
16-16	<.02	<.01	<.010	<.011	<.02	<.010	<.008	<.004	<.005	<.02	<.034	<.02	<.005

Date	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI- CLOPYR, WATER, FLTRD, GF 0.7U REC (UG/L) (49235)	TRI- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)
MAR			
19-20	<.002	<.02	<.009
JUN			
16-16	<.002	<.02	<.009

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

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

08159000 Onion Creek at U.S. Highway 183, Austin, TX

LOCATION.--Lat 30°10'40", long 97°41'18", Travis County, Hydrologic Unit 12090205, on right bank at downstream side of downstream bridge on U.S. Highway 183, 2.4 mi downstream from Williamson Creek, 3.2 mi southwest of Del Valle, and 7.5 mi southeast of the State Capitol Building in Austin.

DRAINAGE AREA.--321 mi^2.

PERIOD OF RECORD.--May 1924 to Mar. 1930 station was published as "near Del Valle", Mar. 1976 to current year.
Water-quality records.--Chemical data: Oct. 1976 to Sept. 1988. Biochemical data: Oct. 1976 to Sept. 1988. Radiochemical data: Jan. 1980. Pesticide data: Oct. 1976 to Sept. 1986. Sediment data: Oct. 1976 to Sept. 1982.

GAGE.--Water-stage recorder. Datum of gage is 442.85 ft above NGVD of 1929 (Texas Department of Transportation datum). May 15, 1924, to Mar. 15, 1930, nonrecording gage at highway bridge 1,700 ft upstream at 6.42 ft higher datum. Satellite telemeter at station.

REMARKS.--Records good except those for estimated daily discharges, which are fair. No known regulation or diversions. Flow is slightly affected by several small ponds on main channel and tributaries above station. No flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1869 occurred about July 3, 1869, stage about 38 ft, from newspaper accounts, and Sept. 9, 1921, stage 38.0 ft, from floodmark, present site and datum.

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	4.5	7.4	86	107	46	24	9.9	4.9	1.3	637	34	0.28
2	4.3	7.6	297	103	42	24	10	4.5	0.69	5620	19	0.19
3	4.2	7.7	387	99	39	23	8.9	4.1	0.52	4480	13	0.08
4	3.9	7.5	221	96	37	23	7.3	4.0	0.37	1810	11	0.00
5	3.7	7.0	175	e240	45	23	8.3	3.9	0.32	3130	9.7	0.00
6	3.5	7.0	139	e208	55	23	9.9	3.5	0.17	2070	8.9	0.00
7	3.4	6.7	114	e147	55	23	11	3.1	0.00	1180	e8.8	10
8	3.6	6.6	e440	e126	41	23	28	2.9	3.9	787	e17	35
9	3.5	6.4	e471	e116	36	24	21	2.7	2.2	582	17	9.7
10	3.7	7.0	e319	e103	34	23	16	2.6	1.6	507	8.7	9.3
11	211	6.6	e318	e87	33	23	14	2.4	1.5	415	9.7	4.5
12	40	44	e392	e77	31	24	13	2.2	0.51	342	7.5	2.7
13	218	24	e288	e70	31	22	12	2.0	0.08	299	5.9	2.0
14	51	9.3	e275	e65	30	22	11	1.8	0.00	350	4.6	1.7
15	25	e7270	e475	e62	29	23	11	1.9	0.00	278	4.1	1.5
16	17	e20300	e1030	e59	28	22	10	2.2	37	278	3.5	1.5
17	13	523	e605	56	27	22	11	2.2	5.0	430	3.2	1.6
18	12	308	e358	55	26	23	10	2.1	1.2	543	2.8	1.6
19	11	255	e314	51	28	33	10	2.1	0.35	339	2.5	3.9
20	10	191	e290	49	27	60	10	2.2	0.09	274	2.2	12
21	9.5	160	e264	46	27	40	9.5	2.1	0.00	239	2.0	5.5
22	9.4	140	e243	45	26	30	9.9	2.0	0.00	210	1.8	3.3
23	9.0	125	e225	44	25	26	9.3	1.9	0.00	184	1.7	2.4
24	8.5	104	e209	43	25	23	8.9	1.6	0.00	160	1.7	1.9
25	7.6	91	e195	42	23	21	8.5	1.7	0.00	118	1.3	1.6
26	7.0	79	e180	39	23	21	8.6	2.0	0.00	99	0.93	1.4
27	6.7	73	e167	39	23	19	7.6	1.5	72	83	0.79	1.00
28	6.9	453	153	38	23	19	6.5	16	12	70	0.69	0.85
29	6.8	232	139	37	---	17	6.0	6.4	7.2	59	0.48	0.70
30	6.9	111	131	37	---	11	5.4	3.6	1230	50	0.39	0.48
31	7.2	---	117	41	---	11	---	2.1	---	43	0.30	---
TOTAL	731.8	30569.8	9017	2427	915	745	322.5	98.2	1378.00	25666	205.18	116.68
MEAN	23.61	1019	290.9	78.29	32.68	24.03	10.75	3.168	45.93	827.9	6.619	3.889
MAX	218	20300	1030	240	55	60	28	16	1230	5620	34	35
MIN	3.4	6.4	86	37	23	11	5.4	1.5	0.00	43	0.30	0.00
AC-FT	1450	60640	17890	4810	1810	1480	640	195	2730	50910	407	231

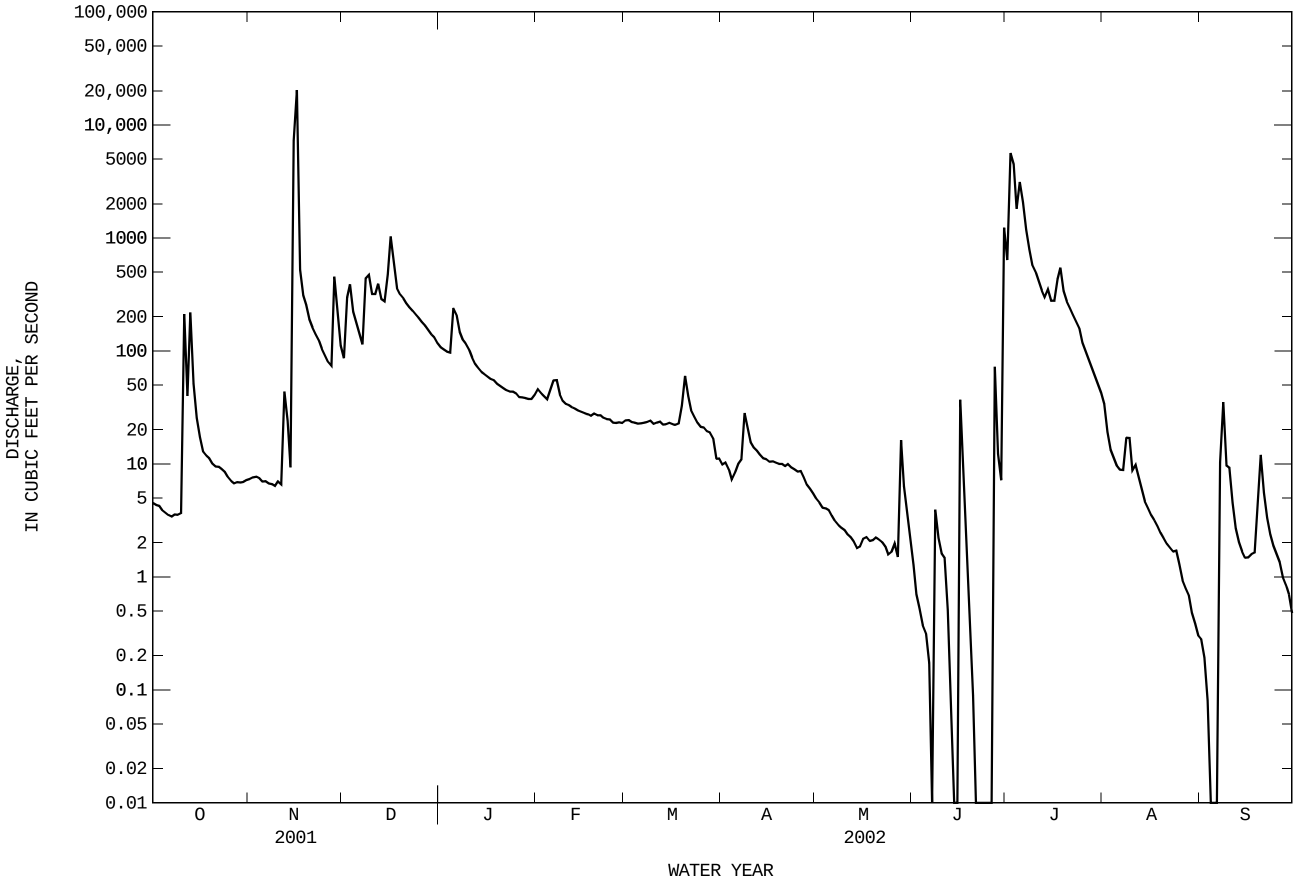
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1924 - 2002h, BY WATER YEAR (WY)

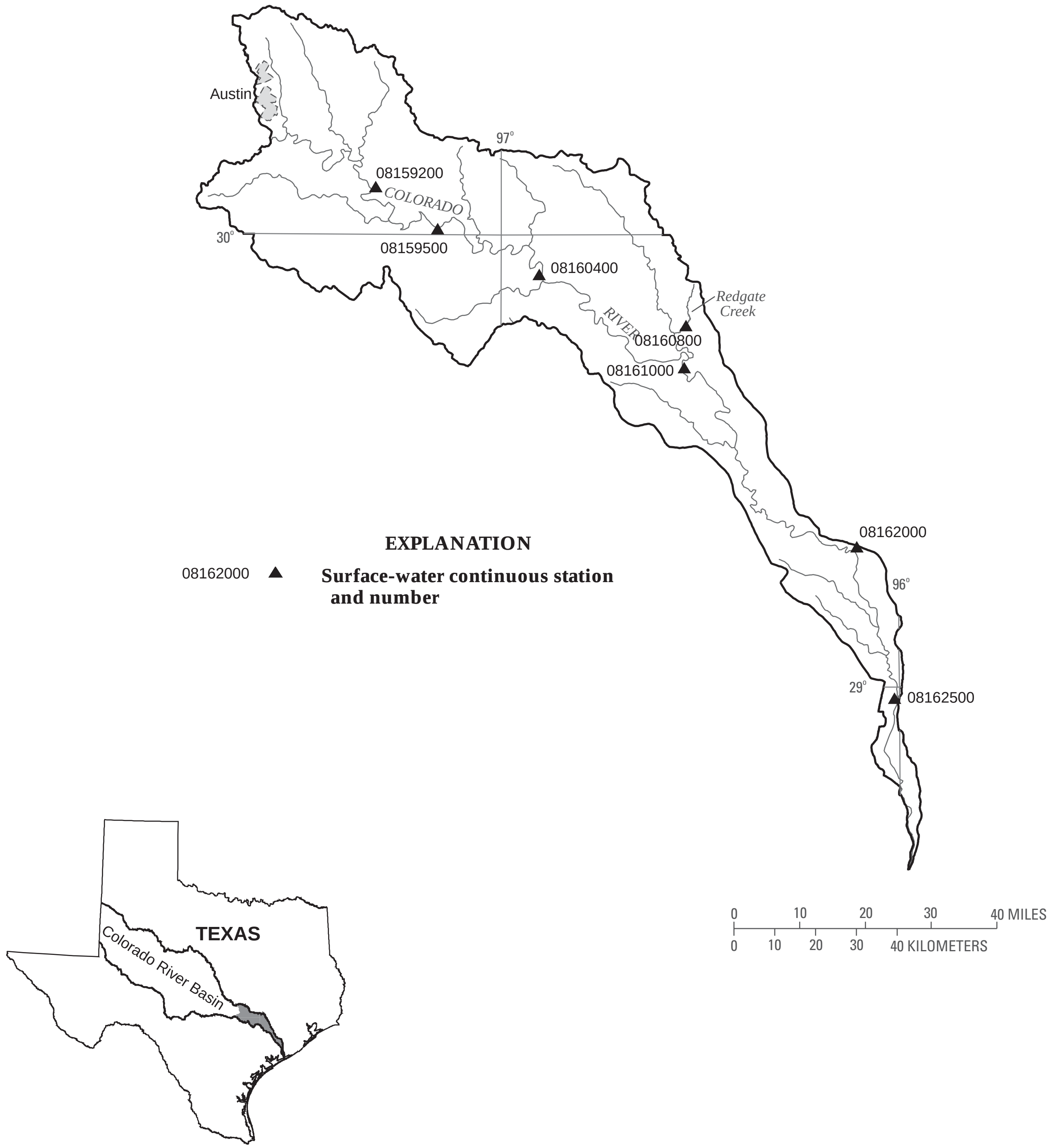
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	77.71	75.53	97.70	54.11	76.13	79.58	97.52	167.8	224.4	55.34	8.545	8.681
MAX	1346	1019	1526	487	908	576	847	1767	2305	828	59.2	48.0
(WY)	1999	2002	1992	1992	1992	1992	1926	1929	1981	2002	2001	1986
MIN	0.000	0.27	0.000	0.002	1.65	1.80	1.39	1.40	0.010	0.000	0.000	0.000
(WY)	1929	1994	1990	1990	1925	1996	1994	1984	1925	1925	1925	1988

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1924 - 2002h	
ANNUAL TOTAL	54403.27		72192.16			
ANNUAL MEAN	149.1		197.8		85.04	
HIGHEST ANNUAL MEAN					379	1992
LOWEST ANNUAL MEAN					1.49	1925
HIGHEST DAILY MEAN	20300	Nov 16	20300	Nov 16	30500	May 28 1929
LOWEST DAILY MEAN	0.00	Jul 11	0.00	Jun 7	0.00	Jun 3 1925
ANNUAL SEVEN-DAY MINIMUM	0.00	Jul 11	0.01	Jun 20	0.00	Jun 3 1925
MAXIMUM PEAK FLOW			i93200	Nov 16	i93200	Nov 16 2001
MAXIMUM PEAK STAGE			a36.50	Nov 16	a36.50	Nov 16 2001
ANNUAL RUNOFF (AC-FT)	107900		143200		61610	
10 PERCENT EXCEEDS	210		289		131	
50 PERCENT EXCEEDS	21		17		6.3	
90 PERCENT EXCEEDS	0.00		1.3		0.00	

e Estimated
a From floodmark.
i Field determination on basis of contracted-opening measurement of peak flow.
h See PERIOD OF RECORD paragraph.

08159000 Onion Creek at U.S. Highway 183, Austin, TX--Continued





Colorado_E

Figure 8.--Map showing location of gaging stations in the fifth section of the Colorado River Basin

08159200 Colorado River at Bastrop, TX

LOCATION.--Lat 30°06'16", long 97°19'09", Bastrop County, Hydrologic Unit 12090301, at the downstream side of bridge on State Highway 71 bridge, at Bastrop, 0.3 mi upstream from Gills Branch, 1.2 mi downstream from Piney Creek, and at mile 236.6.

DRAINAGE AREA.--39,979 mi^2, approximately, of which 11,403 mi^2 probably is noncontributing.

PERIOD OF RECORD.--Mar. 1960 to current year. Oct. 1973 to Sept. 1975, daily discharges estimated by hydrographic comparison with Colorado River at Austin (station 08158000) and Colorado River near Smithville (station 08159500).
Water-quality records.--Chemical data: Mar. 1944, Feb. 1968 to Sept. 1994. Biochemical data: Feb. 1968 to Sept. 1994. Specific conductance: Nov. 1986 to Sept. 1994. pH: Nov. 1986 to Sept. 1994. Water temperature: Nov. 1986 to Sept. 1994. Dissolved oxygen: Nov. 1986 to Sept. 1994.

REVISED RECORDS.--WDR TX-81-3: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 307.38 ft above NGVD of 1929. Prior to May 10, 1960, nonrecording gage at a site 400 ft upstream from present site and at same datum. May 10, 1960, to Sept. 30, 1973, Oct. 1, 1975, to Oct. 28, 1986, at a site 400 ft upstream from present site and at same datum. Radio telemeter at station. Satellite telemeter at station.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Since installation of gage in 1960, at least 10% of contributing drainage area has been regulated. There are many diversions above station for irrigation and municipal supply. The city of Austin diverts water into Decker Lake (by pumpage) upstream from this station. The Lower Colorado River Authority also diverts water from the Colorado into Lake Bastrop (by pumpage) upstream from this station.

COOPERATION.--Lower Colorado River Authority provides operation and maintenance of the gage and verification of stage-discharge relation at low stages. U.S. Geological Survey maintains stage-discharge relation at medium to high stages, computes, and publishes streamflow record.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1845, 60.3 ft July 7 or 8, 1869. Flood of June 16, 1935, reached a stage of 57.0 ft, and flood of Dec. 4, 1913, reached a stage of 53.3 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	1240	883	1580	2500	975	760	e1200	1650	1630	5530	3400	1670
2	1160	910	1340	2490	1150	854	1150	1620	1590	3750	3260	1670
3	1220	908	2660	2300	1030	560	1090	1540	1550	15300	3380	1630
4	1280	783	2030	1860	683	914	908	1490	1130	12000	3330	1640
5	1330	759	2240	2550	736	722	874	1510	1290	7750	3410	1470
6	1230	792	1650	4190	1270	591	1040	1630	1370	13300	3210	1850
7	1170	776	2040	2350	1400	707	1080	1890	1460	18700	3270	1710
8	1240	755	3990	1880	838	774	1250	e1970	1570	22500	2240	2860
9	1060	740	6650	1090	709	882	885	e2070	1640	23200	1970	3420
10	940	769	2840	1050	621	536	500	2130	1740	23900	1920	1640
11	829	707	2690	1390	578	718	511	2150	1820	23800	2060	1700
12	2220	622	4960	1480	568	795	604	2100	1660	23800	1900	1710
13	2040	639	3860	1460	726	617	734	2170	1730	23500	1910	1620
14	2670	835	3950	790	634	739	994	2140	1920	22100	1730	1600
15	1150	807	4010	1050	622	634	1010	2150	1920	19200	1780	1650
16	1000	26800	15100	1380	541	757	1010	2040	2230	18100	1690	1620
17	872	27200	8370	1440	620	1020	1020	1760	2840	18200	1660	1660
18	791	8120	4810	1420	689	1160	1070	1890	2070	16000	1680	1670
19	728	6940	4410	1360	648	1160	1090	1760	2020	12900	1630	1520
20	653	6430	2100	1050	549	1520	1100	1750	1960	12200	1640	1760
21	607	6020	1730	713	617	1500	1140	1750	1960	12400	1630	1640
22	688	5890	1590	837	680	1080	1200	1670	2010	8960	1640	1540
23	746	5580	1450	920	506	1090	1280	1590	2030	8570	1600	1580
24	858	4000	1420	916	570	1030	1330	1750	1980	6490	1620	1560
25	1070	3830	1340	881	553	1030	1400	1620	1950	6120	1610	1570
26	e1240	3660	1310	1100	563	1180	1300	1680	1880	5450	e1620	1550
27	e1250	3660	2620	927	571	1190	1320	1640	2120	4960	1620	1570
28	e1110	3960	4060	648	658	1200	1600	1790	2060	3600	1560	1480
29	e851	5220	4260	751	---	1140	1590	2530	1860	3650	1630	1470
30	837	2990	4250	912	---	1190	1660	1730	2200	3760	1610	1390
31	862	---	3710	764	---	e1200	---	1740	---	3510	1650	---
TOTAL	34942	131985	109020	44449	20305	29250	32940	56900	55190	403200	64860	51420
MEAN	1127	4400	3517	1434	725.2	943.5	1098	1835	1840	13010	2092	1714
MAX	2670	27200	15100	4190	1400	1520	1660	2530	2840	23900	3410	3420
MIN	607	622	1310	648	506	536	500	1490	1130	3510	1560	1390
AC-FT	69310	261800	216200	88160	40270	58020	65340	112900	109500	799700	128600	102000

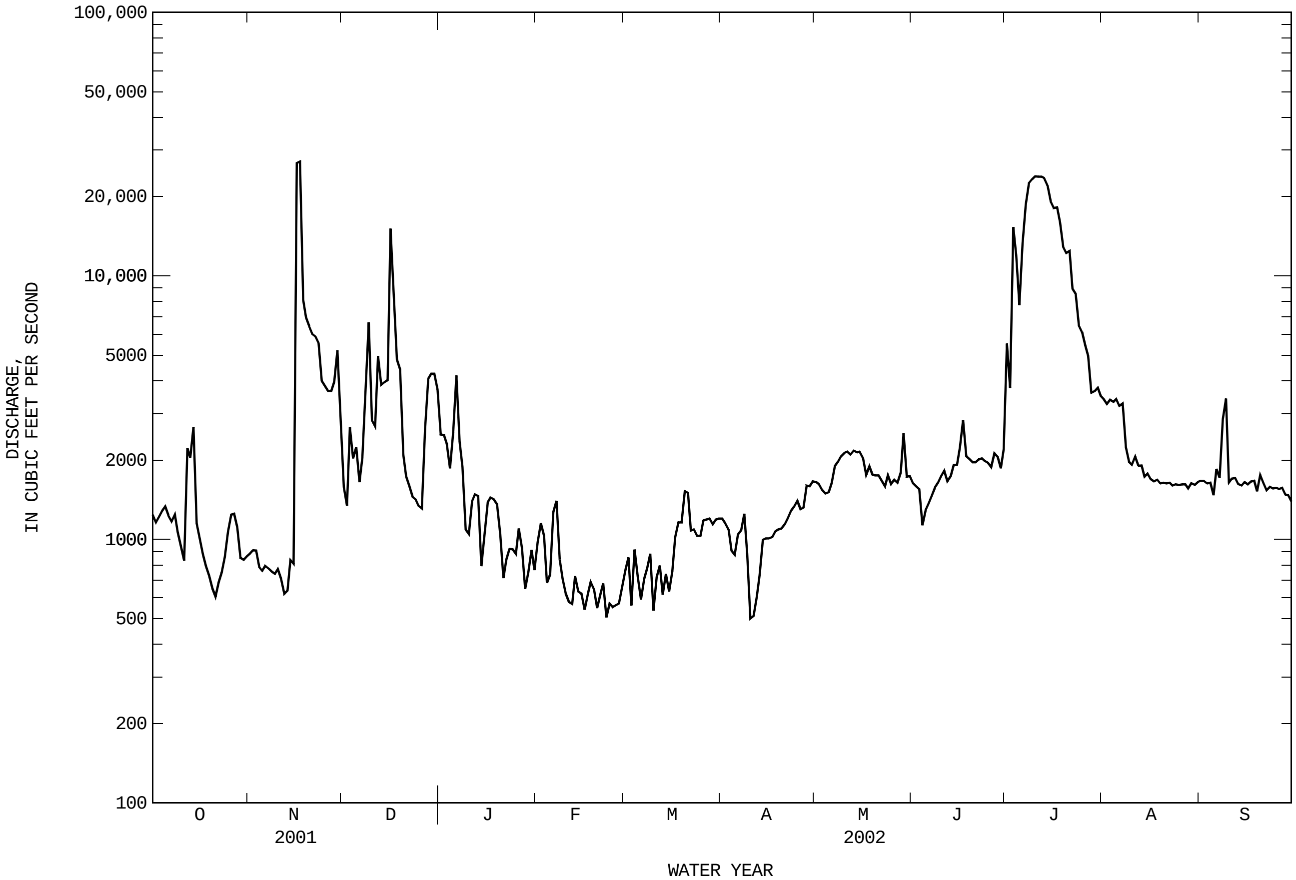
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1406	1330	1514	1689	2107	2303	2472	3366	4338	2806	1888	1719
MAX	6380	11330	14770	17490	29140	16910	11080	10420	23620	13010	3705	4930
(WY)	1974	1975	1992	1992	1992	1992	1977	1975	1987	2002	1961	1974
MIN	291	94.6	111	109	138	131	565	1471	1489	1302	1125	1003
(WY)	1965	1964	1964	1964	1964	1964	1962	1962	1993	1967	1999	1999

08159200 Colorado River at Bastrop, TX--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1960 - 2002	
ANNUAL TOTAL	922041		1034461			
ANNUAL MEAN	2526		2834		2250	
HIGHEST ANNUAL MEAN					9073	1992
LOWEST ANNUAL MEAN					828	1964
HIGHEST DAILY MEAN	27200	Nov 17	27200	Nov 17	65800	Dec 22 1991
LOWEST DAILY MEAN	607	Oct 21	500	Apr 10	75	Apr 1 1964
ANNUAL SEVEN-DAY MINIMUM	715	Nov 7	577	Feb 20	84	Oct 19 1964
MAXIMUM PEAK FLOW			42100	Nov 16	79600	Oct 29 1960
MAXIMUM PEAK STAGE			30.97	Nov 16	37.48	Dec 22 1991
ANNUAL RUNOFF (AC-FT)	1829000		2052000		1630000	
10 PERCENT EXCEEDS	4440		5310		4180	
50 PERCENT EXCEEDS	1790		1590		1550	
90 PERCENT EXCEEDS	965		711		262	

e Estimated



08159500 Colorado River at Smithville, TX

LOCATION.--Lat 30°00’45", long 97°09’42", Bastrop County, Hydrologic Unit 12090301, on right bank 28 ft downstream from bridge on Business State Highway 71 in Smithville, 500 ft below mouth of Gazley Creek, 3.9 mi below mouth of Alum Creek, and at mile 212.1.

DRAINAGE AREA.--40,371 mi^2 approximately, of which 11,403 mi^2 probably is noncontributing.

PERIOD OF RECORD.--July 1930 to Sept. 1975, Oct. 1997 to current year. Gage-height records collected in this vicinity since 1920 are contained in reports of the National Weather Service.
Water-quality records.--Chemical data: Oct. 1973 to Sept. 1975. Biological data: Oct. 1973 to Sept. 1975.

REVISED RECORDS.--WSP 1342: Drainage are. WSP 1562: 1934. WSP 1712: 1953, 1954(M), 1957-58.

GAGE.--Water-stage recorder. Datum of gage is 270.14 ft above NGVD of 1929. Prior to Apr. 9, 1931, nonrecording gage at same site and datum. Apr. 9, 1931, to Sept. 2, 1971, water-stage recorder at site 360 ft downstream at same datum. Radio telemeter at station. Satellite telemeter at station.

REMARKS.--Records fair. Since installation of gage in 1930, at least 10% of contributing drainage area has been regulated. At times, low-flow releases from Lake Travis are made for generation of electric power and to fulfill downstream water contracts. There are many diversions above station for irrigation and municipal supply.

COOPERATION.--Lower Colorado River Authority provides operation and maintenance of the gage and verification of stage-discharge relation at low stages. U.S. Geological Survey maintains stage-discharge relation at medium to high stages, computes, and publishes streamflow record.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1860, occurred July 8, 1869, and was several feet higher than flood of Dec. 4, 1913, which reached a stage of 47.4 ft and was the highest since 1869, 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	856	e643	2240	2980	1050	940	1520	2130	2010	4410	3470	1700
2	868	e657	1430	2790	1170	1020	1490	2010	1940	3980	3340	1700
3	798	645	3010	2730	1470	1000	1520	2100	1890	10000	3330	1680
4	877	627	e2870	2110	952	955	1410	1880	1720	17600	3360	1670
5	796	497	2260	2420	792	1010	1220	1910	1430	7610	3440	1670
6	779	534	2070	4750	1140	923	1410	2160	1740	10600	3290	1620
7	736	551	1920	3210	1930	909	1420	2050	1690	18400	3300	1830
8	765	525	3070	2430	1320	998	1850	2720	1820	24000	2910	2030
9	746	540	8650	1830	990	1090	1920	2430	1880	26400	2090	3880
10	731	559	3550	1190	849	1010	997	2470	1960	27600	1960	1960
11	701	643	2820	1390	754	889	802	2550	2090	28000	2080	1790
12	1180	524	6050	1770	e740	1020	784	2460	1980	28000	2060	1760
13	1650	506	5110	2040	e812	900	973	2550	1860	27900	1970	1740
14	2510	637	4000	1160	e814	1010	1100	2530	2120	26500	1820	1640
15	1310	631	3840	901	e840	964	1380	2530	2120	23600	1820	1680
16	834	17400	16200	1530	e824	939	1400	2530	2340	20400	1780	1700
17	709	44500	16100	1630	e818	1080	1420	2230	2890	20200	1740	1690
18	633	12600	5560	1650	e831	1450	1440	2220	2430	19100	1720	1730
19	566	7260	5240	1670	849	1540	1490	2220	2310	14700	1700	1650
20	523	6590	3070	1530	822	1680	1490	2120	2170	12300	1690	1720
21	441	6120	2350	954	752	2020	1520	2130	2200	13500	1690	1730
22	415	5910	1850	793	782	1590	1590	2130	2190	9760	1660	1630
23	476	5790	1770	1060	801	1500	1670	1980	2220	8460	1680	1650
24	501	4430	1690	1100	691	1400	1770	2110	2190	7090	1660	1650
25	643	3880	1580	1110	712	1210	1810	1990	2250	5970	1650	1610
26	838	3690	1510	1100	728	1400	1780	2030	2070	5740	1650	1690
27	650	3630	1930	1230	729	1620	1730	2040	2210	5080	1660	1600
28	822	3710	3950	840	750	1490	1980	1800	2380	3490	1690	1560
29	562	5230	4290	731	---	1490	2070	2940	2150	3670	1610	1540
30	582	3570	4330	1040	---	1510	2090	2230	2170	3700	1640	1520
31	610	---	4260	1020	---	1420	---	2060	---	3630	1660	---
TOTAL	25108	143029	128570	52689	25712	37977	45046	69240	62420	441390	67120	53020
MEAN	809.9	4768	4147	1700	918.3	1225	1502	2234	2081	14240	2165	1767
MAX	2510	44500	16200	4750	1930	2020	2090	2940	2890	28000	3470	3880
MIN	415	497	1430	731	691	889	784	1800	1430	3490	1610	1520
AC-FT	49800	283700	255000	104500	51000	75330	89350	137300	123800	875500	133100	105200

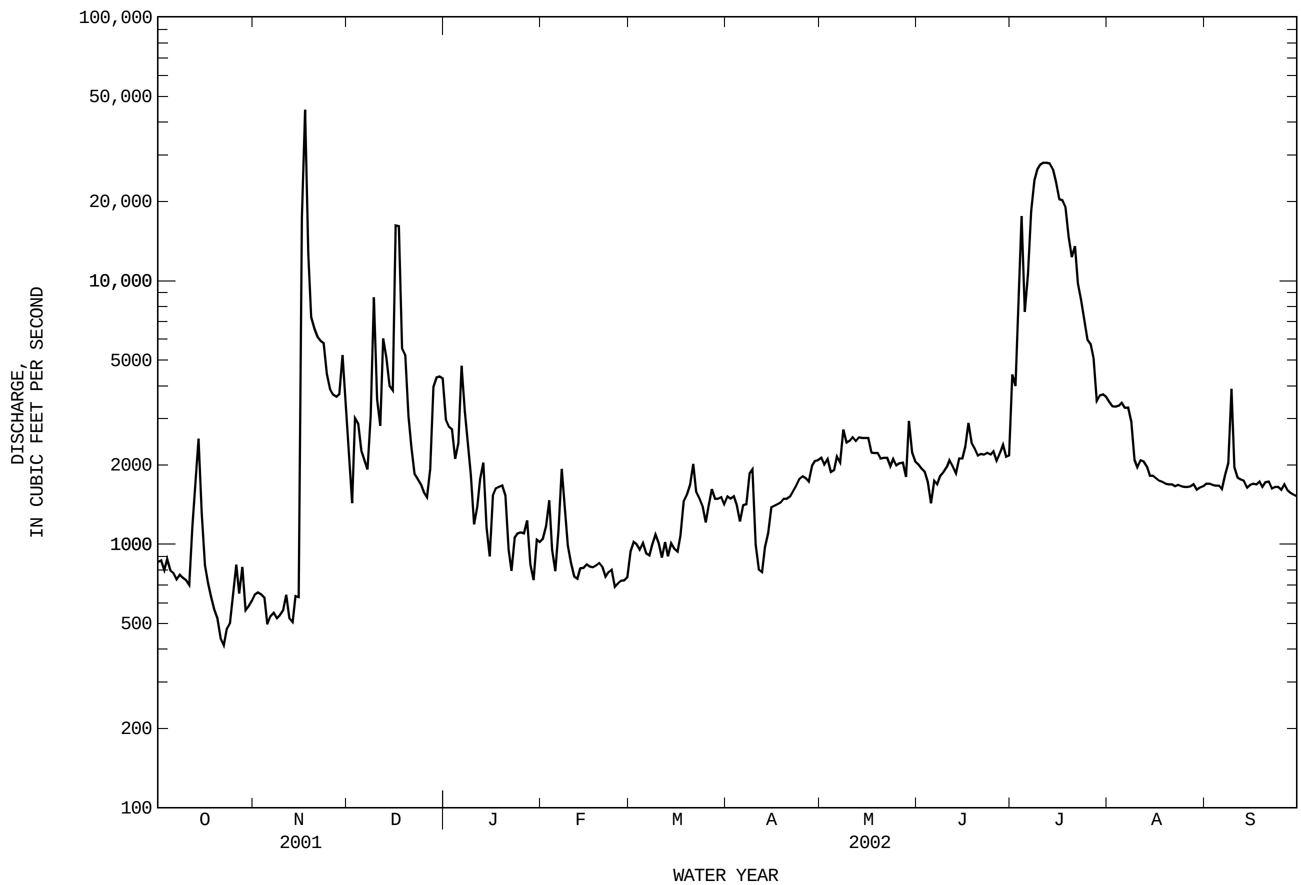
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 2002h, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2793	1976	1728	1890	2149	2026	2502	4382	4091	3640	1919	2937
MAX	20380	13480	5738	7823	8516	7292	11300	27980	31510	31310	7303	38090
(WY)	1931	1975	1941	1968	1958	1958	1941	1957	1935	1938	1938	1936
MIN	117	133	129	133	145	176	471	1088	391	852	240	337
(WY)	1935	1964	1964	1964	1964	1964	1952	1942	1934	1933	1930	1934

08159500 Colorado River at Smithville, TX--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1930 - 2002h	
ANNUAL TOTAL	958485		1151321			
ANNUAL MEAN	2626		3154		2670	
HIGHEST ANNUAL MEAN					6780	1935
LOWEST ANNUAL MEAN					489	1930
HIGHEST DAILY MEAN	44500	Nov 17	44500	Nov 17	219000	Jun 16 1935
LOWEST DAILY MEAN	415	Oct 22	415	Oct 22	79	Nov 1 1934
ANNUAL SEVEN-DAY MINIMUM	508	Oct 18	508	Oct 18	84	Oct 27 1934
MAXIMUM PEAK FLOW			51000	Nov 17	305000	Jun 16 1935
MAXIMUM PEAK STAGE			24.14	Nov 17	42.50	Jun 16 1935
ANNUAL RUNOFF (AC-FT)	1901000		2284000		1935000	
10 PERCENT EXCEEDS	4640		5630		4710	
50 PERCENT EXCEEDS	1850		1720		1630	
90 PERCENT EXCEEDS	785		738		345	

e Estimated
h See PERIOD OF RECORD paragraph.



08160400 Colorado River above LaGrange, TX

LOCATION.--Lat 29°54'44", long 96°54'13", Fayette County, Hydrologic Unit 12090301, at right downstream end of bridge on new State Highway 71, 1.4 mi upstream from Buckners Creek, and at mile 177.

DRAINAGE AREA.--40,874 mi^2, of which 11,403 mi^2 probably is noncontributing.

PERIOD OF RECORD.--Dec. 1979 to Sept. 1982 (discharge measurements only), Apr. 1988 to current year.

GAGE.--Water-stage recorder. Datum of gage is 210.04 ft above NGVD of 1929. Dec. 12, 1979, to Sept. 30, 1982, discharge measurements only were made at old State Highway 71 bridge, 1.0 mi downstream and at different datum. Radio telemeter at station. Satellite telemeter at station.

REMARKS.--Records good. Since installation of gage in 1988, at least 10% of contributing drainage area has been regulated. At times, low-flow releases from Lake Travis are made for generation of electric power and to fulfill downstream water contracts. There are many diversions above station for irrigation and municipal supply.

COOPERATION.--Lower Colorado River Authority provides operation and maintenance of the gage and verification of stage-discharge relation at low stages. U.S. Geological Survey maintains stage-discharge relation at medium to high stages, computes, and publishes streamflow record.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1869, about 56.7 ft on July 9, 1869 (from marble high-water marker in LaGrange). Stages of other floods are as follows: Dec. 5, 1913, 56.4 ft, from floodmark; June 17, 1935, 50.84 ft, from floodmarks (discharge 255,000 ft^3/s from rating curve extended above 200,000 ft^3/s); July 27, 1938, 42.95 ft (discharge, 200,000 ft^3/s). These data were collected at a site 2.6 mi downstream at streamflow station and published as Colorado River at La Grange at datum different than at present site.

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	1040	626	3440	3930	939	679	1420	1880	1950	2890	3800	1670
2	995	644	2260	2950	1060	861	1360	1860	1850	5510	3680	1680
3	1000	661	2620	2870	1250	945	1400	1860	1810	6580	3540	1690
4	938	639	4170	2570	1250	786	1360	1790	1760	15600	3650	1650
5	1380	606	2790	2390	878	962	1210	1730	1390	11700	3570	1660
6	2740	474	2830	3810	813	882	1130	1760	1440	8880	3570	1520
7	1190	498	2160	4490	1510	756	1360	1870	1560	14100	3430	1910
8	934	515	2650	2910	1660	825	6020	2180	1630	18300	3430	1810
9	935	485	7360	2380	1090	923	4750	2330	1740	21700	2440	2960
10	880	494	6770	1540	885	1020	1500	2300	1790	23200	2170	3170
11	872	526	3720	1350	762	784	860	2380	1870	24200	2120	1780
12	849	598	6250	1700	680	807	725	2380	1970	24400	2260	1780
13	4120	479	7650	1850	639	952	699	2360	1830	24600	2080	1760
14	3160	461	4850	1770	746	751	852	2400	1860	24300	2070	1650
15	2820	637	4700	1100	711	932	1120	e2320	2040	23000	1900	1620
16	1470	3280	10100	1200	685	813	1190	e2300	2150	20000	1920	1660
17	1040	26800	20500	1630	650	863	1210	2280	2420	19200	1830	1660
18	856	28800	10100	1680	652	1190	1220	2040	2870	18400	1790	1680
19	734	9620	6420	1670	709	1410	1250	2140	2270	15800	1790	1680
20	641	7690	5080	1590	722	1530	1280	1980	2190	12600	1740	1530
21	575	7210	2970	1310	673	1800	1280	1960	2120	12400	1730	1740
22	480	6870	2410	922	646	1750	1330	1970	2110	11600	1710	1650
23	434	6700	2140	907	689	1330	1390	1890	2130	9010	1710	1550
24	477	6030	1920	1080	655	1340	1470	1820	2160	8300	1670	1590
25	497	4720	1820	1060	608	1260	1540	1940	2120	6550	1680	1570
26	663	4450	1700	1080	604	1180	1600	1820	2150	6400	1660	1580
27	915	4270	1620	1170	623	1370	1510	1890	2600	5660	1640	1550
28	748	4220	3160	1140	638	1430	1540	1890	2340	4870	1670	1570
29	823	4960	4480	805	---	1420	1810	2090	2390	4040	1590	1480
30	590	5290	4680	759	---	1380	1800	2610	2360	4010	1620	1460
31	599	---	4690	1030	---	1430	---	1970	---	4030	1620	---
TOTAL	35395	139253	148010	56643	23427	34361	47186	63990	60870	411830	71080	52260
MEAN	1142	4642	4775	1827	836.7	1108	1573	2064	2029	13280	2293	1742
MAX	4120	28800	20500	4490	1660	1800	6020	2610	2870	24600	3800	3170
MIN	434	461	1620	759	604	679	699	1730	1390	2890	1590	1460
AC-FT	70210	276200	293600	112400	46470	68160	93590	126900	120700	816900	141000	103700

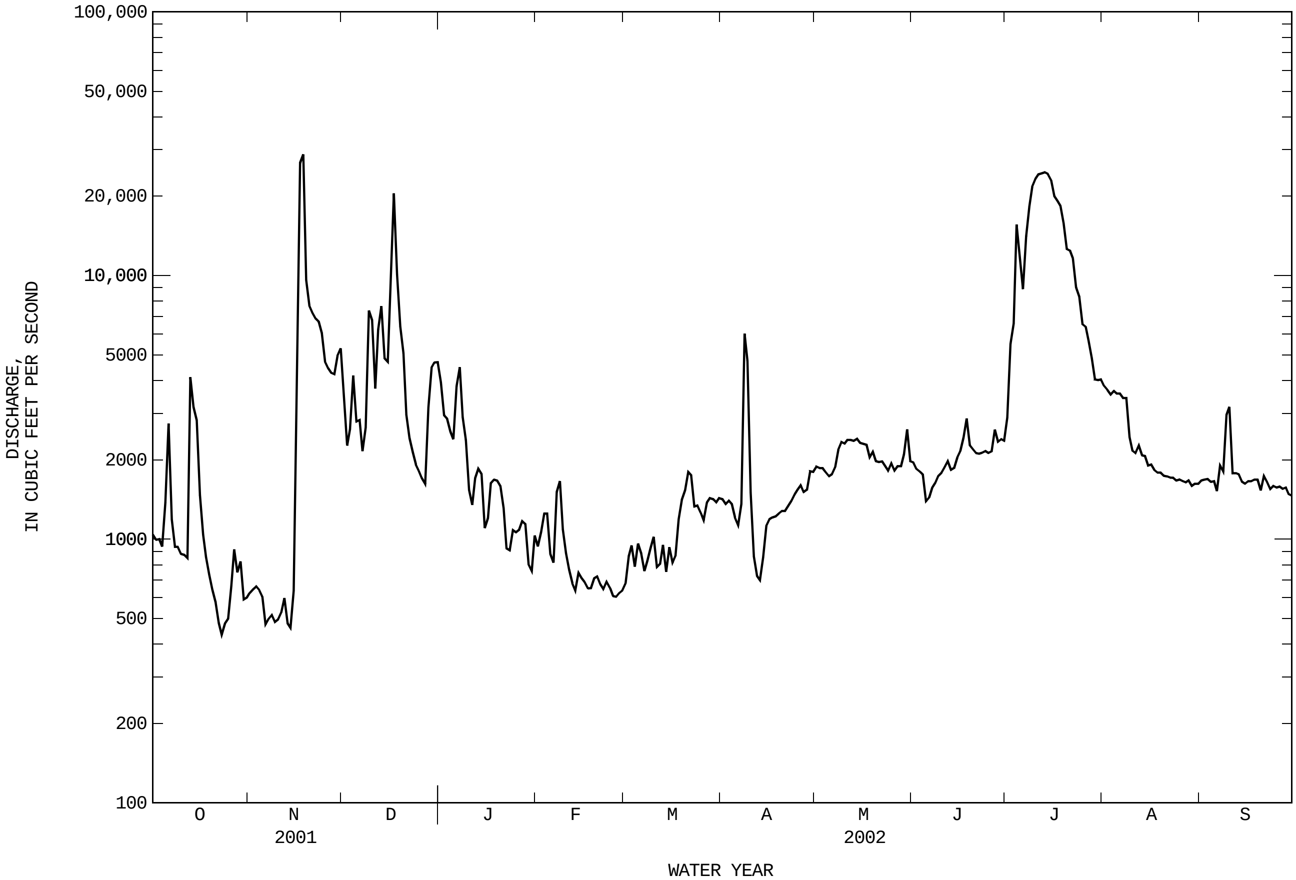
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1823	1228	2383	2658	3498	3665	2712	3243	4141	3444	1706	1627
MAX	10510	4762	16350	18640	31160	18080	7333	8290	15180	13280	2293	2541
(WY)	1999	1999	1992	1992	1992	1992	1997	1992	1997	2002	2002	2001
MIN	476	244	248	247	356	380	984	1771	1453	1379	1177	939
(WY)	1997	1989	1990	1990	1990	2000	2000	2000	2001	2001	2000	1999

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1988 - 2002	
ANNUAL TOTAL	993689		1144305			
ANNUAL MEAN	2722		3135		2679	
HIGHEST ANNUAL MEAN					9913	1992
LOWEST ANNUAL MEAN					930	2000
HIGHEST DAILY MEAN	28800	Nov 18	28800	Nov 18	84000	Dec 23 1991
LOWEST DAILY MEAN	434	Oct 23	434	Oct 23	167	Dec 21 1989
ANNUAL SEVEN-DAY MINIMUM	508	Nov 8	508	Nov 8	170	Dec 16 1989
MAXIMUM PEAK FLOW			37700	Nov 18	89800	Oct 20 1998
MAXIMUM PEAK STAGE			28.52	Nov 18	45.47	Oct 20 1998
ANNUAL RUNOFF (AC-FT)	1971000		2270000		1941000	
10 PERCENT EXCEEDS	4840		6470		4700	
50 PERCENT EXCEEDS	1800		1710		1500	
90 PERCENT EXCEEDS	901		683		386	

e Estimated

08160400 Colorado River above LaGrange, TX--Continued



08160800 Redgate Creek near Columbus, TX

LOCATION.--Lat 29°47'56", long 96°31'55", Colorado County, Hydrologic Unit 12090301, on left bank at downstream side of bridge on Farm Road 109, 1.9 mi upstream from Cummins Creek, and 7.0 mi north of Columbus.

DRAINAGE AREA.--17.3 mi^2.

PERIOD OF RECORD.--Apr. 1962 to current year.

REVISED RECORDS.--WSP 2122: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 210.82 ft above NGVD of 1929. Prior to Oct. 1, 1975, datum 10.00 ft higher. 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 1860, about 33.4 ft in late June or early July 1940, from information by Texas Department of Transportation and local residents.

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

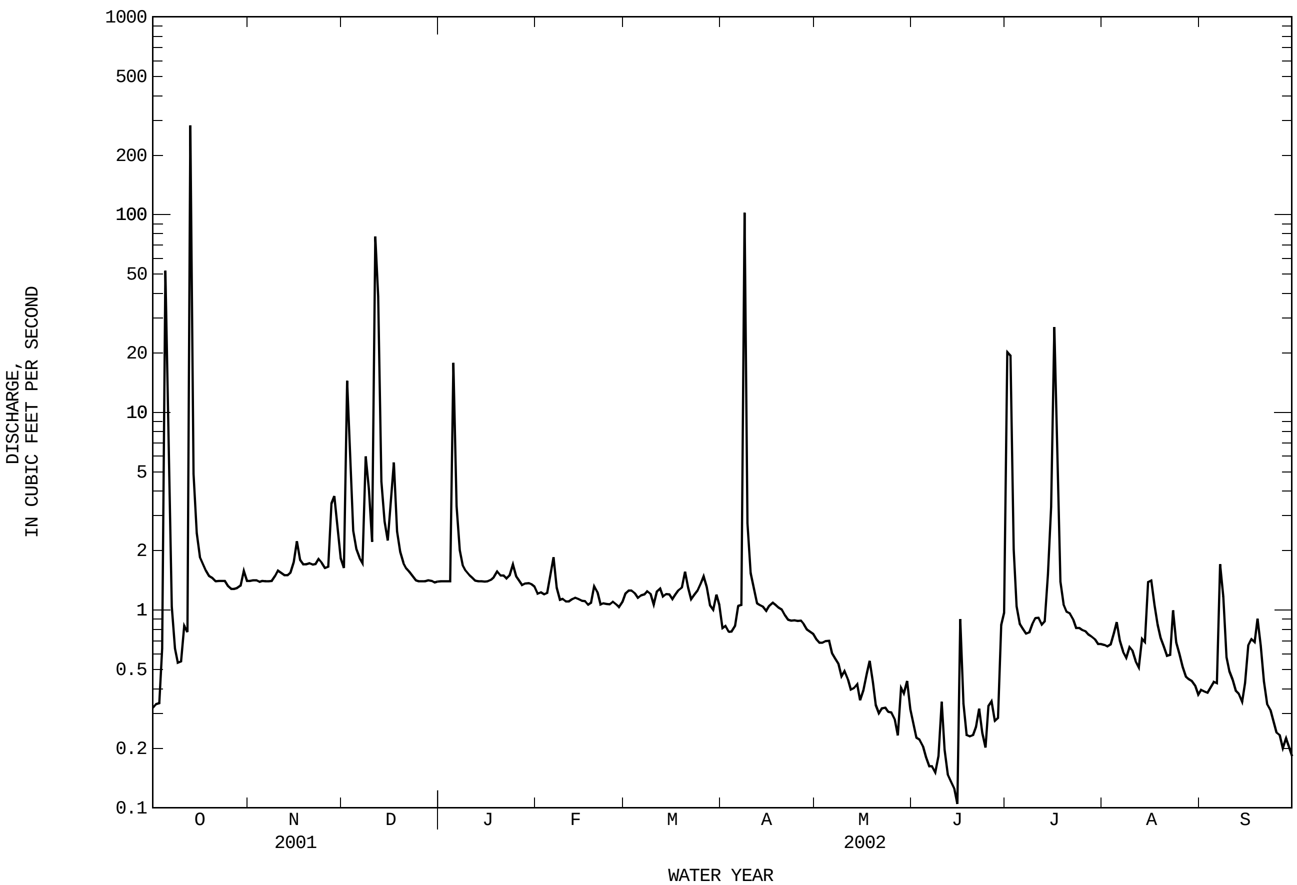
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.32	1.4	1.6	1.4	1.2	1.2	0.81	0.71	0.27	20	0.67	0.39
2	0.33	1.4	14	1.4	1.2	1.3	0.83	0.68	0.23	19	0.65	0.39
3	0.34	1.4	5.6	1.4	1.2	1.3	0.78	0.68	0.22	2.0	0.67	0.38
4	0.64	1.4	2.5	1.4	1.2	1.2	0.78	0.70	0.21	1.0	0.76	0.41
5	52	1.4	2.0	18	1.5	1.2	0.83	0.70	0.18	0.85	0.87	0.43
6	9.0	1.4	1.8	3.4	1.8	1.2	1.1	0.61	0.16	0.80	0.70	0.43
7	1.0	1.4	1.7	2.0	1.3	1.2	1.1	0.57	0.16	0.76	0.62	1.7
8	0.64	1.4	6.0	1.7	1.1	1.2	102	0.54	0.15	0.77	0.57	1.2
9	0.54	1.5	4.1	1.6	1.1	1.2	2.7	0.46	0.18	0.85	0.65	0.58
10	0.55	1.6	2.2	1.5	1.1	1.1	1.5	0.49	0.34	0.91	0.62	0.49
11	0.84	1.5	77	1.5	1.1	1.2	1.3	0.45	0.20	0.92	0.55	0.45
12	0.77	1.5	39	1.4	1.1	1.3	1.1	0.40	0.15	0.85	0.51	0.39
13	282	1.5	4.5	1.4	1.2	1.2	1.1	0.40	0.14	0.88	0.72	0.38
14	4.9	1.5	2.8	1.4	1.1	1.2	1.0	0.42	0.13	1.5	0.69	0.34
15	2.5	1.7	2.2	1.4	1.1	1.2	0.99	0.35	0.10	3.3	1.4	0.43
16	1.9	2.2	3.6	1.4	1.1	1.1	1.1	0.39	0.90	27	1.4	0.66
17	1.7	1.8	5.6	1.4	1.1	1.2	1.1	0.47	0.34	3.7	1.1	0.71
18	1.6	1.7	2.5	1.5	1.1	1.3	1.1	0.55	0.23	1.4	0.84	0.69
19	1.5	1.7	2.0	1.6	1.3	1.3	1.0	0.43	0.23	1.1	0.72	0.90
20	1.5	1.7	1.7	1.5	1.2	1.6	1.0	0.33	0.23	0.98	0.65	0.66
21	1.4	1.7	1.6	1.5	1.1	1.3	0.94	0.30	0.26	0.96	0.59	0.44
22	1.4	1.7	1.6	1.4	1.1	1.1	0.89	0.32	0.32	0.90	0.59	0.33
23	1.4	1.8	1.5	1.5	1.1	1.2	0.89	0.32	0.24	0.81	1.00	0.31
24	1.4	1.7	1.4	1.7	1.1	1.3	0.89	0.31	0.20	0.81	0.68	0.28
25	1.3	1.6	1.4	1.5	1.1	1.4	0.88	0.30	0.33	0.79	0.60	0.24
26	1.3	1.7	1.4	1.4	1.1	1.5	0.88	0.28	0.34	0.78	0.52	0.23
27	1.3	3.5	1.4	1.3	1.0	1.3	0.85	0.23	0.28	0.75	0.46	0.20
28	1.3	3.8	1.4	1.4	1.1	1.1	0.80	0.41	0.28	0.73	0.45	0.22
29	1.3	2.6	1.4	1.4	---	1.0	0.78	0.38	0.84	0.71	0.44	0.20
30	1.6	1.8	1.4	1.3	---	1.2	0.76	0.44	0.97	0.67	0.41	0.18
31	1.4	---	1.4	1.3	---	1.1	---	0.31	---	0.67	0.37	---
TOTAL	379.67	53.0	198.3	64.0	32.8	38.2	131.78	13.93	8.81	97.15	21.47	14.64
MEAN	12.25	1.767	6.397	2.065	1.171	1.232	4.393	0.449	0.294	3.134	0.693	0.488
MAX	282	3.8	77	18	1.8	1.6	102	0.71	0.97	27	1.4	1.7
MIN	0.32	1.4	1.4	1.3	1.0	1.0	0.76	0.23	0.10	0.67	0.37	0.18
AC-FT	753	105	393	127	65	76	261	28	17	193	43	29
CFSM	0.71	0.10	0.37	0.12	0.07	0.07	0.25	0.03	0.02	0.18	0.04	0.03
IN.	0.82	0.11	0.43	0.14	0.07	0.08	0.28	0.03	0.02	0.21	0.05	0.03

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	6.523	4.905	4.747	6.470	7.532	6.378	7.060	11.21	9.105	1.096	1.181	3.147
MAX	69.3	98.4	25.4	31.9	67.5	38.1	39.9	55.5	83.4	4.44	17.4	38.5
(WY)	1999	1999	1992	1974	1992	1973	1991	1979	1993	1993	1974	1974
MIN	0.000	0.070	0.25	0.24	0.21	0.19	0.24	0.33	0.065	0.007	0.000	0.040
(WY)	1964	1967	1967	1967	1967	1967	1971	1971	1990	1971	1970	1965

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1962 - 2002	
ANNUAL TOTAL	1554.07		1053.75			
ANNUAL MEAN	4.258		2.887		5.757	
HIGHEST ANNUAL MEAN					20.7	1992
LOWEST ANNUAL MEAN					0.82	1964
HIGHEST DAILY MEAN	282	Oct 13	282	Oct 13	1180	Jun 13 1973
LOWEST DAILY MEAN	0.05	Aug 24	0.10	Jun 15	0.00	Aug 7 1962
ANNUAL SEVEN-DAY MINIMUM	0.07	Aug 21	0.18	Jun 9	0.00	Aug 7 1962
MAXIMUM PEAK FLOW			1640	Oct 13	5360	May 22 1979
MAXIMUM PEAK STAGE			18.32	Oct 13	27.19	May 22 1979
ANNUAL RUNOFF (AC-FT)	3080		2090		4170	
ANNUAL RUNOFF (CFSM)	0.25		0.17		0.33	
ANNUAL RUNOFF (INCHES)	3.34		2.27		4.52	
10 PERCENT EXCEEDS	3.8		1.9		5.0	
50 PERCENT EXCEEDS	1.4		1.1		0.88	
90 PERCENT EXCEEDS	0.31		0.32		0.10	

08160800 Redgate Creek near Columbus, TX--Continued



08161000 Colorado River at Columbus, TX

LOCATION.--Lat 29°42'22", long 96°32'12", Colorado County, Hydrologic Unit 12090301, near right bank at downstream side of pier of bridge on U.S. Highway 90 at eastern edge of Columbus, 340 ft downstream from Texas and New Orleans Railroad Co. bridge, 2.6 mi downstream from Cummins Creek, and at mile 135.1.

DRAINAGE AREA.--41,640 mi^2, approximately, of which 11,403 mi^2 probably is noncontributing.

PERIOD OF RECORD.--Jan. 1903 to Dec. 1911 (gage heights only), May 1916 to current year. Discharge records for 1902-11, published in WSP 84, 99, 132, 174, 210, 288, and 308, have been found to be unreliable and should not be used. Records collected at site 23 mi downstream Oct. 1930 to May 1939, published as "near Eagle Lake". Gage-height records collected in this vicinity since 1903 are contained in reports of the National Weather Service.
Water-quality records.--Chemical data: Oct. 1967 to Sept. 1981. Biochemical data: Feb. 1968 to Sept. 1981. Sediment data: Mar. 1957 to Sept. 1973.

REVISED RECORDS.--WSP 1562: 1920-21(M), 1922. WDR TX-81-3: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 145.52 ft above NGVD of 1929. Prior to May 1, 1919, various nonrecording gages at sites in the immediate vicinity at datum 7.00 ft higher. May 1, 1919, to Nov. 23, 1930, water-stage recorder at site about 300 ft downstream at datum 7.00 ft higher. Sept. 17, 1930, to June 12, 1939 (Oct. 1, 1930, to May 31, 1939, used herein), water-stage recorder at site 23 mi downstream at different datum. May 17 to Nov. 14, 1939, nonrecording gage at present site and datum 10.00 ft higher; Nov. 15, 1939, to Dec. 31, 1988, water-stage recorder at present site and at datum 10.00 ft higher. Gage-height telemeter at station. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. Since installation of gage in May 1916, at least 10% of contributing drainage area has been regulated. There are many other diversions above this station for irrigation and municipal supply. Low-flow releases from Lake Travis (1,144,100 acre-ft) 251 mi upstream, are made for the generation of electric power to fulfill downstream water contracts.

COOPERATION.--Lower Colorado River Authority provides operation and maintenance of the gage and verification of stage-discharge relation at low stages. U.S. Geological Survey maintains stage-discharge relation at medium to high stages, computes, and publishes streamflow record.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1852, 51.6 ft, present datum, in July 1869 and Dec. 6, 1913, from information by local resident. River divided each time and left city of Columbus on an island.

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

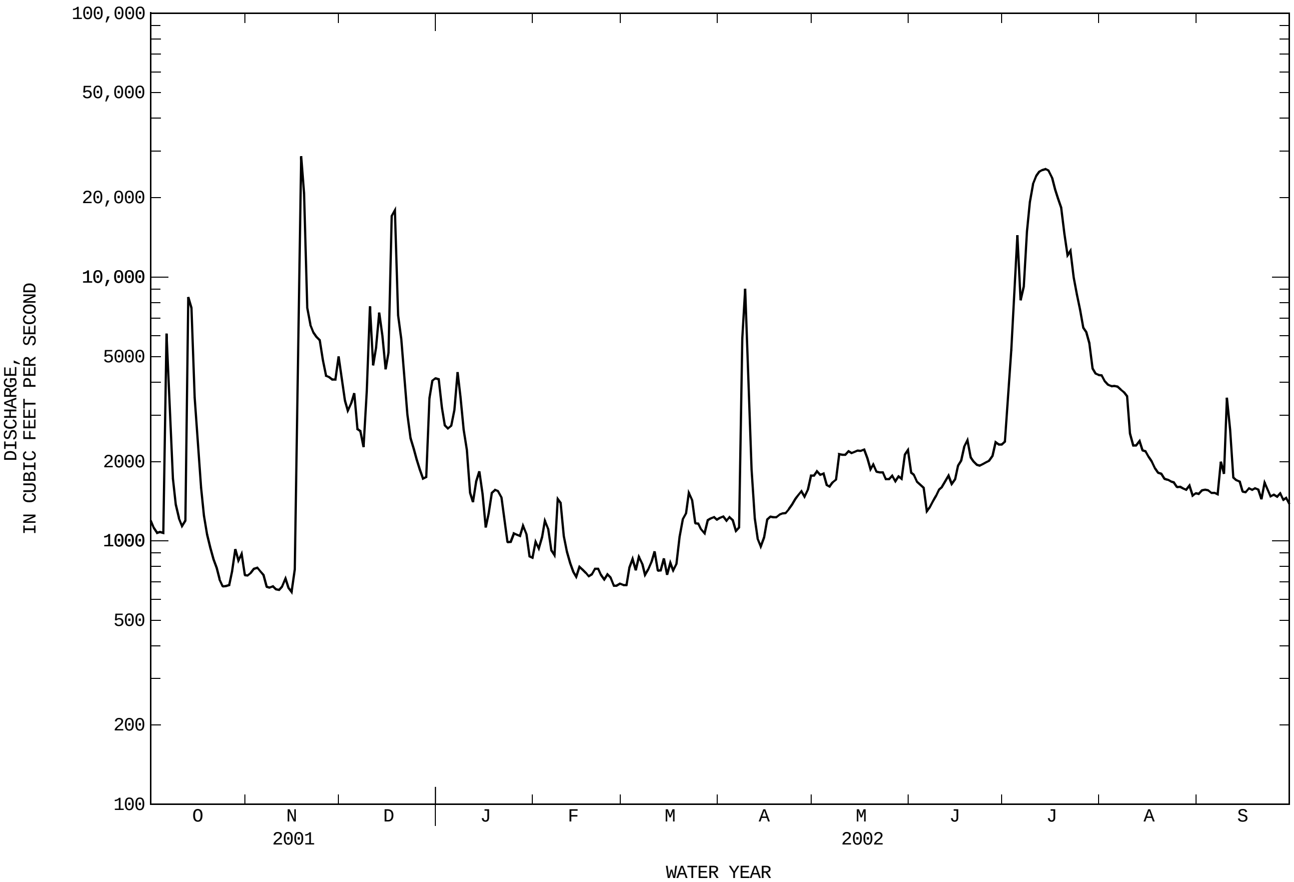
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1190	738	4140	4100	992	680	1220	1770	1810	2380	4250	1510
2	1120	755	3390	3190	936	680	1240	1830	1780	3660	4020	1550
3	1070	783	3110	2740	1030	789	1190	1780	1670	5300	3900	1560
4	1080	790	3310	2660	1190	853	1230	1800	1630	8340	3860	1550
5	1070	767	3620	2730	1110	772	1200	1630	1590	14400	3860	1520
6	6100	743	2650	3130	921	872	1090	1600	1290	8150	3840	1520
7	3120	669	2610	4360	884	822	1120	1670	1340	9200	3750	1500
8	1720	664	2270	3520	1440	741	5840	1700	1410	14900	3670	2000
9	1370	671	3680	2640	1400	778	9030	2130	1480	19200	3530	1790
10	1220	656	7740	2210	1040	829	4660	2120	1570	22500	2550	3490
11	1140	652	4620	1520	907	910	1860	2120	1600	24100	2300	2640
12	1190	672	5400	1400	821	770	1220	2190	1680	25100	2300	1740
13	8390	719	7330	1680	767	772	1020	2150	1760	25400	2390	1700
14	7630	664	5980	1830	731	856	954	2170	1640	25600	2200	1680
15	3490	641	4470	1510	796	743	1030	2200	1700	25300	2180	1540
16	2410	779	5170	1130	777	823	1200	2190	1920	23900	2080	1530
17	1590	8740	17000	1270	756	770	1240	2220	2000	21400	2000	1580
18	1250	28700	17900	1520	733	815	1230	2050	2270	19800	1880	1560
19	1050	20800	7160	1560	746	1040	1230	1860	2410	18300	1810	1580
20	939	7660	5820	1540	785	1200	1260	1950	2070	14600	1800	1560
21	851	6590	4110	1460	783	1270	1270	1830	2000	12100	1720	1440
22	788	6150	3010	1220	740	1520	1270	1820	1950	12500	1710	1660
23	715	5940	2450	987	712	1430	1320	1820	1930	9980	1680	1560
24	671	5770	2230	990	744	1170	1370	1710	1960	8610	1670	1470
25	674	4830	2030	1070	724	1160	1440	1720	1980	7530	1600	1500
26	680	4210	1860	1050	675	1100	1490	1770	2010	6420	1600	1470
27	766	4170	1720	1040	675	1070	1540	1680	2090	6200	1570	1520
28	928	4090	1740	1140	687	1200	1470	1750	2360	5610	1560	1430
29	841	4090	3480	1070	---	1210	1560	1720	2320	4500	1620	1450
30	891	5000	4050	871	---	1230	1770	2110	2320	4300	1480	1380
31	741	---	4130	861	---	1200	---	2210	---	4250	1520	---
TOTAL	56685	128103	148180	57999	24502	30075	54564	59270	55540	413530	75900	49980
MEAN	1829	4270	4780	1871	875.1	970.2	1819	1912	1851	13340	2448	1666
MAX	8390	28700	17900	4360	1440	1520	9030	2220	2410	25600	4250	3490
MIN	671	641	1720	861	675	680	954	1600	1290	2380	1480	1380
AC-FT	112400	254100	293900	115000	48600	59650	108200	117600	110200	820200	150500	99140

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1916 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2970	2340	2139	2359	2644	2538	3479	5352	5206	3370	1930	2859
MAX	25310	13360	16450	19800	33800	20220	17350	40630	30060	25710	10030	32690
(WY)	1937	1975	1992	1992	1992	1992	1922	1922	1935	1938	1938	1936
MIN	204	197	162	182	203	275	308	1257	574	569	128	347
(WY)	1935	1918	1964	1964	1967	1952	1925	1937	1934	1933	1917	1934

08161000 Colorado River at Columbus, TX--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1916 - 2002	
ANNUAL TOTAL	1065858		1154328			
ANNUAL MEAN	2920		3163		3108	
HIGHEST ANNUAL MEAN					10810	1992
LOWEST ANNUAL MEAN					653	1917
HIGHEST DAILY MEAN	28700	Nov 18	28700	Nov 18	164000	Jun 19 1935
LOWEST DAILY MEAN	641	Nov 15	641	Nov 15	93	Sep 1 1918
ANNUAL SEVEN-DAY MINIMUM	668	Nov 9	668	Nov 9	106	Aug 22 1917
MAXIMUM PEAK FLOW			32900	Nov 18	190000	Jun 18 1935
MAXIMUM PEAK STAGE			30.14	Nov 18	48.50	Jun 18 1935
ANNUAL RUNOFF (AC-FT)	2114000		2290000		2252000	
10 PERCENT EXCEEDS	5370		6290		5930	
50 PERCENT EXCEEDS	1970		1640		1620	
90 PERCENT EXCEEDS	1150		770		400	



08162000 Colorado River at Wharton, TX

LOCATION.--Lat 29°18'32", long 96°06'13", Wharton County, Hydrologic Unit 12090302, near left bank at downstream side of downstream bridge on U.S. Highway 59 in Wharton, 1,100 ft downstream from Texas and New Orleans Railroad Co. bridge, 12 mi upstream from Jones Creek, and at mile 66.6.

DRAINAGE AREA.--42,003 mi^2, approximately, of which 11,403 mi^2 probably is noncontributing.

PERIOD OF RECORD.--July 1916 to Aug. 1918 (intermittent periods), Mar. 1919 to Sept. 1925 and July and Aug. 1938 (flood discharge measurements only), Oct. 1938 to current year. June to Nov. 1901, May to Sept. 1902, daily records published in U.S. Department of Agriculture, Office of Experiment Stations, Bulletin Nos. 119 and 133. Gage-height records collected in this vicinity since 1935 are contained in reports of the National Weather Service.
Water-quality records.--Chemical data: Apr. 1944 to Sept. 1995. Biochemical data: Jan. 1968 to Sept. 1995. Radiochemical data: Dec. 1973 to Sept. 1995. Pesticide data: Oct. 1967 to June 1982. Sediment data: Oct. 1974 to Sept. 1995.

REVISED RECORDS.--WSP 878: 1938(M). WDR TX-81-3: Drainage area. WDR TX-88-3: 1985.

GAGE.--Water-stage recorder. Datum of gage is 52.42 ft above NGVD of 1929. Prior to Oct. 1, 1938, various types of recording and nonrecording gages 800 ft upstream at different datum. Oct. 1, 1938, to June 1, 1956, nonrecording gage 100 ft upstream at datum 13.00 ft higher. June 1, 1966, to Sept. 30, 1975, water-stage recorder at present site at datum 13.00 ft higher. Oct. 1, 1975, to Mar. 1, 1983, 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 Oct. 1938, at least 10% of contributing drainage area has been regulated. There are many diversions above station for irrigation, municipal supply, cooling water for thermal-electric power plant, and oil field operations.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1869, 51.9 ft Dec. 8, 1913, present datum, from information by local residents; below Wharton floodwater combined with that of the Brazos River. Flood of about July 12, 1869, reached about same height. Flood of June 20, 1935, reached a stage of 51.2 ft, present datum, furnished by National Weather Service (discharge, 159,000 ft^3/s), from rating curve defined by current-meter measurements below 145,000 ft^3/s. Flood of July 30, 1938, reached a stage of 50.4 ft, present datum, observed by U.S. Geological Survey personnel (discharge, 145,000 ft^3/s).

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

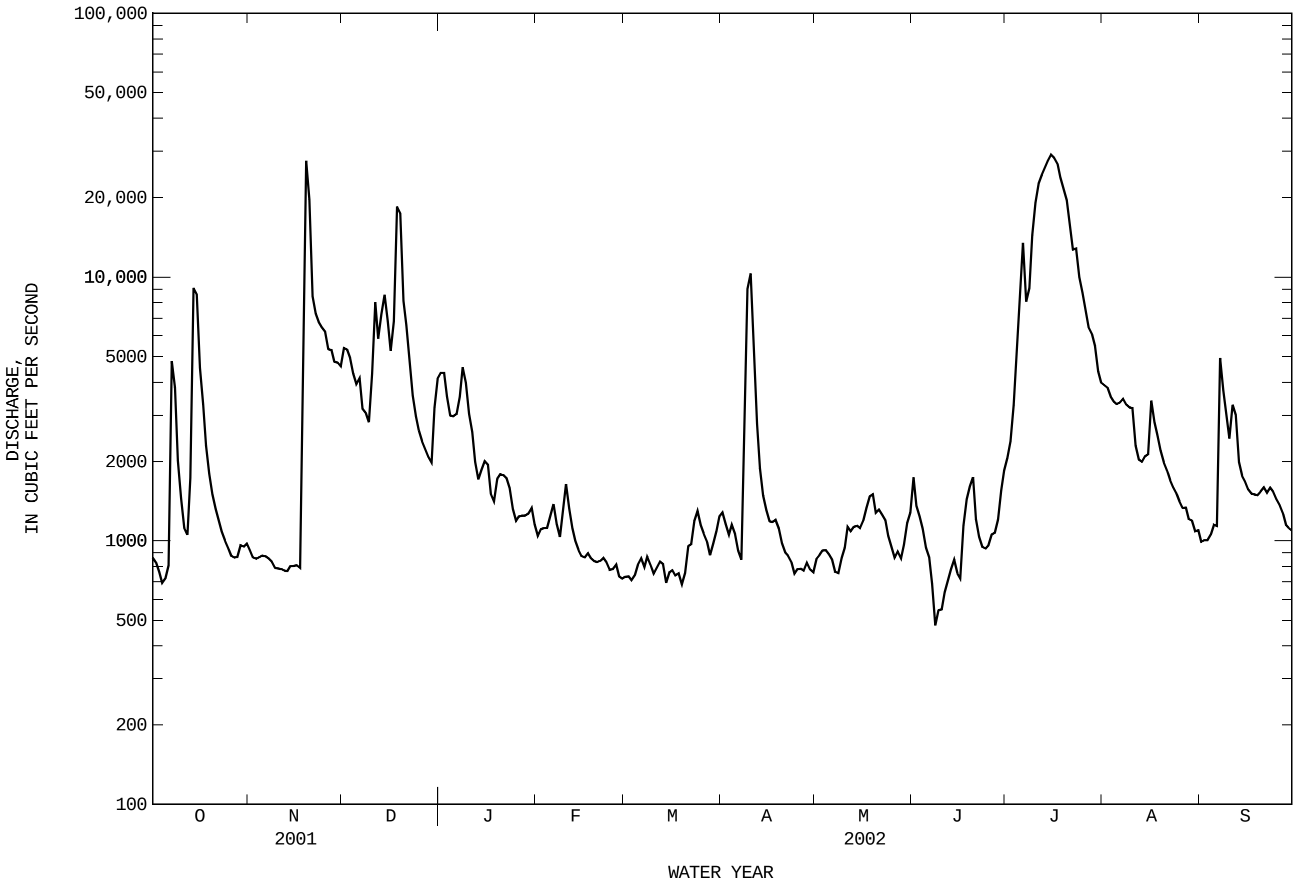
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	862	924	5370	4340	1040	730	1280	854	1740	2060	3900	991
2	827	863	5300	4340	1110	733	1160	880	1360	2390	3810	1010
3	759	855	4950	3520	1120	709	1050	918	1240	3280	3530	1010
4	691	867	4310	2990	1120	739	1150	922	1100	5080	3370	1060
5	719	878	3920	2960	1240	812	1060	890	939	8600	3300	1150
6	805	874	4140	3020	1380	856	917	851	865	13500	3350	1140
7	4790	856	3170	3510	1160	795	847	762	688	8060	3460	4930
8	3810	833	3060	4540	1030	873	2900	753	478	9070	3280	3720
9	2020	789	2810	3980	1300	812	9030	856	546	14400	3200	3010
10	1450	785	4290	3030	1650	750	10300	941	550	19100	3190	2450
11	1120	781	8010	2580	1320	790	5550	1130	636	22600	2290	3280
12	1060	771	5860	1990	1110	833	2770	1090	704	24400	2030	3000
13	1730	769	7230	1710	999	818	1880	1130	779	25900	1990	1990
14	9100	801	8570	1860	923	693	1480	1140	848	27600	2090	1760
15	8620	803	6800	2000	874	758	1310	1120	752	29100	2130	1680
16	4540	807	5240	1940	864	773	1180	1190	721	28300	3400	1570
17	3290	790	6800	1510	896	738	1180	1330	1140	26900	2810	1510
18	2300	9630	18500	1410	860	751	1200	1470	1430	23800	2490	1500
19	1800	27600	17500	1720	839	684	1120	1500	1610	21600	2200	1490
20	1500	19700	8140	1790	831	752	978	1280	1740	19500	1990	1540
21	1320	8460	6580	1770	840	953	903	1310	1210	15400	1850	1590
22	1190	7260	4820	1730	863	970	878	1260	1030	12700	1700	1520
23	1080	6760	3560	1580	829	1190	834	1200	948	12800	1600	1590
24	1000	6450	2960	1320	778	1300	750	1040	936	10000	1520	1540
25	941	6210	2620	1190	782	1140	782	950	961	8730	1410	1440
26	877	5340	2390	1230	810	1070	782	862	1050	7500	1330	1370
27	865	5290	2230	1250	732	998	771	912	1070	6470	1340	1280
28	868	4760	2090	1250	718	882	827	859	1200	6120	1210	1150
29	961	4740	1980	1270	---	975	780	967	1560	5490	1190	1120
30	950	4580	3200	1330	---	1090	760	1170	1840	4380	1090	1090
31	977	---	4130	1150	---	1230	---	1280	---	3990	1090	---
TOTAL	62822	130826	170530	69810	28018	27197	56409	32817	31671	428820	73140	53481
MEAN	2027	4361	5501	2252	1001	877.3	1880	1059	1056	13830	2359	1783
MAX	9100	27600	18500	4540	1650	1300	10300	1500	1840	29100	3900	4930
MIN	691	769	1980	1150	718	684	750	753	478	2060	1090	991
AC-FT	124600	259500	338200	138500	55570	53950	111900	65090	62820	850600	145100	106100

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

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2276	2445	2290	2499	2935	2776	3062	4055	4607	2656	1366	1880
MAX	14590	13870	15060	21810	35520	21550	13730	27300	30910	15010	3916	9394
(WY)	1999	1975	1992	1992	1992	1992	1977	1957	1987	1997	1945	1961
MIN	296	220	253	224	268	328	566	825	838	706	406	436
(WY)	1957	1957	1990	1964	1967	1952	1951	1962	1948	1967	1964	1954

08162000 Colorado River at Wharton, TX--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1939 - 2002	
ANNUAL TOTAL	1071038		1165541			
ANNUAL MEAN	2934		3193		2733	
HIGHEST ANNUAL MEAN					11120	1992
LOWEST ANNUAL MEAN					615	1964
HIGHEST DAILY MEAN	27600	Nov 19	29100	Jul 15	90600	Jul 3 1940
LOWEST DAILY MEAN	380	Jul 18	478	Jun 8	42	Aug 22 1964
ANNUAL SEVEN-DAY MINIMUM	455	Aug 20	626	Jun 7	110	Dec 11 1956
MAXIMUM PEAK FLOW			30100	Nov 19	100000	Jul 3 1940
MAXIMUM PEAK STAGE			31.05	Nov 19	48.99	Jul 3 1940
ANNUAL RUNOFF (AC-FT)	2124000		2312000		1980000	
10 PERCENT EXCEEDS	6340		7240		5470	
50 PERCENT EXCEEDS	1850		1300		1320	
90 PERCENT EXCEEDS	626		782		470	



08162500 Colorado River near Bay City, TX

LOCATION.--Lat 28°58'26", long 96°00'44", Matagorda County, Hydrologic Unit 12090302, on left bank, 6,300 ft downstream from bridge on State Highway 35, 7,100 ft downstream from Texas and New Orleans Railroad Co. bridge, 2.8 mi west of Bay City, and at mile 32.5.

DRAINAGE AREA.--42,240 mi^2, approximately, of which 11,403 mi^2 probably is noncontributing.

PERIOD OF RECORD.--July 1940 published in WSP 1046, Apr. 1948 to current year. Records of elevation collected in this vicinity since 1946 are contained in reports of the National Weather Service.
Water-quality records.--Chemical data: Oct. 1974 to Sept. 1975. Biochemical data: Oct. 1974 to Sept. 1975.

REVISED RECORDS.--WDR TX-81-3: Drainage area. WDR TX-88-3: 1985.

GAGE.--Water-stage recorder. Datum of gage is NGVD of 1929. July 2-6, 1940, nonrecording gage at highway bridge, 6,300 ft upstream at datum 30.60 ft lower. On Feb. 19, 1992, gage was temporarily moved 6,200 ft upstream at same datum. Gage re-established on left bank 6,300 ft downstream on May 12, 1993. Radio telemeter at station. Satellite telemeter at station.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Since installation of gage in Apr. 1948, at least 10% of contributing drainage area has been regulated. There are many other diversions above this station for irrigation and municipal supply. No flow at times in 1951-53, 1956 and 2002.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum elevation since 1869, 56.1 ft Dec. 10, 1913. Flood in July 1869 probably reached about same elevation. Elevation of other floods are as follows: May 8, 1922, 55.4 ft; June 1929, 55.0 ft; June 22, 1935, 54.6 ft; Oct. 5, 1936, 52.2 ft; Aug. 2, 1938, 53.4 ft; Nov. 27, 1940, 47.6 ft. All above flood data from information by Texas and New Orleans Railroad Co. and adjusted to present site.

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	773	963	4770	4120	1070	691	925	549	990	2000	3440	554
2	711	918	6750	4050	990	835	890	570	926	2070	3370	535
3	689	872	11200	3730	1170	599	804	562	725	2820	3140	625
4	578	877	6480	2970	1100	579	810	562	625	3650	3000	685
5	686	710	4340	3260	1210	690	742	474	434	4890	2880	842
6	1260	685	4500	3270	1390	769	721	478	355	10400	2930	968
7	2580	472	3750	3290	1190	775	645	420	298	8260	2840	13500
8	5230	818	3200	3510	864	830	2300	365	233	6150	2810	14500
9	2660	785	2980	3770	1060	806	6950	286	285	10300	2650	8910
10	1920	742	3240	2270	1560	674	10900	191	227	14900	2640	5030
11	1670	976	6400	2010	1410	717	6450	414	256	19100	2260	3800
12	1850	1080	9580	1610	1170	759	3330	527	244	21300	1780	3830
13	3980	935	7460	1190	1060	662	2070	325	221	22800	1670	2510
14	7340	749	8990	1130	925	623	1510	387	215	24300	1770	1980
15	11000	613	8060	1960	911	574	1280	504	158	29300	1980	3220
16	5460	1930	5730	1450	850	626	1150	621	228	31200	2730	6200
17	3700	1900	5570	1370	873	620	1140	808	120	28200	2960	5380
18	2660	2360	13100	1500	1170	638	898	1640	491	24100	2400	3620
19	2020	20700	19600	1520	1140	605	848	1320	709	21100	2150	2420
20	1650	24700	10500	1720	1140	574	793	1040	908	19300	1870	2330
21	1430	10600	6640	1760	1280	545	649	801	748	15800	1720	2140
22	1310	7140	5550	1760	433	709	569	811	420	12400	1540	1850
23	1210	6560	3900	1640	669	814	552	723	381	11900	1380	1660
24	1050	6360	3180	894	839	1090	428	612	343	10400	1270	1710
25	957	6030	2730	948	531	1050	292	462	369	8270	1140	1660
26	932	5380	1930	1170	474	815	380	388	479	7410	1020	1550
27	907	5890	1970	1220	514	850	533	380	543	6080	954	1300
28	885	7680	e1970	1130	618	805	464	413	574	5700	927	1200
29	887	5450	e2020	1230	---	748	515	405	1450	5150	775	1080
30	940	4860	e2660	1320	---	925	557	537	2470	4420	689	1050
31	965	---	3770	1280	---	880	---	607	---	3610	669	---
TOTAL	69890	129735	182520	64052	27611	22877	50095	18182	16425	397280	63354	96639
MEAN	2255	4324	5888	2066	986.1	738.0	1670	586.5	547.5	12820	2044	3221
MAX	11000	24700	19600	4120	1560	1090	10900	1640	2470	31200	3440	14500
MIN	578	472	1930	894	433	545	292	191	120	2000	669	535
AC-FT	138600	257300	362000	127000	54770	45380	99360	36060	32580	788000	125700	191700

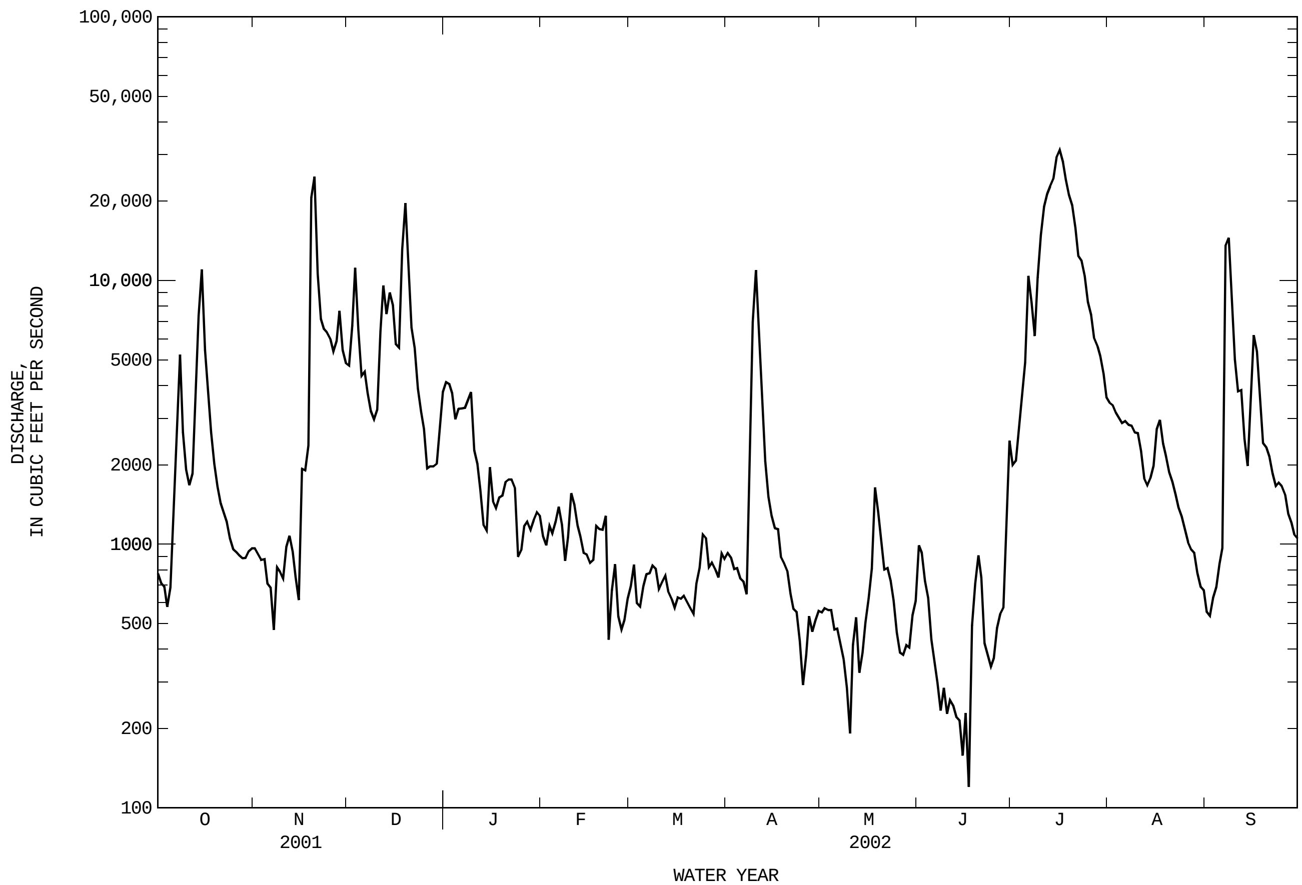
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1948 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2475	2424	2321	2580	3189	2802	2804	3811	4336	1859	847.4	1811
MAX	16110	13470	16200	25780	42200	25780	13410	27750	30360	14240	2876	11160
(WY)	1999	1975	1992	1992	1992	1992	1977	1957	1987	1997	1961	1961
MIN	254	226	292	249	246	257	125	227	155	1.00	114	93.9
(WY)	1990	1957	1990	1957	1967	1967	1964	1964	1971	1967	1964	1966

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1948 - 2002	
ANNUAL TOTAL	1054082		1138660			
ANNUAL MEAN	2888		3120		2612	
HIGHEST ANNUAL MEAN					14270	1992
LOWEST ANNUAL MEAN					375	1964
HIGHEST DAILY MEAN	24700	Nov 20	31200	Jul 16	79300	Oct 23 1998
LOWEST DAILY MEAN	48	Jun 24	120	Jun 17	0.00	Jun 1 1951
ANNUAL SEVEN-DAY MINIMUM	110	Jun 20	206	Jun 11	0.44	Oct 4 1969
MAXIMUM PEAK FLOW			33000	Jul 16	84100	Jun 26 1960
MAXIMUM PEAK STAGE			27.05	Jul 16	46.40	Jun 26 1960
ANNUAL RUNOFF (AC-FT)	2091000		2259000		1892000	
10 PERCENT EXCEEDS	6560		7430		5780	
50 PERCENT EXCEEDS	1830		1200		907	
90 PERCENT EXCEEDS	243		474		244	

e Estimated

08162500 Colorado River near Bay City, TX--Continued



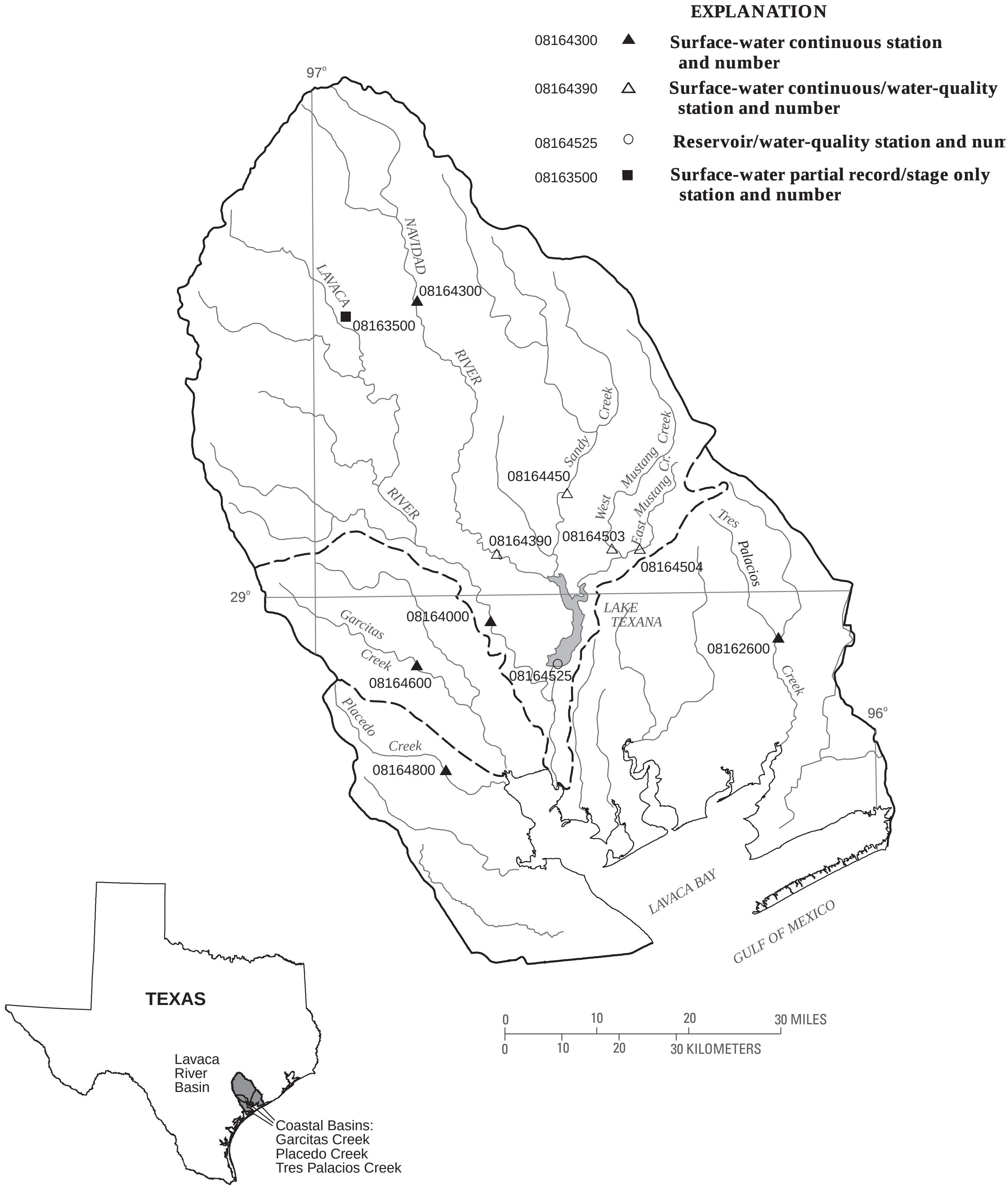


Figure 9.--Map showing location of gaging stations in the Lavaca and Coastal River Basins

08162600 Tres Palacios River near Midfield, TX

LOCATION.--Lat 28°55'40", long 96°10'15", Matagorda County, Hydrologic Unit 12100401, at left downstream end of bridge on Farm Road 456, 1.0 mi downstream from Juanita Creek, and 2.4 mi southeast of Midfield.

DRAINAGE AREA.--145 mi^2.

PERIOD OF RECORD.--June 1970 to current year. Prior to Oct. 1973, published as "Tres Palacios Creek near Midfield".
Water-quality records.--Chemical data: Oct. 1968 to Sept. 1981. Biochemical data: Oct. 1968 to Sept. 1981. Pesticide data: Oct. 1968 to Sept. 1981.

GAGE.--Water-stage recorder. Datum of gage is 5.38 ft above NGVD of 1929. Apr. 29, 1988 to Sept. 4, 1991, at right downstream end of bridge at same datum. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records fair. No known regulation. There are ten known diversions above station, but amounts are unknown. An undetermined amount of water from irrigated rice fields enters the river at various points upstream from station. Extensive channel cleaning upstream and downstream from the gage was begun during the 1983 water year and completed during the 1984 water year.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1885, 37 ft in June 1960, and 35 ft in Aug. 1945, from information by local residents.

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

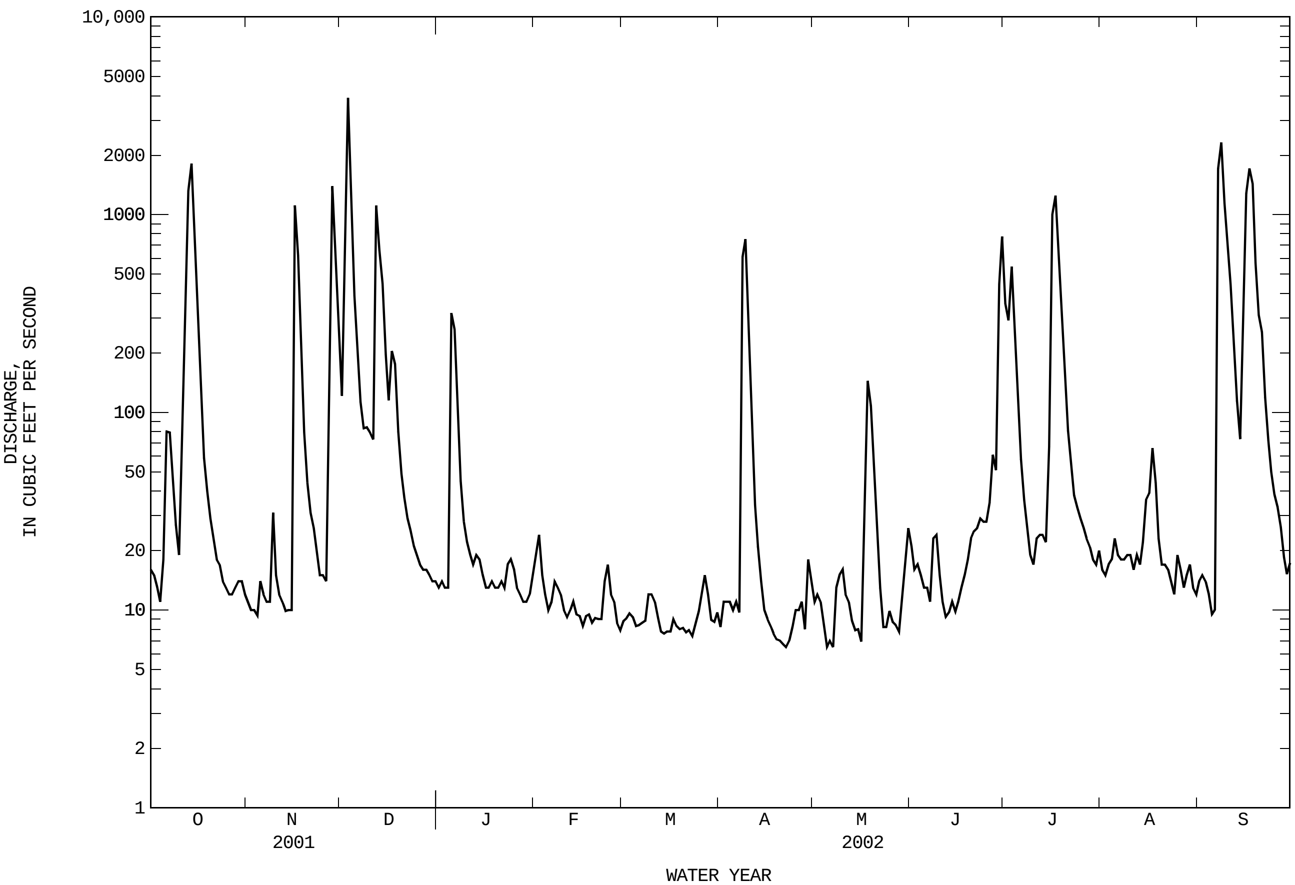
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	11	121	13	19	8.8	8.2	11	21	356	16	14
2	15	10	1100	14	24	9.1	11	12	16	292	15	15
3	13	10	3890	13	15	9.6	11	11	17	546	17	14
4	11	9.4	1230	13	12	9.2	11	8.5	15	301	18	12
5	18	14	389	318	10	8.3	10	6.5	13	115	23	9.5
6	80	12	195	263	11	8.4	11	7.0	13	58	19	10
7	79	11	113	98	14	8.6	9.7	6.5	11	36	18	1710
8	46	11	83	45	13	8.8	612	13	23	26	18	2320
9	27	31	84	28	12	12	751	15	24	19	19	1140
10	19	15	79	22	10	12	188	16	15	17	19	714
11	129	12	73	19	9.2	11	73	12	11	23	16	444
12	392	11	1110	17	10	9.1	34	11	9.2	24	19	216
13	1320	9.9	663	19	11	7.8	21	8.8	9.7	24	17	115
14	1810	10	447	18	9.5	7.6	14	7.9	11	22	22	73
15	526	10	196	15	9.3	7.8	10	8.0	9.8	67	36	359
16	216	1110	115	13	8.3	7.8	9.0	6.9	11	1000	39	1280
17	102	622	204	13	9.3	9.0	8.3	44	13	1250	66	1710
18	59	189	175	14	9.5	8.3	7.6	144	15	640	44	1430
19	40	79	80	13	8.6	8.0	7.1	108	18	289	23	569
20	29	44	49	13	9.1	8.1	7.0	49	23	150	17	311
21	23	31	37	14	9.0	7.7	6.7	26	25	81	17	255
22	18	26	29	13	9.0	7.9	6.5	13	26	55	16	119
23	17	20	25	17	14	7.4	7.0	8.2	29	38	14	72
24	14	15	21	18	17	8.5	8.2	8.2	28	33	12	50
25	13	15	19	16	12	9.8	10	9.9	28	29	19	38
26	12	14	17	13	11	12	10	8.7	35	26	16	33
27	12	318	16	12	8.6	15	11	8.4	61	23	13	26
28	13	1390	16	11	7.9	12	8.0	7.8	51	21	15	18
29	14	529	15	11	---	8.9	18	12	445	18	17	15
30	14	231	14	12	---	8.7	14	18	776	17	13	17
31	12	---	14	15	---	9.7	---	26	---	20	12	---
TOTAL	5109	4820.3	10619	1133	322.3	286.9	1913.3	652.3	1802.7	5616	645	13108.5
MEAN	164.8	160.7	342.5	36.55	11.51	9.255	63.78	21.04	60.09	181.2	20.81	436.9
MAX	1810	1390	3890	318	24	15	751	144	776	1250	66	2320
MIN	11	9.4	14	11	7.9	7.4	6.5	6.5	9.2	17	12	9.5
AC-FT	10130	9560	21060	2250	639	569	3800	1290	3580	11140	1280	26000

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1970 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	243.3	152.0	134.3	139.8	144.8	116.5	141.7	227.8	171.3	107.3	54.56	269.8
MAX	1375	582	568	542	978	1058	689	1080	699	623	166	1308
(WY)	1985	1993	1992	1991	1992	1997	1997	1982	1996	1981	1998	1979
MIN	8.43	3.66	5.29	4.83	6.66	7.79	10.4	14.4	10.4	11.1	9.95	6.45
(WY)	2000	2000	2000	1971	1976	1996	1989	1998	1990	1998	2000	2000

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1970 - 2002	
ANNUAL TOTAL	66405.9		46028.3			
ANNUAL MEAN	181.9		126.1		158.9	
HIGHEST ANNUAL MEAN					325	1992
LOWEST ANNUAL MEAN					42.2	1986
HIGHEST DAILY MEAN	6770	Sep 2	3890	Dec 3	12500	Oct 19 1994
LOWEST DAILY MEAN	3.1	Aug 18	6.5	Apr 22	0.22	Aug 18 2000
ANNUAL SEVEN-DAY MINIMUM	4.1	Aug 17	7.2	Apr 18	1.0	Aug 17 2000
MAXIMUM PEAK FLOW			4480	Dec 3	17000	Oct 17 1984
MAXIMUM PEAK STAGE			26.98	Dec 3	32.43	Oct 17 1984
ANNUAL RUNOFF (AC-FT)	131700		91300		115100	
10 PERCENT EXCEEDS	255		314		250	
50 PERCENT EXCEEDS	18		16		22	
90 PERCENT EXCEEDS	9.3		8.6		8.2	

08162600 Tres Palacios River near Midfield, TX--Continued



08164000 Lavaca River near Edna, TX

LOCATION.--Lat 28°57′35", long 96°41′10", Jackson County, Hydrologic Unit 12100101, at downstream side near center of upstream bridge of two bridges on U.S. Highway 59, 660 ft upstream from Texas and New Orleans Railroad Co. bridge, and 2.8 mi southwest of Edna.

DRAINAGE AREA.--817 mi^2.

PERIOD OF RECORD.--Aug. 1938 to current year.
Water-quality records.--Chemical data: Aug. 1945 to Aug. 1993. Biochemical data: Feb. 1971 to Aug. 1993. Pesticide data: Jan. 1968 to Aug. 1981. Sediment data: Nov. 1977 to Aug. 1993. Specific conductance: Nov. 1977 to Sept. 1981. Water temperature: Nov. 1977 to Sept. 1981.

REVISED RECORDS.--WSP 1923: 1955. WDR TX-73-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 14.10 ft above NGVD of 1929. Prior to Mar. 21, 1961, nonrecording gage. Satellite telemeter at station.

REMARKS.--Records good. No known regulation. Small diversions above station for irrigation. No flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1880, 33.8 ft, May 25, 1936, discharge, 83,400 ft^3/s, from information by local resident.

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	112	94	103	118	85	65	58	61	32	1100	72	35
2	108	92	924	113	83	66	57	58	31	1370	69	33
3	104	99	4770	111	82	64	52	56	29	1530	65	32
4	102	109	6560	109	81	64	50	55	28	2030	82	30
5	109	96	1790	115	81	64	e49	53	27	663	81	29
6	956	88	592	151	84	63	e49	52	25	247	68	28
7	1560	85	396	531	85	63	e49	51	29	161	60	28
8	494	84	307	234	86	61	e787	48	27	119	56	32
9	223	100	607	158	87	61	e1940	46	25	97	54	145
10	170	149	1110	134	84	60	4760	44	26	91	53	166
11	143	116	472	121	80	62	1300	43	23	104	52	66
12	127	102	2320	111	78	61	358	41	22	95	52	42
13	777	91	5150	105	76	60	259	40	25	73	52	35
14	2510	86	1500	102	75	60	208	38	22	417	66	29
15	2900	88	577	99	74	59	177	37	20	2180	128	52
16	505	560	486	97	73	58	155	37	22	6320	525	118
17	276	1060	920	97	72	58	140	51	22	7380	1640	98
18	211	397	1020	96	71	58	126	38	21	7880	397	79
19	178	230	485	95	72	58	116	36	21	1630	159	53
20	158	168	304	92	70	60	108	35	21	547	105	66
21	143	136	236	92	70	65	101	34	20	371	81	51
22	133	119	204	92	70	65	94	33	19	276	71	35
23	126	112	184	93	68	66	90	32	18	213	62	32
24	121	106	166	93	67	62	83	32	19	174	60	30
25	115	100	154	91	67	60	78	31	19	145	54	27
26	108	97	144	88	66	58	75	31	25	126	48	25
27	103	98	138	87	65	56	77	29	46	121	45	23
28	99	99	135	87	64	55	71	29	25	104	42	22
29	96	104	131	88	---	55	66	29	26	95	40	22
30	95	108	126	87	---	56	63	29	533	85	37	21
31	94	---	122	88	---	59	---	32	---	77	36	---
TOTAL	12956	4973	32133	3775	2116	1882	11596	1261	1248	35821	4412	1484
MEAN	417.9	165.8	1037	121.8	75.57	60.71	386.5	40.68	41.60	1156	142.3	49.47
MAX	2900	1060	6560	531	87	66	4760	61	533	7880	1640	166
MIN	94	84	103	87	64	55	49	29	18	73	36	21
AC-FT	25700	9860	63740	7490	4200	3730	23000	2500	2480	71050	8750	2940

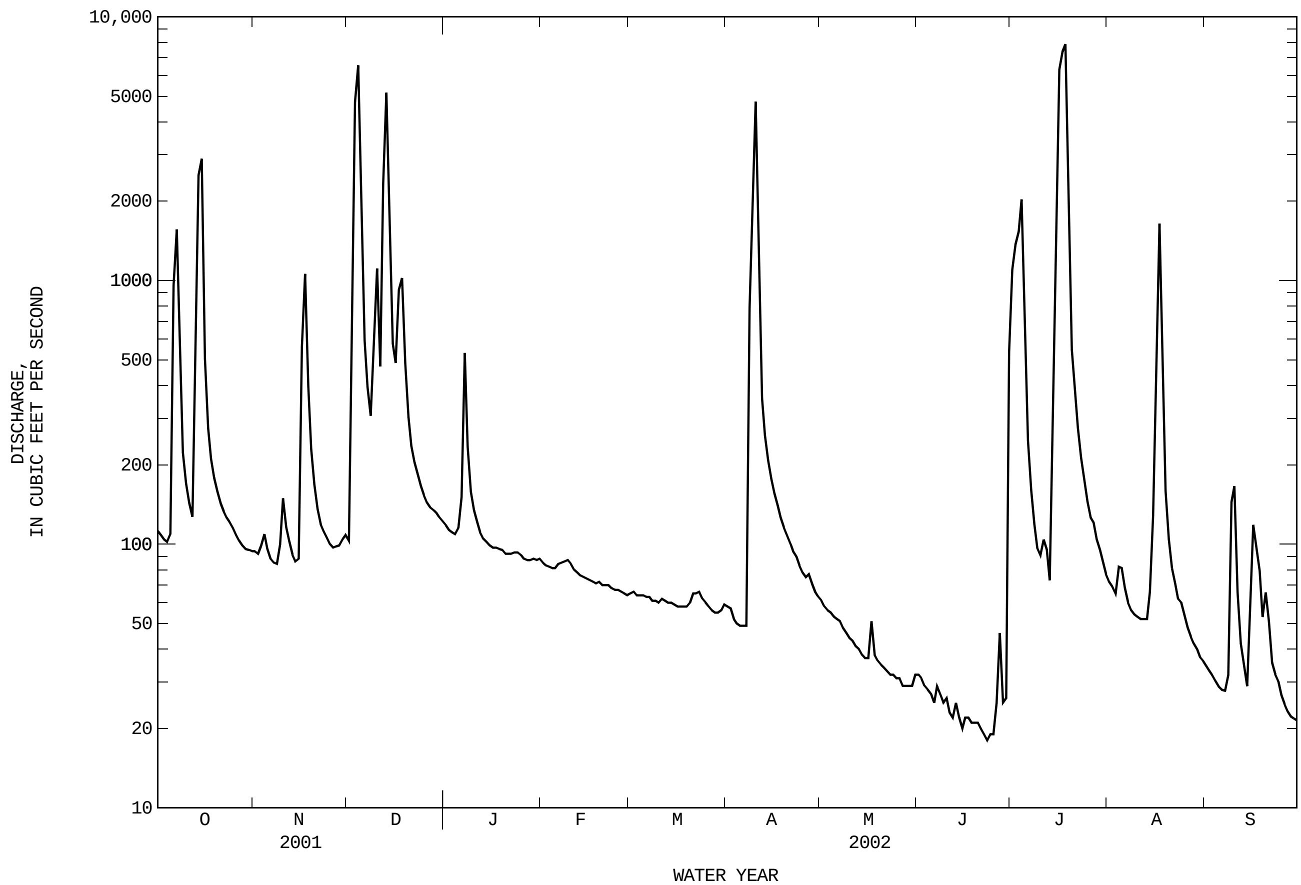
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	477.3	336.5	257.4	283.2	382.2	275.8	487.3	661.6	625.2	218.9	91.67	385.9
MAX	7118	3875	2400	1564	5214	2696	5014	3239	5005	3999	713	3023
(WY)	1995	1999	1977	1979	1992	1997	1997	1982	1973	1940	1946	2001
MIN	0.58	0.003	0.19	0.055	13.5	6.58	4.43	8.16	0.72	2.14	0.16	0.13
(WY)	1991	1957	1991	1957	1954	1956	1956	1956	1990	1954	1990	1989

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1938 - 2002	
ANNUAL TOTAL	216505.3		113657			
ANNUAL MEAN	593.2		311.4		373.0	
HIGHEST ANNUAL MEAN					1385	1992
LOWEST ANNUAL MEAN					6.12	1956
HIGHEST DAILY MEAN	24600	Sep 2	7880	Jul 18	122000	Oct 19 1994
LOWEST DAILY MEAN	6.2	Aug 26	18	Jun 23	0.00	Nov 10 1954
ANNUAL SEVEN-DAY MINIMUM	6.6	Aug 17	20	Jun 19	0.00	Jul 2 1956
MAXIMUM PEAK FLOW			9330	Jul 18	c150000	Oct 19 1994
MAXIMUM PEAK STAGE			a23.78	Jul 18	a35.54	Oct 19 1994
ANNUAL RUNOFF (AC-FT)	429400		225400		270200	
10 PERCENT EXCEEDS	919		539		423	
50 PERCENT EXCEEDS	99		84		54	
90 PERCENT EXCEEDS	17		29		9.5	

e Estimated
c From rating curve extended above discharge measurements of 68,200 ft^3/s and 71,500 ft^3/s.
a From floodmark.

08164000 Lavaca River near Edna, TX--Continued



08164300 Navidad River near Hallettsville, TX

LOCATION.--Lat 29°28'00", long 96°48'45", Lavaca County, Hydrologic Unit 12100102, on right bank at downstream end of bridge on U.S. Highway 90-A, 0.8 mi downstream from Mixons Creek, 1.2 mi southwest of Sublime, and 8 mi northeast of Hallettsville.

DRAINAGE AREA.--332 mi^2.

PERIOD OF RECORD.--Oct. 1961 to current year.

REVISED RECORDS.--WSP 2123: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 159.28 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 1860, 40 ft in June 1940; flood in July 1936 reached a stage of 39 ft, from information by local residents and Southern Pacific Railroad Company.

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

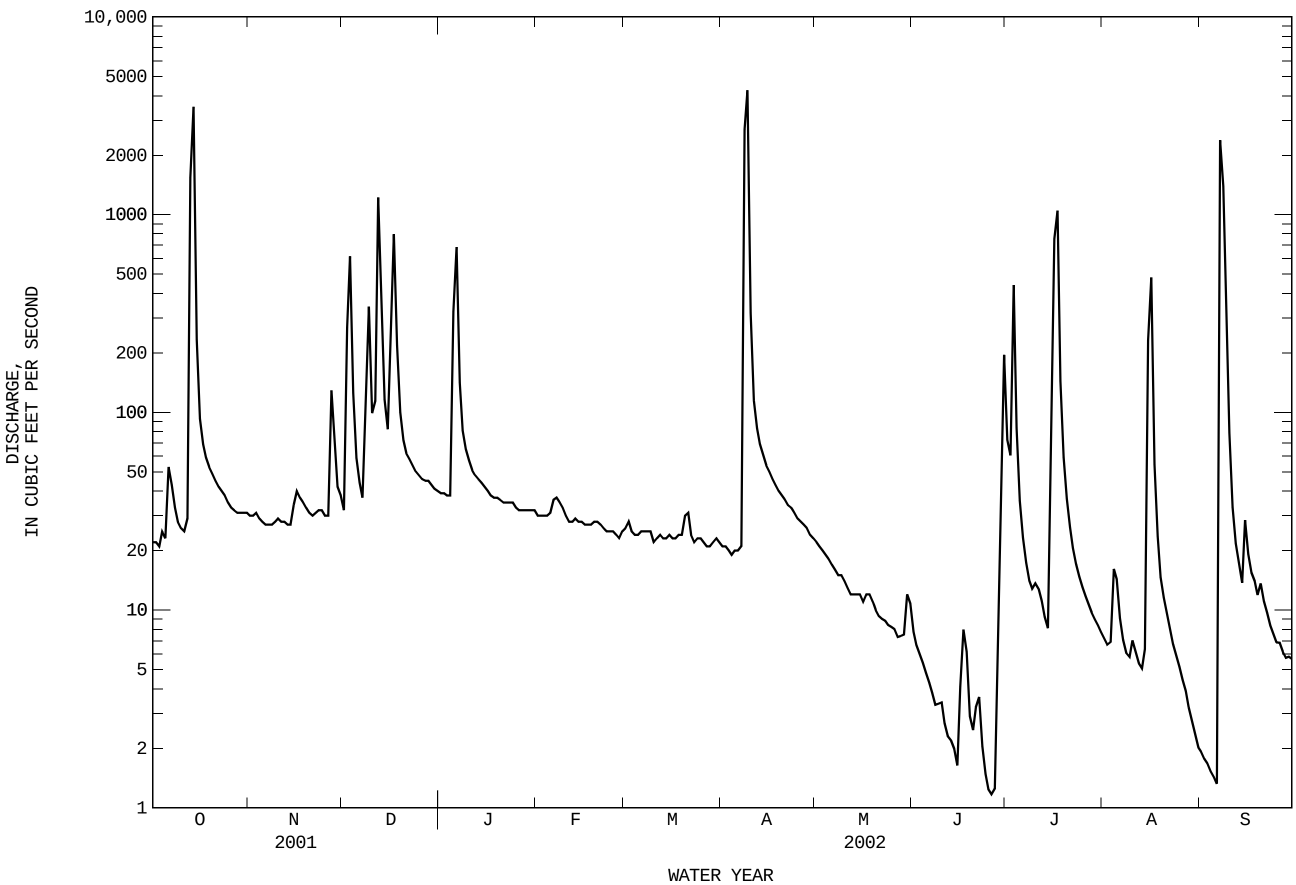
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	30	32	39	30	26	21	22	7.8	73	7.2	1.9
2	22	30	269	39	30	28	21	21	6.6	60	6.7	1.8
3	21	31	614	38	30	25	20	20	6.0	439	6.9	1.7
4	25	29	125	38	30	24	19	19	5.4	84	16	1.5
5	23	28	59	322	31	24	20	18	4.8	36	14	1.4
6	53	27	44	686	36	25	20	17	4.3	23	9.1	1.3
7	43	27	37	141	37	25	21	16	3.8	17	7.0	2380
8	33	27	119	81	35	25	2700	15	3.3	14	6.1	1390
9	28	28	343	65	33	25	4250	15	3.4	13	5.8	392
10	26	29	99	57	30	22	318	14	3.4	14	7.0	79
11	25	28	114	51	28	23	115	13	2.7	13	6.1	33
12	29	28	1220	48	28	24	83	12	2.3	11	5.4	22
13	1540	27	301	46	29	23	69	12	2.2	9.2	5.1	17
14	3510	27	116	44	28	23	61	12	2.0	8.1	6.3	14
15	233	34	82	42	28	24	54	12	1.6	83	232	29
16	93	40	293	40	27	23	50	11	4.1	754	480	19
17	69	37	796	38	27	23	46	12	8.0	1050	55	15
18	59	35	218	37	27	24	43	12	6.1	144	24	14
19	53	33	100	37	28	24	40	11	2.9	59	15	12
20	49	31	72	36	28	30	38	10	2.5	37	12	14
21	45	30	62	35	27	31	36	9.3	3.2	26	9.6	11
22	42	31	58	35	26	24	34	9.0	3.6	21	7.9	9.7
23	40	32	54	35	25	22	33	8.8	2.0	17	6.7	8.3
24	38	32	50	35	25	23	31	8.4	1.5	15	5.9	7.6
25	35	30	48	33	25	23	29	8.2	1.2	13	5.1	6.9
26	33	30	46	32	24	22	28	8.0	1.2	12	4.4	6.8
27	32	129	45	32	23	21	27	7.3	1.2	11	3.9	6.2
28	31	77	45	32	25	21	26	7.4	4.9	9.7	3.2	5.7
29	31	42	43	32	---	22	24	7.5	27	9.0	2.8	5.8
30	31	38	41	32	---	23	23	12	195	8.4	2.4	5.7
31	31	---	40	32	---	22	---	11	---	7.8	2.0	---
TOTAL	6345	1077	5585	2290	800	744	8300	390.9	324.0	3091.2	980.6	4513.3
MEAN	204.7	35.90	180.2	73.87	28.57	24.00	276.7	12.61	10.80	99.72	31.63	150.4
MAX	3510	129	1220	686	37	31	4250	22	195	1050	480	2380
MIN	21	27	32	32	23	21	19	7.3	1.2	7.8	2.0	1.3
AC-FT	12590	2140	11080	4540	1590	1480	16460	775	643	6130	1950	8950
CFSM	0.62	0.11	0.54	0.22	0.09	0.07	0.83	0.04	0.03	0.30	0.10	0.45
IN.	0.71	0.12	0.63	0.26	0.09	0.08	0.93	0.04	0.04	0.35	0.11	0.51

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	154.8	138.1	119.5	130.6	159.9	122.2	197.0	303.4	247.8	25.34	27.57	155.0
MAX	1709	1346	943	691	1251	611	1158	1502	1792	99.7	332	1975
(WY)	1999	1999	1977	1968	1992	1992	1973	1972	1973	2002	1971	1974
MIN	0.000	0.035	0.97	6.38	8.46	9.87	7.17	2.39	0.68	0.16	0.014	0.014
(WY)	1991	1991	1991	1990	1996	1991	1996	1996	1990	1990	1990	1990

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1962 - 2002	
ANNUAL TOTAL	47018.21		34441.0			
ANNUAL MEAN	128.8		94.36		148.0	
HIGHEST ANNUAL MEAN					508	1992
LOWEST ANNUAL MEAN					11.5	1990
HIGHEST DAILY MEAN	6460	Mar 15	4250	Apr 9	30500	Sep 14 1974
LOWEST DAILY MEAN	0.17	Aug 21	1.2	Jun 25	0.00	Aug 5 1964
ANNUAL SEVEN-DAY MINIMUM	0.22	Aug 15	1.7	Aug 31	0.00	Sep 2 1964
MAXIMUM PEAK FLOW			5490	Apr 9	53500	Sep 13 1974
MAXIMUM PEAK STAGE			23.49	Apr 9	36.05	Sep 13 1974
ANNUAL RUNOFF (AC-FT)	93260		68310		107200	
ANNUAL RUNOFF (CFSM)	0.39		0.28		0.45	
ANNUAL RUNOFF (INCHES)	5.27		3.86		6.05	
10 PERCENT EXCEEDS	157		88		127	
50 PERCENT EXCEEDS	33		26		22	
90 PERCENT EXCEEDS	0.78		5.3		2.0	

08164300 Navidad River near Hallettsville, TX--Continued



08164390 Navidad River at Strane Park near Edna, TX

LOCATION.--Lat 29°03'55", long 96°40'26", Jackson County, Hydrologic Unit 12100102, on right bank at downstream side of bridge on County Road 401, and 6.3 mi north of Edna.

DRAINAGE AREA.--579 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Oct. 1996 to current year.

GAGE.--Water-stage recorder. Datum of gage is 42.53 ft above NGVD of 1929. Satellite telemeter at station.

REMARKS.--Records fair. Much of low flow during the irrigation season (Apr. to Sep) is drainage from rice fields irrigated by water originally diverted from the Colorado River. 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	28	41	52	60	e43	32	e21	36	12	211	12	5.0
2	26	40	410	58	e41	32	e21	34	14	208	11	4.7
3	24	40	2540	57	e40	33	e21	32	13	168	8.6	4.3
4	23	40	1480	56	e39	34	23	31	12	560	41	4.1
5	23	40	445	59	e40	32	24	29	10	166	57	3.9
6	60	38	233	369	e41	31	25	28	9.6	62	29	3.7
7	62	37	147	847	e42	31	25	27	9.2	34	23	5.0
8	60	36	106	220	48	32	717	26	8.9	21	14	1470
9	44	37	433	135	48	32	2200	23	8.8	15	10	2290
10	34	38	538	104	44	31	3320	21	9.5	12	8.5	672
11	28	48	209	89	41	32	2120	20	8.8	11	7.7	218
12	25	40	1130	79	39	30	321	19	7.9	9.7	7.6	99
13	289	37	2000	71	37	28	243	18	7.9	8.5	8.3	61
14	1720	36	729	65	37	29	e204	18	7.1	11	7.8	40
15	2520	36	291	61	37	28	e159	17	6.4	447	15	75
16	1300	88	215	57	36	26	e118	16	6.2	1040	471	115
17	221	190	512	53	36	27	e94	18	6.0	1610	855	96
18	150	104	1080	52	36	26	86	17	5.9	1630	151	75
19	117	67	352	51	35	25	80	16	5.7	395	e60	60
20	98	51	188	e48	35	27	75	14	7.2	170	e30	63
21	85	43	136	e47	36	28	70	14	7.4	91	e20	77
22	75	39	113	e46	36	30	65	13	6.8	60	e16	35
23	68	36	102	e46	34	30	61	13	6.3	43	15	23
24	64	34	92	e46	33	24	57	12	6.8	35	12	18
25	59	34	82	e46	34	22	52	12	8.6	32	10	15
26	54	33	77	e44	32	22	49	11	9.3	29	9.0	14
27	50	34	73	e41	32	20	46	11	8.7	21	8.0	13
28	46	34	70	e41	32	e20	44	11	12	18	7.2	12
29	44	148	67	e41	---	e19	41	10	14	17	6.5	12
30	43	69	66	e42	---	e19	39	11	36	15	5.9	11
31	42	---	63	e43	---	e22	---	11	---	14	5.4	---
TOTAL	7482	1588	14031	3074	1064	854	10421	589	292.0	7164.2	1942.5	5594.7
MEAN	241.4	52.93	452.6	99.16	38.00	27.55	347.4	19.00	9.733	231.1	62.66	186.5
MAX	2520	190	2540	847	48	34	3320	36	36	1630	855	2290
MIN	23	33	52	41	32	19	21	10	5.7	8.5	5.4	3.7
AC-FT	14840	3150	27830	6100	2110	1690	20670	1170	579	14210	3850	11100

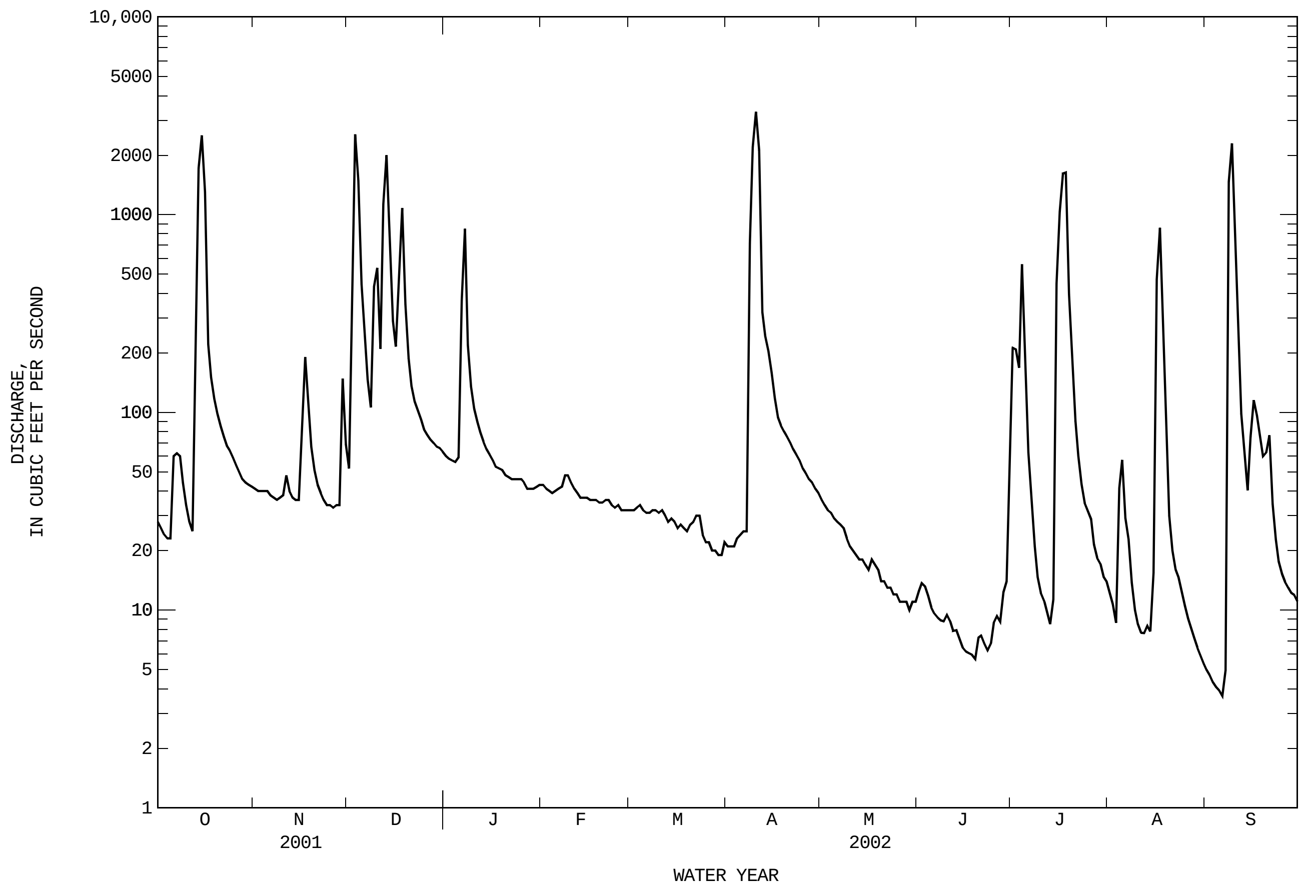
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1997 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	701.8	528.8	236.2	237.6	235.7	443.6	434.8	303.0	403.5	68.96	64.10	361.7
MAX	2636	2334	453	690	904	1540	2030	1038	1632	231	210	1107
(WY)	1999	1999	2002	1997	1998	1997	1997	1997	1997	2002	2001	2001
MIN	3.70	7.73	10.8	16.5	22.7	27.5	33.6	19.0	9.73	2.80	0.69	0.041
(WY)	2001	2000	2000	2000	2000	2002	2001	2002	2002	2000	2000	2000

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1997 - 2002	
ANNUAL TOTAL	102768.40		54096.4			
ANNUAL MEAN	281.6		148.2		334.7	
HIGHEST ANNUAL MEAN					627	1997
LOWEST ANNUAL MEAN					44.8	2000
HIGHEST DAILY MEAN	9540	Sep 1	3320	Apr 10	23300	Oct 19 1998
LOWEST DAILY MEAN	0.00	Aug 20	3.7	Sep 6	0.00	Sep 23 2000
ANNUAL SEVEN-DAY MINIMUM	0.00	Aug 20	4.4	Sep 1	0.00	Aug 20 2001
MAXIMUM PEAK FLOW			3920	Apr 11	c25000	Oct 19 1998
MAXIMUM PEAK STAGE			21.96	Apr 11	a30.08	Oct 19 1998
ANNUAL RUNOFF (AC-FT)	203800		107300		242500	
10 PERCENT EXCEEDS	524		237		498	
50 PERCENT EXCEEDS	40		36		37	
90 PERCENT EXCEEDS	3.4		8.9		6.6	

e Estimated
c From rating curve extended above discharge measurement of 9,150 ft^3/s.
a From floodmark.

08164390 Navidad River at Strane Park near Edna, TX--Continued



08164390 Navidad River at Strane Park near Edna, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--
CHEMICAL DATA: June 1998 to current year.
PESTICIDE DATA: June 1998 to current year.

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

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	DIS-CHARGE INST. (CMS) (30209)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	OXYGEN, DIS-SOLVED (MG/L) (00300)	2,4,5-T DIS-SOLVED (UG/L) (39742)	2,4-D, DIS-SOLVED (UG/L) (39732)	2,4-DB WATER, FLTRD, GF 0.7U REC (UG/L) (38746)	2,6-DI-ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	SILVEX, DIS-SOLVED (UG/L) (39762)	3HYDRXY CARBO-FURAN WAT,FLT GF 0.7U REC (UG/L) (49308)	DNOC WAT,FLT GF 0.7U REC (UG/L) (49299)
APR													
17...	1130	94	2.66	693	8.0	7.3	<.07	<.16	<.25	<.006	<.03	<.11	<.25
17...	1130	--	--	--	--	--	--	--	--	--	--	--	--

Date	ACETO-CHLOR, WATER FLTRD REC (UG/L) (49260)	ACIFL-UORFEN WATER, FLTRD, GF 0.7U REC (UG/L) (49315)	ALA-CHLOR, WATER, DISS, REC, (UG/L) (46342)	ALDI-CARB, WATER, FLTRD, GF 0.7U REC (UG/L) (49312)	ALDI-CARB SULFONE WAT,FLT GF 0.7U REC (UG/L) (49313)	ALDICA-RB SUL-FOXIDE, WAT,FLT GF 0.7U REC (UG/L) (49314)	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)	BENTA-ZON, WATER, FLTRD, GF 0.7U REC (UG/L) (38711)	BRO-MACIL, WATER, DISS, REC (UG/L) (04029)	BRO-MOXYNIL WATER, FLTRD, GF 0.7U REC (UG/L) (49311)
APR													
17...	<.006	<.11	<.004	<.21	<.20	<.27	<.005	.375	<.050	<.010	<.05	<.09	<.07
17...	--	--	--	--	--	--	--	--	--	--	--	--	--

Date	BUTYL-ATE, WATER, DISS, REC (UG/L) (04028)	CAR-BARYL, WATER, FLTRD, GF 0.7U REC (UG/L) (49310)	CAR-BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBO-FURAN, WATER, FLTRD, GF 0.7U REC (UG/L) (49309)	CARBO-FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	TRI-THION, TOTAL IN BOT-TOM MA-TERIAL (UG/KG) (39787)	CHLORO-THALO-NIL, WAT,FLT GF 0.7U REC (UG/L) (49306)	CHLOR-PYRIFOS DIS-SOLVED (UG/L) (38933)	PER-METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	CLOPYR-ALID, WATER, FLTRD, GF 0.7U REC (UG/L) (49305)	CYANA-ZINE, WATER, DISS, REC (UG/L) (04041)	DACTHAL MONO-ACID, WAT,FLT GF 0.7U REC (UG/L) (49304)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)
APR													
17...	<.002	<.080	<.041	<.15	<.020	--	<.25	<.005	<.006	<.42	<.018	<.07	<.003
17...	--	--	--	--	--	<.2	--	--	--	--	--	--	--

Date	DEETHYL ATRA-ZINE, WATER, DISS, REC (UG/L) (04040)	DI-AZINON, TOTAL IN BOT-TOM MA-TERIAL (UG/KG) (39571)	DI-AZINON, DIS-SOLVED (UG/L) (39572)	DICAMBA WATER, FLTRD, GF 0.7U REC (UG/L) (38442)	DICHLO-BENIL, WATER, FLTRD, GF 0.7U REC (UG/L) (49303)	DICHLOR PROP, WATER, FLTRD, GF 0.7U REC (UG/L) (49302)	DI-ELDRIN DIS-SOLVED (UG/L) (39381)	DINOSEB WATER, FLTRD, GF 0.7U REC (UG/L) (49301)	DISUL-FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	DIURON, WATER, FLTRD, GF 0.7U REC (UG/L) (49300)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	ETHAL-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)	ETHION, TOTAL IN BOT-TOM MA-TERIAL (UG/KG) (39399)
APR													
17...	E.013	--	<.005	<.11	<.09	<.12	<.005	<.09	<.02	E.06	<.002	<.009	--
17...	--	<.2	--	--	--	--	--	--	--	--	--	--	<.2

Date	ETHO-PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	FEN-URON, WATER, FLTRD, GF 0.7U REC (UG/L) (49297)	FLUO-METURON WATER, FLTRD, GF 0.7U REC (UG/L) (38811)	FONOFOS WATER DISS REC (UG/L) (04095)	LINDANE DIS-SOLVED (UG/L) (39341)	LINURON WATER, FLTRD, GF 0.7U REC (UG/L) (38478)	LIN-URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA-THION, TOTAL IN BOT-TOM MA-TERIAL (UG/KG) (39531)	MALA-THION, DIS-SOLVED (UG/L) (39532)	MCPA, WATER, FLTRD, GF 0.7U REC (UG/L) (38482)	MCPB, WATER, FLTRD, GF 0.7U REC (UG/L) (38487)	METHIO-CARB, WATER, FLTRD, GF 0.7U REC (UG/L) (38501)	METH-OMYL, WATER, FLTRD, GF 0.7U REC (UG/L) (49296)
APR													
17...	<.005	<.07	<.06	<.003	<.004	<.06	<.035	--	<.027	<.20	<.26	<.07	<.47
17...	--	--	--	--	--	--	--	<.2	--	--	--	--	--

Date	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)	NEB-URON, WATER, FLTRD, GF 0.7U REC (UG/L) (49294)	NORFLUR AZON, WATER, FLTRD, GF 0.7U REC (UG/L) (49293)	ORY-ZALIN, WATER, FLTRD, GF 0.7U REC (UG/L) (49292)	OXAMYL, WATER, FLTRD, GF 0.7U REC (UG/L) (38866)	P,P' DDE DISSOLV (UG/L) (34653)	PARA-THION, TOTAL IN BOT-TOM MA-TERIAL (UG/KG) (39541)	PARA-THION, DIS-SOLVED (UG/L) (39542)	METHYL PARA-THION, TOT. IN BOTTOM MATL. (UG/KG) (39601)	METHYL PARA-THION WAT FLT 0.7 U GF, REC (UG/L) (82667)
APR													
17...	E.013n	<.006	<.002	<.007	<.07	<.04	<.28	<.16	<.003	--	<.010	--	<.006
17...	--	--	--	--	--	--	--	--	--	<.2	--	<.2	--

08164390 Navidad River at Strane Park near Edna, TX--Continued

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

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)	PIC-LORAM, WATER, FLTRD, GF 0.7U REC (UG/L) (49291)	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)	PRO-PHAM, WATER, FLTRD, GF 0.7U REC (UG/L) (49236)	PRO-POXUR, WATER, FLTRD, GF 0.7U REC (UG/L) (38538)	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)
APR													
17...	<.004	<.022	<.011	<.09	<.01	<.010	<.011	<.02	<.22	<.12	<.004	<.005	<.02
17...	--	--	--	--	--	--	--	--	--	--	--	--	--

Date	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-CLOPYR, WATER, FLTRD, GF 0.7U REC (UG/L) (49235)	TRI-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)
APR						
17...	<.034	<.02	<.005	<.002	<.07	<.009
17...	--	--	--	--	--	--

Remark codes used in this report:
< -- Less than
E -- Estimated value
Value qualifier codes used in this report:
n -- Below the NDV

08164450 Sandy Creek near Ganado, TX

LOCATION.--Lat 29°09'36", long 96°32'46", Jackson County, Hydrologic Unit 12100102, on left bank at downstream end of bridge on Farm Road 710, 0.9 mi upstream from Goldenrod Creek, and 8.0 mi north of Ganado.

DRAINAGE AREA.--289 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Oct. 1977 to current year. Prior to Oct. 1997, published as "near Louise".

GAGE.--Water-stage recorder. Datum of gage is 59.72 ft above NGVD of 1929. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records fair. Much of the low flow during the irrigation season (Apr. to Sept.) is drainage from rice fields irrigated by water originally diverted from the Colorado River. No known regulation or diversions. No flow at times.

DISCHARGE FROM DCP, in CFS, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	65	4.5	346	4.8	12	0.00	2.3	0.00	3.2	395	8.5	33
2	79	34	969	5.3	12	0.00	1.3	0.00	0.68	856	7.7	37
3	91	102	2870	6.3	11	0.00	1.3	0.00	0.06	1340	5.7	42
4	92	35	2090	5.1	7.6	0.00	0.28	0.00	0.00	1290	3.5	49
5	94	19	1280	6.9	9.3	0.00	0.14	0.00	0.00	749	5.5	46
6	122	11	620	90	15	0.00	0.17	0.00	0.00	269	3.2	58
7	178	7.7	284	128	11	0.00	0.15	0.00	0.00	131	3.2	1250
8	157	7.2	173	49	9.0	0.00	1050	0.00	0.00	66	2.4	2170
9	127	8.8	450	27	6.2	0.00	3120	0.00	0.00	35	2.2	1250
10	112	57	458	20	6.7	0.00	1790	0.00	0.09	85	2.4	824
11	108	27	208	15	5.7	0.00	1020	0.00	0.07	112	10	441
12	111	16	1090	12	4.7	0.00	275	0.00	0.00	124	19	205
13	392	13	1390	11	2.2	0.00	113	0.00	0.00	139	17	95
14	1450	11	848	9.0	3.6	0.59	39	0.00	0.11	320	31	45
15	979	7.8	400	7.1	6.6	1.7	15	0.00	0.08	1850	48	326
16	635	196	203	5.0	6.0	0.26	4.9	0.00	0.04	2270	177	661
17	315	620	193	3.3	2.6	0.31	1.5	0.00	4.4	3040	443	348
18	183	491	274	2.9	1.2	0.00	0.36	0.23	23	1860	328	231
19	119	216	138	2.7	1.8	0.00	0.25	3.1	19	1030	114	159
20	92	109	77	2.8	0.78	0.02	0.40	2.1	11	492	54	171
21	63	58	50	3.0	0.11	0.00	0.0	0.00	7.5	239	34	339
22	47	34	34	5.3	0.01	0.00	2.7	0.00	3.9	132	28	260
23	28	24	15	36	1.0	0.00	1.4	0.00	1.5	71	39	151
24	21	16	8.9	27	2.5	0.02	0.47	0.00	1.5	43	45	91
25	18	11	8.9	18	0.83	0.11	0.0	0.00	2.5	29	26	63
26	8.6	7.8	12	12	0.11	0.29	0.00	0.00	5.8	22	21	51
27	6.1	230	9.2	7.7	0.00	4.0	0.00	0.00	13	23	21	39
28	4.2	602	7.5	13	0.00	1.4	0.00	0.00	38	25	25	50
29	3.2	830	6.1	10	---	0.20	0.00	0.00	142	23	22	42
30	4.4	785	5.1	6.8	---	0.39	0.00	1.5	323	13	24	40
31	6.2	---	4.5	7.6	---	6.3	---	6.3	---	8.1	30	---
TOTAL	5710.7	4590.8	14522.2	559.6	139.54	15.59	7439.62	13.23	600.43	17081.1	1600.3	9567
MEAN	184.2	153.0	468.5	18.05	4.984	0.503	248.0	0.427	20.01	551.0	51.62	318.9
MAX	1450	830	2870	128	15	6.3	3120	6.3	323	3040	443	2170
MIN	3.2	4.5	4.5	2.7	0.00	0.00	0.00	0.00	0.00	8.1	2.2	33
AC-FT	11330	9110	28800	1110	277	31	14760	26	1190	33880	3170	18980

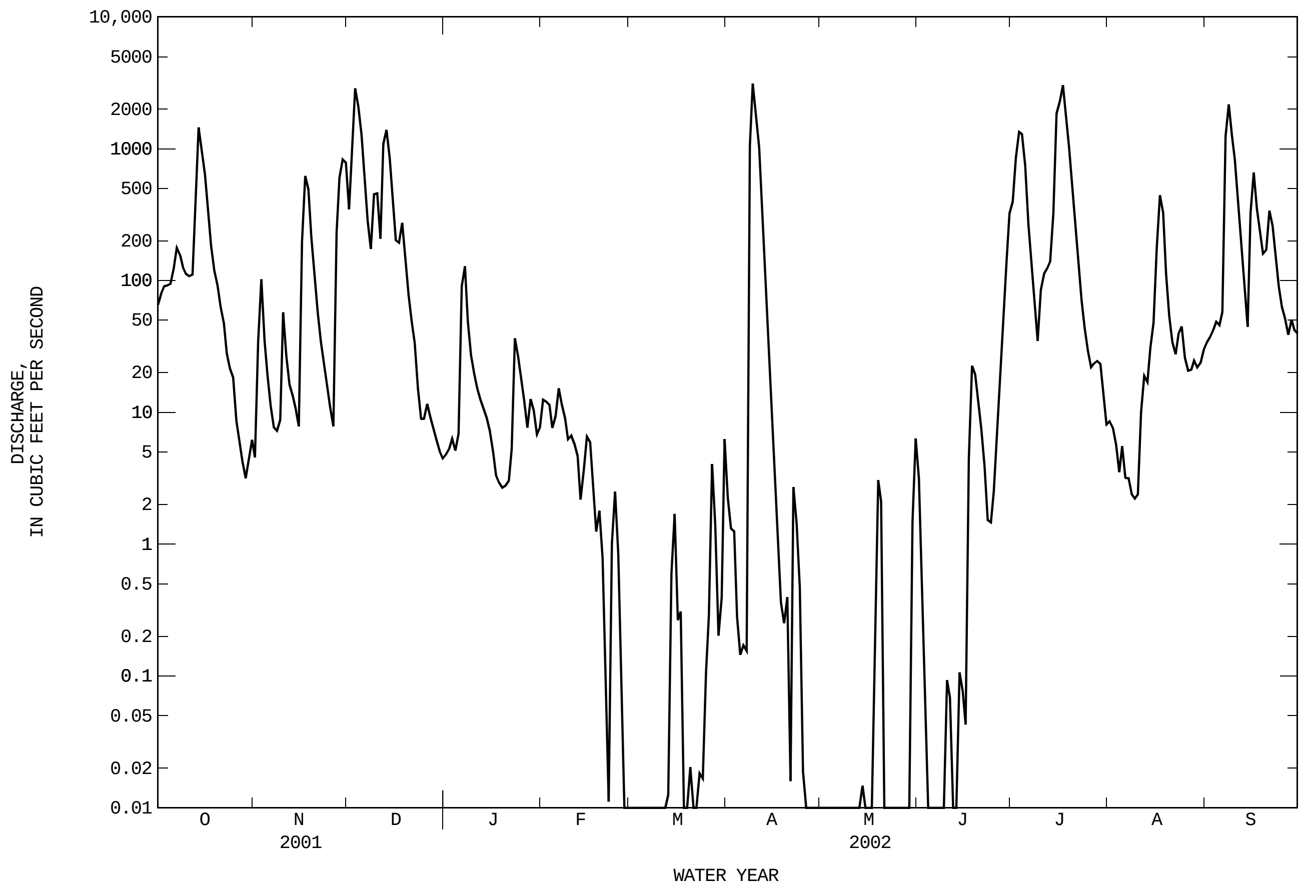
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1978 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	348.2	206.4	147.8	255.6	250.6	183.4	212.1	291.6	337.8	138.7	42.10	272.2
MAX	2917	1513	746	956	2331	1406	1316	1150	1866	551	202	1364
(WY)	1999	1999	1992	1992	1992	1997	1997	1993	1993	2002	2001	1978
MIN	18.6	0.000	0.000	0.022	0.28	0.080	3.14	0.43	0.030	7.25	3.21	11.8
(WY)	2000	2000	2000	2000	1988	1996	1980	2002	1990	1997	1991	1988

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1978 - 2002	
ANNUAL TOTAL	99263.55		61840.11			
ANNUAL MEAN	272.0		169.4		223.3	
HIGHEST ANNUAL MEAN					606	1992
LOWEST ANNUAL MEAN					51.2	1990
HIGHEST DAILY MEAN	9350	Sep 1	3120	Apr 9	41100	Oct 19 1998
LOWEST DAILY MEAN	0.00	Aug 23	0.00	Feb 27	0.00	Apr 5 1978
ANNUAL SEVEN-DAY MINIMUM	0.04	May 19	0.00	Feb 27	0.00	Mar 10 1980
MAXIMUM PEAK FLOW			3600	Apr 9	c63400	Oct 19 1998
MAXIMUM PEAK STAGE			15.30	Apr 9	a32.72	Oct 19 1998
ANNUAL RUNOFF (AC-FT)	196900		122700		161800	
10 PERCENT EXCEEDS	738		453		458	
50 PERCENT EXCEEDS	43		11		20	
90 PERCENT EXCEEDS	4.5		0.00		0.05	

c From rating curve extended above indirect measurement of 60,000 ft^3/s.
a From floodmark.

08164450 Sandy Creek near Ganado, TX--Continued



08164450 Sandy Creek near Ganado, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--
CHEMICAL DATA: Oct. 1977 to current year.
BIOCHEMICAL DATA: Oct. 1977 to Nov. 1992.
PESTICIDE DATA: Nov. 1977 to July 1981, Apr. 1996 to current year.
SEDIMENT DATA: Sept. 1978 to Apr. 1979.

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

Date	Time	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	DIS- CHARGE INST. (CMS) (30209)	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)	2,4,5-T DIS- SOLVED (UG/L) (39742)	2,4-D, DIS- SOLVED (UG/L) (39732)	2,4-DB WATER, FLTRD, GF 0.7U REC (UG/L) (38746)	2,6-DI- ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	SILVEX, DIS- SOLVED (UG/L) (39762)
APR													
17...	0940	2.4	.068	178	6.9	24.0	6.9	81	<.07	<.16	<.25	<.006	<.03
17...	0940	--	--	--	--	--	--	--	--	--	--	--	--

Date	3HYDRXY CARBO- FURAN WAT,FLT GF 0.7U REC (UG/L) (49308)	DNOC WAT,FLT GF 0.7U REC (UG/L) (49299)	ACETO- CHLOR, WATER FLTRD REC (UG/L) (49260)	ACIFL- UORFEN WATER, FLTRD, GF 0.7U REC (UG/L) (49315)	ALA- CHLOR, WATER, DISS, REC, (UG/L) (46342)	ALDI- CARB, WATER, FLTRD, GF 0.7U REC (UG/L) (49312)	ALDI- CARB SULFONE WAT,FLT GF 0.7U REC (UG/L) (49313)	ALDICA- RB SUL- FOXIDE, WAT,FLT GF 0.7U REC (UG/L) (49314)	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)	BENTA- ZON, WATER, FLTRD, GF 0.7U REC (UG/L) (38711)
APR													
17...	<.11	<.25	<.006	<.05	.041	<.21	<.20	<.27	<.005	.419	<.050	<.010	<.05
17...	--	--	--	--	--	--	--	--	--	--	--	--	--

Date	BRO- MACIL, WATER, DISS, REC (UG/L) (04029)	BRO- MOXYNIL WATER, FLTRD, GF 0.7U REC (UG/L) (49311)	BUTYL- ATE, WATER, DISS, REC (UG/L) (04028)	CAR- BARYL, WATER, FLTRD, GF 0.7U REC (UG/L) (49310)	CAR- BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBO- FURAN, WATER, FLTRD, GF 0.7U REC (UG/L) (49309)	CARBO- FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	TRI- THION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39787)	CHLORO- THALO- NIL, WAT,FLT GF 0.7U REC (UG/L) (49306)	CHLOR- PYRIFOS DIS- SOLVED (UG/L) (38933)	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	CLOPYR- ALID, WATER, FLTRD, GF 0.7U REC (UG/L) (49305)	CYANA- ZINE, WATER, DISS, REC (UG/L) (04041)
APR													
17...	<.71	<.07	<.002	<.080	<.041	<.15	<.020	--	<.25	<.005	<.006	<.42	<.018
17...	--	--	--	--	--	--	--	<.2	--	--	--	--	--

Date	DACTHAL MONO- ACID, WAT,FLT GF 0.7U REC (UG/L) (49304)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	DEETHYL ATRA- ZINE, WATER, DISS, REC (UG/L) (04040)	DI- AZINON, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39571)	DI- AZINON, DIS- SOLVED (UG/L) (39572)	DICAMBA WATER, FLTRD, GF 0.7U REC (UG/L) (38442)	DICHLO- BENIL, WATER, FLTRD, GF 0.7U REC (UG/L) (49303)	DICHLOR PROP, WATER, FLTRD, GF 0.7U REC (UG/L) (49302)	DI- ELDRIN DIS- SOLVED (UG/L) (39381)	DINOSEB WATER, FLTRD, GF 0.7U REC (UG/L) (49301)	DISUL- FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	DIURON, WATER, FLTRD, GF 0.7U REC (UG/L) (49300)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)
APR													
17...	<.07	<.003	E.030	--	<.005	<.11	<.09	<.12	<.005	<.09	<.02	E.02	<.002
17...	--	--	--	<.2	--	--	--	--	--	--	--	--	--

Date	ETHAL- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)	ETHION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39399)	ETHO- PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	FEN- URON, WATER, FLTRD, GF 0.7U REC (UG/L) (49297)	FLUO- METURON WATER, FLTRD, GF 0.7U REC (UG/L) (38811)	FONOFOS WATER DISS REC (UG/L) (04095)	LINDANE DIS- SOLVED (UG/L) (39341)	LINURON WATER, FLTRD, GF 0.7U REC (UG/L) (38478)	LIN- URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA- THION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39531)	MALA- THION, DIS- SOLVED (UG/L) (39532)	MCPA, WATER, FLTRD, GF 0.7U REC (UG/L) (38482)	MCPB, WATER, FLTRD, GF 0.7U REC (UG/L) (38487)
APR													
17...	<.009	--	<.005	<.07	<.25	<.003	<.004	<.06	<.035	--	<.027	<.20	<.26
17...	--	<.2	--	--	--	--	--	--	--	<.2	--	--	--

Date	METHIO- CARB, WATER, FLTRD, GF 0.7U REC (UG/L) (38501)	METH- OMYL, WATER, FLTRD, GF 0.7U REC (UG/L) (49296)	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)	NEB- URON, WATER, FLTRD, GF 0.7U REC (UG/L) (49294)	NORFLUR AZON, WATER, FLTRD, GF 0.7U REC (UG/L) (49293)	ORY- ZALIN, WATER, FLTRD, GF 0.7U REC (UG/L) (49292)	OXAMYL, WATER, FLTRD, GF 0.7U REC (UG/L) (38866)	P,P′ DDE DISSOLV (UG/L) (34653)	PARA- THION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39541)	PARA- THION, DIS- SOLVED (UG/L) (39542)
APR													
17...	<.07	<.47	.207	<.006	.080	<.007	<.07	<.04	<.28	<.16	<.003	--	<.010
17...	--	--	--	--	--	--	--	--	--	--	--	<.2	--

08164450 Sandy Creek near Ganado, TX--Continued

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

Date	METHYL PARA- THION, TOT. IN BOTTOM MATL. (UG/KG) (39601)	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)	PIC- LORAM, WATER, FLTRD, GF 0.7U REC (UG/L) (49291)	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)	PRO- PHAM, WATER, FLTRD, GF 0.7U REC (UG/L) (49236)	PRO- POXUR, WATER, FLTRD, GF 0.7U REC (UG/L) (38538)	PRON- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)
APR													
17...	--	<.006	<.004	<.022	<.011	<.09	<.01	<.010	E.009n	<.02	<.22	<.12	<.004
17...	<.2	--	--	--	--	--	--	--	--	--	--	--	--

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- CLOPYR, WATER, FLTRD, GF 0.7U REC (UG/L) (49235)	TRI- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)
APR								
17...	<.005	<.02	<.034	<.02	.103	<.002	<.07	<.009
17...	--	--	--	--	--	--	--	--

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

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

08164503 West Mustang Creek near Ganado, TX

LOCATION.--Lat 29°04′17", long 96°28′01", Jackson County, Hydrologic Unit 12100102, on right bank at upstream end of southbound U.S. Highway 59 bridge, 2.1 mi upstream from Middle Mustang Creek, and 3.6 mi east of Ganado.

DRAINAGE AREA.--178 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Oct. 1977 to current year.

GAGE.--Water-stage recorder. Datum of gage is 40.12 ft above NGVD of 1929. Satellite telemeter at station.

REMARKS.--Records fair. Much of low flow during the irrigation season (Apr. to Sep) is drainage from rice fields irrigated by water originally diverted from the Colorado River. 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	18	9.4	193	4.9	1.7	0.49	40	31	56	324	7.9	11
2	15	7.8	448	5.4	1.3	0.53	28	22	30	533	8.1	12
3	20	44	2540	e6.1	1.2	0.40	16	15	18	910	4.5	10
4	27	60	2510	e3.0	1.1	0.36	7.5	13	11	568	3.6	8.2
5	27	25	711	4.2	1.0	0.35	3.4	13	9.4	285	4.9	7.1
6	64	12	271	6.8	1.1	0.35	7.6	9.6	10	136	4.8	7.4
7	93	7.1	139	25	4.3	0.42	5.2	11	8.1	79	8.4	1020
8	71	4.4	96	25	4.4	0.49	425	9.4	9.8	56	6.5	2110
9	52	18	157	14	3.5	0.47	2390	9.9	11	45	6.1	1910
10	40	9.6	136	9.7	3.1	0.35	1830	8.2	18	39	5.6	1050
11	54	5.1	82	7.2	2.2	0.33	495	5.4	18	57	6.7	463
12	83	2.9	115	5.7	1.6	0.36	150	3.2	20	80	6.9	229
13	440	1.9	259	4.7	1.2	0.32	63	1.9	15	83	5.9	118
14	1310	1.3	222	3.7	0.98	0.39	35	2.8	16	210	14	69
15	551	0.94	110	3.0	0.78	0.37	22	4.2	13	2180	28	875
16	218	205	63	2.6	0.64	0.34	15	5.1	12	4910	201	2920
17	126	416	44	2.3	0.73	0.33	11	25	33	4530	362	2170
18	75	151	52	2.5	1.6	0.35	9.7	394	57	3050	197	690
19	44	63	53	2.6	1.5	5.8	17	155	45	1590	125	256
20	32	39	33	2.0	1.0	4.7	19	72	37	639	81	151
21	30	22	22	1.8	0.75	6.2	23	32	27	290	53	173
22	30	13	16	1.7	0.69	8.4	17	17	21	141	61	96
23	29	9.6	13	1.8	1.1	8.3	26	11	19	94	44	62
24	18	7.3	13	2.6	2.1	8.2	22	7.8	20	92	59	41
25	13	4.8	16	13	2.2	10	16	7.8	43	66	43	27
26	11	3.5	12	17	1.1	26	15	10	71	49	25	20
27	11	467	7.7	9.7	0.58	37	28	9.4	57	35	15	16
28	7.5	1590	6.4	5.6	0.44	21	20	14	73	30	11	12
29	6.2	682	5.8	3.5	---	20	18	12	104	22	9.4	11
30	8.1	340	5.4	2.3	---	15	31	47	443	11	7.6	9.4
31	9.9	---	5.3	2.0	---	13	---	83	---	7.1	6.4	---
TOTAL	3533.7	4222.64	8356.6	201.4	43.89	190.60	5805.4	1061.7	1325.3	21141.1	1422.3	14554.1
MEAN	114.0	140.8	269.6	6.497	1.567	6.148	193.5	34.25	44.18	682.0	45.88	485.1
MAX	1310	1590	2540	25	4.4	37	2390	394	443	4910	362	2920
MIN	6.2	0.94	5.3	1.7	0.44	0.32	3.4	1.9	8.1	7.1	3.6	7.1
AC-FT	7010	8380	16580	399	87	378	11520	2110	2630	41930	2820	28870
CFSM	0.64	0.79	1.51	0.04	0.01	0.03	1.09	0.19	0.25	3.83	0.26	2.73
IN.	0.74	0.88	1.75	0.04	0.01	0.04	1.21	0.22	0.28	4.42	0.30	3.04

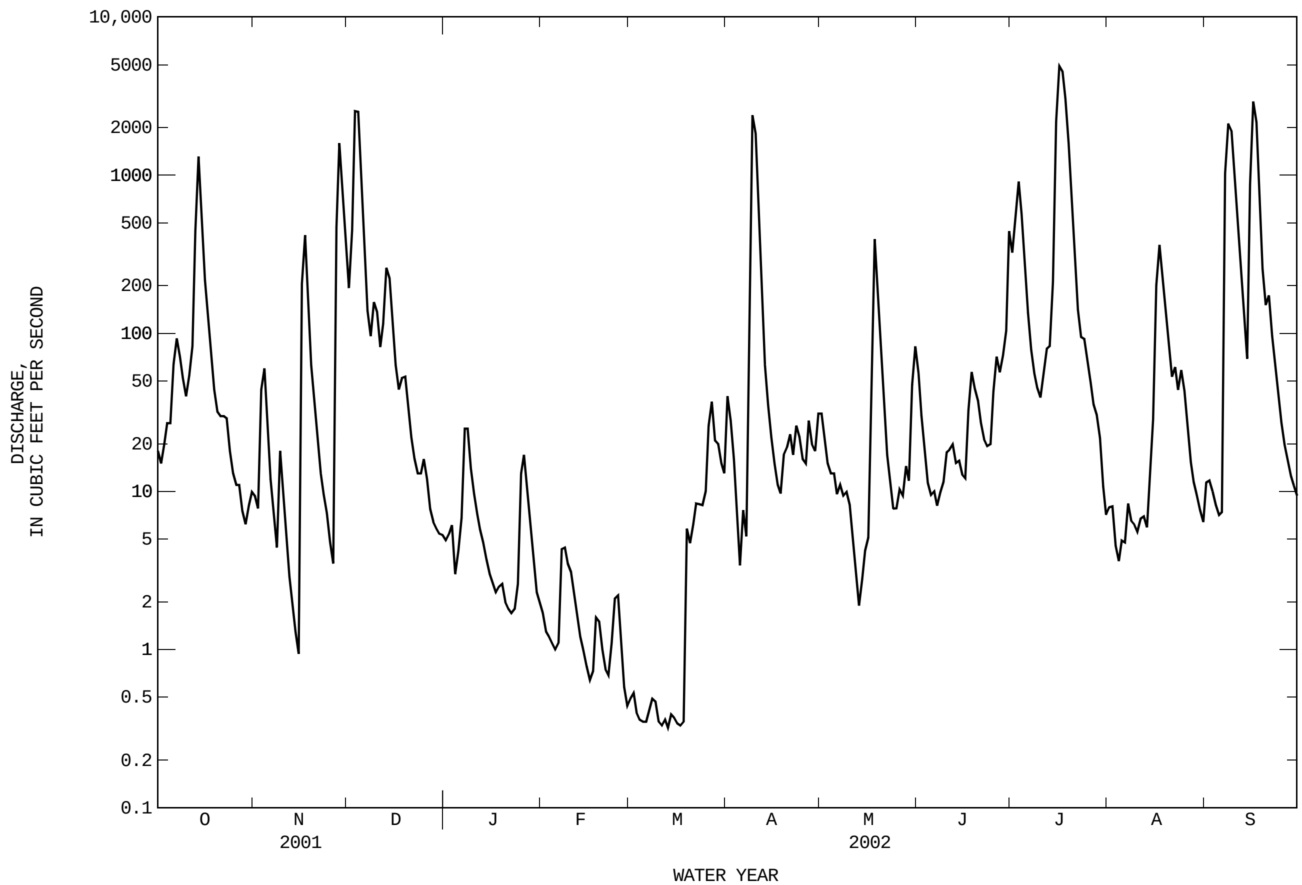
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1978 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	246.5	158.1	114.7	174.5	145.6	114.0	162.8	201.4	194.8	124.7	57.13	260.1
MAX	1746	813	587	881	1243	988	1107	702	958	682	179	1173
(WY)	1995	1999	1992	1980	1992	1997	1997	1993	1993	2002	2001	2001
MIN	14.2	1.32	0.17	0.72	0.87	0.81	12.3	11.2	5.56	38.1	14.0	5.33
(WY)	1988	2000	1991	1982	1986	1986	1983	1978	1990	1986	2000	1988

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1978 - 2002	
ANNUAL TOTAL	76099.67		61858.73			
ANNUAL MEAN	208.5		169.5		162.7	
HIGHEST ANNUAL MEAN					325	1997
LOWEST ANNUAL MEAN					45.2	1990
HIGHEST DAILY MEAN	10100	Sep 1	4910	Jul 16	18700	Oct 19 1994
LOWEST DAILY MEAN	0.73	Feb 25	0.32	Mar 13	0.00	Dec 19 1990
ANNUAL SEVEN-DAY MINIMUM	2.2	Feb 7	0.35	Mar 11	0.01	Dec 19 1990
MAXIMUM PEAK FLOW			5550	Jul 16	c20000	Oct 19 1994
MAXIMUM PEAK STAGE			18.31	Jul 16	a28.39	Oct 19 1994
ANNUAL RUNOFF (AC-FT)	150900		122700		117800	
ANNUAL RUNOFF (CFSM)	1.17		0.95		0.91	
ANNUAL RUNOFF (INCHES)	15.90		12.93		12.42	
10 PERCENT EXCEEDS	297		349		300	
50 PERCENT EXCEEDS	27		15		22	
90 PERCENT EXCEEDS	5.3		1.3		1.5	

e Estimated
c From rating curve extended above discharge measurement of 19,000 ft^3/s.
a From floodmark.

08164503 West Mustang Creek near Ganado, TX--Continued



08164503 West Mustang Creek near Ganado, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--
CHEMICAL DATA: Oct. 1977 to current year.
BIOCHEMICAL DATA: Oct. 1977 to Nov. 1992.
PESTICIDE DATA: Nov. 1977 to July 1981, Apr. 1996 to current year.
SEDIMENT DATA: Sept. 1978 to Apr. 1979.

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)	OXYGEN, DIS-SOLVED (MG/L) (00300)	2,4,5-T DIS-SOLVED (UG/L) (39742)	2,4-D, DIS-SOLVED (UG/L) (39732)	2,4-DB WATER, FLTRD, GF 0.7U REC (UG/L) (38746)	2,6-DI-ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	SILVEX, DIS-SOLVED (UG/L) (39762)	3HYDRXY CARBO-FURAN WAT,FLT GF 0.7U REC (UG/L) (49308)	DNOC WAT,FLT GF 0.7U REC (UG/L) (49299)	ACETO-CHLOR, WATER FLTRD REC (UG/L) (49260)
APR													
17...	0840	11	269	6.9	5.1	<.07	<.16	<.25	E.004n	<.03	<.40	<.25	.185
17...	0840	--	--	--	--	--	--	--	--	--	--	--	--

Date	ACIFL-UORFEN WATER, FLTRD, GF 0.7U REC (UG/L) (49315)	ALA-CHLOR, WATER, DISS, REC, (UG/L) (46342)	ALDI-CARB, WATER, FLTRD, GF 0.7U REC (UG/L) (49312)	ALDI-CARB SULFONE WAT,FLT GF 0.7U REC (UG/L) (49313)	ALDICA-RB SUL-FOXIDE, WAT,FLT GF 0.7U REC (UG/L) (49314)	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)	BENTA-ZON, WATER, FLTRD, GF 0.7U REC (UG/L) (38711)	BRO-MACIL, WATER, DISS, REC (UG/L) (04029)	BRO-MOXYNIL WATER, FLTRD, GF 0.7U REC (UG/L) (49311)	BUTYL-ATE, WATER, DISS, REC (UG/L) (04028)
APR													
17...	<.05	.598	<.21	<.20	<.27	<.005	1.67	<.050	<.010	<.05	<.31	<.07	<.002
17...	--	--	--	--	--	--	--	--	--	--	--	--	--

Date	CAR-BARYL, WATER, FLTRD, GF 0.7U REC (UG/L) (49310)	CAR-BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBO-FURAN, WATER, FLTRD, GF 0.7U REC (UG/L) (49309)	CARBO-FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	TRI-THION, TOTAL IN BOT-TOM MA-TERIAL (UG/KG) (39787)	CHLORO-THALO-NIL, WAT,FLT GF 0.7U REC (UG/L) (49306)	CHLOR-PYRIFOS DIS-SOLVED (UG/L) (38933)	PER-METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	CLOPYR-ALID, WATER, FLTRD, GF 0.7U REC (UG/L) (49305)	CYANA-ZINE, WATER, DISS, REC (UG/L) (04041)	DACTHAL MONO-ACID, WAT,FLT GF 0.7U REC (UG/L) (49304)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	DEETHYL ATRA-ZINE, WATER, DISS, REC (UG/L) (04040)
APR													
17...	<.080	<.041	<.15	<.020	--	<.25	<.005	<.006	<.42	<.018	<.07	<.003	E.055
17...	--	--	--	--	<.2	--	--	--	--	--	--	--	--

Date	DI-AZINON, TOTAL IN BOT-TOM MA-TERIAL (UG/KG) (39571)	DI-AZINON, DIS-SOLVED (UG/L) (39572)	DICAMBA WATER, FLTRD, GF 0.7U REC (UG/L) (38442)	DICHLO-BENIL, WATER, FLTRD, GF 0.7U REC (UG/L) (49303)	DICHLOR PROP, WATER, FLTRD, GF 0.7U REC (UG/L) (49302)	DI-ELDRIN DIS-SOLVED (UG/L) (39381)	DINOSEB WATER, FLTRD, GF 0.7U REC (UG/L) (49301)	DISUL-FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	DIURON, WATER, FLTRD, GF 0.7U REC (UG/L) (49300)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	ETHAL-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)	ETHION, TOTAL IN BOT-TOM MA-TERIAL (UG/KG) (39399)	ETHO-PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)
APR													
17...	--	<.005	<.11	<.09	<.12	<.005	<.09	<.02	E.09	<.002	<.009	--	<.005
17...	<.2	--	--	--	--	--	--	--	--	--	--	<.2	--

Date	FEN-URON, WATER, FLTRD, GF 0.7U REC (UG/L) (49297)	FLUO-METURON WATER, FLTRD, GF 0.7U REC (UG/L) (38811)	FONOFOS WATER DISS REC (UG/L) (04095)	LINDANE DIS-SOLVED (UG/L) (39341)	LINURON WATER, FLTRD, GF 0.7U REC (UG/L) (38478)	LIN-URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA-THION, TOTAL IN BOT-TOM MA-TERIAL (UG/KG) (39531)	MALA-THION, DIS-SOLVED (UG/L) (39532)	MCPA, WATER, FLTRD, GF 0.7U REC (UG/L) (38482)	MCPB, WATER, FLTRD, GF 0.7U REC (UG/L) (38487)	METHIO-CARB, WATER, FLTRD, GF 0.7U REC (UG/L) (38501)	METH-OMYL, WATER, FLTRD, GF 0.7U REC (UG/L) (49296)	METO-LACHLOR WATER DISSOLV (UG/L) (39415)
APR													
17...	<.13	.11	<.003	<.004	<.06	<.035	--	<.027	<.20	<.26	<.07	<.47	.710
17...	--	--	--	--	--	--	<.2	--	--	--	--	--	--

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)	NEB-URON, WATER, FLTRD, GF 0.7U REC (UG/L) (49294)	NORFLUR AZON, WATER, FLTRD, GF 0.7U REC (UG/L) (49293)	ORY-ZALIN, WATER, FLTRD, GF 0.7U REC (UG/L) (49292)	OXAMYL, WATER, FLTRD, GF 0.7U REC (UG/L) (38866)	P,P' DDE DISSOLV (UG/L) (34653)	PARA-THION, TOTAL IN BOT-TOM MA-TERIAL (UG/KG) (39541)	PARA-THION, DIS-SOLVED (UG/L) (39542)	METHYL PARA-THION, TOT. IN BOTTOM MATL. (UG/KG) (39601)	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)
APR													
17...	<.010	.024	<.007	<.07	<.04	<.52	<.16	<.003	--	<.010	--	<.006	<.004
17...	--	--	--	--	--	--	--	--	<.2	--	<.2	--	--

08164503 West Mustang Creek near Ganado, TX--Continued

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

Date	PENDI- METH- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PIC- LORAM, WATER, FLTRD, GF 0.7U REC (UG/L) (49291)	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)	PRO- PHAM, WATER, FLTRD, GF 0.7U REC (UG/L) (49236)	PRO- POXUR, WATER, FLTRD, GF 0.7U REC (UG/L) (38538)	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)
APR													
17...	<.022	<.011	<.09	<.01	<.010	<.011	<.02	<.22	<.12	<.004	.035	E.01n	<.034
17...	--	--	--	--	--	--	--	--	--	--	--	--	--

Date	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- CLOPYR, WATER, FLTRD, GF 0.7U REC (UG/L) (49235)	TRI- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)
APR					
17...	<.02	.088	<.002	<.07	<.009
17...	--	--	--	--	--

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

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

08164504 East Mustang Creek near Louise, TX

LOCATION.--Lat 29°04'14", long 96°25'01", Wharton County, Hydrologic Unit 12100102, on right bank, 50 ft downstream from right end of bridge on Farm Road 647, and 2.7 mi south of Louise.

DRAINAGE AREA.--90.8 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Oct. 1996 to current year. Prior to Oct. 2000, published as "at FM 647 near Ganado".

GAGE.--Water-stage recorder. Datum of gage is 43.02 ft above NGVD of 1929. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records fair. Much of the low flow during the irrigation season (Apr. to Sep) is drainage from rice fields irrigated by water originally diverted from the Colorado River. No known regulation or diversions. No flow at times.

DISCHARGE FROM DCP, in CFS, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

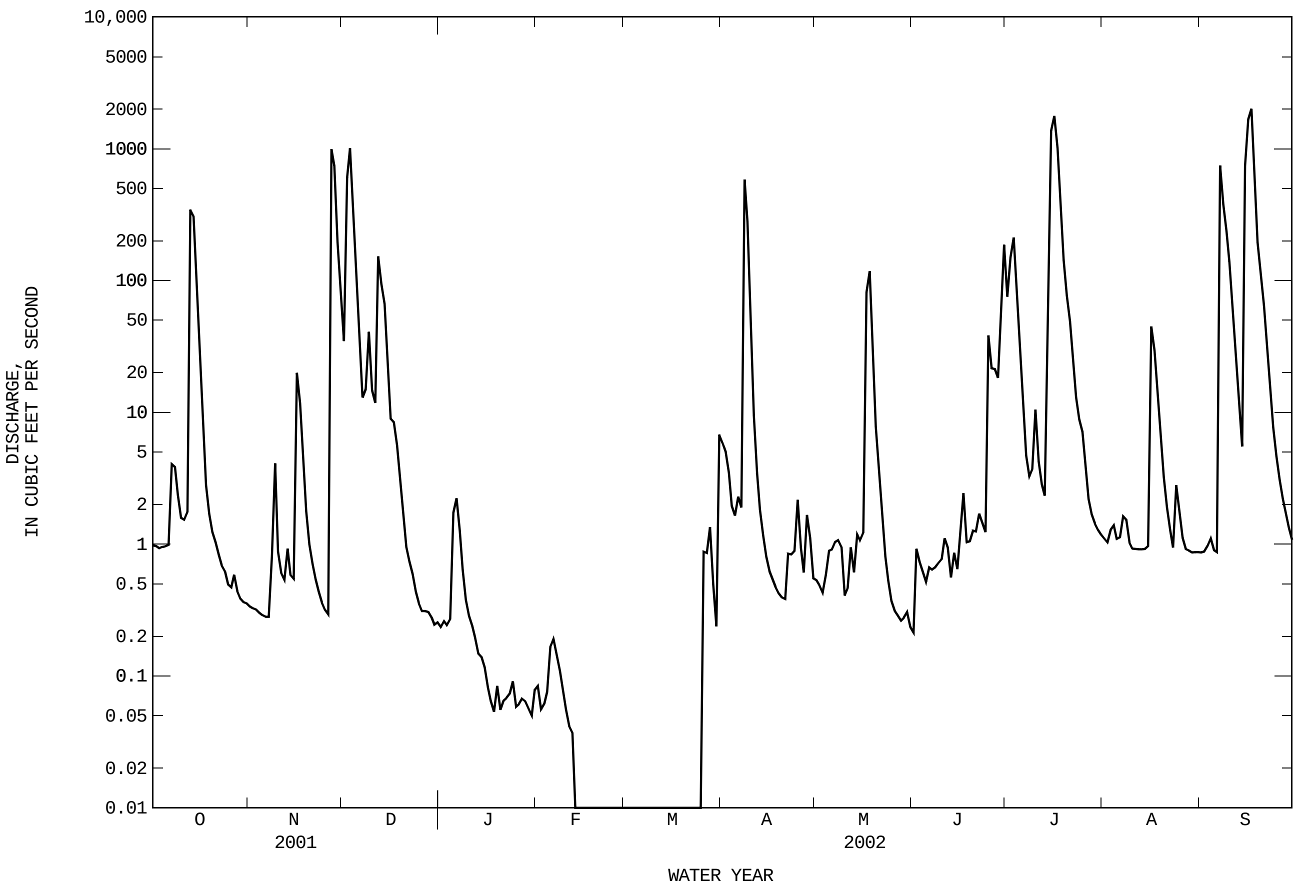
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.98	0.34	35	0.23	0.08	0.00	5.9	0.53	0.21	75	1.1	0.87
2	0.97	0.33	607	0.26	0.06	0.00	5.0	0.49	0.92	150	1.0	0.88
3	0.93	0.32	1010	0.24	0.06	0.00	3.5	0.43	0.73	213	1.3	0.97
4	0.95	0.30	268	0.27	0.08	0.00	1.9	0.58	0.62	68	1.4	1.1
5	0.96	0.29	80	1.7	0.17	0.00	1.6	0.89	0.52	23	1.1	0.90
6	0.98	0.28	30	2.2	0.19	0.00	2.3	0.91	0.67	9.7	1.1	0.87
7	4.1	0.28	13	1.3	0.15	0.00	1.9	1.0	0.64	4.7	1.6	746
8	3.9	0.81	15	0.64	0.11	0.00	583	1.1	0.67	3.2	1.5	379
9	2.4	4.1	41	0.38	0.08	0.00	281	0.95	0.72	3.7	1.0	237
10	1.6	0.88	15	0.28	0.06	0.00	41	0.41	0.77	10	0.92	139
11	1.5	0.61	12	0.24	0.04	0.00	9.4	0.46	1.1	4.3	0.92	55
12	1.8	0.54	153	0.19	0.04	0.00	3.5	0.94	0.94	2.8	0.92	24
13	344	0.93	94	0.15	0.02	0.00	1.8	0.61	0.56	2.3	0.92	11
14	308	0.58	67	0.14	0.00	0.00	1.2	1.2	0.86	35	0.92	5.5
15	63	0.54	21	0.12	0.00	0.00	0.80	1.1	0.65	1380	0.97	742
16	18	20	8.9	0.08	0.00	0.00	0.62	1.2	1.3	1780	45	1670
17	6.1	12	8.4	0.06	0.00	0.00	0.54	81	2.4	1020	30	2010
18	2.8	4.8	5.6	0.05	0.00	0.00	0.47	118	1.0	349	13	621
19	1.7	1.8	3.2	0.08	0.00	0.00	0.42	31	1.1	144	6.5	196
20	1.2	0.99	1.6	0.06	0.0	0.00	0.39	7.8	1.3	77	3.2	116
21	1.0	0.71	0.95	0.06	0.0	0.00	0.38	3.0	1.3	49	1.9	65
22	0.83	0.54	0.73	0.07	0.00	0.00	0.85	1.5	1.7	25	1.3	28
23	0.69	0.44	0.59	0.07	0.00	0.00	0.84	0.80	1.4	13	0.94	15
24	0.62	0.36	0.43	0.09	0.00	0.00	0.89	0.53	1.2	8.8	2.8	7.7
25	0.49	0.32	0.36	0.06	0.00	0.00	2.2	0.37	38	7.1	1.8	4.6
26	0.47	0.29	0.31	0.06	0.00	0.87	0.94	0.31	22	3.7	1.1	3.1
27	0.59	993	0.31	0.07	0.00	0.86	0.61	0.29	21	2.2	0.92	2.2
28	0.44	742	0.31	0.06	0.00	1.3	1.7	0.26	18	1.7	0.90	1.7
29	0.38	194	0.28	0.06	---	0.50	1.1	0.28	69	1.4	0.86	1.3
30	0.36	81	0.24	0.05	---	0.24	0.55	0.30	186	1.3	0.87	1.1
31	0.35	---	0.25	0.08	---	6.8	---	0.23	---	1.2	0.87	---
TOTAL	772.09	2063.38	2493.46	9.40	1.14	10.57	956.30	258.47	377.28	5469.1	128.63	7086.79
MEAN	24.91	68.78	80.43	0.303	0.041	0.341	31.88	8.338	12.58	176.4	4.149	236.2
MAX	344	993	1010	2.2	0.19	6.8	583	118	186	1780	45	2010
MIN	0.35	0.28	0.24	0.05	0.00	0.00	0.38	0.23	0.21	1.2	0.86	0.87
AC-FT	1530	4090	4950	19	2.3	21	1900	513	748	10850	255	14060

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1997 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	91.54	93.76	33.73	41.36	21.21	70.07	71.22	44.66	14.06	32.38	27.78	164.1
MAX	371	235	80.4	161	63.3	310	374	131	39.7	176	83.5	368
(WY)	1998	1999	2002	1997	1997	1997	1997	1997	2000	2002	1998	1998
MIN	0.21	0.063	0.073	0.11	0.041	0.34	0.87	2.32	0.43	0.62	0.26	0.000
(WY)	2000	2000	2000	2000	2002	2002	2001	1998	2001	2001	2000	2000

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1997 - 2002	
ANNUAL TOTAL	18898.59		19626.61			
ANNUAL MEAN	51.78		53.77		58.81	
HIGHEST ANNUAL MEAN					104	1997
LOWEST ANNUAL MEAN					13.0	2000
HIGHEST DAILY MEAN	2720	Sep 1	2010	Sep 17	3640	Sep 11 1998
LOWEST DAILY MEAN	0.00	Aug 7	0.00	Feb 14	0.00	Jul 14 2000
ANNUAL SEVEN-DAY MINIMUM	0.00	Aug 21	0.00	Feb 14	0.00	Jul 14 2000
MAXIMUM PEAK FLOW			2350	Sep 17	4100	Sep 11 1998
MAXIMUM PEAK STAGE			20.82	Sep 17	22.16	Sep 11 1998
ANNUAL RUNOFF (AC-FT)	37490		38930		42610	
10 PERCENT EXCEEDS	39		71		55	
50 PERCENT EXCEEDS	0.86		0.93		1.5	
90 PERCENT EXCEEDS	0.17		0.00		0.06	

08164504 East Mustang Creek near Louise, TX--Continued



08164504 East Mustang Creek near Louise, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--
CHEMICAL DATA: Apr. 1996 to current year
PESTICIDE DATA: Apr. 1996 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)	2,4,5-T DIS- SOLVED (UG/L) (39742)	2,4-D, DIS- SOLVED (UG/L) (39732)	2,4-DB WATER, FLTRD, GF 0.7U REC (UG/L) (38746)	2,6-DI- ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	SILVEX, DIS- SOLVED (UG/L) (39762)	3HYDRXY CARBO- FURAN WAT,FLT GF 0.7U REC (UG/L) (49308)
APR													
17...	0730	.54	286	7.2	24.5	5.7	68	<.07	<.16	<.25	E.003	<.03	<.11
17...	0730	--	--	--	--	--	--	--	--	--	--	--	--

Date	DNOC WAT,FLT GF 0.7U REC (UG/L) (49299)	ACETO- CHLOR, WATER FLTRD REC (UG/L) (49260)	ACIFL- UORFEN WATER, FLTRD, GF 0.7U REC (UG/L) (49315)	ALA- CHLOR, WATER, DISS, REC, (UG/L) (46342)	ALDI- CARB, WATER, FLTRD, GF 0.7U REC (UG/L) (49312)	ALDI- CARB SULFONE WAT,FLT GF 0.7U REC (UG/L) (49313)	ALDICA- RB SUL- FOXIDE, WAT,FLT GF 0.7U REC (UG/L) (49314)	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)	BENTA- ZON, WATER, FLTRD, GF 0.7U REC (UG/L) (38711)	BRO- MACIL, WATER, DISS, REC (UG/L) (04029)
APR													
17...	<.25	.028	<.05	3.68	<.21	<.20	<.27	<.005	6.60	<.050	<.010	<.05	<1.14
17...	--	--	--	--	--	--	--	--	--	--	--	--	--

Date	BRO- MOXYNIL WATER, FLTRD, GF 0.7U REC (UG/L) (49311)	BUTYL- ATE, WATER, DISS, REC (UG/L) (04028)	CAR- BARYL, WATER, FLTRD, GF 0.7U REC (UG/L) (49310)	CAR- BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBO- FURAN, WATER, FLTRD, GF 0.7U REC (UG/L) (49309)	CARBO- FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	TRI- THION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39787)	CHLORO- THALO- NIL, WAT,FLT GF 0.7U REC (UG/L) (49306)	CHLOR- PYRIFOS DIS- SOLVED (UG/L) (38933)	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	CLOPYR- ALID, WATER, FLTRD, GF 0.7U REC (UG/L) (49305)	CYANA- ZINE, WATER, DISS, REC (UG/L) (04041)	DACTHAL MONO- ACID, WAT,FLT GF 0.7U REC (UG/L) (49304)
APR													
17...	<.07	<.002	<.080	<.041	<.15	<.020	--	<.25	<.010	<.006	<.42	<.018	<.07
17...	--	--	--	--	--	--	<.2	--	--	--	--	--	--

Date	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	DEETHYL ATRA- ZINE, WATER, DISS, REC (UG/L) (04040)	DI- AZINON, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39571)	DI- AZINON, DIS- SOLVED (UG/L) (39572)	DICAMBA WATER, FLTRD, GF 0.7U REC (UG/L) (38442)	DICHLO- BENIL, WATER, FLTRD, GF 0.7U REC (UG/L) (49303)	DICHLOR PROP, WATER, FLTRD, GF 0.7U REC (UG/L) (49302)	DI- ELDRIN DIS- SOLVED (UG/L) (39381)	DINOSEB WATER, FLTRD, GF 0.7U REC (UG/L) (49301)	DISUL- FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	DIURON, WATER, FLTRD, GF 0.7U REC (UG/L) (49300)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	ETHAL- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)
APR													
17...	<.003	E.203	--	.005	<.11	<.09	<.12	<.005	<.09	<.02	.39	<.002	<.009
17...	--	--	<.2	--	--	--	--	--	--	--	--	--	--

Date	ETHION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39399)	ETHO- PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	FEN- URON, WATER, FLTRD, GF 0.7U REC (UG/L) (49297)	FLUO- METURON WATER, FLTRD, GF 0.7U REC (UG/L) (38811)	FONOFOS WATER DISS REC (UG/L) (04095)	LINDANE DIS- SOLVED (UG/L) (39341)	LINURON WATER, FLTRD, GF 0.7U REC (UG/L) (38478)	LIN- URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA- THION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39531)	MALA- THION, DIS- SOLVED (UG/L) (39532)	MCPA, WATER, FLTRD, GF 0.7U REC (UG/L) (38482)	MCPB, WATER, FLTRD, GF 0.7U REC (UG/L) (38487)	METHIO- CARB, WATER, FLTRD, GF 0.7U REC (UG/L) (38501)
APR													
17...	--	<.005	<.07	1.11	<.003	<.004	<.06	<.035	--	<.027	<.20	<.26	<.07
17...	<.2	--	--	--	--	--	--	--	<.2	--	--	--	--

Date	METH- OMYL, WATER, FLTRD, GF 0.7U REC (UG/L) (49296)	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)	NEB- URON, WATER, FLTRD, GF 0.7U REC (UG/L) (49294)	NORFLUR AZON, WATER, FLTRD, GF 0.7U REC (UG/L) (49293)	ORY- ZALIN, WATER, FLTRD, GF 0.7U REC (UG/L) (49292)	OXAMYL, WATER, FLTRD, GF 0.7U REC (UG/L) (38866)	P,P' DDE DISSOLV (UG/L) (34653)	PARA- THION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39541)	PARA- THION, DIS- SOLVED (UG/L) (39542)	METHYL PARA- THION, TOT. IN BOTTOM MATL. (UG/KG) (39601)
APR													
17...	<.47	2.58	.048	<.005	<.007	<.07	<.04	<2.40	<.16	<.003	--	<.010	--
17...	--	--	--	--	--	--	--	--	--	--	<.2	--	<.2

08164504 East Mustang Creek near Louise, TX--Continued

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

Date	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)	PIC- LORAM, WATER, FLTRD, GF 0.7U REC (UG/L) (49291)	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)	PRO- PHAM, WATER, FLTRD, GF 0.7U REC (UG/L) (49236)	PRO- POXUR, WATER, FLTRD, GF 0.7U REC (UG/L) (38538)	PRON- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	SI- MAZINE, WATER, DISS, REC (UG/L) (04035)
APR													
17...	<.006	<.004	<.022	E.006n	.16	Mn	<.010	<.011	<.02	<.22	<.12	<.004	.043
17...	--	--	--	--	--	--	--	--	--	--	--	--	--

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- CLOPYR, WATER, FLTRD, GF 0.7U REC (UG/L) (49235)	TRI- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)
APR							
17...	E.17	<.034	<.02	.359	<.002	<.07	E.007n
17...	--	--	--	--	--	--	--

Remark codes used in this report:
- < -- Less than
- E -- Estimated value
- M -- Presence verified, not quantified

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

08164525 Lake Texana near Edna, TX

LOCATION.--Lat 28°53'30", long 96°34'39", Jackson County, Hydrologic Unit 12100102, on river outlet works structure on upstream side of Palmetto Bend Dam on the Navidad River, 4.0 mi north of Lolita, 4.9 mi upstream from confluence with Lavaca River, and 7.2 mi southeast of Edna.

DRAINAGE AREA.--1,370 mi^2.

WATER-CONTENT RECORDS

PERIOD OF RECORD.--July 1999 to current year.

REVISED RECORDS.--WSP 1923: 1953(M), Drainage area.

GAGE.--Water-stage recorder. Datum of the 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 1.3 mi long, a concrete spillway 464 ft wide, and 6.6 mi of earthen dikes. The dam was completed and storage began May 1980. The spillway has twelve 35 ft wide by 22.5 ft high radial gates to discharge flood flows to the river channel downstream. Dual level municipal and industrial outlet works structures are located on each side of the spillway. These concrete structures provide for access to a conduit through the dam and for connecting a water delivery system. The river outlet works, a concrete structure with multi-level intake gates, discharge into the Navidad River through an 8 ft by 10 ft downstream conduit. The dam is owned by the Lavaca-Navidad River Authority. The primary purpose of Lake Texana is to provide dependable municipal and industrial water supply of 75,000 acre-ft annually, and to provide recreational, fish and wildlife facilities for the public. The lake is not designed to store floods; therefore, flooding both downstream and upstream remains approximately the same as conditions were before construction. Conservation pool storage is 153,137 acre-ft. Data regarding the dam are given in the following table:

	Elevation (feet)
Top of dam...	55.0
Top of gate..	45.3
Crest of spillways (tainter gates sill)..............................	23.0

COOPERATION.--Capacity table computed Apr. 1, 1992, by Bureau of Reclamation was provided by Lavaca-Navidad River Authority. Basic data for the table was obtained in the Lake Texana sediment resurvey completed in June 1991, by personnel from Bureau of Reclamation and from Lavaca-Navidad River Authority.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 163,200 acre-ft Nov. 27, 2001, elevation, 44.74 ft; minimum contents, 105,200 acre-ft Feb. 22, 2000, elevation, 38.33 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 163,200 acre-ft, Nov. 27, elevation, 44.74 ft; minimum contents, 133,200 acre-ft, June 28, elevation, 41.67 ft.

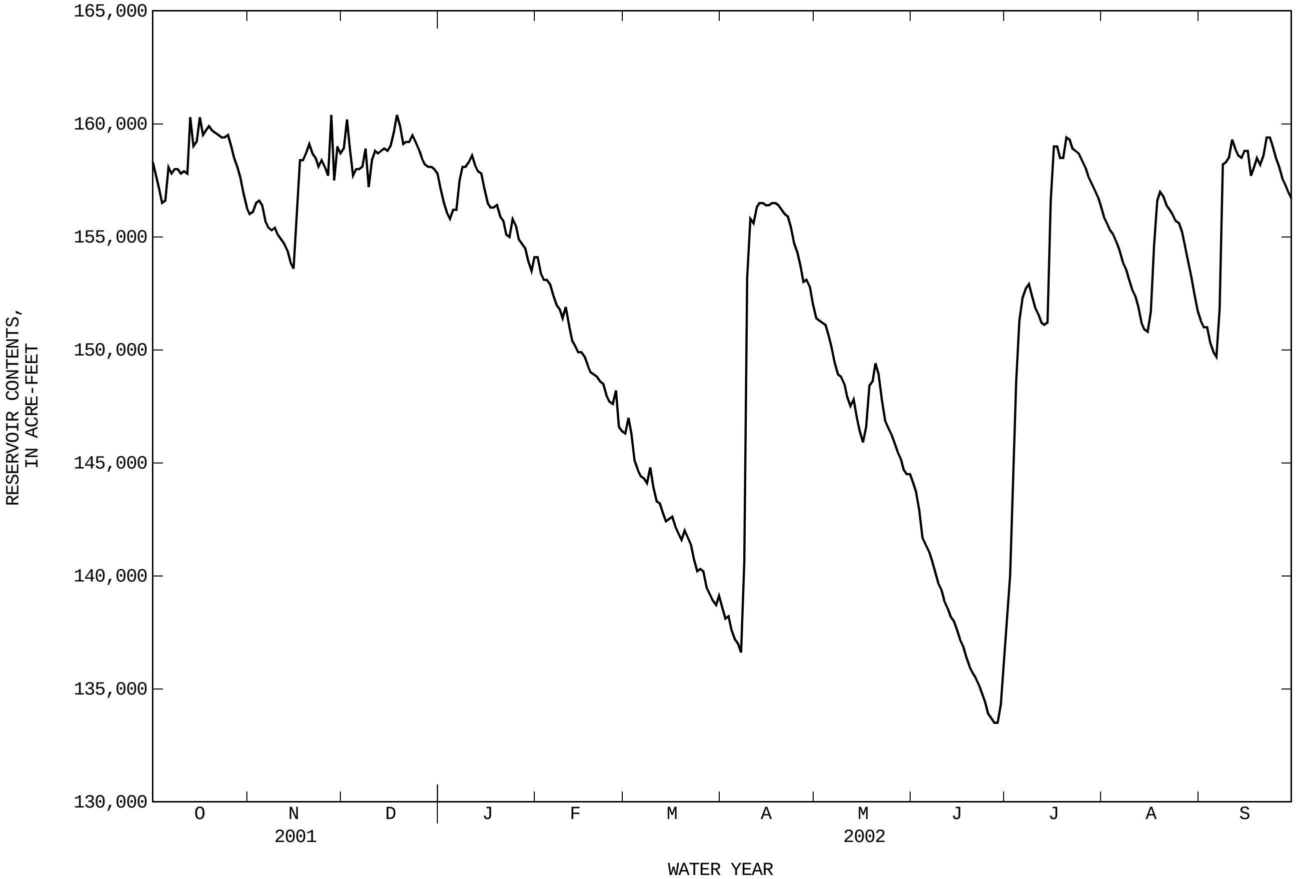
RESERVOIR STORAGE FROM DCP, in (ACRE-FEET), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	158300	156000	158900	157100	154100	146300	138600	151400	144100	137900	155900	151300
2	157700	156100	160200	156500	153400	147000	138100	151300	143700	140000	155600	151000
3	157100	156500	158900	156100	153100	146300	138200	151200	142900	144500	155300	151000
4	156500	156600	157700	155800	153100	145100	137600	151100	141700	148600	155100	150300
5	156600	156400	158000	156200	152900	144700	137200	150600	141400	151300	154800	149900
6	158100	155700	158000	156200	152400	144400	137000	150100	141100	152300	154400	149700
7	157800	155400	158100	157500	152000	144300	136600	149400	140700	152700	153900	151800
8	158000	155300	158900	158100	151800	144100	140600	148900	140200	152900	153600	158200
9	158000	155400	157200	158100	151400	144800	153200	148800	139700	152400	153100	158300
10	157800	155100	158400	158300	151900	143900	155800	148500	139400	151900	152700	158500
11	157900	154900	158800	158600	151100	143300	155600	147900	138900	151600	152400	159300
12	157800	154700	158700	158200	150400	143200	156300	147500	138600	151200	151900	158900
13	160300	154400	158800	157900	150200	142800	156500	147800	138200	151100	151200	158600
14	159000	153900	158900	157800	149900	142400	156500	147000	138000	151200	150900	158500
15	159200	153600	158800	157100	149900	142500	156400	146400	137600	156600	150800	158800
16	160300	155700	159000	156500	149700	142600	156400	145900	137200	159000	151700	158800
17	159500	158400	159600	156300	149300	142200	156500	146600	136900	159000	154600	157700
18	159700	158400	160400	156300	149000	141900	156500	148400	136400	158500	156600	158100
19	159900	158700	159900	156400	148900	141600	156400	148600	136000	158500	157000	158500
20	159700	159100	159100	155900	148800	142000	156200	149400	135700	159400	156800	158200
21	159600	158700	159200	155700	148600	141700	156000	148900	135500	159300	156400	158600
22	159500	158500	159200	155100	148500	141400	155900	147800	135200	158900	156200	159400
23	159400	158100	159500	155000	148000	140700	155400	146900	134800	158800	156000	159400
24	159400	158400	159200	155800	147700	140200	154700	146600	134400	158700	155700	159000
25	159500	158100	158900	155500	147600	140300	154300	146300	133900	158400	155600	158500
26	159000	157700	158500	154900	148200	140200	153700	145900	133700	158100	155200	158100
27	158500	160400	158200	154700	146600	139500	153000	145500	133500	157700	154500	157600
28	158100	157500	158100	154500	146400	139200	153100	145200	133500	157400	153900	157300
29	157600	159000	158100	153900	---	138900	152800	144700	134300	157100	153200	157000
30	156900	158700	158000	153500	---	138700	152000	144500	136100	156800	152400	156700
31	156300	---	157800	154100	---	139100	---	144500	---	156400	151700	---
MEAN	158500	156800	158700	156200	150200	142400	150600	147900	137800	154100	154200	156600
MAX	160300	160400	160400	158600	154100	147000	156500	151400	144100	159400	157000	159400
MIN	156300	153600	157200	153500	146400	138700	136600	144500	133500	137900	150800	149700
(+)	44.08	44.31	44.22	43.86	43.08	42.31	43.64	42.88	41.99	44.08	43.61	44.11
(@)	-2500	+2400	-900	-3700	-7700	-7300	+12900	-7500	-8400	+20300	-4700	+5000

CAL YR 2001 MAX 161300 MIN 126600 (@) -200
WTR YR 2002 MAX 160400 MIN 133500 (@) -2100

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

08164525 Lake Texana near Edna, TX--Continued



08164525 Lake Texana near Edna, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--
CHEMICAL DATA: Jan. 1988 to current year.
BIOCHEMICAL DATA: Jan. 1988 to Sept. 1993.
PESTICIDE DATA: May 1994 to current year.

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

285331096343501 -- Lk Texana 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)	TRANS-PAR-ENCY (SECCHI DISK) (M) (00078)	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													
06...	0904	145000	1.00	151	7.9	11.0	.18	10.1	91	56	7	18.4	2.37
06...	0906	--	10.0	150	7.9	11.0	--	10.3	92	--	--	--	--
06...	0908	--	20.0	150	7.9	11.0	--	10.3	92	--	--	--	--
06...	0910	--	30.0	151	7.9	11.0	--	10.3	92	--	--	--	--
06...	0912	--	40.0	150	7.9	11.0	--	10.3	92	--	--	--	--
06...	0914	--	50.0	151	7.9	11.0	--	10.2	92	--	--	--	--
06...	0916	--	55.0	150	7.9	11.0	--	10.1	91	--	--	--	--
06...	0918	--	65.0	150	7.9	11.0	--	10.2	92	57	7	18.8	2.42
JUN													
19...	0940	136000	1.00	207	8.2	29.5	.24	7.1	93	74	7	24.6	2.89
19...	0942	--	10.0	206	8.2	29.0	--	6.9	90	--	--	--	--
19...	0944	--	20.0	206	7.9	28.5	--	6.1	79	--	--	--	--
19...	0946	--	30.0	205	7.7	26.5	--	4.3	53	--	--	--	--
19...	0948	--	40.0	202	7.8	26.0	--	4.3	53	--	--	--	--
19...	0950	--	50.0	202	7.8	25.0	--	3.5	42	--	--	--	--
19...	0952	--	60.0	201	8.1	24.5	--	2.1	25	74	5	24.5	2.95
JUL													
31...	0736	157000	1.00	189	7.7	29.0	.46	6.1	79	64	7	20.4	3.09
31...	0738	--	10.0	189	7.4	29.0	--	6.0	78	--	--	--	--
31...	0740	--	20.0	189	7.4	29.0	--	5.9	77	--	--	--	--
31...	0742	--	30.0	168	6.6	27.0	--	.1	1	--	--	--	--
31...	0744	--	40.0	166	6.5	27.0	--	.1	1	--	--	--	--
31...	0746	--	50.0	164	6.4	26.5	--	.1	1	--	--	--	--
31...	0748	--	63.0	164	6.0	26.5	--	.1	1	54	4	16.9	2.89

285331096343501 -- Lk Texana 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)	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)	OIL AND GREASE, TOTAL RECOV. GRAVI-METRIC (MG/L) (00556)
MAR													
06...	6.94	.4	20	3.73	<1	E60	49	4.8	9.51	.1	11.1	87	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	7.04	.4	20	3.64	<1	E61	50	4.8	9.28	.1	11.3	88	--
JUN													
19...	9.84	.5	21	4.46	1	79	66	6.5	14.3	.2	10.7	113	<7
19...	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--	--	<7
19...	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	9.39	.5	21	4.23	1	82	68	6.4	13.7	.1	12.6	115	--
JUL													
31...	10.5	.6	25	3.69	<1	69	57	5.1	15.6	.1	10.5	103	--
31...	--	--	--	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--	--	--	--
31...	9.05	.5	--	<.10	<1	61	50	4.1	13.9	.1	11.5	--	--

08164525 Lake Texana near Edna, TX--Continued

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

285331096343501 -- Lk Texana Site AC

Date	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)	COPPER, DISSOLVED (UG/L AS CU) (01040)	IRON, DISSOLVED (UG/L AS FE) (01046)	LEAD, DISSOLVED (UG/L AS PB) (01049)	LITHIUM DISSOLVED (UG/L AS LI) (01130)	MANGANESE, DISSOLVED (UG/L AS MN) (01056)
MAR													
06...	<1	.27	2	66	<.06	<.04	<.8	.07	2.3	25	<.08	E2	.3
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	<1	.26	2	67	<.06	<.04	<.8	.08	2.4	20	<.08	<4	.5
JUN													
19...	2	.15	3	89	<.06	<.04	<.8	.07	3.3	<10	E.06	<4	.5
19...	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	<1	.15	3	85	<.06	<.04	<.8	.09	3.9	E5	.16	<4	71.3
JUL													
31...	<1	.12	2	68	<.06	<.04	<.8	.09	3.5	11	<.08	E2	.9
31...	--	--	--	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--	--	--	--
31...	1	.12	4	60	<.06	<.04	<.8	.33	4.0	136	.10	E2	176

285331096343501 -- Lk Texana Site AC

Date	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)	STRONTIUM, DISSOLVED (UG/L AS SR) (01080)	VANADIUM, DISSOLVED (UG/L AS V) (01085)	ZINC, DISSOLVED (UG/L AS ZN) (01090)	URANIUM NATURAL DISSOLVED (UG/L AS U) (22703)
MAR									
06...	<.01	.4	.98	<2	<1	58.9	<8	<1	.12
06...	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--
06...	<.01	.4	1.03	<2	<1	59.8	<8	<1	.12
JUN									
19...	<.01	.7	.92	<2	<1	78.9	E4	1	.21
19...	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--
19...	<.01	.6	.80	<2	<1	78.7	E5	6	.14
JUL									
31...	<.01	.6	1.15	<2	<1	74.8	<8	2	.11
31...	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--
31...	<.01	.5	1.26	<2	<1	66.2	<8	8	.07

08164525 Lake Texana near Edna, TX--Continued

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

285326096342101 -- Lk Texana 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)
MAR							
06...	0945	1.00	151	8.0	12.0	10.0	92
06...	0947	10.0	151	8.0	11.5	10.2	92
06...	0949	20.0	151	7.9	11.5	10.2	92
06...	0951	30.0	151	8.0	11.5	10.2	92
06...	0953	37.0	151	8.0	11.5	10.2	92
JUN							
19...	1022	1.00	205	8.0	28.5	6.9	89
19...	1024	10.0	205	8.0	28.5	6.8	88
19...	1026	20.0	205	7.9	28.0	6.5	83
19...	1028	33.0	204	7.9	26.5	4.2	52
JUL							
31...	0816	1.00	191	7.8	29.0	6.3	82
31...	0818	10.0	189	7.6	29.0	5.9	77
31...	0820	20.0	187	7.4	28.5	5.3	68
31...	0822	30.0	170	6.9	27.5	.6	8
31...	0824	35.0	168	6.9	27.0	.1	1

285534096322301 -- Lk Texana Site BC

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							
06...	1004	1.00	152	7.9	12.0	10.0	92
06...	1006	10.0	151	7.9	11.5	10.1	92
06...	1008	20.0	150	7.9	11.5	10.1	92
06...	1010	30.0	172	7.9	11.0	10.0	90
06...	1012	40.0	173	7.9	11.5	10.0	91
JUN							
19...	1045	1.00	211	7.8	28.5	6.4	82
19...	1047	10.0	207	7.8	28.0	6.2	79
19...	1049	20.0	206	7.8	27.5	5.4	68
19...	1051	30.0	205	7.8	27.5	4.7	60
19...	1053	35.0	205	7.8	27.0	4.3	54
JUL							
31...	0834	1.00	193	7.9	30.0	6.7	88
31...	0836	10.0	193	7.9	30.0	6.6	87
31...	0838	20.0	193	7.8	29.5	6.5	85
31...	0840	30.0	173	7.0	28.0	1.3	17
31...	0842	39.0	168	6.9	27.5	.2	3

08164525 Lake Texana near Edna, TX--Continued

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

285816096320201 -- Lk Texana 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)	TRANS-PAR-ENCY (SECCHI DISK) (M) (00078)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	2,4,5-T DIS-SOLVED (UG/L) (39742)	2,4-D, DIS-SOLVED (UG/L) (39732)	2,4-DB WATER, FLTRD, GF 0.7U REC (UG/L) (38746)	2,6-DI-ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	SILVEX, DIS-SOLVED (UG/L) (39762)
MAR													
06...	1035	1.00	176	8.0	11.5	--	10.4	94	--	--	--	--	--
MAR													
06-06	1035	--	--	--	--	--	--	--	<.07	<.16	<.25	<.006	<.03
06...	1037	10.0	185	8.0	11.0	--	10.5	94	--	--	--	--	--
06...	1039	20.0	218	8.0	10.5	--	10.3	91	--	--	--	--	--
06...	1041	30.0	246	8.0	10.5	--	10.3	91	--	--	--	--	--
06...	1043	35.0	247	8.0	11.0	--	10.0	90	--	--	--	--	--
JUN													
19...	1104	1.00	219	7.7	29.0	.15	6.3	82	--	--	--	--	--
JUN													
19-19	1104	--	--	--	--	--	--	--	<.07	<.16	<.25	<.006	<.03
19...	1106	10.0	220	7.3	28.0	--	5.1	65	--	--	--	--	--
19...	1108	20.0	207	7.6	27.5	--	4.3	54	--	--	--	--	--
19...	1110	35.0	207	7.7	27.5	--	4.1	52	--	--	--	--	--
19...	1110	35.0	--	--	--	--	--	--	--	--	--	--	--
JUL													
31...	0900	1.00	180	7.6	30.0	.24	5.8	77	--	--	--	--	--
JUL													
31-31	0900	--	--	--	--	--	--	--	<.07	<.16	<.25	<.006	<.03
31...	0902	10.0	180	7.6	30.0	--	5.7	75	--	--	--	--	--
31...	0904	20.0	181	7.6	30.0	--	5.7	75	--	--	--	--	--
31...	0906	30.0	182	7.6	30.0	--	5.6	74	--	--	--	--	--
31...	0908	40.0	182	7.6	30.0	--	5.6	74	--	--	--	--	--

285816096320201 -- Lk Texana Site CC

Date	3HYDRXY CARBO-FURAN WAT,FLT GF 0.7U REC (UG/L) (49308)	DNOC WAT,FLT GF 0.7U REC (UG/L) (49299)	ACETO-CHLOR, WATER FLTRD REC (UG/L) (49260)	ACIFL-UORFEN WATER, FLTRD, GF 0.7U REC (UG/L) (49315)	ALA-CHLOR, WATER, DISS, REC, (UG/L) (46342)	ALDI-CARB, WATER, FLTRD, GF 0.7U REC (UG/L) (49312)	ALDI-CARB SULFONE WAT,FLT GF 0.7U REC (UG/L) (49313)	ALDICA-RB SUL-FOXIDE, WAT,FLT GF 0.7U REC (UG/L) (49314)	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)	BENTA-ZON, WATER, FLTRD, GF 0.7U REC (UG/L) (38711)
MAR													
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR													
06-06	<.11	<.25	<.007	<.05	.013	<.21	<.20	<.27	<.005	.605	<.050	<.010	<.05
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN													
19...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN													
19-19	<.11	<.25	.073	<.05	.500	<.21	<.20	<.27	<.005	.947	<.050	<.010	<.05
19...	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL													
31...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL													
31-31	<.11	<.25	.014	<.05	.074	<.21	<1.30	<.27	<.005	.295	<.050	<.010	<.05
31...	--	--	--	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--	--	--	--

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

285816096320201 -- Lk Texana Site CC

Date	BROMACIL, WATER, DISS, REC (UG/L) (04029)	BROMOXYNIL WATER, FLTRD, GF 0.7U REC (UG/L) (49311)	BUTYLATE, WATER, DISS, REC (UG/L) (04028)	CARBARYL, WATER, FLTRD, GF 0.7U REC (UG/L) (49310)	CARBARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBOFURAN, WATER, FLTRD, GF 0.7U REC (UG/L) (49309)	CARBOFURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	TRITHION, TOTAL IN BOTTOM MATERIAL (UG/KG) (39787)	CHLOROTHALONIL, WAT,FLT GF 0.7U REC (UG/L) (49306)	CHLORPYRIFOS DISSOLVED (UG/L) (38933)	PERMETHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	CLOPYRALID, WATER, FLTRD, GF 0.7U REC (UG/L) (49305)	CYANAZINE, WATER, DISS, REC (UG/L) (04041)
MAR													
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR													
06-06	<.09	<.07	<.002	<.080	<.041	<.35	<.020	--	<.25	<.005	<.006	<.42	<.018
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN													
19...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN													
19-19	<.09	<.07	<.002	<.080	<.041	<.15	<.020	--	<.25	<.005	<.006	<.42	<.018
19...	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	<.2	--	--	--	--	--
JUL													
31...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL													
31-31	<.09	<.07	<.002	<.080	<.041	<.15	<.020	--	<.25	<.005	<.006	<.42	<.018
31...	--	--	--	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--	--	--	--

285816096320201 -- Lk Texana Site CC

Date	DACTHAL MONO-ACID, WAT,FLT GF 0.7U REC (UG/L) (49304)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	DEETHYL ATRAZINE, WATER, DISS, REC (UG/L) (04040)	DIAZINON, TOTAL IN BOTTOM MATERIAL (UG/KG) (39571)	DIAZINON, DISSOLVED (UG/L) (39572)	DICAMBA WATER, FLTRD, GF 0.7U REC (UG/L) (38442)	DICHLOBENIL, WATER, FLTRD, GF 0.7U REC (UG/L) (49303)	DICHLORPROP, WATER, FLTRD, GF 0.7U REC (UG/L) (49302)	DIELDRIN DISSOLVED (UG/L) (39381)	DINOSEB WATER, FLTRD, GF 0.7U REC (UG/L) (49301)	DISULFOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	DIURON, WATER, FLTRD, GF 0.7U REC (UG/L) (49300)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)
MAR													
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR													
06-06	<.14	<.003	E.022	--	<.005	<.11	<.09	<.12	<.005	<.09	<.02	<.12	<.002
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN													
19...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN													
19-19	<.07	<.003	E.091	--	<.005	<.11	<.09	<.12	<.005	<.09	<.02	<.12	<.002
19...	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	<.2	--	--	--	--	--	--	--	--	--
JUL													
31...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL													
31-31	<.07	<.003	E.027	--	<.005	<.11	<.09	<.12	<.005	<.09	<.02	<.12	<.002
31...	--	--	--	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--	--	--	--

08164525 Lake Texana near Edna, TX--Continued

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

285816096320201 -- Lk Texana Site CC

Date	ETHAL-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)	ETHION, TOTAL IN BOT-TOM MA-TERIAL (UG/KG) (39399)	ETHO-PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	FEN-URON, WATER, FLTRD, GF 0.7U REC (UG/L) (49297)	FLUO-METURON WATER, FLTRD, GF 0.7U REC (UG/L) (38811)	FONOFOS WATER DISS REC (UG/L) (04095)	LINDANE DIS-SOLVED (UG/L) (39341)	LINURON WATER, FLTRD, GF 0.7U REC (UG/L) (38478)	LIN-URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA-THION, TOTAL IN BOT-TOM MA-TERIAL (UG/KG) (39531)	MALA-THION, DIS-SOLVED (UG/L) (39532)	MCPA, WATER, FLTRD, GF 0.7U REC (UG/L) (38482)	MCPB, WATER, FLTRD, GF 0.7U REC (UG/L) (38487)
MAR													
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR													
06-06	<.009	--	<.005	<.07	<.06	<.003	<.004	<.06	<.035	--	<.027	<.20	<.26
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN													
19...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN													
19-19	<.009	--	<.005	<.07	.07	<.003	<.004	<.06	<.035	--	<.027	<.20	<.26
19...	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	<.2	--	--	--	--	--	--	--	<.2	--	--	--
JUL													
31...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL													
31-31	<.009	--	<.005	<.07	.24	<.003	<.004	<.06	<.035	--	.046	<.20	<.26
31...	--	--	--	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--	--	--	--

285816096320201 -- Lk Texana Site CC

Date	METHIO-CARB, WATER, FLTRD, GF 0.7U REC (UG/L) (38501)	METH-OMYL, WATER, FLTRD, GF 0.7U REC (UG/L) (49296)	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)	NEB-URON, WATER, FLTRD, GF 0.7U REC (UG/L) (49294)	NORFLUR AZON, WATER, FLTRD, GF 0.7U REC (UG/L) (49293)	ORY-ZALIN, WATER, FLTRD, GF 0.7U REC (UG/L) (49292)	OXAMYL, WATER, FLTRD, GF 0.7U REC (UG/L) (38866)	P,P' DDE DISSOLV (UG/L) (34653)	PARA-THION, TOTAL IN BOT-TOM MA-TERIAL (UG/KG) (39541)	PARA-THION, DIS-SOLVED (UG/L) (39542)
MAR													
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR													
06-06	<.07	<.47	.043	<.006	<.002	<.007	<.07	<.04	<.28	<.16	<.003	--	<.010
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN													
19...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN													
19-19	<.07	<.22	.415	<.006	.031	<.007	<.07	<.04	<.46	<.16	<.003	--	<.010
19...	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--	<.2	--
JUL													
31...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL													
31-31	<.07	<.49	.221	<.006	<.002	<.007	<.07	<.04	<.28	<.71	<.003	--	<.010
31...	--	--	--	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--	--	--	--

08164525 Lake Texana near Edna, TX--Continued

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

285816096320201 -- Lk Texana Site CC

Date	METHYL PARA-THION, TOT. IN BOTTOM MATL. (UG/KG) (39601)	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)	PIC-LORAM, WATER, FLTRD, GF 0.7U REC (UG/L) (49291)	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)	PRO-PHAM, WATER, FLTRD, GF 0.7U REC (UG/L) (49236)	PRO-POXUR, WATER, FLTRD, GF 0.7U REC (UG/L) (38538)	PRON-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)
MAR													
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR													
06-06	--	<.006	<.004	<.022	<.011	<.09	<.01	<.010	<.011	<.02	<2.30	<.12	<.004
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN													
19...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN													
19-19	--	<.006	<.004	<.022	<.011	<.09	<.01	<.010	<.011	<.02	<.22	<.90	<.004
19...	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	<.2	--	--	--	--	--	--	--	--	--	--	--	--
JUL													
31...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL													
31-31	--	.027	<.004	<.022	<.011	<.09	<.01	<.010	<.011	<.02	<1.00	<.12	<.004
31...	--	--	--	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--	--	--	--

285816096320201 -- Lk Texana Site CC

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-CLOPYR, WATER, FLTRD, GF 0.7U REC (UG/L) (49235)	TRI-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)
MAR								
06...	--	--	--	--	--	--	--	--
MAR								
06-06	.012	E.01n	<.034	<.02	<.005	<.002	<.07	<.009
06...	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--
JUN								
19...	--	--	--	--	--	--	--	--
JUN								
19-19	.018	E.01	<.034	<.02	<.005	<.002	<.07	<.009
19...	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--
JUL								
31...	--	--	--	--	--	--	--	--
JUL								
31-31	.026	E.02	<.034	<.02	<.005	<.002	<.07	<.009
31...	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--

08164525 Lake Texana near Edna, TX--Continued

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

290042096331401 -- Lk Texana 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)	OIL AND GREASE, TOTAL RECOV. GRAVI- METRIC (MG/L) (00556)	2,4,5-T DIS- SOLVED (UG/L) (39742)	2,4-D, DIS- SOLVED (UG/L) (39732)	2,4-DB WATER, FLTRD, GF 0.7U REC (UG/L) (38746)	2,6-DI- ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	SILVEX, DIS- SOLVED (UG/L) (39762)
MAR													
06...	1117	1.00	315	7.9	11.5	10.8	98	--	--	--	--	--	--
MAR													
06-06	1117	--	--	--	--	--	--	--	<.07	<.16	<.25	<.006	<.03
06...	1119	10.0	330	7.9	11.0	10.7	96	--	--	--	--	--	--
06...	1121	18.0	355	7.9	10.5	10.5	93	--	--	--	--	--	--
JUN													
19...	1156	1.00	269	7.7	29.5	6.6	87	<7	--	--	--	--	--
JUN													
19-19	1156	--	--	--	--	--	--	--	<.07	<.16	<.25	<.006	<.03
19...	1158	10.0	270	7.6	29.0	5.6	73	--	--	--	--	--	--
19...	1200	20.0	280	7.8	28.0	4.6	59	--	--	--	--	--	--
19...	1200	20.0	--	--	--	--	--	--	--	--	--	--	--
JUL													
31...	0940	1.00	182	7.4	30.0	4.7	62	--	--	--	--	--	--
JUL													
31-31	0940	--	--	--	--	--	--	--	<.07	<.16	<.25	<.006	<.03
31...	0942	10.0	183	7.4	30.0	4.6	61	--	--	--	--	--	--
31...	0944	20.0	183	7.4	30.0	4.4	58	--	--	--	--	--	--

290042096331401 -- Lk Texana Site DC

Date	3HYDRXY CARBO- FURAN WAT,FLT GF 0.7U REC (UG/L) (49308)	DNOC WAT,FLT GF 0.7U REC (UG/L) (49299)	ACETO- CHLOR, WATER FLTRD REC (UG/L) (49260)	ACIFL- UORFEN WATER, FLTRD, GF 0.7U REC (UG/L) (49315)	ALA- CHLOR, WATER, DISS, REC, (UG/L) (46342)	ALDI- CARB, WATER, FLTRD, GF 0.7U REC (UG/L) (49312)	ALDI- CARB SULFONE WAT,FLT GF 0.7U REC (UG/L) (49313)	ALDICA- RB SUL- FOXIDE, WAT,FLT GF 0.7U REC (UG/L) (49314)	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)	BENTA- ZON, WATER, FLTRD, GF 0.7U REC (UG/L) (38711)
MAR													
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR													
06-06	<.11	<.25	<.006	<.05	.015	<.21	<.20	<.27	<.005	.374	<.050	<.010	<.05
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN													
19...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN													
19-19	<.11	<.25	.058	<.05	.290	<.21	<.20	<.27	<.005	.847	<.050	<.010	<.05
19...	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL													
31...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL													
31-31	<.63	<.25	<.006	<.05	.011	<.21	<.20	<.27	<.005	.052	<.050	<.010	<.05
31...	--	--	--	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--	--	--	--

290042096331401 -- Lk Texana Site DC

Date	BRO- MACIL, WATER, DISS, REC (UG/L) (04029)	BRO- MOXYNIL WATER, FLTRD, GF 0.7U REC (UG/L) (49311)	BUTYL- ATE, WATER, DISS, REC (UG/L) (04028)	CAR- BARYL, WATER, FLTRD, GF 0.7U REC (UG/L) (49310)	CAR- BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBO- FURAN, WATER, FLTRD, GF 0.7U REC (UG/L) (49309)	CARBO- FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	TRI- THION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39787)	CHLORO- THALO- NIL, WAT,FLT GF 0.7U REC (UG/L) (49306)	CHLOR- PYRIFOS DIS- SOLVED (UG/L) (38933)	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	CLOPYR- ALID, WATER, FLTRD, GF 0.7U REC (UG/L) (49305)	CYANA- ZINE, WATER, DISS, REC (UG/L) (04041)
MAR													
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR													
06-06	<.09	<.07	<.002	<.080	<.041	<.24	<.020	--	<.25	<.005	<.006	<.42	<.018
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN													
19...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN													
19-19	<.09	<.07	<.002	<.080	<.041	<.15	<.020	--	<.25	<.005	<.006	<1.00	<.018
19...	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	<.2	--	--	--	--	--
JUL													
31...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL													
31-31	<.16	<.07	<.002	<.080	<.041	<.15	<.020	--	<.25	<.005	<.006	<.42	<.018
31...	--	--	--	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--	--	--	--

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

290042096331401 -- Lk Texana Site DC

Date	DACTHAL MONO- ACID, WAT,FLT GF 0.7U REC (UG/L) (49304)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	DEETHYL ATRA- ZINE, WATER, DISS, REC (UG/L) (04040)	DI- AZINON, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39571)	DI- AZINON, DIS- SOLVED (UG/L) (39572)	DICAMBA WATER, FLTRD, GF 0.7U REC (UG/L) (38442)	DICHLO- BENIL, WATER, FLTRD, GF 0.7U REC (UG/L) (49303)	DICHLOR PROP, WATER, FLTRD, GF 0.7U REC (UG/L) (49302)	DI- ELDRIN DIS- SOLVED (UG/L) (39381)	DINOSEB WATER, FLTRD, GF 0.7U REC (UG/L) (49301)	DISUL- FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	DIURON, WATER, FLTRD, GF 0.7U REC (UG/L) (49300)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)
MAR 06...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR 06-06	<.14	<.003	E.016	--	<.005	<.11	<.09	<.12	<.005	<.09	<.02	<.12	<.002
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN 19...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN 19-19	<.07	<.003	E.099	--	<.005	<.11	<.09	<.12	<.005	<.09	<.02	<.12	<.002
19...	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	<.2	--	--	--	--	--	--	--	--	--
JUL 31...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL 31-31	<.07	<.003	E.006	--	<.005	<.11	<.09	<.12	<.005	<.09	<.02	E.04	<.002
31...	--	--	--	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--	--	--	--

290042096331401 -- Lk Texana Site DC

Date	ETHAL- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)	ETHION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39399)	ETHO- PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	FEN- URON, WATER, FLTRD, GF 0.7U REC (UG/L) (49297)	FLUO- METURON WATER, FLTRD, GF 0.7U REC (UG/L) (38811)	FONOFOS WATER DISS REC (UG/L) (04095)	LINDANE DIS- SOLVED (UG/L) (39341)	LINURON WATER, FLTRD, GF 0.7U REC (UG/L) (38478)	LIN- URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA- THION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39531)	MALA- THION, DIS- SOLVED (UG/L) (39532)	MCPA, WATER, FLTRD, GF 0.7U REC (UG/L) (38482)	MCPB, WATER, FLTRD, GF 0.7U REC (UG/L) (38487)
MAR 06...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR 06-06	<.009	--	<.005	<.07	<.06	<.003	<.004	<.06	<.035	--	<.027	<.20	<.26
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN 19...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN 19-19	<.009	--	<.005	<.07	E.06	<.003	<.004	<.06	<.035	--	<.027	<.20	<.26
19...	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	<.2	--	--	--	--	--	--	--	<.2	--	--	--
JUL 31...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL 31-31	<.009	--	<.005	<.07	.08	<.003	<.004	<.06	<.035	--	.070	<.20	<.26
31...	--	--	--	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--	--	--	--

290042096331401 -- Lk Texana Site DC

Date	METHIO- CARB, WATER, FLTRD, GF 0.7U REC (UG/L) (38501)	METH- OMYL, WATER, FLTRD, GF 0.7U REC (UG/L) (49296)	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)	NEB- URON, WATER, FLTRD, GF 0.7U REC (UG/L) (49294)	NORFLUR AZON, WATER, FLTRD, GF 0.7U REC (UG/L) (49293)	ORY- ZALIN, WATER, FLTRD, GF 0.7U REC (UG/L) (49292)	OXAMYL, WATER, FLTRD, GF 0.7U REC (UG/L) (38866)	P,P' DDE DISSOLV (UG/L) (34653)	PARA- THION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39541)	PARA- THION, DIS- SOLVED (UG/L) (39542)
MAR 06...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR 06-06	<.07	<.58	.029	<.006	<.002	<.007	<.07	<.04	<.28	<.16	<.003	--	<.010
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN 19...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN 19-19	<.07	<.22	.352	<.006	.033	<.007	<.07	<.04	<.28	<.16	<.003	--	<.010
19...	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--	<.2	--
JUL 31...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL 31-31	<.07	<.22	.083	<.006	<.002	<.007	<.07	<.04	<.28	<.16	<.003	--	<.010
31...	--	--	--	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--	--	--	--

08164525 Lake Texana near Edna, TX--Continued

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

290042096331401 -- Lk Texana Site DC

Date	METHYL PARA-THION, TOT. IN BOTTOM MATL. (UG/KG) (39601)	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)	PIC-LORAM, WATER, FLTRD, GF 0.7U REC (UG/L) (49291)	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)	PRO-PHAM, WATER, FLTRD, GF 0.7U REC (UG/L) (49236)	PRO-POXUR, WATER, FLTRD, GF 0.7U REC (UG/L) (38538)	PRON-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)
MAR													
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR													
06-06	--	<.006	<.004	<.022	<.011	<.09	<.01	<.010	<.011	<.02	<1.40	<.12	<.004
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN													
19...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN													
19-19	--	<.006	<.004	<.022	<.011	<.09	<.01	<.010	<.011	<.02	<1.50	<.64	<.004
19...	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	<.2	--	--	--	--	--	--	--	--	--	--	--	--
JUL													
31...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL													
31-31	--	.012	<.004	<.022	<.011	<.09	<.01	<.010	<.011	<.02	<.22	<.12	<.004
31...	--	--	--	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--	--	--	--

290042096331401 -- Lk Texana Site DC

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-CLOPYR, WATER, FLTRD, GF 0.7U REC (UG/L) (49235)	TRI-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)
MAR								
06...	--	--	--	--	--	--	--	--
MAR								
06-06	.008	<.02	<.034	<.02	<.005	<.002	<.07	<.009
06...	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--
JUN								
19...	--	--	--	--	--	--	--	--
JUN								
19-19	.016	E.01	<.034	<.02	<.005	<.002	<.07	<.009
19...	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--
JUL								
31...	--	--	--	--	--	--	--	--
JUL								
31-31	<.005	E.04	<.034	<.02	<.005	<.002	<.07	<.009
31...	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--

08164525 Lake Texana near Edna, TX--Continued

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

285940096312101 -- Lk Texana 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)	2,4,5-T DISSOLVED (UG/L) (39742)	2,4-D, DISSOLVED (UG/L) (39732)	2,4-DB WATER, FLTRD, GF 0.7U REC (UG/L) (38746)	2,6-DIETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	SILVEX, DISSOLVED (UG/L) (39762)	3HYDRXY CARBOFURAN WAT,FLT GF 0.7U REC (UG/L) (49308)
MAR													
06...	1050	1.00	188	7.7	11.5	10.3	93	--	--	--	--	--	--
MAR													
06-06	1050	--	--	--	--	--	--	<.07	<.19	<.25	<.006	<.03	<.11
06...	1052	10.0	179	7.7	11.0	10.3	92	--	--	--	--	--	--
06...	1054	20.0	177	7.7	11.0	10.1	90	--	--	--	--	--	--
06...	1056	26.0	176	7.6	11.0	9.9	89	--	--	--	--	--	--
JUN													
19...	1129	1.00	249	7.7	29.0	5.9	77	--	--	--	--	--	--
JUN													
19-19	1129	--	--	--	--	--	--	<.07	<.16	<.25	<.006	<.03	<.13
19...	1131	10.0	247	7.6	28.5	5.6	72	--	--	--	--	--	--
19...	1133	23.0	234	7.6	28.5	4.4	57	--	--	--	--	--	--
19...	1133	23.0	--	--	--	--	--	--	--	--	--	--	--
JUL													
31...	0920	1.00	160	7.2	30.5	4.6	61	--	--	--	--	--	--
JUL													
31-31	0920	--	--	--	--	--	--	<.07	<.16	<.25	E.001	<.03	<.11
31...	0922	10.0	159	7.2	30.0	4.2	55	--	--	--	--	--	--
31...	0924	20.0	161	7.0	30.0	2.3	30	--	--	--	--	--	--
31...	0926	25.0	161	7.0	30.0	2.1	28	--	--	--	--	--	--

285940096312101 -- Lk Texana Site EC

Date	DNOC WAT,FLT GF 0.7U REC (UG/L) (49299)	ACETOCHLOR, WATER FLTRD REC (UG/L) (49260)	ACIFLUORFEN WATER, FLTRD, GF 0.7U REC (UG/L) (49315)	ALACHLOR, WATER, DISS, REC, (UG/L) (46342)	ALDICARB, WATER, FLTRD, GF 0.7U REC (UG/L) (49312)	ALDICARB SULFONE WAT,FLT GF 0.7U REC (UG/L) (49313)	ALDICARB SULFOXIDE, WAT,FLT GF 0.7U REC (UG/L) (49314)	ALPHA BHC DISSOLVED (UG/L) (34253)	ATRAZINE, WATER, DISS, REC (UG/L) (39632)	METHYL AZINPHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)	BENFLURALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)	BENTAZON, WATER, FLTRD, GF 0.7U REC (UG/L) (38711)	BROMACIL, WATER, DISS, REC (UG/L) (04029)
MAR													
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR													
06-06	<.25	<.009	<.05	.019	<.21	<.20	<.27	<.005	.560	<.050	<.010	<.05	<.09
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN													
19...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN													
19-19	<.25	.087	<.05	.459	<.21	<.20	<.27	<.005	1.18	<.050	<.010	E.03	<.23
19...	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL													
31...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL													
31-31	<.25	<.006	<.05	.036	<.21	<.20	<.27	<.005	.160	<.050	<.010	<.05	<.09
31...	--	--	--	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--	--	--	--

08164525 Lake Texana near Edna, TX--Continued

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

285940096312101 -- Lk Texana Site EC

Date	BROMOXYNIL WATER, FLTRD, GF 0.7U REC (UG/L) (49311)	BUTYLATE, WATER, DISS, REC (UG/L) (04028)	CARBARYL, WATER, FLTRD, GF 0.7U REC (UG/L) (49310)	CARBARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBOFURAN, WATER, FLTRD, GF 0.7U REC (UG/L) (49309)	CARBOFURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	TRITHION, TOTAL IN BOTTOM MATERIAL (UG/KG) (39787)	CHLOROTHALONIL, WAT,FLT GF 0.7U REC (UG/L) (49306)	CHLORPYRIFOS DISSOLVED (UG/L) (38933)	PERMETHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	CLOPYRALID, WATER, FLTRD, GF 0.7U REC (UG/L) (49305)	CYANAZINE, WATER, DISS, REC (UG/L) (04041)	DACTHAL MONOACID, WAT,FLT GF 0.7U REC (UG/L) (49304)
MAR													
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR													
06-06	<.07	<.002	<.080	<.041	<.28	<.020	--	<.25	<.005	<.006	<.42	<.018	<.19
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN													
19...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN													
19-19	<.07	<.002	<.080	<.041	<.15	<.020	--	<.25	<.005	<.006	<.42	<.018	<.07
19...	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	<.2	--	--	--	--	--	--
JUL													
31...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL													
31-31	<.07	<.002	<.080	<.041	<.15	<.020	--	<.25	<.005	<.006	<.42	<.018	<.07
31...	--	--	--	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--	--	--	--

285940096312101 -- Lk Texana Site EC

Date	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	DEETHYL ATRAZINE, WATER, DISS, REC (UG/L) (04040)	DIAZINON, TOTAL IN BOTTOM MATERIAL (UG/KG) (39571)	DIAZINON, DISSOLVED (UG/L) (39572)	DICAMBA WATER, FLTRD, GF 0.7U REC (UG/L) (38442)	DICHLOBENIL, WATER, FLTRD, GF 0.7U REC (UG/L) (49303)	DICHLORPROP, WATER, FLTRD, GF 0.7U REC (UG/L) (49302)	DIELDRIN DISSOLVED (UG/L) (39381)	DINOSEB WATER, FLTRD, GF 0.7U REC (UG/L) (49301)	DISULFOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	DIURON, WATER, FLTRD, GF 0.7U REC (UG/L) (49300)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	ETHALFLURALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)
MAR													
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR													
06-06	<.003	E.034	--	<.005	<.11	<.09	<.12	<.005	<.09	<.02	<.12	<.002	<.009
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN													
19...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN													
19-19	<.003	E.127	--	<.005	<.11	<.09	<.12	<.005	<.09	<.02	E.05	<.002	<.009
19...	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	<.2	--	--	--	--	--	--	--	--	--	--
JUL													
31...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL													
31-31	<.003	E.014	--	<.005	<.11	<.09	<.12	<.005	<.09	<.02	<.12	<.002	<.009
31...	--	--	--	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--	--	--	--

08164525 Lake Texana near Edna, TX--Continued

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

285940096312101 -- Lk Texana Site EC

Date	ETHION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39399)	ETHO- PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	FEN- URON, WATER, FLTRD, GF 0.7U REC (UG/L) (49297)	FLUO- METURON WATER, FLTRD, GF 0.7U REC (UG/L) (38811)	FONOFOS WATER DISS REC (UG/L) (04095)	LINDANE DIS- SOLVED (UG/L) (39341)	LINURON WATER, FLTRD, GF 0.7U REC (UG/L) (38478)	LIN- URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA- THION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39531)	MALA- THION, DIS- SOLVED (UG/L) (39532)	MCPA, WATER, FLTRD, GF 0.7U REC (UG/L) (38482)	MCPB, WATER, FLTRD, GF 0.7U REC (UG/L) (38487)	METHIO- CARB, WATER, FLTRD, GF 0.7U REC (UG/L) (38501)
MAR													
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR													
06-06	--	<.005	<.07	<.06	<.003	<.004	<.06	<.035	--	<.027	<.20	<.26	<.07
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN													
19...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN													
19-19	--	<.005	<.07	.19	<.003	<.004	<.06	<.035	--	<.027	<.20	<.26	<.07
19...	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	<.2	--	--	--	--	--	--	--	<.2	--	--	--	--
JUL													
31...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL													
31-31	--	<.005	<.07	.17	<.003	<.004	<.06	<.035	--	.103	<.20	<.26	<.07
31...	--	--	--	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--	--	--	--

285940096312101 -- Lk Texana Site EC

Date	METH- OMYL, WATER, FLTRD, GF 0.7U REC (UG/L) (49296)	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)	NEB- URON, WATER, FLTRD, GF 0.7U REC (UG/L) (49294)	NORFLUR AZON, WATER, FLTRD, GF 0.7U REC (UG/L) (49293)	ORY- ZALIN, WATER, FLTRD, GF 0.7U REC (UG/L) (49292)	OXAMYL, WATER, FLTRD, GF 0.7U REC (UG/L) (38866)	P,P' DDE DISSOLV (UG/L) (34653)	PARA- THION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39541)	PARA- THION, DIS- SOLVED (UG/L) (39542)	METHYL PARA- THION, TOT. IN BOTTOM MATL. (UG/KG) (39601)
MAR													
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR													
06-06	<1.01	.054	<.006	<.002	<.007	<.07	<.04	<.28	<.16	<.003	--	<.010	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN													
19...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN													
19-19	<.22	.568	<.006	.094	<.007	<.07	<.04	<.42	<.16	<.003	--	<.010	--
19...	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	<.2	--	<.2
JUL													
31...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL													
31-31	<.22	.201	<.006	.004	<.007	<.07	<.04	<.28	<.16	<.003	--	<.010	--
31...	--	--	--	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--	--	--	--

08164525 Lake Texana near Edna, TX--Continued

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

285940096312101 -- Lk Texana Site EC

Date	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)	PIC-LORAM, WATER, FLTRD, GF 0.7U REC (UG/L) (49291)	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)	PRO-PHAM, WATER, FLTRD, GF 0.7U REC (UG/L) (49236)	PRO-POXUR, WATER, FLTRD, GF 0.7U REC (UG/L) (38538)	PRON-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	SI-MAZINE, WATER, DISS, REC (UG/L) (04035)
MAR													
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR													
06-06	<.006	<.004	<.022	<.011	<.09	<.01	<.010	<.011	<.02	<1.99	<.12	<.004	.011
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN													
19...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN													
19-19	<.006	<.004	<.022	<.011	<.09	<.01	<.010	<.011	<.02	<4.00	<.26	<.004	.018
19...	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL													
31...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL													
31-31	.016	<.004	<.022	<.011	<.09	<.01	<.010	<.011	<.02	<.58	<.12	<.004	.017
31...	--	--	--	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--	--	--	--

285940096312101 -- Lk Texana 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-CLOPYR, WATER, FLTRD, GF 0.7U REC (UG/L) (49235)	TRI-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)
MAR							
06...	--	--	--	--	--	--	--
MAR							
06-06	E.01n	<.034	<.02	<.005	<.002	<.07	<.009
06...	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--
JUN							
19...	--	--	--	--	--	--	--
JUN							
19-19	E.01	<.034	<.02	<.005	<.002	E.03	<.009
19...	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--
JUL							
31...	--	--	--	--	--	--	--
JUL							
31-31	E.03	<.034	<.02	<.005	<.002	<.07	<.009
31...	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--

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

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

08164600 Garcitas Creek near Inez, TX

LOCATION.--Lat 28°53'28", long 96°49'08", Victoria County, Hydrologic Unit 12100402, at right downstream end of bridge on U.S. Highway 59 access road, 0.3 mi upstream from Southern Pacific Railroad bridge, 2.0 mi southwest of Inez, and 3.6 mi upstream from Casa Blanca Creek.

DRAINAGE AREA.--91.7 mi^2.

PERIOD OF RECORD.--Jun. 1970 to current year.
Water-quality records.--Chemical data: Apr. 1965 to Aug. 1988. Biochemical data: Apr. 1965 to Aug. 1988. Pesticide data: Jul. 1970 to Jul. 1981.

REVISED RECORDS.--WDR TX-94-3: 1992-93.

GAGE.--Water-stage recorder. Datum of gage is 29.16 ft above NGVD of 1929. Satellite telemeter at station.

REMARKS.--Records good except those for estimated daily discharges, which are fair. No known regulation or diversions. An undetermined amount of return water from irrigation enters the stream above this station. No flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage during period 1903-70, 24.5 ft Oct. 26, 1960. In 1929, a flood nearly as high as the 1960 flood occurred, and a flood in Sept. 1967 reached a stage of 23.4 ft, from information by local resident.

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	4.6	3.8	4.3	4.0	2.0	2.1	1.2	1.1	e0.32	71	4.2	0.52
2	4.5	3.7	364	3.8	2.0	2.2	1.1	1.1	e0.25	151	3.7	0.49
3	4.4	3.5	2390	3.5	2.1	1.8	1.0	1.1	e0.19	217	3.4	0.45
4	4.7	3.3	623	3.5	2.1	1.7	0.93	1.1	e0.14	52	3.2	0.47
5	12	3.1	146	4.0	2.2	1.8	0.86	1.0	e0.10	21	3.0	0.40
6	129	3.1	82	4.2	2.3	1.9	1.0	0.85	e0.07	11	2.8	0.36
7	96	2.9	52	3.8	2.3	2.0	1.0	0.64	e0.04	6.5	2.5	0.33
8	36	2.9	40	3.6	2.2	1.9	489	0.61	e0.03	4.3	2.3	0.48
9	20	4.3	53	3.4	2.2	1.9	291	0.57	e0.02	3.1	2.3	6.5
10	13	3.7	56	3.3	2.0	1.6	60	0.47	e0.01	2.6	2.5	2.6
11	11	3.2	33	3.2	2.0	1.8	27	e0.39	e0.01	3.4	2.4	1.3
12	19	3.0	511	3.0	2.1	1.9	14	e0.32	e0.0	5.2	2.0	0.80
13	251	2.9	577	2.9	2.1	1.7	8.8	e0.25	e0.0	3.1	1.9	0.69
14	337	3.8	111	2.8	2.1	1.6	6.2	e0.19	e0.0	340	2.0	0.53
15	90	4.6	57	2.6	2.2	1.7	4.8	e0.12	e0.0	718	2.3	2.7
16	44	638	46	2.6	2.2	1.7	3.9	e0.07	e0.0	2150	2.0	70
17	26	1260	68	2.6	2.2	1.5	3.4	e0.58	e0.0	3640	1.6	30
18	18	299	49	2.5	2.1	1.6	2.9	1.2	e0.0	691	1.5	17
19	13	99	30	2.6	2.2	1.6	2.5	0.95	e0.0	122	1.4	15
20	10	53	20	2.4	2.1	1.5	2.2	0.58	e0.0	64	1.2	9.9
21	8.2	33	15	2.4	2.1	1.1	2.0	e0.39	e0.0	41	1.2	5.3
22	6.9	23	13	2.5	1.9	0.99	1.9	e0.32	e0.0	30	1.3	3.4
23	6.0	18	11	2.6	2.0	0.94	1.8	0.25	e0.0	21	1.4	2.2
24	5.5	14	8.7	2.5	1.8	1.0	1.7	e0.22	e0.45	16	1.2	1.6
25	4.9	10	7.5	2.3	2.0	1.2	1.5	e0.17	e0.48	13	0.97	1.2
26	4.5	8.2	6.5	2.3	2.1	1.1	1.5	e0.12	e0.39	11	0.86	0.85
27	4.4	7.0	6.0	2.2	1.7	1.2	1.4	e0.08	0.73	9.9	0.75	0.62
28	4.4	6.1	5.5	2.3	1.8	1.2	1.4	e0.05	e0.35	8.3	0.66	0.51
29	4.3	5.4	4.9	2.3	---	1.2	1.3	e0.33	2.2	6.8	0.62	0.45
30	4.1	4.7	4.5	2.2	---	1.8	1.1	0.49	84	5.7	0.54	0.38
31	3.9	---	4.2	2.3	---	2.2	---	e0.39	---	4.8	0.51	---
MEAN	38.72	84.34	174.2	2.910	2.075	1.595	31.28	0.516	2.993	272.4	1.878	5.901
MAX	337	1260	2390	4.2	2.3	2.2	489	1.2	84	3640	4.2	70
MIN	3.9	2.9	4.2	2.2	1.7	0.94	0.86	0.05	0.00	2.6	0.51	0.33
AC-FT	2380	5020	10710	179	115	98	1860	32	178	16750	115	351

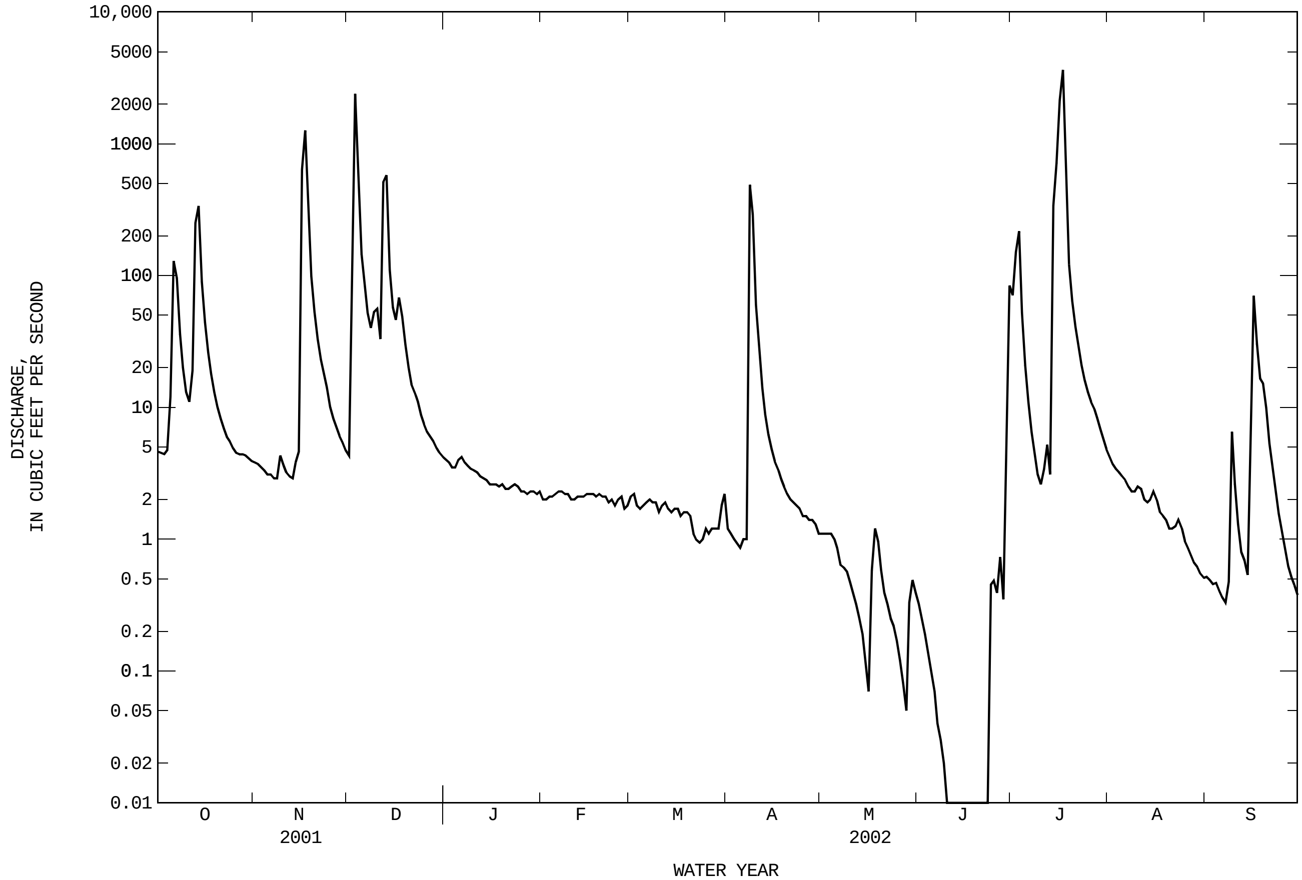
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1970 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	68.25	45.59	40.46	39.89	47.99	41.87	78.32	104.7	109.7	27.36	8.935	81.62
MAX	695	541	263	220	558	578	658	503	745	272	89.8	789
(WY)	1995	1999	1977	1992	1992	1997	1991	1979	1981	2002	2001	1978
MIN	0.000	0.000	0.006	0.022	0.14	0.48	0.25	0.045	0.000	0.003	0.056	0.000
(WY)	1990	1990	1990	1990	1990	1996	1996	1996	1990	2001	1988	1988

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1970 - 2002	
ANNUAL MEAN	71.83		52.19		57.92	
HIGHEST ANNUAL MEAN					144	1992
LOWEST ANNUAL MEAN					2.65	1989
HIGHEST DAILY MEAN	5960	Sep 1	3640	Jul 17	13100	Oct 19 1994
LOWEST DAILY MEAN	0.00	Jul 7	0.00	Jun 12	0.00	May 22 1971
ANNUAL SEVEN-DAY MINIMUM	0.00	Jul 7	0.00	Jun 12	0.00	May 26 1971
MAXIMUM PEAK FLOW			4560	Jul 17	c19700	Jun 12 1981
MAXIMUM PEAK STAGE			a21.52	Jul 17	a33.43	Oct 19 1994
ANNUAL RUNOFF (AC-FT)	52010		37790		41960	
10 PERCENT EXCEEDS	88		53		55	
50 PERCENT EXCEEDS	3.8		2.3		3.0	
90 PERCENT EXCEEDS	0.00		0.33		0.20	

e Estimated
c From rating curve extended above discharge measurement of 8,000 ft^3/s.
a From floodmark.

08164600 Garcitas Creek near Inez, TX--Continued



08164800 Placedo Creek near Placedo, TX

LOCATION.--Lat 28°43'30", long 96°46'07", Victoria County, Hydrologic Unit 12100402, on right bank at downstream end of bridge on Farm Road 616, 0.1 mi downstream from confluence of Lone Tree Creek and Arroyo Palo Alto, 1.2 mi upstream from Ninemile Creek, and 4.4 mi northeast of Placedo.

DRAINAGE AREA.--68.3 mi^2.

PERIOD OF RECORD.--Jun. 1970 to current year.
Water-quality records.--Chemical data: Oct. 1968 to Sept. 1979. Biochemical data: Oct. 1968 to Sept. 1979. Pesticide data: Oct. 1968 to Sept. 1979.

GAGE.--Water-stage recorder. Datum of gage is 5.58 ft above NGVD of 1929. Satellite telemeter at station.

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

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1930, 31.9 ft in Sept. 1967 and 30.4 ft in 1960 (probably Oct), from information by local resident.

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	0.61	2.0	13	1.9	0.97	0.97	0.57	0.92	0.44	215	1.2	0.34
2	0.60	2.5	725	1.7	0.93	0.95	0.59	0.89	0.40	477	1.2	0.41
3	0.59	2.5	983	1.6	0.96	0.81	0.55	0.90	0.40	503	1.1	0.35
4	0.62	2.1	175	1.6	0.96	0.73	0.52	0.88	0.38	70	0.96	0.36
5	14	2.1	62	14	0.97	0.79	0.53	0.83	0.35	19	19	0.35
6	168	1.8	31	10	1.0	0.82	0.55	0.76	0.33	7.3	7.2	0.33
7	55	1.7	18	4.0	0.98	0.81	0.66	0.72	0.32	3.3	2.2	0.31
8	16	1.9	28	2.3	0.92	0.78	373	0.66	0.32	1.9	1.0	0.52
9	5.6	12	53	1.8	0.94	0.80	285	0.63	0.31	1.5	0.85	0.56
10	2.1	6.6	32	1.6	0.87	0.67	43	0.62	0.29	1.5	0.76	0.92
11	2.8	2.5	34	1.4	0.81	0.69	17	0.58	0.29	1.0	0.70	0.65
12	63	1.3	65	1.3	0.83	0.75	8.4	0.56	0.53	0.80	0.80	0.44
13	784	0.76	63	1.3	0.87	0.69	4.7	0.63	0.70	0.65	0.75	0.88
14	553	0.92	32	1.3	0.88	0.68	3.4	0.64	0.45	0.56	0.71	0.61
15	85	4.2	17	1.3	0.90	0.69	3.0	0.57	0.40	8.6	0.77	0.94
16	30	1370	11	1.4	0.86	0.64	2.7	0.58	0.36	1380	0.78	422
17	13	838	12	1.4	0.87	0.63	2.6	1.1	0.34	1470	0.67	291
18	6.7	160	8.6	1.4	0.92	0.65	2.4	1.3	0.30	215	0.57	102
19	4.5	53	8.0	1.4	0.98	0.66	2.2	0.76	0.29	54	0.50	50
20	3.4	25	4.5	1.3	0.99	0.67	2.1	0.61	0.26	21	0.47	30
21	2.6	14	3.1	1.3	0.90	0.56	1.8	0.56	0.26	11	0.47	28
22	2.6	8.3	2.7	1.3	0.85	0.53	1.6	0.56	0.28	6.2	0.50	12
23	2.4	6.1	2.4	1.4	0.86	0.54	1.4	0.56	0.24	4.3	0.50	5.3
24	2.2	5.1	2.1	1.3	0.86	0.59	1.3	0.56	0.24	3.4	0.45	2.8
25	1.9	4.4	2.0	1.1	0.92	0.64	1.2	0.55	0.27	2.7	0.39	1.8
26	1.8	4.2	1.9	1.1	0.77	0.60	1.1	0.55	0.31	2.3	0.36	1.3
27	2.0	594	1.9	1.2	0.70	0.58	1.1	0.51	0.35	2.0	0.34	1.1
28	1.9	107	2.0	1.2	0.85	0.62	1.1	0.49	0.32	1.7	0.33	0.98
29	1.9	35	1.8	1.2	---	0.65	1.0	0.47	2.5	1.6	0.34	0.88
30	1.9	16	1.8	1.2	---	0.67	0.97	0.59	405	1.4	0.32	0.81
31	2.0	---	2.9	1.1	---	0.67	---	0.51	---	1.3	0.32	---
TOTAL	1831.72	3284.98	2399.7	67.4	25.12	21.53	766.04	21.05	417.23	4489.01	46.51	957.94
MEAN	59.09	109.5	77.41	2.174	0.897	0.695	25.53	0.679	13.91	144.8	1.500	31.93
MAX	784	1370	983	14	1.0	0.97	373	1.3	405	1470	19	422
MIN	0.59	0.76	1.8	1.1	0.70	0.53	0.52	0.47	0.24	0.56	0.32	0.31
AC-FT	3630	6520	4760	134	50	43	1520	42	828	8900	92	1900

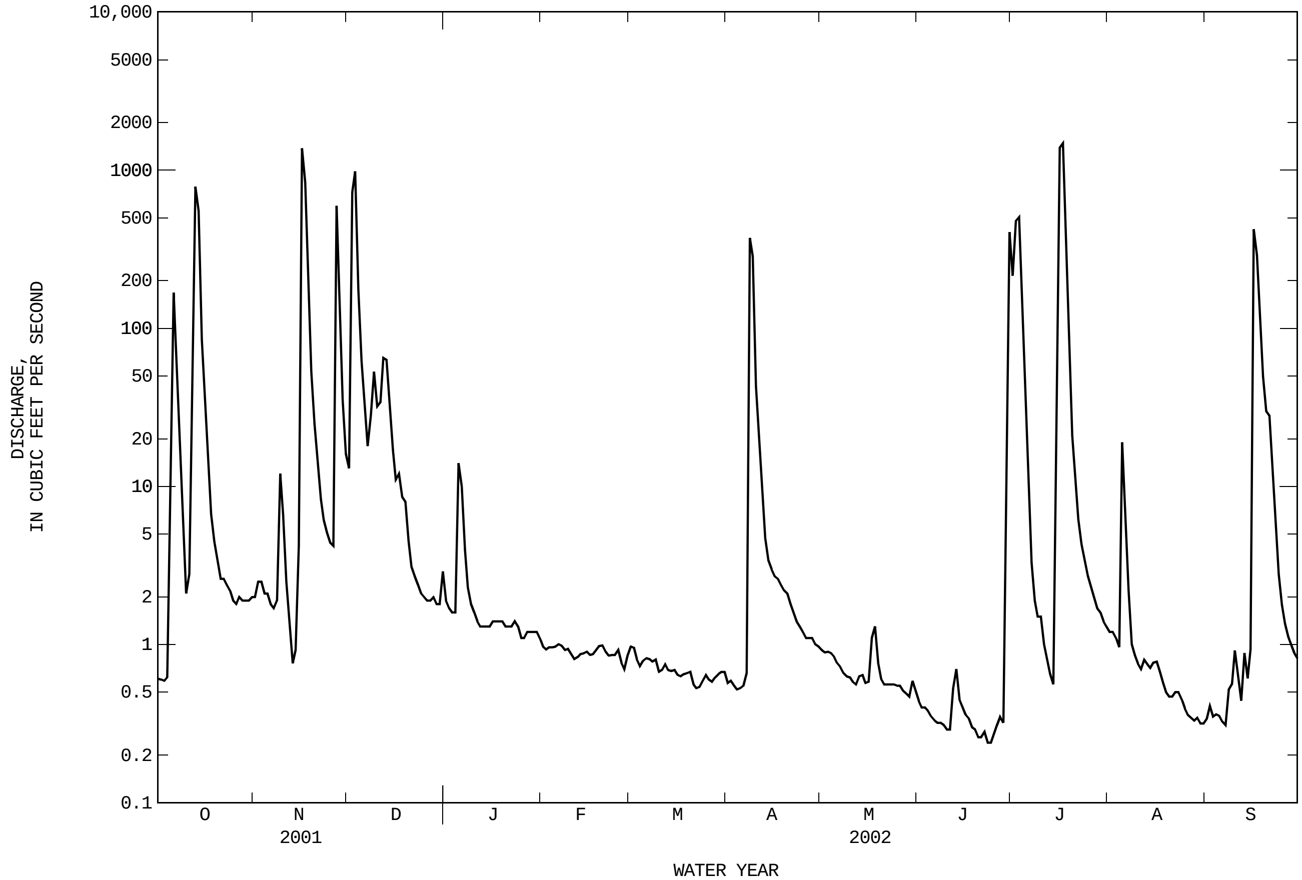
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1970 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	70.39	71.32	42.32	40.50	50.93	43.61	58.57	88.01	83.06	58.70	13.94	109.3
MAX	291	593	389	262	455	516	541	354	510	559	107	913
(WY)	1998	1999	1992	1991	1992	1997	1991	1972	1973	1990	1972	1978
MIN	0.004	0.021	0.015	0.052	0.002	0.086	0.019	0.17	0.000	0.031	0.012	0.013
(WY)	1990	1989	1990	1990	1994	1989	1989	1996	1989	1989	1988	1988

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1970 - 2002	
ANNUAL TOTAL	18769.81		14328.23			
ANNUAL MEAN	51.42		39.26		60.68	
HIGHEST ANNUAL MEAN					154	1992
LOWEST ANNUAL MEAN					1.20	1989
HIGHEST DAILY MEAN	3680	Sep 1	1470	Jul 17	11400	Nov 1 1981
LOWEST DAILY MEAN	0.00	Aug 16	0.24	Jun 23	0.00	Aug 12 1981
ANNUAL SEVEN-DAY MINIMUM	0.00	Aug 16	0.26	Jun 19	0.00	Jul 27 1982
MAXIMUM PEAK FLOW			3150	Jul 16	c18300	Oct 31 1981
MAXIMUM PEAK STAGE			22.76	Jul 16	31.62	Nov 13 1998
ANNUAL RUNOFF (AC-FT)	37230		28420		43960	
10 PERCENT EXCEEDS	53		34		44	
50 PERCENT EXCEEDS	0.88		1.1		1.5	
90 PERCENT EXCEEDS	0.10		0.40		0.14	

c From rating curve extened above discharge measurement of 5,840 ft^3/s.

08164800 Placedo Creek near Placedo, TX--Continued



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The U.S. Geological Survey collects limited streamflow data at sites other than continuous stream-gaging stations because the number of streams on which streamflow information is likely to be desired far exceeds the number of stream-gaging stations feasible to operate at one time. When limited streamflow data are collected on a systematic basis over a period of years for use in hydrologic analyses, the site at which the data are collected is called a partial-record station. In addition, discharge measurements are made at other sites not included in the partial-record program. These measurements are generally made in times of drought or flood to give better areal coverage of those events. The data collected for special reasons are called measurements at miscellaneous sites.

Streamflow data collected at partial-record stations where water-quality data other than observations of water temperature are not obtained are presented in two tables. The first is a table of discharge measurements at low-flow partial-record stations; the second is a table of annual maximum stage and (or) discharge at crest-stage stations. Discharge measurements made at miscellaneous sites for both low and high flows are given in a third table. Discharge measurements and water-quality data collected at partial-record stations are presented in downstream order in the section of this report entitled “Gaging-station records.”

Low-flow partial-record stations

Measurements of streamflow at low-flow partial-record stations that are not published in the gaging-station section are given in the following table. Most of the measurements of low flow were made during periods when streamflow was sustained primarily by ground-water discharge. These measurements, when correlated with the simultaneous discharge of a nearby stream where continuous records are available, will indicate the low-flow potential of the stream. The years listed in the column headed “Period of record” identifies the water years in which measurements were made at the same or at practically the same site.

Discharge measurements made at low-flow partial-record station during water year 2002

Station number	Station name	Location	Drainage area (mi^2)	Period of record	Measurements Date	Measurements Discharge (ft^3/s)
		Colorado River Basin				
08129500	Dove Creek Spring near Knickerbocker, TX	Lat 31º11'06", long 100º43'51", Irion County, at headquarters ranch house, 500 ft upstream from Dove Creek, 1.8 mi upstream from Stilson Dam on Dove Creek and 8.5 mi southwest of Knickerbocker.	--	1944-58✞, 1959-2002	10-26-01 12-14-01 02-19-02 04-10-02 06-03-02 08-01-02 09-17-02	4.14 5.08 4.25 4.51 3.83 4.97 4.12
08143900	Springs at Fort McKavett, TX	Lat 30º50'03", long 100º05'37", Menard County, 0.9 mi northwest of Fort McKavett at low-water crossing on Ranch Road 864.	--	1902, 1905, 1922, 1942, 1948-49, 1951-52, 1955-56, 1958-2002	10-04-01 12-11-01 01-23-02 03-14-02 05-02-02 06-24-02 08-15-02	12.5 13.0 14.0 13.0 12.0 9.95 8.54
08146500	San Saba Springs at San Saba, TX	Lat 31º11'44", long 98º42'42", San Saba County, 150 ft upstream from bridge on U.S. Highway 190 at San Saba and 0.8 mi east of courthouse.	--	1939, 1952, 1957, 1959-2002	10-03-01 12-05-01 01-16-02 03-18-02 06-18-02 08-13-02	7.18 7.34 6.95 11.2 9.61 9.45
08149400	South Llano River near Telegraph, TX	Lat 30º15'43", long 99º56'01", Edwards County, 3.7 mi upstream from Paint Creek, 5.7 mi south of Telegraph, and 18.7 mi southwest of Junction.	508	1939, 1952, 1956, 1959-2002	10-04-01 12-11-01 01-22-02 03-13-02 04-30-02 06-19-02 08-15-02	27.3 36.0 28.5 27.4 25.4 26.3 26.2
08149500	Seven Hundred Springs near Telegraph, TX	Lat 30º16'12", long 99º55'22", Edwards County, about 3 mi upstream from Paint Creek, about 5 mi south of Telegraph, and about 18 mi southwest of Junction.	--	1939, 1952, 1955-56, 1959-2002	10-04-01 12-11-01 01-22-02 03-13-02 04-30-02 06-19-02 08-14-02	22.8 19.6 24.0 19.8 25.3 28.9 18.1

✞ 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 of flood-profile definition. Gages at these stations usually consist of a device that will register the peak stage occurring between inspection of the gage. The years used in the column “Period of record” identify the years in which the annual maximum has been determined.

Annual maximum stage and (or) discharge during water year 2002

Station name and number	Location	Period of record	Water Year 2001 maximum			Period of record maximum		
			Date	Gage height (ft)	Discharge (ft^3/s)	Date	Gage height (ft)	Discharge (ft^3/s)
Lavaca River Basin								
Lavaca River at Hallettsville, TX 08163500	Lat 29º26’35”, long 96º56’41”, Lavaca County, at downstream side of bridge on U.S. Highway 77 in Hallettsville. Drainage area is 108 mi^2.	1939-92✞ 1993-2002	04-09-02	16.94	--	08-31-81	a/ 41.1	i/ 99,500

✞ Operated as a continuous-record station.
a/ From floodmark.
i/ From indirect measurement of peak flow.

Measurements of streamflow at points other than gaging stations or partial-record stations are given in the following table:

Discharge measurements made at miscellaneous sites during water year 2002

Station number	Tributary to	Location	Drainage area (mi^2)	Measured previously (water years)	Measurements	
					Date	Discharge (ft^3/s)
		Colorado River Basin				
Clear Creek near Menard, TX 08143950	San Saba River	Lat 30º54'13", long 99º55'27", Menard County, at bridge on U.S. Highway 190, about 9 mi west of Menard.	106	1984-2002	12-11-01	14.2
					01-25-02	13.1
					03-14-02	12.6
					05-02-02	11.1
					06-24-02	11.5
					08-15-02	11.0
Tanner Springs near Telegraph, TX 08149405	South Llano River	Lat 30º15'45", long 99º56'03", Edwards County, about 5.6 mi south of Telegraph, Kimble County, and 18.6 mi southwest of Junction at mouth.	--	1939, 1962, 1987-2002	10-04-01	11.3
					12-11-01	13.3
					01-22-02	11.2
					03-13-02	11.9
					04-30-02	12.6
					06-19-02	11.2
					08-15-02	13.1

✞ Operated as a continuous-record station.

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INDEX

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:

$$°F = (1.8 \times °C) + 32$$