Water Resources Data
Texas
Water Year 2003

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

By Susan C. Gandara

Water-Data Report TX-03-4

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

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

U.S. Department of the Interior
Gale A. Norton, Secretary

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2004

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PREFACE

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

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

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

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REPORT DOCUMENTATION PAGE

Form Approved
OMB No. 0704-0188

1. AGENCY USE ONLY *(Leave blank)*	2. REPORT DATE	3. REPORT TYPE AND DATES COVERED
	March 2004	Annual--Oct. 1, 2002, to Sept. 30, 2003

4. TITLE AND SUBTITLE
Water Resources Data--Texas, Water Year 2003, Volume 4
Colorado River, Lavaca River, and Intervening Coastal Basins

5. FUNDING NUMBERS

6. AUTHOR(S)
S.C. Gandara

7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)
U.S. Geological Survey, Water Resources Division
Texas District
8027 Exchange Dr.
Austin, TX 78754-4733

8. PERFORMING ORGANIZATION REPORT NUMBER
USGS-WDR-TX-03-4

9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES)
U.S. Geological Survey, Water Resources Division
Texas District
8027 Exchange Dr.
Austin, TX 78754-4733

10. SPONSORING / MONITORING AGENCY REPORT NUMBER
USGS-WDR-TX-03-4

11. SUPPLEMENTARY NOTES
Prepared in cooperation with Federal, State, and local agencies.

12a. DISTRIBUTION / AVAILABILITY STATEMENT
No restriction on distribution.
This report may be purchased from
National Technical Information Service
Springfield, VA 22161

12b. DISTRIBUTION CODE

13. ABSTRACT (Maximum 200 words)

Water-resources data for the 2003 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 64 gaging stations; stage and contents at 14 lakes and reservoirs; water quality at 29 gaging stations; and data for 13 partial-record stations comprised of 3 flood-hydrograph, 7 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.

15. NUMBER OF PAGES
403

16. PRICE CODE

17. SECURITY CLASSIFICATION OF REPORT	18. SECURITY CLASSIFICATION OF THIS PAGE	19. SECURITY CLASSIFICATION OF ABSTRACT	20. LIMITATION OF ABSTRACT
Unclassified	Unclassified	Unclassified	

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

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

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
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
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
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
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

Station name	Station number	Drainage area (mi^2)	Period of record (water years)
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
Wichita River at State Highway 25 near Kamay (d)	07312130	2,182	1996-2000
Beaver Creek Tributary near Crowell (e)	07312140	3.43	1966-74
Wolf Creek near Iowa Park (e)	07312300	8.5	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
Sabine River near Longview (d)	08020500	2,947	1904-07, 1924-33
Rabbit Creek at Kilgore (d)	08020700	75.80	1964-77

Station name	Station number	Drainage area (mi^2)	Period of record (water years)
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
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
Angelina River at Horger (d)	08039500	3,486	1928-51, 1967-73
Little Sandy Creek Tributary near Jasper (e)	08039900	0.46	1967-74

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

Station name	Station number	Drainage area (mi^2)	Period of record (water years)
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
Trinity River near Wilmer (d)	08057448	6,387	1998-2002
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
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
Brushy Creek near Onalaska (d)	08066150	29.1	1966-70
Rocky Creek near Onalaska (e)	08066180	40.6	1966-73

Station name	Station number	Drainage area (mi^2)	Period of record (water years)
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 Whiteoak 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
Sims Bayou at Houston (d)	08075500*	63.0	1953-95
Berry Bayou at Gilpin Street, Houston (e)	08075550	2.87	1965-84
Berry Bayou Tributary at Globe Street, Houston (e)	08075600	1.58	1965-72
Berry Bayou at Galveston Road, Houston (e)	08075700	4.86	1965-72

Station name	Station number	Drainage area (mi^2)	Period of record (water years)
Hunting Bayou Tributary at Cavalcade Street, Houston (e)	08075750	1.20	1965-72
Hunting Bayou at Falls Street, Houston (e)	08075760	2.75	1964-84
Halls Bayou at Deertrail Street at Houston (e)	08076200	8.69	1965-84
Carpenters Bayou 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
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
Paint Creek near Haskell (d)	08085000	914	1950-51
Humphries Draw near Haskell (e)	08085300	3.51	1965-77

Station name	Station number	Drainage area (mi^2)	Period of record (water years)
Clear Fork Brazos River at Crystall Falls (d)	08086000	4,323	1922-29
Hubbard Creek near Sedwick (d)	08086015	128	1964-66
Hubbard Creek at Highway 380 near Moran (e)	08086020	152	1963-76
Deep Creek near Putnam (e)	08086030	33.8	1963-66
Brushy Creek near Putnam (e)	08086040	27.6	1963-66
Mexia Creek near Putnam (e)	08086045	67.0	1963-66
Hubbard Creek near Albany (d)	08086100	454	1962-75
Salt Prong Hubbard Creek below Lake McCarty near Albany (e)	08086110	45.5	1963-66
Salt Prong Hubbard Creek at U.S. 380 near Albany (d)	08086120	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
Bosque River near Waco (d)	08095600*	1,656	1960-82
Box Branch at Robinson (e)	08096550	0.34	1965-73

Station name	Station number	Drainage area (mi^2)	Period of record (water years)
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
Leon River near De Leon (d)	08099100*	479.0	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
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

Station name	Station number	Drainage area (mi^2)	Period of record (water years)
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
Colorado river near Cuthburt (d)	08120700	3,912	1965-2002
Morgan Creek near Westbrook (d)	08121500	273	1954-63
Graze Creek near Westbrook (d)	08122000	21.70	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
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

Station name	Station number	Drainage area (mi²)	Period of record (water years)
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)	08155370	0.12	1982-84
West Bouldin Creek at Riverside Drive, Austin (e)	08155550	3.12	1976-82
Shoal Creek at Steck Avenue, Austin (e)	08156650	2.79	1975-82
Shoal Creek at Northwest Park at Austin (d)	08156700	6.52	1975-84
Shoal Creek at White Rick Drive, Austin (e)	08156750	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
Fox Branch near Oak Hill (e)	08158900	0.12	1965-73

Station name	Station number	Drainage area (mi^2)	Period of record (water years)
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	1939-65 1966-2002
Leona River near Divot (d)	08204500	565	1924-29
Frio River at Calliham (d)	08207000	5,491	1925-26, 1932-81
Rutledge Hollow Creek 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

Station name	Station number	Drainage area (mi^2)	Period of record (water years)
Nueces River below Mathis (d)	08211100	16,726	1966-67
Rincon Bayou Channel near Calallen (d)	08211503	N/A	1996-2000
Pintas Creek Tributary near Banquete (e)	08211550	3.28	1966-74
Hamon Creek near Freer (e)	08211600	0.73	1965-73
San Diego Creek at Alice (d)	08211800	319	1964-89
Lake Alice at Alice (e)	08211850	150	1965-86
San Fernando Creek near Alice (d)	08212000	518	1962-63
North 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

Station name	Station number	Drainage area (mi^2)	Period of record (water years)
Limpia Creek below Fort Davis (d)	08431800	227	1962-77
Limpia Creek near Fort Davis (d)	08432000	303	1925-32
Toyah Creek below Toyah Lake near Pecos (d)	08434000	3,709	1939-51
Grandfalls-Big Valley Canal near Barstow (d)	08435000	N/A	1922-26, 1939-57, 1964-76
Pecos River below Barstow (d)	08435500	25,980	1939-41
Toronto Creek near Alpine (d)	08435600	27.90	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

Station name	Station number	Drainage area (mi^2)	Period of record (water years)
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
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
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 Fork Wichita River at Ross Ranch near Guthrie	07311790	499	SC	1971-79,
			Cl	1988-97,
			S	1978-79
Beaver Creek near Electra	07312200	652	SC,T	1969-70
				1996-2002
Wichita River at State Highway 25 near Kamay	07312130	2,182	SC, T	1996-2002
Wichita River at Wichita Falls	07312500	3,140	SC, T	1981-89,
				1996-2002
Wichita River near Charlie	07312700	3,439	SC, T	1967-81,
				1996-2002
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

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

Station name	Station number	Drainage area (mi^2)	Type of record	Period of record (water years)
Clear Fork Trinity River at Fort Worth	08047500	518	SC, pH, Cl	1949-52,
			T	1948-62
Village Creek at Everman	08048970	84.5	SC, pH, T, DO	1990
Lake Arlington at Arlington	08049200	143	SC, pH, T, DO	1989-2002
Elm Fork Trinity River SWS # 6-0 near Muenster	08050200	0.77	S	1957-66
Elm Fork Trinity River near Muenster	08050300	46	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

Station name	Station number	Drainage area (mi^2)	Type of record	Period of record (water years)
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
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
				1996-2002
McDonald Creek near Post	08080540	103	SC, T	1964-78
Salt Fork Brazos River near Peacock	08081000	4,619	SC, T	1950-51,
				1965-86
Croton Creek near Jayton	08081200	290	SC, T	1961-80
Salt Croton Creek near Aspermont	08081500	64.30	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
				1996-2002
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

Station name	Station number	Drainage area (mi^2)	Type of record	Period of record (water years)
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
Brazos River at Morris Sheppard Dam near Graford	08088600	23,596	SC	1942-91,
			T	1950-55,
				1966-91
Brazos River near Dennis	08090800	25,237	SC, T	1971-95
Brazos River at Whitney Dam near Whitney	08092600	27,189	SC, T	1947-97
Aquilla Creek above Aquilla	08093360	255	SC, T	1980-83
Aquilla Creek near Aquilla	08093500	308	SC, T	196066,
				1968-82
Bosque River near Waco	08095600	1,656	SC, T	1998-2002
Brazos River near Highbank	08098290	30,436	T	1968-84
Leon River near Eastland	08098500	235	SC, T	1950-53
Leon River near Hasse	08099500	1,261	SC, T	1980-82,
				1990-97
Leon River near Belton	08102500	3,542	T	1957-72
South Fork Rocky Creek near Briggs	08103900	33.30	S	1963-65
Lampasas River at Youngsport	08104000	1,240	SC, T	1961-64
Little River near Little River	08104500	5,228	SC, T	1965-73,
				1980-82
Little River 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	45,107	S	1966-86,
			SC	1942-95,
			T	1951-95
Brazos River near Rosharon	08116650	45,399	SC, T	1969-80
Brazos River at Harris Reservoir near Angleton	08116700	44,000	SC	1962-77,
			T	1967-77
Brazos River at Brazoria Reservoir near Brazoria	08117200	44,000	SC	1962-77,
			T	1967-77
San Bernard River near Boling	08117500	727	SC, T	1978-81
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

Station name	Station number	Drainage area (mi^2)	Type of record	Period of record (water years)
Colorado River near Cuthbert	08120700	3,912	SC, T	1965-99
				2001-02
Morgan Creek near Westbrook	08121500	273	T	1954-55
Graze Creek near Westbrook	08122000	21.70	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
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

Station name	Station number	Drainage area (mi^2)	Type of record	Period of record (water years)
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
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, 2003

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 64 gaging stations; stage and contents at 14 lakes and reservoirs; and water quality at 29 gaging stations. Also included are data for 13 partial-record stations comprised of 3 flood-hydrograph, 7 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-03-4.” 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 2003 are:

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

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

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

SUMMARY OF HYDROLOGIC CONDITIONS

Precipitation

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

Streamflow across the State averaged normal during water year 2003.

Conservation storage in 77 selected reservoirs throughout the State, with a combined conservation capacity of 34,485,000 acre-feet, remained at 77 percent from the end of September 2002 to the end of September 2003. Records from these reservoirs indicate that storage increased in 25, decreased in 48, 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

Monthly mean streamflow was normal in most streams in Texas during the 2003 water year. Comparisons of monthly mean and annual mean discharges in the 2003 water year, with median values for the period 1971-2000, were made for the following four representative index stations in Texas: the Neches River near Rockland (08033500) in southeastern Texas, the North Bosque River near Clifton (08095000) in east central Texas; the North Concho River near Carlsbad (08134000) in west central Texas, and the Guadalupe River near Spring Branch (08167500) in south central Texas (fig. 2).

Annual mean streamflow for the North Concho River near Carlsbad was 3.48 ft^3/s for the 2003 water year, or 170 percent of 2.05 ft^3/s for the reference period 1971-2000. The 2003 water year monthly mean discharges for the North Concho River near Carlsbad were above the normal range (greater than 75 percent of the median monthly discharge for the reference period) during the months of October and June, and below the normal range (less than 25 percent of the median monthly discharge for the reference period) during the months of January,

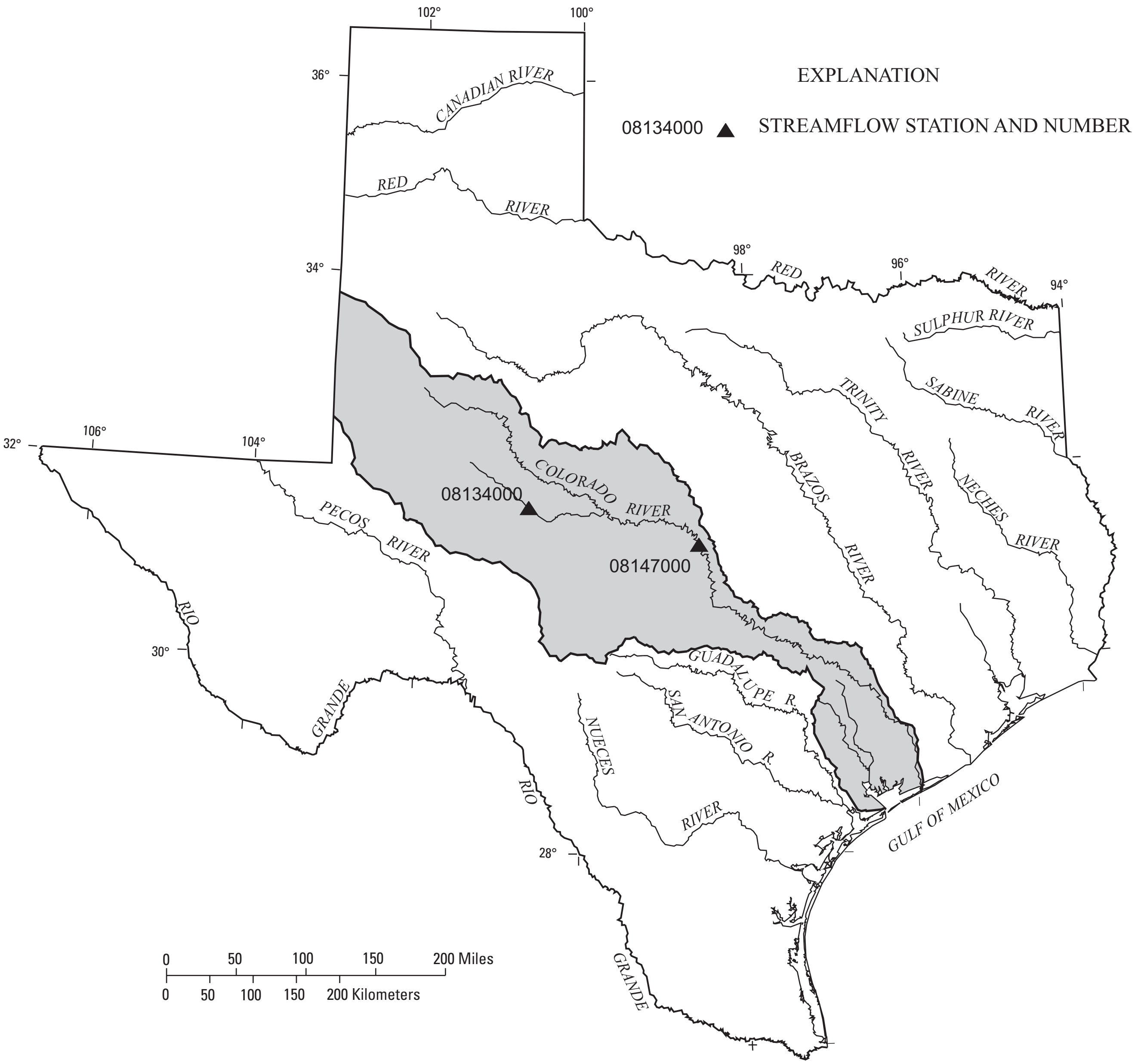
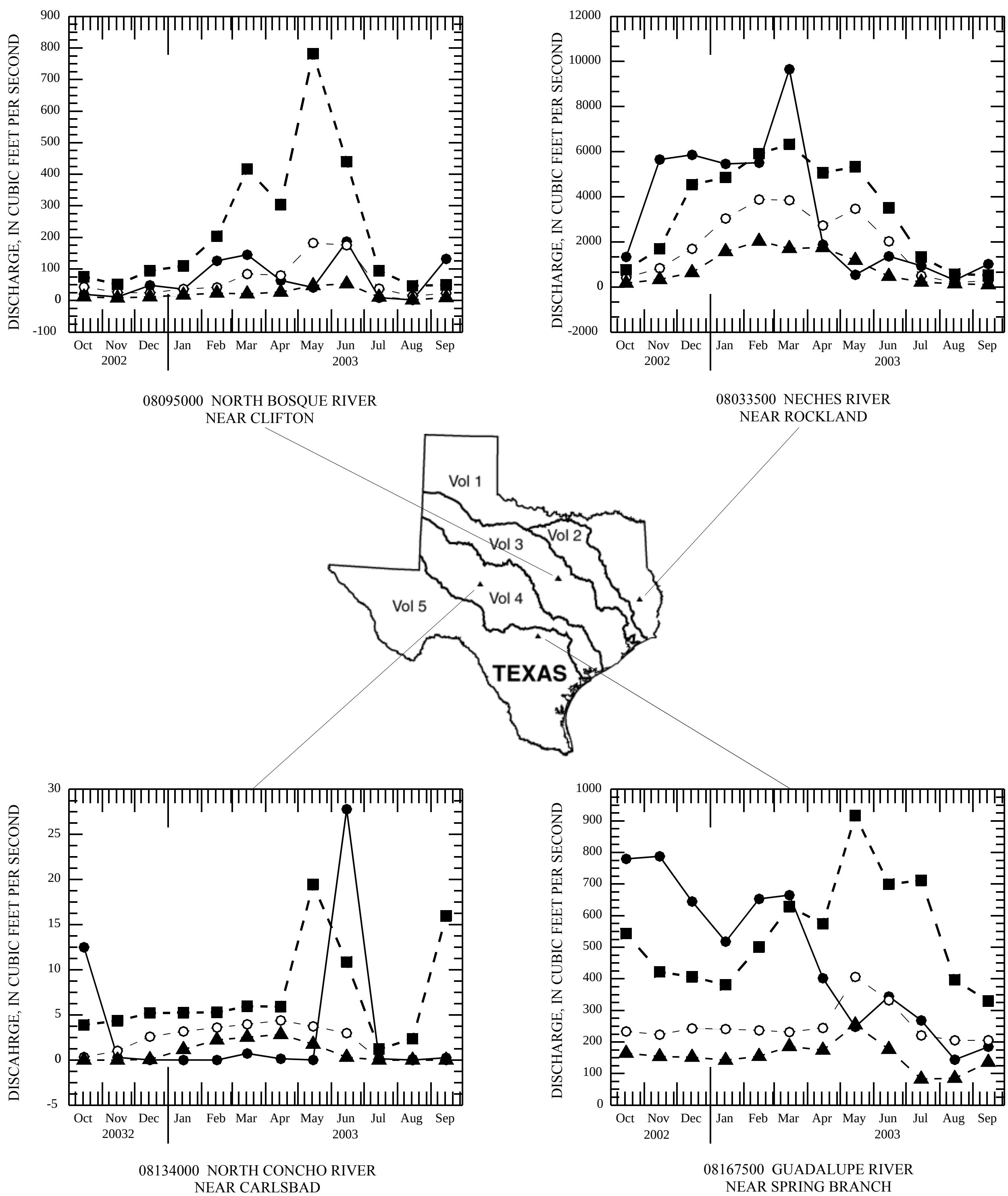


Figure 1. Area of Texas covered by volume 4 (shaded) and location of selected streamflow stations in volume 4.



EXPLANATION

——●—— **MONTHLY MEAN DISCHARGE FOR 2003 WATER YEAR**

- - -o- - - **MEDIAN OF MONTHLY MEAN DISCHARGE FOR 1971-2000 WATER YEARS**

- - -▲- - - **25 PERCENT QUARTILE**

- - -■- - - **75 PERCENT QUARTILE**

Figure 2. Monthly mean discharges at four long-term hydrologic index stations during 2003 water year and median of the monthly mean discharges for 1971-2000 water years.

February, March, April, and May. Monthly mean discharges for other months were within the normal range.

Annual mean streamflow for the Guadalupe River near Spring Branch was 460 ft^3/s for the 2003 water year or 176 percent of 267 ft^3/s for the reference period 1971-2000. The 2003 water year monthly mean discharges for the Guadalupe River near Spring Branch were above the normal range (greater than 75 percent of the median monthly discharge for the reference period during the months of October, November, December, January, February, and March, and below the normal range (less than 25 percent of the median monthly discharge for the reference period) during May. Monthly mean discharges for other months were within the normal range.

Annual mean streamflow for the Neches River near Rockland was 3,285 cubic feet per second (ft^3/s) for the 2003 water year, or 181 percent of 1,811 ft^3/s for the reference period 1971-2003. The 2003 water year monthly mean discharges were above the normal range (greater than 75 percent of the median monthly discharge for the reference period) during the months of October, November, December, January, March, and September, and below the normal range (less than 25 percent of the median monthly discharge for the reference period) during May. Monthly mean discharges for other months were within the normal range.

Annual mean streamflow for the North Bosque River near Clifton was 67.6 ft^3/s for the 2003 water year, or 112 percent of 60.6 ft^3/s for the reference period 1971-2000. the 2003 water year monthly mean discharges for the North Bosque River near Clifton were above the normal range (greater than 75 percent of the median monthly discharge for the reference period) during the month of September, and below the normal range (less than 25 percent of the median monthly discharge for the reference period) during the months of May and July. Monthly mean discharges for other months were within the normal range.

Conservation storage in 12 selected reservoirs in this area of the State, with a total combined conservation capacity of 3,966,000 acre-feet, decreased from 63 percent of capacity at the end of September 2002 to 59 percent of capacity at the end of September 2003. Records from these reservoirs indicate that storage decreased in 8 and increased in 4 during the water year.

Water Quality

Dissolved-solids concentrations in most streams in the State are inversely related to streamflow discharges. During years when precipitation and runoff are less than normal, streamflow commonly is more mineralized than during years when precipitation and runoff are normal or greater than normal. However, for streams 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 2003 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/	1,000	0	3.5	i94,600	0	27.8 (1924-2003)
08147000	Colorado River near San Saba, TX	13,800	30	311	224,000	0	1,008 (1931-2003)

1/ Hydrologic index station.
i From slope-area measurement of peak flow.

DOWNSTREAM ORDER AND STATION NUMBER

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

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

SPECIAL NETWORKS AND PROGRAMS

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

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

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

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

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

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

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

EXPLANATION OF STAGE- AND WATER-DISCHARGE RECORDS

Data Collection and Computation

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

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

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

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

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

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

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

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

For some stream-gaging stations, periods of time occur when no gage-height record is obtained or the recorded gage height is faulty and cannot be used to compute daily discharge or contents. Such a situation can happen when the recorder stops or otherwise fails to operate properly, the intakes are plugged, the float is frozen in the well, or for various other reasons. For such periods, the daily discharges are estimated on the basis of recorded range in stage, prior and subsequent records, discharge measurements, weather records, and comparison with records from other stations in the same or nearby basins. Likewise, lake or reservoir volumes may be estimated on the basis of operator's log, prior and subsequent records, inflow-outflow studies, and other information.

Data Presentation

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

Station Manuscript

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

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

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

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

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

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

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

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

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

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

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

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

Peak Discharge Greater than Base Discharge

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

Data Table of Daily Mean Values

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

Statistics of Monthly Mean Data

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

Summary Statistics

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

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

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

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

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

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

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

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

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

ANNUAL 7-DAY MINIMUM.—The lowest mean discharge for 7 consecutive days for a calendar year or a water year. Note that most low-flow frequency analyses of annual 7-day minimum flows use a climatic year (April 1-March 31). The date shown in the summary statistics table is the initial date of the 7-day period. This value should not be confused with the 7-day 10-year low-flow statistic.

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

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

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

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

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

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

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

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

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

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

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

Identifying Estimated Daily Discharge

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

Accuracy of Field Data and Computed Results

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

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

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

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

Other Data Records Available

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

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

EXPLANATION OF WATER-QUALITY RECORDS

Collection and Examination of Data

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

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

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

Water Analysis

Most of the methods used for collecting and analyzing water samples are described in the TWRIs. A list of TWRIs is provided in this report.

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

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

For chemical-quality stations equipped with digital monitors, the records consist of daily maximum and minimum values (and sometimes mean or median values) for each constituent measured, and are based on 15-minute or 1-hour intervals of recorded data beginning at 0000 hours and ending at 2400 hours for the day of record.

SURFACE-WATER-QUALITY RECORDS

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

Classification of Records

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

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

Accuracy of the Records

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

Rating classifications for continuous water-quality records

[≤, less than or equal to; ±, plus or minus value shown; °C, degree Celsius; >, greater than; %, percent; mg/L, milligram per liter; pH unit, standard pH unit]

Measured physical property	Rating			
	Excellent	Good	Fair	Poor
Water temperature	≤ ±0.2 °C	> ±0.2 to 0.5 °C	> ±0.5 to 0.8 °C	> ±0.8 °C
Specific conductance	≤ ±3%	> ±3 to 10%	> ±10 to 15%	> ±15%
Dissolved oxygen	≤ ±0.3 mg/L	> ±0.3 to 0.5 mg/L	> ±0.5 to 0.8 mg/L	> ±0.8 mg/L
pH	≤ ±0.2 unit	> ±0.2 to 0.5 unit	> ±0.5 to 0.8 unit	> ±0.8 unit
Turbidity	≤ ±5%	> ±5 to 10%	> ±10 to 15%	> ±15%

Arrangement of Records

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

On-Site Measurements and Sample Collection

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

Water Temperature

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

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

Sediment

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

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

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

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

Laboratory Measurements

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

Data Presentation

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

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

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

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

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

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

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

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

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

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

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

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
b	Value was extrapolated below
c	See laboratory coment
d	Diluted sample: method hi range exceeded
e	See field comment
i	Result may be affected by interference
k	Counts outside the acceptable range
m	Highly var comp using method, ? prec
n	Below the NVD
o	Result determined by alternate method
p	Value reported is preferred
q	Insufficient sample received
r	Value verified by rerun, same method
t	Below the long-term MDL
v	Analyte detected in laboratory blank
@	Holding time exceeded
+	Improper preservation

Printed Output	Null Value-Qualifier Code
e	Required equipment not functional or available
i	Required sample type not received
l	Analysis discarded: lab QC failure
m	Results sent by separate memo
q	Sample discharded: holding time exceeded
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

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

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

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

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

Blank Samples

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

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

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

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

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

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

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

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

Reference Samples

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

Replicate Samples

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

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

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

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

Spike Samples

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

ACCESS TO USGS WATER DATA

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

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

DEFINITION OF TERMS

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

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

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

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

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

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

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

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

Annual 7-day minimum is the lowest mean value for any 7-consecutive-day period in a year. Annual 7-day minimum values are reported herein for the calendar year and the water year (October 1 through September 30). Most low-flow frequency analyses use a climatic year (April 1-March 31), which tends to prevent the low-flow period from being artificially split between adjacent years. The date shown in the summary statistics table is the initial date of the 7-day period. (This value should not be confused with the 7-day, 10-year low-flow statistic.)

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Bottom material (See "Bed material")

Bulk electrical conductivity is the combined electrical conductivity of all material within a doughnut-shaped volume surrounding an induction probe. Bulk conductivity is affected by different physical and chemical properties of the material including the dissolved-solids content of the pore water, and the lithology and porosity of the rock.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Daily mean suspended-sediment concentration is the time-weighted mean concentration of suspended sediment 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 data collection on a daily or near-daily basis.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Gage datum is a horizontal surface used as a zero point for measurement of stage or gage height. This surface usually is located slightly below the lowest point of the stream bottom such that the gage height is usually slightly greater than the maximum depth of water. Because the gage datum is not an actual physical object, the datum is usually defined by specifying the elevations of permanent reference marks such as bridge abutments and survey monuments, and the gage is set to agree with the reference marks. Gage datum is a local datum that is maintained independently of any national geodetic datum. However, if the elevation of the gage datum relative to the national datum (North American Vertical Datum of 1988 or National Geodetic Vertical Datum of 1929) has been determined, then the gage readings can be converted to elevations above the national datum by adding the elevation of the gage datum to the gage reading.

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

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

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

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

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

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

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

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

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

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

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

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

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

Horizontal datum (See "Datum")

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Recoverable 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). See separate entries for definitions of these datums.

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

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

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

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

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

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

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

Specific electrical conductance (conductivity) is a measure of the capacity of water (or other media) to conduct an 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 (<2 mm, sand or finer). Below are the class categories expressed as the percentage covered by fine sediment:

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

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

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

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

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

Suspended, total is the total amount of a given constituent in the part of a water-sediment sample that is retained on a 0.45-micrometer membrane filter. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent determined. Knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to determine when the results should be reported as "suspended, total." Determinations of "suspended, total" constituents are made either by directly analyzing portions of the suspended material collected on the filter or, more commonly, by difference, on the basis of determinations of (1) dissolved and (2) total concentrations of the constituent. (See also "Suspended")

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

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

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

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

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

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

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

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

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

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

Total coliform bacteria are a particular group of bacteria that are used as indicators of possible sewage pollution. This group includes coliforms that inhabit the intestine of 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 because of 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 USEPA 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 path length of UV light through a sample.

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

Vertical datum (See “Datum”)

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

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

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

Water year in USGS reports dealing with surface-water supply is the 12-month period October 1 through September 30. The water year is designated by the calendar year in which it ends and which includes 9 of the 12 months. Thus, the year ending September 30, 2003, is called the “2003 water year.”

Watershed (See “Drainage basin”)

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

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

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

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

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

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

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.

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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.

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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.

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

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

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

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

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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–A14. *Use of flumes in measuring discharge,* by F.A. Kilpatrick and V.R. Schneider: USGS–TWRI book 3, chap. A14. 1983. 46 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–A19. *Levels at streamflow gaging stations*, by E.J. Kennedy: USGS–TWRI book 3, chap. A19. 1990. 31 p.

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

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

Section B. Ground-Water Techniques

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

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

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

Section C. Sedimentation and Erosion Techniques

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Book 4. Hydrologic Analysis and Interpretation

Section A. Statistical Analysis

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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

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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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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

7–C1. *Finite difference model for aquifer simulation in two dimensions with results of numerical experiments,* by

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Book 8. Instrumentation

Section A. Instruments for Measurement of Water Level

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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.

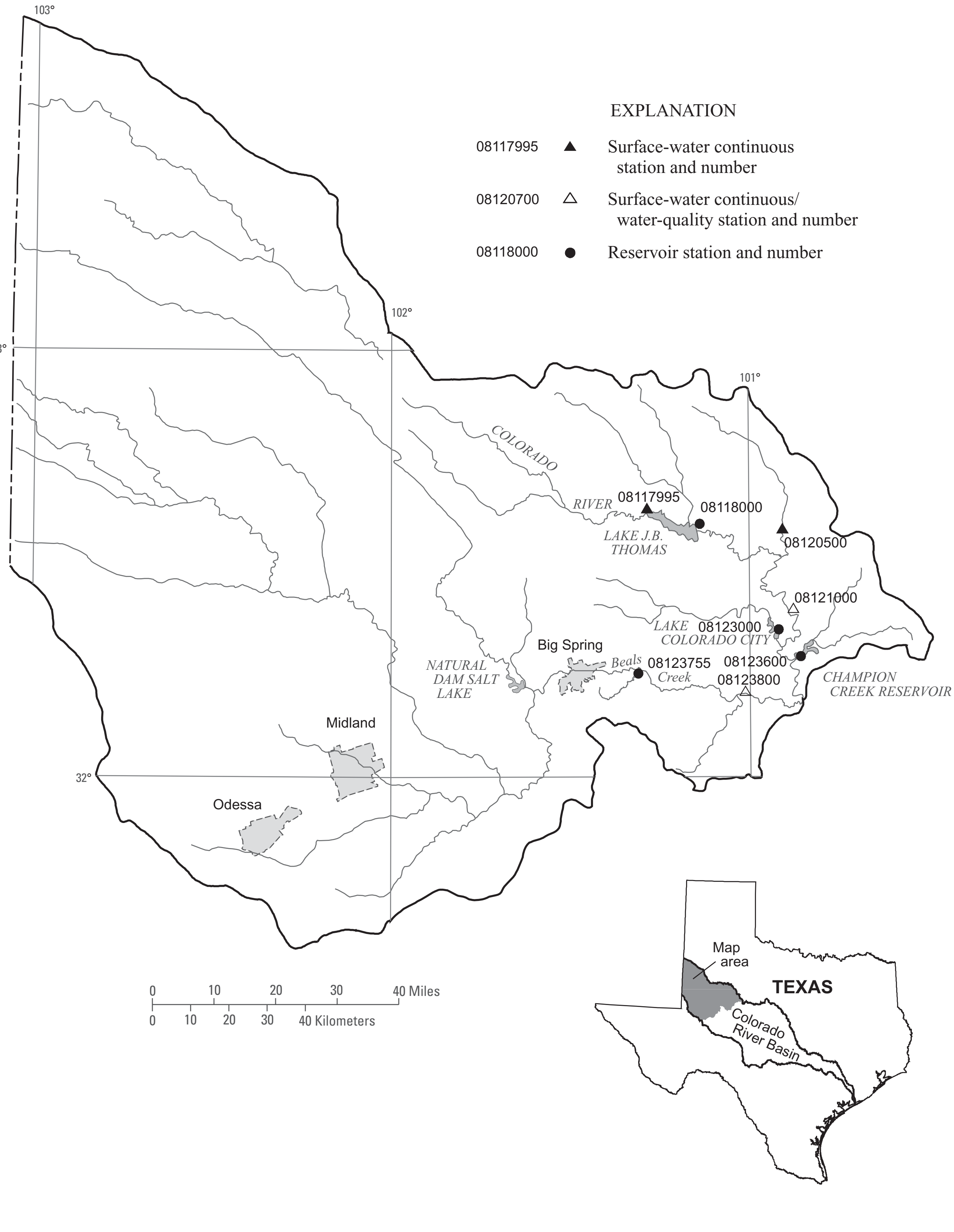


Figure 3.--Map showing location of gaging stations in the first section of the Colorado River Basin

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). WRD TX-02-4: 1988-2001 (M).

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 good except those for estimated daily discharges, which are poor. No known regulation or diversions. No flow at times.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	4.3	0.00	0.00	0.00	0.00	0.00	e3.5	0.00	e0.01	0.00	447
2	0.00	2.3	0.00	0.00	0.00	0.00	0.00	e0.17	8.7	e0.00	0.00	58
3	0.00	0.92	0.39	0.00	0.00	0.00	0.00	e0.02	138	e0.00	0.00	0.79
4	0.00	0.45	0.60	0.00	0.00	0.00	0.00	e0.00	203	0.00	0.00	0.03
5	0.00	0.26	0.06	0.00	0.00	0.00	0.00	e0.00	156	0.00	0.00	0.00
6	0.00	0.10	0.02	0.00	0.00	0.00	0.00	e0.00	119	0.00	0.00	0.00
7	0.00	0.14	0.01	0.00	0.00	0.00	0.00	e0.00	220	0.00	0.00	0.00
8	8.4	0.18	0.01	0.00	0.00	0.00	0.00	0.00	58	0.00	0.00	24
9	8.4	0.07	2.0	0.00	0.00	0.00	0.00	0.00	42	0.00	0.00	291
10	0.69	0.05	0.17	0.00	0.00	0.00	0.00	0.00	31	0.00	0.00	283
11	0.10	0.02	0.06	0.00	0.00	0.00	0.00	0.00	5.9	0.00	0.00	9.2
12	0.01	0.01	0.05	0.00	0.00	0.00	0.00	0.00	3.0	0.00	0.00	0.43
13	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.14	0.00	0.00	27
14	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	3.0
15	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
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	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	182	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	42	0.00	0.00	0.00	0.00	0.00	0.00	25	0.00	0.00	0.00	0.00
21	1.8	0.00	0.00	0.00	0.00	0.00	0.00	133	0.00	0.00	0.00	0.00
22	0.16	0.00	0.00	0.00	0.00	6.8	0.00	35	0.00	0.00	0.00	0.00
23	0.03	0.00	0.00	0.00	0.00	0.19	0.00	2.5	0.00	0.00	0.00	0.00
24	0.29	0.00	0.00	0.00	0.00	0.03	0.00	0.10	0.00	0.00	0.00	0.00
25	0.04	0.00	0.00	0.00	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00
26	0.42	0.00	0.00	0.00	0.00	0.00	0.00	13	6.6	0.00	0.00	0.00
27	13	0.00	0.00	0.00	0.00	0.00	0.00	104	4.4	0.00	0.00	0.00
28	76	0.00	0.00	0.00	0.00	0.00	0.00	40	12	0.00	0.00	0.00
29	511	0.00	0.00	0.00	---	0.00	117	2.1	e5.5	0.00	55	0.00
30	213	0.00	0.00	0.00	---	0.00	141	0.07	e0.44	0.00	293	0.00
31	32	---	0.00	0.00	---	0.00	---	0.00	---	0.00	236	---
TOTAL	1089.46	8.80	3.41	0.00	0.00	7.03	258.00	358.47	1013.69	0.01	584.00	1143.59
MEAN	35.1	0.29	0.11	0.000	0.000	0.23	8.60	11.6	33.8	0.000	18.8	38.1
MAX	511	4.3	2.0	0.00	0.00	6.8	141	133	220	0.01	293	447
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	2160	17	6.8	0.00	0.00	14	512	711	2010	0.02	1160	2270

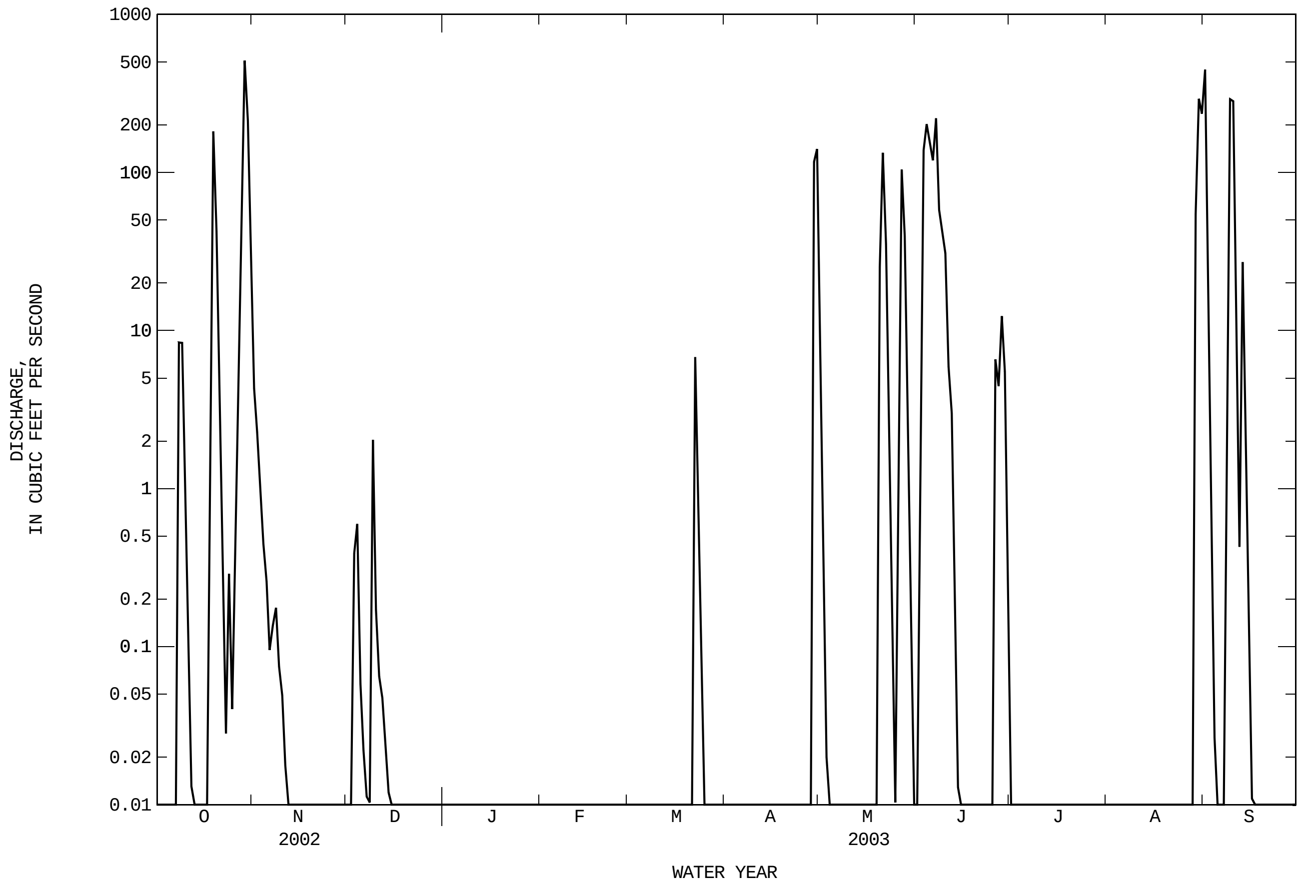
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	8.69	2.65	1.36	1.12	2.75	5.63	5.01	28.3	44.9	12.2	5.80	16.2
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 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1988 - 2003	
ANNUAL TOTAL	4482.07		4466.46			
ANNUAL MEAN	12.3		12.2		11.1	
HIGHEST ANNUAL MEAN					46.2	1992
LOWEST ANNUAL MEAN					0.48	1998
HIGHEST DAILY MEAN	1060	Jul 6	511	Oct 29	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 1	0.00	Jun 7 1988
MAXIMUM PEAK FLOW			656	Sep 1	2320	May 26 1992
MAXIMUM PEAK STAGE			10.55	Sep 1	m16.43	May 26 1992
ANNUAL RUNOFF (AC-FT)	8890		8860		8070	
10 PERCENT EXCEEDS	4.7		8.4		6.2	
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 Sept. 2002 (contents), Oct. 2002 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. 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. 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.--Records of diversions may be obtained 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.

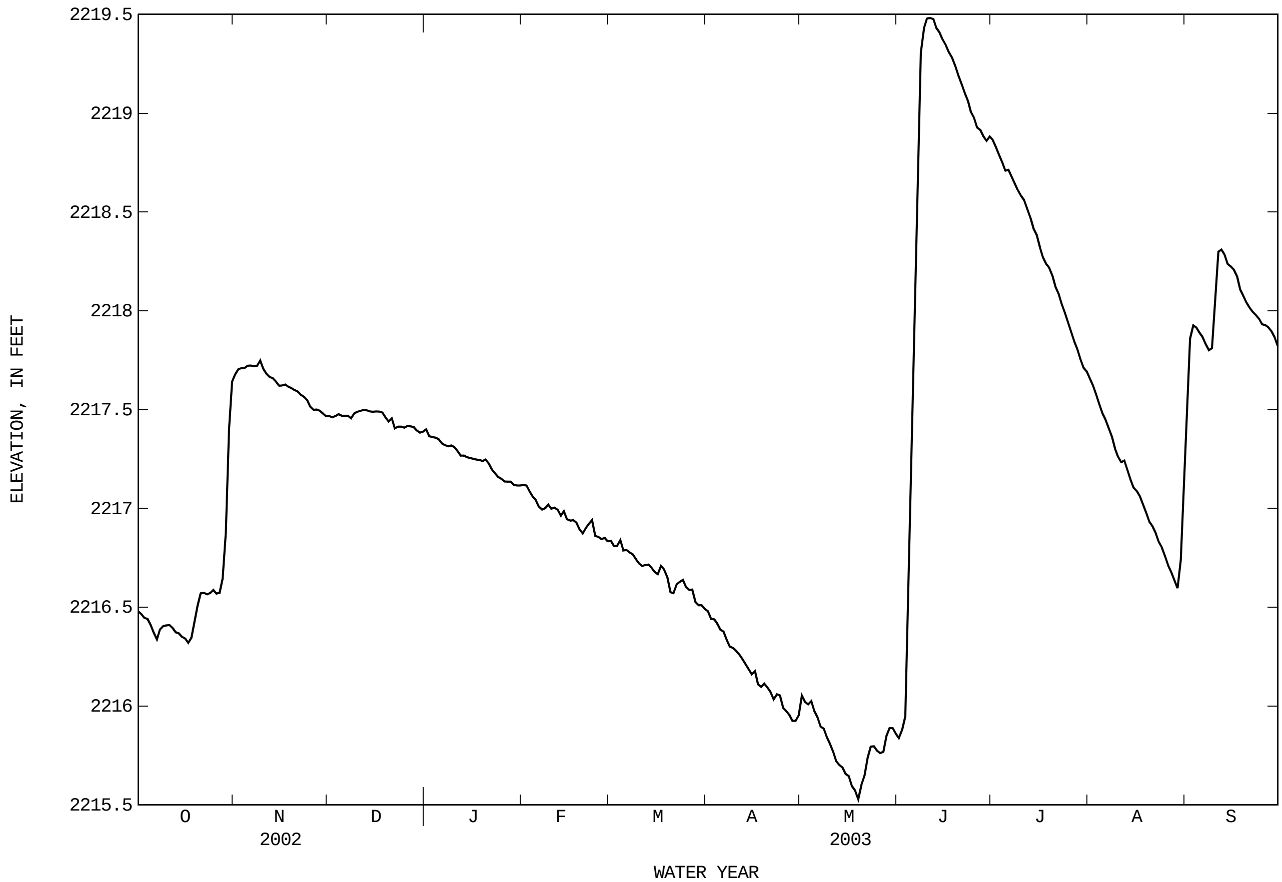
EXTREMES FOR CURRENT YEAR.--Maximum elevation, 2,219.52 ft, June 11; minimum elevation, 2,215.46 ft, May 20.

ELEVATION, IN FEET (NGVD), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2216.48	2217.68	2217.47	2217.40	2217.12	2216.84	2216.48	2216.05	2215.84	2218.86	2217.66	2217.48
2	2216.47	2217.70	2217.46	2217.36	2217.12	2216.81	2216.44	2216.02	2215.88	2218.83	2217.62	2217.86
3	2216.45	2217.71	2217.47	2217.36	2217.09	2216.81	2216.44	2216.01	2215.95	2218.79	2217.58	2217.93
4	2216.44	2217.71	2217.48	2217.36	2217.06	2216.84	2216.42	2216.03	2216.82	2218.75	2217.53	2217.91
5	2216.41	2217.72	2217.47	2217.35	2217.04	2216.79	2216.39	2215.97	2217.73	2218.71	2217.48	2217.89
6	2216.37	2217.72	2217.47	2217.33	2217.01	2216.79	2216.38	2215.94	2218.50	2218.71	2217.45	2217.87
7	2216.34	2217.72	2217.47	2217.32	2216.99	2216.78	2216.33	2215.89	2218.98	2218.68	2217.41	2217.83
8	2216.39	2217.72	2217.46	2217.31	2217.00	2216.77	2216.30	2215.89	2219.31	2218.64	2217.37	2217.80
9	2216.40	2217.75	2217.48	2217.32	2217.02	2216.74	2216.29	2215.84	2219.43	2218.61	2217.30	2217.81
10	2216.41	2217.70	2217.49	2217.31	2217.00	2216.72	2216.28	2215.81	2219.48	2218.58	2217.26	2218.05
11	2216.41	2217.68	2217.49	2217.29	2217.00	2216.71	2216.26	2215.77	2219.48	2218.56	2217.23	2218.30
12	2216.39	2217.66	2217.50	2217.27	2216.99	2216.71	2216.24	2215.72	2219.48	2218.51	2217.24	2218.31
13	2216.37	2217.66	2217.50	2217.27	2216.96	2216.72	2216.21	2215.70	2219.43	2218.47	2217.20	2218.28
14	2216.37	2217.64	2217.49	2217.26	2216.99	2216.70	2216.19	2215.69	2219.41	2218.42	2217.14	2218.24
15	2216.35	2217.62	2217.49	2217.26	2216.94	2216.68	2216.16	2215.66	2219.37	2218.38	2217.10	2218.22
16	2216.34	2217.62	2217.49	2217.25	2216.94	2216.67	2216.18	2215.64	2219.34	2218.32	2217.09	2218.21
17	2216.32	2217.63	2217.49	2217.25	2216.94	2216.71	2216.11	2215.59	2219.31	2218.27	2217.06	2218.17
18	2216.34	2217.61	2217.49	2217.24	2216.93	2216.69	2216.10	2215.57	2219.28	2218.24	2217.02	2218.11
19	2216.42	2217.61	2217.46	2217.24	2216.89	2216.65	2216.11	2215.53	2219.24	2218.22	2216.98	2218.08
20	2216.51	2217.60	2217.44	2217.25	2216.87	2216.57	2216.09	2215.60	2219.19	2218.18	2216.93	2218.04
21	2216.57	2217.59	2217.46	2217.23	2216.90	2216.57	2216.07	2215.65	2219.15	2218.12	2216.91	2218.02
22	2216.57	2217.57	2217.41	2217.20	2216.92	2216.61	2216.03	2215.74	2219.11	2218.09	2216.88	2217.99
23	2216.57	2217.56	2217.41	2217.18	2216.94	2216.63	2216.06	2215.79	2219.06	2218.03	2216.83	2217.98
24	2216.57	2217.55	2217.41	2217.16	2216.86	2216.64	2216.05	2215.80	2219.01	2217.99	2216.80	2217.96
25	2216.59	2217.51	2217.41	2217.15	2216.86	2216.60	2215.99	2215.77	2218.98	2217.94	2216.76	2217.93
26	2216.57	2217.50	2217.42	2217.14	2216.84	2216.59	2215.97	2215.76	2218.93	2217.89	2216.71	2217.93
27	2216.57	2217.50	2217.41	2217.14	2216.85	2216.59	2215.95	2215.77	2218.91	2217.84	2216.68	2217.92
28	2216.64	2217.49	2217.41	2217.14	2216.83	2216.53	2215.92	2215.85	2218.88	2217.81	2216.64	2217.90
29	2216.88	2217.48	2217.39	2217.12	---	2216.51	2215.92	2215.89	2218.86	2217.75	2216.60	2217.86
30	2217.40	2217.47	2217.38	2217.12	---	2216.51	2215.95	2215.89	2218.88	2217.71	2216.74	2217.82
31	2217.64	---	2217.39	2217.12	---	2216.49	---	2215.86	---	2217.69	2217.16	---
MEAN	2216.53	2217.62	2217.45	2217.25	2216.96	2216.68	2216.18	2215.80	2218.71	2218.31	2217.11	2217.99
MAX	2217.64	2217.75	2217.50	2217.40	2217.12	2216.84	2216.48	2216.05	2219.48	2218.86	2217.66	2218.31
MIN	2216.32	2217.47	2217.38	2217.12	2216.83	2216.49	2215.92	2215.53	2215.84	2217.69	2216.60	2217.48

CAL YR 2002 MAX 2218.33 MIN 2216.16
WTR YR 2003 MAX 2219.48 MIN 2215.53

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



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 good except those for estimated daily discharges, which are poor, and those for affected daily discharges, which are fair. 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, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	2.5	5.9	2.1	2.2	2.0	1.4	0.23	0.04	0.71	0.00	2.5
2	0.00	2.8	6.4	2.0	2.2	2.1	1.6	0.21	0.05	0.63	0.00	0.61
3	0.00	&3.4	8.2	1.9	2.1	2.0	1.3	0.19	0.02	0.40	0.00	0.11
4	0.00	&2.4	8.8	2.1	2.2	2.0	0.77	0.14	0.02	0.22	0.00	0.02
5	0.00	2.2	3.5	2.2	2.0	1.9	0.33	0.12	80	0.15	0.00	0.00
6	0.00	2.0	2.5	2.1	2.1	1.8	0.40	0.12	7.4	0.07	0.00	0.00
7	0.00	1.6	2.3	2.0	2.3	1.8	0.22	0.10	4.2	0.02	0.00	0.00
8	0.00	1.9	2.4	2.1	2.1	1.9	0.23	0.06	11	0.00	0.00	0.00
9	0.00	2.1	3.2	2.2	2.2	1.4	0.17	0.00	6.8	0.00	0.00	0.00
10	e0.00	1.9	3.8	2.0	2.0	0.87	0.22	0.00	2.6	0.00	0.00	0.29
11	e0.00	1.7	2.7	2.0	2.1	0.73	0.26	0.00	1.8	0.00	0.00	0.31
12	e0.00	1.7	2.4	2.0	2.0	1.1	0.22	0.00	1.5	0.00	0.00	0.04
13	e0.00	2.1	2.0	1.9	1.9	1.6	0.21	0.00	1.3	0.00	0.00	0.03
14	e0.00	2.6	2.1	1.8	2.0	1.6	0.17	0.00	1.2	0.00	0.00	0.07
15	e0.00	2.5	2.1	2.1	2.0	1.8	0.17	0.00	1.1	0.00	0.00	0.04
16	e0.00	2.1	2.1	2.3	1.9	2.0	0.16	0.00	1.0	0.00	0.00	0.00
17	e0.00	2.6	2.2	2.1	1.7	1.9	0.18	0.00	0.98	0.00	0.00	0.00
18	e0.00	3.0	2.3	2.3	2.0	2.5	0.85	0.00	0.82	0.00	0.00	0.00
19	e400	3.1	2.1	2.4	2.0	2.4	0.54	0.00	0.65	0.00	0.00	0.00
20	e10	3.7	2.2	2.4	2.0	2.1	0.22	5.1	0.65	0.00	0.00	0.00
21	e10	3.9	2.2	2.4	2.6	1.8	0.10	6.1	0.58	0.00	0.00	0.00
22	e390	3.9	1.9	2.4	4.3	2.1	0.13	1.6	0.40	0.00	0.00	0.00
23	e15	4.2	2.1	2.2	2.5	2.1	1.5	0.70	0.19	0.00	0.00	0.00
24	e10	4.7	5.6	2.1	1.8	1.9	0.37	0.37	0.08	0.00	0.00	0.00
25	e5.0	4.7	2.9	2.3	1.4	1.7	0.16	0.27	0.02	0.00	0.00	0.00
26	e5.0	5.7	2.3	2.4	1.4	1.6	0.12	0.27	0.42	0.00	0.00	0.00
27	e10	5.2	2.2	2.3	1.8	1.6	0.13	0.55	6.7	0.00	0.00	0.00
28	18	5.3	2.2	2.4	1.8	1.5	0.35	0.84	1.7	0.00	0.00	0.00
29	22	6.2	2.2	2.4	---	e1.5	0.93	0.55	1.1	0.00	0.29	0.00
30	6.5	5.9	2.2	2.4	---	e1.5	0.37	0.30	1.00	0.00	0.31	0.00
31	2.9	---	2.2	2.3	---	e1.5	---	0.16	---	0.00	9.9	---
TOTAL	904.40	97.6	97.2	67.6	58.6	54.30	13.78	17.98	135.32	2.20	10.50	4.02
MEAN	29.2	3.25	3.14	2.18	2.09	1.75	0.46	0.58	4.51	0.071	0.34	0.13
MAX	400	6.2	8.8	2.4	4.3	2.5	1.6	6.1	80	0.71	9.9	2.5
MIN	0.00	1.6	1.9	1.8	1.4	0.73	0.10	0.00	0.02	0.00	0.00	0.00
AC-FT	1790	194	193	134	116	108	27	36	268	4.4	21	8.0

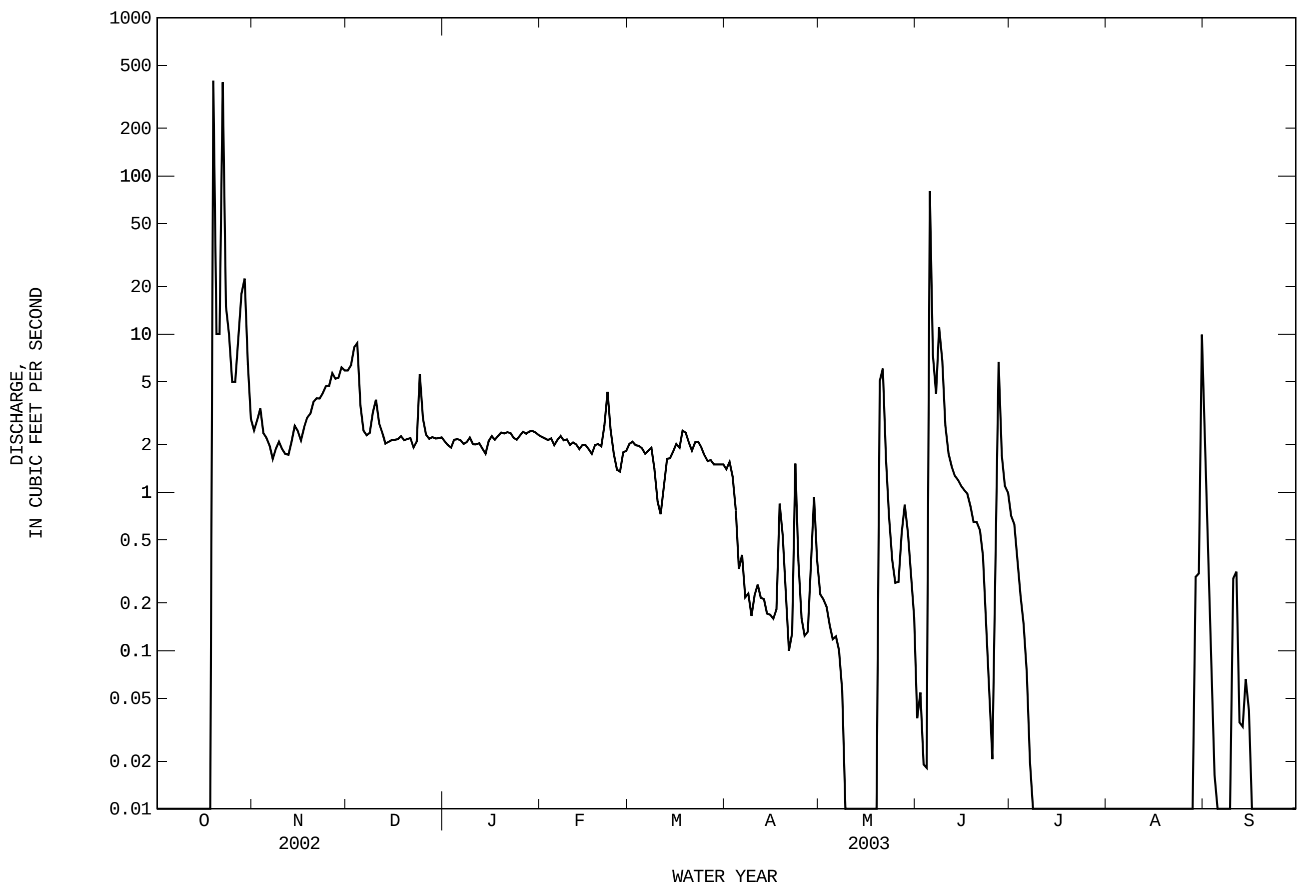
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1953 - 2003h, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	9.41	2.40	1.54	1.43	3.22	2.36	9.06	37.8	24.8	7.16	20.9	14.4
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 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1953 - 2003h	
ANNUAL TOTAL	2412.93		1463.50			
ANNUAL MEAN	6.61		4.01		11.5	
HIGHEST ANNUAL MEAN					38.5	1957
LOWEST ANNUAL MEAN					1.14	1970
HIGHEST DAILY MEAN	400	Oct 19	400	Oct 19	6990	Aug 14 1972
LOWEST DAILY MEAN	0.00	Jun 14	0.00	Oct 1	0.00	Apr 1 1953
ANNUAL SEVEN-DAY MINIMUM	0.00	Jul 29	0.00	Oct 1	0.00	Apr 1 1953
MAXIMUM PEAK FLOW			1130	Oct 19	20700	Aug 14 1972
MAXIMUM PEAK STAGE			a9.16	Oct 19	a31.28	Aug 14 1972
ANNUAL RUNOFF (AC-FT)	4790		2900		8300	
10 PERCENT EXCEEDS	5.2		3.9		3.9	
50 PERCENT EXCEEDS	1.2		1.1		0.60	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

e Estimated
& Value was computed from affected unit values
h See PERIOD OF RECORD paragraph.
a From floodmark.



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. No flow at times.

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 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.03	27	0.26	0.31	0.17	0.33	0.12	0.01	0.01	0.08	0.02	175
2	0.03	22	0.29	0.27	0.19	0.24	0.13	0.00	0.07	0.03	0.01	68
3	0.03	17	0.67	0.25	0.19	0.25	0.14	0.00	2.6	0.03	0.01	30
4	0.02	14	0.63	0.28	0.14	0.28	0.09	0.00	106	0.02	0.01	16
5	0.02	9.7	0.35	0.32	0.15	0.25	0.09	0.00	419	0.02	0.01	10
6	0.03	0.54	14	0.35	0.16	0.27	0.09	0.00	762	0.01	0.01	6.8
7	0.02	0.22	13	0.31	0.15	0.29	0.09	0.00	717	0.01	0.01	4.5
8	0.12	0.19	12	0.33	0.14	0.31	0.07	0.00	334	0.01	0.01	3.3
9	0.07	0.22	20	0.39	0.76	0.32	0.06	0.00	120	0.01	0.01	2.6
10	0.05	0.26	10	0.30	4.2	0.33	0.07	0.00	61	0.01	0.01	0.43
11	0.04	0.30	0.64	3.2	0.53	0.39	0.07	0.00	34	0.01	0.01	1.5
12	0.03	0.28	0.41	4.9	0.28	0.41	0.06	0.00	27	0.01	0.01	0.09
13	0.03	0.25	3.0	0.57	0.24	0.41	0.05	0.00	16	0.00	0.01	0.06
14	0.03	0.29	0.52	0.41	0.25	0.41	0.05	0.00	9.7	0.00	0.02	0.05
15	0.03	0.30	0.41	0.38	0.20	0.41	0.04	0.00	0.41	0.01	0.02	0.04
16	0.03	0.42	0.37	0.22	0.18	0.41	0.04	0.00	0.09	0.02	0.01	0.04
17	0.03	5.4	1.3	1.4	0.16	0.44	0.03	0.00	0.06	0.01	0.01	0.04
18	0.15	4.8	5.8	0.52	0.17	0.60	0.03	0.00	1.9	0.02	0.02	0.05
19	0.41	0.52	0.52	0.27	0.18	0.29	0.03	0.00	0.14	0.01	0.02	0.07
20	37	0.30	0.24	0.24	0.22	0.25	0.02	0.00	0.07	0.02	0.01	0.07
21	13	0.24	0.20	0.23	0.64	0.25	0.02	0.00	0.05	0.02	0.01	0.05
22	32	0.24	0.18	0.17	0.47	0.50	0.02	0.00	0.04	0.02	0.01	0.05
23	22	0.24	8.1	0.15	0.35	0.29	0.02	0.01	0.03	0.02	0.01	0.05
24	29	0.25	0.63	0.16	0.15	3.0	0.02	0.02	0.02	0.02	0.01	0.07
25	13	0.22	1.6	0.19	2.2	0.67	0.01	0.02	0.02	0.02	0.01	73
26	11	0.22	10	2.2	6.3	0.26	0.01	2.2	0.05	0.02	0.01	26
27	20	0.23	0.62	4.4	0.68	0.18	0.01	0.05	0.05	0.02	0.01	0.72
28	19	0.23	0.28	0.60	0.41	0.18	0.01	0.04	0.04	0.02	0.01	0.08
29	15	0.24	0.26	0.36	---	0.18	0.02	0.03	9.6	0.02	0.01	0.06
30	43	0.25	0.30	0.22	---	0.16	0.01	0.02	10	0.02	48	0.05
31	37	---	0.24	0.17	---	0.11	---	0.02	---	0.02	164	---
TOTAL	292.20	106.35	106.82	24.07	19.86	12.67	1.52	2.42	2630.95	0.56	212.34	418.77
MEAN	9.43	3.54	3.45	0.78	0.71	0.41	0.051	0.078	87.7	0.018	6.85	14.0
MAX	43	27	20	4.9	6.3	3.0	0.14	2.2	762	0.08	164	175
MIN	0.02	0.19	0.18	0.15	0.14	0.11	0.01	0.00	0.01	0.00	0.01	0.04
AC-FT	580	211	212	48	39	25	3.0	4.8	5220	1.1	421	831

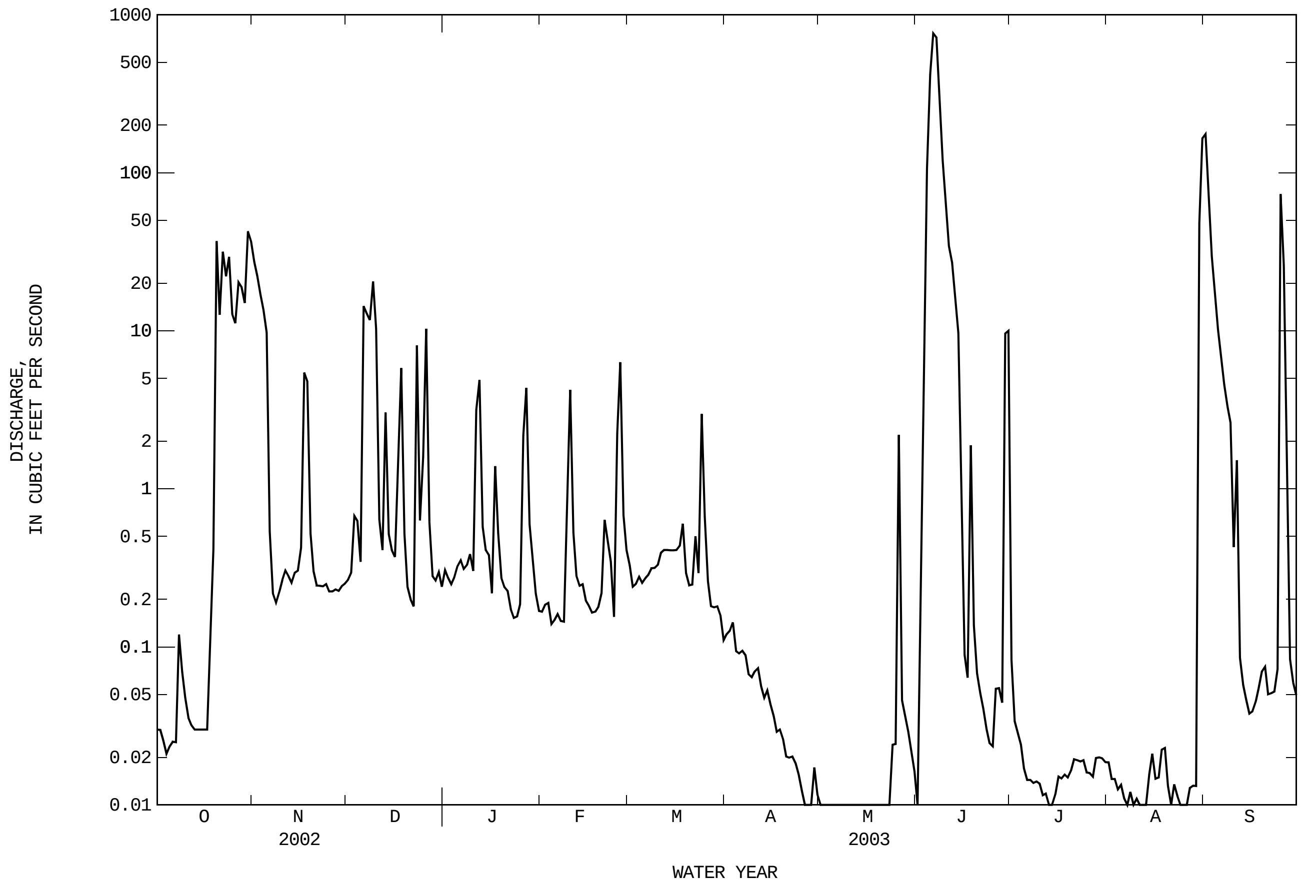
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1952 - 2003z, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	33.8	7.62	5.24	4.05	9.29	18.4	33.4	90.8	77.7	19.8	36.7	52.5
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 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1952 - 2003z	
ANNUAL TOTAL	4640.37		3828.53			
ANNUAL MEAN	12.7		10.5		32.5	
HIGHEST ANNUAL MEAN					143	1957
LOWEST ANNUAL MEAN					0.34	1998
HIGHEST DAILY MEAN	1030	May 7	762	Jun 6	9560	May 25 1957
LOWEST DAILY MEAN	0.00	Aug 3	0.00	May 2	0.00	Oct 1 1951
ANNUAL SEVEN-DAY MINIMUM	0.00	Aug 3	0.00	May 2	0.00	Oct 1 1951
MAXIMUM PEAK FLOW			830	Jun 6	17700	Mar 24 2000
MAXIMUM PEAK STAGE			a10.39	Jun 6	28.58	Mar 24 2000
ANNUAL RUNOFF (AC-FT)	9200		7590		23540	
10 PERCENT EXCEEDS	19		12		23	
50 PERCENT EXCEEDS	0.41		0.17		0.44	
90 PERCENT EXCEEDS	0.02		0.01		0.00	

a From floodmark.
z Period of regulated streamflow.



08121000 Colorado River at Colorado City, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--
CHEMICAL DATA: May 1946 to Sept. 1954, Nov. 1956 to July 2003 (discontinued).

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: May 1946 to Sept. 1954 and Nov. 1956 to Oct. 2003 (local observer), Nov. 2003 to current year.
WATER TEMPERATURE: Nov. 1952 to Sept. 1954 and Nov. 1956 to Oct. 2003 (local observer), Nov. 2003 to current year.

INSTRUMENTATION.--Water-quality monitor since Nov. 8, 2003.

REMARKS.--Records good. Interruptions in the record were due to malfunction of the instrument and to no flow except for Oct. 17, 30, and Nov. 1-8 when specific conductance was not determined and Oct. 18, 30, and Nov. 1-8 when water temperature was not determined. No flow May 2-22 and July 13, 14. 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 recorded, 34,700 microsiemens/cm, June 1; minimum recorded, 1,800 microsiemens/cm, June 4.
WATER TEMPERATURE: Maximum, 38.6°C, July 10; minimum, 1.9°C, Dec. 25.

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

Date	Time	Instantaneous discharge, cfs (00061)	Specif. conductance, wat unf uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temperature, water, deg C (00010)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Sodium, water, fltrd, mg/L (00930)	Sodium adsorption ratio (00931)	Potassium, water, fltrd, mg/L (00935)
DEC													
04...	1130	.68	10500	7.8	5.9	10.7	95	1000	231	104	1950	27	8.03
MAY													
05...	1050	<.01	29500	7.9	19.1	4.8	63	2300	476	275	6760	61	25.6
30...	1130	.09	33100	8.1	28.4	8.4	133	2200	552	201	7130	66	24.7
JUL													
02...	0830	.25	10800	7.3	25.2	5.1	69	1200	255d	128d	1760d	22	15.2

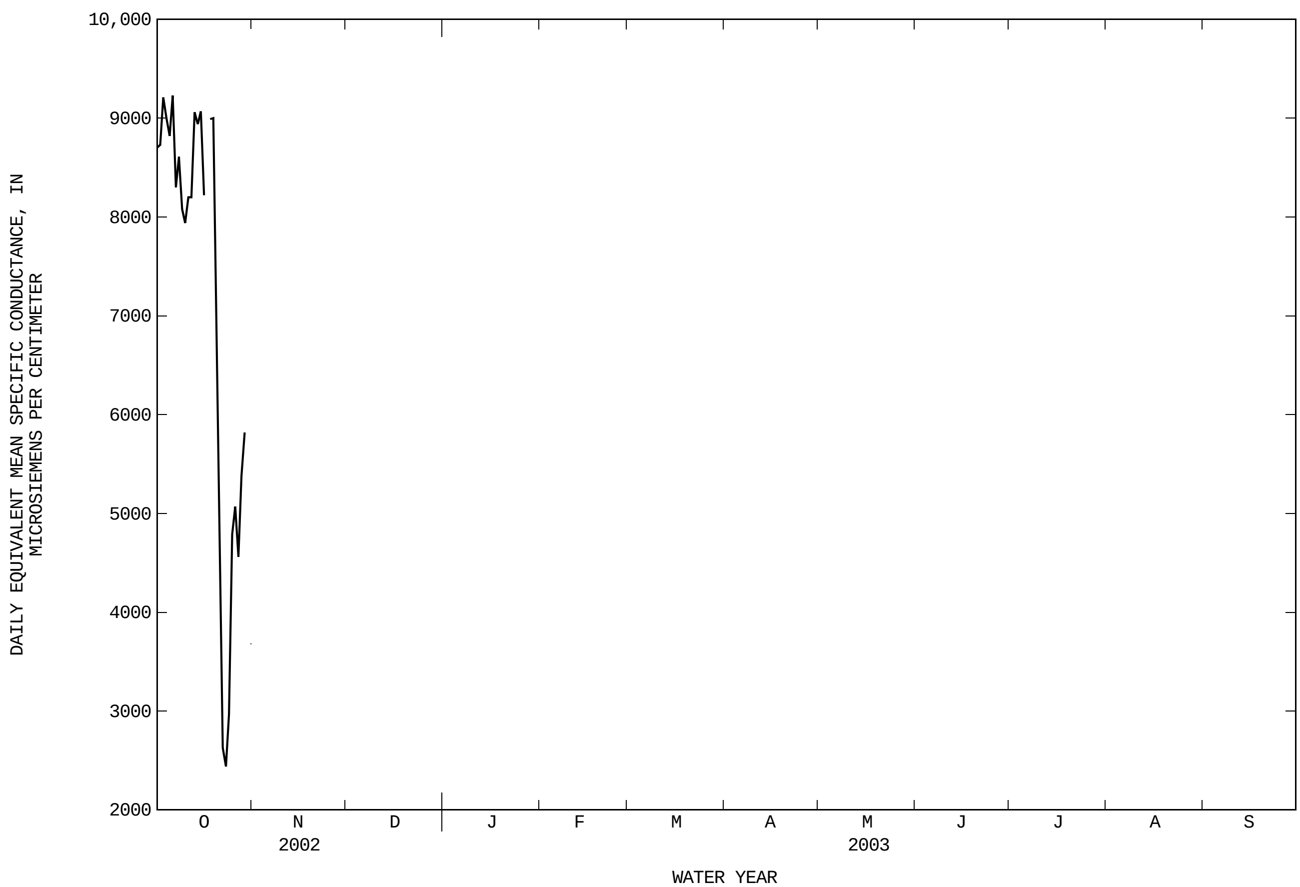
Date	Sulfate water, fltrd, mg/L (00945)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Residue water, fltrd, sum of constituents mg/L (70301)
DEC					
04...	907	2900	.48	1.3	6190
MAY					
05...	2520	9180	.67	<.2	19300
30...	2080	10800	.6	2.6	20900
JUL					
02...	915d	3010d	.6	6.2	6200

Remark codes used in this report:
< -- Less than
Value qualifier codes used in this report:
d -- Diluted sample: method hi range exceeded

08121000 Colorado River at Colorado City, TX--Continued

SPECIFIC CONDUCTANCE FROM DAILY OBSERVER, IN US/CM @ 25C, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY EQUIVALENT MEAN VALUES

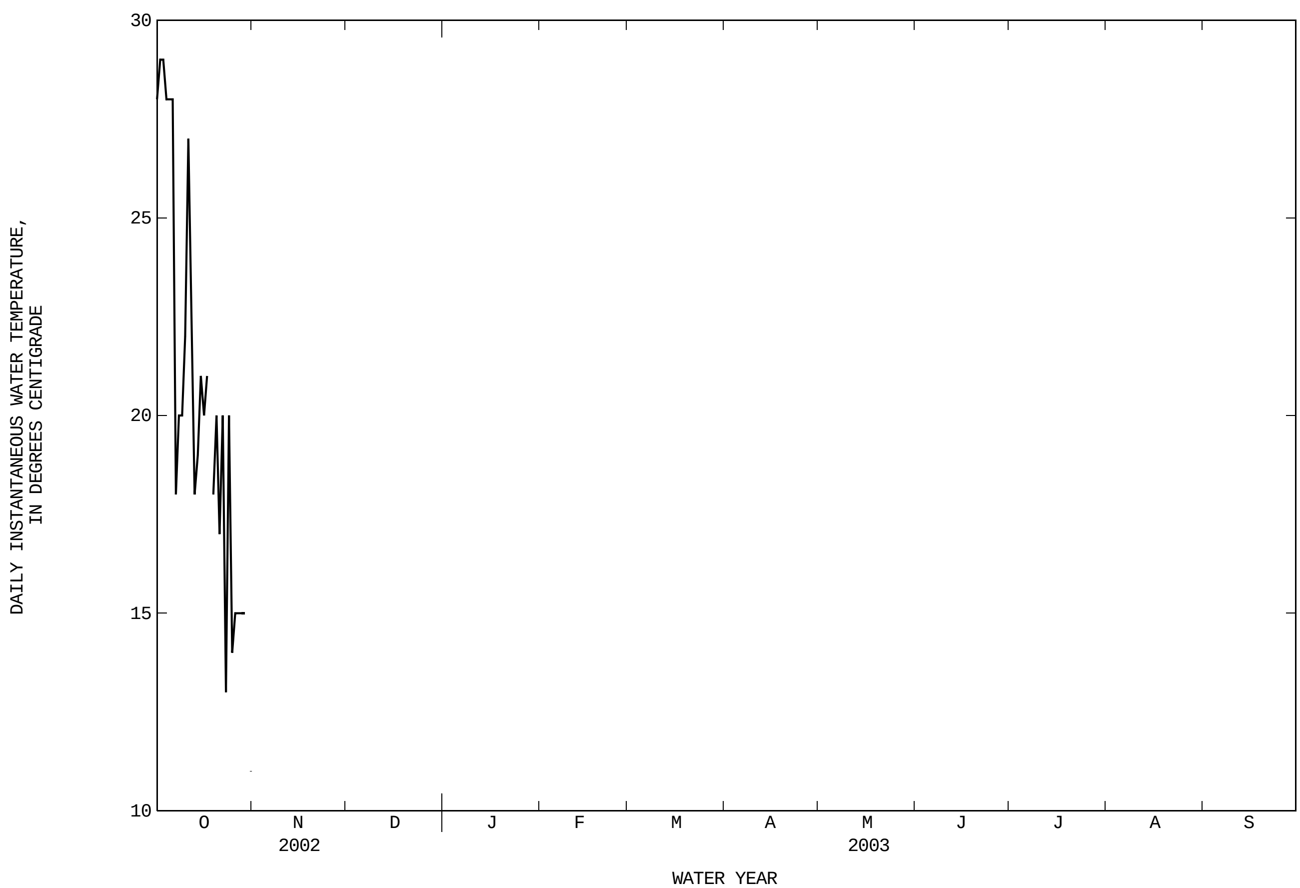
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8700	---	---	---	---	---	---	---	---	---	---	---
2	8730	---	---	---	---	---	---	---	---	---	---	---
3	9210	---	---	---	---	---	---	---	---	---	---	---
4	9000	---	---	---	---	---	---	---	---	---	---	---
5	8820	---	---	---	---	---	---	---	---	---	---	---
6	9230	---	---	---	---	---	---	---	---	---	---	---
7	8300	---	---	---	---	---	---	---	---	---	---	---
8	8610	---	---	---	---	---	---	---	---	---	---	---
9	8080	---	---	---	---	---	---	---	---	---	---	---
10	7940	---	---	---	---	---	---	---	---	---	---	---
11	8200	---	---	---	---	---	---	---	---	---	---	---
12	8200	---	---	---	---	---	---	---	---	---	---	---
13	9060	---	---	---	---	---	---	---	---	---	---	---
14	8940	---	---	---	---	---	---	---	---	---	---	---
15	9070	---	---	---	---	---	---	---	---	---	---	---
16	8220	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	8990	---	---	---	---	---	---	---	---	---	---	---
19	9000	---	---	---	---	---	---	---	---	---	---	---
20	5490	---	---	---	---	---	---	---	---	---	---	---
21	3830	---	---	---	---	---	---	---	---	---	---	---
22	2630	---	---	---	---	---	---	---	---	---	---	---
23	2440	---	---	---	---	---	---	---	---	---	---	---
24	2970	---	---	---	---	---	---	---	---	---	---	---
25	4790	---	---	---	---	---	---	---	---	---	---	---
26	5070	---	---	---	---	---	---	---	---	---	---	---
27	4560	---	---	---	---	---	---	---	---	---	---	---
28	5380	---	---	---	---	---	---	---	---	---	---	---
29	5820	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	3680	---	---	---	---	---	---	---	---	---	---	---
MEAN	---	---	---	---	---	---	---	---	---	---	---	---
MAX	---	---	---	---	---	---	---	---	---	---	---	---
MIN	---	---	---	---	---	---	---	---	---	---	---	---



08121000 Colorado River at Colorado City, TX--Continued

WATER TEMPERATURE FROM DAILY OBSERVER, IN (DEGREES C), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28.00	---	---	---	---	---	---	---	---	---	---	---
2	29.00	---	---	---	---	---	---	---	---	---	---	---
3	29.00	---	---	---	---	---	---	---	---	---	---	---
4	28.00	---	---	---	---	---	---	---	---	---	---	---
5	28.00	---	---	---	---	---	---	---	---	---	---	---
6	28.00	---	---	---	---	---	---	---	---	---	---	---
7	18.00	---	---	---	---	---	---	---	---	---	---	---
8	20.00	---	---	---	---	---	---	---	---	---	---	---
9	20.00	---	---	---	---	---	---	---	---	---	---	---
10	22.00	---	---	---	---	---	---	---	---	---	---	---
11	27.00	---	---	---	---	---	---	---	---	---	---	---
12	24.00	---	---	---	---	---	---	---	---	---	---	---
13	18.00	---	---	---	---	---	---	---	---	---	---	---
14	19.00	---	---	---	---	---	---	---	---	---	---	---
15	21.00	---	---	---	---	---	---	---	---	---	---	---
16	20.00	---	---	---	---	---	---	---	---	---	---	---
17	21.00	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	18.00	---	---	---	---	---	---	---	---	---	---	---
20	20.00	---	---	---	---	---	---	---	---	---	---	---
21	17.00	---	---	---	---	---	---	---	---	---	---	---
22	20.00	---	---	---	---	---	---	---	---	---	---	---
23	13.00	---	---	---	---	---	---	---	---	---	---	---
24	20.00	---	---	---	---	---	---	---	---	---	---	---
25	14.00	---	---	---	---	---	---	---	---	---	---	---
26	15.00	---	---	---	---	---	---	---	---	---	---	---
27	15.00	---	---	---	---	---	---	---	---	---	---	---
28	15.00	---	---	---	---	---	---	---	---	---	---	---
29	15.00	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	11.00	---	---	---	---	---	---	---	---	---	---	---
MEAN	---	---	---	---	---	---	---	---	---	---	---	---
MAX	---	---	---	---	---	---	---	---	---	---	---	---
MIN	---	---	---	---	---	---	---	---	---	---	---	---



08121000 Colorado River at Colorado City, TX--Continued

SPECIFIC CONDUCTANCE, IN US/CM @ 25C, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

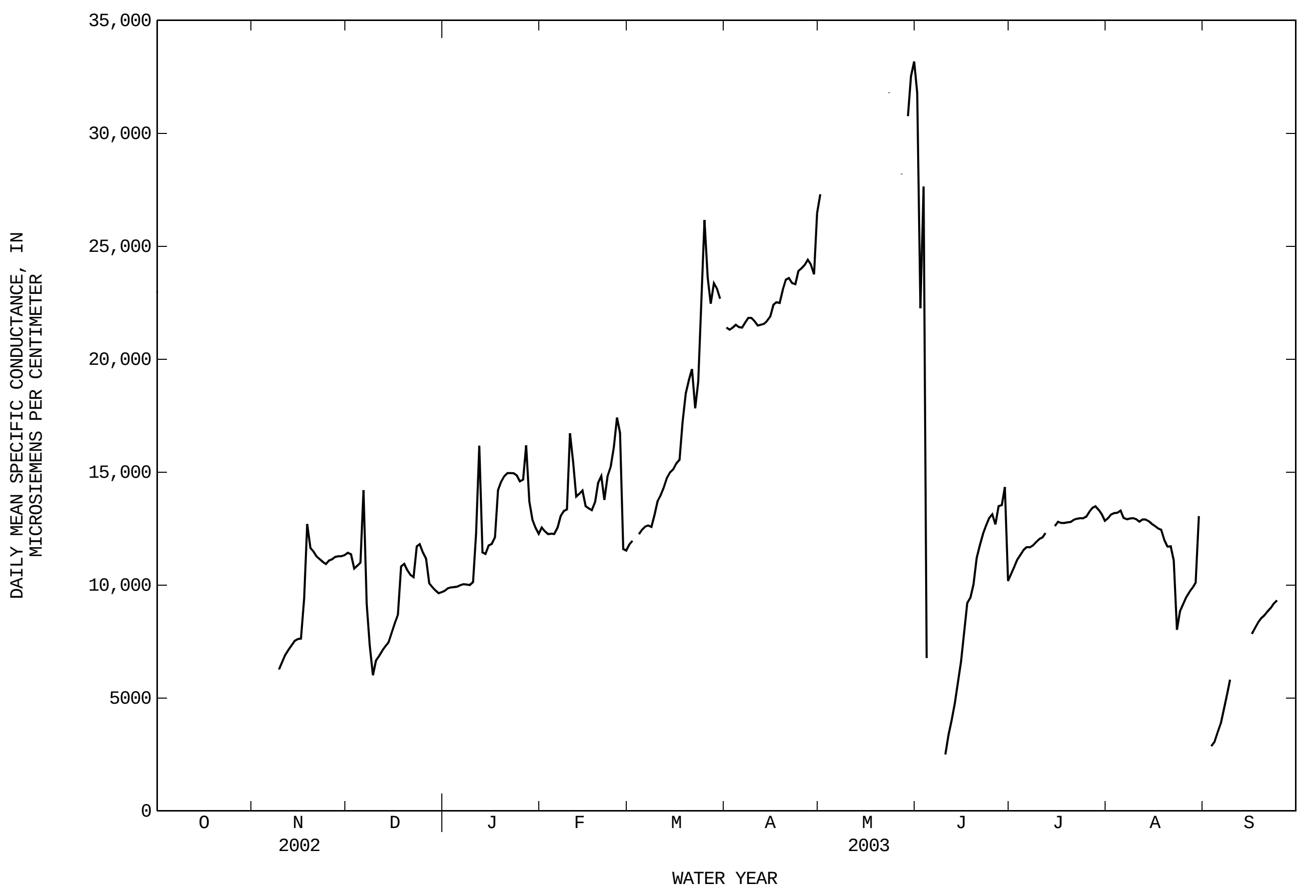
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	---	---	---	---	---	---	11500	11300	11400	9820	9640	9740
2	---	---	---	---	---	---	11500	11300	11400	9930	9790	9850
3	---	---	---	---	---	---	11300	9100	10700	9980	9800	9890
4	---	---	---	---	---	---	11200	10600	10800	9980	9770	9910
5	---	---	---	---	---	---	11200	10800	11000	9990	9820	9930
6	---	---	---	---	---	---	20500	10600	14200	10100	9920	9990
7	---	---	---	---	---	---	10600	7690	9160	10100	9930	10000
8	---	---	---	---	---	---	7870	6150	7320	10100	9890	10000
9	---	---	---	6420	6090	6250	6400	5430	6010	10100	9910	10000
10	---	---	---	6760	6390	6580	6760	6400	6650	10200	9980	10100
11	---	---	---	7050	6760	6900	6990	6760	6860	19800	10100	12300
12	---	---	---	7240	7050	7130	7250	6980	7090	19900	12600	16200
13	---	---	---	7440	7240	7320	7700	7060	7280	12600	10600	11400
14	---	---	---	7590	7410	7520	7630	7240	7450	11600	11200	11400
15	---	---	---	7640	7560	7610	8110	7630	7860	11900	11400	11700
16	---	---	---	7690	7510	7620	8500	8110	8300	11900	11700	11800
17	---	---	---	14400	7270	9410	9400	8490	8670	13100	11400	12100
18	---	---	---	14500	11900	12700	12100	9280	10800	15100	12600	14200
19	---	---	---	11900	11400	11600	11300	10700	10900	15000	14200	14600
20	---	---	---	11600	11400	11500	10800	10500	10700	15100	14500	14800
21	---	---	---	11400	11000	11300	10600	10300	10400	15100	14800	15000
22	---	---	---	11300	11000	11100	10400	10300	10300	15100	14800	15000
23	---	---	---	11100	10900	11000	13400	10100	11700	15100	14700	14900
24	---	---	---	11000	10700	10900	12200	11600	11800	15000	14700	14800
25	---	---	---	11100	11000	11100	11600	11100	11400	14800	14300	14600
26	---	---	---	11200	11100	11100	12400	10300	11200	15700	14300	14700
27	---	---	---	11300	11200	11200	10300	9890	10100	18500	14100	16200
28	---	---	---	11300	11200	11300	10000	9740	9900	14300	13100	13700
29	---	---	---	11400	11200	11300	9870	9620	9760	13300	12700	12900
30	---	---	---	11400	11300	11300	9680	9540	9630	12900	12200	12500
31	---	---	---	---	---	---	9750	9600	9680	12500	12100	12300
MONTH	---	---	---	---	---	---	20500	5430	9690	19900	9640	12500

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	12700	12300	12500	12000	11500	11800	21700	20800	21400	27600	27100	27300
2	12500	12100	12400	12300	11700	11900	21700	20800	21300	---	---	---
3	12400	12000	12200	---	---	---	21800	20800	21400	---	---	---
4	12400	12000	12300	12300	12200	12200	21800	21100	21500	---	---	---
5	12400	12000	12300	12600	12300	12400	21900	20900	21400	---	---	---
6	13000	12100	12500	12700	12400	12600	21800	20900	21400	---	---	---
7	13300	12800	13100	12800	12500	12600	22000	21000	21600	---	---	---
8	13400	13000	13300	12800	12400	12600	22200	21300	21800	---	---	---
9	14300	12900	13300	13500	12800	13100	22200	21200	21800	---	---	---
10	18900	14300	16700	14000	13500	13700	22100	21100	21700	---	---	---
11	16200	14200	15400	14100	13800	14000	21900	21000	21500	---	---	---
12	14300	13500	13900	14800	14100	14300	21800	21000	21500	---	---	---
13	14700	13400	14000	15000	14400	14700	21800	21200	21600	---	---	---
14	14600	13800	14200	15200	14700	15000	22000	21300	21700	---	---	---
15	13800	13200	13500	15300	14900	15100	22200	21500	21900	---	---	---
16	13600	13000	13400	15800	15100	15400	22800	22100	22400	---	---	---
17	13500	12900	13300	16200	14800	15500	22900	22200	22500	---	---	---
18	14300	13300	13700	17900	16200	17200	22800	22200	22500	---	---	---
19	14900	14300	14500	18800	17900	18500	23800	22700	23100	---	---	---
20	15000	14500	14800	19500	18700	19100	23800	23000	23500	---	---	---
21	15000	11400	13800	19900	17100	19600	23800	23300	23600	---	---	---
22	15100	14400	14800	20300	10600	17800	23700	23000	23400	---	---	---
23	15900	14800	15200	20000	18700	19000	24000	22900	23300	33300	30900	31800
24	16500	15000	16100	29500	19000	23200	24200	23400	23900	---	24600	---
25	23700	16100	17400	29500	23800	26200	24400	23400	24000	---	---	---
26	23900	12200	16700	25100	22600	23600	24400	23600	24200	---	17500	---
27	12200	11300	11600	23300	21900	22500	24700	23900	24400	33400	25900	28200
28	11700	11400	11500	23600	23000	23400	24900	22600	24200	---	29400	---
29	---	---	---	23500	22700	23100	25100	22800	23800	32100	29500	30800
30	---	---	---	23300	22100	22700	27500	25100	26500	33400	32100	32500
31	---	---	---	22400	---	---	---	---	---	33900	32500	33200
MONTH	23900	11300	13900	---	---	---	27500	20800	22600	---	---	---

08121000 Colorado River at Colorado City, TX--Continued

SPECIFIC CONDUCTANCE, IN US/CM @ 25C, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	34700	20500	31800	10700	10300	10500	13100	12800	13000	---	---	---
2	28200	11400	22300	11000	10600	10800	13300	12900	13100	2920	---	---
3	32100	24500	27600	11300	10900	11100	13300	12900	13200	3100	2830	2860
4	32700	1800	6760	11500	11200	11300	13400	13000	13200	3260	2890	3040
5	1890	---	---	11700	11400	11500	13600	13100	13300	3660	3260	3450
6	---	---	---	11800	11500	11700	13200	12700	13000	4110	3660	3860
7	---	---	---	11800	11500	11700	13100	12700	12900	4710	4110	4470
8	---	---	---	11900	11600	11800	13100	12800	12900	5470	4710	5140
9	1990	---	---	12100	11700	11900	13100	12700	13000	6140	5470	5800
10	3030	1990	2490	12100	11900	12000	13100	12700	12900	---	---	---
11	3660	3030	3370	12400	11900	12100	12900	12600	12800	---	---	---
12	4290	3660	4030	12400	12100	12300	13000	12700	12900	---	---	---
13	5280	4290	4750	---	---	---	13100	12700	12900	---	---	---
14	6050	5280	5710	---	---	---	13000	12600	12800	---	---	---
15	7350	6050	6610	13000	12400	12600	12900	12400	12700	---	---	---
16	8490	7350	7970	13000	12500	12800	12800	12400	12600	8030	7670	7830
17	9700	8490	9200	12900	12500	12700	12700	12300	12500	8240	8020	8100
18	10600	8400	9450	13000	12400	12700	12500	12300	12400	8550	8230	8340
19	10800	9260	10000	13000	12400	12800	12500	11600	12000	8610	8410	8530
20	11600	10800	11200	13000	12500	12800	11800	11500	11700	8830	8510	8660
21	12100	11600	11800	13100	12600	12900	11900	11500	11700	8960	8730	8830
22	12600	12100	12300	13200	12700	12900	12100	7260	11100	9110	8860	8990
23	13000	12400	12600	13200	12800	13000	8660	7260	8010	9330	9110	9180
24	13200	12800	13000	13200	12700	13000	9020	8660	8830	9400	9170	9310
25	13300	12900	13100	13200	12800	13000	9370	9020	9150	9470	---	---
26	13600	10300	12700	13500	13000	13200	9640	9350	9470	---	---	---
27	14000	12600	13500	13700	13200	13400	9840	9530	9690	---	---	---
28	14000	13200	13500	13700	13200	13500	10100	9710	9870	---	---	---
29	17700	10300	14300	13600	13100	13300	10200	9930	10100	---	---	---
30	11500	9720	10200	13400	12800	13100	28300	5320	13000	---	---	---
31	---	---	---	13000	12600	12800	5320	---	---	---	---	---
MONTH	---	---	---	---	---	---	28300	---	---	---	---	---



08121000 Colorado River at Colorado City, TX--Continued

WATER TEMPERATURE, IN (DEGREES C), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

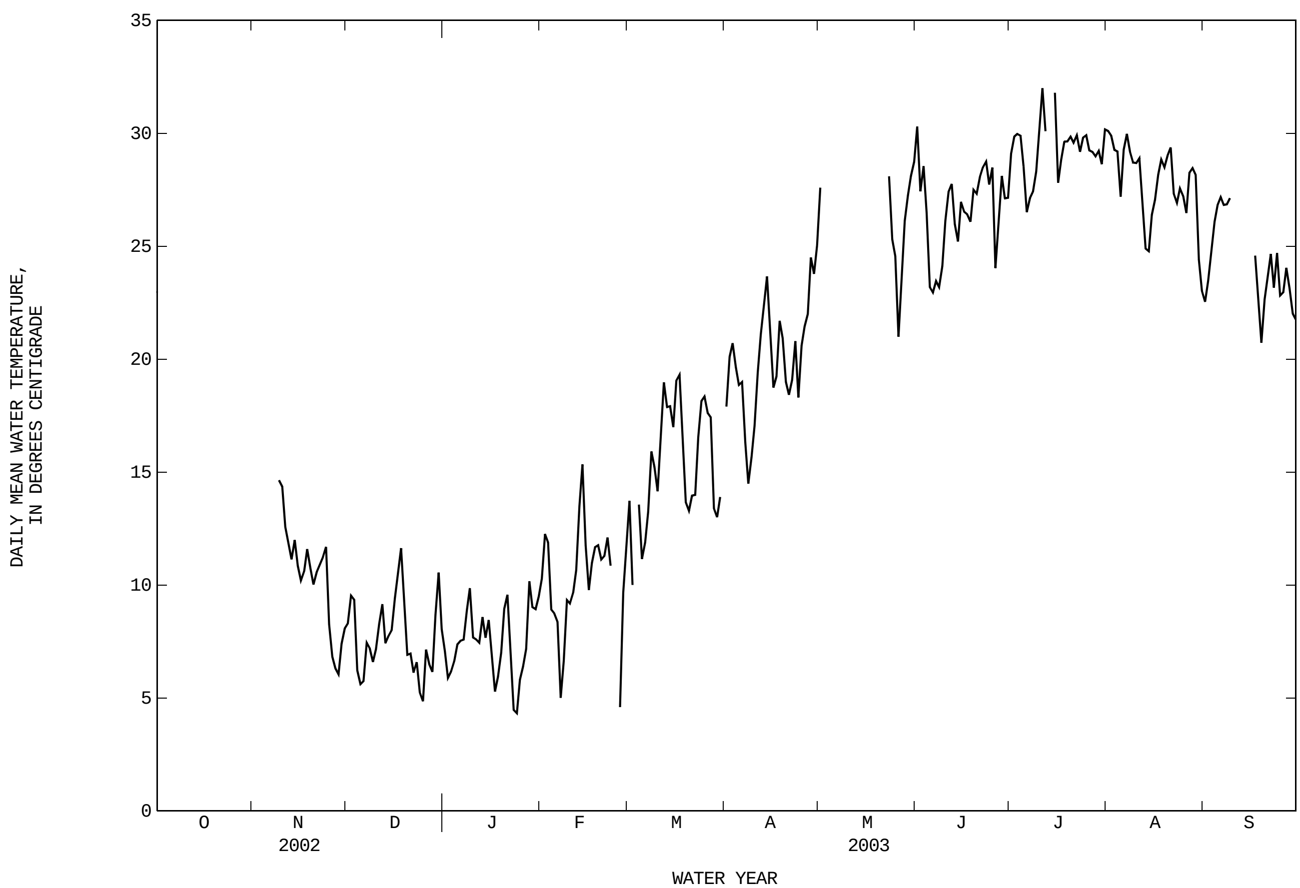
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	---	---	---	---	---	---	11.7	5.7	8.3	10.7	5.3	7.1
2	---	---	---	---	---	---	13.3	6.7	9.5	9.0	3.3	5.9
3	---	---	---	---	---	---	11.0	7.5	9.3	10.1	3.3	6.2
4	---	---	---	---	---	---	7.5	5.5	6.2	10.8	3.6	6.6
5	---	---	---	---	---	---	6.6	4.9	5.6	11.7	4.3	7.4
6	---	---	---	---	---	---	7.8	3.7	5.7	10.3	5.8	7.5
7	---	---	---	---	---	---	9.0	5.8	7.4	11.2	4.6	7.6
8	---	---	---	---	---	---	8.0	6.5	7.2	13.0	5.3	8.9
9	---	---	---	17.3	12.6	14.6	7.1	6.2	6.6	12.4	8.3	9.9
10	---	---	---	16.0	12.8	14.4	8.8	5.8	7.2	10.5	5.1	7.7
11	---	---	---	15.7	10.3	12.6	11.5	5.8	8.3	9.1	6.0	7.6
12	---	---	---	14.9	10.0	11.8	11.2	7.8	9.1	8.4	6.9	7.4
13	---	---	---	14.8	8.2	11.1	9.2	5.1	7.4	11.8	6.7	8.6
14	---	---	---	15.1	9.8	12.0	11.5	4.9	7.7	10.7	5.5	7.7
15	---	---	---	12.3	9.8	10.9	11.3	4.9	8.0	11.7	5.9	8.4
16	---	---	---	13.4	7.9	10.2	12.5	7.2	9.4	9.0	5.1	6.8
17	---	---	---	12.9	8.3	10.6	13.7	7.7	10.4	9.4	2.6	5.3
18	---	---	---	13.2	9.9	11.6	12.9	10.2	11.6	10.7	2.6	5.9
19	---	---	---	14.4	7.8	10.7	11.1	7.4	9.2	11.0	3.8	7.0
20	---	---	---	12.5	7.3	10.0	9.9	4.3	6.9	13.2	5.3	8.9
21	---	---	---	14.3	7.8	10.6	9.7	4.9	7.0	12.9	7.2	9.6
22	---	---	---	14.8	8.1	10.9	7.9	4.2	6.1	10.1	4.9	7.3
23	---	---	---	14.9	8.2	11.2	7.2	5.6	6.6	7.5	2.4	4.5
24	---	---	---	15.6	9.5	11.7	6.8	3.9	5.2	7.2	2.5	4.3
25	---	---	---	9.5	7.0	8.3	8.2	1.9	4.8	8.0	4.4	5.8
26	---	---	---	8.0	6.0	6.8	8.9	5.8	7.1	8.0	5.3	6.4
27	---	---	---	9.0	4.6	6.3	9.3	4.0	6.5	10.0	4.7	7.2
28	---	---	---	9.6	3.5	6.0	9.8	2.9	6.2	14.9	6.6	10.2
29	---	---	---	10.7	4.6	7.4	11.2	6.4	8.7	11.3	7.4	9.0
30	---	---	---	10.7	5.9	8.1	13.0	9.0	10.5	13.7	5.4	8.9
31	---	---	---	---	---	---	10.9	5.6	8.0	13.4	6.5	9.5
MONTH	---	---	---	---	---	---	13.7	1.9	7.7	14.9	2.4	7.5

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	14.9	6.3	10.3	19.8	10.2	13.7	25.8	11.0	17.9	32.9	19.6	27.6
2	17.0	8.3	12.3	12.5	8.4	10.0	28.7	13.6	20.1	---	---	---
3	14.6	9.2	11.9	12.0	---	---	26.9	16.9	20.7	---	---	---
4	12.1	6.0	8.9	18.9	10.2	13.6	26.5	14.8	19.6	---	---	---
5	10.7	7.2	8.7	16.5	6.3	11.1	26.8	11.9	18.9	---	---	---
6	9.5	5.9	8.4	18.2	7.2	11.9	24.9	14.5	19.0	---	---	---
7	6.8	3.4	5.0	20.2	7.6	13.2	24.0	11.0	16.3	---	---	---
8	10.2	4.5	6.6	22.2	11.8	15.9	21.8	9.0	14.5	---	---	---
9	13.6	6.4	9.3	21.0	11.4	15.2	25.4	8.0	15.7	---	---	---
10	11.6	6.7	9.2	19.7	11.0	14.1	25.7	9.9	17.0	---	---	---
11	14.9	6.0	9.6	22.7	12.3	16.5	28.1	12.9	19.4	---	---	---
12	16.4	5.8	10.7	25.3	14.6	19.0	29.8	14.0	21.1	---	---	---
13	15.8	11.5	13.5	23.6	13.9	17.9	29.6	16.9	22.4	---	---	---
14	18.5	13.2	15.3	25.3	12.6	17.9	31.7	17.8	23.7	---	---	---
15	14.0	8.7	11.8	20.8	14.3	17.0	25.1	17.9	21.4	---	---	---
16	14.4	6.6	9.8	26.0	13.7	19.0	26.5	12.6	18.7	---	---	---
17	15.9	6.9	11.0	24.3	16.5	19.3	24.7	14.5	19.2	---	---	---
18	14.8	8.6	11.7	20.6	14.4	16.9	27.4	17.0	21.7	---	---	---
19	14.7	10.0	11.8	17.1	10.6	13.7	25.6	17.1	20.9	---	---	---
20	13.7	9.8	11.1	17.0	11.6	13.3	27.0	13.0	19.0	---	---	---
21	12.9	9.5	11.3	19.2	9.8	14.0	22.7	13.6	18.4	---	---	---
22	17.4	8.0	12.1	16.3	12.1	14.0	23.7	16.1	19.1	---	---	---
23	14.9	7.8	10.9	24.5	10.6	16.5	26.3	17.4	20.8	35.0	21.0	28.1
24	8.3	---	---	22.4	13.8	18.1	25.4	12.7	18.3	29.4	22.6	25.3
25	5.1	---	---	21.7	15.9	18.3	29.4	13.8	20.6	30.5	21.4	24.6
26	7.1	2.8	4.6	24.5	11.6	17.6	29.6	14.8	21.5	22.8	19.4	21.0
27	16.3	5.5	9.7	23.4	13.5	17.4	28.8	17.4	22.0	31.0	18.4	23.8
28	17.4	7.6	11.4	18.8	10.2	13.4	32.8	18.6	24.5	33.3	20.1	26.1
29	---	---	---	19.6	8.8	13.0	31.0	18.3	23.8	35.2	21.1	27.3
30	---	---	---	21.6	8.1	13.9	31.6	21.2	25.0	37.1	21.4	28.1
31	---	---	---	---	9.1	---	---	---	---	37.6	21.8	28.7
MONTH	18.5	---	---	---	---	---	32.8	8.0	20.0	---	---	---

08121000 Colorado River at Colorado City, TX--Continued

WATER TEMPERATURE, IN (DEGREES C), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	37.0	22.4	30.3	35.6	24.0	29.1	36.4	25.0	30.1	23.2	21.9	22.5
2	35.0	21.2	27.4	36.1	24.6	29.9	36.8	24.0	29.9	26.6	21.3	23.5
3	36.0	24.0	28.5	36.4	25.0	30.0	35.3	24.9	29.3	27.2	22.1	24.7
4	28.0	24.8	26.5	36.9	24.7	29.9	35.9	24.3	29.2	28.6	23.9	26.1
5	26.6	20.6	23.2	34.6	24.3	28.5	31.0	23.8	27.2	29.4	24.3	26.8
6	24.0	22.0	23.0	30.9	23.2	26.5	36.7	23.5	29.3	30.2	23.8	27.2
7	26.1	21.4	23.5	32.4	23.8	27.1	36.2	24.3	30.0	29.5	24.0	26.8
8	24.9	21.6	23.2	33.1	23.7	27.4	34.4	24.9	29.2	30.1	23.9	26.9
9	26.3	22.0	24.1	35.5	23.5	28.3	33.9	24.9	28.7	30.5	24.1	27.1
10	29.2	24.0	26.1	38.6	23.5	29.9	34.8	24.1	28.7	---	24.7	---
11	31.1	24.3	27.4	37.1	25.8	32.0	34.5	24.4	28.9	---	---	---
12	30.7	24.5	27.8	37.8	23.6	30.1	31.8	23.2	27.0	---	---	---
13	28.8	23.3	26.0	---	---	---	29.6	20.8	24.9	---	---	---
14	29.8	21.5	25.2	---	---	---	29.4	20.4	24.8	---	---	---
15	31.8	23.6	27.0	37.4	24.9	31.8	32.3	22.5	26.4	---	---	---
16	30.9	22.7	26.5	34.2	23.0	27.8	32.9	22.6	27.1	31.2	---	---
17	31.7	22.3	26.4	35.6	23.4	28.8	33.6	23.5	28.2	29.6	21.1	24.6
18	29.8	22.3	26.1	36.7	23.9	29.6	35.0	23.7	28.9	26.1	18.7	22.8
19	32.2	24.1	27.5	37.0	23.5	29.6	33.8	23.7	28.5	26.7	17.2	20.7
20	32.8	23.3	27.3	36.8	24.4	29.9	35.4	24.1	29.0	28.8	18.4	22.6
21	34.3	23.5	28.1	36.6	23.7	29.6	36.1	23.9	29.4	29.3	20.7	23.6
22	35.3	23.7	28.5	37.3	24.5	29.9	32.7	23.7	27.3	31.3	19.7	24.7
23	35.6	23.9	28.8	35.2	24.5	29.2	34.4	21.5	26.9	25.7	21.2	23.2
24	34.1	24.3	27.7	36.9	24.7	29.8	32.8	23.3	27.6	32.5	19.4	24.7
25	34.8	24.4	28.5	36.3	25.1	29.9	34.3	23.2	27.2	26.1	19.8	22.8
26	27.1	22.2	24.0	35.6	24.3	29.2	32.6	23.2	26.5	25.7	21.0	23.0
27	33.3	21.5	26.1	36.1	23.7	29.2	34.7	23.6	28.3	27.6	21.4	24.0
28	34.8	23.3	28.1	35.7	23.9	29.0	34.4	24.2	28.5	28.1	19.4	23.1
29	30.9	24.0	27.1	35.9	23.8	29.2	35.3	23.6	28.2	26.5	18.6	22.0
30	30.2	24.5	27.1	35.3	24.1	28.6	26.0	22.6	24.4	27.1	17.7	21.8
31	---	---	---	37.3	24.2	30.2	24.3	22.3	23.0	---	---	---
MONTH	37.0	20.6	26.6	---	---	---	36.8	20.4	27.8	---	---	---



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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 Sept. 2002 (contents), Oct. 2002 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. 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. 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.--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.

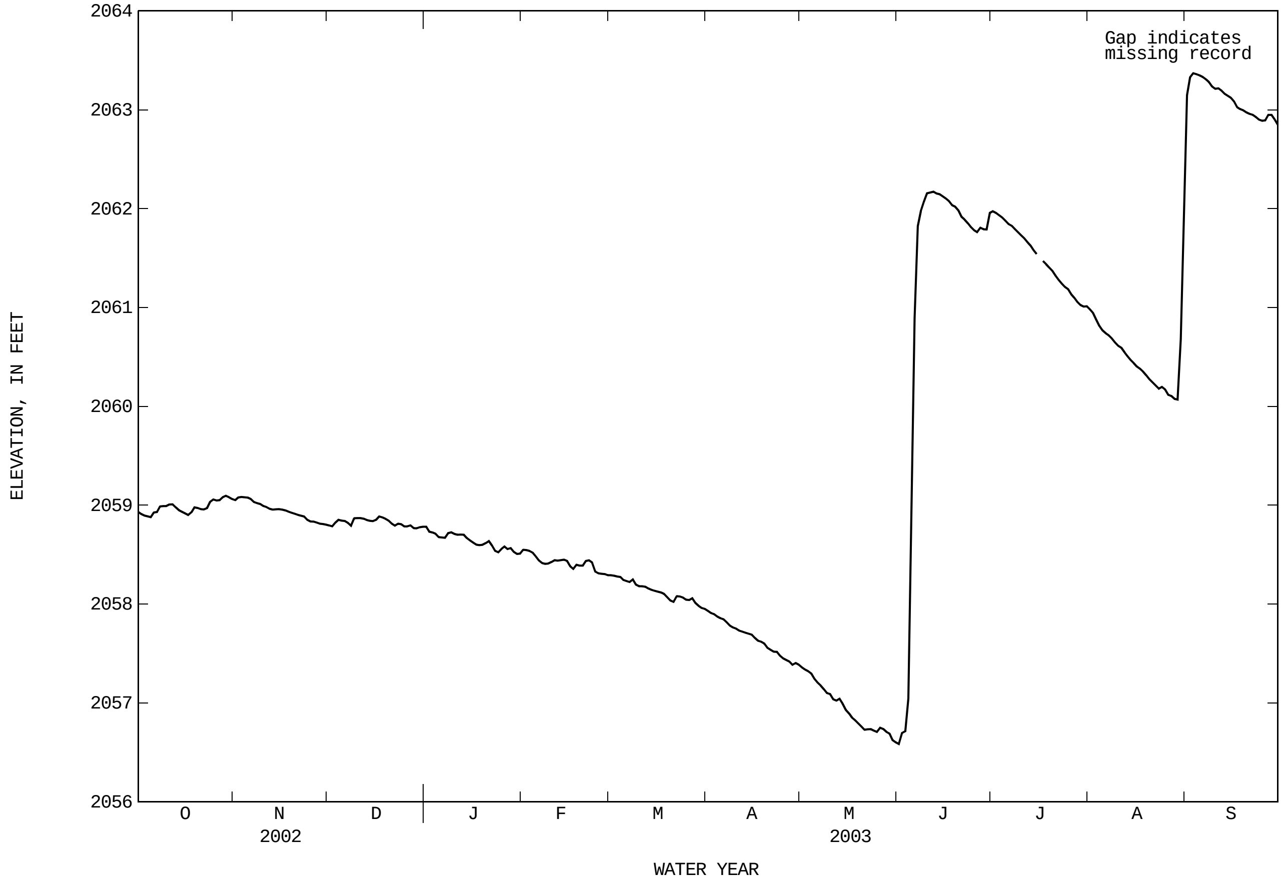
EXTREMES FOR CURRENT YEAR.--Maximum elevation, 2,063.38 ft, Sept. 3; minimum elevation, 2,056.56 ft, June 1.

ELEVATION, IN FEET (NGVD), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2058.93	2059.05	2058.79	2058.78	2058.55	2058.29	2057.93	2057.36	2056.58	2061.97	2060.98	2063.15
2	2058.91	2059.08	2058.78	2058.73	2058.55	2058.29	2057.91	2057.34	2056.70	2061.96	2060.94	2063.33
3	2058.89	2059.08	2058.82	2058.72	2058.54	2058.28	2057.90	2057.32	2056.71	2061.93	2060.88	2063.37
4	2058.89	2059.08	2058.85	2058.71	2058.52	2058.27	2057.87	2057.30	2057.04	2061.91	2060.82	2063.36
5	2058.88	2059.08	2058.84	2058.68	2058.48	2058.24	2057.86	2057.24	2058.56	2061.88	2060.77	2063.35
6	2058.93	2059.06	2058.84	2058.67	2058.44	2058.23	2057.84	2057.20	2060.89	2061.84	2060.74	2063.33
7	2058.93	2059.03	2058.82	2058.67	2058.41	2058.22	2057.81	2057.18	2061.82	2061.83	2060.72	2063.31
8	2058.99	2059.02	2058.79	2058.72	2058.41	2058.25	2057.78	2057.14	2061.97	2061.80	2060.69	2063.28
9	2058.99	2059.01	2058.87	2058.72	2058.41	2058.20	2057.76	2057.10	2062.07	2061.76	2060.65	2063.24
10	2058.99	2058.99	2058.87	2058.71	2058.42	2058.18	2057.75	2057.09	2062.16	2061.73	2060.61	2063.21
11	2059.01	2058.98	2058.87	2058.70	2058.44	2058.18	2057.73	2057.03	2062.16	2061.70	2060.59	2063.22
12	2059.01	2058.96	2058.86	2058.70	2058.44	2058.17	2057.72	2057.02	2062.17	2061.66	2060.55	2063.19
13	2058.98	2058.95	2058.85	2058.70	2058.44	2058.16	2057.71	2057.04	2062.15	2061.63	2060.51	2063.16
14	2058.95	2058.96	2058.84	2058.67	2058.45	2058.14	2057.70	2056.99	2062.15	2061.58	2060.47	2063.14
15	2058.93	2058.96	2058.84	2058.64	2058.43	2058.13	2057.69	2056.93	2062.12	2061.54	2060.44	2063.12
16	2058.92	2058.95	2058.85	2058.62	2058.38	2058.12	2057.66	2056.89	2062.10	---	2060.40	2063.09
17	2058.90	2058.95	2058.89	2058.60	2058.36	2058.12	2057.63	2056.85	2062.08	2061.47	2060.38	2063.03
18	2058.93	2058.93	2058.88	2058.59	2058.40	2058.10	2057.62	2056.82	2062.03	2061.44	2060.35	2063.01
19	2058.98	2058.92	2058.86	2058.60	2058.39	2058.07	2057.60	2056.79	2062.02	2061.41	2060.31	2062.99
20	2058.97	2058.91	2058.84	2058.61	2058.39	2058.03	2057.56	2056.76	2061.98	2061.37	2060.28	2062.97
21	2058.96	2058.90	2058.81	2058.64	2058.43	2058.02	2057.54	2056.73	2061.92	2061.32	2060.24	2062.96
22	2058.96	2058.89	2058.79	2058.59	2058.44	2058.08	2057.52	2056.73	2061.89	2061.28	2060.21	2062.95
23	2058.97	2058.89	2058.81	2058.54	2058.42	2058.08	2057.51	2056.73	2061.85	2061.24	2060.18	2062.93
24	2059.03	2058.85	2058.81	2058.52	2058.33	2058.07	2057.48	2056.72	2061.81	2061.21	2060.20	2062.90
25	2059.06	2058.84	2058.78	2058.55	2058.31	2058.04	2057.45	2056.70	2061.78	2061.18	2060.17	2062.89
26	2059.05	2058.83	2058.78	2058.58	2058.30	2058.04	2057.43	2056.75	2061.76	2061.14	2060.12	2062.89
27	2059.05	2058.82	2058.80	2058.55	2058.30	2058.06	2057.42	2056.73	2061.80	2061.10	2060.11	2062.95
28	2059.08	2058.81	2058.77	2058.57	2058.29	2058.01	2057.39	2056.71	2061.79	2061.06	2060.07	2062.95
29	2059.09	2058.81	2058.76	2058.53	---	2057.98	2057.40	2056.69	2061.79	2061.02	2060.07	2062.90
30	2059.08	2058.80	2058.78	2058.51	---	2057.96	2057.39	2056.62	2061.96	2061.01	2060.68	2062.85
31	2059.06	---	2058.78	2058.51	---	2057.95	---	2056.60	---	2061.01	2062.15	---
MEAN	2058.98	2058.95	2058.82	2058.63	2058.42	2058.13	2057.65	2056.94	2061.13	---	2060.53	2063.10
MAX	2059.09	2059.08	2058.89	2058.78	2058.55	2058.29	2057.93	2057.36	2062.17	---	2062.15	2063.37
MIN	2058.88	2058.80	2058.76	2058.51	2058.29	2057.95	2057.39	2056.60	2056.58	---	2060.07	2062.85

CAL YR 2002 MAX 2061.05 MIN 2058.76
WTR YR 2003 MAX 2063.37 MIN 2056.58

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 Sept. 2002 (contents), Oct. 2002 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.--Records good except those for Aug. 19, 22, 25, 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. 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.--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.

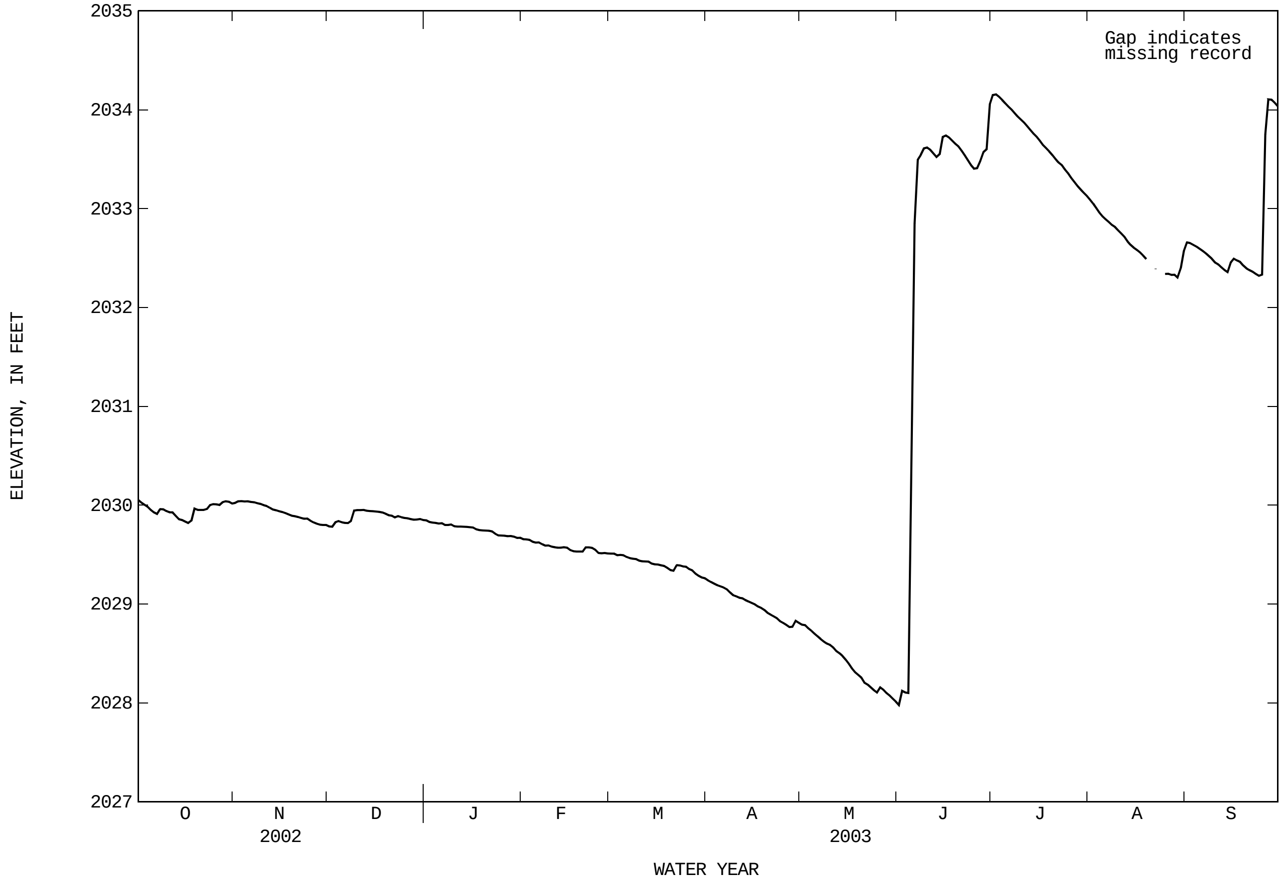
EXTREMES FOR CURRENT YEAR.--Maximum elevation, 2,034.16 ft, July 1, 2; minimum elevation, 2,027.94 ft, June 1.

ELEVATION, IN FEET (NGVD), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2030.05	2030.02	2029.79	2029.85	2029.66	2029.51	2029.24	2028.79	2027.98	2034.15	2033.09	2032.66
2	2030.03	2030.04	2029.78	2029.83	2029.65	2029.51	2029.22	2028.79	2028.12	2034.15	2033.05	2032.65
3	2030.01	2030.04	2029.83	2029.82	2029.65	2029.49	2029.21	2028.76	2028.10	2034.13	2033.01	2032.63
4	2029.98	2030.04	2029.84	2029.82	2029.63	2029.49	2029.19	2028.73	2028.10	2034.10	2032.96	2032.62
5	2029.95	2030.04	2029.83	2029.81	2029.62	2029.49	2029.18	2028.70	2029.77	2034.07	2032.92	2032.60
6	2029.93	2030.03	2029.82	2029.82	2029.62	2029.47	2029.17	2028.67	2032.85	2034.03	2032.89	2032.57
7	2029.91	2030.03	2029.82	2029.80	2029.61	2029.46	2029.15	2028.64	2033.49	2034.00	2032.87	2032.55
8	2029.96	2030.02	2029.84	2029.80	2029.59	2029.46	2029.12	2028.62	2033.54	2033.96	2032.84	2032.52
9	2029.96	2030.01	2029.94	2029.81	2029.59	2029.45	2029.09	2028.60	2033.61	2033.93	2032.82	2032.49
10	2029.94	2030.00	2029.95	2029.79	2029.58	2029.44	2029.08	2028.59	2033.62	2033.90	2032.78	2032.45
11	2029.93	2029.99	2029.95	2029.78	2029.57	2029.43	2029.06	2028.56	2033.60	2033.87	2032.75	2032.43
12	2029.93	2029.97	2029.95	2029.78	2029.57	2029.43	2029.06	2028.52	2033.56	2033.83	2032.71	2032.41
13	2029.89	2029.96	2029.94	2029.78	2029.57	2029.43	2029.04	2028.50	2033.52	2033.80	2032.67	2032.38
14	2029.86	2029.95	2029.94	2029.78	2029.58	2029.41	2029.02	2028.47	2033.55	2033.76	2032.63	2032.36
15	2029.85	2029.94	2029.94	2029.78	2029.57	2029.40	2029.01	2028.44	2033.72	2033.73	2032.61	2032.46
16	2029.83	2029.93	2029.93	2029.77	2029.55	2029.40	2028.99	2028.40	2033.74	2033.69	2032.58	2032.49
17	2029.82	2029.92	2029.93	2029.76	2029.53	2029.39	2028.97	2028.35	2033.72	2033.64	2032.56	2032.47
18	2029.84	2029.91	2029.93	2029.75	2029.53	2029.39	2028.96	2028.31	2033.69	2033.61	2032.53	2032.46
19	2029.96	2029.89	2029.91	2029.74	2029.53	2029.37	2028.94	2028.28	2033.66	2033.58	2032.49	2032.42
20	2029.95	2029.89	2029.90	2029.74	2029.53	2029.34	2028.91	2028.25	2033.63	2033.54	---	2032.39
21	2029.95	2029.88	2029.89	2029.74	2029.57	2029.34	2028.89	2028.20	2033.59	2033.50	---	2032.38
22	2029.95	2029.87	2029.88	2029.73	2029.57	2029.39	2028.88	2028.18	2033.54	2033.47	2032.39	2032.36
23	2029.96	2029.86	2029.89	2029.71	2029.57	2029.39	2028.86	2028.16	2033.49	2033.44	---	2032.34
24	2030.00	2029.87	2029.88	2029.69	2029.55	2029.38	2028.83	2028.13	2033.44	2033.40	---	2032.32
25	2030.01	2029.84	2029.87	2029.69	2029.52	2029.38	2028.81	2028.10	2033.40	2033.36	2032.34	2032.33
26	2030.01	2029.83	2029.87	2029.69	2029.51	2029.35	2028.79	2028.16	2033.41	2033.31	2032.34	2033.75
27	2030.00	2029.81	2029.86	2029.69	2029.52	2029.34	2028.77	2028.13	2033.48	2033.27	2032.33	2034.11
28	2030.03	2029.80	2029.85	2029.69	2029.51	2029.31	2028.77	2028.10	2033.57	2033.23	2032.33	2034.10
29	2030.04	2029.80	2029.85	2029.68	---	2029.29	2028.83	2028.07	2033.60	2033.20	2032.30	2034.07
30	2030.03	2029.80	2029.86	2029.67	---	2029.27	2028.81	2028.04	2034.05	2033.16	2032.40	2034.04
31	2030.02	---	2029.85	2029.67	---	2029.26	---	2028.01	---	2033.13	2032.57	---
MEAN	2029.95	2029.93	2029.88	2029.76	2029.57	2029.40	2028.99	2028.39	2032.70	2033.68	---	2032.73
MAX	2030.05	2030.04	2029.95	2029.85	2029.66	2029.51	2029.24	2028.79	2034.05	2034.15	---	2034.11
MIN	2029.82	2029.80	2029.78	2029.67	2029.51	2029.26	2028.77	2028.01	2027.98	2033.13	---	2032.32

CAL YR 2002 MAX 2033.16 MIN 2028.24
WTR YR 2003 MAX 2034.15 MIN 2027.98

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 Sept. 2002 (contents), Oct. 2002 to current year.

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

REMARKS.--Records fair. The lake is formed by a rolled earthfill dam 2,450 ft long. The dam was completed in 1939. 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. 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.--Records of diversions may be obtained from the 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.

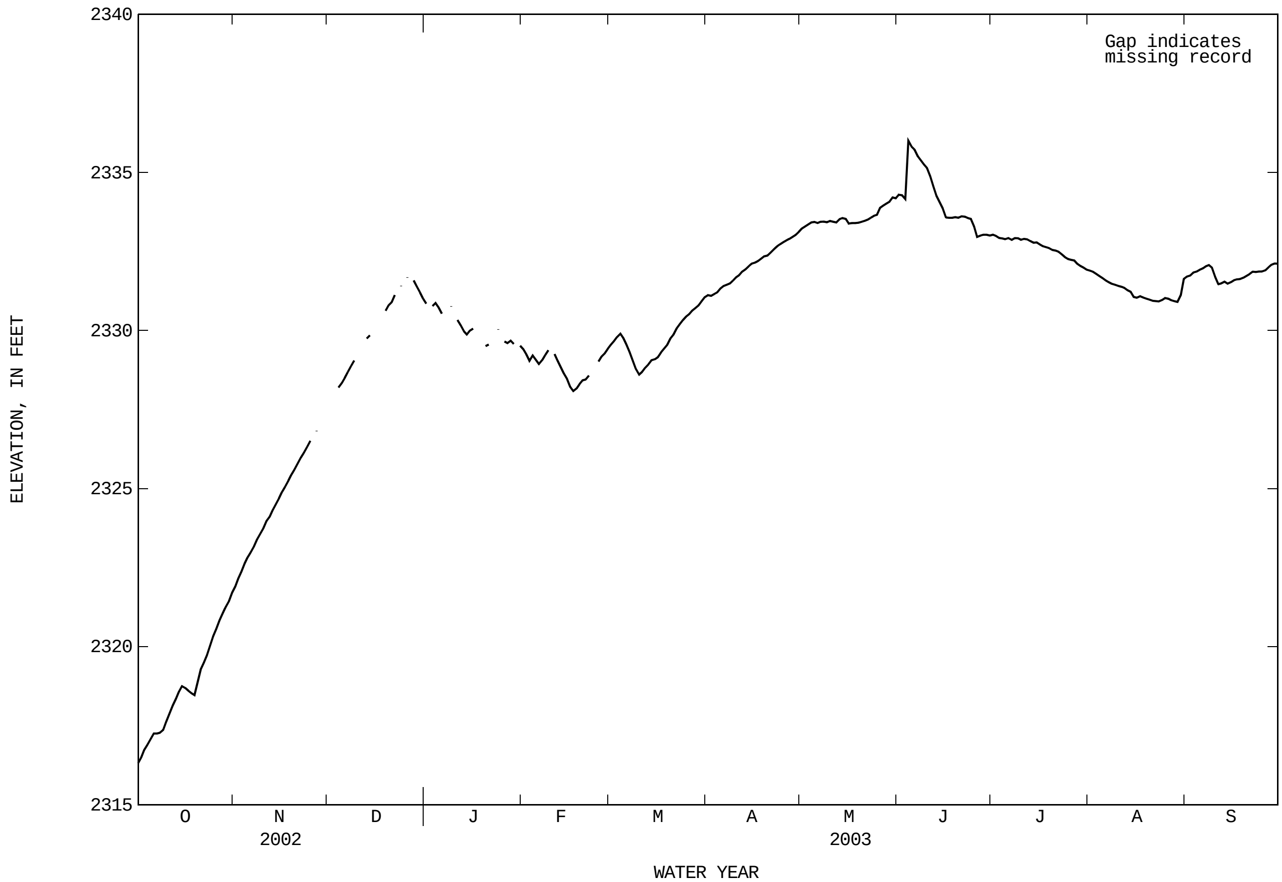
EXTREMES FOR CURRENT YEAR.--Maximum elevation, 2,336.09 ft, June 4; minimum elevation, 2,316.20 ft, Oct. 1.

ELEVATION, IN FEET (NGVD), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2316.31	2321.90	---	2330.85	2329.41	2329.55	2331.12	2333.23	2334.30	2333.03	2331.89	2331.71
2	2316.50	2322.15	---	---	2329.24	2329.66	2331.10	2333.29	2334.28	2332.99	2331.86	2331.73
3	2316.74	2322.38	---	2330.78	2329.05	2329.80	2331.16	2333.36	2334.17	2332.93	2331.79	2331.83
4	2316.90	2322.62	2328.19	2330.87	2329.21	2329.90	2331.21	2333.42	2336.01	2332.91	2331.73	2331.86
5	2317.09	2322.84	2328.33	2330.73	2329.08	2329.76	2331.33	2333.44	2335.82	2332.89	2331.66	2331.92
6	2317.26	2322.99	2328.50	2330.53	2328.94	2329.55	2331.41	2333.40	2335.72	2332.93	2331.59	2331.96
7	2317.25	2323.17	2328.70	---	2329.06	2329.32	2331.45	2333.44	2335.51	2332.87	2331.53	2332.03
8	2317.28	2323.40	2328.87	---	2329.22	2329.05	2331.49	2333.45	2335.39	2332.93	2331.48	2332.07
9	2317.36	2323.57	2329.05	2330.76	2329.38	2328.78	2331.59	2333.42	2335.25	2332.92	2331.45	2331.99
10	2317.62	2323.75	---	---	---	2328.61	2331.69	2333.47	2335.14	2332.87	2331.41	2331.70
11	2317.88	2323.97	---	2330.34	2329.26	2328.69	2331.76	2333.44	2334.88	2332.90	2331.39	2331.47
12	2318.12	2324.11	---	2330.17	2329.04	2328.83	2331.87	2333.42	2334.55	2332.89	2331.34	2331.49
13	2318.33	2324.32	2329.75	2329.98	2328.84	2328.93	2331.94	2333.52	2334.26	2332.83	2331.28	2331.54
14	2318.57	2324.51	2329.85	2329.88	2328.64	2329.06	2332.03	2333.56	2334.06	2332.78	2331.22	2331.48
15	2318.75	2324.69	---	2330.00	2328.47	2329.09	2332.12	2333.53	2333.86	2332.79	2331.06	2331.53
16	2318.70	2324.90	---	2330.06	2328.22	2329.16	2332.15	2333.39	2333.58	2332.72	2331.04	2331.59
17	2318.61	2325.07	---	---	2328.09	2329.31	2332.20	2333.40	2333.57	2332.67	2331.09	2331.62
18	2318.53	2325.25	---	---	2328.16	2329.42	2332.28	2333.40	2333.57	2332.64	2331.04	2331.63
19	2318.47	2325.45	2330.63	---	2328.30	2329.55	2332.35	2333.41	2333.59	2332.61	2331.01	2331.67
20	2318.90	2325.61	2330.80	2329.51	2328.43	2329.75	2332.38	2333.44	2333.57	2332.55	2330.98	2331.73
21	2319.28	2325.80	2330.90	2329.55	2328.45	2329.87	2332.47	2333.47	2333.61	2332.53	2330.94	2331.79
22	2319.49	2325.98	2331.12	---	2328.57	2330.07	2332.57	2333.51	2333.61	2332.49	2330.93	2331.86
23	2319.74	2326.15	---	---	---	2330.20	2332.66	2333.57	2333.56	2332.41	2330.92	2331.85
24	2320.03	2326.33	2331.41	2330.03	---	2330.33	2332.73	2333.63	2333.53	2332.32	2330.96	2331.87
25	2320.34	2326.51	---	---	2329.02	2330.44	2332.79	2333.66	2333.29	2332.26	2331.03	2331.87
26	2320.56	---	2331.67	2329.65	2329.18	2330.52	2332.85	2333.88	2332.96	2332.24	2331.01	2331.90
27	2320.84	2326.82	---	2329.60	2329.28	2330.63	2332.90	2333.96	2333.00	2332.22	2330.95	2331.99
28	2321.05	---	2331.59	2329.68	2329.42	2330.71	2332.96	2334.02	2333.03	2332.11	2330.93	2332.08
29	2321.26	---	2331.39	2329.57	---	2330.80	2333.03	2334.08	2333.03	2332.04	2330.91	2332.12
30	2321.44	---	2331.21	---	---	2330.93	2333.12	2334.21	2333.01	2331.99	2331.11	2332.11
31	2321.70	---	2331.01	2329.52	---	2331.06	---	2334.18	---	2331.92	2331.63	---
MEAN	2318.74	---	---	---	---	2329.72	2332.09	2333.57	2334.12	2332.62	2331.26	2331.80
MAX	2321.70	---	---	---	---	2331.06	2333.12	2334.21	2336.01	2333.03	2331.89	2332.12
MIN	2316.31	---	---	---	---	2328.61	2331.10	2333.23	2332.96	2331.92	2330.91	2331.47

CAL YR 2002 MAX 2332.63 MIN 2312.46
WTR YR 2003 MAX 2336.01 MIN 2316.31

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 right bank, 220 ft upstream from right end 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. Prior to Nov. 18, 2002, at site 222 ft downstream and 193 ft left at same datum. Satellite telemeter at station.

REMARKS.--Records good except those for estimated daily discharges, which are fair. 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 2002 TO SEPTEMBER 2003
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	0.71	0.89	0.00	69
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	408	0.69	0.00	12
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	73	0.51	0.00	4.2
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2610	0.41	0.00	1.5
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3160	0.37	0.00	0.66
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1680	0.37	0.00	0.32
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	209	0.36	0.00	0.20
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	354	0.31	0.00	0.14
9	0.00	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	299	0.31	0.00	0.12
10	0.00	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	47	0.28	0.00	0.11
11	0.00	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	21	0.27	0.00	3.2
12	0.00	e0.00	11	0.00	0.00	0.00	0.00	0.00	11	0.23	0.00	1.2
13	0.00	e0.00	0.71	0.00	0.00	0.00	0.00	0.00	30	0.21	0.00	0.23
14	0.00	0.00	0.22	0.00	0.00	0.00	0.00	0.00	38	0.19	0.00	0.10
15	0.00	0.00	0.09	0.00	0.00	0.00	0.00	0.00	8.2	0.20	0.00	0.09
16	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	4.0	0.21	0.00	0.09
17	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	2.9	0.23	0.00	0.07
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.0	0.23	0.00	0.06
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.5	0.22	0.00	0.05
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.3	0.20	0.00	0.05
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.1	0.17	0.00	0.07
22	0.00	0.00	0.00	0.00	0.00	66	0.00	0.00	0.92	0.15	0.00	0.07
23	0.00	0.00	0.00	0.00	0.00	12	0.00	0.00	0.81	0.14	0.00	0.06
24	0.00	0.00	0.00	0.00	0.00	2.8	0.00	0.00	0.77	0.14	0.00	0.05
25	0.00	0.00	0.00	0.00	0.00	0.92	0.00	186	0.73	0.14	0.00	0.07
26	0.00	0.00	0.00	0.00	0.00	0.24	0.00	273	7.1	0.12	6.0	0.10
27	0.00	0.00	0.00	0.00	0.00	0.05	0.00	47	23	0.06	4.0	59
28	0.00	0.00	0.00	0.00	0.00	0.01	0.00	16	6.4	0.02	0.66	24
29	0.00	0.00	0.00	0.00	---	0.00	0.00	6.1	2.9	0.00	0.16	9.0
30	0.00	0.00	0.00	0.00	---	0.00	0.00	2.9	1.4	0.00	380	5.3
31	0.00	---	0.00	0.00	---	0.00	---	1.3	---	0.00	619	---
TOTAL	0.00	0.00	12.07	0.00	0.00	82.02	0.00	532.30	9005.74	7.63	1009.82	191.11
MEAN	0.000	0.000	0.39	0.000	0.000	2.65	0.000	17.2	300	0.25	32.6	6.37
MAX	0.00	0.00	11	0.00	0.00	66	0.00	273	3160	0.89	619	69
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.71	0.00	0.00	0.05
AC-FT	0.00	0.00	24	0.00	0.00	163	0.00	1060	17860	15	2000	379

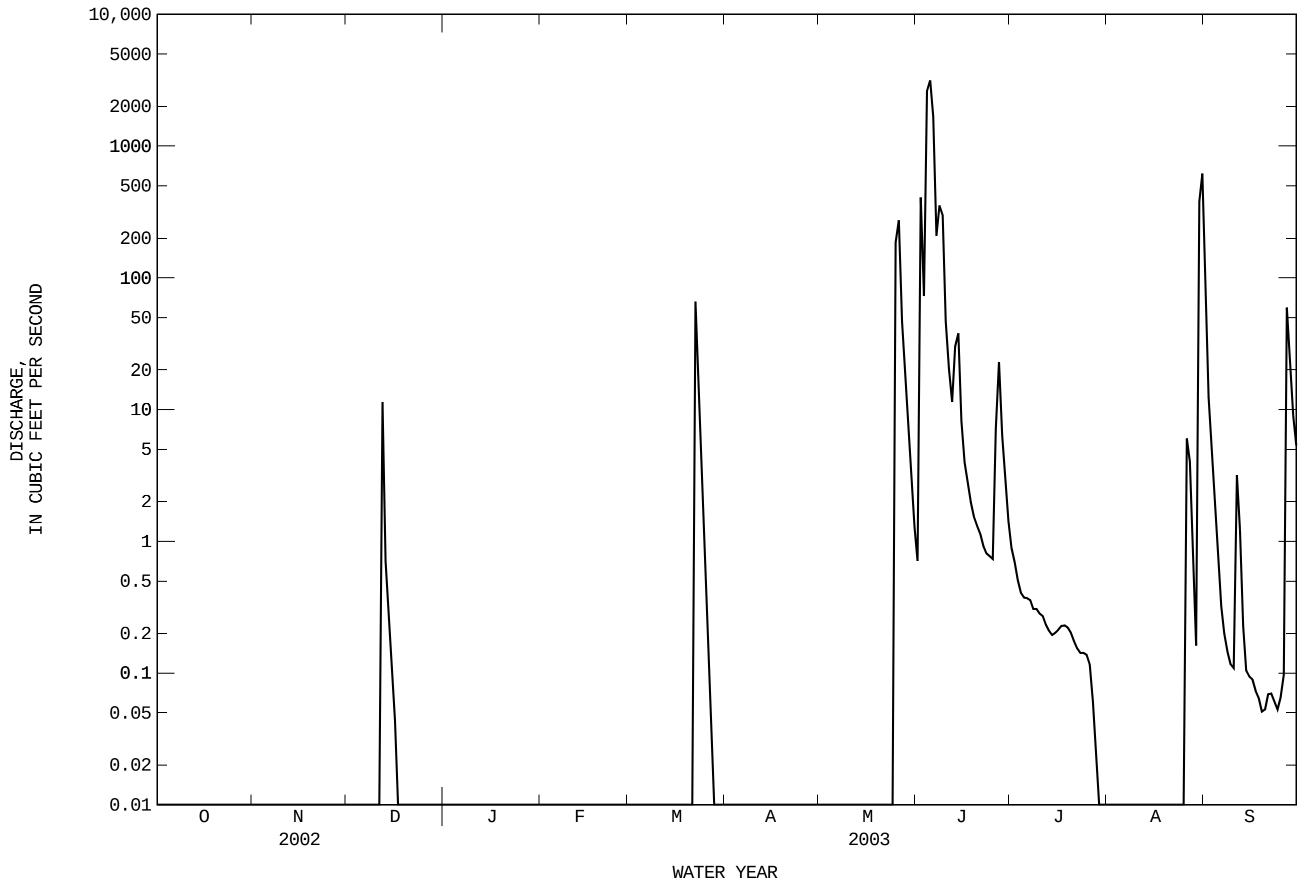
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1959 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	36.3	8.75	4.88	4.60	7.92	18.5	18.8	54.0	45.9	23.4	17.7	57.4
MAX	572	137	49.2	47.0	94.9	544	256	334	300	258	168	680
(WY)	1987	2002	1992	1987	1992	2000	1966	1994	2003	1961	1971	1980
MIN	0.000	0.000	0.000	0.000	0.000	0.005	0.000	0.14	0.000	0.000	0.000	0.000
(WY)	1964	2000	1999	1999	1999	2001	2003	1962	2001	1964	2000	1998

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1959 - 2003	
ANNUAL TOTAL	719.48		10840.69			
ANNUAL MEAN	1.97		29.7		24.9	
HIGHEST ANNUAL MEAN					107	1987
LOWEST ANNUAL MEAN					1.20	2001
HIGHEST DAILY MEAN	290	Jul 7	3160	Jun 5	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			4120	Jun 5	13000	Mar 23 2000
MAXIMUM PEAK STAGE			19.25	Jun 5	a23.70	Mar 23 2000
ANNUAL RUNOFF (AC-FT)	1430		21500		18030	
10 PERCENT EXCEEDS	0.08		4.0		21	
50 PERCENT EXCEEDS	0.00		0.00		1.9	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

e Estimated
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 June 2003 (discontinued).
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 record were due to malfunction of the instrument and 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℃, June 28, 1960, and July 3, 1976; minimum, 0.0℃, on many days during winter months.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum recorded, 9,590 microsiemens/cm, Aug. 26; minimum recorded, 177 microsiemens/cm, Aug. 31.
WATER TEMPERATURE: Maximum, 35.2℃, July 12; minimum, 5.1℃, Dec. 14.

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

Date	Time	Instantaneous discharge, cfs (00061)	Specif. conductance, wat unf uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temperature, water, deg C (00010)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Sodium, water, fltrd, mg/L (00930)	Sodium adsorption ratio (00931)	Potassium, water, fltrd, mg/L (00935)
MAR													
24...	1140	2.7	627e	--	--	--	--	120	30.3	10.2	66.2	3	4.25
MAY													
27...	1550	14	401	7.8	23.5	--	--	100	30.5	6.18	33.5	1	4.90
JUN													
02...	1030	361	684	8.0	20.5	5.6	68	180	48.1	13.7	91.8	3	5.99
04...	1150	3320	171	--	20.2	--	--	65	22.0	2.37	10.2	.5	4.39

Date	Sulfate water, fltrd, mg/L (00945)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Residue water, fltrd, sum of constituents mg/L (70301)
MAR					
24...	54.6	103	.34	3.9	311
MAY					
27...	26.1	51.6	.3	6.7	204
JUN					
02...	104	155	.3	5.8	468
04...	7.4	13.3	<.2	4.6	99

Remark codes used in this report:
< -- Less than
Value qualifier codes used in this report:
e -- See field comment

08123800 Beals Creek near Westbrook, TX--Continued

SPECIFIC CONDUCTANCE, IN US/CM @ 25C, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

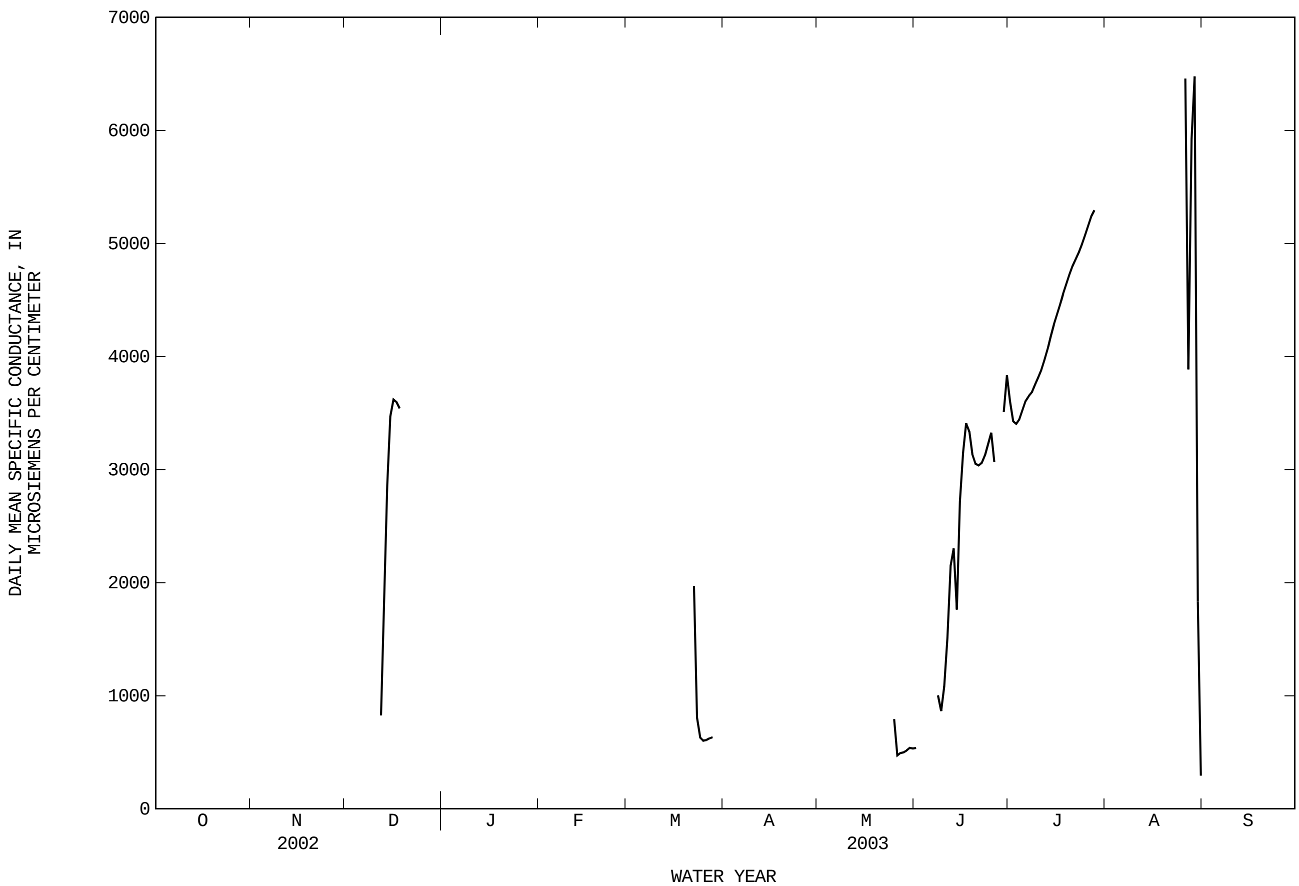
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	4260	412	824	---	---	---
13	---	---	---	---	---	---	2250	842	1580	---	---	---
14	---	---	---	---	---	---	3300	2250	2860	---	---	---
15	---	---	---	---	---	---	3580	3300	3470	---	---	---
16	---	---	---	---	---	---	3660	3550	3620	---	---	---
17	---	---	---	---	---	---	3690	3470	3600	---	---	---
18	---	---	---	---	---	---	3630	3390	3540	---	---	---
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	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	5200	875	1970	---	---	---	---	---	---
23	---	---	---	960	678	806	---	---	---	---	---	---
24	---	---	---	678	604	629	---	---	---	---	---	---
25	---	---	---	605	598	602	---	---	---	1730	364	793
26	---	---	---	615	600	606	---	---	---	676	347	470
27	---	---	---	640	613	622	---	---	---	510	470	492
28	---	---	---	635	623	631	---	---	---	507	495	499
29	---	---	---	---	---	---	---	---	---	528	501	514
30	---	---	---	---	---	---	---	---	---	541	528	537
31	---	---	---	---	---	---	---	---	---	541	524	532
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

08123800 Beals Creek near Westbrook, TX--Continued

SPECIFIC CONDUCTANCE, IN US/CM @ 25C, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	554	529	538	3730	3460	3610	---	---	---	---	---	---
2	---	---	---	3480	3380	3430	---	---	---	---	---	---
3	---	---	---	3430	3360	3400	---	---	---	---	---	---
4	---	---	---	3490	3420	3450	---	---	---	---	---	---
5	---	---	---	3570	3480	3520	---	---	---	---	---	---
6	---	---	---	3650	3570	3610	---	---	---	---	---	---
7	1560	---	---	3680	3620	3650	---	---	---	---	---	---
8	1760	527	1000	3730	3650	3680	---	---	---	---	---	---
9	1050	700	863	3810	3720	3750	---	---	---	---	---	---
10	1180	1050	1080	3870	3770	3810	---	---	---	---	---	---
11	1890	1180	1510	3930	3840	3880	---	---	---	---	---	---
12	2350	1890	2150	4020	3890	3970	---	---	---	---	---	---
13	2550	1690	2300	4140	4000	4060	---	---	---	---	---	---
14	2200	1470	1760	4240	4130	4170	---	---	---	---	---	---
15	3040	2200	2720	4340	4220	4280	---	---	---	---	---	---
16	3320	3030	3150	4430	4320	4370	---	---	---	---	---	---
17	3440	3320	3410	4530	4420	4460	---	---	---	---	---	---
18	3440	3210	3340	4620	4510	4560	---	---	---	---	---	---
19	3210	3070	3140	4700	4600	4640	---	---	---	---	---	---
20	3080	3020	3050	4770	4670	4730	---	---	---	---	---	---
21	3060	3010	3040	4850	4760	4800	---	---	---	---	---	---
22	3090	3040	3060	4890	4840	4860	---	---	---	---	---	---
23	3180	3080	3130	4980	4890	4920	---	---	---	---	---	---
24	3290	3160	3220	5060	4950	4990	---	---	---	---	---	---
25	3390	3280	3330	5130	5030	5070	---	---	---	---	---	---
26	3430	1970	3070	5230	5110	5160	9590	3330	6460	---	---	---
27	2660	---	---	5300	5210	5240	5130	2800	3890	---	---	---
28	2990	---	---	5330	5270	5290	6330	5130	5930	---	---	---
29	3830	2990	3510	---	---	---	6600	6330	6480	---	---	---
30	3910	3720	3830	---	---	---	6500	195	1830	---	---	---
31	---	---	---	---	---	---	666	177	292	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---



08123800 Beals Creek near Westbrook, TX--Continued

WATER TEMPERATURE, IN (DEGREES C), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

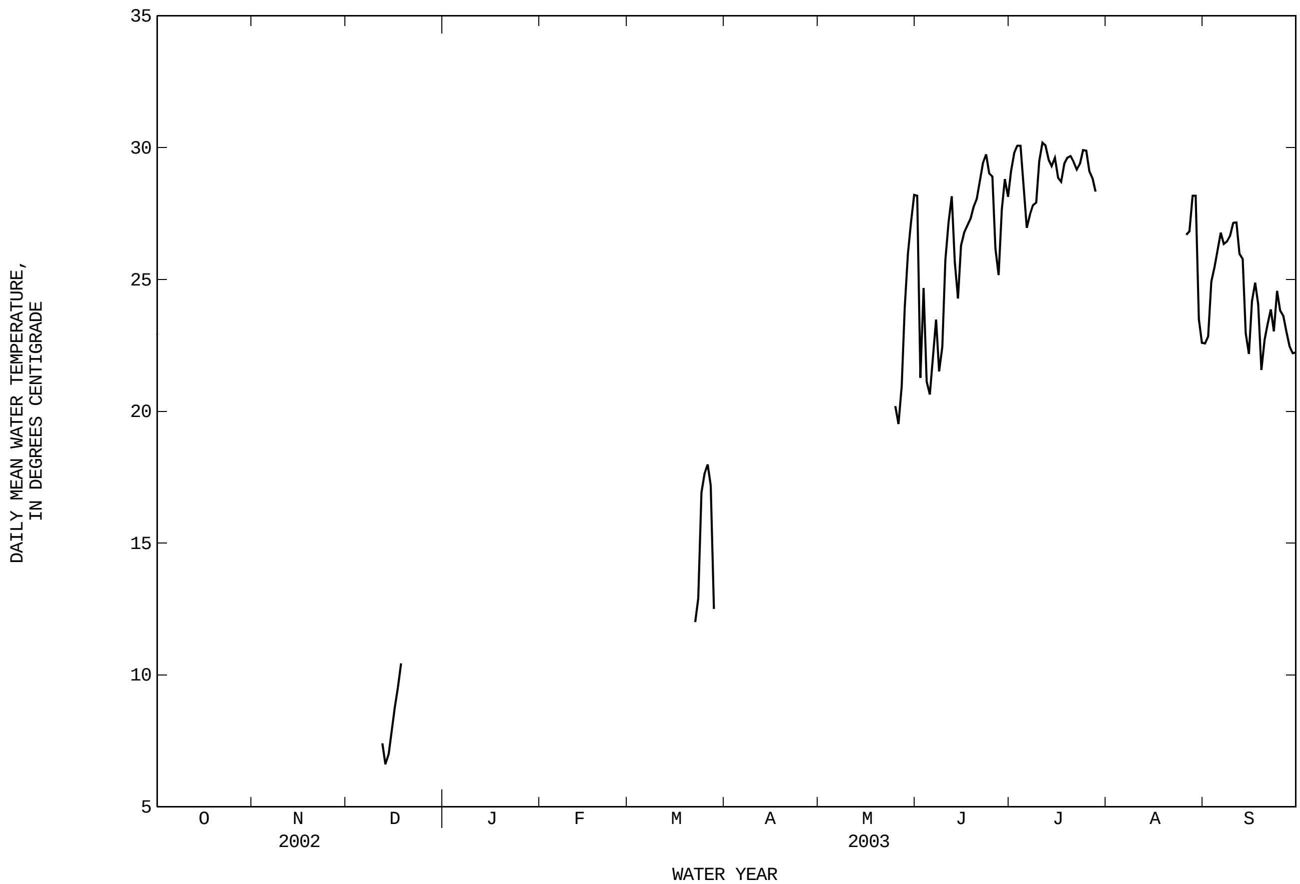
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	9.2	6.1	7.4	---	---	---
13	---	---	---	---	---	---	8.2	5.3	6.6	---	---	---
14	---	---	---	---	---	---	9.4	5.1	7.0	---	---	---
15	---	---	---	---	---	---	11.7	5.6	7.9	---	---	---
16	---	---	---	---	---	---	12.3	6.9	8.8	---	---	---
17	---	---	---	---	---	---	13.7	7.0	9.5	---	---	---
18	---	---	---	---	---	---	13.8	8.3	10.4	---	---	---
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	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	13.2	10.7	12.0	---	---	---	---	---	---
23	---	---	---	16.6	9.7	12.9	---	---	---	---	---	---
24	---	---	---	21.2	13.4	16.9	---	---	---	---	---	---
25	---	---	---	19.9	15.7	17.6	---	---	---	21.7	17.4	20.2
26	---	---	---	23.6	13.7	18.0	---	---	---	21.3	18.9	19.5
27	---	---	---	24.1	13.0	17.2	---	---	---	24.2	18.5	21.0
28	---	---	---	14.6	11.4	12.5	---	---	---	26.8	21.2	23.9
29	---	---	---	---	---	---	---	---	---	29.4	23.0	26.0
30	---	---	---	---	---	---	---	---	---	31.2	23.9	27.2
31	---	---	---	---	---	---	---	---	---	32.2	24.7	28.2
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

08123800 Beals Creek near Westbrook, TX--Continued

WATER TEMPERATURE, IN (DEGREES C), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	34.5	24.4	28.2	33.3	25.5	29.1	---	---	---	23.0	22.1	22.6
2	26.0	19.1	21.3	34.1	26.1	29.8	---	---	---	25.0	20.8	22.8
3	28.4	21.9	24.7	34.6	26.4	30.1	---	---	---	27.9	22.5	24.9
4	26.4	19.4	21.1	34.5	26.7	30.1	---	---	---	28.4	23.2	25.5
5	22.4	18.7	20.6	31.1	26.4	28.6	---	---	---	28.7	23.9	26.1
6	23.7	21.4	22.2	28.3	25.8	27.0	---	---	---	30.3	23.8	26.8
7	26.4	21.3	23.5	30.8	25.3	27.5	---	---	---	29.0	24.2	26.4
8	25.6	18.1	21.5	30.4	25.6	27.8	---	---	---	29.9	23.7	26.4
9	25.6	20.0	22.4	31.6	25.6	27.9	---	---	---	30.7	23.9	26.7
10	28.9	23.1	25.7	34.4	26.0	29.5	---	---	---	30.2	24.7	27.2
11	30.0	24.5	27.2	34.6	27.0	30.2	---	---	---	29.4	25.4	27.2
12	31.1	25.6	28.2	35.2	26.7	30.1	---	---	---	28.9	23.5	26.0
13	28.3	21.0	25.7	34.1	26.2	29.5	---	---	---	29.4	22.6	25.8
14	28.2	21.0	24.3	33.4	26.2	29.3	---	---	---	25.9	21.8	23.0
15	28.9	24.1	26.3	34.4	26.4	29.6	---	---	---	24.5	20.9	22.2
16	29.6	24.5	26.8	33.2	26.3	28.9	---	---	---	28.6	21.0	24.2
17	30.3	24.3	27.0	33.2	25.8	28.7	---	---	---	28.0	22.4	24.9
18	30.5	24.1	27.3	34.1	26.1	29.4	---	---	---	25.4	22.0	24.1
19	30.8	24.7	27.7	34.4	26.1	29.6	---	---	---	23.3	20.2	21.6
20	31.5	25.1	28.0	34.5	26.3	29.7	---	---	---	26.8	20.2	22.7
21	32.8	25.3	28.7	34.3	26.1	29.5	---	---	---	26.8	21.5	23.3
22	33.6	26.1	29.4	33.7	26.2	29.2	---	---	---	28.3	21.0	23.9
23	33.8	26.6	29.8	33.3	26.7	29.4	---	---	---	24.2	22.2	23.0
24	31.6	27.0	29.0	34.7	26.7	29.9	---	---	---	29.9	21.2	24.6
25	31.8	26.7	28.9	34.2	26.8	29.9	---	---	---	25.3	23.0	23.8
26	29.5	24.0	26.2	33.1	26.5	29.1	28.3	26.1	26.7	26.1	22.1	23.6
27	28.1	22.9	25.2	33.3	25.8	28.9	29.5	24.9	26.8	24.0	21.6	23.0
28	30.4	25.3	27.7	32.1	25.7	28.3	32.0	25.5	28.2	23.9	20.9	22.5
29	32.4	26.2	28.8	---	---	---	31.9	25.9	28.2	24.0	20.4	22.2
30	31.2	25.4	28.1	---	---	---	26.6	22.1	23.5	24.8	20.2	22.2
31	---	---	---	---	---	---	23.2	22.0	22.6	---	---	---
MONTH	34.5	18.1	26.1	---	---	---	---	---	---	30.7	20.2	24.3



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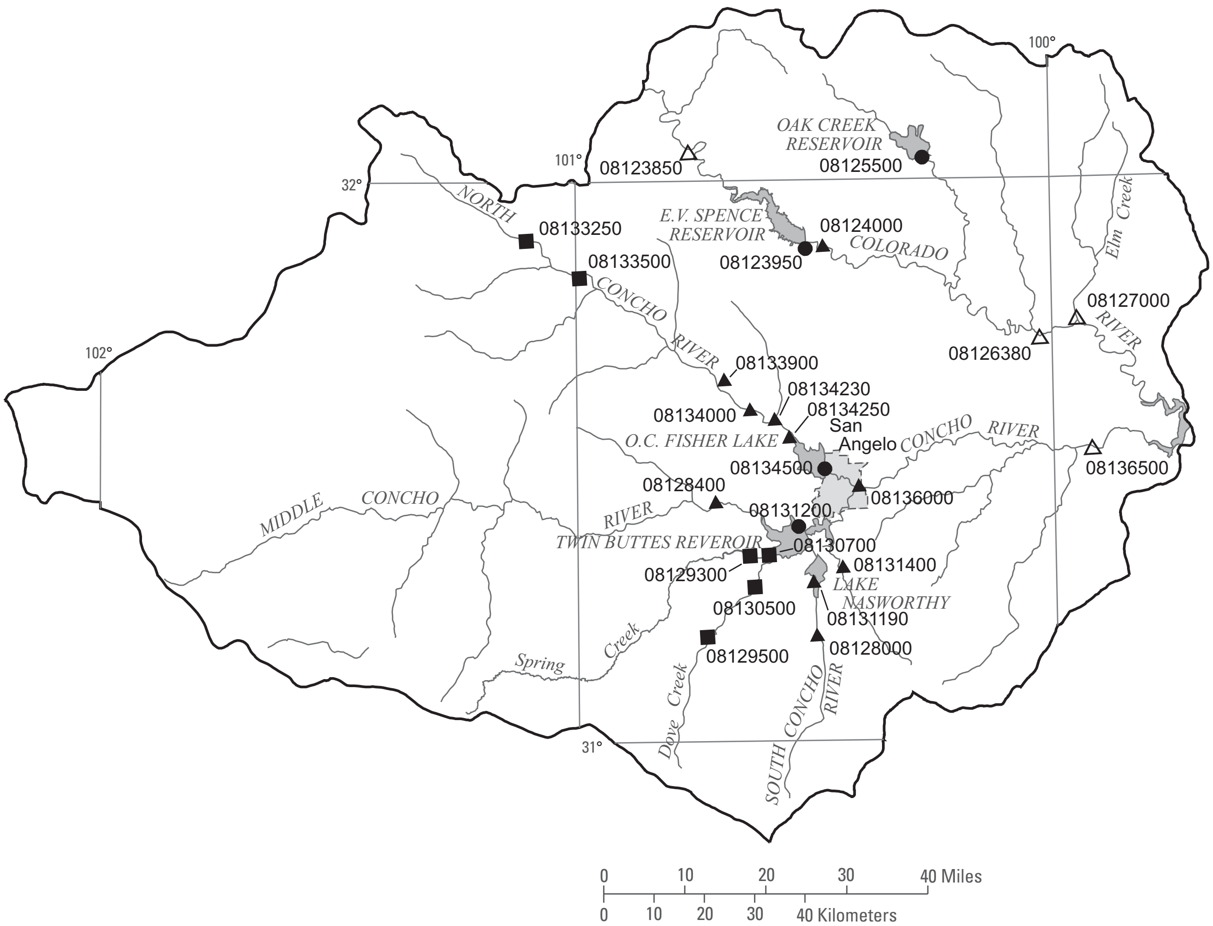


EXPLANATION

08124000	▲	Surface-water continuous station and number
08136500	△	Surface-water continuous/water-quality station and number
08123950	●	Reservoir station and number
08129500	■	Surface-water partial record/stage only station and number

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 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

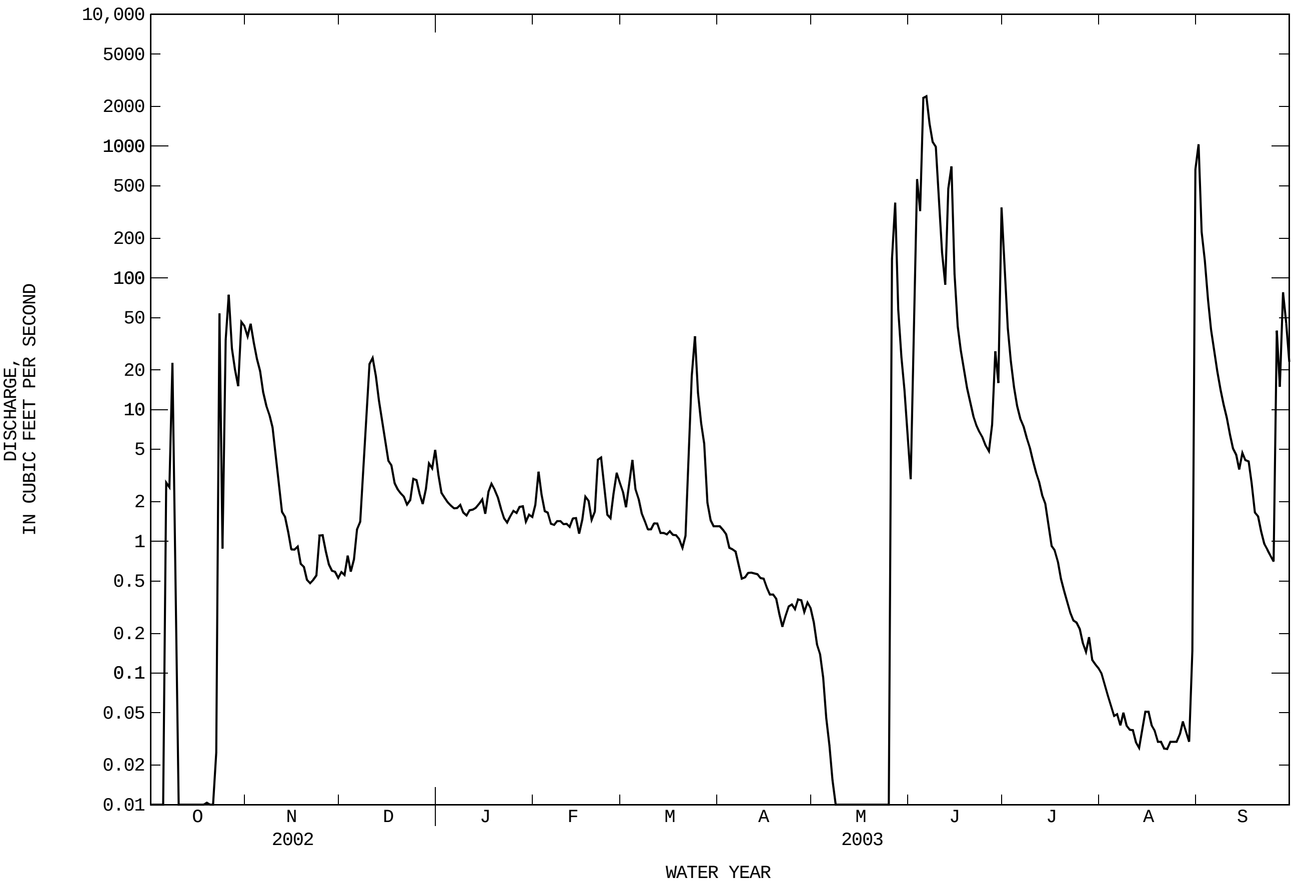
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	36	0.58	3.2	1.9	2.4	1.3	0.24	3.0	126	0.10	1030
2	0.00	45	0.55	2.3	3.4	1.8	1.2	0.17	70	42	0.08	224
3	0.00	32	0.78	2.1	2.3	2.7	1.1	0.14	560	23	0.07	135
4	0.00	24	0.59	2.0	1.7	4.1	0.89	0.09	321	15	0.06	68
5	0.00	20	0.73	1.9	1.6	2.5	0.87	0.05	2320	11	0.05	40
6	2.8	14	1.2	1.8	1.4	2.1	0.84	0.03	2390	8.6	0.05	28
7	2.6	11	1.4	1.8	1.3	1.6	0.65	0.02	1480	7.5	0.04	19
8	23	9.1	2.8	1.9	1.4	1.4	0.52	0.01	1080	6.2	0.05	14
9	0.09	7.3	6.9	1.7	1.4	1.2	0.53	0.00	988	5.2	0.04	11
10	0.00	4.6	22	1.6	1.3	1.2	0.57	0.00	400	4.1	0.04	8.7
11	0.00	2.8	25	1.7	1.4	1.4	0.58	0.00	156	3.4	0.04	6.5
12	0.00	1.7	18	1.7	1.3	1.4	0.57	0.00	89	2.9	0.03	5.1
13	0.00	1.5	12	1.8	1.5	1.2	0.56	0.00	476	2.2	0.03	4.6
14	0.00	1.2	8.2	1.9	1.5	1.2	0.53	0.00	702	1.9	0.04	3.5
15	0.00	0.87	5.9	2.1	1.1	1.1	0.52	0.00	107	1.3	0.05	4.7
16	0.00	0.86	4.1	1.6	1.5	1.2	0.44	0.00	43	0.92	0.05	4.1
17	0.00	0.91	3.8	2.4	2.2	1.1	0.39	0.00	28	0.85	0.04	4.0
18	0.00	0.67	2.8	2.7	2.0	1.1	0.39	0.00	20	0.70	0.04	2.7
19	0.01	0.64	2.5	2.5	1.5	1.0	0.37	0.00	15	0.52	0.03	1.7
20	0.00	0.51	2.3	2.2	1.7	0.89	0.28	0.00	11	0.42	0.03	1.5
21	0.00	0.48	2.2	1.8	4.2	1.1	0.22	0.00	8.9	0.35	0.03	1.2
22	0.02	0.51	1.9	1.5	4.3	3.8	0.27	0.00	7.6	0.29	0.03	0.95
23	54	0.55	2.1	1.4	2.7	18	0.32	0.00	6.7	0.25	0.03	0.86
24	0.88	1.1	3.0	1.6	1.6	36	0.33	0.00	6.1	0.24	0.03	0.77
25	34	1.1	2.9	1.7	1.5	13	0.31	0.00	5.3	0.22	0.03	0.70
26	75	0.84	2.3	1.6	2.3	7.8	0.36	139	4.8	0.17	0.03	40
27	29	0.67	1.9	1.8	3.3	5.5	0.36	372	7.7	0.14	0.04	15
28	20	0.60	2.5	1.8	2.8	2.0	0.29	57	28	0.19	0.04	78
29	15	0.59	3.9	1.4	---	1.4	0.34	25	16	0.13	0.03	45
30	46	0.53	3.6	1.6	---	1.3	0.31	14	342	0.12	0.15	23
31	43	---	4.9	1.5	---	1.3	---	6.5	---	0.11	666	---
TOTAL	345.40	221.63	153.33	58.6	56.1	123.79	16.21	614.25	11692.1	265.92	667.40	1821.58
MEAN	11.1	7.39	4.95	1.89	2.00	3.99	0.54	19.8	390	8.58	21.5	60.7
MAX	75	45	25	3.2	4.3	36	1.3	372	2390	126	666	1030
MIN	0.00	0.48	0.55	1.4	1.1	0.89	0.22	0.00	3.0	0.11	0.03	0.70
AC-FT	685	440	304	116	111	246	32	1220	23190	527	1320	3610

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	110	22.1	16.9	15.9	27.6	52.7	48.1	140	162	47.8	75.8	136
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	0.54	1.91	0.048	0.000	0.000	0.000
(WY)	1969	1971	1971	2002	1971	1971	2003	1984	2001	1970	2002	1968

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1967 - 2003	
ANNUAL TOTAL	5822.37		16036.31			
ANNUAL MEAN	16.0		43.9		71.5	
HIGHEST ANNUAL MEAN					298	1987
LOWEST ANNUAL MEAN					4.69	1998
HIGHEST DAILY MEAN	915	May 9	2390	Jun 6	15900	Sep 30 1980
LOWEST DAILY MEAN	0.00	Jun 13	0.00	Oct 1	0.00	Aug 2 1968
ANNUAL SEVEN-DAY MINIMUM	0.00	Aug 1	0.00	Oct 10	0.00	Aug 2 1968
MAXIMUM PEAK FLOW			2740	Jun 6	18900	Sep 9 1980
MAXIMUM PEAK STAGE			11.26	Jun 6	22.73	Sep 9 1980
ANNUAL RUNOFF (AC-FT)	11550		31810		51830	
10 PERCENT EXCEEDS	32		36		89	
50 PERCENT EXCEEDS	0.97		1.5		7.6	
90 PERCENT EXCEEDS	0.00		0.02		0.07	

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 Sept. 2003 (discontinued).
BIOCHEMICAL DATA: Nov. 1977 to Sept. 2003 (discontinued).
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. Interruptions in the record were due to malfunction of the instrument and no flow. No flow Oct. 1-5, 10-18, 20-21, May 9-25. 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, 9,380 microsiemens/cm, Mar. 24, 25; minimum, 298 microsiemens/cm, June 6.
WATER TEMPERATURE: Maximum, 33.9°C, July 12; minimum, 1.9°C, Feb. 25.

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

Date	Time	Instantaneous discharge, cfs (00061)	Specif. conductance, wat unf uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temperature, water, deg C (00010)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Noncarb hardness, wat flt field, mg/L as CaCO3 (00904)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Sodium, water, fltrd, mg/L (00930)	Sodium adsorption ratio (00931)
NOV													
21...	1410	.60	5740	8.3	15.3	8.9	97	790	670	205	68.5	836	13
JAN													
02...	1200	2.4	5390	8.5	6.3	10.4	90	1100	940	288	89.6	790	10
MAY													
27...	1630	554	506	7.8	22.0	4.5	54	140	69	42.4	9.10	57.0	2
JUN													
23...	1010	7.1	3990	8.0	26.8	6.0	83	990	830	261	81.1	649	9
SEP													
02...	1330	182	3600	8.0	22.9	--	--	380	300	95.0d	34.1d	543d	12

Date	Potassium, water, fltrd, mg/L (00935)	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)	Sulfate water, fltrd, mg/L (00945)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Residue water, fltrd, sum of constituents mg/L (70301)	Nitrate water, fltrd, mg/L as N (00618)	Nitrite water, fltrd, mg/L as N (00613)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Ammonia water, fltrd, mg/L as N (00608)	Organic nitrogen, water, fltrd, mg/L (00607)	Ammonia + org-N, water, fltrd, mg/L as N (00623)
NOV													
21...	8.07	121	636	1420	.40	2.9	3250	--	<.008	<.06	.04	.30	.35
JAN													
02...	7.33	151	910	1170	.44	2.0	3350	--	<.008	<.06	.06	.20	.26
MAY													
27...	5.69	74	35.2	104	.4	6.13	308	.70	.049	.75	E.02	--	.64
JUN													
23...	11.4	156	595	873	.5	8.1	2570	--	<.008	E.04	<.04	--	.47
SEP													
02...	11.4d	79	255d	936d	.3	7.1	1930	.20	.026	.22	.06	.49	.54

Date	Phosphorus, water, fltrd, mg/L (00666)	Orthophosphate, water, fltrd, mg/L as P (00671)	Orthophosphate, water, fltrd, mg/L (00660)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Cobalt water, fltrd, ug/L (01035)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)
NOV													
21...	<.04	<.02	--	--	--	2	171	--	<.4	<.8	--	<2.4	<50
JAN													
02...	<.04	<.02	--	--	--	<2	97.2	--	<.4	E.4	--	<2.4	<30
MAY													
27...	E.03	.03	.080	3	E.15	2	120	<.06	<.04	<.8	.44	2.0	15
JUN													
23...	<.04	<.02	--	--	--	3	344	--	.4	1.0	--	E1.3n	<8
SEP													
02...	.05	.04	.117	--	--	4	264d	--	<.2	<.8	--	1.9	<24d

08123850 Colorado River above Silver, TX--Continued

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

Date	Lead, water, fltrd, ug/L (01049)	Lithium water, fltrd, ug/L (01130)	Mangan-ese, water, fltrd, ug/L (01056)	Mercury water, fltrd, ug/L (71890)	Molyb-denum, water, fltrd, ug/L (01060)	Nickel, water, fltrd, ug/L (01065)	Selen-ium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Stront-ium, water, fltrd, ug/L (01080)	Vanad-ium, water, fltrd, ug/L (01085)	Zinc, water, fltrd, ug/L (01090)	Uranium natural water, fltrd, ug/L (22703)
NOV												
21...	<2	--	21.4	<.02	--	--	E2	<.3	--	--	<120n	--
JAN												
02...	<2	--	7.4	<.04	--	--	<3	<.5	--	--	<72	--
MAY												
27...	<.08	14	.5	<.02	2.9	2.93	<3	<.20	503	11	M	2.37
JUN												
23...	1	--	29.3	<.02	--	--	<3	<.3	--	--	<3	--
SEP												
02...	Mn	--	2.2d	<.02	--	--	3	<.3	--	--	E5nd	--

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

Value qualifier codes used in this report:
d -- Diluted sample: method hi range exceeded
n -- Below the NDV

SPECIFIC CONDUCTANCE, IN US/CM @ 25C, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	---	---	---	1820	967	1340	5500	5460	5480	5970	4800	5370
2	---	---	---	1420	976	1150	5530	5460	5490	7020	5970	6600
3	---	---	---	3020	1420	2220	5510	5340	5420	7910	7020	7610
4	---	---	---	3870	3020	3540	5370	5330	5350	8490	7830	8230
5	---	---	---	3870	3760	3810	5440	5360	5390	8710	8480	8600
6	5620	4070	4870	4220	3800	3940	5440	5320	5410	8850	8700	8790
7	5530	4850	5330	4800	4220	4530	5370	5280	5330	9000	8760	8860
8	5180	1980	4680	5160	4800	5000	5310	5070	5230	8860	8690	8790
9	4810	4680	4720	5320	5160	5240	5070	4700	4850	8700	8530	8630
10	---	---	---	5330	5280	5310	4790	4120	4530	8600	8470	8540
11	---	---	---	5340	5300	5330	4680	3700	4120	8500	8350	8440
12	---	---	---	5370	5330	5350	5640	4680	5220	8380	8120	8220
13	---	---	---	5390	5350	5370	5780	5640	5730	8160	7650	7900
14	---	---	---	5420	5380	5400	5720	5600	5670	7790	7390	7600
15	---	---	---	5460	5400	5430	5990	5680	5820	7530	7100	7250
16	---	---	---	5480	5440	5460	6340	5980	6200	7170	6970	7060
17	---	---	---	5530	5400	5490	6410	6330	6380	6970	6670	6830
18	---	---	---	5540	5500	5520	6390	6290	6350	6710	6390	6550
19	4940	4840	4910	5620	5510	5560	6320	6230	6270	6420	6150	6280
20	---	---	---	5610	5570	5590	6260	6110	6200	6230	5950	6100
21	---	---	---	5640	5590	5620	6160	6070	6110	6050	5960	6010
22	4930	4820	4850	5670	5620	5640	6080	6010	6050	6050	5990	6010
23	4830	2180	4110	5670	5630	5650	6040	5970	6000	6150	6040	6090
24	---	---	---	5730	5640	5670	5980	5930	5950	6180	6110	6150
25	5150	4300	4460	5750	5680	5720	5940	5820	5880	6230	6170	6210
26	8950	2820	6080	5750	5650	5700	5820	5640	5730	6300	6230	6260
27	2820	2240	2390	5650	5520	5590	5650	5180	5440	6350	6290	6320
28	2770	2310	2560	5560	5480	5530	5220	5010	5120	6410	6340	6370
29	2770	2370	2620	5530	5480	5500	5030	4650	4830	6520	6400	6460
30	2370	1590	1940	5500	5440	5470	4670	4530	4590	6610	6520	6550
31	2030	1820	1870	---	---	---	4800	4520	4620	6630	6560	6600
MONTH	---	---	---	5750	967	4890	6410	3700	5510	9000	4800	7140

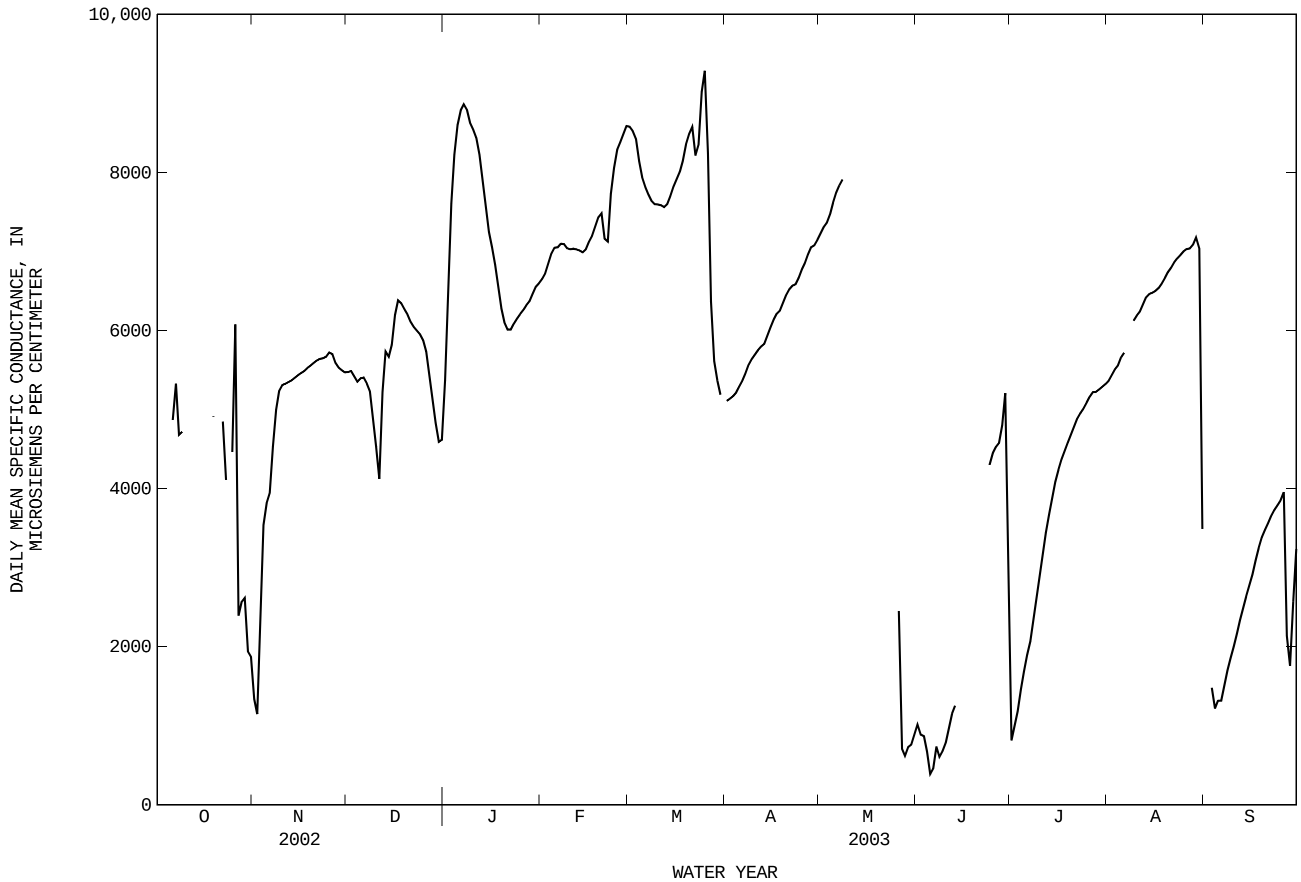
08123850 Colorado River above Silver, TX--Continued

SPECIFIC CONDUCTANCE, IN US/CM @ 25C, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	6690	6610	6650	8610	8520	8580	5130	5070	5110	7260	7190	7230
2	6790	6680	6720	8560	8500	8530	5160	5120	5140	7350	7260	7310
3	6920	6780	6840	8520	8270	8430	5190	5150	5170	7400	7320	7360
4	7020	6920	6970	8280	8000	8140	5260	5180	5210	7560	7400	7470
5	7070	7010	7050	8030	7840	7940	5320	5260	5290	7690	7560	7620
6	7080	7000	7050	7900	7690	7820	5420	5320	5370	7820	7680	7750
7	7120	7070	7100	7780	7650	7720	5520	5420	5460	7880	7780	7840
8	7130	7060	7100	7680	7590	7640	5610	5510	5570	7940	7870	7910
9	7090	6980	7040	7630	7550	7600	5680	5590	5640	---	---	---
10	7070	6980	7030	7620	7570	7590	5730	5680	5700	---	---	---
11	7060	6990	7040	7620	7560	7590	5790	5720	5750	---	---	---
12	7060	6980	7030	7590	7510	7560	5840	5740	5800	---	---	---
13	7030	6990	7010	7640	7570	7600	5890	5790	5830	---	---	---
14	7030	6950	6990	7750	7630	7700	6000	5890	5930	---	---	---
15	7100	6980	7030	7890	7740	7820	6090	5960	6040	---	---	---
16	7160	7080	7120	7950	7860	7910	6200	6090	6140	---	---	---
17	7260	7140	7200	8100	7940	8010	6240	6170	6210	---	---	---
18	7350	7260	7320	8260	8080	8150	6290	6220	6250	---	---	---
19	7500	7350	7430	8440	8250	8360	6430	6250	6350	---	---	---
20	7530	7400	7480	8550	8430	8490	6500	6380	6450	---	---	---
21	7410	7010	7160	8610	8290	8580	6550	6480	6520	---	---	---
22	7440	6970	7130	8340	8050	8210	6590	6530	6570	---	---	---
23	7880	7440	7730	8800	8200	8350	6650	6520	6580	---	---	---
24	8220	7880	8060	9380	8410	9020	6720	6620	6660	---	---	---
25	8340	8220	8290	9380	9120	9290	6840	6720	6770	---	---	---
26	8450	8330	8380	9160	6990	8240	6890	6810	6850	7260	932	2450
27	8540	8450	8490	6990	5940	6370	7020	6890	6970	1020	453	709
28	8620	8540	8590	5940	5500	5610	7090	7020	7060	707	526	617
29	---	---	---	5510	5270	5370	7120	7020	7080	751	707	730
30	---	---	---	5280	5140	5190	7190	7110	7150	817	724	760
31	---	---	---	5170	---	---	---	---	---	958	817	892
MONTH	8620	6610	7320	9380	---	---	7190	5070	6090	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	1070	934	1010	1060	370	814	5410	5300	5360	---	---	---
2	1080	678	888	1050	969	997	5480	5380	5430	4110	---	---
3	1260	505	867	1330	1040	1180	5550	5470	5510	2660	945	1480
4	764	346	675	1570	1330	1460	5620	5490	5550	1380	981	1220
5	443	325	388	1790	1560	1680	5720	5600	5660	1380	1270	1320
6	615	298	458	1980	1790	1900	5780	5660	5720	1390	1270	1320
7	1060	512	736	2200	1970	2070	---	5720	---	1620	1390	1500
8	717	485	605	2460	2180	2330	6100	---	---	1770	1610	1700
9	752	606	681	2720	2440	2580	6160	6100	6120	1920	1770	1850
10	855	745	782	2940	2720	2840	6240	6150	6190	2070	1920	2000
11	1050	855	962	3300	2890	3130	6280	6200	6240	2260	2070	2160
12	1280	1050	1150	3600	3300	3440	6380	6270	6330	2410	2250	2330
13	1400	732	1250	3790	3560	3670	6460	6370	6420	2580	2410	2480
14	---	---	---	3960	3780	3870	6490	6440	6460	2700	2570	2630
15	---	---	---	4180	3960	4090	6510	6440	6480	2850	2700	2770
16	---	---	---	4320	4160	4240	6540	6460	6500	3020	2850	2910
17	---	---	---	4440	4310	4370	6590	6480	6540	3180	3010	3090
18	---	---	---	4540	4430	4470	6630	6560	6590	3320	3180	3250
19	---	---	---	4630	4530	4580	6720	6620	6660	3430	3320	3380
20	---	---	---	4760	4620	4680	6770	6700	6740	3520	3410	3480
21	---	---	---	4860	4730	4780	6840	6740	6800	3620	3520	3560
22	---	---	---	4970	4840	4890	6910	6800	6860	3710	3600	3660
23	4220	---	---	5000	4880	4960	7020	6850	6920	3780	3680	3730
24	4380	4220	4300	5050	4970	5010	7020	6880	6950	3820	3760	3790
25	4490	4380	4450	5130	5040	5090	7030	6940	7000	3890	3810	3850
26	4560	4490	4520	5220	5130	5160	7060	6920	7030	4230	3210	3950
27	4630	4520	4580	5250	5190	5220	7060	6990	7040	3210	1180	2140
28	4980	4620	4800	5260	5190	5220	7130	7040	7090	3640	561	1760
29	5480	4980	5210	5300	5210	5250	7230	7120	7180	3320	2440	2570
30	5820	359	2770	5320	5260	5290	7230	6920	7040	3620	2580	3240
31	---	---	---	5370	5270	5320	6990	327	3490	---	---	---
MONTH	---	---	---	5370	370	3700	---	---	---	---	---	---

08123850 Colorado River above Silver, TX--Continued



WATER TEMPERATURE, IN (DEGREES C), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	---	---	---	11.1	10.2	10.7	10.3	8.2	9.4	9.8	7.0	8.3
2	---	---	---	10.6	9.8	10.2	10.9	9.0	10	7.8	4.7	6.4
3	---	---	---	11.6	10.5	11.0	11.4	9.2	10.7	8.3	5.4	6.9
4	---	---	---	10.9	9.8	10.3	9.2	6.3	7.5	9.0	6.5	7.6
5	---	---	---	13.0	8.6	10.6	6.3	5.4	5.7	10.1	6.9	8.6
6	24.2	23.6	23.9	13.9	8.8	11.1	7.0	4.3	5.8	9.2	7.9	8.6
7	24.0	21.7	23.3	14.3	9.4	12.1	8.5	6.1	7.3	10.1	6.7	8.0
8	21.7	18.0	20.6	16.0	11.1	13.6	8.0	7.4	7.7	11.5	7.2	9.0
9	20.9	19.9	20.3	17.2	13.4	15.2	7.4	6.7	7.0	12.3	9.9	11.0
10	---	---	---	16.2	14.3	15.3	8.7	5.5	7.1	10.8	8.3	9.5
11	---	---	---	15.5	12.7	14.4	9.4	5.9	7.6	9.1	7.1	7.8
12	---	---	---	14.6	11.9	13.5	10.4	7.7	8.7	7.3	6.4	6.8
13	---	---	---	13.8	11.5	12.8	9.5	6.2	7.9	9.9	6.6	8.0
14	---	---	---	14.2	11.6	12.8	10.0	5.8	8.0	9.2	7.3	8.5
15	---	---	---	13.3	11.7	12.3	10.8	7.2	9.1	10.0	7.1	8.5
16	---	---	---	12.4	10.2	11.4	11.5	8.7	9.9	9.5	7.6	8.5
17	---	---	---	13.8	10.0	11.6	12.0	9.0	10.5	7.8	5.4	6.5
18	---	---	---	12.5	10.9	11.6	12.2	9.9	11.3	7.7	3.8	5.9
19	19.3	17.2	17.9	13.4	10.1	11.7	11.6	8.5	9.8	9.0	5.2	7.2
20	---	---	---	12.2	10.3	11.4	9.1	6.1	7.8	11.9	7.6	9.5
21	---	---	---	12.8	10.2	11.5	8.6	6.4	7.6	12.2	9.3	10.7
22	19.1	18.7	18.9	13.6	10.4	12.0	8.1	6.3	7.0	11.2	8.2	9.5
23	19.0	17.5	18.6	14.0	11.2	12.7	6.9	5.8	6.7	8.2	5.5	6.8
24	---	---	---	14.9	12.2	13.2	5.8	4.2	4.9	6.2	3.7	4.9
25	16.5	13.8	14.6	13.1	9.2	10.6	6.4	2.8	4.8	5.8	4.8	5.2
26	15.0	14.1	14.6	9.2	7.3	8.2	7.7	5.2	6.4	7.2	5.6	6.3
27	15.2	13.6	14.3	8.1	6.3	7.1	7.8	5.2	6.4	8.9	5.6	7.1
28	16.4	14.8	15.4	8.5	5.9	7.3	8.3	5.3	6.9	12.0	7.8	9.9
29	18.2	13.6	15.5	8.7	6.8	7.8	10.1	7.0	8.5	11.5	9.0	10
30	16.2	13.5	14.5	10.3	8.0	9.0	11.8	9.7	10.6	10.7	7.0	9.0
31	13.5	11.1	12.1	---	---	---	10.5	7.8	9.1	12.3	8.9	10.4
MONTH	---	---	---	17.2	5.9	11.4	12.2	2.8	8.0	12.3	3.7	8.1

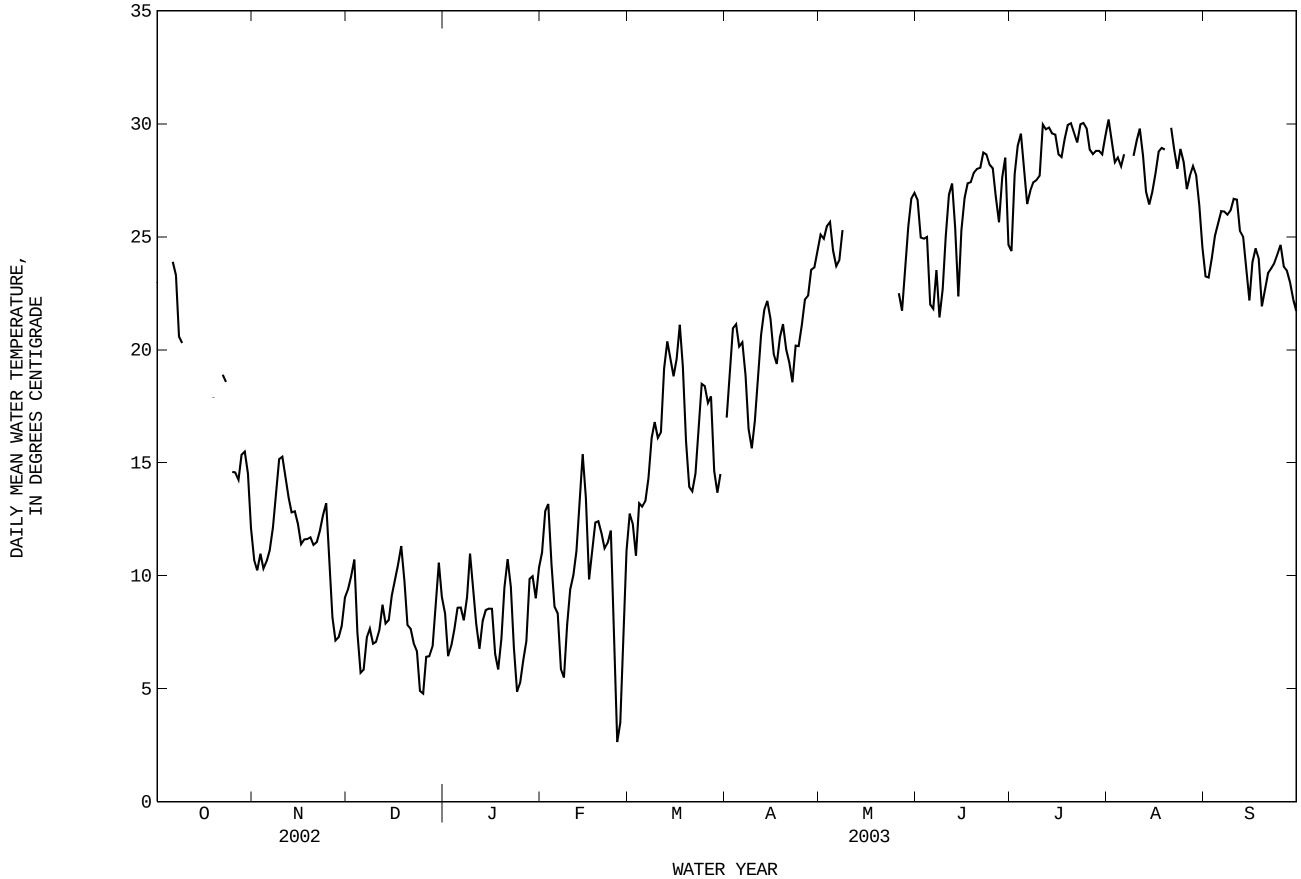
08123850 Colorado River above Silver, TX--Continued

WATER TEMPERATURE, IN (DEGREES C), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	12.8	9.0	11.0	15.3	11.6	12.7	19.5	14.4	17.0	27.5	23.0	25.1
2	14.7	10.7	12.9	14.1	10.9	12.3	21.2	16.3	18.9	26.9	23.2	24.9
3	14.1	12.0	13.2	12.1	9.9	10.9	23.9	18.7	20.9	28.0	23.2	25.5
4	12.1	9.3	10.5	16.4	10.5	13.2	22.8	19.6	21.1	27.2	24.5	25.7
5	9.8	8.1	8.6	15.3	10.6	13.1	21.7	18.2	20.1	26.8	22.4	24.4
6	8.8	7.4	8.3	16.1	11.1	13.3	21.8	19.1	20.3	27.1	21.0	23.7
7	7.4	5.3	5.9	17.7	11.9	14.3	20.5	17.2	18.9	26.7	21.3	24.0
8	6.6	4.5	5.5	18.5	14.4	16.1	18.6	14.7	16.5	28.5	23.5	25.3
9	10.1	5.9	7.8	19.3	14.9	16.8	18.0	13.5	15.6	---	---	---
10	11.0	7.5	9.4	17.3	14.7	16.1	18.7	14.8	16.8	---	---	---
11	11.4	8.5	10.0	17.8	14.9	16.3	22.0	16.0	18.7	---	---	---
12	12.9	9.1	11.1	22.0	16.7	19.2	25.1	17.9	20.7	---	---	---
13	14.5	12.4	13.3	22.5	18.6	20.4	23.2	20.3	21.8	---	---	---
14	17.2	14.1	15.4	21.6	17.3	19.6	24.9	19.9	22.2	---	---	---
15	15.9	11.1	13.4	20.0	18.0	18.8	23.0	20.5	21.4	---	---	---
16	11.2	8.0	9.8	21.9	17.3	19.6	21.5	17.9	19.8	---	---	---
17	12.9	8.9	11.0	22.9	19.7	21.1	20.5	18.0	19.4	---	---	---
18	13.2	11.5	12.4	20.9	17.7	19.3	23.9	18.4	20.6	---	---	---
19	13.0	11.6	12.4	17.7	14.6	15.9	22.7	19.9	21.1	---	---	---
20	12.5	10.9	11.9	15.2	13.3	13.9	22.2	17.9	20.0	---	---	---
21	11.9	10.7	11.2	15.3	12.1	13.7	20.6	18.5	19.4	---	---	---
22	14.5	8.8	11.5	15.5	13.6	14.5	19.8	17.3	18.6	---	---	---
23	13.5	10.1	12.0	21.3	13.3	16.3	23.1	18.2	20.2	---	---	---
24	11.9	3.4	7.4	22.1	15.5	18.5	21.8	18.2	20.2	---	---	---
25	3.4	1.9	2.6	19.9	17.0	18.4	24.5	18.4	21.1	---	---	---
26	4.6	2.7	3.5	21.3	14.5	17.6	25.2	19.5	22.2	23.1	21.7	22.5
27	10.9	4.4	7.1	20.9	14.9	17.9	24.7	20.3	22.4	22.4	21.1	21.7
28	14.5	9.1	11.1	18.1	12.7	14.6	26.3	21.4	23.5	27.0	20.8	23.4
29	---	---	---	15.0	11.6	13.7	26.5	21.4	23.6	29.1	22.7	25.5
30	---	---	---	16.5	11.8	14.5	27.6	22.0	24.4	31.1	24.1	26.7
31	---	---	---	---	12.9	---	---	---	---	31.5	25.1	27.0
MONTH	17.2	1.9	10.0	---	9.9	---	27.6	13.5	20.2	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	31.7	24.6	26.6	27.6	21.9	24.4	33.3	27.8	30.2	23.6	22.9	23.2
2	29.3	21.6	25.0	30.9	25.3	27.8	32.4	26.7	29.2	24.3	22.3	23.2
3	27.4	23.8	24.9	32.3	26.5	29.0	30.4	26.7	28.3	25.7	22.6	24.1
4	28.1	22.3	25.0	33.1	27.0	29.6	31.3	26.3	28.5	26.4	23.8	25.1
5	23.6	21.0	22.0	29.9	26.4	28.2	29.4	26.6	28.1	27.5	24.0	25.6
6	23.1	21.0	21.8	27.9	25.0	26.5	32.8	26.4	28.7	28.7	23.9	26.1
7	25.0	22.3	23.5	29.3	25.2	27.0	---	27.3	---	27.6	24.4	26.1
8	24.2	18.4	21.4	29.7	25.4	27.4	31.2	---	---	28.1	24.0	26.0
9	24.3	21.2	22.7	30.0	25.6	27.5	30.6	27.1	28.6	28.8	23.7	26.2
10	27.1	23.4	25.0	30.0	25.9	27.7	32.5	27.0	29.3	28.8	24.6	26.7
11	29.1	25.2	26.9	33.3	27.6	30.0	32.0	27.8	29.8	27.8	25.6	26.6
12	29.5	25.2	27.4	33.9	27.3	29.8	30.3	27.1	28.6	27.3	23.2	25.3
13	28.0	20.3	25.4	32.7	27.0	29.8	28.6	25.6	27.0	28.1	22.4	25.0
14	24.9	20.3	22.4	31.9	27.1	29.6	28.7	24.5	26.4	26.3	22.5	23.6
15	27.2	23.7	25.3	32.9	27.3	29.5	29.1	25.3	27.0	23.5	20.9	22.2
16	29.0	24.7	26.7	30.1	27.1	28.7	29.9	25.8	27.8	26.8	21.2	23.9
17	29.9	25.2	27.4	31.3	26.4	28.5	31.5	26.5	28.8	25.9	22.7	24.5
18	30.1	25.3	27.4	33.0	26.8	29.4	31.1	26.9	28.9	25.0	23.2	24.1
19	30.9	25.5	27.8	33.1	27.3	30.0	30.6	27.1	28.9	23.3	20.8	21.9
20	31.4	25.3	28.0	33.6	27.8	30.0	31.5	---	---	24.6	20.8	22.7
21	31.3	25.0	28.1	32.9	26.9	29.6	32.3	27.7	29.8	25.2	22.2	23.4
22	31.7	25.8	28.7	32.8	27.3	29.2	30.6	27.8	28.9	27.1	22.2	23.6
23	31.3	26.0	28.6	33.3	28.0	30.0	31.5	26.2	28.0	25.2	23.2	23.8
24	30.1	26.2	28.2	32.4	28.0	30.0	31.7	26.8	28.9	27.6	21.7	24.2
25	30.1	26.1	28.0	31.5	28.0	29.8	30.0	27.3	28.3	25.8	23.9	24.6
26	28.9	25.7	26.8	30.8	27.1	28.9	29.0	26.0	27.1	25.0	22.6	23.7
27	29.3	23.9	25.6	31.1	26.8	28.7	29.9	26.0	27.7	25.9	21.7	23.5
28	30.8	25.0	27.6	31.4	26.9	28.8	30.1	26.2	28.1	24.2	21.7	23.0
29	31.3	26.3	28.5	31.5	27.1	28.8	28.9	26.4	27.7	24.1	20.5	22.2
30	28.5	21.8	24.7	31.7	27.0	28.7	27.6	25.6	26.4	24.0	19.5	21.7
31	---	---	---	32.7	27.8	29.5	26.4	23.1	24.6	---	---	---
MONTH	31.7	18.4	25.9	33.9	21.9	28.8	---	---	---	28.8	19.5	24.2

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 fair except those for estimated daily contents, which are poor. 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, 31,640 acre-ft, June 1, 2003, elevation, 1,832.67 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 60,340 acre-ft, June 16, elevation, 1,843.84 ft; minimum contents, 31,640 acre-ft, June 1, elevation, 1,832.67 ft.

RESERVOIR STORAGE, IN (ACRE-FEET), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

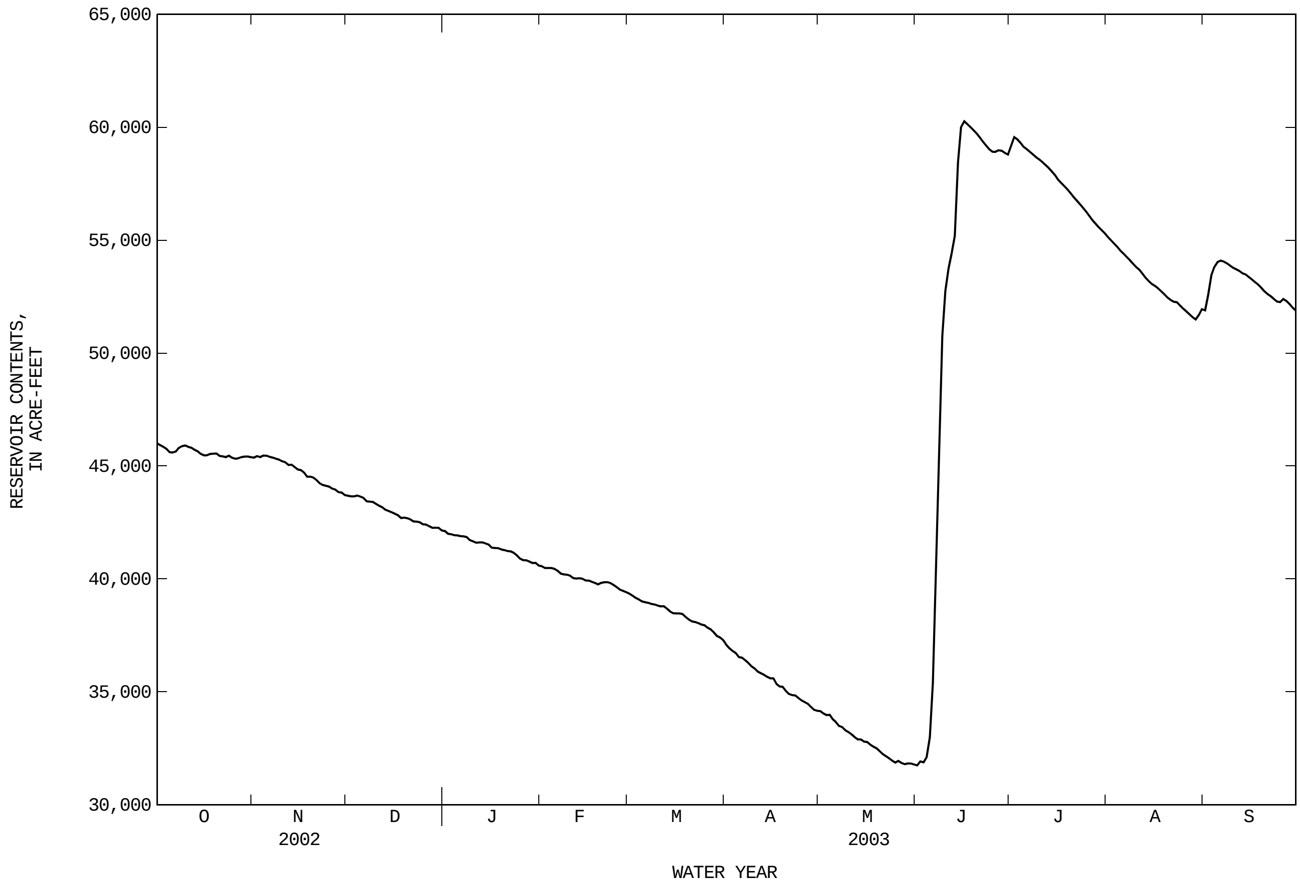
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	46010	45370	43690	42120	40560	39340	37080	34150	31740	59180	55130	51900
2	45920	45430	e43660	42000	40480	39260	36920	34040	31920	59560	54990	52560
3	45850	45390	43660	41980	40490	39160	36810	33970	31880	59470	54840	53440
4	45760	45460	43690	41940	40480	39090	36710	33980	32110	59310	54700	53830
5	45610	45460	43640	41930	40450	39000	36540	33780	32980	59140	54530	54030
6	45590	45400	43590	41890	40370	38970	36510	33660	35400	59040	54400	54100
7	45640	45370	43440	41890	40240	38940	36400	33480	40000	58910	54260	54050
8	45800	45320	e43430	41850	40200	38890	36280	33440	46490	58800	54120	53980
9	45880	45290	43410	41720	40190	38870	36130	33300	50760	58670	53950	53880
10	45910	45210	43330	41660	40150	38820	36040	33220	52750	58580	53810	53780
11	45850	45160	43240	41600	40040	38780	35900	33110	53750	58460	53690	53710
12	45810	45050	43170	41620	40020	38790	35820	32990	54440	58340	53510	53640
13	45720	45060	43060	41620	40030	38680	35760	32890	55190	58210	53340	53530
14	45640	44960	43000	41570	40010	38550	35670	32890	58440	58060	53190	53480
15	45530	44850	42950	41520	39930	38480	35590	32790	60000	57890	53060	53370
16	45470	44820	42890	41380	39920	38480	35600	32780	60270	57680	52980	53260
17	45480	44700	42820	41370	39870	38470	35350	32660	60150	57540	52860	53140
18	45540	44530	42690	41360	39820	e38450	35240	32570	60010	57400	52740	53030
19	45550	44530	42710	41310	39750	e38310	35230	32500	59880	57250	52600	52890
20	45550	44490	42690	41280	e39820	e38200	35040	32370	59730	57090	52460	52730
21	45450	44380	42630	41240	e39850	e38120	34900	32240	59550	56910	52350	52620
22	45420	44240	42550	41220	e39850	38090	34860	32150	59370	56760	52270	52520
23	45390	44160	42540	41160	39810	38040	34840	32050	59190	56590	52250	52400
24	45460	44120	42510	41040	e39730	37980	34730	31950	59030	56430	52110	52280
25	45360	44090	42420	40910	e39630	37950	34620	31870	58920	56260	51970	52270
26	45320	44000	42410	40830	39520	37830	34550	31940	58910	56080	51840	52390
27	45340	43950	42330	40830	e39460	37760	34470	31850	58980	55890	51720	52310
28	e45390	43840	42260	40770	39410	37630	34340	31800	58960	55740	51590	52180
29	e45420	43830	42270	40700	---	37470	34200	31830	58870	55580	51490	52010
30	e45420	43720	42260	40710	---	37400	34160	31820	58790	55440	51690	51890
31	e45390	---	42150	40590	---	37280	---	31780	---	55300	51940	---
MEAN	45600	44740	42940	41410	40000	38420	35540	32770	51950	57600	53110	53040
MAX	46010	45460	43690	42120	40560	39340	37080	34150	60270	59560	55130	54100
MIN	45320	43720	42150	40590	39410	37280	34160	31780	31740	55300	51490	51890
(+)	1838.75	1838.06	1837.41	1836.76	1836.27	1835.39	1833.91	1832.74	1843.39	1842.25	1841.16	1841.14
(@)	-710	-1670	-1570	-1560	-1180	-2130	-3120	-2380	+27010	-3490	-3360	-50

CAL YR 2002 MAX 60780 MIN 42150 (@) -18660
WTR YR 2003 MAX 60270 MIN 31740 (@) +5790

(+) 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.--Records good except those for estimated daily discharges, which are poor, and those for affected daily discharges, which are fair. 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 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	6.0	8.1	11	8.6	10	8.2	7.4	7.0	12	11	9.0
2	11	6.5	8.2	10	8.6	10	8.2	7.6	9.8	12	10	8.9
3	10	6.2	9.4	10	8.6	10	8.3	7.6	15	12	10	8.9
4	10	6.2	8.5	10	8.4	10	8.1	7.3	&64	11	10	9.0
5	9.7	6.0	8.3	10	8.5	9.8	8.2	7.2	&161	12	10	9.7
6	11	6.0	8.5	9.9	8.6	9.0	8.0	7.2	64	11	10	8.7
7	21	5.9	8.6	10	8.4	9.2	8.3	7.4	&10	11	11	8.7
8	17	6.1	9.5	10	8.6	9.2	8.2	7.3	&1500	11	10	8.7
9	11	6.5	10	9.6	8.4	9.2	8.2	7.3	&21	11	e5.0	8.8
10	9.2	7.2	8.5	9.5	8.4	9.0	8.2	7.4	&14	11	e3.0	8.5
11	9.2	7.4	8.5	9.5	8.4	8.8	8.2	7.2	&14	11	e2.0	8.3
12	9.2	7.5	8.3	9.8	8.4	8.4	8.0	7.4	&18	11	7.0	8.3
13	8.9	7.5	8.4	9.5	9.2	8.5	8.1	7.5	&1870	11	8.1	8.6
14	9.5	7.3	8.5	9.3	9.8	8.3	7.9	7.1	&101	11	8.3	15
15	9.1	7.4	8.5	e9.5	9.8	8.4	7.8	7.1	&19	11	8.3	7.9
16	8.9	7.5	8.4	e9.5	9.7	9.1	7.6	7.9	&13	11	8.2	7.9
17	9.1	7.3	8.5	e10	9.9	9.2	7.8	7.1	&12	11	8.0	7.8
18	12	7.3	11	9.9	9.9	8.6	7.6	7.1	&9.3	11	7.6	7.8
19	11	7.6	12	9.7	9.9	8.3	7.3	6.9	&9.1	11	7.7	7.6
20	9.0	7.7	11	9.6	10	8.6	7.5	7.5	&10	11	7.7	7.7
21	9.0	7.8	11	9.7	12	8.8	7.7	7.4	10	10	7.8	7.8
22	9.5	7.8	11	9.4	9.8	11	8.2	7.9	10	10	8.8	7.7
23	9.1	7.9	11	9.1	9.5	8.7	8.0	7.5	10	11	8.8	7.9
24	9.1	8.0	11	9.2	9.7	8.5	7.6	6.3	10	11	8.3	7.9
25	9.1	8.2	11	9.2	9.9	8.8	7.6	6.6	9.9	11	8.4	9.0
26	9.4	8.5	11	9.2	10	8.9	7.7	8.1	11	10	8.6	11
27	9.2	8.7	11	9.4	10	8.4	7.5	6.9	13	10	8.5	8.2
28	35	8.9	11	9.4	10	8.3	7.7	6.8	12	10	8.4	8.2
29	8.7	8.9	11	9.2	---	8.4	7.9	6.6	12	11	8.3	8.2
30	5.9	8.7	11	9.1	---	8.4	7.6	6.5	12	10	9.9	8.0
31	5.8	---	11	8.8	---	8.5	---	6.6	---	11	14	---
TOTAL	336.6	220.5	301.7	298.0	261.0	278.3	237.2	223.7	4051.1	339	262.7	259.7
MEAN	10.9	7.35	9.73	9.61	9.32	8.98	7.91	7.22	135	10.9	8.47	8.66
MAX	35	8.9	12	11	12	11	8.3	8.1	1870	12	14	15
MIN	5.8	5.9	8.1	8.8	8.4	8.3	7.3	6.3	7.0	10	2.0	7.6
AC-FT	668	437	598	591	518	552	470	444	8040	672	521	515

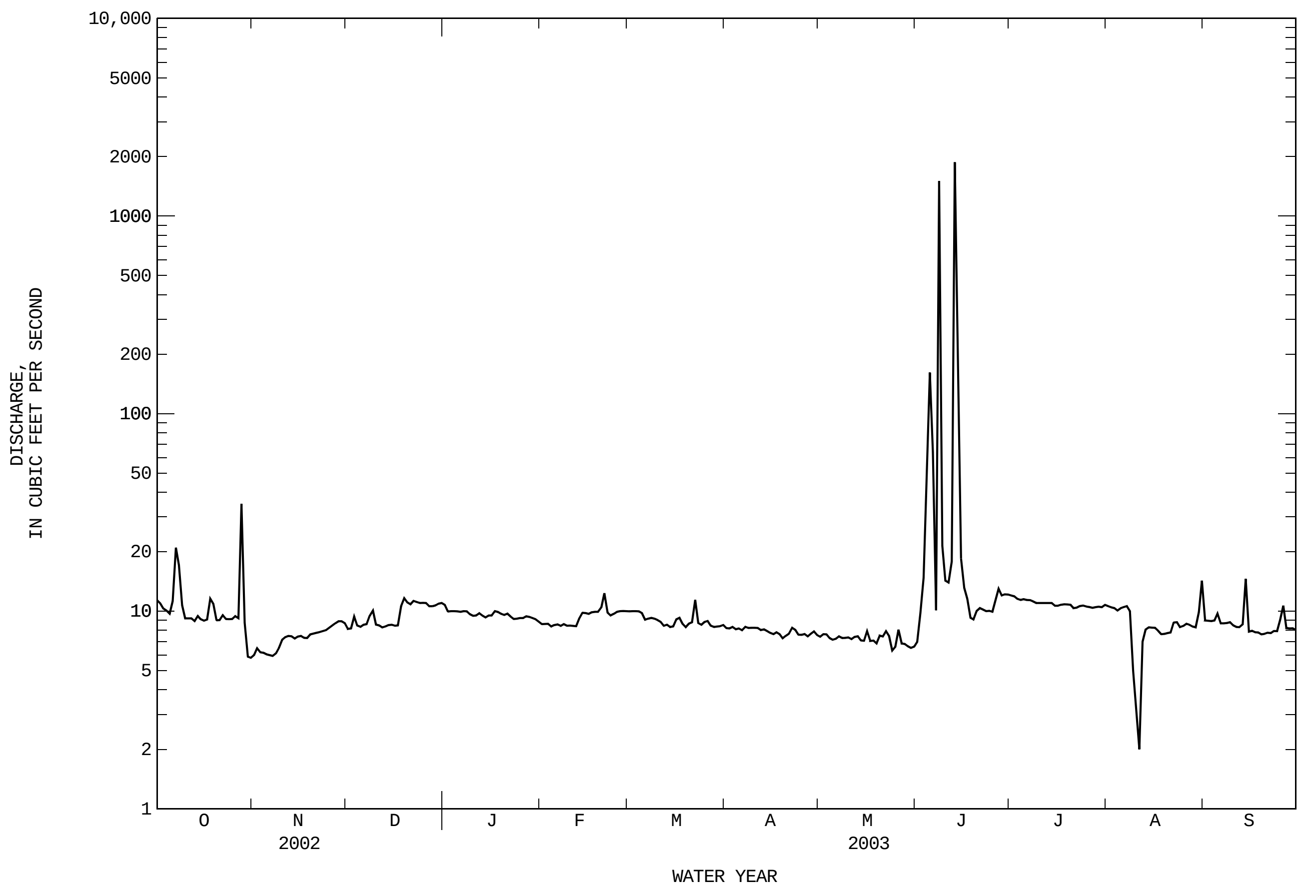
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1952 - 2003hz, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	36.1	10.1	3.38	2.72	5.00	9.29	27.2	85.6	40.1	39.1	48.2	32.6
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 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1952 - 2003hz	
ANNUAL TOTAL	4046.1		7069.5			
ANNUAL MEAN	11.1		19.4		28.1	
HIGHEST ANNUAL MEAN					237	1954
LOWEST ANNUAL MEAN					1.04	1969
HIGHEST DAILY MEAN	64	May 27	1870	Jun 13	13400	May 12 1954
LOWEST DAILY MEAN	5.8	Oct 31	2.0	Aug 11	0.00	Oct 1 1951
ANNUAL SEVEN-DAY MINIMUM	6.1	Oct 30	6.0	Aug 9	0.00	Oct 1 1951
MAXIMUM PEAK FLOW			11500	Jun 13	24500	Sep 9 1980
MAXIMUM PEAK STAGE			14.96	Jun 13	20.63	Sep 9 1980
ANNUAL RUNOFF (AC-FT)	8030		14020		20360	
10 PERCENT EXCEEDS	13		11		15	
50 PERCENT EXCEEDS	10		8.9		0.99	
90 PERCENT EXCEEDS	7.5		7.3		0.00	

e Estimated
& Value was computed from affected unit values
h See PERIOD OF RECORD paragraph.
z Period of regulated streamflow.



08125500 Oak Creek Reservoir near Blackwell, TX

LOCATION.--Lat 32°02'26", long 100°16'05", Coke County, Hydrologic Unit 12080008, on upstream side of dam, 20.0 ft upstream from FM 3399, 175 ft left of right end of dam, 1.2 mi downstream from State Highway 70, 4.3 mi southeast of Blackwell, 12.0 mi north of Bronte, and 18.0 mi upstream from mouth.

DRAINAGE AREA.--238 mi^2.

PERIOD OF RECORD.--May 1953 to Sept. 1983, Mar. 1999 to Sept. 2002 (contents), Oct. 2002 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. Prior to Mar. 12, 2003, water-stage recorder on left bank at Sweetwater municipal pump station, 1.9 mi upstream at same datum. Satellite telemeter at station.

REMARKS.--Records fair except those for Mar. 12 to Apr. 30, which are poor. Prior to Dec. 28, 2002, 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. 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.--Records of diversions may be obtained from the 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; minimum elevation, 1,965.63 ft, June 4, 5, 2003.

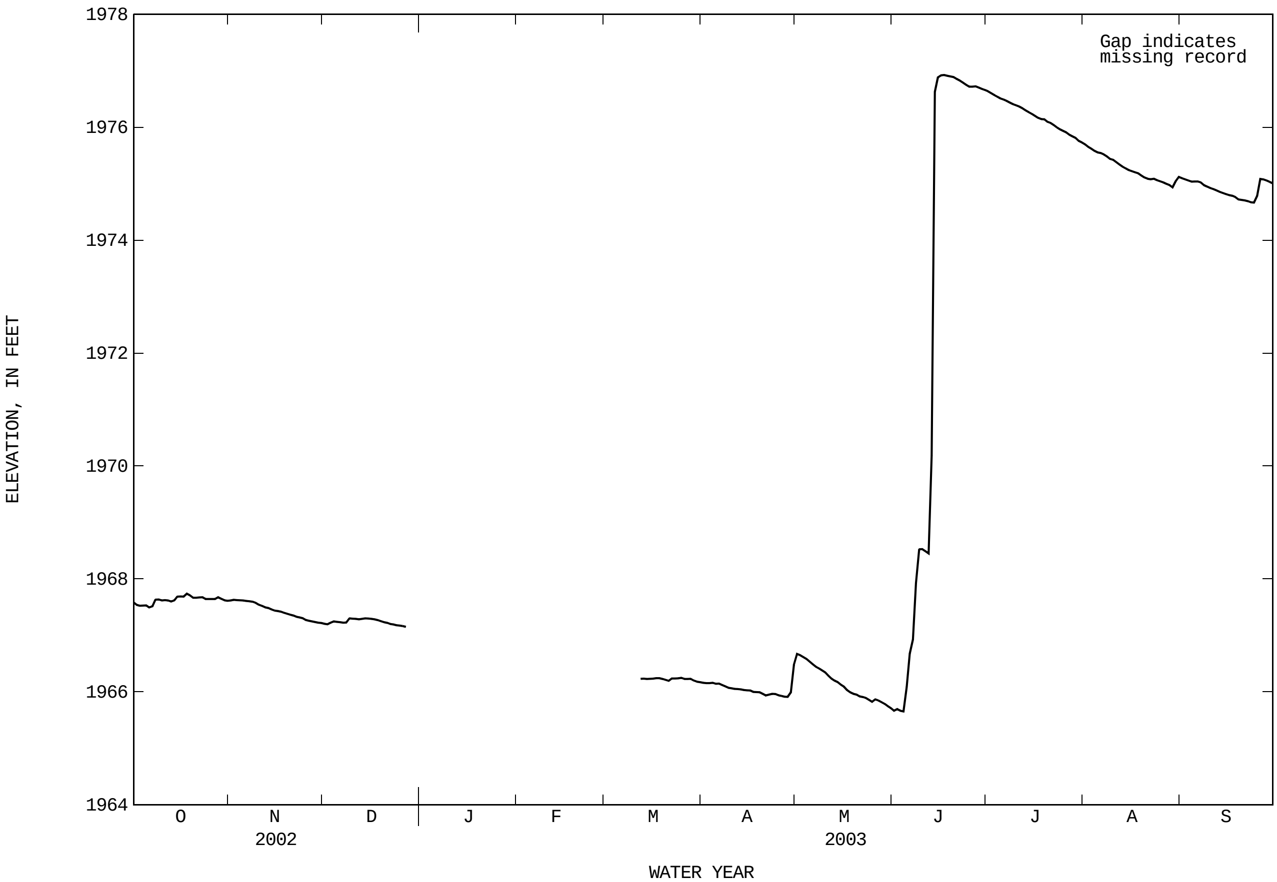
EXTREMES FOR CURRENT YEAR.--Maximum elevation, 1,976.93 ft, June 16, 17; minimum elevation, 1,965.63 ft, June 4, 5.

ELEVATION, IN FEET (NGVD), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1967.59	1967.62	1967.20	---	---	---	1966.16	1966.67	1965.66	1976.64	1975.70	1975.10
2	1967.54	1967.63	1967.20	---	---	---	1966.15	1966.65	1965.69	1976.61	1975.66	1975.08
3	1967.52	1967.62	1967.22	---	---	---	1966.15	1966.62	1965.66	1976.58	1975.62	1975.06
4	1967.53	1967.62	1967.25	---	---	---	1966.16	1966.58	1965.65	1976.54	1975.59	1975.04
5	1967.53	1967.62	1967.24	---	---	---	1966.14	1966.54	1966.08	1976.51	1975.56	1975.04
6	1967.49	1967.61	1967.23	---	---	---	1966.15	1966.49	1966.67	1976.49	1975.55	1975.04
7	1967.52	1967.61	1967.22	---	---	---	1966.12	1966.45	1966.93	1976.46	1975.52	1975.02
8	1967.63	1967.60	1967.23	---	---	---	1966.10	1966.41	1967.93	1976.44	1975.49	1974.98
9	1967.64	1967.58	1967.30	---	---	---	1966.07	1966.38	1968.53	1976.41	1975.44	1974.95
10	1967.62	1967.54	1967.30	---	---	---	1966.06	1966.35	1968.53	1976.39	1975.42	1974.93
11	1967.62	1967.52	1967.29	---	---	---	1966.05	1966.28	1968.49	1976.37	1975.38	1974.90
12	1967.62	1967.50	1967.29	---	---	1966.23	1966.05	1966.23	1968.45	1976.34	1975.34	1974.88
13	1967.60	1967.49	1967.29	---	---	1966.23	1966.04	1966.20	1970.18	1976.30	1975.31	1974.86
14	1967.62	1967.46	1967.30	---	---	1966.23	1966.03	1966.17	1976.63	1976.27	1975.27	1974.84
15	1967.69	1967.44	1967.30	---	---	1966.23	1966.03	1966.13	1976.89	1976.24	1975.24	1974.82
16	1967.69	1967.43	1967.29	---	---	1966.23	1966.02	1966.09	1976.92	1976.20	1975.22	1974.80
17	1967.69	1967.42	1967.29	---	---	1966.24	1966.00	1966.03	1976.93	1976.17	1975.20	1974.79
18	1967.74	1967.40	1967.27	---	---	1966.24	1965.99	1965.99	1976.91	1976.14	1975.18	1974.77
19	1967.71	1967.38	1967.25	---	---	1966.23	1965.99	1965.96	1976.90	1976.14	1975.15	1974.72
20	1967.67	1967.37	1967.23	---	---	1966.21	1965.96	1965.95	1976.89	1976.10	1975.11	1974.71
21	1967.67	1967.35	1967.22	---	---	1966.19	1965.94	1965.92	1976.86	1976.08	1975.09	1974.71
22	1967.67	1967.33	1967.20	---	---	1966.23	1965.95	1965.91	1976.83	1976.04	1975.08	1974.69
23	1967.68	1967.32	1967.19	---	---	1966.24	1965.96	1965.89	1976.79	1976.00	1975.09	1974.67
24	1967.64	1967.30	1967.18	---	---	1966.24	1965.96	1965.86	1976.76	1975.96	1975.06	1974.67
25	1967.64	1967.27	1967.17	---	---	1966.25	1965.94	1965.82	1976.72	1975.94	1975.05	1974.78
26	1967.64	1967.26	1967.16	---	---	1966.23	1965.93	1965.86	1976.72	1975.91	1975.02	1975.09
27	1967.64	1967.25	1967.15	---	---	1966.23	1965.91	1965.85	1976.73	1975.87	1975.00	1975.08
28	1967.67	1967.24	---	---	---	1966.23	1965.91	1965.82	1976.70	1975.84	1974.98	1975.06
29	1967.65	1967.22	---	---	---	1966.20	1965.99	1965.79	1976.68	1975.81	1974.94	1975.03
30	1967.62	1967.22	---	---	---	1966.18	1966.47	1965.75	1976.66	1975.76	1975.05	1975.01
31	1967.61	---	---	---	---	1966.17	---	1965.71	---	1975.73	1975.12	---
MEAN	1967.62	1967.44	---	---	---	---	1966.05	1966.14	1972.67	1976.20	1975.27	1974.90
MAX	1967.74	1967.63	---	---	---	---	1966.47	1966.67	1976.93	1976.64	1975.70	1975.10
MIN	1967.49	1967.22	---	---	---	---	1965.91	1965.71	1965.65	1975.73	1974.94	1974.67

CAL YR 2002 MAX 1971.09 MIN 1967.15
WTR YR 2003 MAX 1976.93 MIN 1965.65

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, Oct. 1979 to current year. Prior to Oct. 1979, published as "at Ballinger", station 08126500. 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.--Records fair except those for estimated daily discharges and those for Nov. 3-30, Dec. 1-10, which are poor. 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 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.7	16	11	9.9	8.3	9.4	7.2	6.5	5.3	17	4.8	8.2
2	1.7	12	12	9.2	e8.5	9.2	6.9	4.9	6.8	15	4.3	7.2
3	1.7	10	15	9.3	e8.5	11	7.4	5.1	58	14	4.0	6.4
4	1.7	9.2	13	9.0	e8.5	11	7.7	4.1	562	13	3.1	7.9
5	1.3	9.1	11	9.3	e8.5	10	6.9	3.8	922	13	1.9	8.4
6	1.6	8.3	10	9.2	8.8	9.9	7.1	2.5	1370	14	3.0	7.2
7	2.1	9.3	11	9.7	8.2	9.2	6.6	2.3	572	16	4.0	6.5
8	5.9	11	12	9.6	8.2	8.8	6.6	1.8	461	14	1.8	5.1
9	38	12	14	9.8	8.1	8.7	6.3	1.5	1420	14	2.8	4.8
10	44	12	15	8.9	e8.2	8.6	6.8	1.5	287	13	2.4	5.2
11	31	9.8	14	8.7	e8.2	8.5	6.8	1.2	124	12	2.5	5.4
12	13	8.6	14	9.2	e8.4	8.7	6.8	1.4	360	12	2.2	4.9
13	7.1	8.7	13	9.5	e8.6	8.7	7.2	1.6	e131	11	2.3	4.4
14	5.8	10	11	9.2	e8.6	8.4	6.5	1.4	1540	10	1.8	5.7
15	5.1	10	11	9.4	e8.8	9.4	5.9	1.3	913	8.6	1.3	6.1
16	4.9	10	10	9.4	e9.0	12	5.9	1.4	231	9.2	1.5	6.9
17	4.9	10	10	9.1	e9.2	8.4	5.1	1.2	111	9.8	1.3	8.1
18	819	11	9.9	9.0	9.4	9.3	6.2	1.3	70	9.2	1.2	10
19	624	10	9.9	9.0	9.5	8.4	6.3	1.5	52	9.7	1.1	9.6
20	112	10	9.4	8.8	12	7.9	5.9	1.7	40	8.7	1.1	8.7
21	37	11	9.3	8.6	22	8.3	5.6	3.0	33	6.6	1.0	7.8
22	18	11	9.0	8.6	22	12	5.5	6.5	28	5.8	1.5	7.0
23	29	11	9.6	8.2	14	12	5.9	5.6	24	5.4	2.3	7.2
24	24	12	9.9	8.0	13	12	6.0	5.3	21	5.6	7.2	6.6
25	12	9.7	9.7	8.1	11	14	8.1	5.3	19	4.3	8.9	9.5
26	9.8	9.2	9.8	8.2	9.2	11	7.9	6.5	18	2.4	7.2	138
27	13	8.5	9.9	8.3	8.9	8.5	6.8	6.3	18	3.1	44	280
28	15	8.6	9.5	7.8	9.1	7.3	5.6	6.8	18	3.2	23	52
29	71	9.2	9.5	8.3	---	7.5	6.6	6.7	18	4.4	11	20
30	90	11	9.9	9.2	---	7.1	6.9	6.8	18	5.0	8.6	13
31	45	---	9.6	8.8	---	6.8	---	5.8	---	3.6	8.9	---
TOTAL	2090.3	308.2	341.9	277.3	284.7	292.0	197.0	112.6	9451.1	292.6	172.0	677.8
MEAN	67.4	10.3	11.0	8.95	10.2	9.42	6.57	3.63	315	9.44	5.55	22.6
MAX	819	16	15	9.9	22	14	8.1	6.8	1540	17	44	280
MIN	1.3	8.3	9.0	7.8	8.1	6.8	5.1	1.2	5.3	2.4	1.0	4.4
AC-FT	4150	611	678	550	565	579	391	223	18750	580	341	1340

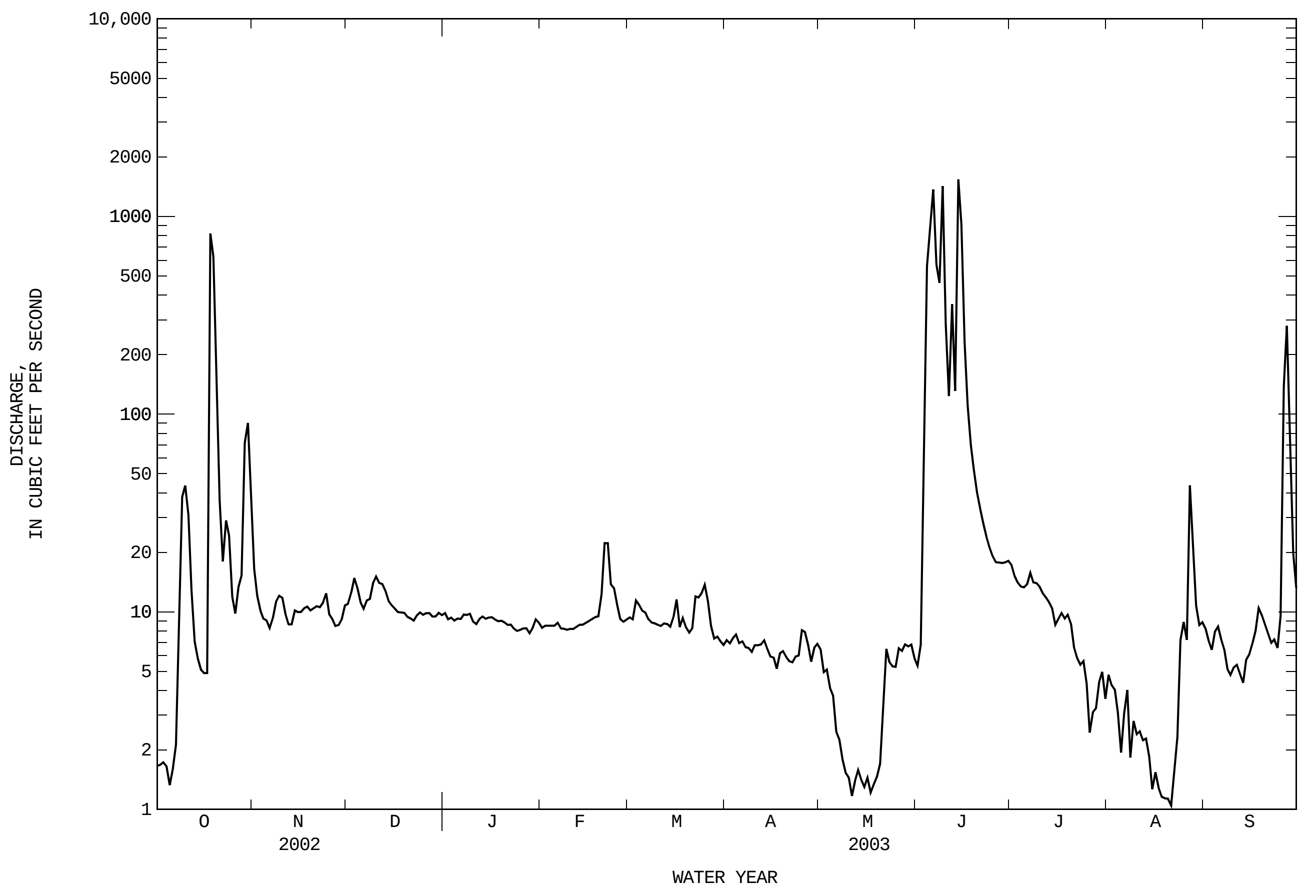
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1953 - 2003z, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	164	39.1	25.7	22.4	41.3	36.2	90.7	322	199	69.5	99.1	150
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 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1953 - 2003z	
ANNUAL TOTAL	5146.68		14497.5			
ANNUAL MEAN	14.1		39.7		105	
HIGHEST ANNUAL MEAN					813	1957
LOWEST ANNUAL MEAN					7.18	1984
HIGHEST DAILY MEAN	819	Oct 18	1540	Jun 14	45800	Oct 14 1957
LOWEST DAILY MEAN	0.31	Aug 24	1.0	Aug 21	0.00	Oct 15 1952
ANNUAL SEVEN-DAY MINIMUM	0.32	Aug 20	1.2	Aug 15	0.00	Oct 15 1952
MAXIMUM PEAK FLOW			2990	Jun 14	g16600	Aug 3 1978
MAXIMUM PEAK STAGE			14.56	Jun 14	27.50	Sep 21 1990
ANNUAL RUNOFF (AC-FT)	10210		28760		76250	
10 PERCENT EXCEEDS	14		24		133	
50 PERCENT EXCEEDS	7.5		8.8		11	
90 PERCENT EXCEEDS	0.63		2.4		0.43	

e Estimated
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 June 2003 (discontinued).

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 and water temperature from Jan. 6, 7, Mar. 29 to Apr. 1, June 9-13, 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, 125 microsiemens/cm, Oct. 18, 2002.
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, 6,200 microsiemens/cm, Aug. 26; minimum, 125 microsiemens/cm, Oct. 18.
WATER TEMPERATURE: Maximum, 35.9°C, Aug. 7; minimum, 4.6°C, Feb. 25.

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

Date	Time	Instantaneous discharge, cfs (00061)	Specif. conductance, wat unf uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temperature, water, deg C (00010)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Sodium, water, fltrd, mg/L (00930)	Sodium adsorption ratio (00931)	Potassium, water, fltrd, mg/L (00935)
DEC													
10...	1220	15	4830	8.2	8.4	10.8	99	1100	232	121	649	9	15.1
MAR													
19...	1350	8.9	4520	--	19.1	--	--	950	207	106	587	8	17.2
APR													
30...	1110	7.2	5600	8.0	25.8	6.9	93	1300	278	148	785	9	22.5
JUN													
04...	1400	1120	1600	7.8	24.6	4.3	56	340	75.4	36.3	207	5	10.2

Date	Sulfate water, fltrd, mg/L (00945)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Residue water, fltrd, sum of constituents mg/L (70301)
DEC					
10...	856	1040	.50	2.0	2990
MAR					
19...	836	961	.47	2.6	2770
APR					
30...	1100	1230	.61	2.4	3630
JUN					
04...	244	322	.3	4.5	940

08126380 Colorado River near Ballinger, TX--Continued

SPECIFIC CONDUCTANCE, IN US/CM @ 25C, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

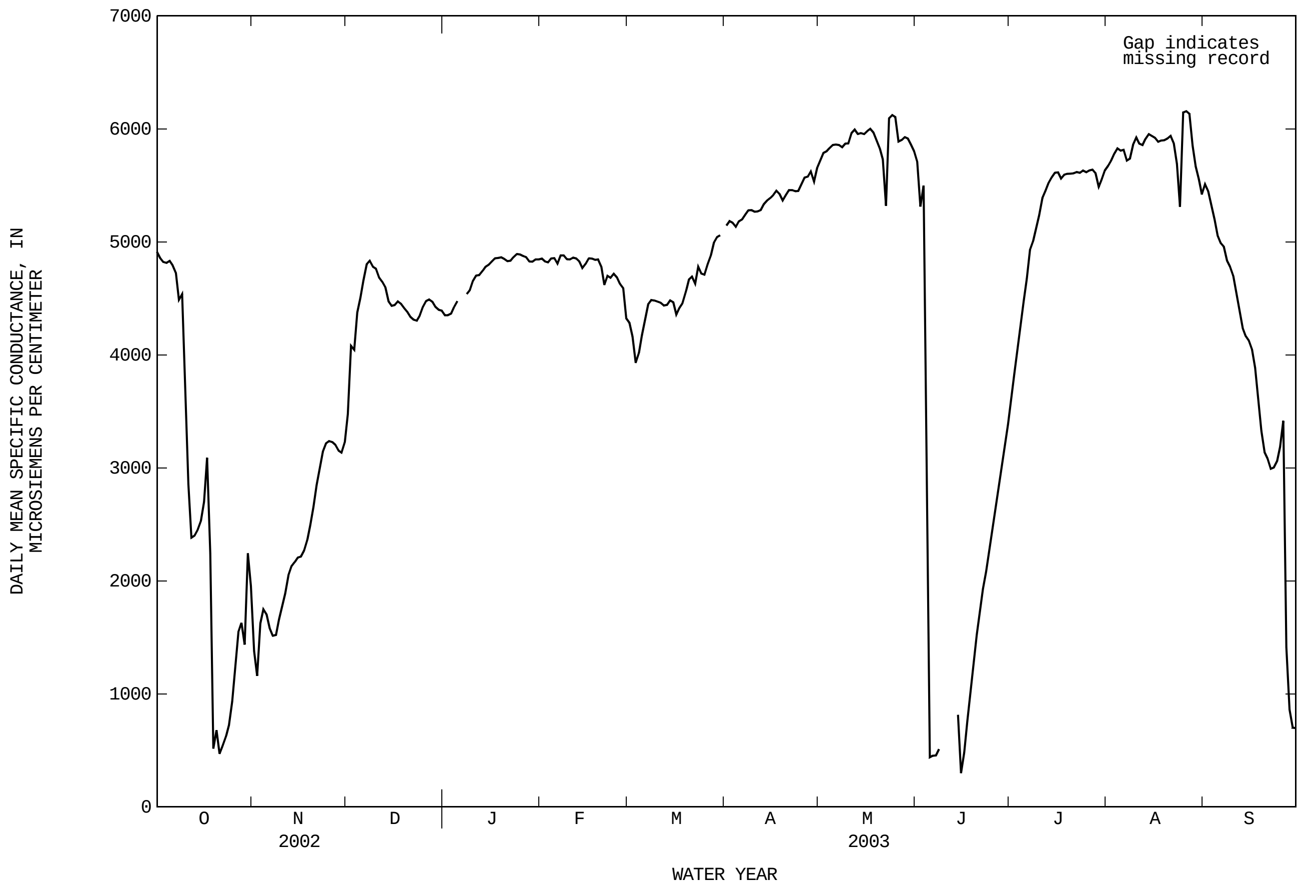
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	4970	4850	4910	1660	1130	1380	3760	3340	3480	4400	4310	4350
2	4890	4810	4860	1320	1110	1160	4230	3760	4080	4380	4330	4350
3	4860	4780	4820	1750	1320	1620	4220	3940	4040	4390	4330	4370
4	4840	4780	4810	1770	1730	1750	4450	4030	4380	4470	4390	4420
5	4850	4810	4830	1740	1630	1700	4610	4440	4510	4500	4460	4480
6	4840	4740	4790	1630	1550	1580	4720	4610	4660	---	---	---
7	4800	4610	4730	1550	1490	1510	4850	4720	4800	4540	---	---
8	4610	4180	4490	1560	1500	1520	4860	4720	4830	4550	4520	4540
9	4620	4340	4540	1740	1560	1660	4820	4750	4780	4630	4550	4570
10	4600	2730	3770	1820	1740	1780	4830	4690	4760	4680	4630	4660
11	2970	2630	2860	1980	1820	1890	4710	4660	4680	4740	4670	4700
12	2630	2320	2380	2110	1980	2050	4660	4620	4650	4740	4690	4710
13	2420	2380	2400	2150	2100	2130	4640	4540	4600	4770	4700	4740
14	2480	2420	2450	2200	2150	2160	4540	4430	4470	4800	4770	4780
15	2580	2470	2530	2220	2200	2210	4460	4410	4440	4820	4780	4800
16	2800	2580	2700	2230	2210	2210	4480	4420	4440	4850	4800	4830
17	3270	2800	3090	2300	2230	2270	4490	4450	4470	4870	4840	4850
18	3680	125	2240	2430	2300	2360	4480	4420	4450	4880	4840	4860
19	832	276	514	2580	2420	2500	4440	4390	4410	4880	4850	4860
20	854	478	676	2720	2580	2650	4410	4360	4380	4870	4830	4850
21	489	457	468	2920	2720	2850	4380	4290	4340	4850	4810	4830
22	592	488	540	3070	2920	2990	4340	4290	4310	4850	4820	4830
23	640	590	620	3210	3070	3140	4310	4290	4300	4880	4850	4870
24	815	620	723	3230	3210	3220	4400	4310	4350	4900	4880	4890
25	1060	815	930	3240	3230	3240	4470	4390	4430	4900	4880	4890
26	1360	1060	1220	3240	3220	3230	4490	4460	4480	4880	4860	4870
27	1650	1360	1550	3230	3180	3200	4520	4460	4490	4880	4840	4860
28	1650	1600	1630	3190	3120	3150	4510	4430	4470	4860	4800	4830
29	1830	1170	1430	3150	3120	3130	4460	4400	4420	4840	4810	4820
30	2630	1830	2240	3340	3150	3220	4410	4380	4400	4870	4830	4850
31	2640	1660	1950	---	---	---	4420	4360	4390	4860	4830	4840
MONTH	4970	125	2640	3340	1110	2320	4860	3340	4440	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	4880	4810	4850	4380	4210	4280	5190	5100	5140	5760	5670	5720
2	4860	4790	4830	4210	4080	4160	5210	5140	5180	5830	5740	5790
3	4840	4800	4820	4080	3840	3930	5200	5120	5170	5860	5720	5800
4	4880	4840	4850	4130	3950	4010	5180	5080	5130	5860	5790	5830
5	4870	4840	4860	4220	4130	4180	5220	5120	5180	5910	5790	5860
6	4840	4780	4810	4380	4220	4320	5220	5170	5200	5940	5800	5860
7	4900	4840	4880	4480	4380	4450	5270	5210	5240	5930	5780	5860
8	4900	4860	4880	4500	4470	4480	5310	5250	5280	5880	5780	5840
9	4880	4820	4850	4510	4450	4480	5340	5220	5280	5910	5840	5870
10	4870	4820	4850	4490	4450	4470	5300	5230	5270	5920	5830	5870
11	4880	4840	4860	4480	4440	4460	5300	5230	5270	6030	5900	5960
12	4880	4830	4850	4460	4400	4440	5320	5250	5280	6050	5950	5990
13	4840	4810	4830	4480	4420	4440	5360	5290	5330	6000	5880	5950
14	4820	4740	4770	4510	4460	4480	5410	5320	5370	6010	5910	5960
15	4840	4770	4800	4510	4270	4470	5410	5370	5390	6010	5880	5950
16	4880	4840	4850	4400	4310	4360	5440	5390	5420	6050	5930	5980
17	4880	4830	4850	4440	4400	4420	5480	5430	5450	6070	5920	6000
18	4860	4830	4840	4500	4440	4460	5490	5360	5420	6040	5870	5970
19	4860	4840	4840	4620	4500	4560	5390	5320	5370	6000	5600	5900
20	4860	4640	4780	4700	4620	4670	5460	5370	5420	5860	5790	5830
21	4720	4450	4620	4710	4560	4690	5480	5430	5460	5820	5340	5730
22	4730	4670	4700	4750	4550	4630	5480	5430	5460	6040	4830	5320
23	4700	4660	4680	4830	4740	4780	5480	5400	5450	6140	6040	6090
24	4730	4700	4720	4790	4660	4720	5500	5420	5450	6160	6080	6120
25	4730	4650	4690	4750	4680	4710	5550	5470	5510	6150	6050	6110
26	4660	4600	4630	4840	4750	4800	5600	5530	5570	6110	5790	5890
27	4620	4560	4590	4950	4820	4880	5610	5520	5580	5940	5860	5900
28	4600	4080	4320	5040	4950	4990	5660	5550	5620	5970	5860	5930
29	---	---	---	5060	5020	5040	5580	5480	5530	5980	5850	5910
30	---	---	---	5080	5020	5060	5710	5550	5650	5930	5800	5860
31	---	---	---	---	5070	---	---	---	---	5840	5750	5800
MONTH	4900	4080	4780	---	3840	---	5710	5080	5370	6160	4830	5890

08126380 Colorado River near Ballinger, TX--Continued

SPECIFIC CONDUCTANCE, IN US/CM @ 25C, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	5820	4390	5710	3660	3470	3600	5710	5640	5670	5530	5480	5510
2	5400	5050	5310	3910	3660	3830	5760	5690	5720	5490	5390	5450
3	5770	2660	5500	4130	3910	4020	5820	5750	5780	5430	5220	5330
4	5270	517	2560	4360	4130	4230	5850	5800	5830	5260	5130	5200
5	563	304	437	4630	4350	4470	5860	5740	5810	5170	4970	5060
6	539	394	451	4780	4620	4670	5850	5780	5820	5020	4950	4990
7	539	393	454	5020	4780	4930	5810	5610	5720	5000	4910	4960
8	541	479	510	5120	4930	5000	5780	5680	5740	4910	4770	4840
9	523	---	---	5170	5000	5120	5950	5770	5860	4830	4720	4780
10	---	---	---	5280	5160	5240	5960	5880	5920	4760	4640	4700
11	---	---	---	5440	5280	5390	5950	5780	5870	4640	4490	4550
12	---	271	---	5510	5380	5450	5890	5800	5860	4490	4320	4400
13	1080	---	---	5570	5480	5520	5960	5870	5910	4340	4150	4240
14	1700	315	813	5600	5540	5570	5990	5900	5950	4230	4120	4170
15	348	274	297	5650	5580	5610	5990	5840	5940	4180	4080	4130
16	629	348	480	5660	5560	5620	5990	5830	5920	4100	3980	4050
17	872	629	752	5600	5530	5560	5940	5830	5890	3980	3760	3880
18	1130	872	992	5640	5550	5590	5960	5840	5900	3760	3500	3590
19	1420	1130	1260	5650	5550	5600	5950	5850	5900	3500	3190	3330
20	1650	1420	1520	5650	5550	5600	5960	5860	5910	3190	3080	3140
21	1840	1650	1740	5640	5570	5610	5980	5890	5940	3110	3040	3080
22	2000	1830	1930	5660	5580	5620	5980	5620	5880	3040	2950	2990
23	2150	2000	2080	5640	5550	5610	5820	5530	5690	3040	2970	3000
24	2350	2150	2250	5670	5560	5630	5930	4820	5310	3110	3030	3060
25	2520	2350	2450	5670	5550	5620	6190	5930	6150	3340	3080	3190
26	2720	2510	2630	5670	5580	5630	6200	6090	6160	4010	2780	3420
27	2870	2710	2800	5680	5600	5640	6190	6070	6130	2780	961	1410
28	3100	2870	2990	5660	5560	5610	6070	5740	5850	961	728	860
29	3270	3100	3190	5580	5410	5490	5780	5600	5670	728	687	699
30	3470	3260	3390	5650	5470	5550	5620	5400	5560	712	685	696
31	---	---	---	5670	5600	5630	5490	5360	5420	---	---	---
MONTH	---	---	---	5680	3470	5230	6200	4820	5830	5530	685	3760



08126380 Colorado River near Ballinger, TX--Continued

WATER TEMPERATURE, IN (DEGREES C), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

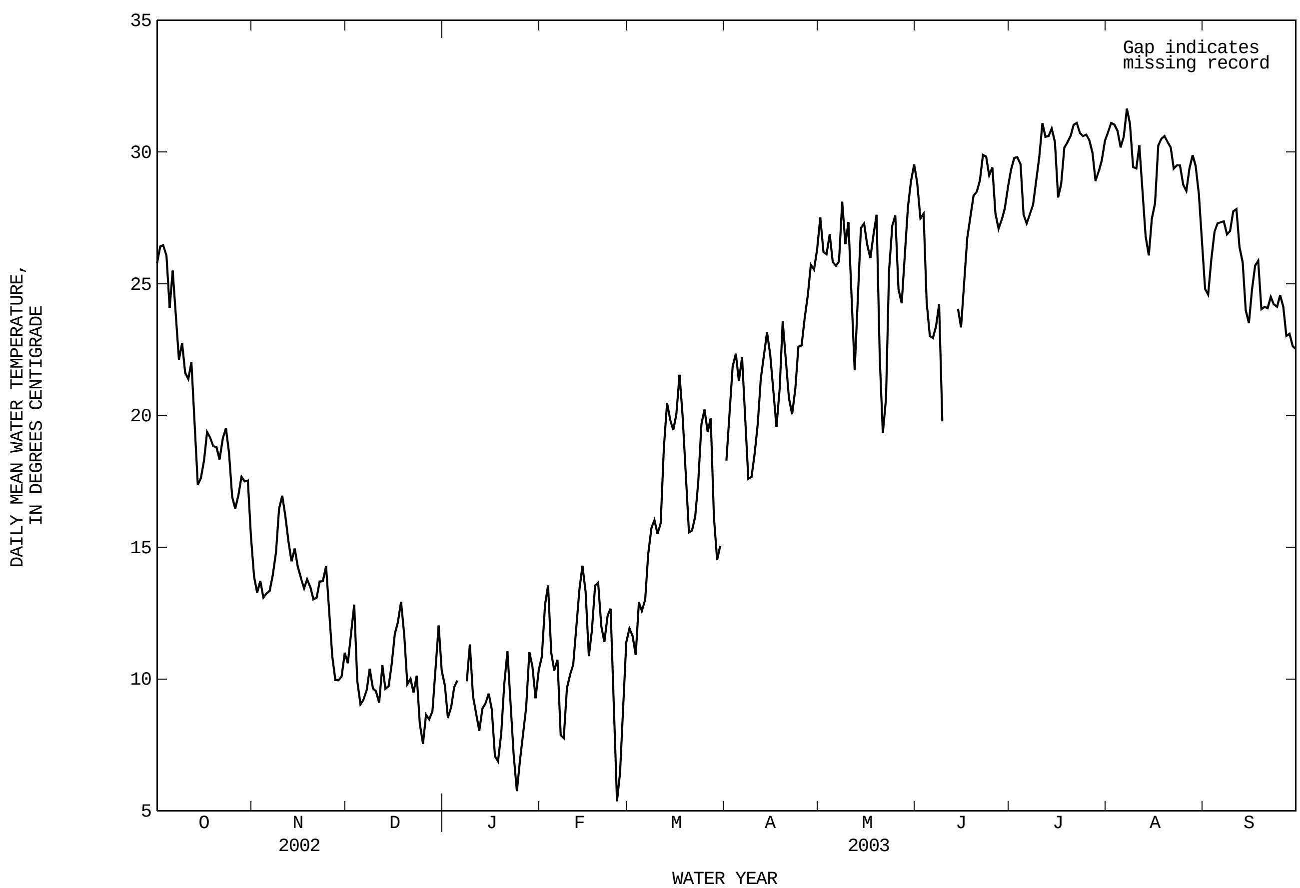
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	28.9	23.6	25.8	14.4	13.2	13.9	11.9	9.4	10.6	11.4	8.7	9.8
2	29.7	24.0	26.4	13.5	13.0	13.3	13.6	10.2	11.8	9.8	7.1	8.5
3	29.3	24.3	26.5	14.4	13.2	13.7	13.3	11.4	12.8	10.6	7.3	8.9
4	28.9	23.9	26.1	13.8	12.6	13.1	11.4	9.2	9.9	11.3	8.2	9.7
5	26.6	21.9	24.1	15.1	11.7	13.2	9.7	8.4	9.0	11.5	8.4	9.9
6	29.8	23.0	25.5	15.2	11.3	13.3	10.6	7.8	9.2	---	---	---
7	25.2	22.0	23.6	15.9	11.8	14.0	10.9	8.3	9.6	9.9	---	---
8	23.3	21.3	22.1	16.6	12.9	14.8	10.8	10.0	10.4	11.9	8.2	9.9
9	23.6	21.9	22.8	18.3	14.8	16.5	10.0	9.2	9.6	12.5	10.4	11.3
10	22.3	20.9	21.6	18.3	15.6	17.0	10.2	8.9	9.5	10.4	8.1	9.3
11	23.4	20.0	21.4	17.4	14.9	16.2	10.4	7.6	9.1	9.3	8.1	8.7
12	24.7	19.7	22.0	16.5	14.0	15.2	11.9	9.5	10.5	8.3	7.8	8.0
13	22.6	18.7	20.1	15.9	12.7	14.5	10.8	8.2	9.6	9.8	8.3	8.9
14	18.7	16.7	17.4	16.3	13.7	15.0	11.5	8.0	9.7	10.3	8.1	9.1
15	20.6	14.9	17.6	15.2	13.2	14.3	12.1	8.9	10.5	10.7	8.3	9.4
16	20.5	16.1	18.3	15.0	12.7	13.8	13.2	10.6	11.7	9.8	7.7	8.9
17	21.2	17.4	19.4	15.0	11.8	13.4	13.4	10.9	12.2	8.2	5.7	7.1
18	20.1	18.5	19.2	15.0	12.8	13.8	13.8	11.9	12.9	8.4	5.3	6.9
19	19.4	18.2	18.8	15.0	11.9	13.5	12.7	10.4	11.6	9.9	6.1	7.9
20	19.3	18.2	18.8	14.0	11.9	13.0	10.9	8.3	9.8	11.8	8.1	9.8
21	19.0	17.9	18.3	14.7	11.4	13.1	11.3	8.7	10.0	12.6	9.7	11.0
22	20.4	18.3	19.1	15.2	12.3	13.7	10.3	8.2	9.5	10.9	8.2	9.3
23	20.6	18.8	19.5	15.2	12.1	13.7	10.4	9.3	10.1	8.2	5.9	7.1
24	19.3	17.5	18.6	16.0	12.8	14.3	9.3	7.6	8.3	6.7	5.1	5.7
25	17.5	16.4	16.9	14.3	11.9	12.7	8.9	6.1	7.5	7.8	6.0	6.9
26	17.1	16.0	16.5	11.9	9.9	10.8	10.0	7.6	8.6	8.4	7.4	7.9
27	18.3	16.0	17.0	11.0	8.9	10	9.8	7.0	8.5	10.8	7.4	8.9
28	18.8	16.9	17.7	11.5	8.4	9.9	10.5	7.1	8.8	13.3	9.2	11.0
29	18.6	16.0	17.5	10.9	9.2	10.1	11.8	8.7	10.2	12.0	9.4	10.5
30	18.0	16.6	17.5	12.1	10.0	11.0	13.2	11.3	12.0	11.1	7.4	9.3
31	16.6	14.4	15.4	---	---	---	11.4	9.0	10.3	12.0	8.8	10.4
MONTH	29.8	14.4	20.4	18.3	8.4	13.5	13.8	6.1	10.1	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	13.1	8.6	10.8	13.5	10.4	11.9	21.9	15.1	18.3	31.2	24.8	27.5
2	15.1	10.7	12.8	12.6	10.6	11.6	23.7	17.3	20.2	29.9	24.4	26.2
3	14.7	12.2	13.6	12.1	9.9	10.9	25.1	19.6	21.9	30.1	23.7	26.1
4	12.3	9.2	11.0	16.1	10.4	12.9	25.1	20.4	22.4	29.4	25.0	26.9
5	11.1	9.9	10.3	14.4	10.3	12.6	24.0	18.5	21.3	30.1	23.1	25.8
6	11.5	9.5	10.7	16.0	10.2	13.0	24.6	20.6	22.2	32.4	20.6	25.7
7	9.5	6.9	7.9	18.0	11.7	14.7	22.5	17.3	19.9	30.0	21.5	25.9
8	8.5	7.2	7.8	17.4	14.1	15.7	20.4	15.0	17.6	33.6	24.5	28.1
9	11.9	7.9	9.7	18.4	13.8	16.0	22.0	13.9	17.7	28.1	25.0	26.5
10	11.9	8.3	10.1	16.7	14.3	15.5	21.7	15.5	18.5	32.4	24.3	27.3
11	12.7	8.5	10.5	17.5	14.5	15.9	22.6	17.0	19.7	29.2	19.6	24.1
12	13.8	9.8	11.8	22.0	16.1	18.8	24.8	18.4	21.4	23.4	20.5	21.7
13	14.0	12.9	13.4	22.9	18.5	20.5	24.9	20.1	22.3	30.4	20.6	24.4
14	15.8	12.9	14.3	22.4	17.3	19.9	26.9	20.3	23.2	32.8	23.1	27.1
15	14.8	11.3	13.3	21.1	18.2	19.5	24.2	21.5	22.3	31.2	24.3	27.3
16	12.6	9.1	10.9	22.6	17.7	20.0	23.6	18.1	20.9	31.0	22.9	26.5
17	14.5	9.3	11.8	23.9	19.8	21.6	21.6	18.6	19.6	33.1	21.0	26.0
18	15.0	11.9	13.5	21.5	18.6	20.0	24.7	18.2	21.0	33.0	22.1	26.9
19	14.3	12.8	13.7	19.7	15.7	17.7	27.3	21.4	23.6	34.5	24.0	27.6
20	13.2	11.2	12.0	17.1	14.8	15.6	24.9	19.1	22.0	26.3	20.0	22.2
21	12.0	10.8	11.4	18.5	12.9	15.6	22.2	18.7	20.7	20.0	18.6	19.3
22	15.0	10.1	12.4	17.1	14.8	16.2	20.9	19.0	20.1	23.9	18.5	20.7
23	14.8	10.8	12.7	21.1	14.1	17.5	24.8	18.5	21.0	30.5	21.8	25.5
24	12.1	5.8	8.2	23.0	16.4	19.7	26.0	19.8	22.6	31.0	24.6	27.2
25	6.0	4.6	5.4	22.4	18.1	20.2	26.6	19.1	22.7	31.7	24.9	27.6
26	7.8	5.4	6.4	22.6	16.2	19.4	27.8	20.3	23.7	27.4	23.9	24.8
27	12.5	6.9	9.4	22.8	17.1	19.9	27.6	22.1	24.6	27.0	22.2	24.3
28	13.8	9.4	11.4	19.5	14.4	16.1	29.7	23.3	25.7	31.0	22.4	26.3
29	---	---	---	16.9	12.8	14.5	29.8	22.3	25.5	32.8	24.0	27.9
30	---	---	---	18.2	11.8	15.1	30.5	23.3	26.3	33.2	25.3	28.9
31	---	---	---	---	13.6	---	---	---	---	33.6	26.2	29.5
MONTH	15.8	4.6	11.0	---	9.9	---	30.5	13.9	21.6	34.5	18.5	25.9

08126380 Colorado River near Ballinger, TX--Continued

WATER TEMPERATURE, IN (DEGREES C), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	33.8	21.3	28.8	32.8	25.8	29.3	34.6	27.8	30.8	25.9	24.2	24.8
2	32.6	23.8	27.5	32.5	26.8	29.8	35.5	28.1	31.1	27.0	23.0	24.6
3	30.6	22.3	27.7	32.5	27.3	29.8	34.8	28.5	31.0	29.8	23.0	25.9
4	26.9	22.2	24.3	32.1	27.0	29.6	35.3	28.0	30.8	30.0	24.7	27.0
5	24.4	21.3	23.0	29.8	26.6	27.6	34.1	27.4	30.2	29.6	25.4	27.3
6	24.3	22.4	22.9	29.3	25.8	27.3	35.0	26.5	30.6	30.1	24.9	27.3
7	25.4	21.8	23.4	29.7	25.7	27.6	35.9	28.4	31.7	29.9	25.2	27.4
8	25.2	23.2	24.2	30.8	25.6	28.0	35.7	28.2	31.1	29.8	24.9	26.9
9	23.1	17.8	19.8	32.0	26.2	28.9	31.7	28.0	29.4	30.3	24.7	27.0
10	---	---	---	33.1	26.7	29.8	32.8	26.7	29.4	30.8	25.6	27.8
11	---	---	---	34.0	28.6	31.1	34.1	27.4	30.3	30.0	26.6	27.8
12	27.2	---	---	33.4	28.2	30.6	31.1	26.1	28.3	29.2	24.0	26.4
13	27.9	---	---	33.3	28.3	30.6	29.0	25.1	26.8	29.4	23.3	25.8
14	26.2	22.5	24.1	33.7	28.4	30.9	29.7	23.1	26.1	25.6	23.2	24.0
15	24.9	22.3	23.3	32.4	28.6	30.4	32.3	24.5	27.5	26.0	21.6	23.5
16	26.4	24.1	25.3	29.5	27.2	28.3	32.4	24.7	28.1	27.8	22.7	24.8
17	28.6	25.4	26.8	32.4	26.2	28.8	35.3	26.1	30.2	27.8	23.8	25.7
18	29.7	25.9	27.5	33.0	27.8	30.2	35.6	26.1	30.5	27.7	24.6	25.9
19	30.7	26.8	28.3	33.4	27.9	30.4	35.6	26.5	30.6	25.8	22.1	24.0
20	31.3	26.9	28.5	33.8	28.1	30.6	35.2	26.4	30.4	26.1	22.4	24.1
21	32.5	26.6	28.9	35.0	28.1	31.0	34.6	26.3	30.2	25.3	23.3	24.1
22	33.8	27.2	29.9	35.0	28.4	31.1	34.7	26.3	29.4	27.6	21.9	24.5
23	33.0	27.4	29.8	33.0	28.8	30.7	34.5	26.0	29.5	25.4	23.4	24.2
24	31.5	27.2	29.1	33.9	28.1	30.6	32.1	27.4	29.5	27.0	22.0	24.1
25	32.4	27.1	29.4	34.0	28.4	30.7	30.6	27.7	28.8	25.4	23.8	24.6
26	30.4	26.8	27.7	35.1	27.3	30.5	31.7	26.8	28.5	26.4	22.8	24.1
27	29.6	25.2	27.1	34.2	27.0	30.0	31.4	27.9	29.4	24.6	21.8	23.0
28	29.8	24.6	27.4	31.8	26.7	28.9	32.0	28.4	29.9	24.9	22.1	23.1
29	30.9	25.2	27.9	32.6	26.6	29.3	31.8	27.2	29.5	24.8	20.9	22.6
30	32.1	25.4	28.7	33.0	27.1	29.7	29.9	27.6	28.4	24.6	20.1	22.5
31	---	---	---	34.8	27.3	30.4	27.6	25.9	26.7	---	---	---
MONTH	---	---	---	35.1	25.6	29.8	35.9	23.1	29.5	30.8	20.1	25.2



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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. 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 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	29	4.0	3.3	3.0	3.0	1.8	40	1.4	12	0.00	0.27
2	0.00	29	4.0	3.0	3.0	3.0	1.8	17	3.8	11	0.00	0.40
3	0.00	26	4.8	3.0	3.0	3.8	2.2	11	21	9.6	0.00	0.43
4	0.00	23	4.9	3.0	3.0	4.0	2.6	7.2	34	8.4	0.00	0.43
5	0.00	21	4.7	3.0	3.0	3.8	2.2	5.8	61	7.8	0.00	0.41
6	0.00	18	4.0	3.0	3.0	3.0	2.4	4.3	74	7.1	0.00	0.35
7	0.00	17	4.0	3.7	3.0	3.0	2.1	3.3	53	6.7	0.00	0.32
8	0.00	15	4.4	4.0	3.0	3.0	1.6	2.1	47	5.6	0.00	0.26
9	0.00	14	6.0	3.8	3.0	3.0	1.4	2.2	75	4.4	0.00	0.20
10	14	13	5.9	3.2	3.0	3.0	1.4	2.2	51	3.8	0.00	0.13
11	13	12	4.9	3.1	3.0	3.0	1.4	1.6	32	2.8	0.00	0.08
12	7.8	11	4.7	3.8	3.0	3.0	1.4	1.1	30	2.3	0.00	0.04
13	4.1	10	4.4	4.0	3.0	3.0	1.7	0.93	211	1.9	0.00	0.02
14	3.0	9.4	4.0	4.0	3.4	3.0	1.6	0.95	683	1.6	0.00	0.02
15	2.7	8.2	4.0	4.0	3.0	3.0	1.7	0.92	147	1.2	0.00	0.01
16	2.2	7.5	4.0	3.6	2.8	3.0	1.6	0.94	63	0.87	0.00	0.01
17	1.8	7.0	4.0	3.0	2.7	3.0	1.4	0.67	55	0.75	0.00	0.01
18	1890	6.4	4.0	3.0	2.3	2.8	1.5	0.55	53	0.64	0.00	0.01
19	487	5.5	3.6	3.2	2.6	2.3	1.6	0.49	42	0.50	0.00	0.04
20	198	4.7	3.0	3.0	3.5	2.2	1.4	0.65	38	0.38	0.00	0.20
21	108	4.7	3.0	3.0	7.4	2.3	1.3	0.71	34	0.26	0.00	0.45
22	76	4.1	3.0	3.0	9.4	3.7	1.2	0.89	26	0.16	0.00	0.55
23	62	4.0	3.4	3.0	5.8	4.0	1.3	1.5	21	0.12	0.00	0.46
24	48	4.0	3.1	3.0	4.2	3.6	1.3	1.6	16	0.09	0.00	0.37
25	36	3.6	3.0	3.0	3.0	3.1	1.0	1.3	14	0.05	0.00	0.40
26	31	3.0	3.0	3.0	3.0	3.0	1.00	3.7	13	0.02	0.00	2.4
27	27	3.0	3.0	3.0	3.0	2.9	0.90	2.1	11	0.01	0.00	2.4
28	26	3.8	3.4	3.0	3.0	2.2	0.83	1.4	12	0.00	0.00	2.6
29	29	4.0	4.0	3.0	---	1.8	1.1	1.1	11	0.00	0.00	1.6
30	46	4.0	3.9	3.0	---	1.8	569	0.93	11	0.00	0.00	1.2
31	36	---	3.1	3.0	---	1.8	---	1.1	---	0.00	0.06	---
TOTAL	3148.60	324.9	123.2	100.7	98.1	91.1	613.73	120.23	1944.2	90.05	0.06	16.07
MEAN	102	10.8	3.97	3.25	3.50	2.94	20.5	3.88	64.8	2.90	0.002	0.54
MAX	1890	29	6.0	4.0	9.4	4.0	569	40	683	12	0.06	2.6
MIN	0.00	3.0	3.0	3.0	2.3	1.8	0.83	0.49	1.4	0.00	0.00	0.01
AC-FT	6250	644	244	200	195	181	1220	238	3860	179	0.1	32
CFSM	0.23	0.02	0.01	0.01	0.01	0.01	0.05	0.01	0.14	0.01	0.00	0.00
IN.	0.26	0.03	0.01	0.01	0.01	0.01	0.05	0.01	0.16	0.01	0.00	0.00

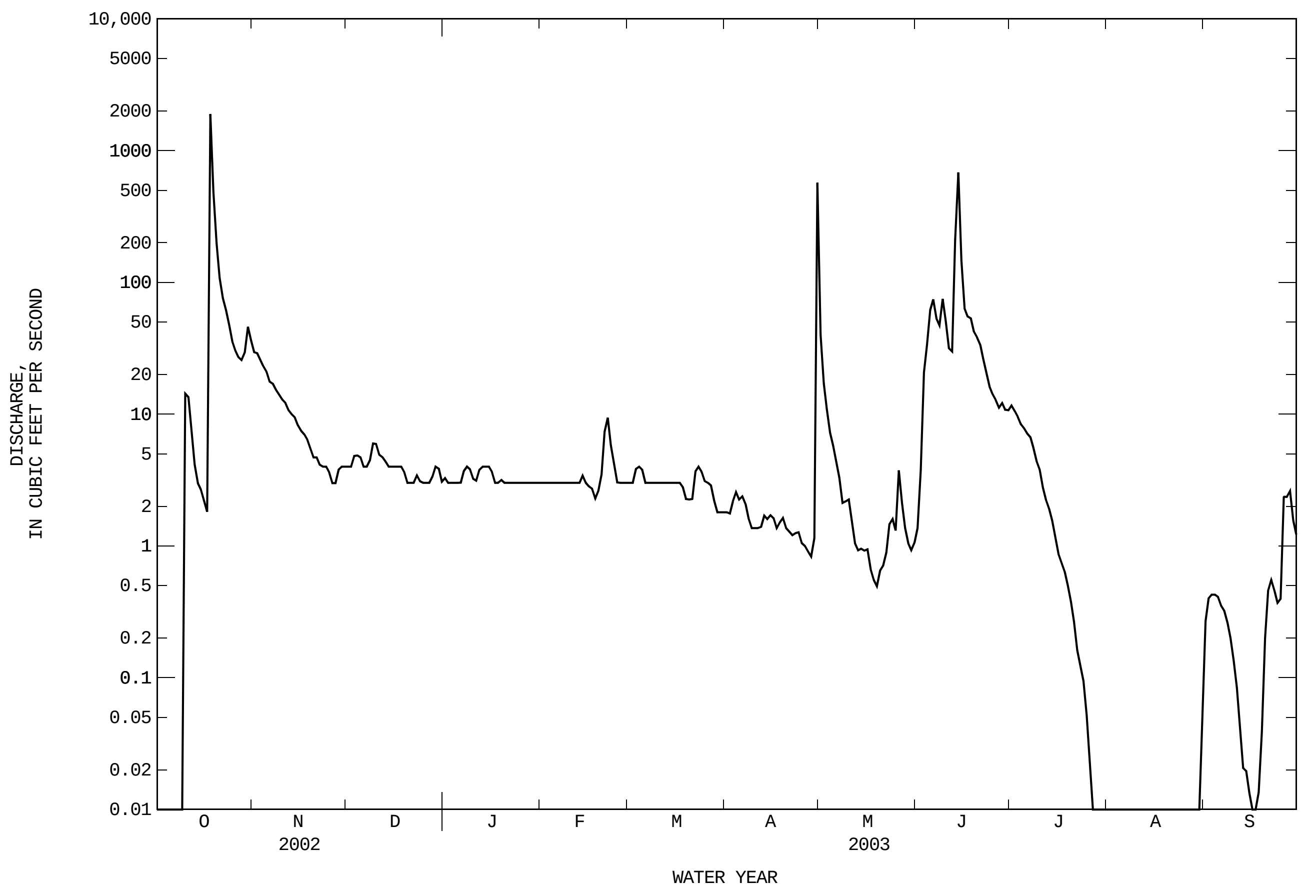
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 2003z, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	25.5	14.3	37.4	16.9	59.8	31.1	18.1	65.7	104	13.8	9.94	51.3
MAX	165	59.7	576	164	911	268	76.4	655	770	157	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 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1983 - 2003z	
ANNUAL TOTAL	9285.94		6670.94			
ANNUAL MEAN	25.4		18.3		37.0	
HIGHEST ANNUAL MEAN					188	1992
LOWEST ANNUAL MEAN					0.96	1984
HIGHEST DAILY MEAN	1890	Oct 18	1890	Oct 18	12400	Sep 15 1996
LOWEST DAILY MEAN	0.00	Jan 1	0.00	Oct 1	0.00	Jul 20 1983
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00	Oct 1	0.00	Jul 20 1983
MAXIMUM PEAK FLOW			8580	Oct 18	16700	Jun 23 1997
MAXIMUM PEAK STAGE			7.63	Oct 18	9.06	Jun 23 1997
ANNUAL RUNOFF (AC-FT)	18420		13230		26840	
ANNUAL RUNOFF (CFSM)	0.057		0.041		0.082	
ANNUAL RUNOFF (INCHES)	0.77		0.55		1.12	
10 PERCENT EXCEEDS	26		26		52	
50 PERCENT EXCEEDS	0.00		3.0		1.7	
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 May 2003 (discontinued).

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. 1-9, July 28 to Aug. 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, 2,840 microsiemens/cm, Apr. 30; minimum, 128 microsiemens/cm, Oct. 18.
WATER TEMPERATURE: Maximum, 33.0°C, July 11, 12, 24; minimum, 6.4°C, Jan. 18.

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

Date	Time	Instantaneous discharge, cfs (00061)	Specif. conductance, wat unf uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temperature, water, deg C (00010)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Sodium, water, fltrd, mg/L (00930)	Sodium adsorption ratio (00931)	Sodium, percent (00932)
DEC													
12...	1150	5.0	1490	--	9.3	11.2	105	520	114	57.4	102	2	30
MAR													
21...	1240	2.1	2620	--	17.0	--	--	830	157	105	221	3	37
APR													
30...	1010	428	613	8.1	15.5	8.8	95	180	38.6	20.4	49.1	2	36
MAY													
01...	1210	41	435	8.0	21.5	7.9	96	120	29.4	12.4	32.6	1	35

Date	Potassium, water, fltrd, mg/L (00935)	Sulfate water, fltrd, mg/L (00945)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Residue water, fltrd, sum of constituents mg/L (70301)
DEC						
12...	5.63	298	175	.53	5.5	878
MAR						
21...	4.66	575	403	.77	4.0	1590
APR						
30...	6.05	96.3	84.0	.25	4.5	344
MAY						
01...	5.59	55.5	50.3	.19	4.7	232

08127000 Elm Creek at Ballinger, TX--Continued

SPECIFIC CONDUCTANCE, IN US/CM @ 25C, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

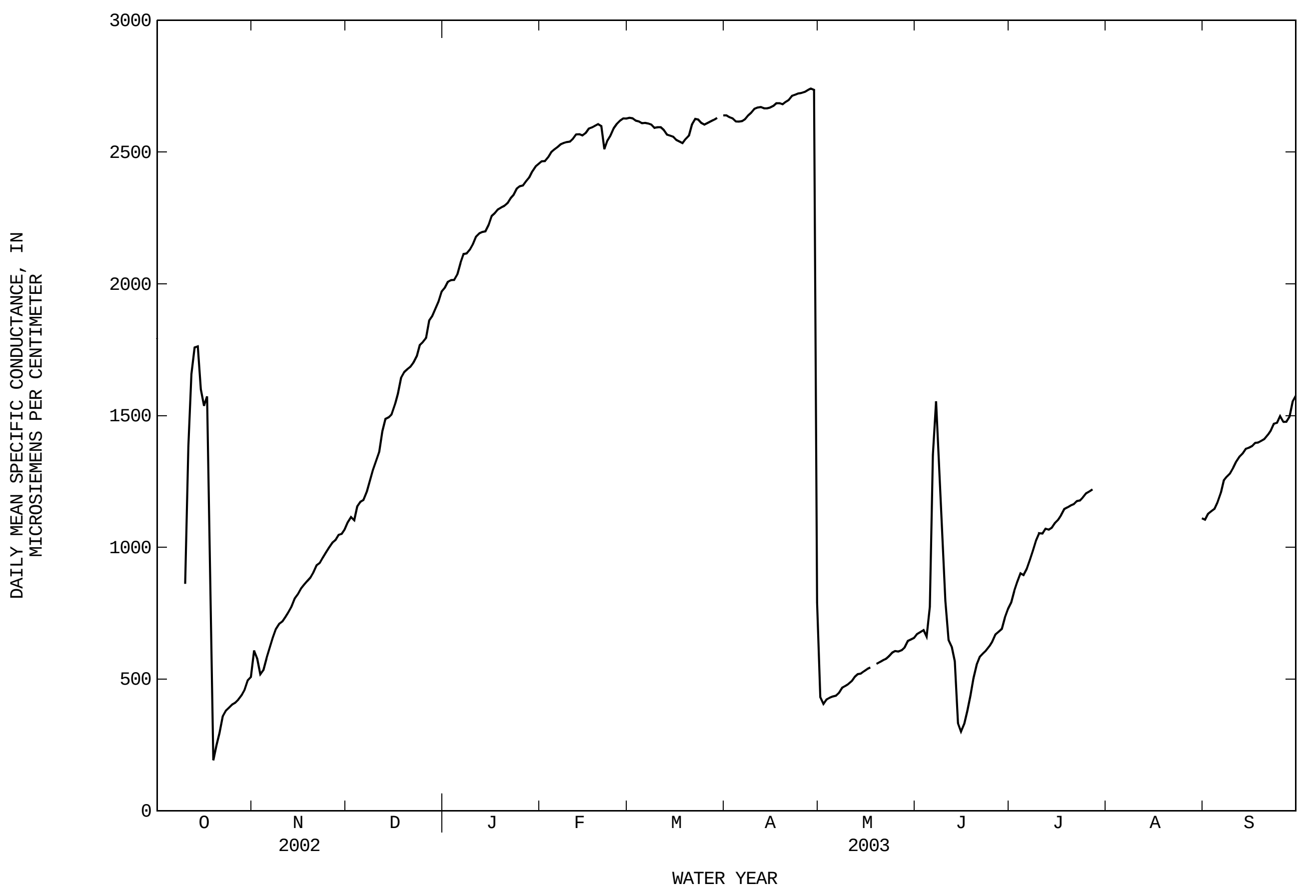
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	---	---	---	635	513	608	1100	1090	1100	2010	1970	1990
2	---	---	---	624	539	579	1140	1090	1110	2010	2000	2010
3	---	---	---	539	510	518	1130	1050	1100	2030	2000	2010
4	---	---	---	548	520	533	1170	1130	1160	2040	2000	2020
5	---	---	---	605	548	579	1180	1160	1170	2070	1980	2040
6	---	---	---	640	603	616	1190	1180	1180	2100	2050	2080
7	---	---	---	680	625	656	1280	1180	1210	2130	2090	2110
8	---	---	---	705	680	691	1270	1240	1250	2140	2110	2120
9	---	---	---	712	705	709	1320	1260	1290	2170	2100	2130
10	1070	796	861	728	712	718	1340	1320	1320	2170	2130	2150
11	1630	1070	1380	741	726	735	1430	1330	1360	2190	2160	2180
12	1750	1550	1660	768	738	755	1490	1390	1440	2200	2180	2190
13	1780	1710	1760	792	765	775	1500	1460	1490	2200	2190	2200
14	1780	1740	1760	815	792	806	1510	1480	1490	2220	2180	2200
15	1750	1400	1600	830	815	821	1520	1480	1500	2240	2210	2220
16	1640	1400	1540	855	830	843	1590	1510	1540	2270	2230	2260
17	1640	1540	1570	868	852	858	1620	1550	1580	2280	2250	2270
18	1560	128	997	886	861	872	1670	1600	1640	2300	2260	2280
19	234	150	191	892	878	885	1680	1650	1670	2300	2270	2290
20	263	234	249	924	886	905	1690	1660	1680	2320	2270	2300
21	336	260	296	938	923	931	1700	1670	1690	2320	2290	2310
22	373	336	359	945	932	940	1710	1690	1700	2350	2310	2330
23	385	372	381	967	942	961	1740	1710	1730	2350	2330	2340
24	400	384	391	988	967	981	1780	1740	1770	2370	2340	2360
25	408	398	404	1010	986	1000	1800	1760	1780	2380	2360	2370
26	412	408	410	1020	1010	1020	1840	1760	1790	2390	2350	2370
27	430	412	422	1040	1020	1030	1870	1840	1860	2410	2340	2390
28	449	427	437	1060	1030	1050	1900	1870	1880	2420	2380	2400
29	478	449	459	1060	1040	1050	1930	1890	1910	2450	2400	2430
30	513	478	496	1100	1040	1070	1970	1910	1930	2460	2420	2450
31	516	498	508	---	---	---	1990	1960	1970	2470	2440	2460
MONTH	---	---	---	1100	510	816	1990	1050	1530	2470	1970	2230

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	2490	2450	2470	2640	2610	2630	2650	2610	2640	489	385	432
2	2480	2450	2470	2640	2580	2630	2640	2600	2630	418	394	406
3	2500	2450	2480	2640	2580	2620	2640	2600	2630	451	405	422
4	2520	2480	2500	2630	2580	2620	2630	2590	2620	442	418	429
5	2520	2500	2510	2620	2580	2610	2630	2590	2620	444	427	433
6	2540	2500	2520	2640	2580	2610	2630	2570	2620	453	431	437
7	2550	2510	2530	2620	2600	2610	2640	2600	2630	471	433	447
8	2550	2530	2530	2620	2580	2600	2660	2620	2640	471	460	467
9	2550	2520	2540	2610	2570	2590	2660	2630	2650	482	466	474
10	2560	2530	2540	2610	2570	2600	2680	2640	2660	485	477	481
11	2580	2540	2550	2610	2580	2600	2680	2650	2670	502	484	491
12	2580	2540	2570	2600	2570	2580	2690	2650	2670	516	499	508
13	2600	2560	2570	2580	2540	2570	2680	2650	2670	524	515	518
14	2580	2530	2560	2590	2540	2560	2680	2650	2670	526	515	521
15	2590	2560	2570	2570	2530	2560	2670	2660	2670	541	523	530
16	2600	2580	2590	2560	2520	2550	2690	2670	2680	541	535	538
17	2610	2570	2590	2550	2520	2540	2690	2670	2690	549	539	544
18	2620	2580	2600	2540	2510	2530	2710	2670	2690	556	---	---
19	2620	2590	2610	2570	2520	2550	2700	2660	2680	562	553	557
20	2620	2560	2600	2580	2540	2560	2700	2680	2690	569	559	565
21	2590	2370	2510	2660	2560	2610	2710	2680	2700	575	569	571
22	2580	2520	2550	2650	2610	2630	2720	2690	2710	583	573	576
23	2570	2550	2560	2630	2610	2620	2730	2700	2720	599	578	587
24	2610	2570	2590	2630	2600	2610	2730	2710	2720	606	593	600
25	2620	2590	2610	2620	2590	2600	2740	2710	2720	611	598	606
26	2630	2610	2620	2620	2600	2610	2740	2700	2730	614	600	604
27	2650	2600	2630	2630	2600	2620	2740	2710	2740	618	601	609
28	2650	2610	2630	2630	2610	2620	2750	2720	2740	628	612	620
29	---	---	---	2640	2620	2630	2750	2710	2740	677	627	644
30	---	---	---	---	---	---	2840	477	790	663	637	650
31	---	---	---	2650	2630	2640	---	---	---	666	649	656
MONTH	2650	2370	2560	---	---	---	2840	477	2610	677	---	---

08127000 Elm Creek at Ballinger, TX--Continued

SPECIFIC CONDUCTANCE, IN US/CM @ 25C, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	680	650	671	806	777	789	---	---	---	1110	1100	1100
2	717	651	679	845	806	834	---	---	---	1150	1110	1130
3	708	556	686	889	838	869	---	---	---	1150	1120	1140
4	764	571	661	912	872	901	---	---	---	1160	1130	1150
5	961	700	774	907	887	895	---	---	---	1190	1160	1170
6	1600	886	1350	937	907	917	---	---	---	1250	1190	1210
7	1620	1390	1550	969	937	952	---	---	---	1280	1230	1250
8	1400	1240	1340	1020	965	987	---	---	---	1280	1250	1270
9	1240	1020	1090	1050	1010	1030	---	---	---	1310	1270	1280
10	1020	662	797	1070	1040	1050	---	---	---	1330	1280	1300
11	677	618	649	1060	1040	1050	---	---	---	1340	1310	1330
12	646	569	623	1090	1060	1070	---	---	---	1360	1340	1340
13	621	540	567	1080	1050	1070	---	---	---	1370	1340	1360
14	542	272	332	1080	1060	1070	---	---	---	1380	1370	1370
15	314	291	300	1100	1070	1090	---	---	---	1380	1370	1380
16	355	312	329	1110	1100	1100	---	---	---	1400	1370	1380
17	409	352	378	1140	1100	1120	---	---	---	1400	1390	1400
18	475	409	438	1150	1140	1140	---	---	---	1410	1380	1400
19	528	469	504	1160	1140	1150	---	---	---	1410	1390	1400
20	579	528	555	1160	1150	1160	---	---	---	1420	1400	1410
21	593	571	585	1170	1150	1160	---	---	---	1440	1400	1430
22	607	583	597	1180	1170	1180	---	---	---	1450	1430	1440
23	616	595	608	1190	1170	1180	---	---	---	1480	1450	1470
24	632	616	623	1200	1180	1190	---	---	---	1500	1460	1470
25	660	628	642	1220	1200	1210	---	---	---	1510	1480	1500
26	675	660	669	1220	1200	1210	---	---	---	1500	1440	1480
27	691	673	679	1220	1210	1220	---	---	---	1500	1460	1480
28	717	676	690	---	---	---	---	---	---	1530	1480	1500
29	749	716	732	---	---	---	---	---	---	1580	1520	1550
30	777	748	766	---	---	---	---	---	---	1590	1570	1580
31	---	---	---	---	---	---	1160	1100	1110	---	---	---
MONTH	1620	272	695	---	---	---	---	---	---	1590	1100	1360



08127000 Elm Creek at Ballinger, TX--Continued

WATER TEMPERATURE, IN (DEGREES C), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

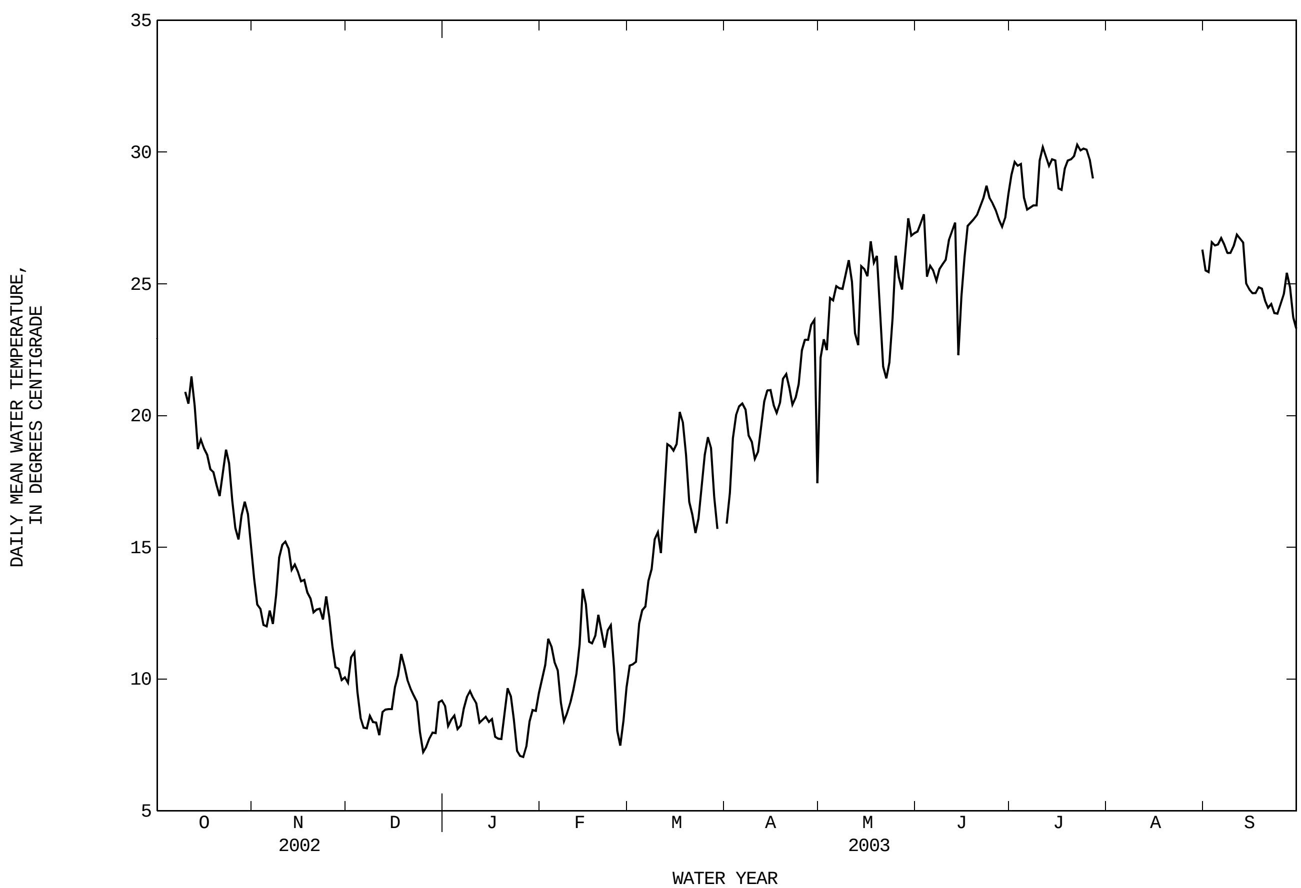
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	---	---	---	14.2	13.2	13.8	10.5	9.2	9.9	9.5	8.5	9.0
2	---	---	---	13.2	12.5	12.8	13.0	9.3	10.8	8.7	7.8	8.2
3	---	---	---	13.2	12.3	12.7	11.5	10.2	11.0	9.8	7.2	8.5
4	---	---	---	12.3	11.7	12.1	10.2	8.8	9.5	9.9	7.5	8.6
5	---	---	---	12.6	11.3	12.0	8.9	8.2	8.5	9.0	7.2	8.1
6	---	---	---	16.0	11.6	12.6	9.1	7.4	8.2	8.7	7.6	8.2
7	---	---	---	12.6	11.5	12.1	9.1	7.1	8.1	10.6	7.5	8.9
8	---	---	---	14.8	12.5	13.2	9.0	8.4	8.6	11.4	7.9	9.3
9	---	---	---	15.5	13.7	14.6	8.6	8.1	8.4	10.1	9.2	9.5
10	21.1	20.6	20.9	15.9	14.3	15.1	8.8	8.0	8.3	10.3	8.5	9.3
11	20.9	20.1	20.5	16.3	14.5	15.2	8.4	7.2	7.9	9.4	8.6	9.1
12	23.7	20.0	21.5	16.1	14.3	15.0	9.5	8.2	8.7	8.6	8.2	8.3
13	21.8	19.4	20.4	15.0	13.6	14.1	9.6	8.3	8.8	9.4	8.1	8.5
14	19.5	18.1	18.7	15.0	13.6	14.3	10.1	8.0	8.9	9.5	7.9	8.6
15	21.7	17.4	19.1	14.5	13.6	14.1	10.4	7.8	8.9	9.1	7.7	8.4
16	19.5	17.8	18.7	14.2	13.2	13.7	11.7	8.7	9.7	9.0	8.0	8.5
17	21.1	17.6	18.5	15.5	12.7	13.8	11.4	9.2	10.1	9.0	7.1	7.8
18	18.5	17.3	18.0	14.2	12.6	13.3	12.3	10.0	10.9	9.4	6.4	7.7
19	19.9	17.3	17.9	14.3	12.2	13.1	11.2	9.9	10.5	8.5	6.7	7.7
20	17.9	17.1	17.4	13.6	11.8	12.5	11.1	8.9	10	11.0	7.2	8.7
21	17.5	16.6	16.9	13.5	11.7	12.6	10.2	9.0	9.6	11.0	8.6	9.6
22	18.5	17.3	17.8	13.5	12.1	12.7	10.0	8.7	9.4	9.9	8.9	9.4
23	19.5	18.2	18.7	12.9	11.4	12.3	9.5	8.6	9.1	9.1	7.6	8.5
24	19.3	17.5	18.2	15.1	11.9	13.1	8.6	7.2	8.0	7.6	7.0	7.3
25	17.5	16.2	16.8	13.3	11.7	12.4	8.1	6.5	7.2	7.3	6.8	7.1
26	16.2	15.3	15.7	11.7	10.5	11.2	8.5	6.5	7.4	7.5	6.6	7.0
27	15.9	15.1	15.3	11.5	9.7	10.5	8.8	6.7	7.7	8.0	6.9	7.4
28	17.5	15.9	16.2	12.1	9.1	10.4	9.8	6.8	8.0	9.3	7.7	8.4
29	19.8	15.7	16.7	10.6	9.4	10	8.6	7.3	7.9	9.3	8.2	8.8
30	16.9	15.8	16.3	11.5	9.2	10.1	10.0	8.5	9.1	11.2	7.9	8.8
31	15.9	14.2	15.1	---	---	---	10.1	8.5	9.2	11.2	8.2	9.5
MONTH	---	---	---	16.3	9.1	12.8	13.0	6.5	9.0	11.4	6.4	8.5

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	11.8	9.0	10.0	12.6	9.9	10.5	17.2	14.4	15.9	26.9	18.9	22.2
2	11.5	9.5	10.5	11.0	10.2	10.6	18.6	15.6	17.1	27.5	21.4	22.9
3	12.1	11.1	11.5	11.4	10.2	10.6	21.9	17.5	19.1	24.2	21.4	22.5
4	12.8	10.3	11.2	15.2	10.3	12.1	21.0	19.0	20.0	27.0	23.2	24.5
5	11.1	10.4	10.6	13.8	11.4	12.6	21.7	18.9	20.4	26.2	22.7	24.4
6	10.8	9.7	10.3	15.3	11.3	12.7	21.0	20.0	20.5	28.4	23.0	24.9
7	9.7	8.6	9.1	15.3	12.2	13.7	21.8	18.8	20.2	27.6	23.8	24.8
8	8.6	8.1	8.4	16.4	13.3	14.2	20.1	18.3	19.3	26.7	23.7	24.8
9	9.8	7.8	8.7	17.8	13.4	15.3	21.5	16.8	19.0	26.2	25.1	25.4
10	10.1	8.1	9.1	17.3	14.9	15.6	19.9	17.0	18.4	27.7	24.5	25.9
11	10.7	8.2	9.6	15.8	13.9	14.8	21.3	17.1	18.6	26.4	24.0	25.1
12	11.3	9.5	10.2	18.4	15.2	16.6	22.0	18.0	19.6	24.0	22.5	23.1
13	12.2	10.7	11.3	20.9	17.1	18.9	22.2	19.4	20.5	24.4	22.1	22.7
14	15.2	12.2	13.4	20.0	17.9	18.8	22.5	19.6	21.0	30.3	22.7	25.7
15	14.1	11.8	12.8	20.3	18.0	18.7	21.6	20.7	21.0	27.0	24.2	25.6
16	12.1	10.8	11.4	21.1	17.9	18.9	21.2	19.2	20.4	26.7	24.0	25.3
17	12.5	10.2	11.4	22.1	18.8	20.1	20.5	19.6	20.1	30.2	24.4	26.6
18	12.3	10.7	11.6	20.7	19.0	19.8	22.2	19.3	20.5	27.2	24.7	25.8
19	13.4	11.7	12.4	19.4	17.7	18.5	22.7	20.2	21.4	29.1	24.8	26.1
20	12.5	11.2	11.8	17.7	15.8	16.7	23.1	20.4	21.6	25.9	22.5	23.9
21	11.4	10.8	11.2	17.8	15.2	16.2	22.2	20.2	21.1	22.5	21.3	21.9
22	13.5	10.6	11.9	16.5	14.9	15.5	20.8	20.0	20.4	22.4	20.9	21.4
23	13.1	11.5	12.0	17.6	14.7	16.1	22.1	19.7	20.7	24.3	21.0	22.0
24	11.8	9.1	10.4	18.6	16.0	17.3	22.1	20.0	21.2	25.4	22.2	23.7
25	9.1	7.5	8.0	19.8	17.3	18.5	25.2	20.2	22.5	29.7	24.0	26.1
26	8.3	7.0	7.5	21.6	17.4	19.2	24.5	21.4	22.9	26.1	24.7	25.3
27	10.8	6.9	8.4	20.3	17.4	18.8	24.0	21.8	22.9	26.0	23.9	24.8
28	11.3	8.7	9.7	18.3	15.8	16.9	25.7	22.2	23.4	30.6	23.2	26.1
29	---	---	---	16.6	15.1	15.7	26.2	22.1	23.6	31.6	24.6	27.5
30	---	---	---	17.2	---	---	24.1	13.0	17.4	29.0	25.2	26.8
31	---	---	---	---	14.7	---	---	---	---	29.8	25.4	26.9
MONTH	15.2	6.9	10.5	---	---	---	26.2	13.0	20.4	31.6	18.9	24.7

08127000 Elm Creek at Ballinger, TX--Continued

WATER TEMPERATURE, IN (DEGREES C), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	29.9	24.9	27.0	30.3	27.9	29.1	---	---	---	26.1	25.1	25.5
2	31.1	24.3	27.3	31.5	28.6	29.6	---	---	---	26.7	24.6	25.4
3	29.3	24.3	27.6	31.8	28.3	29.5	---	---	---	29.8	24.7	26.6
4	27.3	24.3	25.3	31.3	28.7	29.6	---	---	---	28.2	25.1	26.5
5	27.6	23.9	25.7	29.0	27.7	28.3	---	---	---	27.7	25.4	26.5
6	26.6	24.6	25.5	29.0	27.3	27.8	---	---	---	29.8	25.4	26.7
7	27.3	24.0	25.1	29.0	27.1	27.9	---	---	---	29.1	25.5	26.5
8	27.5	24.1	25.6	30.9	27.0	28.0	---	---	---	28.0	25.3	26.2
9	27.3	24.7	25.8	29.5	27.1	28.0	---	---	---	28.0	25.1	26.2
10	27.2	24.9	25.9	32.8	27.1	29.7	---	---	---	28.4	25.4	26.4
11	28.1	26.2	26.7	33.0	28.9	30.2	---	---	---	29.1	25.8	26.9
12	28.7	26.0	27.0	33.0	28.2	29.8	---	---	---	28.1	25.6	26.7
13	28.6	24.5	27.3	31.0	28.2	29.5	---	---	---	28.9	25.6	26.6
14	24.5	20.6	22.3	32.1	28.5	29.7	---	---	---	25.8	24.4	25.0
15	29.0	22.8	24.5	31.4	28.8	29.7	---	---	---	26.3	23.7	24.8
16	29.2	23.5	26.0	30.1	28.0	28.6	---	---	---	26.4	23.7	24.6
17	30.0	24.9	27.2	30.9	27.5	28.6	---	---	---	26.2	23.8	24.7
18	30.6	25.4	27.3	32.3	27.9	29.4	---	---	---	27.3	24.1	24.9
19	28.9	26.5	27.5	31.6	28.4	29.7	---	---	---	27.6	23.2	24.8
20	28.3	26.7	27.6	32.2	28.1	29.7	---	---	---	25.8	23.4	24.4
21	29.5	27.1	27.9	32.0	28.5	29.8	---	---	---	25.1	23.6	24.1
22	29.9	27.5	28.2	32.9	28.6	30.3	---	---	---	26.2	23.2	24.2
23	30.4	27.8	28.7	31.1	29.4	30.1	---	---	---	24.4	23.4	23.9
24	29.1	27.7	28.3	33.0	28.7	30.1	---	---	---	25.5	23.1	23.9
25	29.1	27.3	28.0	32.6	28.9	30.1	---	---	---	25.3	23.8	24.2
26	28.6	27.2	27.8	31.7	28.5	29.7	---	---	---	26.9	23.3	24.6
27	29.0	26.4	27.4	31.5	27.9	29.0	---	---	---	27.9	23.7	25.4
28	29.1	26.2	27.2	---	---	---	---	---	---	26.0	23.9	24.9
29	30.1	26.4	27.5	---	---	---	---	---	---	24.9	23.0	23.7
30	30.3	27.1	28.4	---	---	---	---	---	---	24.4	22.6	23.3
31	---	---	---	---	---	---	26.4	26.1	26.3	---	---	---
MONTH	31.1	20.6	26.8	---	---	---	---	---	---	29.8	22.6	25.3



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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 (daily mean discharge), 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 poor. 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 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.8	18	17	e15	e16	e14	e11	e9.0	4.2	6.9	5.5	4.7
2	1.5	18	18	e15	e16	e14	e11	e9.0	4.6	6.7	5.3	4.6
3	1.4	18	20	e15	16	e14	e11	e8.0	8.1	6.7	5.4	4.6
4	1.5	18	20	e15	e16	e14	e11	e8.0	8.7	6.8	5.3	4.6
5	1.4	18	20	e15	e16	e14	e11	e8.0	9.5	6.8	5.4	5.0
6	1.6	18	20	e15	e16	e14	e11	e8.0	8.3	8.7	5.1	5.4
7	150	18	20	e15	e16	e14	e11	e8.0	7.9	7.2	5.4	4.0
8	64	18	20	e15	e16	e13	e11	e8.0	8.0	6.7	5.4	4.3
9	11	19	20	e15	e15	e13	e10	e8.0	8.0	6.7	5.2	4.0
10	9.9	19	20	e15	e15	e13	e10	e8.0	9.0	6.7	5.1	4.0
11	9.6	17	20	e15	e15	e13	e10	e8.0	7.7	8.0	5.0	4.0
12	9.5	17	20	e15	e15	e13	e10	e8.0	7.4	7.0	4.9	3.8
13	9.0	18	19	e15	e15	e13	e10	e8.0	8.2	6.1	5.2	3.6
14	9.7	18	18	e15	e15	e13	e10	e7.0	9.5	6.1	5.8	7.9
15	9.6	18	17	e15	e15	e13	e10	e7.0	8.4	5.7	5.9	4.7
16	8.9	18	16	e15	e15	e13	e10	e7.0	8.8	5.8	5.6	4.6
17	8.9	17	e16	e15	e15	e13	e10	e7.0	8.6	6.6	5.4	4.8
18	9.7	17	e16	e15	e15	e13	e10	e7.0	9.1	6.3	5.1	4.9
19	12	17	e16	e16	e15	13	e10	e7.0	8.6	6.1	4.8	5.2
20	10	17	e16	e16	e15	e12	e10	e7.0	9.1	5.8	5.2	6.2
21	12	17	e16	e16	e15	e12	e9.0	e7.0	8.0	5.8	5.8	6.1
22	12	17	e16	e16	e14	e12	e9.0	7.0	7.3	5.9	8.0	5.5
23	36	18	e16	e16	e14	e12	e9.0	6.4	6.7	5.9	9.0	5.1
24	42	17	e16	e16	e14	e12	e9.0	5.9	6.8	6.0	6.8	5.3
25	264	17	e16	e16	e14	e12	e9.0	5.8	6.9	6.3	6.5	6.9
26	462	17	e16	e16	e14	e12	e9.0	8.0	6.6	6.5	7.2	5.5
27	29	17	e16	e16	e14	e12	e9.0	5.8	6.8	5.9	6.2	4.5
28	16	17	e16	e16	e14	e12	e9.0	5.5	7.0	5.2	4.8	4.2
29	16	17	e16	e16	---	e11	e9.0	5.1	8.8	5.7	4.5	4.0
30	16	17	e16	e16	---	e11	e9.0	5.0	7.7	5.7	4.7	4.1
31	16	---	e16	e16	---	e11	---	4.6	---	5.7	4.9	---
TOTAL	1262.0	527	545	478	421	395	298.0	221.1	234.3	198.0	174.4	146.1
MEAN	40.7	17.6	17.6	15.4	15.0	12.7	9.93	7.13	7.81	6.39	5.63	4.87
MAX	462	19	20	16	16	14	11	9.0	9.5	8.7	9.0	7.9
MIN	1.4	17	16	15	14	11	9.0	4.6	4.2	5.2	4.5	3.6
AC-FT	2500	1050	1080	948	835	783	591	439	465	393	346	290

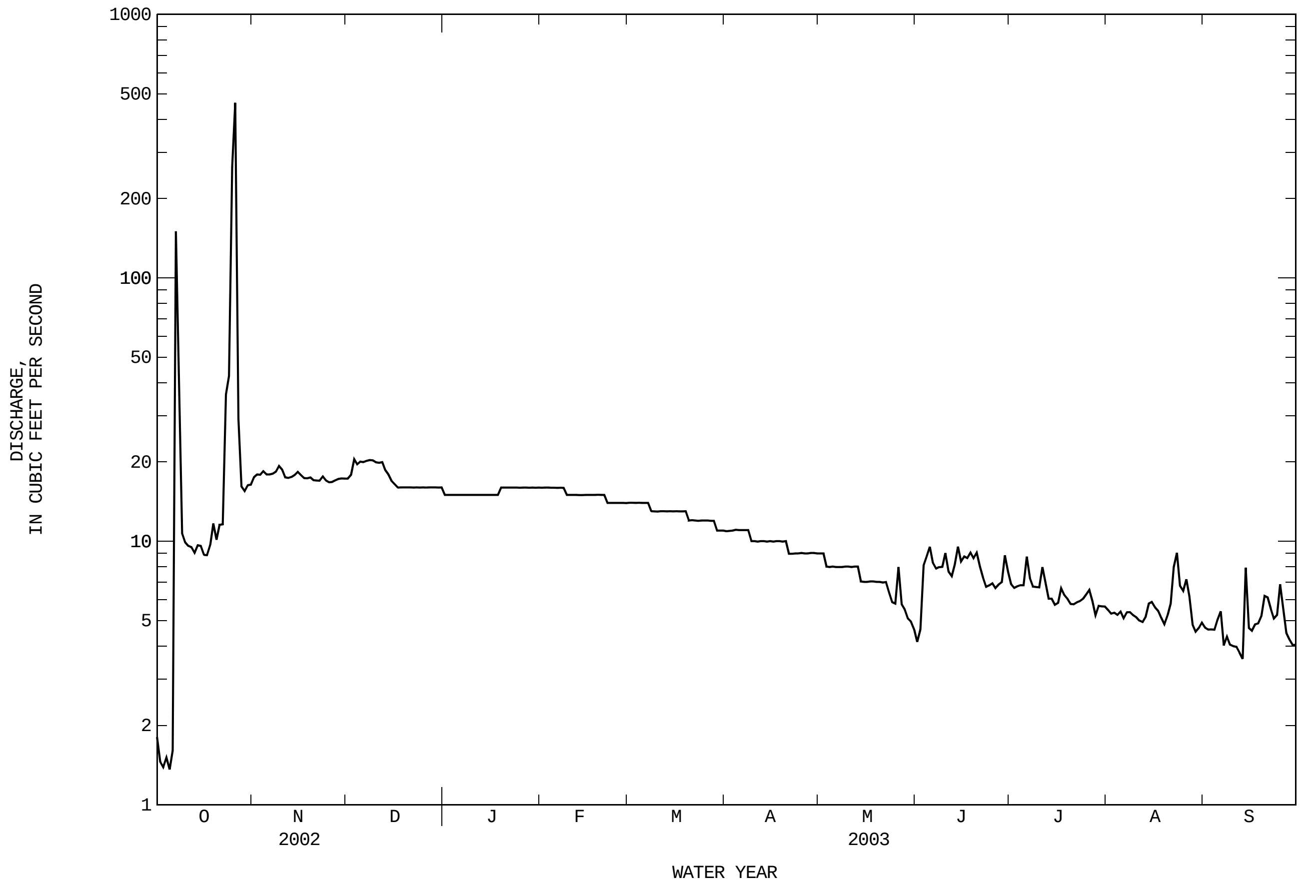
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 2003h, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	47.0	21.5	21.1	19.7	20.4	20.0	27.8	40.9	26.5	39.4	19.8	63.0
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 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1930 - 2003h	
ANNUAL TOTAL	4037.59		4899.9			
ANNUAL MEAN	11.1		13.4		30.8	
HIGHEST ANNUAL MEAN					207	1936
LOWEST ANNUAL MEAN					3.20	1952
HIGHEST DAILY MEAN	462	Oct 26	462	Oct 26	29500	Jul 23 1938
LOWEST DAILY MEAN	0.99	Aug 23	1.4	Oct 3	0.10	Feb 27 1955
ANNUAL SEVEN-DAY MINIMUM	1.2	Aug 19	4.0	Sep 7	0.19	Feb 25 1955
MAXIMUM PEAK FLOW			2040	Oct 25	100000	Jul 23 1938
MAXIMUM PEAK STAGE			5.46	Oct 25	a21.95	Jul 23 1938
ANNUAL RUNOFF (AC-FT)	8010		9720		22310	
10 PERCENT EXCEEDS	18		17		40	
50 PERCENT EXCEEDS	5.7		10		14	
90 PERCENT EXCEEDS	2.1		5.0		3.6	

e Estimated
h See PERIOD OF RECORD paragraph.
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 (daily mean discharge), 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 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	56
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28
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	137.28
MEAN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	4.58
MAX	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81
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	272

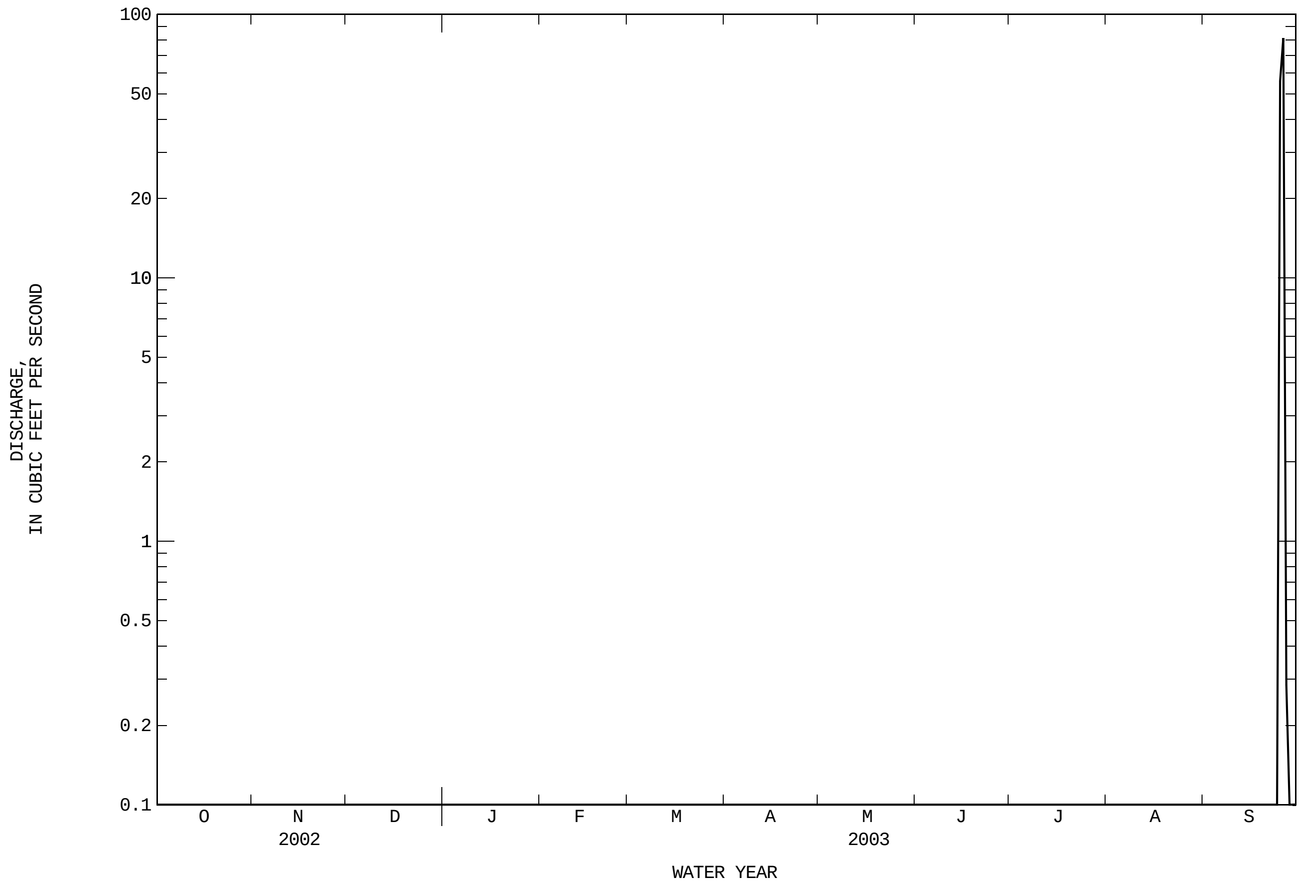
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 2003h, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	25.0	8.33	7.71	7.87	13.0	11.0	15.2	18.0	18.0	3.02	8.84	52.2
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 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1961 - 2003h	
ANNUAL TOTAL	0.12		137.28			
ANNUAL MEAN	0.000		0.38		15.7	
HIGHEST ANNUAL MEAN					110	1974
LOWEST ANNUAL MEAN					0.000	1962
HIGHEST DAILY MEAN	0.07	Feb 6	81	Sep 26	12900	Sep 21 1974
LOWEST DAILY MEAN	0.00	Jan 1	0.00	Oct 1	0.00	Apr 1 1961
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00	Oct 1	0.00	Apr 1 1961
MAXIMUM PEAK FLOW			522	Sep 25	15500	Sep 21 1974
MAXIMUM PEAK STAGE			9.68	Sep 25	24.98	Sep 21 1974
ANNUAL RUNOFF (AC-FT)	0.2		272		11400	
10 PERCENT EXCEEDS	0.00		0.00		19	
50 PERCENT EXCEEDS	0.00		0.00		1.2	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

h See PERIOD OF RECORD paragraph.

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.				Feb. 21	0645	*14.1	*4.21

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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)
Oct. 23	1330	*868	*8.40	Oct. 25	2200	836	8.30

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08130700 Spring Creek above Twin Buttes Reservoir near San Angelo, TX
(Low-flow partial-record station)

LOCATION.--Lat 31°19'51", long 100°36'02", Tom Green County, Hydrologic Unit 12090102, on right bank at confluence of Spring and Dove Creeks, 2.3 mi downstream from Spring Creek above Tankersley (station 08129300), 4.3 mi downstream from Dove Creek at Knickerbocker (station 08130500), 4.9 mi upstream from Twin Buttes Reservoir Dam, and 13.2 mi southwest of San Angelo.

DRAINAGE AREA.--720 mi^2, of which 31 mi^2 probably is noncontributing.

PERIOD OF RECORD.--Oct. 2001 to current year (daily mean discharges less than 12 ft^3/s).

GAGE.--Water-stage recorder and concrete dam. Elevation of gage is 1,950 ft above NGVD of 1929, from topographic map. Satellite telemeter at station.

REMARKS.--Records poor. No known regulation or diversions. No flow many days.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 2.54 ft, Oct. 26, 2002 (discharge not determined); minimum, no flow many days.

EXTREMES FOR WATER YEAR 2002.--Maximum gage height, 1.36 ft, Mar. 19, 2002 (discharge not determined); minimum, no flow many days.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 2.54 ft, Oct. 26 (discharge not determined); minimum, no flow many days.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	4.1	---	---	4.3	6.3	0.04	0.00	0.00	0.00	0.00
2	0.00	0.00	3.8	---	---	7.5	2.3	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	3.7	9.2	10	3.0	1.8	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	3.7	---	---	3.4	1.2	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	3.2	---	---	4.8	0.86	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	4.3	---	---	5.5	0.93	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	4.9	---	---	6.0	1.2	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	5.3	---	---	4.9	1.4	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	3.9	---	---	4.7	1.1	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	3.6	---	---	2.9	0.62	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	6.3	---	---	1.3	0.33	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	6.7	---	8.0	1.9	0.31	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	9.4	---	---	7.4	0.36	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	5.4	7.2	---	4.9	0.64	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	6.8	3.2	---	7.5	0.81	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	---	1.7	---	3.9	0.19	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	---	2.3	---	2.0	0.08	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	---	3.0	---	1.6	0.13	0.00	0.00	0.00	0.00	0.00
19	0.00	0.47	---	1.0	7.0	---	0.38	0.00	0.00	0.00	0.00	0.00
20	0.00	0.50	---	2.1	4.8	---	0.37	0.00	0.00	0.00	0.00	0.00
21	0.00	1.7	---	7.5	0.62	---	0.59	0.00	0.00	0.00	0.00	0.00
22	0.00	1.0	---	---	0.09	---	0.78	0.00	0.00	0.00	0.00	0.00
23	0.00	0.74	---	---	0.39	---	0.33	0.00	0.00	0.00	0.00	0.00
24	0.00	0.71	---	---	0.17	---	0.09	0.00	0.00	0.00	0.00	0.00
25	0.00	0.65	---	---	1.1	---	0.07	0.00	0.00	0.00	0.00	0.00
26	0.00	0.54	---	---	1.3	3.2	0.13	0.00	0.00	0.00	0.00	0.00
27	0.00	2.1	---	---	0.78	0.96	0.04	0.00	0.00	0.00	0.00	0.00
28	0.00	4.3	---	---	2.4	0.63	0.10	0.00	0.00	0.00	0.00	0.00
29	0.00	3.4	---	---	---	---	0.20	0.00	0.00	0.00	0.00	0.00
30	0.00	3.7	---	---	---	---	0.16	0.00	0.00	0.00	0.00	0.00
31	0.00	---	---	---	---	8.4	---	0.00	---	0.00	0.00	---
TOTAL	0.00	19.81	---	---	---	---	23.80	0.04	0.00	0.00	0.00	0.00
MEAN	0.000	0.66	---	---	---	---	0.79	0.001	0.000	0.000	0.000	0.000
MAX	0.00	4.3	---	---	---	---	6.3	0.04	0.00	0.00	0.00	0.00
MIN	0.00	0.00	---	---	---	---	0.04	0.00	0.00	0.00	0.00	0.00
AC-FT	0.00	39	---	---	---	---	47	0.08	0.00	0.00	0.00	0.00

08130700 Spring Creek above Twin Buttes Reservoir near San Angelo, TX--Continued
(Low-flow partial-record station)

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	---	3.8	0.55	0.08	3.8	0.04	0.00	0.00	0.00	0.00	0.00
2	0.00	---	1.9	1.3	0.09	3.8	0.02	0.00	0.00	0.00	0.00	0.00
3	0.00	---	e2.0	2.0	0.12	---	0.01	0.00	0.00	0.00	0.00	0.00
4	0.00	---	e5.0	2.7	0.05	---	0.01	0.00	0.00	0.00	0.00	0.00
5	0.00	---	e9.0	3.6	0.09	---	0.02	0.00	0.00	0.00	0.00	0.00
6	0.00	---	5.7	2.4	0.18	5.5	0.05	0.00	0.00	0.00	0.00	0.00
7	0.00	---	4.7	2.5	0.96	3.2	0.07	0.00	0.00	0.00	0.00	0.00
8	0.00	---	5.5	2.6	2.0	2.6	0.05	0.00	0.00	0.00	0.00	0.00
9	0.00	---	8.0	1.7	1.8	1.9	0.07	0.00	0.00	0.00	0.00	0.00
10	0.00	---	7.0	0.58	1.3	0.82	0.03	0.00	0.00	0.00	0.00	0.00
11	0.00	---	5.7	0.29	0.39	0.58	0.01	0.00	0.00	0.00	0.00	0.00
12	0.00	---	4.4	0.72	0.15	0.86	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	---	3.5	0.52	0.10	0.66	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	---	3.5	0.62	0.37	0.11	0.01	0.00	0.00	0.00	0.00	0.00
15	0.00	---	1.9	1.5	0.30	0.03	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	---	1.2	2.1	0.44	0.09	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	---	0.54	2.3	0.91	0.05	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	---	0.58	2.4	0.09	0.10	0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	8.9	0.20	2.3	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	6.4	0.19	1.5	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	5.6	0.17	0.83	---	0.04	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	5.6	0.85	0.50	---	---	0.00	0.00	0.00	0.00	0.00	0.00
23	---	5.6	2.0	0.13	6.7	---	0.00	0.00	0.00	0.00	0.00	0.00
24	---	5.4	2.5	0.11	7.0	5.7	0.00	0.00	0.00	0.00	0.00	0.00
25	---	5.1	3.4	0.70	6.0	1.8	0.00	0.00	0.00	0.00	0.00	0.00
26	---	4.3	3.0	2.4	8.1	2.9	0.00	0.00	0.00	0.00	0.00	0.00
27	---	4.7	3.0	1.6	6.7	0.59	0.00	0.00	0.00	0.00	0.00	0.00
28	---	6.7	3.2	0.23	4.1	0.17	0.00	0.00	0.00	0.00	0.00	0.00
29	---	5.7	2.7	0.05	---	0.35	0.00	0.00	0.00	0.00	0.00	0.00
30	---	6.6	2.1	0.04	---	0.74	0.00	0.00	0.00	0.00	0.00	0.00
31	---	---	0.49	0.05	---	0.46	---	0.00	---	0.00	0.00	---
TOTAL	---	---	97.72	40.82	---	---	0.39	0.00	0.00	0.00	0.00	0.00
MEAN	---	---	3.15	1.32	---	---	0.013	0.000	0.000	0.000	0.000	0.000
MAX	---	---	9.0	3.6	---	---	0.07	0.00	0.00	0.00	0.00	0.00
MIN	---	---	0.17	0.04	---	---	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	---	---	194	81	---	---	0.8	0.00	0.00	0.00	0.00	0.00

e Estimated

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 except those for July 7-8, Aug. 1-20, which are poor. No flow May 13 was a result of earthen dam. On May 12, 2003 the right end of the masonry dam was repaired when a temporary earthen dam was installed. 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, 8.18 ft, Oct. 26, 2002; minimum gage height, 0.73 ft, Sept. 10, 2000.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 8.18 ft, Oct. 26; minimum gage height, 1.73 ft, May 12.

GAGE HEIGHT, IN FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	2.13	2.09	2.27	2.25	1.95	1.92	1.92	1.87	3.23	3.18	3.70	3.68
2	2.15	2.10	2.27	2.22	1.95	1.93	1.91	1.89	3.25	3.20	3.72	3.69
3	2.18	2.14	2.22	2.20	2.02	1.94	1.91	1.89	3.34	3.21	3.72	3.69
4	2.21	2.17	2.21	2.19	1.99	1.95	1.90	1.89	3.30	3.28	3.72	3.67
5	2.20	2.17	2.21	2.18	1.97	1.96	1.93	1.90	3.34	3.29	3.73	3.69
6	2.20	2.15	2.19	2.18	1.97	1.96	1.97	1.92	3.43	3.34	3.70	3.67
7	3.56	2.16	2.19	2.16	1.97	1.95	1.99	1.95	3.43	3.38	3.69	3.67
8	4.53	2.73	2.18	2.13	1.97	1.95	2.02	1.99	3.40	3.38	3.69	3.66
9	2.73	2.45	2.14	2.10	1.98	1.95	2.12	2.02	3.45	3.39	3.70	3.67
10	2.45	2.39	2.11	2.07	1.96	1.95	2.13	2.08	3.45	3.42	3.69	3.67
11	2.40	2.36	2.11	2.07	1.96	1.93	2.17	2.12	3.46	3.43	3.68	3.64
12	2.37	2.31	2.10	2.05	1.96	1.93	2.27	2.17	3.48	3.46	3.67	3.63
13	2.33	2.30	2.06	2.01	1.95	1.94	2.32	2.27	3.51	3.48	3.71	3.64
14	2.34	2.30	2.02	2.00	1.95	1.93	2.39	2.32	3.55	3.50	3.67	3.64
15	2.33	2.31	2.03	2.00	1.95	1.93	2.43	2.38	3.60	3.54	3.67	3.63
16	2.32	2.30	2.03	2.00	1.95	1.93	2.54	2.43	3.60	3.55	3.65	3.63
17	2.33	2.31	2.01	1.98	1.94	1.91	2.55	2.49	3.56	3.53	3.67	3.63
18	2.36	2.32	2.00	1.97	1.94	1.92	2.60	2.54	3.56	3.52	3.67	3.59
19	2.38	2.35	2.00	1.98	1.94	1.91	2.64	2.60	3.60	3.55	3.65	3.59
20	2.35	2.31	2.01	1.97	1.92	1.90	2.71	2.63	3.68	3.57	3.64	3.59
21	2.35	2.31	1.99	1.96	1.92	1.89	2.78	2.71	3.73	3.67	3.69	3.59
22	2.37	2.34	1.98	1.96	1.92	1.90	2.84	2.77	3.72	3.69	3.72	3.66
23	2.46	2.35	1.98	1.94	1.94	1.90	2.85	2.82	3.75	3.68	3.71	3.67
24	2.94	2.38	1.96	1.94	1.93	1.90	2.88	2.84	3.74	3.70	3.68	3.64
25	2.83	2.58	1.97	1.95	1.91	1.89	2.95	2.88	3.70	3.68	3.73	3.67
26	8.18	2.71	1.96	1.94	1.91	1.89	3.00	2.95	3.70	3.68	3.69	3.66
27	3.69	2.64	1.96	1.94	1.90	1.89	3.02	2.98	3.71	3.68	3.75	3.60
28	2.66	2.33	1.95	1.94	1.90	1.86	3.08	2.96	3.70	3.68	3.73	3.65
29	2.33	2.27	1.95	1.93	1.88	1.85	3.14	3.07	---	---	3.67	3.61
30	2.27	2.25	1.96	1.93	1.90	1.87	3.17	3.13	---	---	3.62	3.60
31	2.26	2.25	---	---	1.90	1.88	3.24	3.14	---	---	3.61	3.58
MONTH	8.18	2.09	2.27	1.93	2.02	1.85	3.24	1.87	3.75	3.18	3.75	3.58

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

GAGE HEIGHT, IN FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	3.57	3.51	2.37	2.32	5.38	5.35	5.41	5.34	&5.30	&5.26	5.36	5.35
2	3.57	3.50	2.33	2.28	5.37	5.33	5.36	5.34	&5.32	&5.27	5.36	5.35
3	3.58	3.51	2.29	2.21	5.65	5.32	5.35	5.32	&5.30	&5.24	5.35	5.29
4	3.62	3.56	2.22	2.16	5.92	5.61	5.37	5.33	&5.36	&5.25	5.30	5.27
5	3.59	3.54	2.19	2.11	6.30	5.55	5.43	5.34	&5.37	&5.30	5.29	5.27
6	3.61	3.55	2.12	2.06	5.89	5.58	5.51	5.43	&5.38	&5.31	5.31	5.27
7	3.59	3.55	2.06	1.97	5.58	5.51	&5.51	&5.44	&5.36	&5.28	5.32	5.27
8	3.59	3.44	1.99	1.95	5.57	5.51	&5.46	&5.42	&5.35	&5.28	5.27	5.23
9	3.44	3.38	1.96	1.92	5.54	5.51	5.43	5.40	&5.40	&5.31	5.25	5.22
10	3.38	3.31	1.93	1.86	5.58	5.52	5.43	5.40	&5.48	&5.34	5.24	5.22
11	3.32	3.27	1.87	1.77	5.55	5.50	5.42	5.37	&5.48	&5.32	5.24	5.22
12	3.28	3.22	1.77	1.73	5.53	5.50	5.38	5.33	&5.48	&5.31	5.28	5.24
13	3.22	3.16	---	---	5.52	5.49	5.33	5.26	&5.45	&5.23	5.27	5.23
14	3.17	3.09	5.19	4.84	5.53	5.51	5.30	5.25	&5.44	&5.23	5.36	5.22
15	3.11	2.96	5.30	5.19	5.54	5.49	5.33	5.30	&5.40	&5.17	5.42	5.36
16	3.09	3.00	5.37	5.29	5.51	5.49	5.36	5.31	&5.52	&5.15	5.38	5.32
17	3.04	2.93	5.31	5.29	5.51	5.49	5.41	5.35	&5.39	&5.10	5.34	5.32
18	2.93	2.85	5.29	5.27	5.51	5.49	5.43	5.38	&5.30	&5.07	5.34	5.32
19	2.91	2.84	5.36	5.27	5.50	5.44	5.39	5.35	&5.39	&5.13	5.34	5.32
20	2.87	2.80	5.36	5.33	5.45	5.43	5.36	5.30	&5.21	&5.13	5.37	5.34
21	2.81	2.76	5.39	5.33	5.48	5.43	5.33	5.29	5.18	5.15	5.39	5.34
22	2.76	2.72	5.42	5.38	5.45	5.38	5.33	5.30	5.29	5.17	5.39	5.35
23	2.74	2.62	5.39	5.37	5.39	5.36	5.35	5.31	5.48	5.26	5.38	5.35
24	2.70	2.64	5.42	5.33	5.37	5.33	5.37	5.33	5.47	5.38	5.38	5.36
25	2.66	2.60	5.34	5.30	5.36	5.33	5.38	5.34	5.38	5.35	5.50	5.36
26	2.61	2.54	5.48	5.33	5.38	5.35	5.37	5.31	5.38	5.36	5.50	5.45
27	2.54	2.48	5.48	5.43	5.36	5.33	5.34	5.28	5.39	5.36	5.45	5.41
28	2.54	2.45	5.43	5.40	5.34	5.32	5.33	5.28	5.37	5.33	5.41	5.38
29	2.48	2.37	5.40	5.36	5.37	5.32	5.30	5.26	5.33	5.31	5.39	5.36
30	2.43	2.36	5.36	5.29	5.43	5.34	5.39	5.28	5.35	5.31	5.38	5.35
31	---	---	5.35	5.29	---	---	5.40	5.30	5.36	5.35	---	---
MONTH	3.62	2.36	---	---	6.30	5.32	5.51	5.25	5.52	5.07	5.50	5.22

& Value was computed from affected unit values

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 Oct. 1, 2002 to Mar. 4, 2003 and May 9 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, 11,680 acre-ft, Mar. 27; minimum combined daily mean contents, 5,080 acre-ft, Oct. 7.

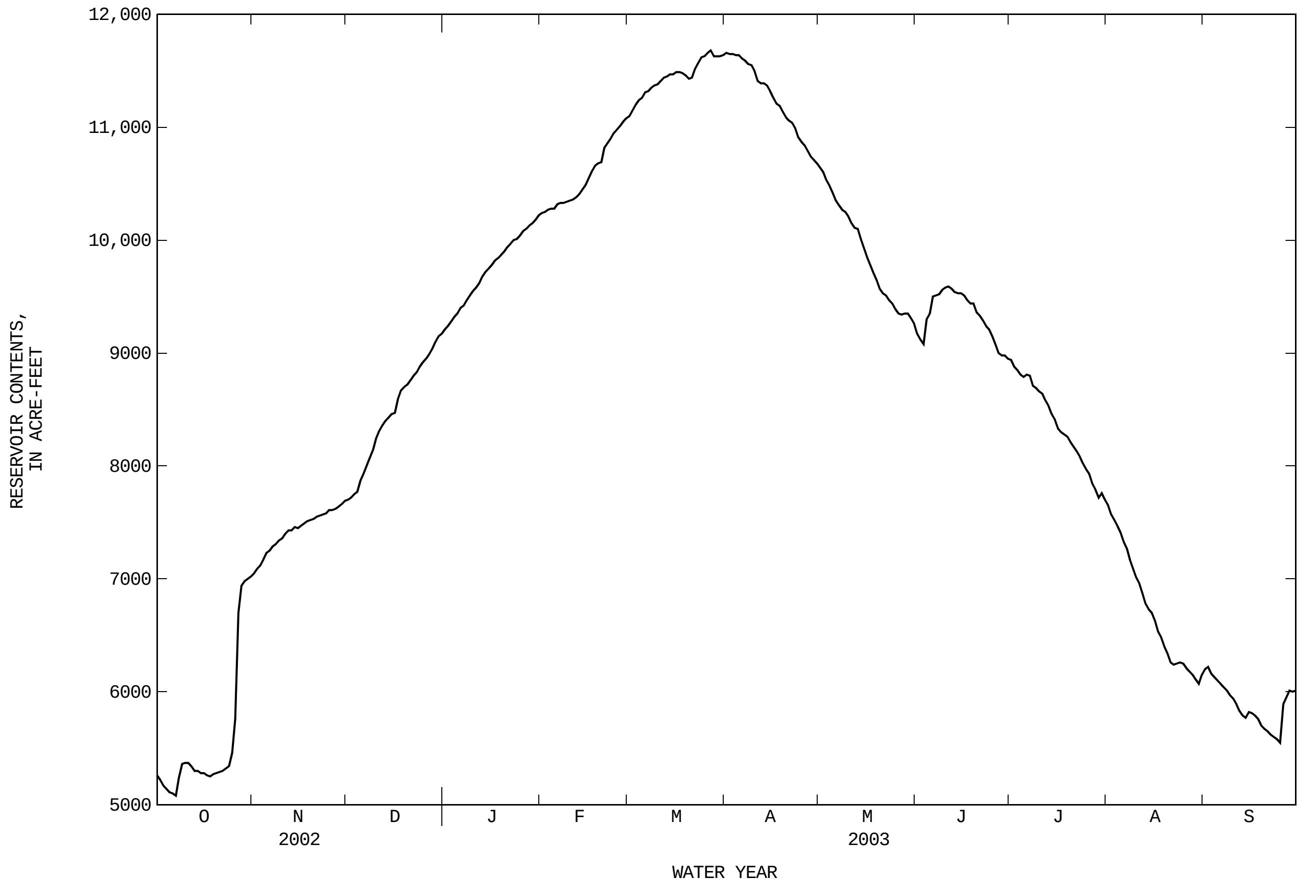
RESERVOIR STORAGE, IN (ACRE-FEET), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5260	7050	7700	9210	10240	11100	11660	10640	9170	8940	7650	6200
2	5220	7090	7720	9240	10250	11150	11650	10600	9120	8880	7570	6220
3	5170	7120	7750	9280	10270	11200	11650	10530	9080	8850	7520	6160
4	5140	7170	7770	9320	10280	11240	11640	10480	9300	8810	7470	6130
5	5110	7230	7870	9350	10280	11260	11640	10420	9350	8790	7410	6100
6	5100	7250	7930	9400	10320	11310	11610	10350	9500	8810	7330	6070
7	5080	7290	8000	9420	10330	11320	11590	10310	9510	8800	7270	6040
8	5240	7310	8070	9470	10330	11350	11560	10270	9520	8710	7170	6010
9	5360	7340	8140	9510	10340	11370	11550	10250	9560	8690	7090	5970
10	5370	7360	8240	9550	10350	11380	11500	10210	9580	8660	7010	5940
11	5370	7400	8310	9580	10360	11410	11410	10150	9590	8640	6960	5890
12	5340	7430	8360	9620	10380	11440	11390	10110	9570	8580	6870	5830
13	5300	7430	8400	9680	10410	11450	11390	10100	9540	8530	6780	5790
14	5300	7460	8430	9720	10450	11470	11370	10010	9530	8460	6730	5770
15	5280	7450	8460	9750	10490	11470	11320	9930	9530	8410	6700	5820
16	5280	7470	8470	9780	10550	11490	11260	9850	9510	8330	6630	5810
17	5260	7490	8590	9820	10610	11490	11210	9780	9470	8300	6530	5790
18	5250	7510	8670	9840	10660	11480	11190	9710	9440	8280	6480	5760
19	5270	7520	8700	9870	10680	11460	11140	9650	9440	8260	6400	5700
20	5280	7530	8720	9900	10690	11430	11090	9570	9360	8210	6340	5670
21	5290	7550	8760	9940	10820	11440	11060	9530	9330	8170	6260	5650
22	5300	7560	8800	9970	10860	11520	11040	9510	9290	8130	6240	5620
23	5320	7570	8830	10000	10900	11570	10990	9470	9240	8080	6250	5600
24	5340	7580	8880	10010	10950	11620	10910	9440	9210	8020	6260	5580
25	5460	7610	8920	10040	10980	11630	10870	9390	9150	7970	6250	5550
26	5760	7610	8950	10080	11010	11660	10840	9350	9080	7930	6210	5890
27	6700	7620	8990	10100	11050	11680	10790	9340	9000	7840	6180	5950
28	6940	7640	9040	10130	11080	11630	10740	9350	8980	7790	6150	6010
29	6980	7660	9100	10150	---	11630	10710	9350	8980	7720	6110	6000
30	7000	7690	9150	10180	---	11630	10680	9310	8950	7760	6070	6010
31	7020	---	9170	10220	---	11640	---	9260	---	7700	6150	---
MEAN	5550	7430	8480	9750	10570	11450	11250	9880	9330	8360	6710	5880
MAX	7020	7690	9170	10220	11080	11680	11660	10640	9590	8940	7650	6220
MIN	5080	7050	7700	9210	10240	11100	10680	9260	8950	7700	6070	5550
(+)	1886.71	1886.88	1887.06	1887.19	1887.94	1888.67	1888.33	1887.79	1887.52	1886.89	1885.70	1885.98
(@)	+1710	+670	+1480	+1050	+860	+560	-960	-1420	-310	-1250	-1550	-140

CAL YR 2002 MAX 13890 MIN 5080 (@) -3710
WTR YR 2003 MAX 11680 MIN 5080 (@) +700

(+) 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 excellent. 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 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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	0.00
MEAN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MAX	0.00	0.00	0.00	0.00	0.00	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

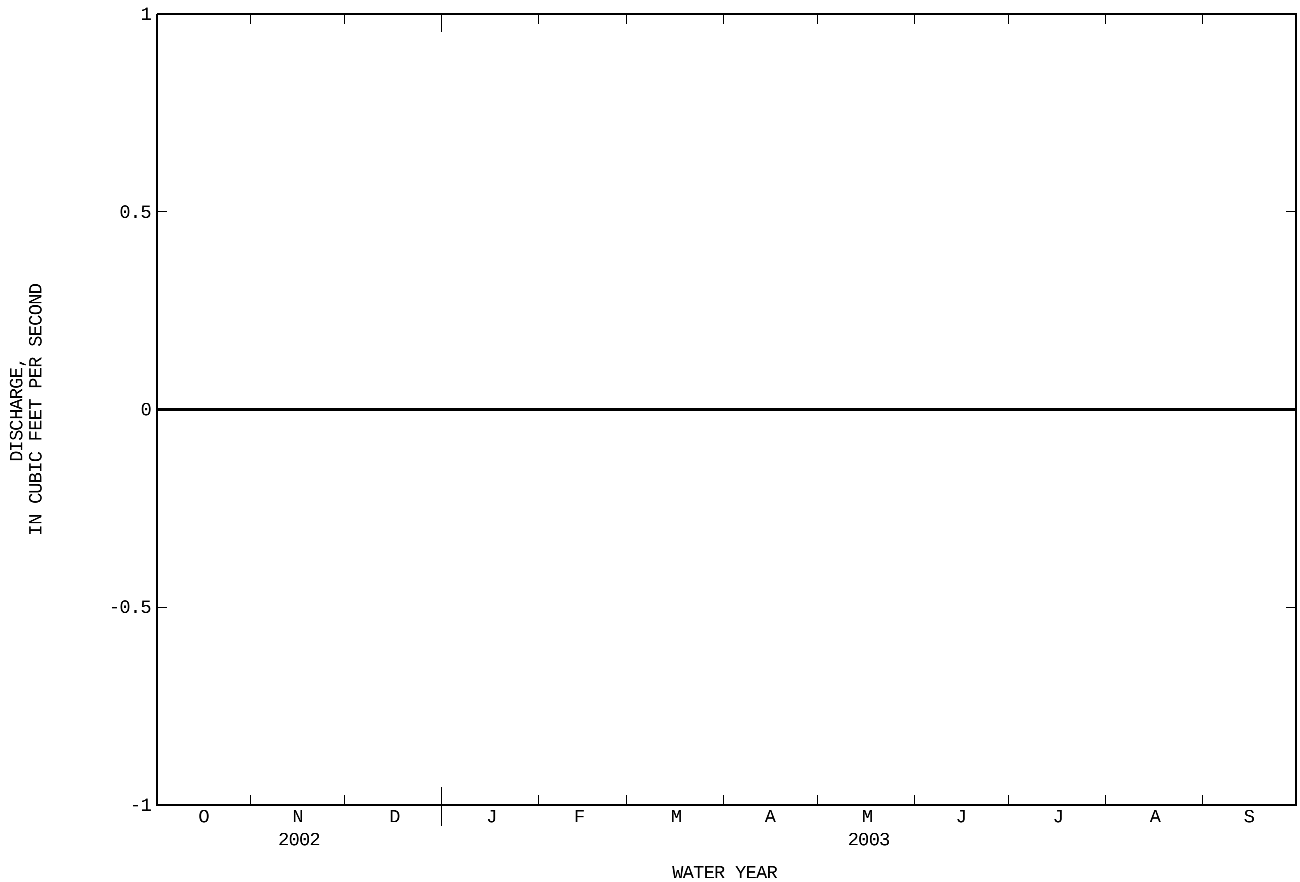
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 2003h, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2.41	1.53	1.55	1.12	0.87	0.70	1.73	1.41	0.84	0.46	2.54	9.08
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 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1961 - 2003h	
ANNUAL TOTAL	1.00		0.00			
ANNUAL MEAN	0.003		0.000		1.93	
HIGHEST ANNUAL MEAN					15.7	1980
LOWEST ANNUAL MEAN					0.000	1969
HIGHEST DAILY MEAN	1.0	Sep 15	0.00	Oct 1	3940	Sep 8 1980
LOWEST DAILY MEAN	0.00	Jan 1	0.00	Oct 1	0.00	Jul 1 1961
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00	Oct 1	0.00	Jul 1 1961
MAXIMUM PEAK FLOW			0.00	Oct 1	25600	Sep 8 1980
MAXIMUM PEAK STAGE			0.00	Oct 1	10.63	Sep 8 1980
ANNUAL RUNOFF (AC-FT)	2.0		0.00		1400	
10 PERCENT EXCEEDS	0.00		0.00		2.0	
50 PERCENT EXCEEDS	0.00		0.00		0.00	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

h See PERIOD OF RECORD paragraph.

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 estimated discharge, 55 ft^3/s, probably occurred June 6, gage height, 4.08 ft, determined from estimated discharge; minimum, no flow many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	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	e0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e1.0	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.25	0.00	0.00	0.00
6	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e20	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e1.5	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e1.5	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.75	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.50	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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	25.50	0.00	0.00	0.00
MEAN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.85	0.000	0.000	0.000
MAX	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	20	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	51	0.00	0.00	0.00

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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 (daily mean discharge), 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)
No peak greater than base discharge.				June 6	1645	*92	*5.62

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08133900 Chalk Creek near Water Valley, TX

LOCATION.--Lat 31°38'47", long 100°41'25", Tom Green County, Hydrologic Unit 12090104, on right bank at upstream side of upstream bridge on U.S. Hwy 87, 1.2 mi above mouth, 2.4 mi southeast of Water Valley, and 3.6 mi northwest of Carlsbad.

DRAINAGE AREA.--26.9 mi^2.

PERIOD OF RECORD.--Oct. 2001 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 2,075.00 ft above NGVD of 1929, from topographic map. Satellite telemeter at station.

REMARKS.--Records fair except those for estimated daily discharges and discharges from 5.0 to 1,000 ft^3/s, which are poor. No known regulation or diversions. No flow at times.

EXTREMES FOR WATER YEAR 2002.--Maximum discharge, 3,820 ft^3/s, July 4, gage height, 8.10 ft, from rating curve extended above 3,680 ft^3/s; 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	0.00	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	227	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00
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	237.00	0.00	0.00
MEAN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	7.65	0.000	0.000
MAX	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	227	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	470	0.00	0.00

e Estimated

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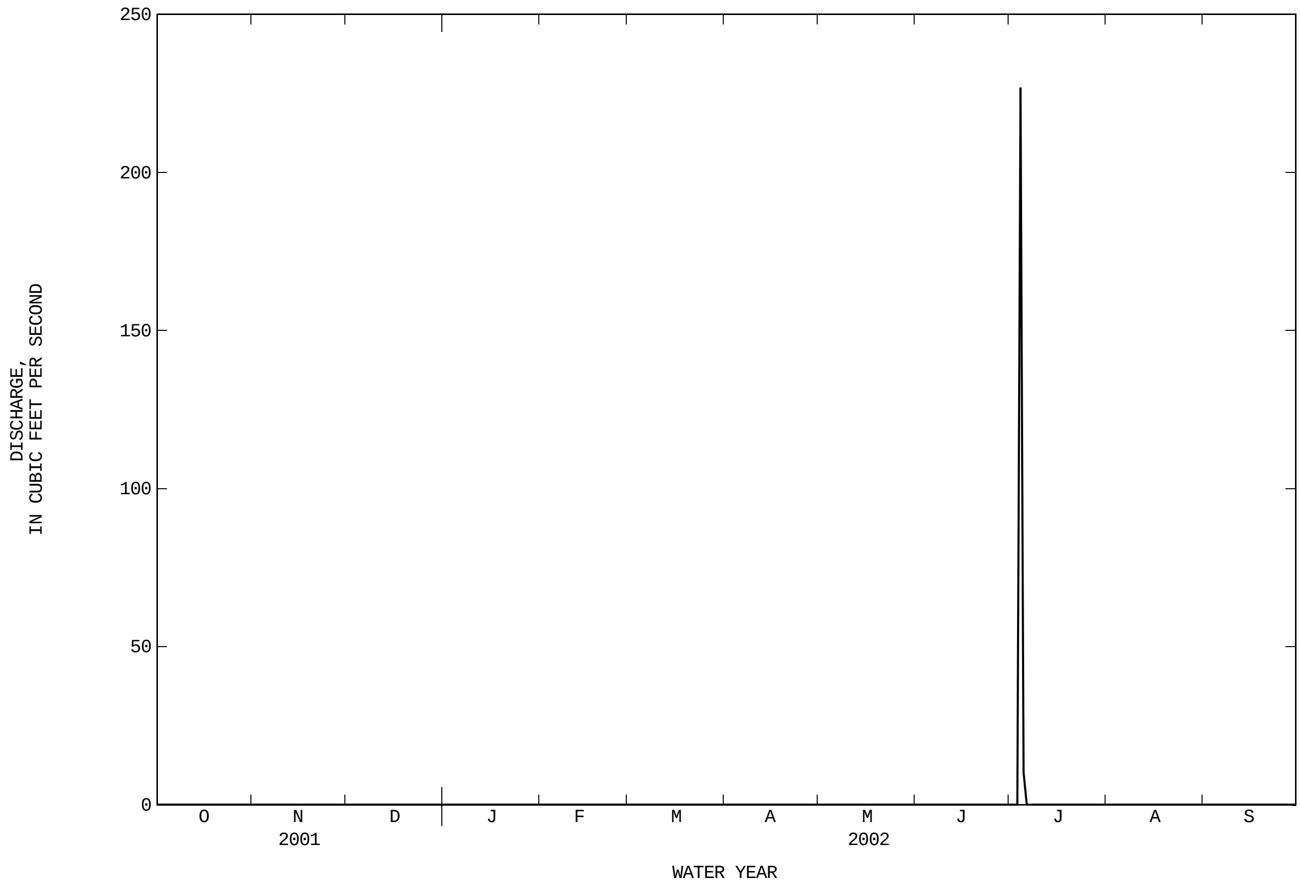
08133900 Chalk Creek near Water Valley, TX--Continued



DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	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	0.08	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	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	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	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	0.24	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	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.24	0.21	0.00	0.00	0.00
MEAN	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.008	0.007	0.000	0.000	0.000
MAX	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.24	0.08	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	0.1	0.00	0.00	0.00	0.00	0.00	0.00	0.5	0.4	0.00	0.00	0.00

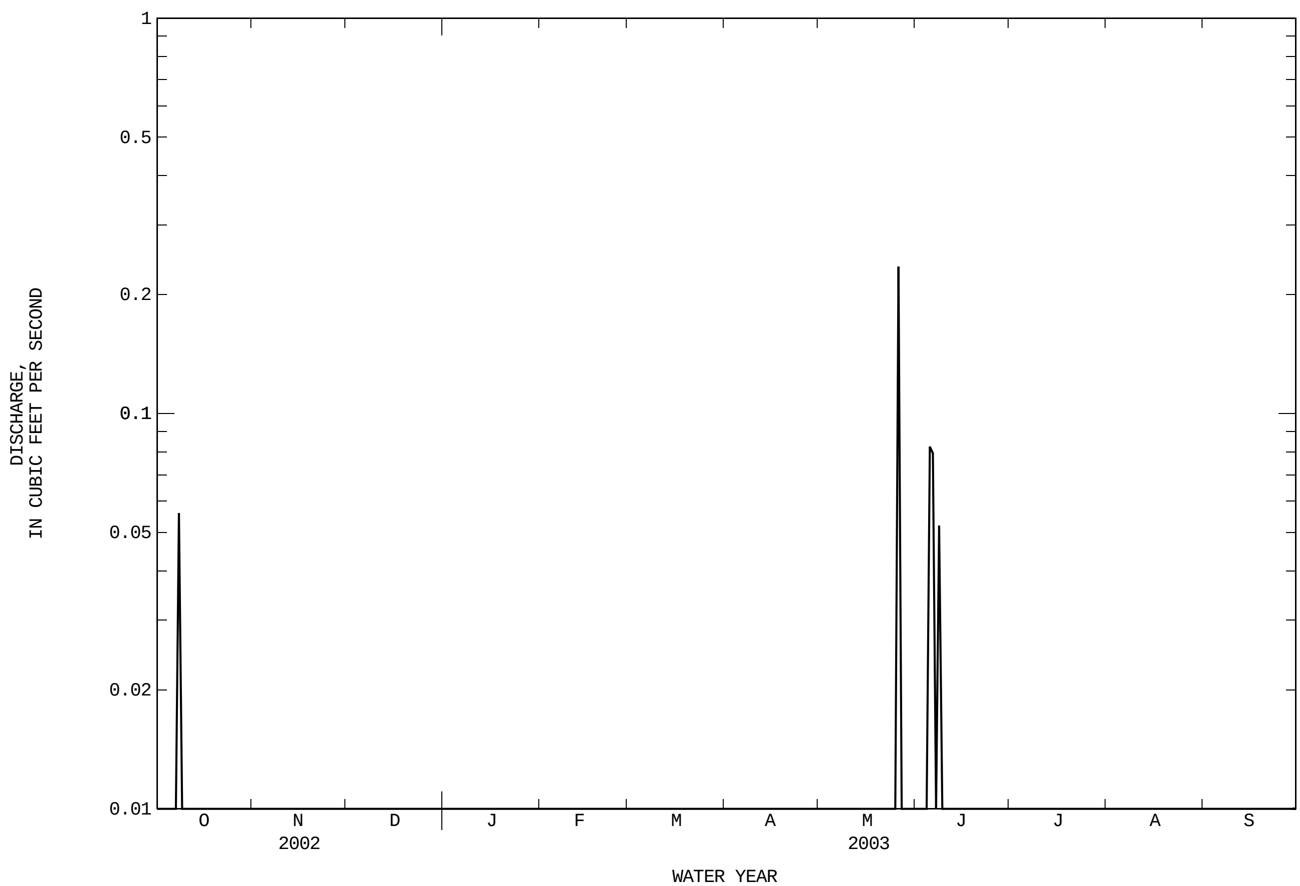
08133900 Chalk Creek near Water Valley, TX--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2001 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.004	0.003	3.82	0.000	0.000
MAX	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.008	0.007	7.65	0.000	0.000
(WY)	2003	2002	2002	2002	2002	2002	2002	2003	2003	2002	2002	2002
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)	2002	2002	2002	2002	2002	2002	2002	2002	2002	2003	2002	2002

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 2001 - 2003	
ANNUAL TOTAL	237.06		0.51			
ANNUAL MEAN	0.65		0.001		0.33	
HIGHEST ANNUAL MEAN					0.65	2002
LOWEST ANNUAL MEAN					0.001	2003
HIGHEST DAILY MEAN	227	Jul 4	0.24	May 26	227	Jul 4 2002
LOWEST DAILY MEAN	0.00	Jan 1	0.00	Oct 1	0.00	Oct 1 2001
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00	Oct 1	0.00	Oct 1 2001
MAXIMUM PEAK FLOW			5.7	May 26	3820	Jul 4 2002
MAXIMUM PEAK STAGE			3.35	May 26	8.10	Jul 4 2002
ANNUAL RUNOFF (AC-FT)	470		1.0		236	
10 PERCENT EXCEEDS	0.00		0.00		0.00	
50 PERCENT EXCEEDS	0.00		0.00		0.00	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

e Estimated



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 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	4.4	0.01	0.00	0.00	0.03	0.14	0.06	0.00	1.3	0.00	0.00
2	0.00	2.1	0.01	0.00	0.00	0.04	0.14	0.06	0.00	0.92	0.00	0.00
3	0.00	1.0	0.03	0.00	0.00	0.04	0.16	0.05	0.00	0.51	0.00	0.00
4	0.00	0.32	0.03	0.00	0.00	0.04	0.17	0.04	0.00	0.25	0.00	0.00
5	0.00	0.07	0.02	0.00	0.00	0.05	0.16	0.03	15	0.15	0.00	0.00
6	0.00	0.05	0.02	0.00	0.00	0.05	0.12	0.02	205	0.27	0.00	0.00
7	7.1	0.04	0.01	0.00	0.00	0.06	0.09	0.01	43	0.24	0.00	0.00
8	19	0.03	0.02	0.00	0.00	0.06	0.07	0.01	94	0.21	0.00	0.00
9	60	0.03	0.03	0.00	0.00	0.06	0.07	0.00	170	0.14	0.00	0.00
10	13	0.03	0.02	0.00	0.00	0.07	0.08	0.00	24	0.08	0.00	0.00
11	2.8	0.02	0.02	0.00	0.00	0.07	0.09	0.00	12	0.07	0.00	0.00
12	0.14	0.02	0.02	0.00	0.00	0.07	0.90	0.00	79	0.06	0.00	0.00
13	0.02	0.02	0.01	0.00	0.00	0.07	0.51	0.00	19	0.05	0.00	0.00
14	0.01	0.02	0.01	0.00	0.00	0.07	0.23	0.00	115	0.05	0.00	0.00
15	0.00	0.03	0.01	0.00	0.00	0.07	0.14	0.00	20	0.03	0.00	0.00
16	0.00	0.03	0.01	0.00	0.00	0.07	0.08	0.00	8.5	0.00	0.00	0.00
17	0.00	0.02	0.01	0.00	0.00	0.12	0.07	0.00	5.6	0.00	0.00	0.00
18	0.00	0.02	0.00	0.00	0.00	1.4	0.08	0.00	4.1	0.00	0.00	0.00
19	0.00	0.02	0.00	0.00	0.00	1.0	0.08	0.00	3.0	0.00	0.00	0.00
20	0.00	0.02	0.00	0.00	0.00	0.79	0.07	0.00	2.3	0.00	0.00	0.00
21	0.00	0.02	0.00	0.00	0.00	0.68	0.07	0.00	1.9	0.00	0.00	0.00
22	0.00	0.01	0.00	0.00	0.00	1.9	0.07	0.00	1.3	0.00	0.00	0.00
23	0.00	0.01	0.00	0.00	0.00	4.7	0.07	0.00	1.0	0.00	0.00	0.00
24	0.00	0.01	0.00	0.00	0.00	3.8	0.07	0.00	0.78	0.00	0.00	0.00
25	0.00	0.01	0.00	0.00	0.00	2.5	0.07	0.00	0.52	0.00	0.00	0.00
26	0.00	0.01	0.00	0.00	0.00	1.5	0.06	0.00	0.28	0.00	0.00	6.3
27	0.00	0.01	0.00	0.00	0.01	0.92	0.06	0.00	0.84	0.00	0.00	1.2
28	173	0.01	0.00	0.00	0.02	0.73	0.06	0.00	3.0	0.00	0.00	0.01
29	75	0.01	0.00	0.00	---	0.58	0.06	0.00	2.8	0.00	0.00	0.00
30	29	0.01	0.00	0.00	---	0.36	0.07	0.00	1.9	0.00	0.00	0.00
31	9.6	---	0.00	0.00	---	0.30	---	0.00	---	0.00	0.00	---
TOTAL	388.67	8.40	0.29	0.00	0.03	22.20	4.11	0.28	833.82	4.33	0.00	7.51
MEAN	12.5	0.28	0.009	0.000	0.001	0.72	0.14	0.009	27.8	0.14	0.000	0.25
MAX	173	4.4	0.03	0.00	0.02	4.7	0.90	0.06	205	1.3	0.00	6.3
MIN	0.00	0.01	0.00	0.00	0.00	0.03	0.06	0.00	0.00	0.00	0.00	0.00
AC-FT	771	17	0.6	0.00	0.06	44	8.2	0.6	1650	8.6	0.00	15

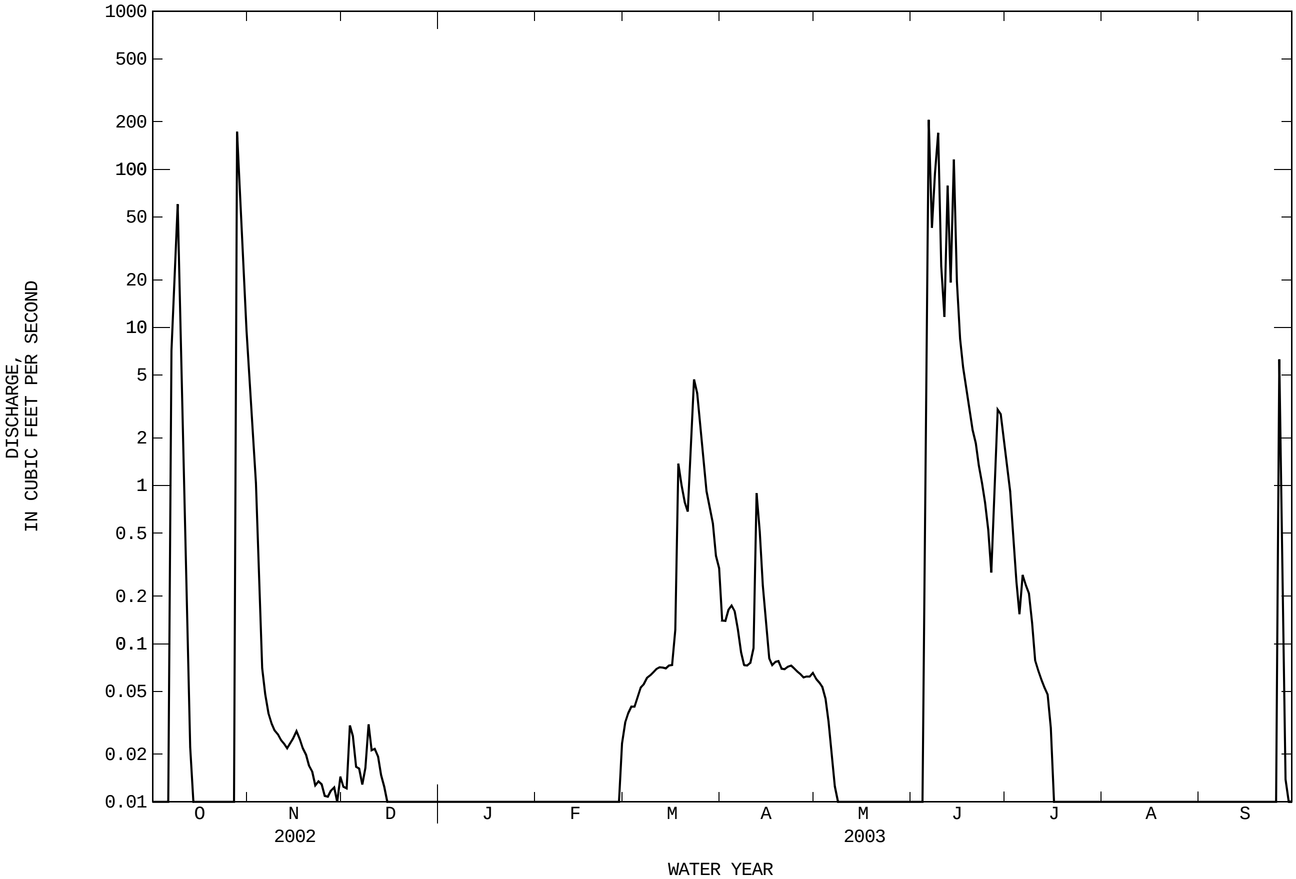
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1924 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	35.4	4.10	3.94	3.77	6.43	11.8	33.5	74.7	25.8	37.8	15.6	78.4
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 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1924 - 2003	
ANNUAL TOTAL	964.77		1269.64			
ANNUAL MEAN	2.64		3.48		27.8	
HIGHEST ANNUAL MEAN					336	1936
LOWEST ANNUAL MEAN					0.000	1970
HIGHEST DAILY MEAN	273	Jul 5	205	Jun 6	62900	Sep 17 1936
LOWEST DAILY MEAN	0.00	Jan 1	0.00	Oct 1	0.00	Jun 20 1924
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00	Oct 15	0.00	Jun 20 1924
MAXIMUM PEAK FLOW			1000	Oct 28	i94600	Sep 26 1936
MAXIMUM PEAK STAGE			8.29	Oct 28	a29.10	Sep 26 1936
ANNUAL RUNOFF (AC-FT)	1910		2520		20140	
10 PERCENT EXCEEDS	0.02		1.7		11	
50 PERCENT EXCEEDS	0.00		0.00		1.3	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

i From slope-area measurement of peak flow.
a From floodmark at present site.

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



08134230 Grape Creek near Grape Creek, TX

LOCATION.--Lat 31°34'30", long 100°35'07", Tom Green County, Hydrologic Unit 12090104, on left bank, at left upstream end of upstream bridge on U.S. Hwy 87, 0.9 mi above mouth, 2.5 mi northwest of intersection of FM 2288 and U.S. Hwy 87 in Grape Creek, 4.4 mi southeast of Carlsbad, and 9.0 mi above O.C. Fisher Dam.

DRAINAGE AREA.--109 mi^2.

PERIOD OF RECORD.--Oct. 2001 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,940.71 ft above the NGVD of 1929. Satellite telemeter at station.

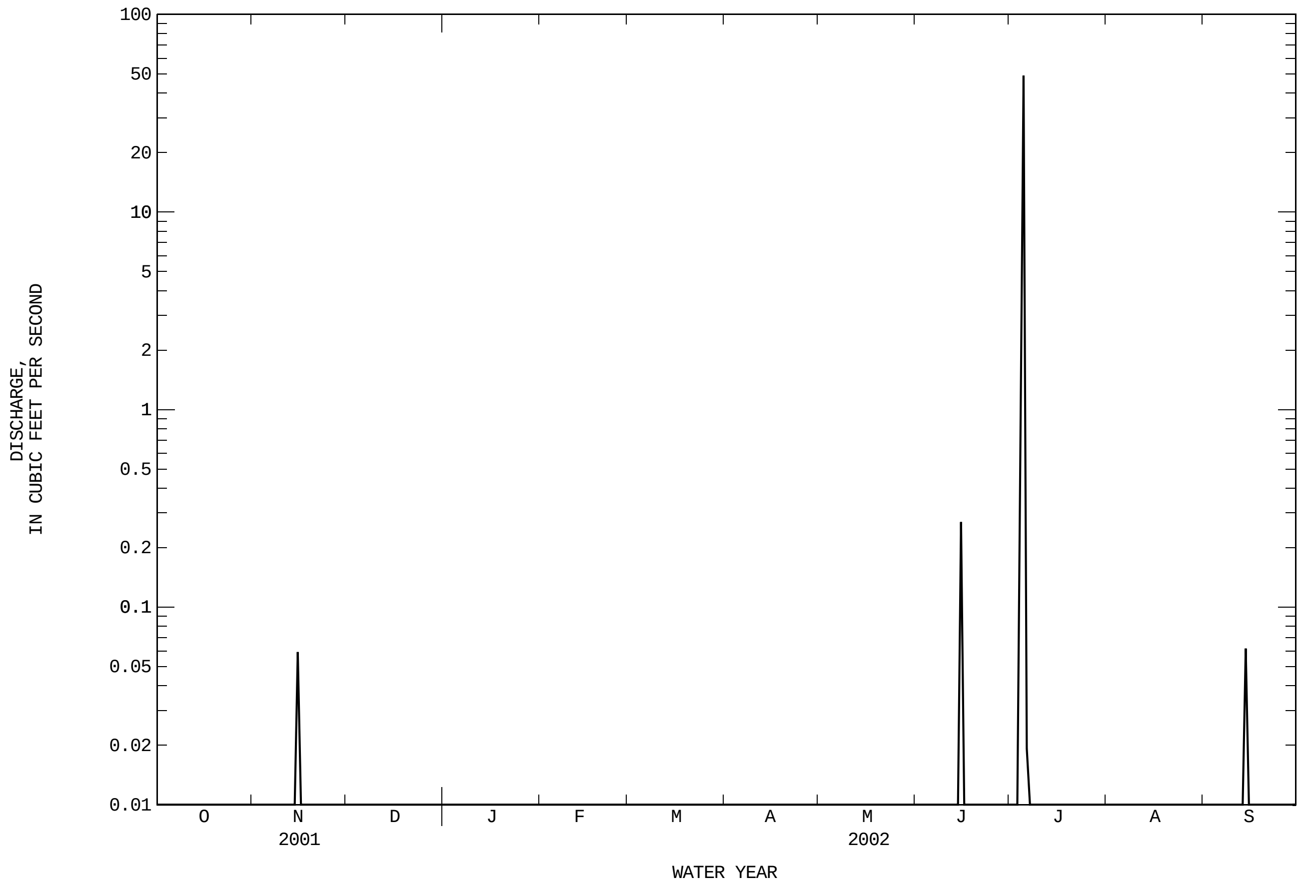
REMARKS.--Records fair except those for estimated daily discharges and discharges above 200 ft^3/s, which are poor. No known regulation or diversions. No flow at times.

EXTREMES FOR WATER YEAR 2002.--Maximum discharge, 391 ft^3/s, July 5, gage height, 7.22 ft, from floodmark, from rating curve extended above 109 ft^3/s; no flow many days.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	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	0.86	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	49	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	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	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06
15	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.27	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.27	49.88	0.00	0.06
MEAN	0.000	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.009	1.61	0.000	0.002
MAX	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.27	49	0.00	0.06
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	0.1	0.00	0.00	0.00	0.00	0.00	0.00	0.5	99	0.00	0.1

08134230 Grape Creek near Grape Creek, TX--Continued



08134230 Grape Creek near Grape Creek, TX--Continued

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

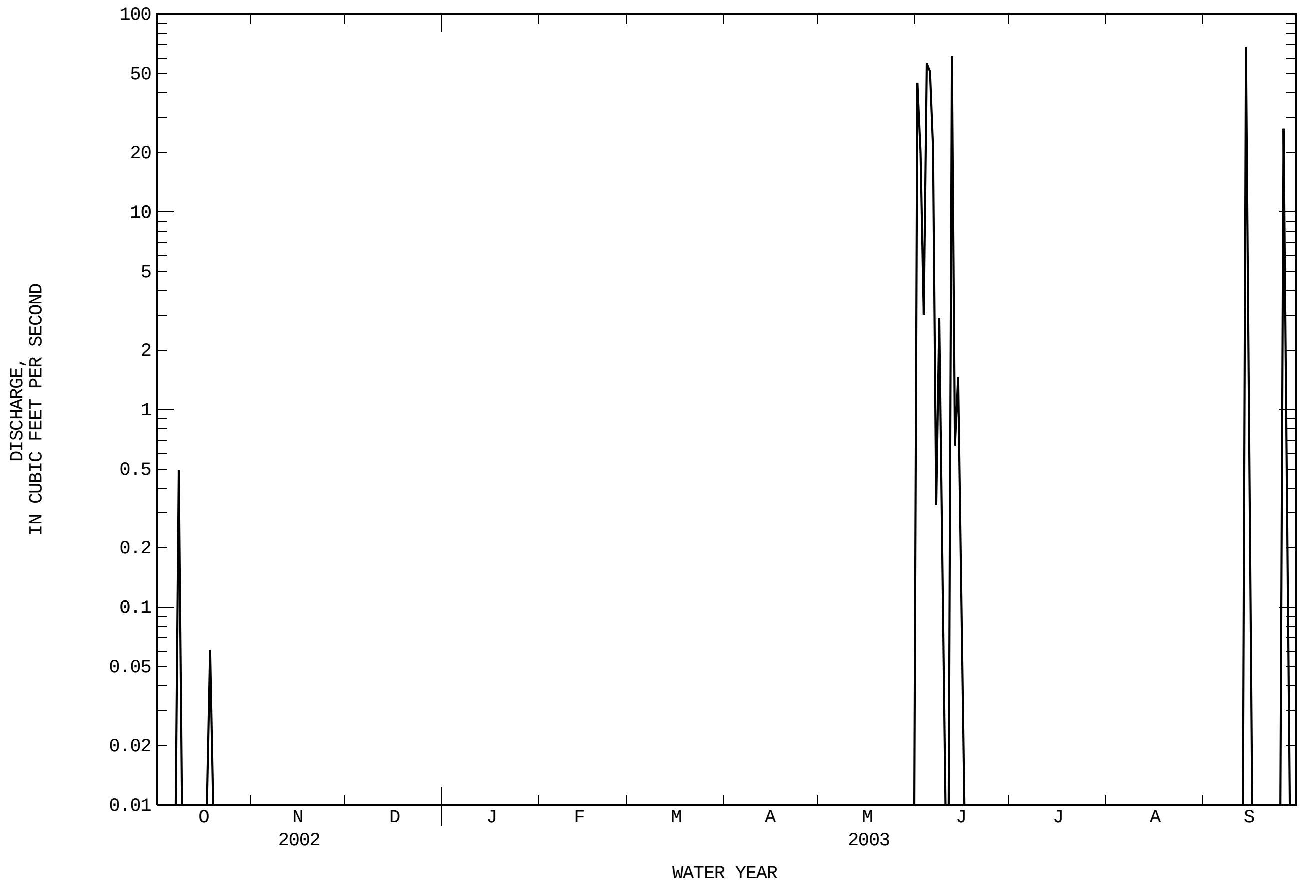
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	45	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e20	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e3.0	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	56	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	51	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	21	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33	0.00	0.00	0.00
8	0.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.9	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	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	61	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.66	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.5	0.00	0.00	68
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.00	0.00	1.6
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	0.06	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	26
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.44
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	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	262.56	0.00	0.00	96.04
MEAN	0.018	0.000	0.000	0.000	0.000	0.000	0.000	0.000	8.75	0.000	0.000	3.20
MAX	0.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	61	0.00	0.00	68
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	1.1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	521	0.00	0.00	190

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2001 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.009	0.001	0.000	0.000	0.000	0.000	0.000	0.000	4.38	0.80	0.000	1.60
MAX	0.018	0.002	0.000	0.000	0.000	0.000	0.000	0.000	8.75	1.61	0.000	3.20
(WY)	2003	2002	2002	2002	2002	2002	2002	2002	2003	2002	2002	2003
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.009	0.000	0.000	0.002
(WY)	2002	2003	2002	2002	2002	2002	2002	2002	2002	2003	2002	2002

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 2001 - 2003	
ANNUAL TOTAL	50.76		359.15			
ANNUAL MEAN	0.14		0.98		0.56	
HIGHEST ANNUAL MEAN					0.98	2003
LOWEST ANNUAL MEAN					0.14	2002
HIGHEST DAILY MEAN	49	Jul 5	68	Sep 14	68	Sep 14 2003
LOWEST DAILY MEAN	0.00	Jan 1	0.00	Oct 1	0.00	Sep 28 2001
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00	Oct 1	0.00	Sep 28 2001
MAXIMUM PEAK FLOW			477	Sep 14	477	Sep 14 2003
MAXIMUM PEAK STAGE			7.80	Sep 14	7.80	Sep 14 2003
ANNUAL RUNOFF (AC-FT)	101		712		406	
10 PERCENT EXCEEDS	0.00		0.00		0.00	
50 PERCENT EXCEEDS	0.00		0.00		0.00	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

08134230 Grape Creek near Grape Creek, TX--Continued



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. No flow at times.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	4.6	0.00	0.00	0.00	0.00	0.00	0.00	30	0.04	0.00	0.00
2	0.00	1.9	0.00	0.00	0.00	0.00	0.00	0.00	163	0.03	0.00	0.00
3	0.00	0.51	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.03	0.00	0.00
4	0.00	0.14	0.00	0.00	0.00	0.00	0.00	0.00	101	0.02	0.00	0.00
5	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	93	0.03	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	141	0.03	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	80	0.03	0.00	0.00
8	1.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	35	0.02	0.00	0.00
9	5.7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	193	0.02	0.00	0.00
10	13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	30	0.02	0.00	0.00
11	3.4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12	0.01	0.00	0.00
12	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	166	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	32	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	94	0.00	0.00	77
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	31	0.00	0.00	2.1
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10	0.00	0.00	0.06
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.7	0.00	0.00	0.00
18	3.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.4	0.00	0.00	0.00
19	1.7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.6	0.00	0.00	0.00
20	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.98	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	13
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00	2.1
28	36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.19
29	110	0.00	0.00	0.00	---	0.00	0.00	0.00	0.04	0.00	0.00	0.02
30	23	0.00	0.00	0.00	---	0.00	0.00	0.00	0.03	0.00	0.00	0.01
31	10	---	0.00	0.00	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	208.05	7.17	0.00	0.00	0.00	0.00	0.00	0.00	1225.32	0.28	0.00	94.48
MEAN	6.71	0.24	0.000	0.000	0.000	0.000	0.000	0.000	40.8	0.009	0.000	3.15
MAX	110	4.6	0.00	0.00	0.00	0.00	0.00	0.00	193	0.04	0.00	77
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00
AC-FT	413	14	0.00	0.00	0.00	0.00	0.00	0.00	2430	0.6	0.00	187

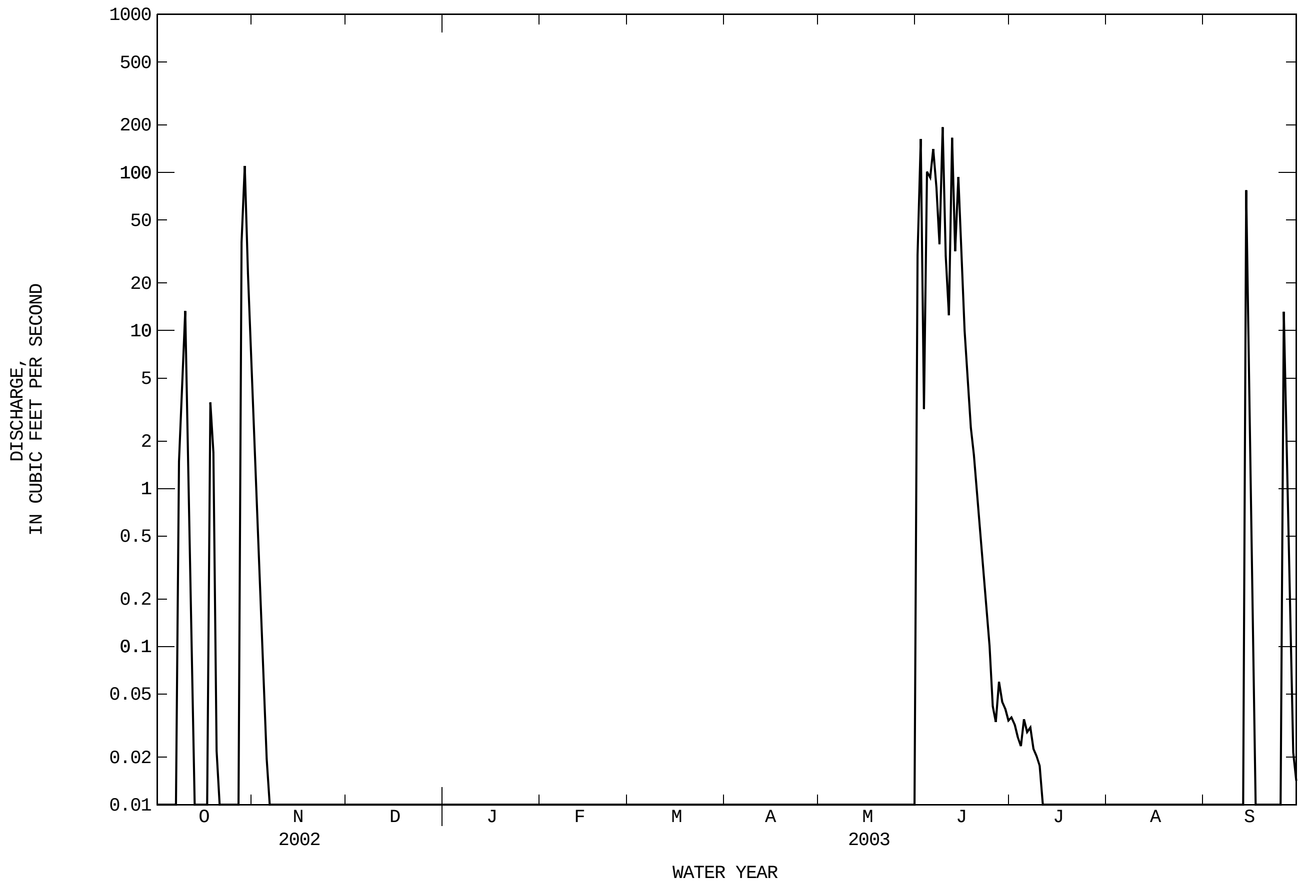
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2000 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	29.8	5.19	0.000	0.000	0.000	38.5	0.45	0.000	10.2	3.97	0.000	1.47
MAX	82.7	11.4	0.000	0.000	0.000	154	1.59	0.000	40.8	15.9	0.000	3.15
(WY)	2001	2002	2001	2001	2001	2000	2000	2000	2003	2002	2000	2003
MIN	0.000	0.24	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	2002	2003	2001	2001	2001	2002	2002	2000	2000	2000	2000	2000

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 2000 - 2003	
ANNUAL TOTAL	707.14		1535.30			
ANNUAL MEAN	1.94		4.21		4.69	
HIGHEST ANNUAL MEAN					7.60	2001
LOWEST ANNUAL MEAN					2.28	2002
HIGHEST DAILY MEAN	340	Jul 5	193	Jun 9	3890	Mar 24 2000
LOWEST DAILY MEAN	0.00	Jan 1	0.00	Oct 1	0.00	Feb 14 2000
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00	Oct 1	0.00	Feb 14 2000
MAXIMUM PEAK FLOW			842	Jun 2	10400	Mar 24 2000
MAXIMUM PEAK STAGE			11.18	Jun 2	p24.50	Mar 24 2000
ANNUAL RUNOFF (AC-FT)	1400		3050		3400	
10 PERCENT EXCEEDS	0.00		0.74		0.04	
50 PERCENT EXCEEDS	0.00		0.00		0.00	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

p Observed.

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 Sept. 2002 (contents), Oct. 2002 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 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.--Records of diversions may be obtained from the U.S. Army Corps of Engineers.

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 daily elevation, 1,862.72 ft, June 16; minimum elevation, 1,857.08 ft, May 31, June 1.

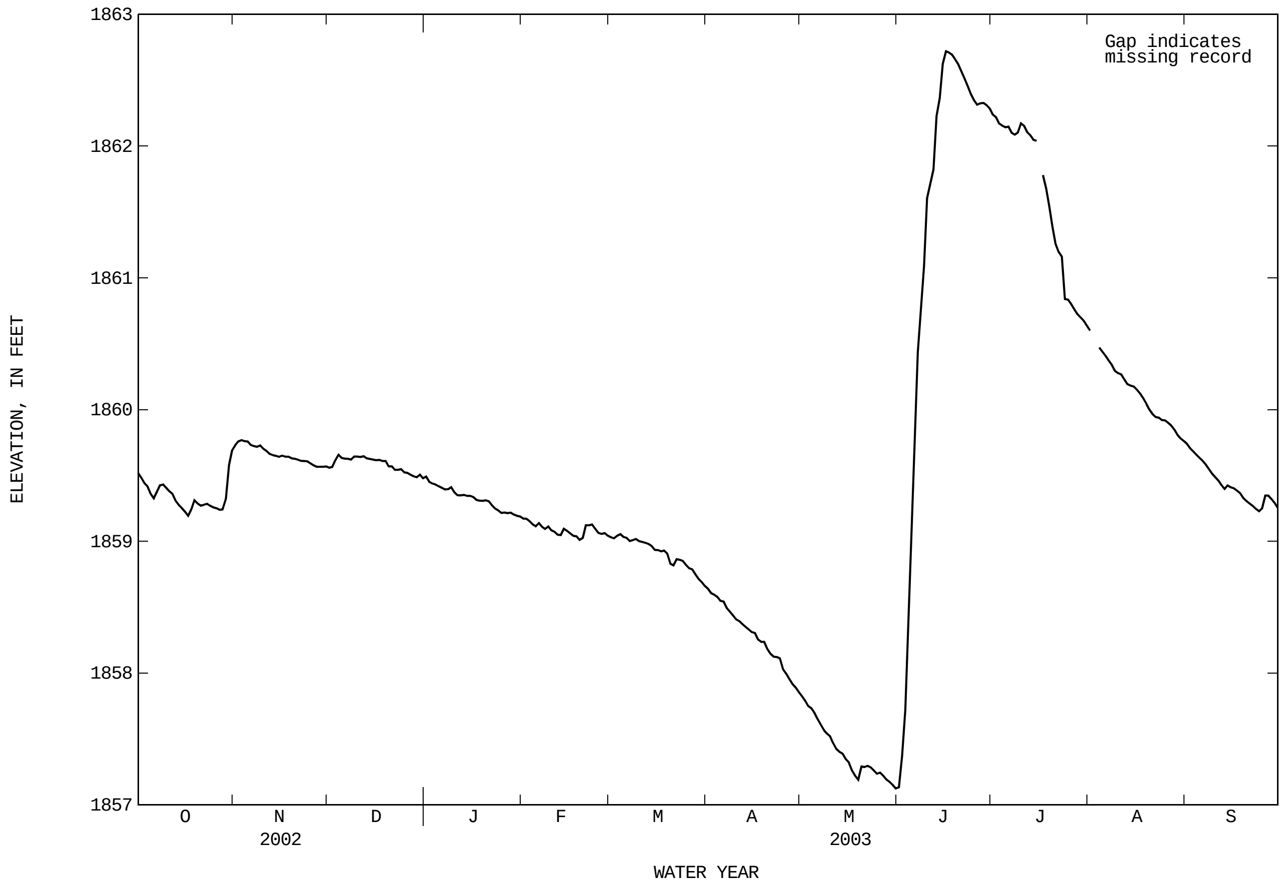
ELEVATION, IN FEET (NGVD), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1859.52	1859.73	1859.56	1859.49	1859.17	1859.03	1858.64	1857.83	1857.13	1862.24	1860.60	1859.74
2	1859.48	1859.76	1859.57	1859.45	1859.17	1859.02	1858.61	1857.79	1857.37	1862.22	---	1859.71
3	1859.44	1859.77	1859.62	1859.44	1859.15	1859.04	1858.60	1857.75	1857.72	1862.17	---	1859.68
4	1859.42	1859.76	1859.66	1859.43	1859.13	1859.05	1858.58	1857.73	1858.24	1862.16	1860.47	1859.66
5	1859.36	1859.76	1859.63	1859.42	1859.11	1859.03	1858.55	1857.70	1858.89	1862.14	1860.44	1859.63
6	1859.33	1859.73	1859.63	1859.41	1859.14	1859.03	1858.54	1857.65	1859.72	1862.15	1860.41	1859.61
7	1859.38	1859.72	1859.63	1859.39	1859.11	1859.00	1858.49	1857.61	1860.43	1862.10	1860.37	1859.58
8	1859.42	1859.72	1859.62	1859.40	1859.09	1859.01	1858.47	1857.57	1860.79	1862.09	1860.34	1859.55
9	1859.43	1859.73	1859.64	1859.41	1859.11	1859.02	1858.44	1857.54	1861.09	1862.10	1860.29	1859.52
10	1859.40	1859.70	1859.64	1859.37	1859.08	1859.00	1858.41	1857.52	1861.61	1862.17	1860.28	1859.49
11	1859.38	1859.69	1859.64	1859.35	1859.07	1858.99	1858.39	1857.47	1861.72	1862.15	1860.27	1859.46
12	1859.36	1859.66	1859.65	1859.35	1859.05	1858.99	1858.37	1857.42	1861.82	1862.11	1860.23	1859.43
13	1859.31	1859.65	1859.63	1859.35	1859.05	1858.98	1858.35	1857.40	1862.23	1862.08	1860.19	1859.40
14	1859.28	1859.65	1859.62	1859.35	1859.10	1858.96	1858.33	1857.39	1862.36	1862.05	1860.18	1859.42
15	1859.25	1859.64	1859.62	1859.35	1859.08	1858.93	1858.31	1857.35	1862.62	1862.04	1860.17	1859.41
16	1859.22	1859.65	1859.62	1859.34	1859.06	1858.93	1858.30	1857.32	1862.72	---	1860.15	1859.40
17	1859.19	1859.64	1859.62	1859.31	1859.04	1858.92	1858.26	1857.26	1862.71	1861.78	1860.12	1859.38
18	1859.24	1859.64	1859.61	1859.31	1859.04	1858.93	1858.24	1857.22	1862.69	1861.68	1860.09	1859.37
19	1859.31	1859.63	1859.61	1859.31	1859.01	1858.91	1858.24	1857.19	1862.66	1861.55	1860.04	1859.33
20	1859.29	1859.63	1859.57	1859.31	1859.03	1858.83	1858.18	1857.29	1862.62	1861.39	1860.00	1859.31
21	1859.27	1859.62	1859.57	1859.30	1859.12	1858.82	1858.14	1857.29	1862.56	1861.26	1859.96	1859.29
22	1859.28	1859.61	1859.54	1859.27	1859.12	1858.86	1858.12	1857.29	1862.51	1861.20	1859.94	1859.27
23	1859.28	1859.61	1859.54	1859.25	1859.13	1858.86	1858.12	1857.28	1862.45	1861.16	1859.94	1859.25
24	1859.27	1859.61	1859.55	1859.23	1859.10	1858.85	1858.11	1857.26	1862.40	1860.84	1859.92	1859.23
25	1859.26	1859.59	1859.52	1859.21	1859.06	1858.82	1858.03	1857.23	1862.35	&1860.84	1859.92	1859.25
26	1859.25	1859.58	1859.52	1859.22	1859.06	1858.80	1857.99	1857.24	1862.32	1860.80	1859.90	1859.35
27	1859.24	1859.57	1859.51	1859.21	1859.06	1858.79	1857.95	1857.22	1862.33	1860.76	1859.88	1859.35
28	1859.24	1859.57	1859.49	1859.22	1859.04	1858.75	1857.92	1857.19	1862.33	1860.72	1859.85	1859.32
29	1859.32	1859.57	1859.49	1859.20	---	1858.71	1857.89	1857.17	1862.31	1860.70	1859.81	1859.29
30	1859.58	1859.57	1859.51	1859.19	---	1858.69	1857.86	1857.15	1862.29	1860.68	1859.78	1859.25
31	1859.69	---	1859.48	1859.19	---	1858.66	---	1857.12	---	1860.64	1859.76	---
MEAN	1859.35	1859.66	1859.58	1859.32	1859.09	1858.91	1858.28	1857.40	1861.37	---	---	1859.43
MAX	1859.69	1859.77	1859.66	1859.49	1859.17	1859.05	1858.64	1857.83	1862.72	---	---	1859.74
MIN	1859.19	1859.57	1859.48	1859.19	1859.01	1858.66	1857.86	1857.12	1857.13	---	---	1859.23

CAL YR 2002 MAX 1863.14 MIN 1858.61
WTR YR 2003 MAX 1862.72 MIN 1857.12

& Value was computed from affected unit values

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 and those for affected daily discharges, 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 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.06	1.2	0.08	0.52	0.07	0.06	0.06	0.06	57	0.18	0.06	1.5
2	0.06	9.6	0.08	0.08	0.07	0.05	0.06	0.07	35	0.09	0.06	0.91
3	0.06	7.1	52	0.08	0.06	0.06	0.06	0.07	199	0.07	0.07	0.69
4	0.06	5.2	37	0.09	0.05	0.07	0.06	0.07	631	48	0.06	0.62
5	0.06	5.3	6.0	0.09	0.08	0.05	0.06	0.07	306	69	0.06	0.61
6	0.06	4.8	1.4	0.09	0.08	0.04	0.06	0.07	343	73	0.06	0.35
7	68	4.6	0.09	0.08	0.06	0.04	0.06	0.07	25	14	0.06	0.49
8	83	4.0	1.1	0.08	0.06	0.04	0.06	0.07	133	6.1	0.08	0.36
9	69	4.3	10	0.08	0.30	0.04	0.06	0.07	31	4.6	0.08	0.24
10	8.8	1.5	3.6	0.07	0.07	0.03	0.06	&0.07	&19	3.9	0.05	0.31
11	3.7	1.8	1.0	0.07	0.06	0.03	0.05	&0.05	&10	2.7	0.05	0.40
12	3.0	1.6	0.18	0.10	0.06	&0.04	0.05	&0.05	&9.1	0.11	0.05	0.17
13	2.1	3.2	0.08	0.06	0.06	&0.06	0.05	&0.06	&7.8	0.08	0.04	0.15
14	4.8	2.7	0.12	0.07	0.66	&0.06	0.04	&0.05	&11	0.10	0.05	186
15	3.3	2.5	0.61	0.08	5.2	&0.07	0.04	&0.13	&10	0.08	0.05	20
16	2.6	3.5	0.49	0.07	2.1	&0.07	0.04	&0.04	&8.4	0.08	0.05	3.9
17	1.1	2.4	0.08	0.05	0.67	&0.13	0.03	&0.02	&7.6	0.09	0.06	1.8
18	75	1.7	0.09	0.07	0.08	&2.0	0.03	&0.02	7.1	15	0.05	1.8
19	67	1.2	0.21	0.11	0.08	&0.38	0.03	&0.04	6.8	32	0.05	1.2
20	9.6	1.5	0.07	0.06	34	&0.10	0.03	&0.04	6.7	31	0.05	1.2
21	4.7	0.11	0.06	0.06	106	&0.40	0.03	&0.07	6.6	28	0.04	1.6
22	5.9	0.09	0.06	0.06	14	&86	0.03	&0.07	6.0	8.0	0.05	1.7
23	21	0.10	0.07	0.06	0.08	&14	0.05	0.06	4.0	2.1	0.05	1.4
24	6.1	0.18	0.08	0.06	0.08	&3.8	0.06	0.05	2.1	2.5	0.04	1.5
25	25	0.08	0.09	0.07	0.06	&0.33	0.06	0.06	2.0	3.0	0.04	242
26	20	0.08	0.07	0.05	0.06	&0.14	0.06	0.11	15	4.2	0.05	145
27	7.5	0.08	0.08	0.06	0.09	0.07	0.06	0.07	70	3.4	0.06	13
28	2.2	0.09	0.08	0.05	0.06	0.06	0.06	0.06	23	0.16	0.05	5.5
29	0.08	0.09	0.11	0.05	---	0.06	0.06	0.08	5.0	0.06	0.15	3.2
30	0.08	0.08	0.33	0.05	---	0.06	0.06	0.08	3.1	0.06	0.10	2.0
31	0.08	---	0.82	0.06	---	0.06	---	0.10	---	0.06	2.0	---
TOTAL	494.00	70.68	116.13	2.63	164.30	108.40	1.52	2.00	2000.3	351.72	3.77	639.60
MEAN	15.9	2.36	3.75	0.085	5.87	3.50	0.051	0.065	66.7	11.3	0.12	21.3
MAX	83	9.6	52	0.52	106	86	0.06	0.13	631	73	2.0	242
MIN	0.06	0.08	0.06	0.05	0.05	0.03	0.03	0.02	2.0	0.06	0.04	0.15
AC-FT	980	140	230	5.2	326	215	3.0	4.0	3970	698	7.5	1270

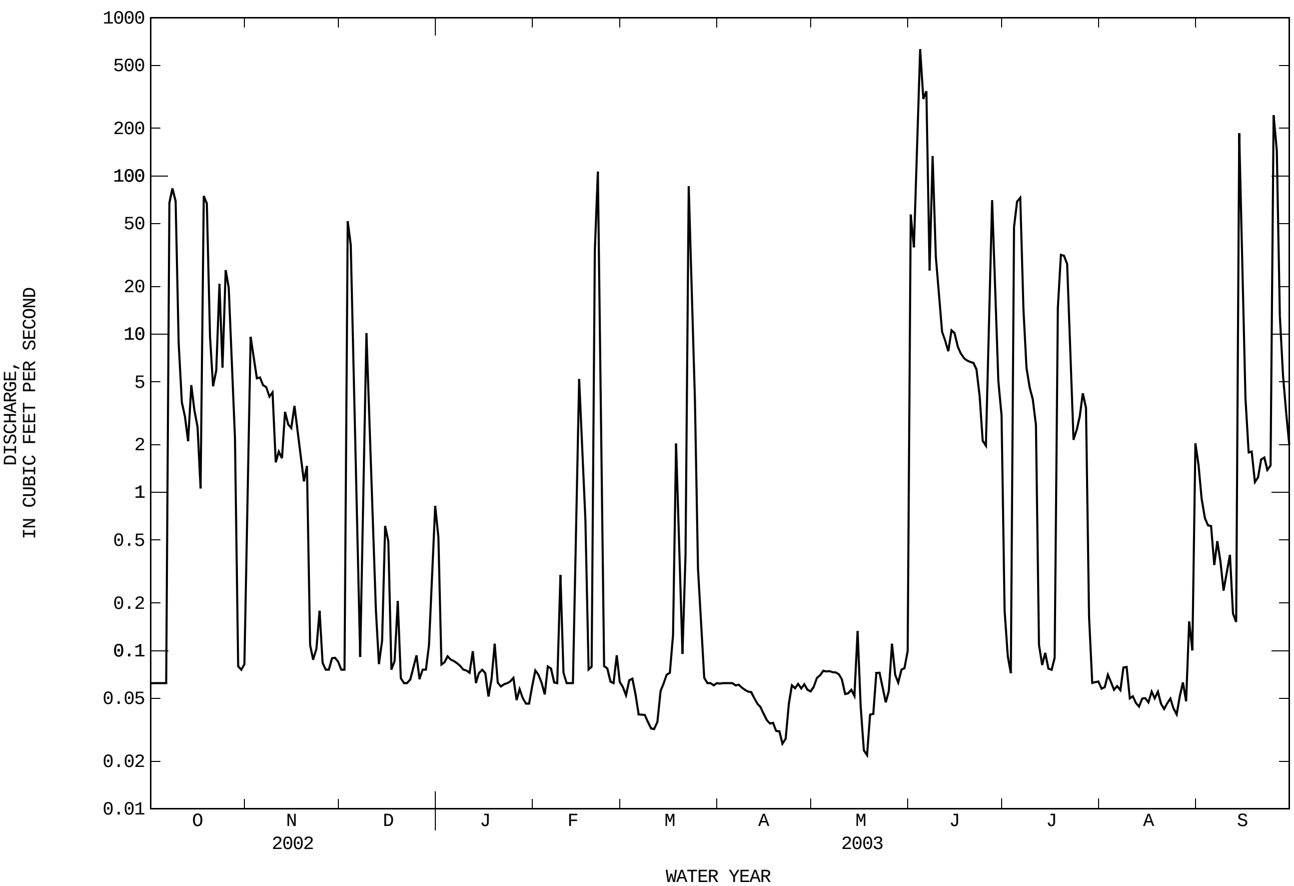
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 2003z, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	116	31.7	32.4	28.9	34.3	27.7	89.9	180	82.9	99.8	38.5	245
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	0.065	0.090	0.069	0.040	0.034
(WY)	2000	2000	1974	1974	2000	1971	2000	2003	1971	1969	1999	1999

08136000 Concho River at San Angelo, TX--Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1931 - 2003z	
ANNUAL TOTAL	2181.48		3955.05			
ANNUAL MEAN	5.98		10.8		84.0	
HIGHEST ANNUAL MEAN					1132	1936
LOWEST ANNUAL MEAN					1.55	2000
HIGHEST DAILY MEAN	246	Mar 19	631	Jun 4	128000	Sep 17 1936
LOWEST DAILY MEAN	0.02	Aug 16	0.02	May 17	0.00	Sep 14 1952
ANNUAL SEVEN-DAY MINIMUM	0.03	Aug 16	0.03	Apr 16	0.00	Sep 16 1952
MAXIMUM PEAK FLOW			4450	Jun 4	i230000	Sep 17 1936
MAXIMUM PEAK STAGE			a8.77	Jun 4	a46.60	Sep 17 1936
ANNUAL RUNOFF (AC-FT)	4330		7840		60860	
10 PERCENT EXCEEDS	7.4		15		66	
50 PERCENT EXCEEDS	0.09		0.08		6.4	
90 PERCENT EXCEEDS	0.05		0.05		0.10	

& Value was computed from affected unit values
z Period of regulated streamflow.
a From floodmark.
i From slope-area measurement of peak flow.



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.--No estimated daily discharges. Records good. 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 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	7.1	2.0	2.0	0.16	8.4	0.14	0.00	0.00	21	0.00	0.00
2	0.00	6.9	1.5	1.1	0.20	7.6	0.09	0.00	1.5	12	0.00	0.00
3	0.00	5.5	4.5	0.93	0.13	8.1	0.09	0.00	4.6	7.2	0.00	0.00
4	0.00	4.1	4.1	0.48	0.06	7.6	0.06	0.00	1870	3.3	0.00	0.00
5	0.00	2.8	1.6	0.34	0.09	6.2	0.02	0.00	1700	1.0	0.00	0.00
6	0.00	1.6	11	0.26	0.14	5.3	0.02	0.00	2060	0.53	0.00	0.00
7	0.00	0.83	27	0.18	0.08	4.9	0.00	0.00	806	12	0.00	0.00
8	0.00	1.4	19	0.21	0.13	3.0	0.00	0.00	241	47	0.00	0.00
9	0.00	4.4	16	0.14	0.19	2.2	0.00	0.00	220	25	0.00	0.00
10	0.00	4.1	12	0.03	0.13	3.0	0.00	0.00	156	14	0.00	0.00
11	0.03	3.8	11	0.04	0.14	1.7	0.00	0.00	69	7.5	0.00	0.00
12	0.02	2.0	8.3	0.36	0.18	0.91	0.00	0.00	188	3.0	0.00	0.00
13	0.00	0.51	6.4	0.36	0.25	0.90	0.00	0.00	170	0.66	0.00	0.00
14	0.02	0.45	5.8	0.30	0.42	0.88	0.00	0.00	62	0.36	0.00	0.00
15	0.05	4.4	7.3	0.32	0.19	1.6	0.00	0.00	35	0.18	0.00	0.00
16	0.04	3.9	7.3	0.64	0.06	1.9	0.00	0.00	21	0.19	0.00	0.00
17	0.03	0.28	6.5	1.4	0.11	1.9	0.00	0.00	16	0.18	0.00	0.00
18	0.04	1.7	6.4	3.5	0.18	0.57	0.00	0.00	15	0.10	0.00	0.00
19	0.12	0.46	5.3	3.7	0.22	0.28	0.00	0.00	13	0.10	0.00	0.00
20	0.06	0.33	5.7	1.6	2.1	0.18	0.00	0.00	10	0.01	0.00	0.00
21	11	0.20	4.9	1.1	8.2	0.29	0.00	0.00	7.1	0.00	0.00	0.00
22	26	1.1	4.9	0.53	7.6	1.1	0.00	0.00	5.7	0.00	0.00	0.00
23	18	2.4	5.9	0.20	26	0.76	0.00	0.00	6.0	0.00	0.00	0.00
24	12	4.8	6.3	0.15	36	0.99	0.00	0.00	6.5	0.00	0.00	0.00
25	10	3.3	5.9	0.17	21	1.0	0.00	0.00	7.1	0.00	0.00	0.00
26	8.7	1.9	4.9	0.19	15	0.60	0.00	0.00	6.9	0.00	0.00	130
27	11	3.9	4.3	0.17	12	0.27	0.00	0.00	6.3	0.00	0.00	242
28	13	4.1	4.2	0.18	9.7	0.40	0.00	0.00	5.4	0.00	0.00	75
29	17	2.3	4.2	0.15	---	0.87	0.00	0.00	2.6	0.00	0.00	31
30	14	2.5	3.7	0.14	---	0.34	0.00	0.00	29	0.00	0.00	17
31	10	---	4.0	0.18	---	0.20	---	0.00	---	0.00	0.00	---
TOTAL	151.11	83.06	221.9	21.05	140.66	73.94	0.42	0.00	7740.70	155.31	0.00	495.00
MEAN	4.87	2.77	7.16	0.68	5.02	2.39	0.014	0.000	258	5.01	0.000	16.5
MAX	26	7.1	27	3.7	36	8.4	0.14	0.00	2060	47	0.00	242
MIN	0.00	0.20	1.5	0.03	0.06	0.18	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	300	165	440	42	279	147	0.8	0.00	15350	308	0.00	982

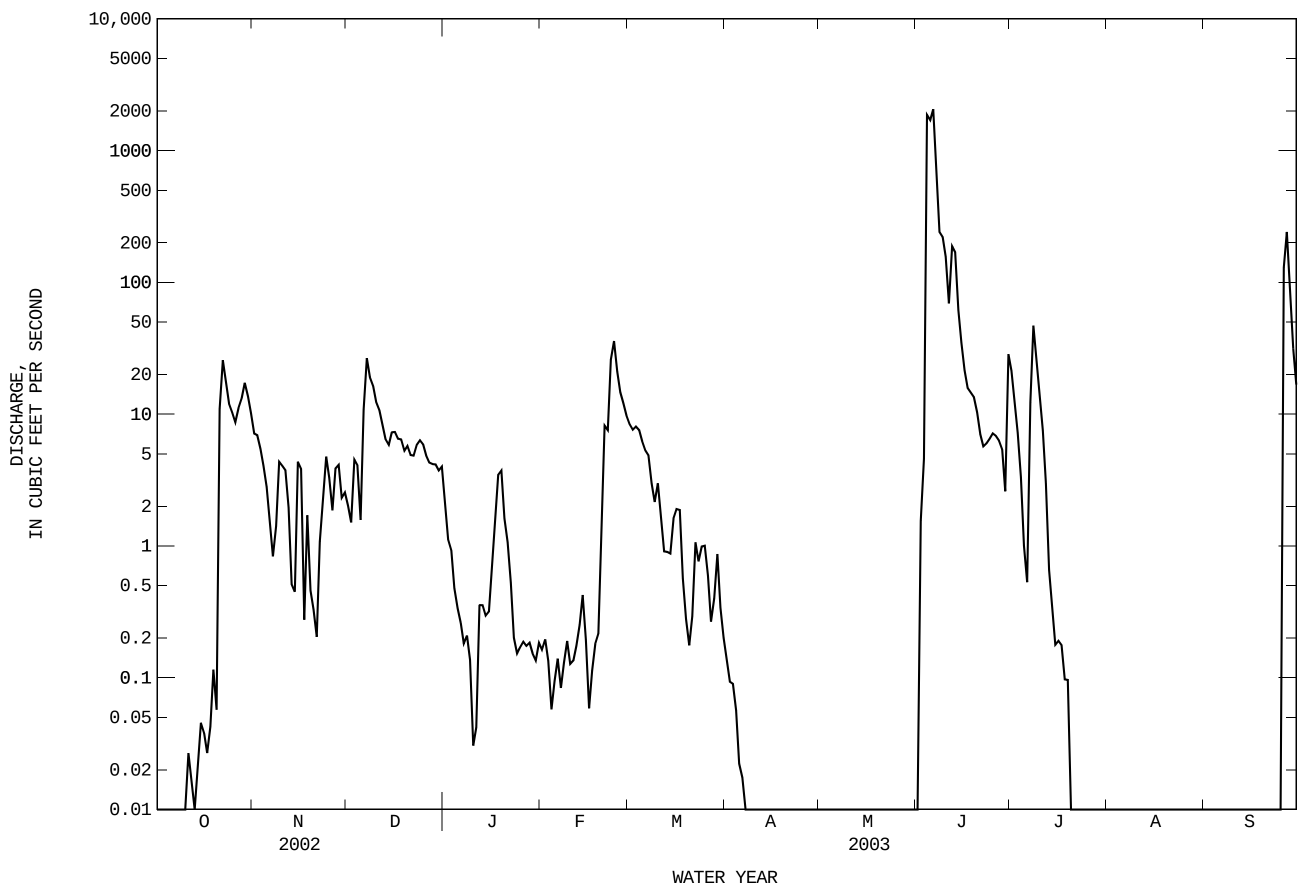
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 2003z, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	190	56.3	54.9	50.9	63.8	51.0	131	285	134	145	55.6	358
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 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1931 - 2003z	
ANNUAL TOTAL	4444.85		9083.15			
ANNUAL MEAN	12.2		24.9		131	
HIGHEST ANNUAL MEAN					1470	1936
LOWEST ANNUAL MEAN					7.56	2000
HIGHEST DAILY MEAN	542	Jul 30	2060	Jun 6	134000	Sep 17 1936
LOWEST DAILY MEAN	0.00	Mar 12	0.00	Oct 1	0.00	Sep 28 1931
ANNUAL SEVEN-DAY MINIMUM	0.00	Apr 26	0.00	Oct 1	0.00	Sep 28 1931
MAXIMUM PEAK FLOW			4140	Jun 4	i301000	Sep 17 1936
MAXIMUM PEAK STAGE			15.92	Jun 4	a43.40	Sep 17 1936
ANNUAL RUNOFF (AC-FT)	8820		18020		95130	
10 PERCENT EXCEEDS	16		13		124	
50 PERCENT EXCEEDS	0.83		0.19		23	
90 PERCENT EXCEEDS	0.00		0.00		0.10	

z Period of regulated streamflow.
a From floodmark.
i From slope-area measurement of peak flow.



WATER-QUALITY RECORDS

PERIOD OF RECORD.--
CHEMICAL DATA: Apr. 1946 to Oct. 1949, Mar. 1964 to June 2003 (discontinued).
BIOCHEMICAL DATA: Mar. 1964 to July 2002.
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 Oct. 1-10, 13, Apr. 7 to June 1, and July 21 to Sept. 25. 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, 259 microsiemens/cm, June 6, 2003.
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, 2,950 microsiemens/cm, June 3; minimum, 259 microsiemens/cm, June 6.
WATER TEMPERATURE: Maximum, 34.7°C, July 11; minimum, 4.3°C, Feb. 26.

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

Date	Time	Instantaneous discharge, cfs (00061)	Specif. conductance, wat unf uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temperature, water, deg C (00010)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Noncarb hardness, wat flt field, mg/L as CaCO3 (00904)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Sodium, water, fltrd, mg/L (00930)	Sodium adsorption ratio (00931)
OCT													
24...	1315	16	1600	7.7	17.8	8.6	97	470	310	108	49.2	133	3
DEC													
17...	1050	5.7	2100	8.2	11.6	10.7	99	670	500	148	72.1	161	3
JUN													
03...	1300	4.4	317	7.7	24.3	5.8	75	120	37	36.5	5.82	11.6	.5
04...	1120	1160	315	8.0	20.0	6.9	82	95	42	28.8	5.63	20.9	.9
24...	1200	6.7	606	8.3	29.8	7.5	105	200	79	50.8	17.4	37.7	1

Date	Potassium, water, fltrd, mg/L (00935)	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)	Sulfate water, fltrd, mg/L (00945)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Residue water, fltrd, sum of constituents mg/L (70301)	Nitrate water, fltrd, mg/L as N (00618)	Nitrite water, fltrd, mg/L as N (00613)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Ammonia water, fltrd, mg/L as N (00608)	Organic nitrogen, water, fltrd, mg/L (00607)	Ammonia + org-N, water, fltrd, mg/L as N (00623)
OCT													
24...	6.20	162	174	296	.38	13.5	889	2.08	.059	2.14	<.04	--	.47
DEC													
17...	7.81	171	330	369	.43	10.7	1200	.29	.010	.30	<.04	--	.50
JUN													
03...	9.32	78	30.7	23.9	<.2	8.63	176	.39	.017	.41	<.04	--	.65
04...	5.88	54	22.5	43.2	<.2	7.64	170	.54	.023	.56	.06	.44	.50
24...	10.8	121	51.7	82.8	.3	14.6	339	--	<.008	<.06	<.04	--	.66

Date	Phosphorus, water, fltrd, mg/L (00666)	Orthophosphate, water, fltrd, mg/L as P (00671)	Orthophosphate, water, fltrd, mg/L (00660)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Cobalt water, fltrd, ug/L (01035)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)
OCT													
24...	<.04	<.02	--	3	.58	4	167	<.06	<.04	<.8	.32	1.4	<10
DEC													
17...	<.04	<.02	--	--	--	--	--	--	--	--	--	--	--
JUN													
03...	.06	.03	.089	7	<.30	2	57	<.06	E.02	<.8	.57	2.2	13
04...	E.02	.03	.089	--	--	5	--	--	--	--	--	--	11
24...	<.04	<.02	--	--	--	12	--	--	--	--	--	--	<8

08136500 Concho River at Paint Rock, TX--Continued

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

Date	Lead, water, fltrd, ug/L (01049)	Lithium water, fltrd, ug/L (01130)	Mangan-ese, water, fltrd, ug/L (01056)	Mercury water, fltrd, ug/L (71890)	Molyb-denum, water, fltrd, ug/L (01060)	Nickel, water, fltrd, ug/L (01065)	Selen-ium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Stront-ium, water, fltrd, ug/L (01080)	Vanad-ium, water, fltrd, ug/L (01085)	Zinc, water, fltrd, ug/L (01090)	Uranium natural water, fltrd, ug/L (22703)
OCT												
24...	<.08	35	1.3	<.02	3.0	3.52	E2	<.20	2020	9	3	2.43
DEC												
17...	--	--	--	--	--	--	--	--	--	--	--	--
JUN												
03...	<.08	6	1.4	<.02	1.2	1.37	<3	<.20	378	9	M	.33
04...	--	6	--	<.02	--	--	<3	--	213	11	--	--
24...	--	14	--	<.02	--	--	<3	--	817	12	--	--

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

SPECIFIC CONDUCTANCE, IN US/CM @ 25C, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

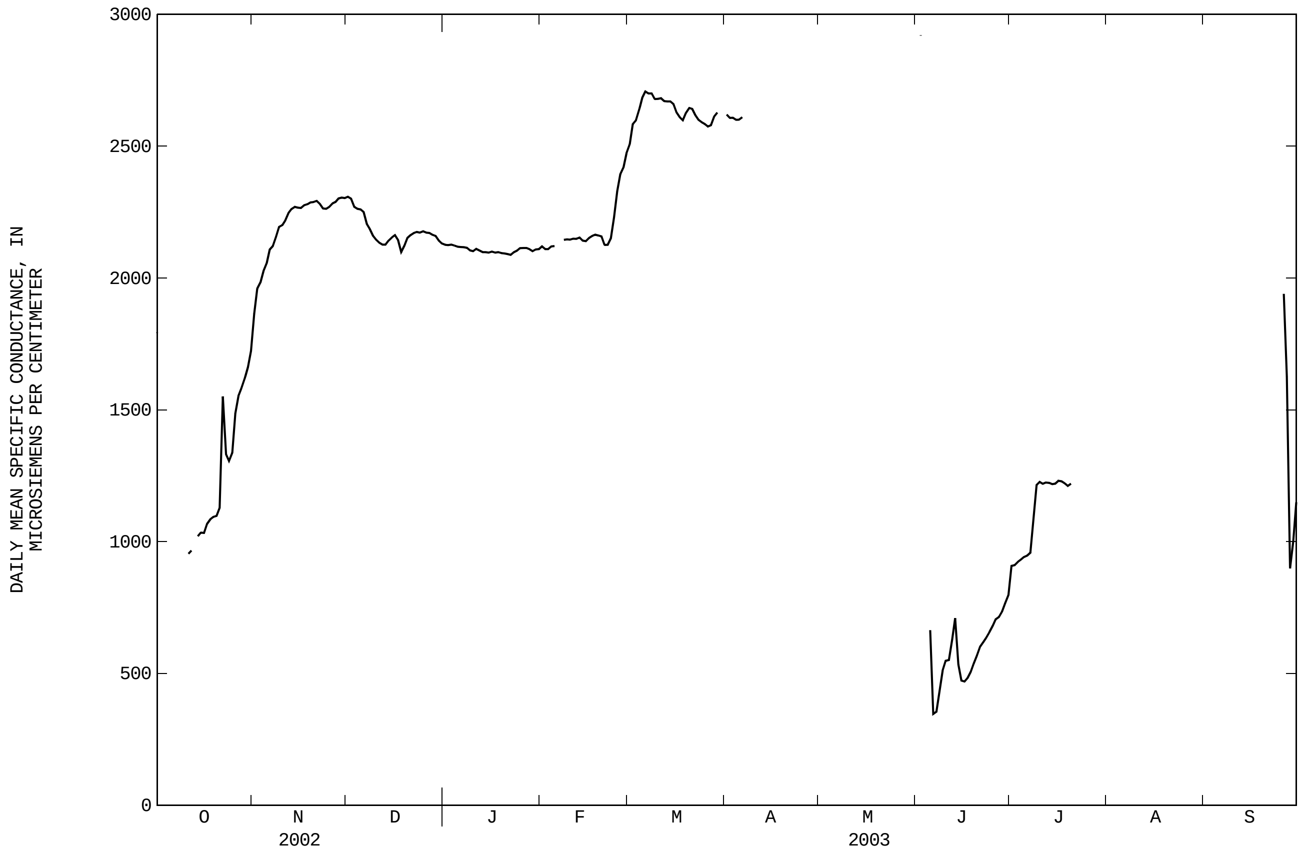
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	---	---	---	1920	1800	1860	2320	2300	2310	2140	2110	2130
2	---	---	---	2000	1910	1960	2310	2290	2300	2140	2110	2120
3	---	---	---	2010	1960	1980	2300	2240	2270	2140	2110	2130
4	---	---	---	2040	2010	2030	2270	2260	2260	2140	2110	2120
5	---	---	---	2090	2030	2060	2270	2250	2260	2130	2090	2120
6	---	---	---	2130	2080	2110	2260	2240	2250	2130	2110	2120
7	---	---	---	2140	2100	2120	2240	2180	2200	2130	2100	2120
8	---	---	---	2180	2130	2160	2200	2160	2190	2130	2100	2110
9	---	---	---	2210	2180	2190	2160	2150	2160	2110	2100	2110
10	---	---	---	2210	2190	2200	2160	2130	2150	2110	2090	2100
11	962	943	954	2240	2200	2220	2150	2120	2130	2120	2100	2110
12	990	960	966	2260	2230	2250	2140	2120	2130	2120	2090	2100
13	---	---	---	2280	2240	2260	2140	2120	2130	2110	2090	2100
14	1030	1020	1020	2280	2260	2270	2150	2130	2140	2110	2080	2100
15	1050	1030	1030	2280	2260	2270	2160	2140	2150	2100	2090	2100
16	1050	1010	1030	2280	2250	2270	2180	2150	2160	2110	2090	2100
17	1080	1050	1070	2290	2270	2280	2180	2090	2140	2110	2080	2100
18	1100	1070	1080	2290	2270	2280	2110	2080	2100	2110	2090	2100
19	1150	1070	1090	2300	2270	2290	2140	2100	2120	2110	2080	2090
20	1120	1080	1100	2300	2270	2290	2170	2130	2150	2100	2080	2090
21	1190	1110	1130	2300	2280	2290	2170	2160	2160	2100	2080	2090
22	1820	1190	1550	2300	2250	2280	2180	2160	2170	2100	2080	2090
23	1810	1130	1330	2270	2240	2260	2180	2160	2170	2110	2090	2100
24	1380	1230	1310	2270	2250	2260	2180	2160	2170	2120	2090	2100
25	1440	1300	1340	2290	2250	2270	2190	2170	2180	2120	2110	2110
26	1540	1440	1490	2290	2270	2280	2180	2160	2170	2120	2110	2110
27	1570	1540	1550	2300	2280	2290	2180	2160	2170	2120	2100	2110
28	1590	1560	1580	2320	2290	2300	2180	2150	2160	2120	2090	2110
29	1650	1590	1620	2310	2300	2310	2170	2150	2160	2110	2090	2100
30	1690	1650	1660	2310	2290	2300	2160	2110	2140	2120	2100	2110
31	1800	1690	1720	---	---	---	2140	2120	2130	2120	2070	2110
MONTH	---	---	---	2320	1800	2210	2320	2080	2180	2140	2070	2110

08136500 Concho River at Paint Rock, TX--Continued

SPECIFIC CONDUCTANCE, IN US/CM @ 25C, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	2130	2090	2120	2530	2480	2510	2630	2580	2620	---	---	---
2	2140	2090	2110	2620	2530	2580	2630	2580	2610	---	---	---
3	2120	2090	2110	2640	2560	2600	2630	2580	2610	---	---	---
4	2130	2110	2120	2680	2600	2640	2610	2560	2600	---	---	---
5	2130	2110	2120	2700	2640	2680	2620	2570	2600	---	---	---
6	---	---	---	2730	2680	2710	2620	2600	2610	---	---	---
7	---	---	---	2720	2700	2700	---	---	---	---	---	---
8	2150	2140	2140	2720	2670	2700	---	---	---	---	---	---
9	2160	2140	2150	2700	2660	2680	---	---	---	---	---	---
10	2160	2120	2150	2700	2660	2680	---	---	---	---	---	---
11	2160	2140	2150	2700	2680	2680	---	---	---	---	---	---
12	2170	2130	2150	2700	2640	2670	---	---	---	---	---	---
13	2160	2140	2150	2680	2630	2670	---	---	---	---	---	---
14	2160	2120	2140	2680	2640	2670	---	---	---	---	---	---
15	2150	2130	2140	2690	2630	2660	---	---	---	---	---	---
16	2170	2130	2150	2640	2610	2630	---	---	---	---	---	---
17	2170	2150	2160	2630	2590	2610	---	---	---	---	---	---
18	2170	2140	2160	2610	2580	2600	---	---	---	---	---	---
19	2170	2150	2160	2640	2610	2630	---	---	---	---	---	---
20	2180	2130	2160	2660	2630	2650	---	---	---	---	---	---
21	2150	2100	2130	2650	2630	2640	---	---	---	---	---	---
22	2140	2110	2130	2640	2600	2620	---	---	---	---	---	---
23	2210	2130	2150	2620	2570	2600	---	---	---	---	---	---
24	2280	2190	2230	2610	2570	2590	---	---	---	---	---	---
25	2380	2280	2330	2600	2570	2580	---	---	---	---	---	---
26	2420	2380	2390	2590	2560	2580	---	---	---	---	---	---
27	2450	2390	2420	2590	2570	2580	---	---	---	---	---	---
28	2500	2440	2470	2620	2580	2610	---	---	---	---	---	---
29	---	---	---	2640	2620	2630	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	---	---	---	941	859	908	---	---	---	---	---	---
2	2930	2860	2920	927	891	911	---	---	---	---	---	---
3	2950	---	---	936	904	922	---	---	---	---	---	---
4	---	300	---	942	914	931	---	---	---	---	---	---
5	997	308	664	947	936	941	---	---	---	---	---	---
6	391	259	346	954	932	947	---	---	---	---	---	---
7	401	322	355	974	946	958	---	---	---	---	---	---
8	482	401	435	1190	974	1070	---	---	---	---	---	---
9	554	482	511	1240	1190	1220	---	---	---	---	---	---
10	561	538	548	1240	1210	1230	---	---	---	---	---	---
11	581	538	551	1240	1180	1220	---	---	---	---	---	---
12	746	567	627	1230	1210	1220	---	---	---	---	---	---
13	800	597	710	1230	1210	1220	---	---	---	---	---	---
14	597	475	534	1220	1200	1220	---	---	---	---	---	---
15	480	461	472	1230	1200	1220	---	---	---	---	---	---
16	480	459	469	1240	1210	1230	---	---	---	---	---	---
17	500	463	482	1240	1200	1230	---	---	---	---	---	---
18	537	463	506	1230	1200	1220	---	---	---	---	---	---
19	565	507	538	1220	1190	1210	---	---	---	---	---	---
20	604	550	569	1220	1210	1220	---	---	---	---	---	---
21	616	594	602	---	---	---	---	---	---	---	---	---
22	631	611	619	---	---	---	---	---	---	---	---	---
23	651	629	637	---	---	---	---	---	---	---	---	---
24	668	644	657	---	---	---	---	---	---	---	---	---
25	700	667	680	---	---	---	---	---	---	---	---	---
26	712	699	705	---	---	---	---	---	---	2410	1490	1940
27	735	696	714	---	---	---	---	---	---	2350	1100	1630
28	769	711	735	---	---	---	---	---	---	1100	811	898
29	778	746	766	---	---	---	---	---	---	1130	925	1000
30	859	774	797	---	---	---	---	---	---	1240	1080	1150
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---



WATER TEMPERATURE, IN (DEGREES C), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	---	---	---	14.3	13.0	13.7	11.3	8.6	9.9	10.3	8.7	9.6
2	---	---	---	13.0	12.4	12.8	13.0	9.1	10.8	9.1	7.4	8.3
3	---	---	---	13.2	12.3	12.5	12.1	10.5	11.7	9.7	7.4	8.5
4	---	---	---	12.3	11.5	11.8	10.5	8.6	9.6	10.6	7.5	8.9
5	---	---	---	13.1	11.1	12.0	8.6	7.5	8.2	12.7	8.0	9.6
6	---	---	---	16.7	11.1	13.4	8.9	6.9	7.9	9.4	8.4	9.0
7	---	---	---	16.6	11.5	13.6	9.1	7.5	8.3	10.1	7.8	8.9
8	---	---	---	18.4	12.2	14.4	9.0	8.4	8.7	11.4	8.2	9.7
9	---	---	---	15.9	14.3	15.2	8.7	8.3	8.5	12.1	10.3	11.0
10	---	---	---	16.1	14.6	15.4	10.3	8.0	8.8	11.7	9.6	10.5
11	24.0	20.0	21.2	17.0	14.5	15.6	10.8	7.7	9.0	10.2	9.1	9.7
12	23.2	20.1	21.3	16.1	14.4	15.2	10.1	8.7	9.3	9.1	8.1	8.4
13	---	---	---	16.7	13.6	14.9	10.3	8.3	9.2	9.5	8.0	8.4
14	18.1	17.5	17.8	15.1	13.5	14.3	10.7	8.2	9.5	10.5	8.0	8.8
15	21.3	16.5	18.2	14.7	13.3	13.8	11.1	8.6	10	10.8	8.2	9.4
16	20.0	16.7	18.1	14.1	12.7	13.3	11.6	9.7	10.6	9.5	8.3	8.9
17	20.4	17.0	18.3	14.4	11.9	13.1	12.2	10.4	11.2	9.8	7.2	8.2
18	18.9	18.1	18.4	13.5	12.5	13.0	13.0	11.2	11.9	9.4	6.5	7.8
19	20.3	17.7	18.6	16.1	11.7	13.6	11.8	10.3	11.1	10.8	6.6	8.5
20	18.8	17.6	18.0	13.0	11.6	12.3	11.4	8.9	10.2	10.7	7.7	9.2
21	18.6	17.1	17.6	13.6	11.3	12.3	10.6	9.3	9.9	11.7	9.2	10.3
22	19.0	17.6	18.2	16.0	11.4	13.1	9.7	8.6	9.3	10.5	9.4	9.9
23	20.0	18.2	18.9	15.8	11.4	13.3	9.3	8.7	9.1	9.9	8.0	8.7
24	18.9	17.6	18.4	15.8	12.5	14.0	8.7	6.7	7.6	8.3	6.7	7.2
25	17.6	16.5	16.9	13.5	12.0	12.7	8.6	5.8	7.0	7.3	6.6	6.9
26	16.5	15.6	15.9	12.0	10.2	11.2	8.6	6.5	7.4	7.3	6.7	6.9
27	17.2	15.2	16.1	11.0	9.3	10.0	8.8	6.7	7.6	10.6	6.8	8.3
28	17.6	16.2	16.7	12.2	8.6	9.9	9.7	6.7	8.1	12.9	8.6	10.2
29	19.4	15.9	17.4	9.6	8.9	9.3	10.1	8.2	9.1	11.1	9.4	10.0
30	17.4	15.8	16.4	10.8	8.8	9.7	11.3	9.9	10.5	12.3	8.7	10.0
31	15.8	14.3	15.0	---	---	---	11.1	9.1	10.0	12.0	9.1	10.2
MONTH	---	---	---	18.4	8.6	13.0	13.0	5.8	9.4	12.9	6.5	9.0

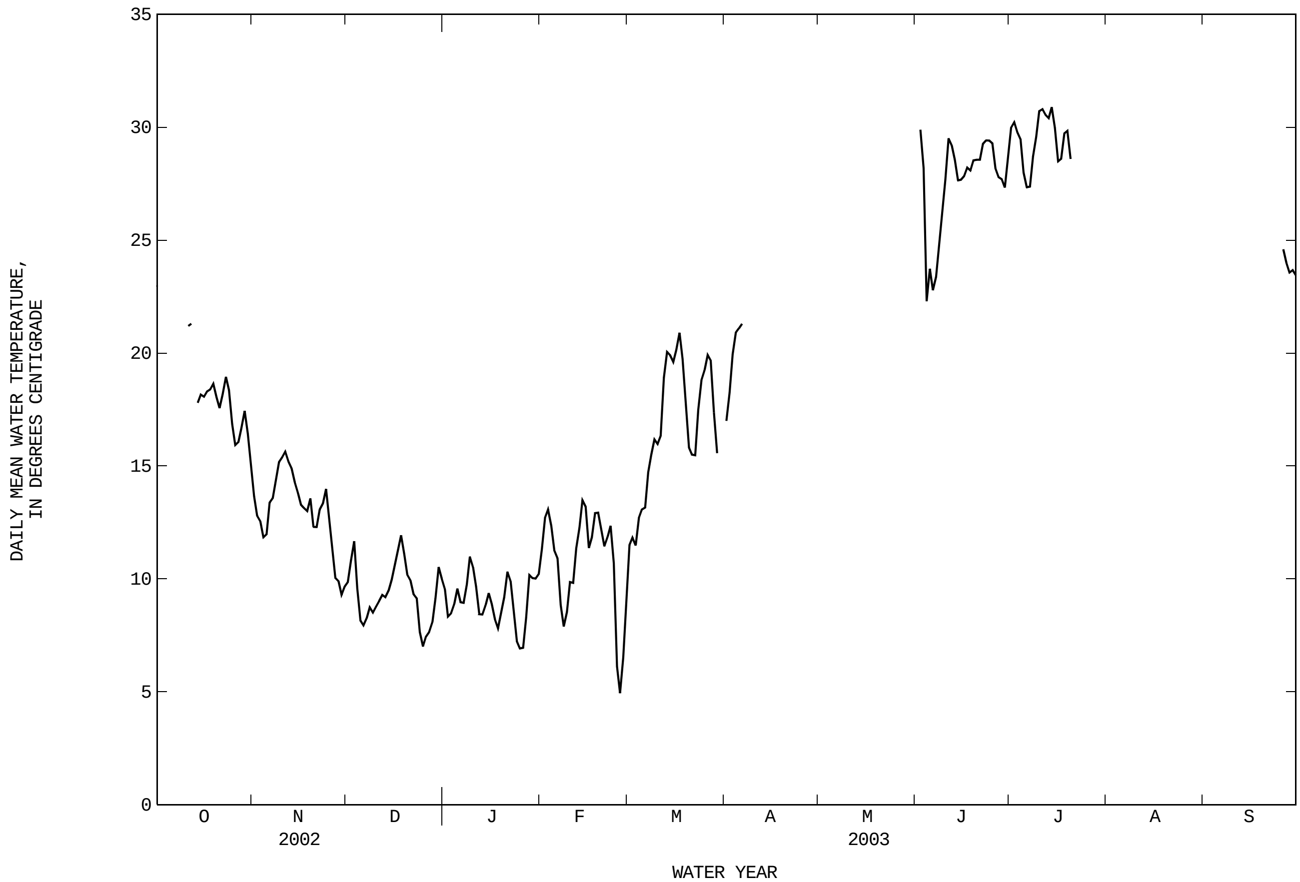
08136500 Concho River at Paint Rock, TX--Continued

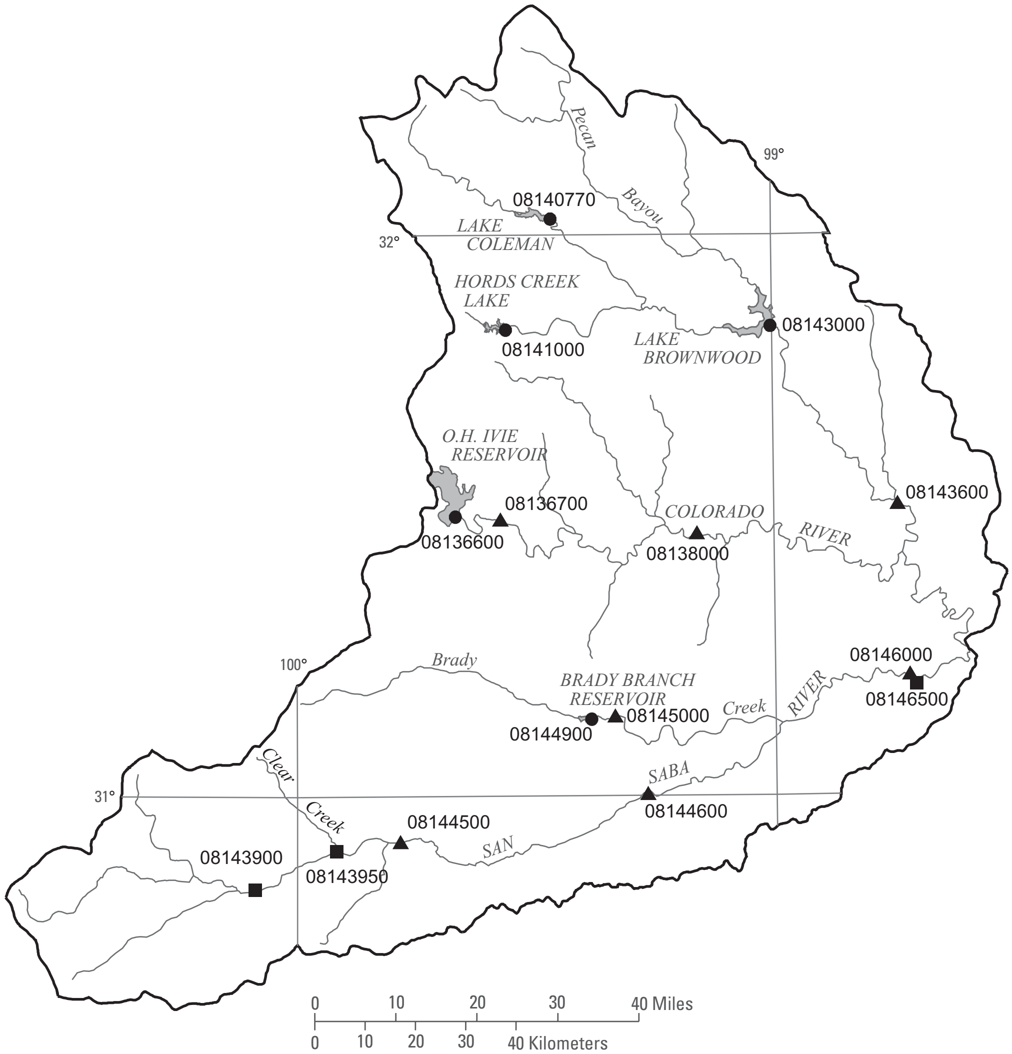
WATER TEMPERATURE, IN (DEGREES C), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	14.2	9.1	11.3	13.9	10.2	11.5	19.0	15.1	17.0	---	---	---
2	14.7	10.8	12.7	12.1	11.4	11.8	20.5	16.2	18.3	---	---	---
3	13.8	12.4	13.1	11.9	10.9	11.5	22.7	18.2	19.9	---	---	---
4	13.7	11.2	12.4	14.8	10.9	12.7	22.2	19.8	20.9	---	---	---
5	11.6	10.9	11.3	14.6	12.0	13.1	22.4	19.4	21.1	---	---	---
6	11.4	10.0	10.9	14.6	11.6	13.2	22.1	20.7	21.3	---	---	---
7	10.0	8.1	8.8	17.7	12.4	14.7	---	---	---	---	---	---
8	8.4	7.3	7.9	17.5	14.4	15.5	---	---	---	---	---	---
9	10.0	7.3	8.5	19.2	14.3	16.2	---	---	---	---	---	---
10	12.3	8.0	9.9	17.7	15.0	16.0	---	---	---	---	---	---
11	11.1	8.4	9.8	17.7	15.2	16.3	---	---	---	---	---	---
12	14.8	9.6	11.3	22.3	16.1	18.9	---	---	---	---	---	---
13	13.0	11.6	12.3	21.5	19.0	20.1	---	---	---	---	---	---
14	14.7	12.4	13.5	23.4	18.0	19.9	---	---	---	---	---	---
15	14.2	12.0	13.2	22.1	18.5	19.6	---	---	---	---	---	---
16	12.1	10.6	11.4	22.2	18.7	20.2	---	---	---	---	---	---
17	13.8	10.0	11.8	22.1	19.8	20.9	---	---	---	---	---	---
18	14.0	11.6	12.9	21.0	18.6	19.7	---	---	---	---	---	---
19	13.8	12.4	12.9	18.6	16.8	17.6	---	---	---	---	---	---
20	12.7	11.6	12.1	16.8	14.8	15.8	---	---	---	---	---	---
21	11.7	11.1	11.4	17.3	13.9	15.5	---	---	---	---	---	---
22	13.7	10.3	11.8	16.6	14.8	15.5	---	---	---	---	---	---
23	13.1	11.4	12.4	21.2	14.6	17.5	---	---	---	---	---	---
24	12.5	8.1	10.7	21.5	16.7	18.8	---	---	---	---	---	---
25	8.1	4.9	6.1	20.4	18.1	19.2	---	---	---	---	---	---
26	5.6	4.3	4.9	21.9	18.0	19.9	---	---	---	---	---	---
27	8.3	4.9	6.5	21.2	18.5	19.7	---	---	---	---	---	---
28	11.2	7.7	9.3	19.4	16.1	17.4	---	---	---	---	---	---
29	---	---	---	16.3	14.8	15.6	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	14.8	4.3	10.8	---	---	---	---	---	---	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	---	---	---	33.0	28.0	30.0	---	---	---	---	---	---
2	31.0	28.6	29.9	33.3	28.6	30.2	---	---	---	---	---	---
3	29.9	27.0	28.2	32.7	27.9	29.8	---	---	---	---	---	---
4	26.2	19.5	22.3	32.6	28.0	29.5	---	---	---	---	---	---
5	24.8	22.0	23.7	28.7	27.3	28.0	---	---	---	---	---	---
6	24.2	21.4	22.8	28.2	26.8	27.3	---	---	---	---	---	---
7	25.2	21.9	23.4	28.4	26.4	27.4	---	---	---	---	---	---
8	27.0	23.6	24.9	31.2	27.5	28.7	---	---	---	---	---	---
9	29.7	24.1	26.4	31.6	28.3	29.6	---	---	---	---	---	---
10	30.8	25.5	27.7	33.9	28.3	30.7	---	---	---	---	---	---
11	33.4	26.9	29.5	34.7	29.0	30.8	---	---	---	---	---	---
12	30.8	27.9	29.2	34.4	28.7	30.6	---	---	---	---	---	---
13	29.6	27.2	28.6	33.0	28.5	30.4	---	---	---	---	---	---
14	31.2	25.3	27.6	33.7	29.0	30.9	---	---	---	---	---	---
15	29.9	26.2	27.7	31.2	29.0	30.0	---	---	---	---	---	---
16	30.6	26.1	27.8	29.5	27.8	28.5	---	---	---	---	---	---
17	31.5	26.1	28.2	31.0	27.1	28.6	---	---	---	---	---	---
18	33.0	25.9	28.1	33.2	27.6	29.7	---	---	---	---	---	---
19	32.9	26.8	28.5	33.2	28.0	29.8	---	---	---	---	---	---
20	31.5	27.3	28.6	29.1	28.2	28.6	---	---	---	---	---	---
21	30.3	27.3	28.6	---	---	---	---	---	---	---	---	---
22	31.7	27.7	29.3	---	---	---	---	---	---	---	---	---
23	30.8	28.2	29.4	---	---	---	---	---	---	---	---	---
24	30.8	28.4	29.4	---	---	---	---	---	---	---	---	---
25	31.2	28.1	29.3	---	---	---	---	---	---	---	---	---
26	28.9	27.6	28.2	---	---	---	---	---	---	25.1	23.8	24.6
27	30.5	26.6	27.8	---	---	---	---	---	---	25.0	23.1	24.0
28	31.4	26.0	27.7	---	---	---	---	---	---	24.7	22.2	23.6
29	29.4	26.1	27.3	---	---	---	---	---	---	24.8	22.8	23.7
30	31.6	26.9	28.8	---	---	---	---	---	---	24.8	22.2	23.5
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

08136500 Concho River at Paint Rock, TX--Continued





EXPLANATION

08144500	▲	Surface-water continuous station and number
08141000	●	Reservoir station and number
08143900	■	Surface-water partial record/stage miscellaneous only station and number

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.--No estimated daily contents. Records good. 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, 187,400 acre-ft, June 1, 2003, elevation, 1,524.97 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 226,500 acre-ft, June 17, elevation, 1,529.02 ft; minimum contents, 187,400 acre-ft, June 1, elevation, 1,524.97 ft.

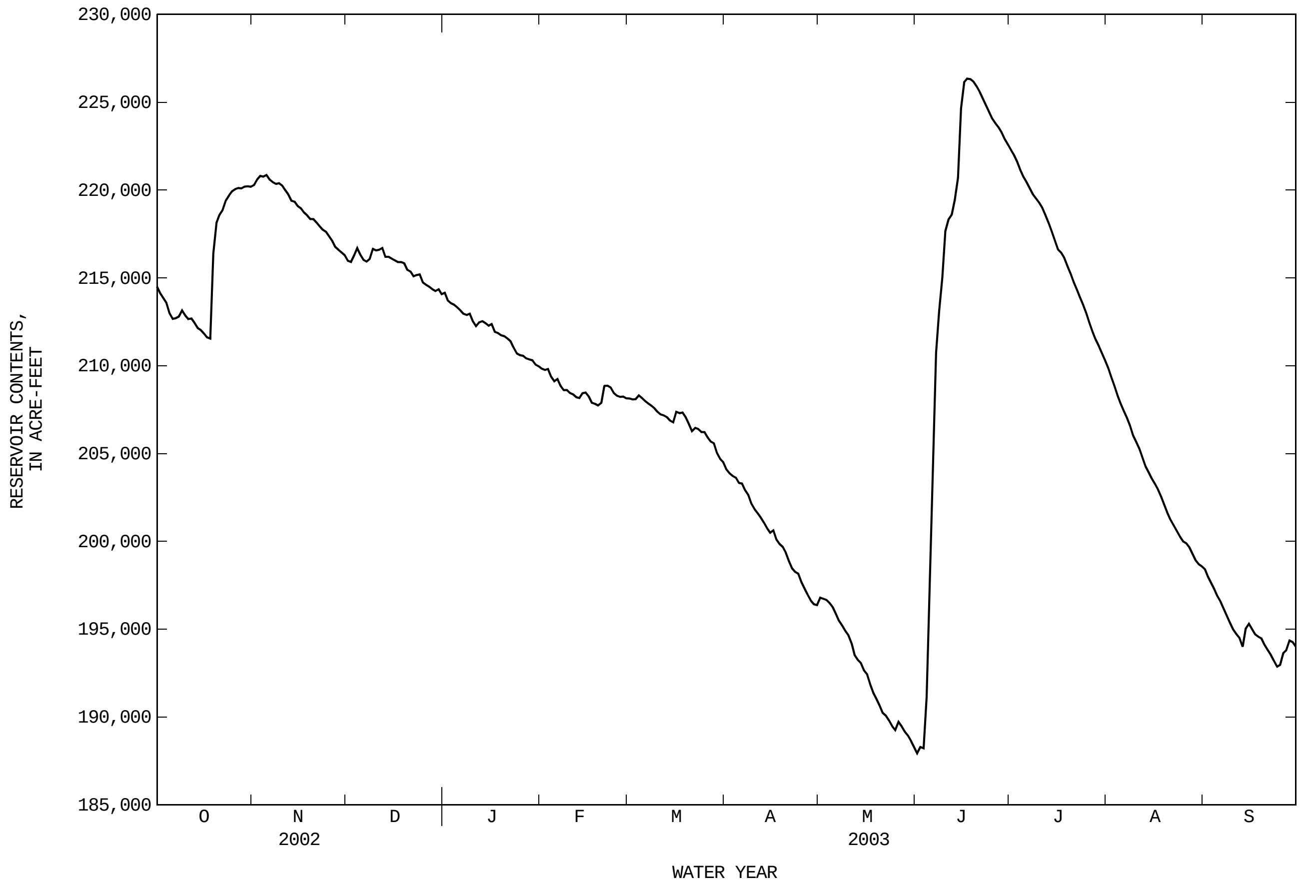
RESERVOIR STORAGE, IN (ACRE-FEET), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	214500	220300	216000	214100	209800	208100	204100	196800	187900	222300	209900	198400
2	214100	220600	215900	213700	209700	208100	203900	196700	188300	222000	209400	198000
3	213900	220800	216300	213600	209800	208100	203700	196700	188200	221600	208900	197600
4	213600	220800	216700	213500	209400	208300	203600	196500	191100	221100	208300	197200
5	213000	220900	216300	213300	209100	208200	203300	196200	196600	220700	207900	196900
6	212700	220600	216000	213100	209200	208000	203300	195900	204600	220400	207400	196500
7	212700	220400	215900	213000	208800	207800	202900	195500	210700	220100	207000	196200
8	212800	220400	216100	212900	208600	207700	202600	195200	213100	219700	206600	195700
9	213100	220400	216600	213000	208600	207600	202100	194900	215000	219500	206000	195400
10	212900	220300	216600	212500	208400	207400	201800	194700	217700	219300	205700	195000
11	212700	220000	216600	212200	208400	207200	201600	194200	218300	219000	205300	194700
12	212700	219700	216700	212500	208200	207200	201300	193500	218600	218600	204700	194500
13	212400	219400	216200	212500	208200	207100	201100	193200	219400	218100	204300	194000
14	212100	219300	216200	212400	208400	206900	200700	193100	220700	217700	203900	195000
15	212000	219100	216100	212300	208500	206800	200500	192600	224600	217100	203600	195300
16	211800	219000	216000	212400	208200	207400	200600	192400	226100	216600	203300	195000
17	211600	218700	215900	211900	207900	207300	200100	191800	226300	216400	202900	194700
18	211500	218600	215900	211900	207800	207300	199800	191400	226300	216100	202500	194600
19	216400	218400	215800	211700	207700	207100	199700	191000	226200	215700	202100	194500
20	218100	218400	215500	211700	207900	206700	199300	190600	225900	215300	201600	194100
21	218600	218100	215400	211500	208800	206300	198900	190200	225600	214800	201200	193800
22	218900	217900	215100	211400	208900	206500	198500	190100	225200	214400	200900	193500
23	219400	217700	215200	211000	208800	206400	198200	189800	224800	213900	200600	193200
24	219700	217600	215200	210700	208400	206200	198200	189500	224400	213500	200300	192900
25	219900	217400	214700	210600	208300	206200	197700	189300	224100	213000	200000	193000
26	220100	217100	214600	210600	208200	205900	197300	189700	223800	212500	199900	193600
27	220100	216800	214500	210400	208200	205700	196900	189500	223600	211900	199700	193800
28	220100	216600	214400	210300	208100	205600	196600	189200	223300	211500	199300	194300
29	220200	216400	214300	210300	---	205000	196400	188900	222900	211100	198900	194300
30	220200	216300	214300	210100	---	204700	196400	188600	222600	210700	198700	194000
31	220200	---	214100	210000	---	204500	---	188300	---	210300	198600	---
MEAN	215500	218900	215600	212000	208600	206900	200400	192500	216200	216600	203500	195000
MAX	220200	220900	216700	214100	209800	208300	204100	196800	226300	222300	209900	198400
MIN	211500	216300	214100	210000	207700	204500	196400	188300	187900	210300	198600	192900
(+)	1528.40	1528.02	1527.79	1527.38	1527.19	1526.81	1525.96	1525.07	1528.64	1527.41	1526.19	1527.70
(@)	+5300	-3900	-2200	-4100	-1900	-3600	-8100	-8100	+34300	-12300	-11700	-4600

CAL YR 2002 MAX 256000 MIN 211500 (@) -41800
WTR YR 2003 MAX 226300 MIN 187900 (@) -20900

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

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 11,391 mi^2, approximately, 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 good. 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 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

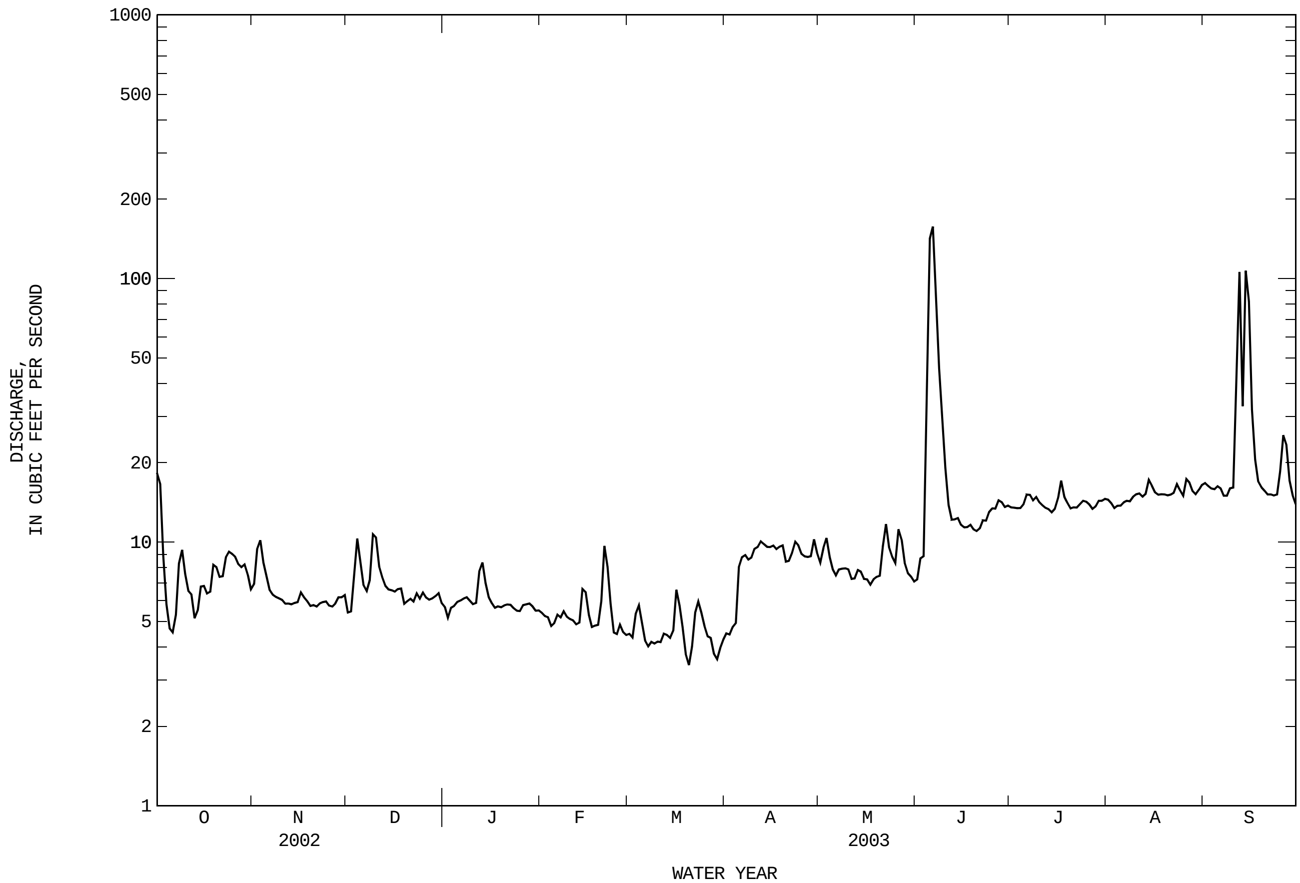
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	6.9	5.4	5.7	5.4	4.5	4.5	8.4	7.2	14	14	17
2	17	9.4	5.5	5.2	5.2	4.3	4.5	9.5	8.7	14	14	16
3	8.9	10	7.7	5.6	5.2	5.3	4.8	10	8.8	13	13	16
4	5.8	8.4	10	5.7	4.8	5.8	4.9	8.8	22	13	14	16
5	4.7	7.4	8.3	5.9	4.9	5.0	8.0	7.9	142	14	14	16
6	4.5	6.6	6.9	6.0	5.3	4.2	8.8	7.5	158	15	14	16
7	5.3	6.3	6.5	6.1	5.2	4.0	8.9	7.9	76	15	14	15
8	8.3	6.2	7.2	6.2	5.5	4.2	8.6	7.9	46	14	14	15
9	9.3	6.1	11	6.0	5.2	4.1	8.7	7.9	31	15	15	16
10	7.6	6.0	10	5.8	5.1	4.2	9.4	7.9	19	14	15	16
11	6.5	5.8	8.1	5.9	5.0	4.2	9.6	7.3	14	14	15	34
12	6.3	5.8	7.3	7.7	4.9	4.5	10	7.3	12	13	15	106
13	5.1	5.8	6.8	8.4	5.0	4.4	9.8	7.8	12	13	15	33
14	5.5	5.9	6.6	7.0	6.6	4.3	9.6	7.7	12	13	17	107
15	6.8	5.9	6.6	6.2	6.5	4.6	9.6	7.3	12	13	16	82
16	6.8	6.4	6.5	5.9	5.3	6.6	9.7	7.2	11	15	15	32
17	6.4	6.2	6.6	5.6	4.8	5.7	9.4	6.9	11	17	15	21
18	6.5	6.0	6.7	5.7	4.8	4.8	9.6	7.2	12	15	15	17
19	8.2	5.7	5.8	5.7	4.9	3.8	9.7	7.4	11	14	15	16
20	8.0	5.8	6.0	5.8	6.0	3.4	8.4	7.4	11	13	15	16
21	7.4	5.7	6.1	5.8	9.7	4.0	8.5	9.6	11	14	15	15
22	7.4	5.8	5.9	5.8	8.0	5.4	9.1	12	12	14	15	15
23	8.8	5.9	6.4	5.6	5.8	5.9	10	9.6	12	14	17	15
24	9.2	6.0	6.1	5.5	4.5	5.4	9.7	8.8	13	14	16	15
25	9.0	5.7	6.4	5.5	4.5	4.8	9.0	8.3	13	14	15	19
26	8.8	5.7	6.2	5.8	4.9	4.4	8.8	11	13	14	17	25
27	8.2	5.9	6.0	5.8	4.6	4.3	8.8	10	14	13	17	23
28	8.0	6.2	6.1	5.8	4.4	3.8	8.8	8.3	14	14	16	17
29	8.2	6.2	6.2	5.7	---	3.6	10	7.6	14	14	15	15
30	7.5	6.3	6.4	5.5	---	4.0	9.1	7.4	14	14	16	14
31	6.6	---	5.9	5.5	---	4.3	---	7.1	---	15	16	---
TOTAL	244.6	192.0	213.2	184.4	152.0	141.8	258.3	256.9	766.7	435	469	796
MEAN	7.89	6.40	6.88	5.95	5.43	4.57	8.61	8.29	25.6	14.0	15.1	26.5
MAX	18	10	11	8.4	9.7	6.6	10	12	158	17	17	107
MIN	4.5	5.7	5.4	5.2	4.4	3.4	4.5	6.9	7.2	13	13	14
AC-FT	485	381	423	366	301	281	512	510	1520	863	930	1580

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	209	108	91.7	92.6	94.6	130	128	297	338	106	155	244
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 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1968 - 2003	
ANNUAL TOTAL	4946.4		4109.9			
ANNUAL MEAN	13.6		11.3		165	
HIGHEST ANNUAL MEAN					719	1987
LOWEST ANNUAL MEAN					11.3	2003
HIGHEST DAILY MEAN	323	May 28	158	Jun 6	31300	Sep 10 1980
LOWEST DAILY MEAN	3.8	Mar 15	3.4	Mar 20	0.00	Jun 22 1974
ANNUAL SEVEN-DAY MINIMUM	4.2	Mar 11	4.1	Mar 26	0.00	Jun 22 1974
MAXIMUM PEAK FLOW			227	Jun 5	45000	Sep 10 1980
MAXIMUM PEAK STAGE			5.36	Jun 5	28.00	Sep 10 1980
ANNUAL RUNOFF (AC-FT)	9810		8150		119200	
10 PERCENT EXCEEDS	18		16		324	
50 PERCENT EXCEEDS	10		8.0		37	
90 PERCENT EXCEEDS	5.2		4.9		5.7	



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 from Oct. 1 to Apr. 2, 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 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.4	9.7	8.3	8.5	8.1	5.7	3.1	5.3	6.4	14	6.4	18
2	7.6	9.8	8.3	8.3	8.3	5.2	2.9	5.0	5.9	13	7.3	14
3	7.6	9.7	9.6	8.3	8.6	6.8	2.4	5.6	5.6	13	7.3	14
4	6.9	9.5	9.8	8.4	8.7	7.5	2.2	6.2	26	13	7.1	14
5	6.4	9.1	9.7	8.3	8.9	6.7	2.0	5.8	246	11	7.3	16
6	6.4	8.7	9.9	8.3	8.5	7.0	1.7	5.6	2770	12	6.5	15
7	6.8	8.7	10	8.3	8.5	6.9	1.7	6.0	1350	12	5.8	14
8	9.1	8.7	11	8.3	8.3	6.4	1.4	6.3	887	13	4.9	13
9	8.6	8.7	14	8.1	8.3	6.1	1.1	6.1	990	14	4.1	13
10	8.2	8.4	14	7.9	8.4	5.7	1.0	5.5	471	15	2.4	13
11	8.5	8.3	15	7.6	8.2	5.4	0.84	5.1	223	14	1.3	14
12	7.4	7.9	15	11	8.3	5.2	0.65	4.5	124	13	0.86	16
13	6.9	7.5	13	12	8.4	5.2	0.53	4.2	145	13	0.39	143
14	6.8	7.1	12	12	10	4.6	0.36	4.2	157	11	0.33	1140
15	7.1	7.2	11	13	11	4.5	2.1	4.4	103	9.8	4.5	277
16	7.3	7.4	11	13	10	4.5	3.9	4.1	70	9.5	8.3	161
17	7.0	7.5	10	12	10	4.3	3.9	4.2	50	10	9.1	85
18	6.9	7.6	9.5	11	12	4.3	3.7	4.1	37	9.8	11	546
19	8.2	7.5	8.6	10	11	4.0	3.7	3.6	30	9.1	11	2050
20	8.4	7.4	8.1	9.4	13	4.0	3.8	3.2	26	7.9	9.9	222
21	8.4	7.5	8.0	9.1	16	4.1	3.7	3.7	23	6.3	9.1	88
22	8.8	7.7	8.1	8.6	17	4.1	4.0	4.1	21	5.6	8.5	52
23	9.6	8.1	7.8	8.0	22	4.1	4.1	4.4	19	9.8	9.4	37
24	11	8.2	8.1	7.6	17	4.2	4.1	4.2	17	11	9.0	29
25	12	8.3	8.3	7.6	11	4.1	4.0	4.7	16	10	9.8	257
26	13	8.2	8.3	7.6	8.0	4.1	3.8	8.8	14	9.1	15	807
27	13	7.9	8.2	7.7	6.9	3.9	3.2	9.1	14	8.1	16	216
28	13	7.7	7.9	8.0	6.3	3.7	3.2	17	14	7.2	17	105
29	13	7.9	8.1	8.3	---	3.5	5.5	14	13	6.9	14	61
30	12	8.2	8.6	7.9	---	3.2	5.8	9.2	14	6.1	13	43
31	10	---	8.8	7.9	---	3.2	---	7.4	---	5.5	22	---
TOTAL	273.3	246.1	308.0	282.0	290.7	152.2	84.38	185.6	7887.9	322.7	258.58	6493
MEAN	8.82	8.20	9.94	9.10	10.4	4.91	2.81	5.99	263	10.4	8.34	216
MAX	13	9.8	15	13	22	7.5	5.8	17	2770	15	22	2050
MIN	6.4	7.1	7.8	7.6	6.3	3.2	0.36	3.2	5.6	5.5	0.33	13
AC-FT	542	488	611	559	577	302	167	368	15650	640	513	12880

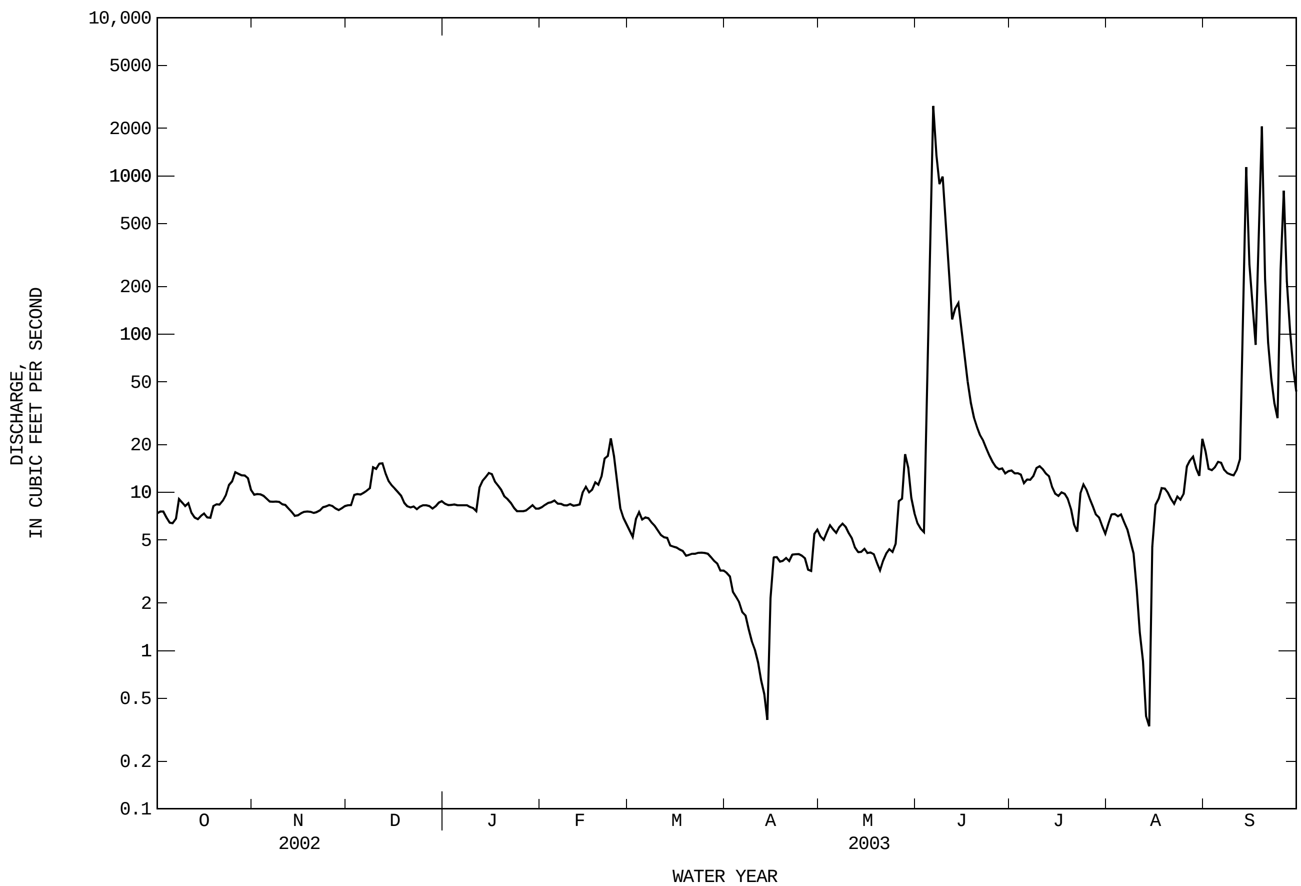
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 2003hz, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	679	153	151	143	167	188	461	1233	731	409	254	528
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 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1931 - 2003hz	
ANNUAL TOTAL	30761.9		16784.46			
ANNUAL MEAN	84.3		46.0		422	
HIGHEST ANNUAL MEAN					2070	1957
LOWEST ANNUAL MEAN					19.6	1999
HIGHEST DAILY MEAN	6700	Jul 3	2770	Jun 6	67000	Oct 14 1930
LOWEST DAILY MEAN	3.9	Aug 26	0.33	Aug 14	0.00	Aug 15 1934
ANNUAL SEVEN-DAY MINIMUM	4.6	Aug 22	0.84	Apr 8	0.00	Aug 15 1934
MAXIMUM PEAK FLOW			4760	Sep 19	76100	Oct 15 1930
MAXIMUM PEAK STAGE			11.18	Sep 19	aa51.80	Oct 15 1930
ANNUAL RUNOFF (AC-FT)	61020		33290		306000	
10 PERCENT EXCEEDS	28		22		626	
50 PERCENT EXCEEDS	9.1		8.3		54	
90 PERCENT EXCEEDS	7.0		3.9		2.6	

h See PERIOD OF RECORD paragraph.
z Period of regulated streamflow.
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 Sept. 2002 (contents), Oct. 2002 to current year.

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

REMARKS.--Records good. The lake is formed by a rolled earthfill dam 3,200 ft long. 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. 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.--Records of diversions may be obtained from the 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.

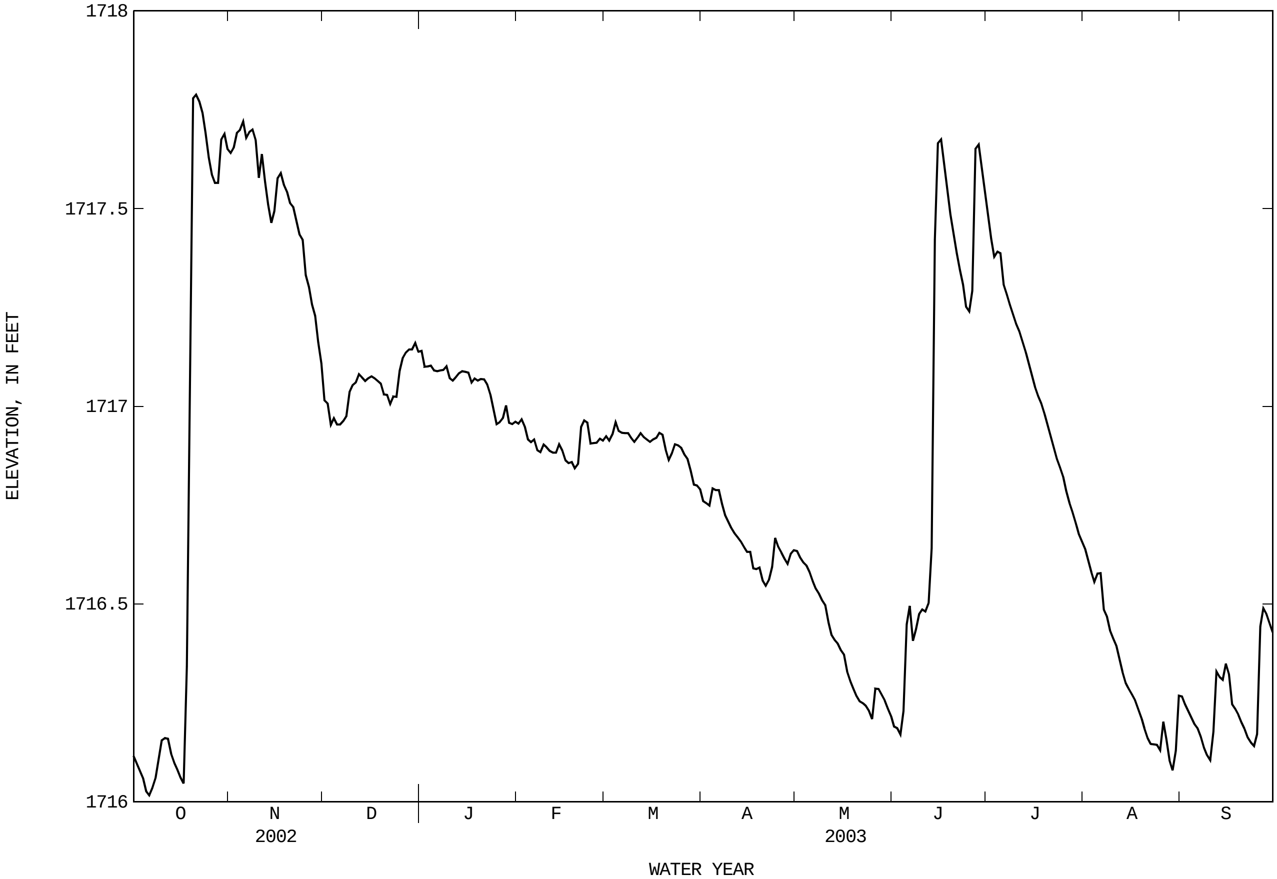
EXTREMES FOR CURRENT YEAR.--Maximum elevation, 1,717.81 ft, Oct. 20, 21; minimum elevation, 1,716.00 ft, Oct. 6.

ELEVATION, IN FEET (NGVD), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1716.12	1717.64	1717.02	1717.14	1716.96	1716.92	1716.76	1716.63	1716.19	1717.48	1716.64	1716.27
2	1716.10	1717.65	1717.01	1717.10	1716.97	1716.91	1716.76	1716.62	1716.19	1717.42	1716.61	1716.25
3	1716.08	1717.69	1716.95	1717.10	1716.95	1716.93	1716.75	1716.61	1716.17	1717.38	1716.58	1716.23
4	1716.06	1717.70	1716.97	1717.10	1716.92	1716.96	1716.79	1716.60	1716.23	1717.39	1716.56	1716.21
5	1716.03	1717.72	1716.95	1717.09	1716.91	1716.94	1716.79	1716.58	1716.45	1717.39	1716.58	1716.20
6	1716.02	1717.68	1716.95	1717.09	1716.92	1716.93	1716.79	1716.56	1716.49	1717.31	1716.58	1716.18
7	1716.04	1717.69	1716.96	1717.09	1716.89	1716.93	1716.75	1716.54	1716.41	1717.28	1716.49	1716.16
8	1716.06	1717.70	1716.97	1717.09	1716.88	1716.93	1716.72	1716.53	1716.44	1717.26	1716.47	1716.14
9	1716.11	1717.67	1717.04	1717.10	1716.90	1716.92	1716.71	1716.51	1716.47	1717.23	1716.43	1716.12
10	1716.15	1717.58	1717.05	1717.07	1716.90	1716.91	1716.69	1716.50	1716.49	1717.21	1716.41	1716.11
11	1716.16	1717.64	1717.06	1717.07	1716.89	1716.92	1716.68	1716.45	1716.48	1717.19	1716.39	1716.18
12	1716.16	1717.57	1717.08	1717.07	1716.88	1716.93	1716.67	1716.42	1716.50	1717.16	1716.36	1716.33
13	1716.12	1717.51	1717.07	1717.08	1716.88	1716.92	1716.66	1716.41	1716.64	1717.14	1716.33	1716.32
14	1716.10	1717.46	1717.06	1717.09	1716.90	1716.92	1716.64	1716.40	1717.42	1717.11	1716.30	1716.31
15	1716.08	1717.49	1717.07	1717.09	1716.89	1716.91	1716.63	1716.38	1717.66	1717.08	1716.29	1716.35
16	1716.06	1717.58	1717.08	1717.09	1716.86	1716.92	1716.63	1716.37	1717.67	1717.05	1716.27	1716.32
17	1716.05	1717.59	1717.07	1717.06	1716.86	1716.92	1716.59	1716.33	1717.61	1717.03	1716.26	1716.25
18	1716.34	1717.56	1717.06	1717.07	1716.86	1716.93	1716.59	1716.31	1717.55	1717.01	1716.23	1716.23
19	1717.44	1717.54	1717.06	1717.07	1716.84	1716.93	1716.59	1716.29	1717.49	1716.98	1716.21	1716.22
20	1717.78	1717.51	1717.03	1717.07	1716.85	1716.89	1716.56	1716.27	1717.43	1716.95	1716.18	1716.20
21	1717.79	1717.50	1717.03	1717.07	1716.95	1716.86	1716.55	1716.25	1717.39	1716.92	1716.16	1716.18
22	1717.77	1717.47	1717.01	1717.06	1716.96	1716.88	1716.56	1716.25	1717.35	1716.89	1716.15	1716.16
23	1717.74	1717.43	1717.03	1717.03	1716.96	1716.90	1716.59	1716.24	1717.31	1716.87	1716.14	1716.15
24	1717.69	1717.42	1717.02	1716.99	1716.91	1716.90	1716.67	1716.23	1717.25	1716.85	1716.14	1716.14
25	1717.63	1717.33	1717.09	1716.95	1716.91	1716.89	1716.64	1716.21	1717.24	1716.82	1716.13	1716.17
26	1717.59	1717.30	1717.12	1716.96	1716.91	1716.88	1716.63	1716.29	1717.29	1716.79	1716.20	1716.44
27	1717.57	1717.26	1717.14	1716.97	1716.92	1716.87	1716.61	1716.29	1717.65	1716.76	1716.16	1716.49
28	1717.57	1717.23	1717.14	1717.00	1716.91	1716.84	1716.60	1716.27	1717.66	1716.73	1716.10	1716.47
29	1717.67	1717.16	1717.14	1716.96	---	1716.80	1716.63	1716.26	1717.60	1716.71	1716.08	1716.45
30	1717.69	1717.11	1717.16	1716.95	---	1716.80	1716.64	1716.24	1717.54	1716.68	1716.13	1716.43
31	1717.65	---	1717.14	1716.96	---	1716.79	---	1716.22	---	1716.66	1716.27	---
MEAN	1716.76	1717.51	1717.05	1717.05	1716.90	1716.90	1716.66	1716.39	1717.01	1717.06	1716.32	1716.26
MAX	1717.79	1717.72	1717.16	1717.14	1716.97	1716.96	1716.79	1716.63	1717.67	1717.48	1716.64	1716.49
MIN	1716.02	1717.11	1716.95	1716.95	1716.84	1716.79	1716.55	1716.21	1716.17	1716.66	1716.08	1716.11

CAL YR 2002 MAX 1723.79 MIN 1698.61
WTR YR 2003 MAX 1717.79 MIN 1716.02

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 Sept. 2002 (contents), Oct. 2002 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.--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.--Records of diversions may be obtained from the 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.

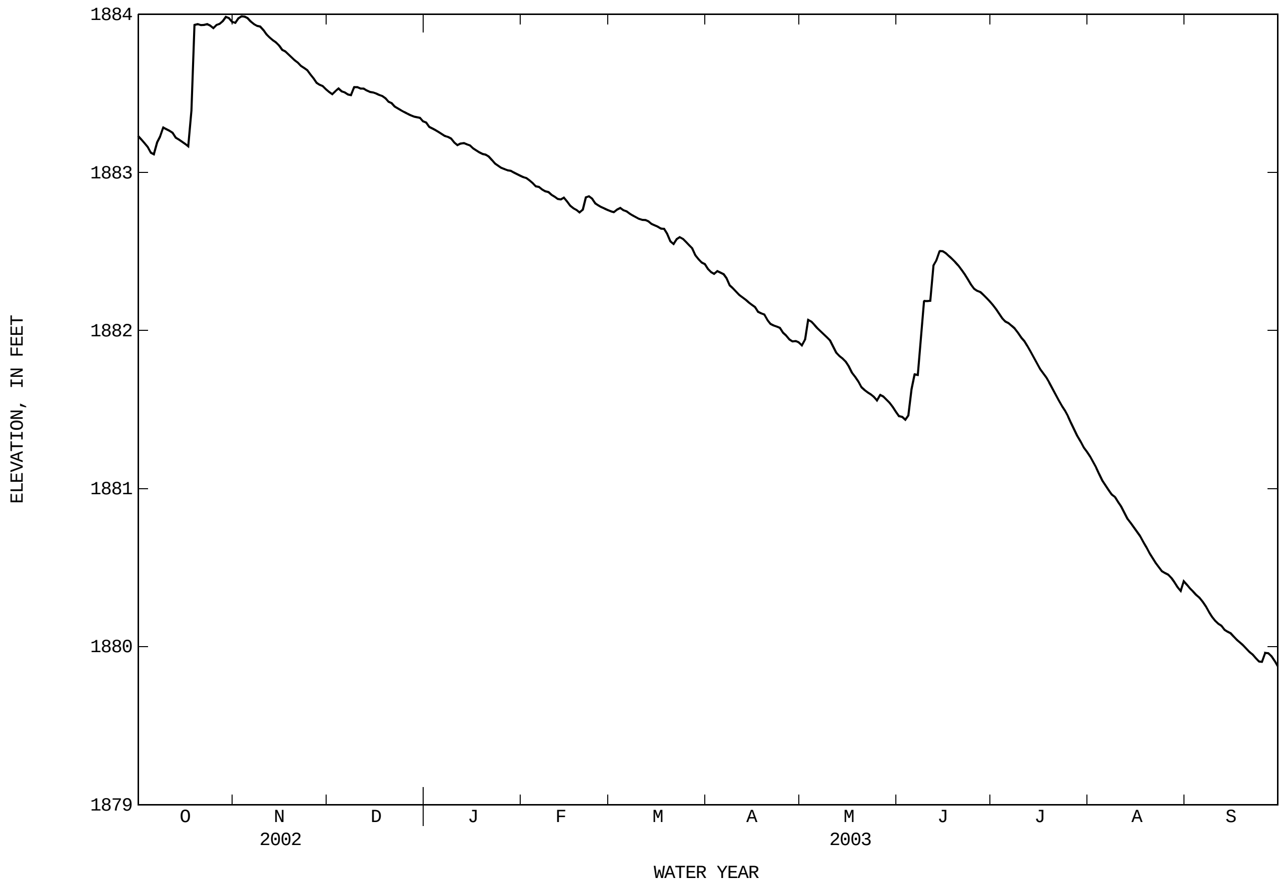
EXTREMES FOR CURRENT YEAR.--Maximum elevation, 1,884.01 ft, Oct. 29; minimum elevation, 1,879.86 ft, Sept. 30.

ELEVATION, IN FEET (NGVD), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1883.23	1883.95	1883.51	1883.32	1882.97	1882.75	1882.39	1881.91	1881.46	1882.16	1881.20	1880.39
2	1883.21	1883.97	1883.50	1883.29	1882.96	1882.75	1882.37	1881.94	1881.45	1882.14	1881.17	1880.37
3	1883.19	1883.99	1883.52	1883.28	1882.95	1882.77	1882.36	1882.07	1881.44	1882.11	1881.13	1880.35
4	1883.16	1883.99	1883.53	1883.27	1882.93	1882.78	1882.38	1882.06	1881.46	1882.08	1881.09	1880.33
5	1883.12	1883.98	1883.51	1883.26	1882.91	1882.76	1882.37	1882.04	1881.63	1882.06	1881.05	1880.31
6	1883.12	1883.95	1883.51	1883.24	1882.91	1882.75	1882.36	1882.01	1881.72	1882.05	1881.02	1880.28
7	1883.19	1883.94	1883.49	1883.23	1882.89	1882.74	1882.33	1881.99	1881.72	1882.03	1880.99	1880.26
8	1883.22	1883.93	1883.49	1883.22	1882.88	1882.73	1882.29	1881.98	1881.93	1882.01	1880.96	1880.22
9	1883.28	1883.92	1883.54	1883.21	1882.88	1882.72	1882.27	1881.96	1882.19	1881.99	1880.95	1880.19
10	1883.27	1883.90	1883.54	1883.19	1882.86	1882.71	1882.25	1881.94	1882.19	1881.96	1880.91	1880.16
11	1883.26	1883.87	1883.53	1883.17	1882.85	1882.70	1882.22	1881.90	1882.19	1881.93	1880.89	1880.14
12	1883.25	1883.85	1883.53	1883.18	1882.83	1882.70	1882.21	1881.86	1882.41	1881.90	1880.85	1880.13
13	1883.22	1883.84	1883.52	1883.19	1882.83	1882.69	1882.20	1881.84	1882.44	1881.87	1880.81	1880.11
14	1883.21	1883.82	1883.51	1883.18	1882.84	1882.67	1882.18	1881.82	1882.50	1881.83	1880.78	1880.09
15	1883.19	1883.80	1883.51	1883.17	1882.82	1882.66	1882.16	1881.80	1882.50	1881.80	1880.76	1880.08
16	1883.18	1883.78	1883.50	1883.15	1882.79	1882.66	1882.15	1881.77	1882.49	1881.76	1880.73	1880.06
17	1883.17	1883.77	1883.49	1883.14	1882.77	1882.64	1882.12	1881.73	1882.47	1881.73	1880.70	1880.04
18	1883.39	1883.75	1883.48	1883.13	1882.76	1882.64	1882.11	1881.71	1882.45	1881.70	1880.66	1880.03
19	1883.93	1883.73	1883.47	1883.12	1882.75	1882.61	1882.10	1881.68	1882.43	1881.67	1880.63	1880.01
20	1883.94	1883.71	1883.45	1883.11	1882.76	1882.56	1882.07	1881.64	1882.41	1881.63	1880.59	1879.99
21	1883.93	1883.69	1883.44	1883.10	1882.84	1882.55	1882.04	1881.62	1882.38	1881.60	1880.56	1879.97
22	1883.93	1883.67	1883.42	1883.08	1882.85	1882.58	1882.03	1881.61	1882.36	1881.56	1880.53	1879.95
23	1883.94	1883.66	1883.40	1883.06	1882.84	1882.59	1882.03	1881.60	1882.32	1881.52	1880.50	1879.93
24	1883.93	1883.65	1883.39	1883.04	1882.81	1882.58	1882.02	1881.58	1882.29	1881.49	1880.48	1879.91
25	1883.91	1883.62	1883.38	1883.03	1882.79	1882.56	1881.98	1881.56	1882.26	1881.46	1880.46	1879.90
26	1883.93	1883.60	1883.37	1883.02	1882.78	1882.54	1881.97	1881.59	1882.25	1881.41	1880.45	1879.96
27	1883.94	1883.57	1883.36	1883.01	1882.77	1882.52	1881.94	1881.58	1882.24	1881.37	1880.43	1879.96
28	1883.96	1883.55	1883.35	1883.01	1882.76	1882.48	1881.93	1881.56	1882.22	1881.33	1880.41	1879.94
29	1883.98	1883.55	1883.35	1883.00	---	1882.45	1881.93	1881.54	1882.21	1881.30	1880.38	1879.91
30	1883.98	1883.53	1883.35	1882.99	---	1882.43	1881.92	1881.52	1882.18	1881.26	1880.35	1879.88
31	1883.95	---	1883.32	1882.98	---	1882.42	---	1881.49	---	1881.23	1880.41	---
MEAN	1883.52	1883.78	1883.46	1883.14	1882.84	1882.63	1882.16	1881.77	1882.14	1881.74	1880.74	1880.10
MAX	1883.98	1883.99	1883.54	1883.32	1882.97	1882.78	1882.39	1882.07	1882.50	1882.16	1881.20	1880.39
MIN	1883.12	1883.53	1883.32	1882.98	1882.75	1882.42	1881.92	1881.49	1881.44	1881.23	1880.35	1879.88

CAL YR 2002 MAX 1886.25 MIN 1883.12
WTR YR 2003 MAX 1883.99 MIN 1879.88

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 Sept. 2002 (contents), Oct. 2002 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, nonrecording 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, nonrecording gage at irrigation outlet structure near right end of dam all at datum 0.50 ft higher. Satellite telemeter at station.

REMARKS.--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. 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.--Records of diversions may be obtained from the Brown County Water Improvement District No. 1.

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.

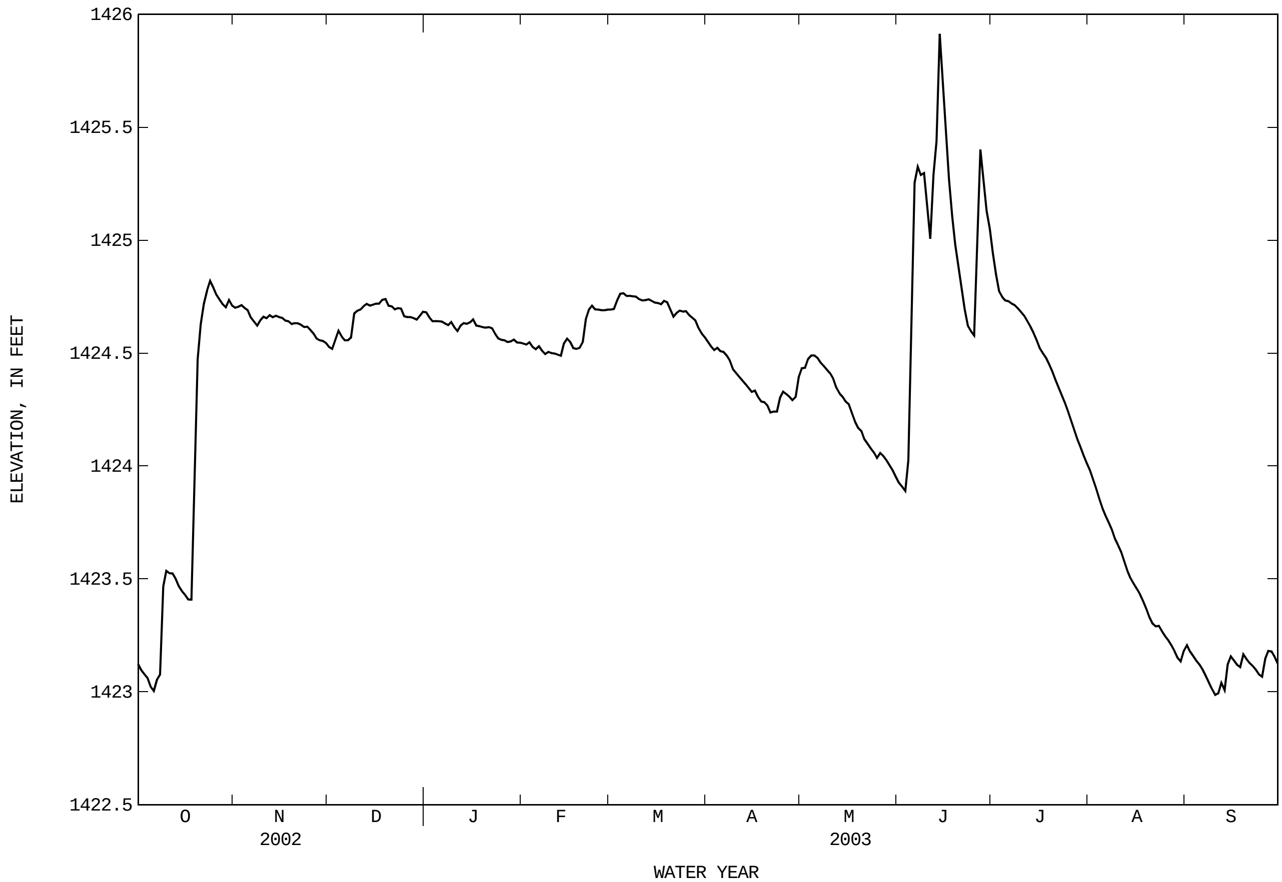
EXTREMES FOR CURRENT YEAR.--Maximum elevation, 1,425.99 ft, June 14; minimum elevation, 1,422.95 ft, Sept. 11.

ELEVATION, IN FEET (NGVD), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1423.12	1424.70	1424.53	1424.68	1424.54	1424.69	1424.55	1424.43	1423.93	1424.94	1423.98	1423.21
2	1423.10	1424.70	1424.52	1424.66	1424.54	1424.70	1424.53	1424.43	1423.91	1424.85	1423.94	1423.18
3	1423.08	1424.71	1424.56	1424.64	1424.55	1424.73	1424.51	1424.47	1423.89	1424.77	1423.90	1423.16
4	1423.06	1424.70	1424.60	1424.64	1424.53	1424.76	1424.52	1424.49	1424.03	1424.75	1423.86	1423.14
5	1423.02	1424.69	1424.57	1424.64	1424.52	1424.77	1424.51	1424.49	1424.50	1424.73	1423.81	1423.12
6	1423.00	1424.66	1424.56	1424.64	1424.53	1424.75	1424.51	1424.48	1425.26	1424.73	1423.78	1423.10
7	1423.05	1424.64	1424.56	1424.63	1424.51	1424.75	1424.49	1424.46	1425.33	1424.72	1423.75	1423.07
8	1423.08	1424.62	1424.57	1424.62	1424.50	1424.75	1424.47	1424.44	1425.29	1424.71	1423.72	1423.04
9	1423.47	1424.64	1424.67	1424.64	1424.51	1424.75	1424.43	1424.43	1425.30	1424.70	1423.68	1423.01
10	1423.54	1424.66	1424.69	1424.61	1424.50	1424.74	1424.41	1424.41	1425.14	1424.68	1423.65	1422.99
11	1423.53	1424.65	1424.69	1424.60	1424.50	1424.73	1424.39	1424.39	1425.01	1424.66	1423.62	1422.99
12	1423.52	1424.67	1424.71	1424.62	1424.49	1424.73	1424.38	1424.35	1425.29	1424.64	1423.58	1423.04
13	1423.50	1424.66	1424.72	1424.63	1424.49	1424.74	1424.36	1424.32	1425.44	1424.62	1423.54	1423.01
14	1423.47	1424.66	1424.71	1424.63	1424.54	1424.73	1424.35	1424.31	1425.91	1424.59	1423.50	1423.12
15	1423.45	1424.66	1424.71	1424.64	1424.56	1424.72	1424.33	1424.29	1425.70	1424.56	1423.48	1423.16
16	1423.43	1424.66	1424.72	1424.65	1424.55	1424.72	1424.33	1424.27	1425.47	1424.52	1423.46	1423.14
17	1423.41	1424.64	1424.72	1424.62	1424.52	1424.72	1424.31	1424.23	1425.27	1424.50	1423.43	1423.12
18	1423.41	1424.64	1424.74	1424.62	1424.52	1424.73	1424.29	1424.19	1425.11	1424.48	1423.40	1423.11
19	1423.96	1424.63	1424.74	1424.62	1424.52	1424.72	1424.28	1424.17	1424.98	1424.45	1423.37	1423.17
20	1424.47	1424.63	1424.71	1424.61	1424.55	1424.69	1424.27	1424.15	1424.88	1424.42	1423.33	1423.14
21	1424.63	1424.63	1424.71	1424.62	1424.65	1424.66	1424.24	1424.12	1424.78	1424.38	1423.30	1423.13
22	1424.72	1424.63	1424.69	1424.61	1424.69	1424.68	1424.24	1424.10	1424.69	1424.35	1423.29	1423.11
23	1424.78	1424.62	1424.70	1424.59	1424.71	1424.69	1424.24	1424.08	1424.62	1424.31	1423.29	1423.10
24	1424.82	1424.62	1424.70	1424.57	1424.69	1424.68	1424.30	1424.06	1424.60	1424.28	1423.27	1423.08
25	1424.79	1424.60	1424.66	1424.56	1424.69	1424.69	1424.33	1424.04	1424.58	1424.24	1423.25	1423.07
26	1424.76	1424.59	1424.66	1424.56	1424.69	1424.67	1424.32	1424.06	1424.89	1424.20	1423.23	1423.15
27	1424.74	1424.57	1424.66	1424.55	1424.69	1424.66	1424.31	1424.04	1425.40	1424.16	1423.21	1423.18
28	1424.72	1424.56	1424.65	1424.55	1424.69	1424.64	1424.29	1424.03	1425.25	1424.12	1423.18	1423.18
29	1424.70	1424.55	1424.65	1424.56	---	1424.61	1424.31	1424.00	1425.13	1424.08	1423.15	1423.15
30	1424.73	1424.55	1424.66	1424.55	---	1424.59	1424.39	1423.98	1425.05	1424.05	1423.13	1423.12
31	1424.71	---	1424.68	1424.55	---	1424.57	---	1423.95	---	1424.01	1423.18	---
MEAN	1423.86	1424.64	1424.66	1424.61	1424.57	1424.70	1424.37	1424.25	1424.95	1424.49	1423.49	1423.11
MAX	1424.82	1424.71	1424.74	1424.68	1424.71	1424.77	1424.55	1424.49	1425.91	1424.94	1423.98	1423.21
MIN	1423.00	1424.55	1424.52	1424.55	1424.49	1424.57	1424.24	1423.95	1423.89	1424.01	1423.13	1422.99

CAL YR 2002 MAX 1431.72 MIN 1420.36
WTR YR 2003 MAX 1425.91 MIN 1422.99

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.--Records good except those for estimated daily discharges, which are poor. 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 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	203	12	13	12	30	15	7.6	9.4	520	4.3	421
2	11	212	11	17	12	28	14	57	7.0	402	4.0	73
3	8.7	216	12	22	12	e32	13	21	6.1	313	3.6	30
4	8.1	215	21	29	11	54	12	15	6.0	165	2.9	18
5	5.4	204	31	21	11	62	12	12	244	61	2.3	13
6	5.0	208	22	16	12	49	11	11	2710	50	2.1	11
7	4.9	197	22	14	12	45	10	11	2160	46	2.1	10
8	9.4	195	20	12	12	36	9.4	12	1070	41	1.8	9.2
9	227	137	27	11	12	32	8.9	11	1470	34	1.4	8.7
10	467	47	76	10	12	30	7.7	9.4	870	29	1.3	8.4
11	103	25	40	9.8	13	29	7.7	7.6	667	26	1.6	8.1
12	46	18	30	14	14	31	8.0	6.5	678	22	2.3	160
13	28	16	25	32	16	28	10	6.0	921	19	3.1	82
14	22	15	22	33	18	26	10	5.2	3590	17	10	2210
15	17	15	30	20	25	25	9.5	4.6	2260	14	50	895
16	14	16	27	16	28	25	11	4.5	1530	12	19	188
17	13	16	23	13	20	23	10	4.3	1040	11	11	61
18	12	15	23	12	18	21	9.0	4.3	783	9.5	8.0	37
19	18	15	22	13	17	21	9.0	4.1	624	9.8	6.1	554
20	34	15	21	15	20	21	6.8	3.9	495	8.9	5.0	202
21	25	16	30	14	78	21	5.4	4.1	392	7.4	4.4	66
22	19	15	26	12	185	24	5.9	4.5	333	6.3	4.1	38
23	25	14	21	12	120	25	7.4	10	297	7.0	4.4	27
24	31	13	20	11	61	28	11	15	174	7.5	5.8	21
25	108	13	20	10	46	22	16	12	60	6.6	13	19
26	236	12	35	10	37	17	12	10	41	5.5	9.3	19
27	231	12	27	10	35	16	9.8	9.5	368	4.4	6.3	44
28	209	12	19	10	33	13	7.0	9.5	851	4.1	4.8	40
29	208	13	17	11	---	13	6.2	11	716	4.5	4.8	27
30	202	13	15	12	---	14	6.6	9.4	667	5.2	4.8	20
31	208	---	14	12	---	13	---	8.9	---	4.4	55	---
TOTAL	2565.5	2133	761	466.8	902	854	291.3	321.9	25039.5	1873.1	258.6	5320.4
MEAN	82.8	71.1	24.5	15.1	32.2	27.5	9.71	10.4	835	60.4	8.34	177
MAX	467	216	76	33	185	62	16	57	3590	520	55	2210
MIN	4.9	12	11	9.8	11	13	5.4	3.9	6.0	4.1	1.3	8.1
AC-FT	5090	4230	1510	926	1790	1690	578	638	49670	3720	513	10550

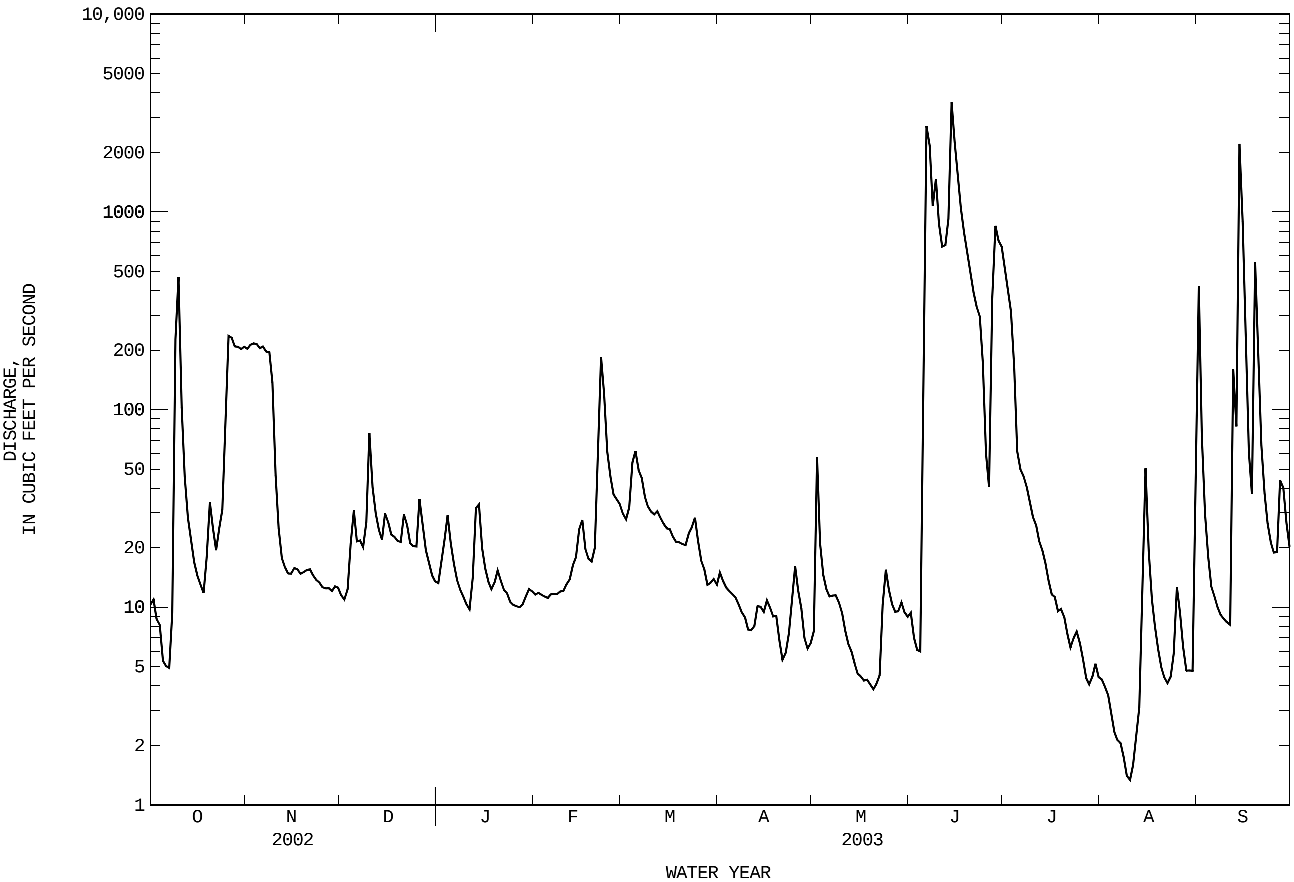
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	142	83.3	174	131	219	226	209	264	346	142	24.8	77.8
MAX	987	1227	4741	1965	4416	2361	3510	1975	2898	3272	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 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1968 - 2003	
ANNUAL TOTAL	112783.1		40787.1			
ANNUAL MEAN	309		112		170	
HIGHEST ANNUAL MEAN					1245	1992
LOWEST ANNUAL MEAN					9.01	1984
HIGHEST DAILY MEAN	24400	Jul 9	3590	Jun 14	37000	Apr 27 1990
LOWEST DAILY MEAN	1.5	May 18	1.3	Aug 10	0.00	Jun 29 1974
ANNUAL SEVEN-DAY MINIMUM	1.9	May 18	1.8	Aug 5	0.00	Jun 29 1974
MAXIMUM PEAK FLOW			4870	Sep 14	38300	Apr 27 1990
MAXIMUM PEAK STAGE			12.46	Sep 14	42.15	Apr 27 1990
ANNUAL RUNOFF (AC-FT)	223700		80900		122800	
10 PERCENT EXCEEDS	229		213		251	
50 PERCENT EXCEEDS	14		16		14	
90 PERCENT EXCEEDS	5.9		5.3		2.8	

e Estimated

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 except those for Oct. 29 to Nov. 26, which are fair. 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 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.1	57	38	42	41	39	17	18	32	17	12	14
2	7.9	60	38	42	42	40	17	18	27	17	11	15
3	8.2	58	41	42	42	42	19	19	23	19	11	14
4	7.8	56	43	42	41	43	19	18	25	16	11	14
5	7.6	52	41	42	41	42	18	18	38	17	11	14
6	7.8	50	39	43	42	39	18	18	42	18	11	15
7	14	47	39	43	42	39	18	18	35	19	9.8	14
8	29	48	40	43	51	40	17	19	30	20	9.6	13
9	65	46	45	43	48	40	17	18	28	18	9.5	12
10	50	42	44	42	43	39	17	18	26	18	9.3	12
11	30	41	41	42	44	40	18	16	24	17	9.7	12
12	21	39	41	44	40	41	19	15	24	15	9.9	12
13	16	38	41	46	35	40	19	15	23	14	10	12
14	13	38	40	45	43	36	19	15	24	13	11	13
15	13	37	41	43	46	37	19	15	26	13	11	13
16	12	40	41	42	42	37	20	15	25	12	11	13
17	12	39	41	41	40	37	19	14	24	13	11	13
18	12	40	41	41	40	36	19	13	23	13	11	13
19	17	39	41	42	40	33	22	13	22	12	10	14
20	18	39	42	42	43	32	20	12	21	11	10	15
21	17	35	42	42	54	32	19	13	21	11	11	15
22	17	36	42	41	55	40	19	14	20	11	11	15
23	21	38	42	41	47	44	21	13	20	10	11	15
24	22	38	45	41	42	41	22	14	19	11	12	15
25	1510	37	45	42	40	37	20	16	19	11	13	16
26	2860	37	45	42	40	35	20	22	19	11	13	21
27	686	38	44	42	40	33	20	22	18	11	14	22
28	206	38	43	42	39	32	19	529	19	11	15	19
29	115	38	44	41	---	31	18	171	18	11	14	17
30	79	39	45	41	---	31	19	70	18	11	13	15
31	65	---	43	41	---	32	---	43	---	12	13	---
TOTAL	5967.4	1280	1298	1308	1203	1160	568	1252	733	433	349.8	437
MEAN	192	42.7	41.9	42.2	43.0	37.4	18.9	40.4	24.4	14.0	11.3	14.6
MAX	2860	60	45	46	55	44	22	529	42	20	15	22
MIN	7.6	35	38	41	35	31	17	12	18	10	9.3	12
AC-FT	11840	2540	2570	2590	2390	2300	1130	2480	1450	859	694	867

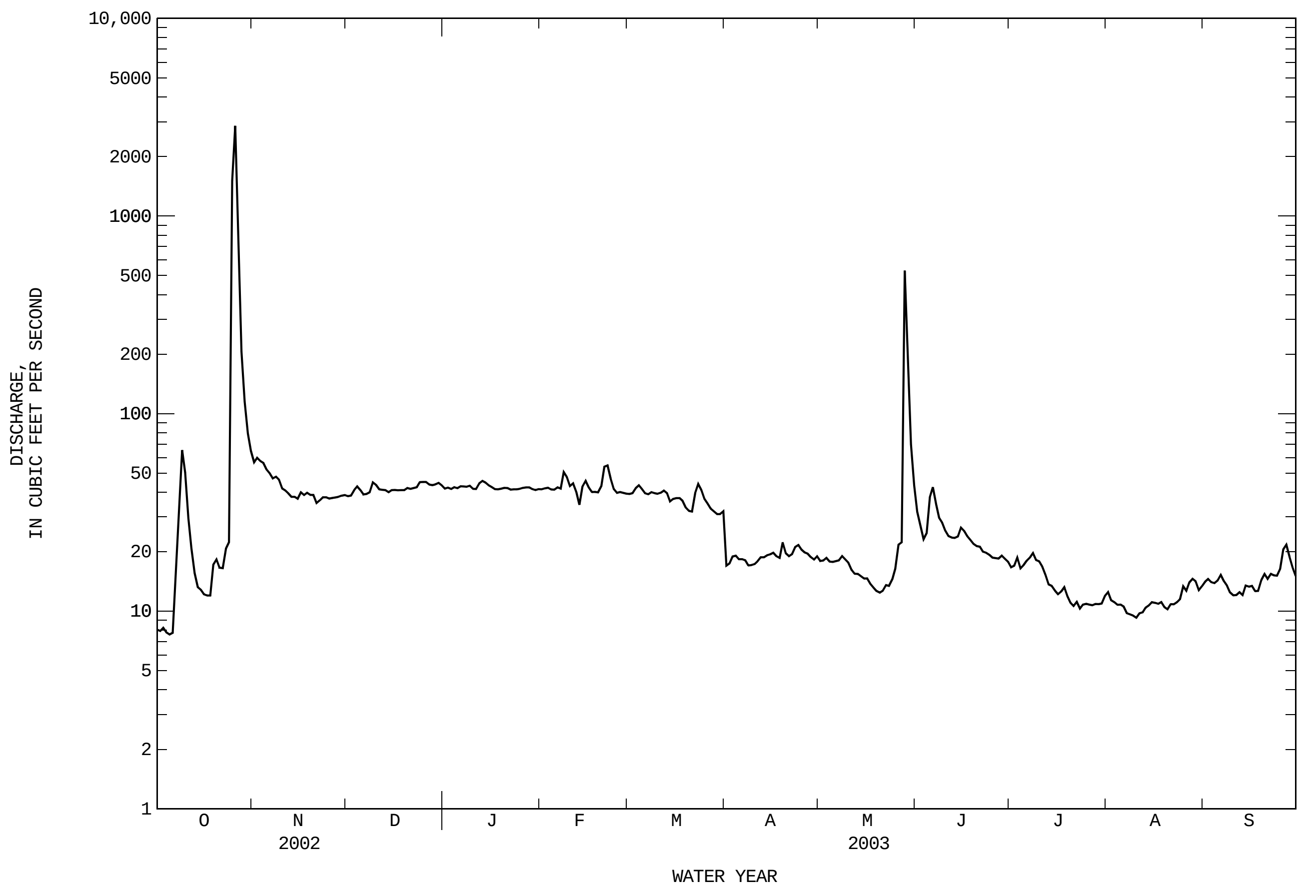
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1916 - 2003h, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	88.9	45.2	31.9	32.0	38.0	32.8	66.7	75.2	55.8	99.3	41.5	131
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 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1916 - 2003h	
ANNUAL TOTAL	12646.6		15989.2			
ANNUAL MEAN	34.6		43.8		61.6	
HIGHEST ANNUAL MEAN					485	1938
LOWEST ANNUAL MEAN					6.12	1952
HIGHEST DAILY MEAN	2860	Oct 26	2860	Oct 26	53300	Jul 23 1938
LOWEST DAILY MEAN	3.6	Jun 27	7.6	Oct 5	0.00	Jul 12 1918
ANNUAL SEVEN-DAY MINIMUM	4.2	Jun 22	8.8	Oct 1	0.00	Jul 19 1918
MAXIMUM PEAK FLOW			7800	Oct 25	i130000	Jul 23 1938
MAXIMUM PEAK STAGE			10.90	Oct 25	a22.20	Jul 23 1938
ANNUAL RUNOFF (AC-FT)	25080		31710		44600	
10 PERCENT EXCEEDS	41		44		58	
50 PERCENT EXCEEDS	17		23		22	
90 PERCENT EXCEEDS	6.9		11		2.3	

h See PERIOD OF RECORD paragraph.
i From slope-area measurement of peak flow.
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 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.15	94	50	50	46	59	e40	23	68	13	0.85	0.19
2	0.15	100	50	49	45	57	39	24	51	12	0.48	0.16
3	0.15	99	54	47	47	64	37	23	41	10	0.25	2.8
4	0.15	91	55	47	45	65	30	23	61	9.4	0.14	8.7
5	0.13	87	53	48	44	63	25	23	100	9.0	0.10	9.9
6	0.12	77	54	46	46	62	26	21	154	11	0.07	10
7	0.17	74	52	47	45	61	26	20	85	17	0.06	10
8	0.49	69	54	47	46	57	24	18	66	15	0.05	10
9	5.8	66	67	48	48	55	25	18	59	15	0.05	9.7
10	6.9	63	61	47	51	54	25	16	51	15	0.05	8.2
11	42	60	58	47	54	54	25	14	41	15	0.06	10
12	48	56	56	51	52	54	24	15	37	14	0.07	92
13	35	55	57	50	50	54	24	16	32	14	0.12	38
14	27	58	53	49	61	53	23	16	31	13	0.15	32
15	23	54	52	49	54	53	25	15	29	12	0.14	69
16	19	54	51	49	49	55	27	14	31	11	0.13	32
17	16	54	51	49	53	51	26	13	30	11	0.13	23
18	15	53	50	47	51	52	27	12	31	8.9	0.10	112
19	18	53	49	47	48	50	25	11	28	7.6	0.08	206
20	19	53	47	47	56	48	25	10	26	6.5	0.05	60
21	23	52	48	47	85	48	25	9.5	24	5.1	0.05	29
22	22	51	49	47	104	53	27	10	23	3.7	0.05	22
23	36	51	50	46	84	55	27	11	19	3.7	0.06	21
24	38	48	52	45	76	55	27	10	19	5.5	0.06	21
25	189	50	50	45	70	60	25	11	19	6.2	0.08	22
26	3590	49	50	46	66	57	24	39	19	4.9	0.13	40
27	1180	50	51	47	63	53	25	43	18	3.0	0.17	54
28	467	50	51	49	60	48	25	24	17	2.0	0.14	39
29	247	49	51	49	---	45	24	269	15	1.4	0.10	34
30	155	50	53	48	---	e44	23	242	13	1.1	0.09	31
31	109	---	51	47	---	e43	---	121	---	1.2	0.15	---
TOTAL	6332.21	1870	1630	1477	1599	1682	800	1134.5	1238	277.2	4.21	1056.65
MEAN	204	62.3	52.6	47.6	57.1	54.3	26.7	36.6	41.3	8.94	0.14	35.2
MAX	3590	100	67	51	104	65	40	269	154	17	0.85	206
MIN	0.12	48	47	45	44	43	23	9.5	13	1.1	0.05	0.16
AC-FT	12560	3710	3230	2930	3170	3340	1590	2250	2460	550	8.4	2100

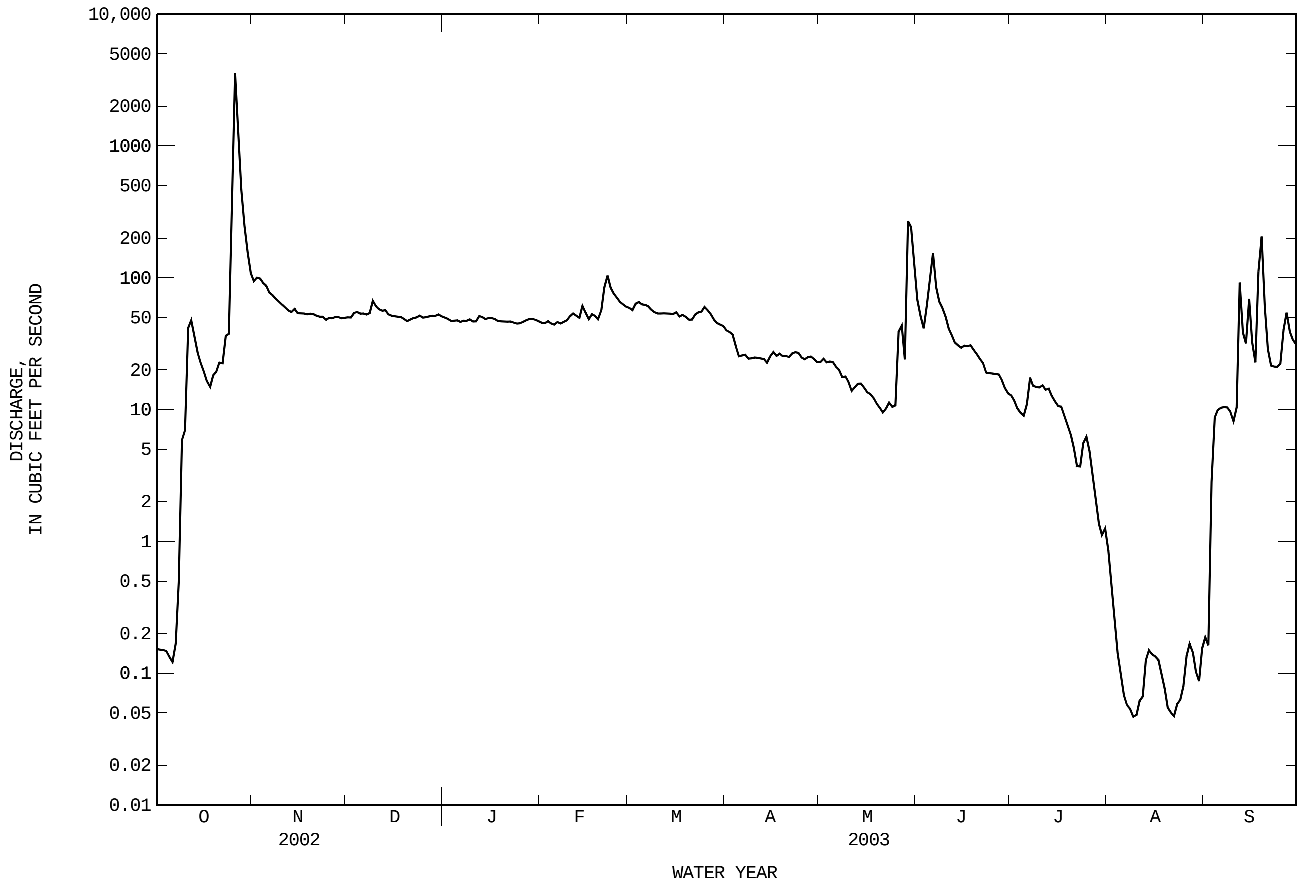
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1979 - 2003h, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	60.2	112	79.0	62.5	69.1	59.5	48.1	57.4	84.1	67.5	45.4	167
MAX	204	1397	516	282	400	160	144	167	511	901	543	1631
(WY)	2003	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 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1979 - 2003h	
ANNUAL TOTAL	15201.78		19100.77			
ANNUAL MEAN	41.6		52.3		76.1	
HIGHEST ANNUAL MEAN					256	1990
LOWEST ANNUAL MEAN					15.4	2000
HIGHEST DAILY MEAN	3590	Oct 26	3590	Oct 26	23900	Sep 8 1980
LOWEST DAILY MEAN	0.12	Oct 6	0.05	Aug 8	0.00	Sep 26 1999
ANNUAL SEVEN-DAY MINIMUM	0.14	Sep 30	0.06	Aug 6	0.00	Sep 26 1999
MAXIMUM PEAK FLOW			7240	Oct 26	66000	Sep 8 1980
MAXIMUM PEAK STAGE			9.07	Oct 26	25.50	Sep 8 1980
ANNUAL RUNOFF (AC-FT)	30150		37890		55120	
10 PERCENT EXCEEDS	54		64		88	
50 PERCENT EXCEEDS	27		40		37	
90 PERCENT EXCEEDS	0.28		0.18		3.5	

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 Sept. 2002 (contents), Oct. 2002 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 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. 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.--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.

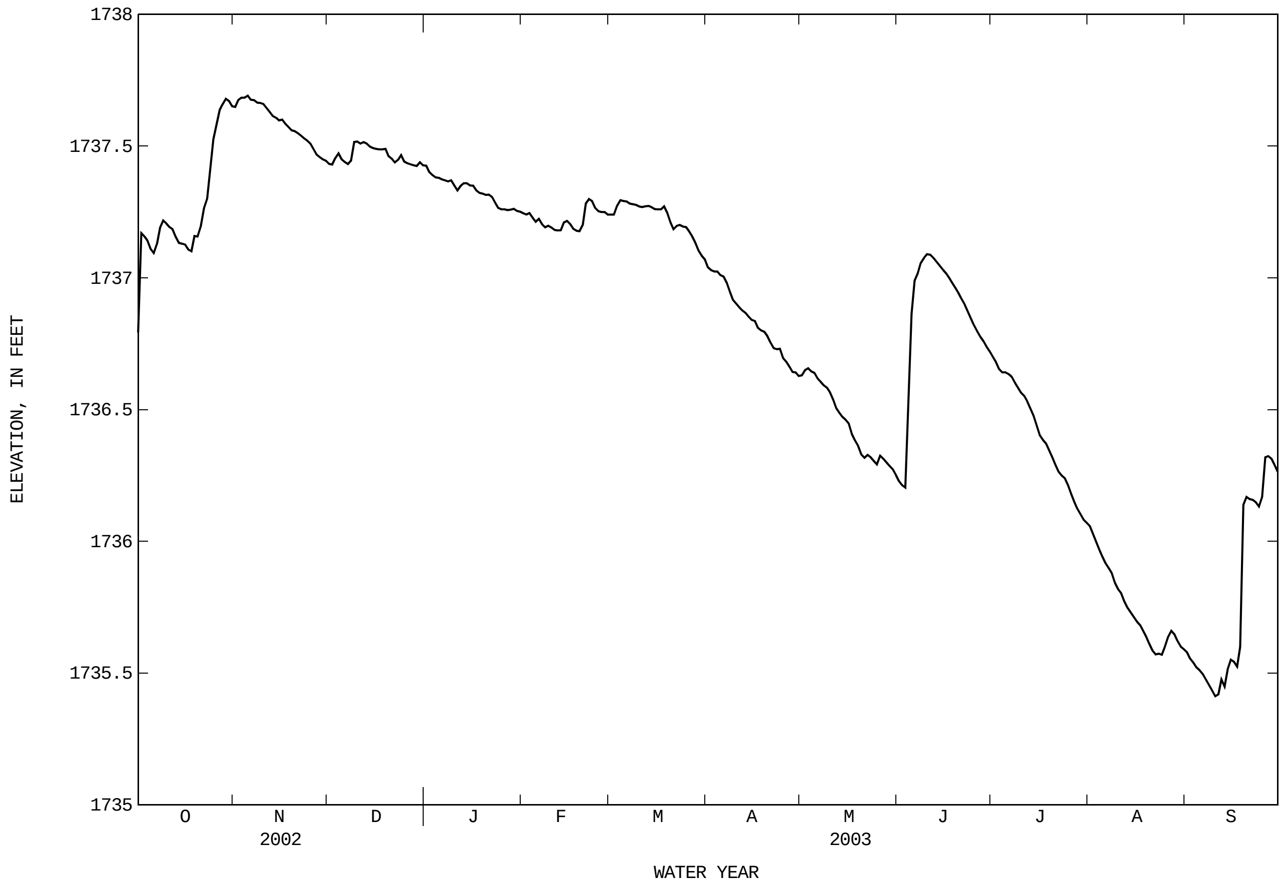
EXTREMES FOR CURRENT YEAR.--Maximum elevation, 1,737.71 ft, Nov. 5; minimum elevation, 1,735.39 ft, Sept. 11.

ELEVATION, IN FEET (NGVD), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	1737.65	1737.43	1737.43	1737.24	1737.24	1737.04	1736.63	1736.23	1736.70	1736.06	1735.58
2	1737.17	1737.67	1737.43	1737.40	1737.24	1737.24	1737.03	1736.65	1736.21	1736.68	1736.03	1735.56
3	1737.16	1737.68	1737.46	1737.39	1737.24	1737.28	1737.02	1736.66	1736.20	1736.65	1736.00	1735.54
4	1737.14	1737.68	1737.47	1737.38	1737.23	1737.30	1737.02	1736.64	1736.56	1736.64	1735.97	1735.52
5	1737.11	1737.69	1737.45	1737.38	1737.21	1737.29	1737.01	1736.64	1736.86	1736.64	1735.94	1735.51
6	1737.09	1737.68	1737.44	1737.37	1737.22	1737.29	1737.01	1736.62	1736.99	1736.63	1735.92	1735.50
7	1737.13	1737.67	1737.43	1737.37	1737.20	1737.28	1736.98	1736.61	1737.02	1736.62	1735.90	1735.48
8	1737.19	1737.66	1737.44	1737.37	1737.19	1737.28	1736.95	1736.59	1737.06	1736.60	1735.88	1735.45
9	1737.22	1737.66	1737.52	1737.37	1737.20	1737.28	1736.92	1736.58	1737.08	1736.58	1735.84	1735.43
10	1737.21	1737.66	1737.52	1737.35	1737.19	1737.27	1736.90	1736.57	1737.09	1736.56	1735.82	1735.41
11	1737.19	1737.64	1737.51	1737.33	1737.18	1737.27	1736.89	1736.54	1737.09	1736.55	1735.80	1735.42
12	1737.18	1737.63	1737.52	1737.35	1737.18	1737.27	1736.88	1736.51	1737.08	1736.53	1735.77	1735.48
13	1737.16	1737.62	1737.51	1737.36	1737.18	1737.27	1736.87	1736.49	1737.06	1736.50	1735.75	1735.45
14	1737.13	1737.61	1737.50	1737.36	1737.21	1737.27	1736.85	1736.47	1737.05	1736.48	1735.73	1735.51
15	1737.13	1737.60	1737.49	1737.35	1737.22	1737.26	1736.84	1736.46	1737.03	1736.44	1735.71	1735.55
16	1737.13	1737.60	1737.49	1737.35	1737.20	1737.26	1736.84	1736.45	1737.02	1736.40	1735.69	1735.54
17	1737.11	1737.59	1737.49	1737.33	1737.19	1737.26	1736.81	1736.41	1737.00	1736.38	1735.68	1735.52
18	1737.10	1737.57	1737.49	1737.32	1737.18	1737.27	1736.80	1736.38	1736.98	1736.37	1735.66	1735.60
19	1737.16	1737.56	1737.49	1737.32	1737.18	1737.25	1736.80	1736.36	1736.96	1736.35	1735.64	1736.14
20	1737.16	1737.56	1737.46	1737.32	1737.20	1737.21	1736.78	1736.33	1736.94	1736.32	1735.61	1736.17
21	1737.19	1737.55	1737.45	1737.32	1737.28	1737.18	1736.75	1736.32	1736.92	1736.29	1735.59	1736.16
22	1737.26	1737.54	1737.44	1737.31	1737.30	1737.20	1736.73	1736.33	1736.90	1736.26	1735.57	1736.16
23	1737.30	1737.53	1737.45	1737.29	1737.29	1737.20	1736.73	1736.32	1736.87	1736.25	1735.57	1736.15
24	1737.40	1737.52	1737.47	1737.27	1737.27	1737.19	1736.73	1736.31	1736.85	1736.24	1735.57	1736.13
25	1737.53	1737.51	1737.44	1737.26	1737.25	1737.19	1736.69	1736.29	1736.82	1736.21	1735.60	1736.17
26	1737.58	1737.49	1737.43	1737.26	1737.25	1737.18	1736.68	1736.33	1736.80	1736.18	1735.64	1736.32
27	1737.64	1737.47	1737.43	1737.26	1737.25	1737.16	1736.66	1736.31	1736.78	1736.15	1735.66	1736.32
28	1737.66	1737.46	1737.43	1737.26	1737.24	1737.13	1736.64	1736.30	1736.76	1736.12	1735.65	1736.31
29	1737.68	1737.45	1737.42	1737.26	---	1737.10	1736.64	1736.29	1736.74	1736.10	1735.62	1736.29
30	1737.67	1737.44	1737.44	1737.25	---	1737.08	1736.63	1736.27	1736.72	1736.08	1735.60	1736.26
31	1737.65	---	1737.43	1737.25	---	1737.07	---	1736.25	---	1736.07	1735.59	---
MEAN	---	1737.59	1737.46	1737.33	1737.22	1737.23	1736.84	1736.45	1736.86	1736.41	1735.74	1735.79
MAX	---	1737.69	1737.52	1737.43	1737.30	1737.30	1737.04	1736.66	1737.09	1736.70	1736.06	1736.32
MIN	---	1737.44	1737.42	1737.25	1737.18	1737.07	1736.63	1736.25	1736.20	1736.07	1735.57	1735.41

CAL YR 2002 MAX 1740.13 MIN 1737.09
WTR YR 2003 MAX 1737.69 MIN 1735.41

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 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 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.10	0.00	0.00	0.00	0.36	0.00	0.00	0.34	0.00	0.00	0.00
4	0.00	0.04	0.00	0.00	0.00	0.33	0.00	0.00	9.4	0.00	0.00	0.00
5	0.00	0.02	0.00	0.04	0.00	0.15	0.00	0.00	5.5	0.00	0.00	0.00
6	0.00	0.01	0.00	0.00	0.00	0.09	0.00	0.00	1.3	0.00	0.00	0.00
7	0.00	0.0	0.00	0.00	0.00	0.06	0.00	0.00	1.1	0.00	0.00	0.00
8	0.00	0.00	0.03	0.00	0.00	0.04	0.00	0.00	1.9	0.00	0.00	0.00
9	0.00	0.00	2.6	0.00	0.00	0.05	0.00	0.00	1.3	0.00	0.00	0.00
10	0.00	0.00	0.94	0.00	0.00	0.05	0.00	0.00	1.3	0.00	0.00	0.00
11	0.00	0.00	0.44	0.00	0.00	0.04	0.00	0.00	1.2	0.00	0.00	2.3
12	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	1.1	0.00	0.00	0.64
13	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	1.0	0.00	0.00	0.26
14	0.00	0.00	0.00	0.00	0.02	0.02	0.00	0.00	0.91	0.00	0.00	7.2
15	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.85	0.00	0.00	1.1
16	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.85	0.00	0.00	0.80
17	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.75	0.00	0.00	0.55
18	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.65	0.00	0.00	0.45
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56	0.00	0.00	136
20	0.00	0.00	0.00	0.00	2.8	0.00	0.00	0.00	0.50	0.00	0.00	16
21	4.0	0.00	0.00	0.00	3.4	0.00	0.00	0.00	0.41	0.00	0.00	10
22	0.00	0.00	0.00	0.00	0.96	0.02	0.00	0.00	0.26	0.00	0.00	3.0
23	0.00	0.00	0.00	0.00	0.40	0.00	0.00	0.00	0.17	0.00	0.00	0.52
24	4.4	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.10	0.00	0.00	0.16
25	1.1	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.05	0.00	0.01	22
26	5.9	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.02	0.00	0.21	71
27	1.3	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.35	8.7
28	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.09	0.87
29	0.19	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.02	0.03
30	0.05	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	0.0	---	0.00	0.00	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	17.76	0.41	4.01	0.04	7.69	1.43	0.00	0.15	31.52	0.00	0.68	281.58
MEAN	0.57	0.014	0.13	0.001	0.27	0.046	0.000	0.005	1.05	0.000	0.022	9.39
MAX	5.9	0.21	2.6	0.04	3.4	0.36	0.00	0.10	9.4	0.00	0.35	136
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	35	0.8	8.0	0.08	15	2.8	0.00	0.3	63	0.00	1.3	559

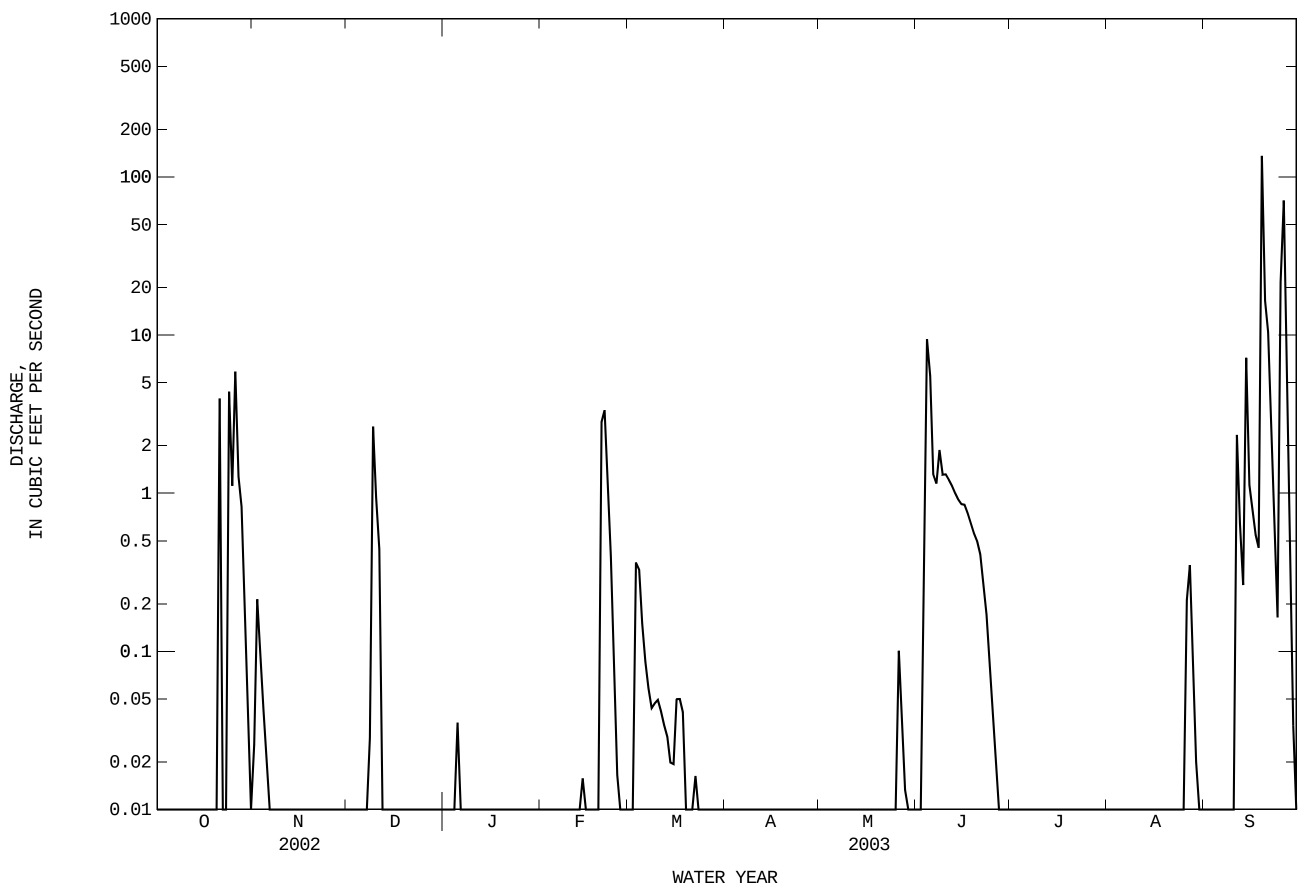
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1963 - 2003hz, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	12.8	3.84	3.28	3.93	2.91	3.59	5.38	7.61	5.92	15.6	12.6	18.6
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	0.005	0.001	0.000	0.000	0.000
(WY)	1969	1971	1971	1963	1963	1963	1984	2003	1984	1963	1963	1963

08145000 Brady Creek at Brady, TX--Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1963 - 2003hz	
ANNUAL TOTAL	105.01		345.27			
ANNUAL MEAN	0.29		0.95		8.21	
HIGHEST ANNUAL MEAN					88.4	1971
LOWEST ANNUAL MEAN					0.034	1963
HIGHEST DAILY MEAN	10	Mar 19	136	Sep 19	4580	Jul 26 1971
LOWEST DAILY MEAN	0.00	Apr 20	0.00	Oct 1	0.00	Oct 1 1962
ANNUAL SEVEN-DAY MINIMUM	0.00	Apr 20	0.00	Oct 1	0.00	Oct 1 1962
MAXIMUM PEAK FLOW			549	Sep 19	24700	Jul 26 1971
MAXIMUM PEAK STAGE			8.33	Sep 19	19.80	Jul 26 1971
ANNUAL RUNOFF (AC-FT)	208		685		5950	
10 PERCENT EXCEEDS	0.53		0.77		4.9	
50 PERCENT EXCEEDS	0.00		0.00		0.08	
90 PERCENT EXCEEDS	0.00		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.--No estimated daily discharges. Records good except those for Oct. 1 to Mar. 11, which are fair. 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 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	38	334	129	145	126	141	95	56	204	60	41	99
2	38	305	128	132	126	136	93	55	149	57	36	64
3	36	321	136	127	126	158	93	69	151	57	33	51
4	36	335	144	127	122	203	92	64	553	56	31	47
5	36	306	143	126	120	203	91	61	347	57	29	45
6	36	285	137	126	122	169	88	54	608	65	24	45
7	35	261	132	126	122	152	77	51	571	62	25	44
8	38	237	134	127	121	144	68	48	326	59	26	42
9	50	224	163	129	122	140	66	40	258	57	31	41
10	67	210	190	128	121	136	68	38	170	55	33	41
11	75	197	195	129	120	133	67	38	148	54	33	43
12	79	183	169	148	121	133	68	37	138	52	36	57
13	60	172	158	159	127	134	71	34	128	50	36	62
14	75	168	150	153	130	127	72	33	123	51	45	766
15	94	164	145	149	136	122	71	31	117	46	43	2100
16	85	162	143	140	138	122	65	30	109	41	36	447
17	68	160	136	132	129	123	59	31	103	36	37	270
18	62	153	137	130	122	130	63	31	95	35	38	186
19	64	150	133	130	119	129	67	31	91	33	36	370
20	67	145	128	129	123	118	64	29	86	35	32	265
21	76	143	126	129	149	114	62	27	79	33	32	285
22	331	140	125	127	203	117	56	37	75	30	32	217
23	359	137	127	126	263	119	60	45	72	24	39	146
24	215	136	132	126	232	117	65	36	70	21	55	112
25	196	134	134	127	193	115	63	33	70	21	45	94
26	324	129	131	129	173	111	61	44	63	23	44	89
27	3380	128	130	128	161	112	57	48	62	25	54	106
28	1200	128	129	130	151	111	53	42	63	30	53	116
29	767	129	128	130	---	105	55	47	62	28	44	157
30	539	131	134	127	---	101	57	54	61	30	43	143
31	411	---	148	127	---	96	---	219	---	32	44	---
TOTAL	8937	5807	4374	4098	4018	4071	2087	1493	5152	1315	1166	6550
MEAN	288	194	141	132	144	131	69.6	48.2	172	42.4	37.6	218
MAX	3380	335	195	159	263	203	95	219	608	65	55	2100
MIN	35	128	125	126	119	96	53	27	61	21	24	41
AC-FT	17730	11520	8680	8130	7970	8070	4140	2960	10220	2610	2310	12990

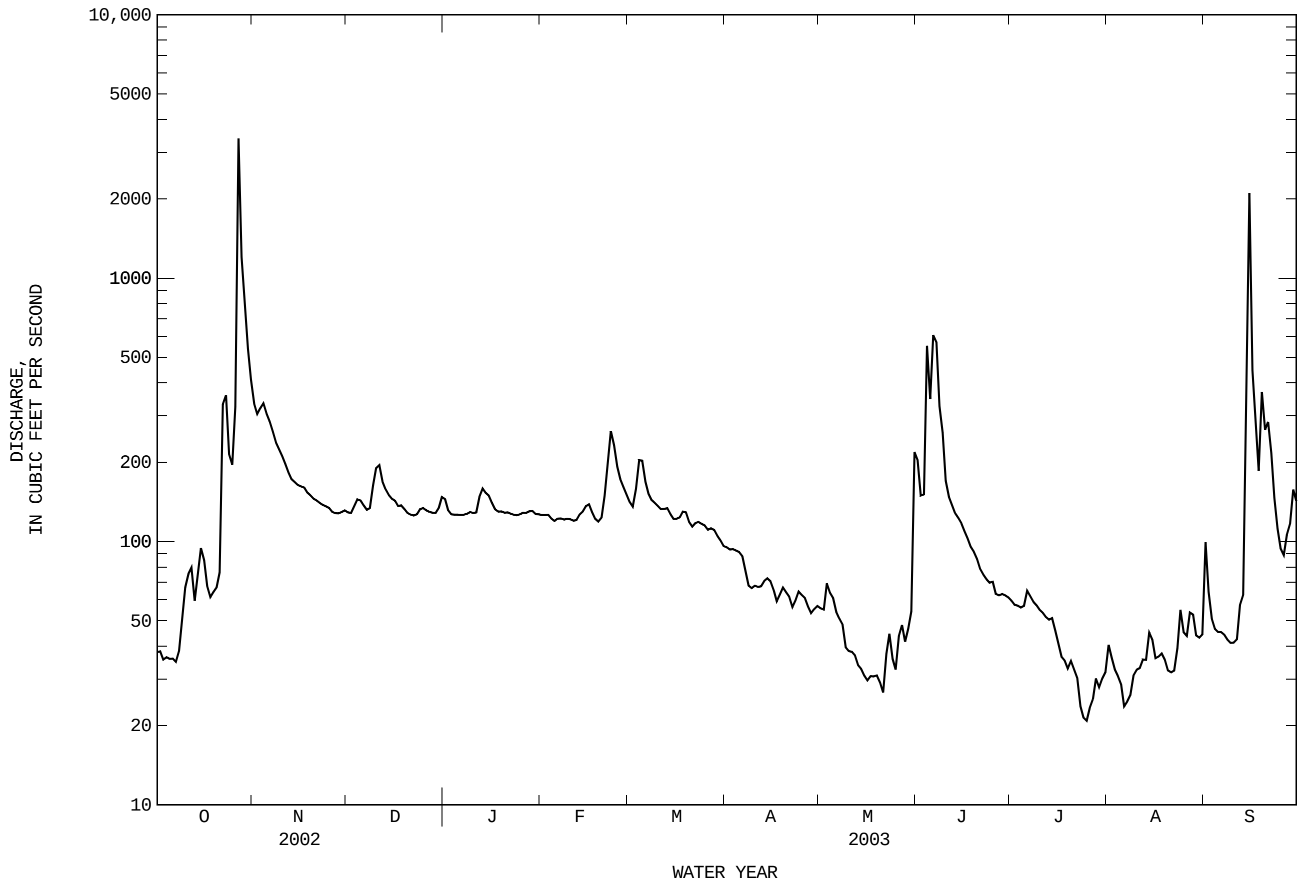
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1963 - 2003hz, BY WATER YEAR (WY)

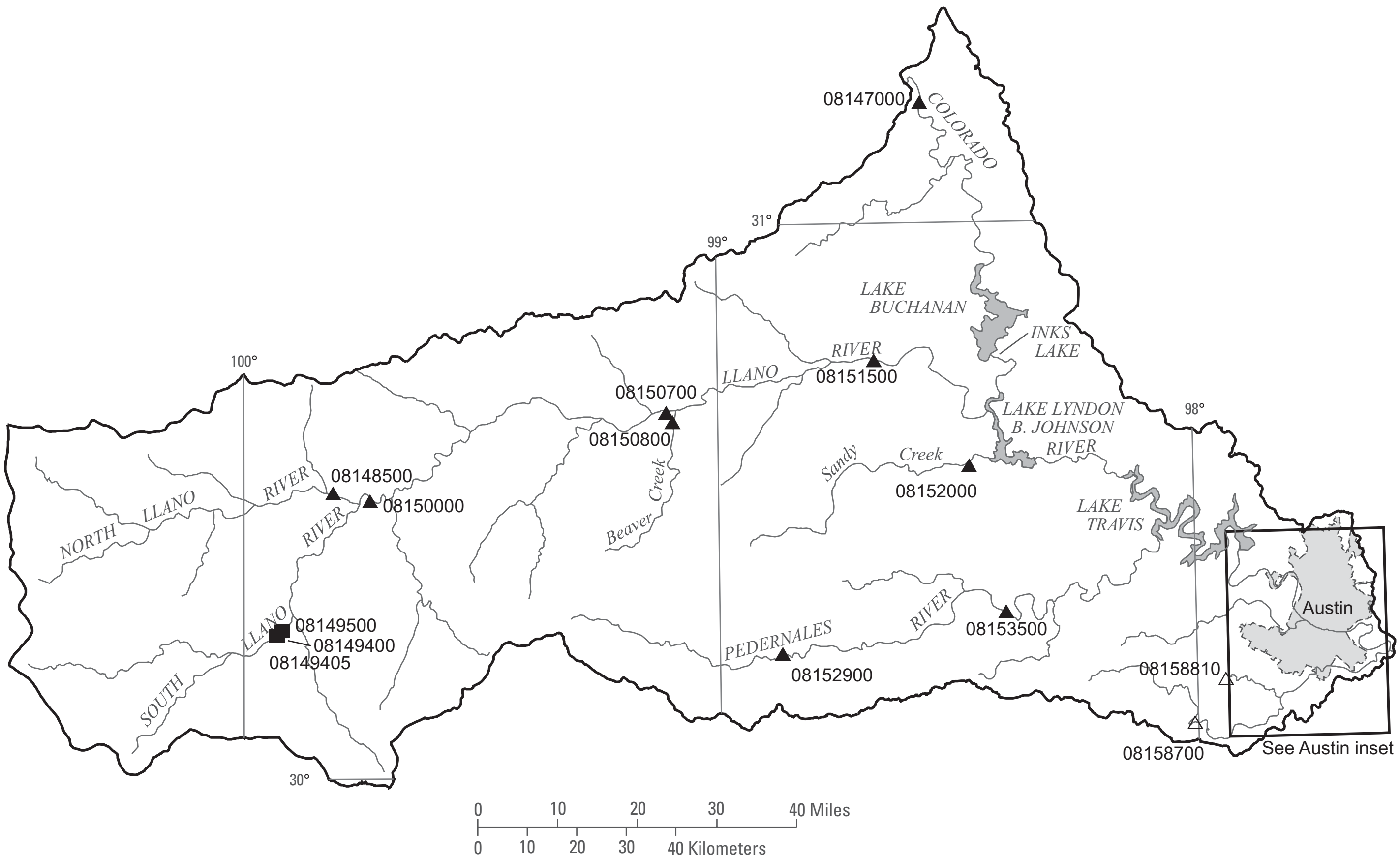
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	212	183	152	156	176	162	153	194	161	144	158	296
MAX	1716	2290	935	896	1542	635	777	1195	695	1201	1768	2144
(WY)	1974	2001	1992	1968	1992	1992	1977	1965	1992	1971	1971	1974
MIN	17.6	32.7	47.8	46.1	44.9	34.7	23.4	10.3	5.31	0.32	9.43	11.1
(WY)	1964	2000	1964	1964	1984	1986	1986	1984	1984	1964	1980	1984

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

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1963 - 2003hz	
ANNUAL TOTAL	45084		49068			
ANNUAL MEAN	124		134		179	
HIGHEST ANNUAL MEAN					493	1974
LOWEST ANNUAL MEAN					29.2	1984
HIGHEST DAILY MEAN	3380	Oct 27	3380	Oct 27	32700	Nov 4 2000
LOWEST DAILY MEAN	30	May 25	21	Jul 24	0.00	Jul 17 1963
ANNUAL SEVEN-DAY MINIMUM	32	Jun 23	25	Jul 23	0.00	Jul 25 1963
MAXIMUM PEAK FLOW			4610	Oct 27	46200	Nov 4 2000
MAXIMUM PEAK STAGE			15.75	Oct 27	29.94	Sep 18 1990
ANNUAL RUNOFF (AC-FT)	89420		97330		129500	
10 PERCENT EXCEEDS	201		206		268	
50 PERCENT EXCEEDS	80		115		88	
90 PERCENT EXCEEDS	38		35		27	

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





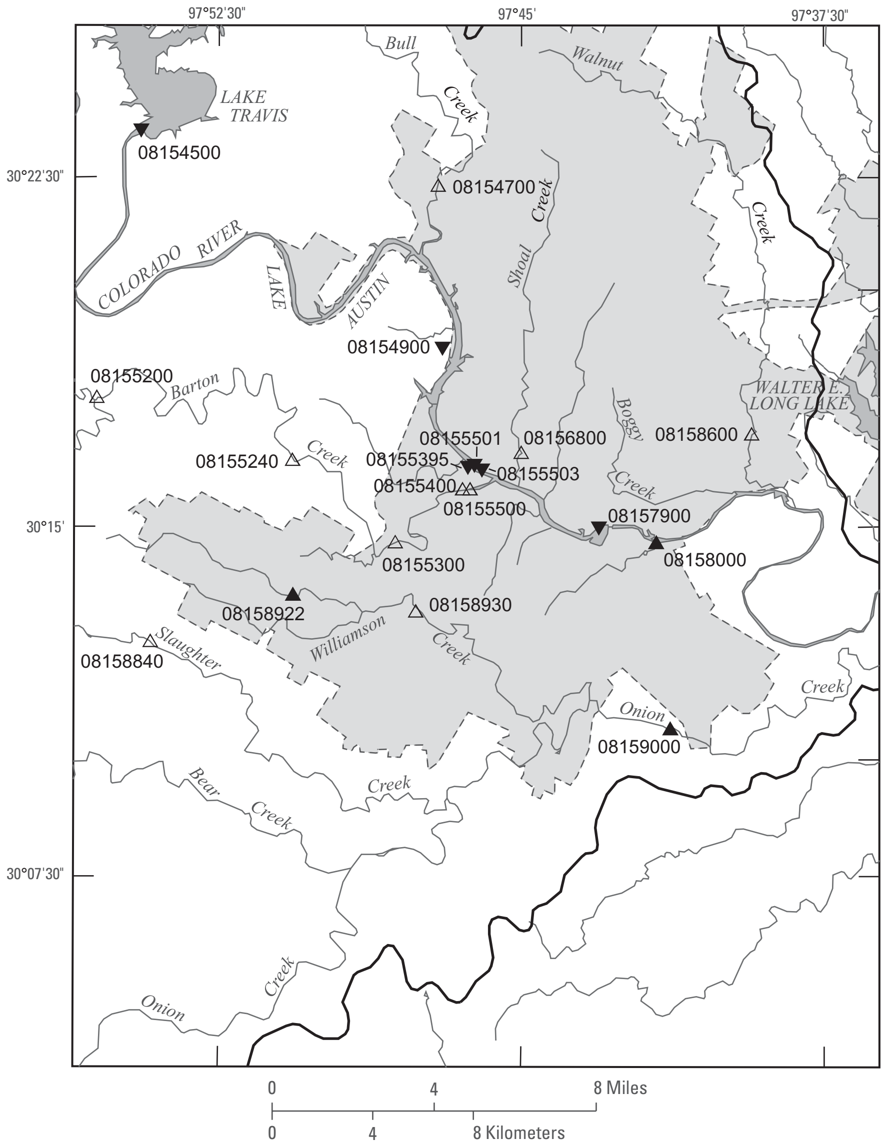
EXPLANATION

08152000 ▲ Surface-water continuous station and number

08158700 △ Surface-water continuous/water-quality station and number

08149400 ■ Surface-water partial record/stage only/miscellaneous station and number

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-quality 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 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	53	472	143	164	127	192	106	59	150	669	46	321
2	57	439	144	153	127	184	104	60	123	497	48	551
3	57	432	151	147	125	274	101	68	105	403	49	222
4	55	457	154	143	124	312	99	70	325	331	41	127
5	53	440	153	141	122	294	95	65	587	243	38	100
6	52	411	152	143	121	273	91	73	1830	155	36	85
7	54	399	153	147	121	234	86	76	7850	130	33	72
8	60	372	160	143	123	210	78	65	4050	118	30	66
9	70	353	191	139	126	197	77	56	3550	111	30	61
10	134	326	191	139	127	186	78	49	2690	103	34	57
11	466	254	212	137	125	178	78	43	1740	96	36	60
12	220	210	232	152	123	172	76	42	1210	92	38	93
13	149	187	202	160	122	165	73	43	1300	84	40	78
14	122	175	188	157	128	162	72	42	2190	79	49	173
15	126	166	180	155	127	158	71	39	3650	75	53	9620
16	121	162	175	166	128	151	69	37	2300	71	48	2370
17	107	161	174	160	129	146	66	33	1710	67	46	1060
18	96	156	176	150	127	153	64	36	1260	63	44	571
19	97	154	169	144	127	154	65	37	930	57	44	1040
20	97	153	163	142	133	146	65	36	722	52	42	3330
21	105	153	159	139	175	137	63	36	593	53	39	987
22	151	153	156	140	190	139	64	34	489	49	36	504
23	364	153	165	136	312	137	61	38	414	48	37	321
24	239	151	174	135	352	137	62	45	365	44	43	225
25	189	148	172	133	272	138	66	35	287	39	60	176
26	203	146	167	133	231	136	66	36	189	36	57	201
27	2690	141	161	133	217	131	65	40	151	35	55	617
28	1850	141	159	132	205	121	61	43	381	37	59	536
29	1040	140	163	131	---	115	57	42	914	43	59	365
30	724	141	165	131	---	111	58	43	751	42	51	270
31	549	---	182	129	---	110	---	55	---	42	55	---
TOTAL	10350	7346	5286	4454	4466	5353	2237	1476	42806	3964	1376	24259
MEAN	334	245	171	144	160	173	74.6	47.6	1427	128	44.4	809
MAX	2690	472	232	166	352	312	106	76	7850	669	60	9620
MIN	52	140	143	129	121	110	57	33	105	35	30	57
AC-FT	20530	14570	10480	8830	8860	10620	4440	2930	84910	7860	2730	48120

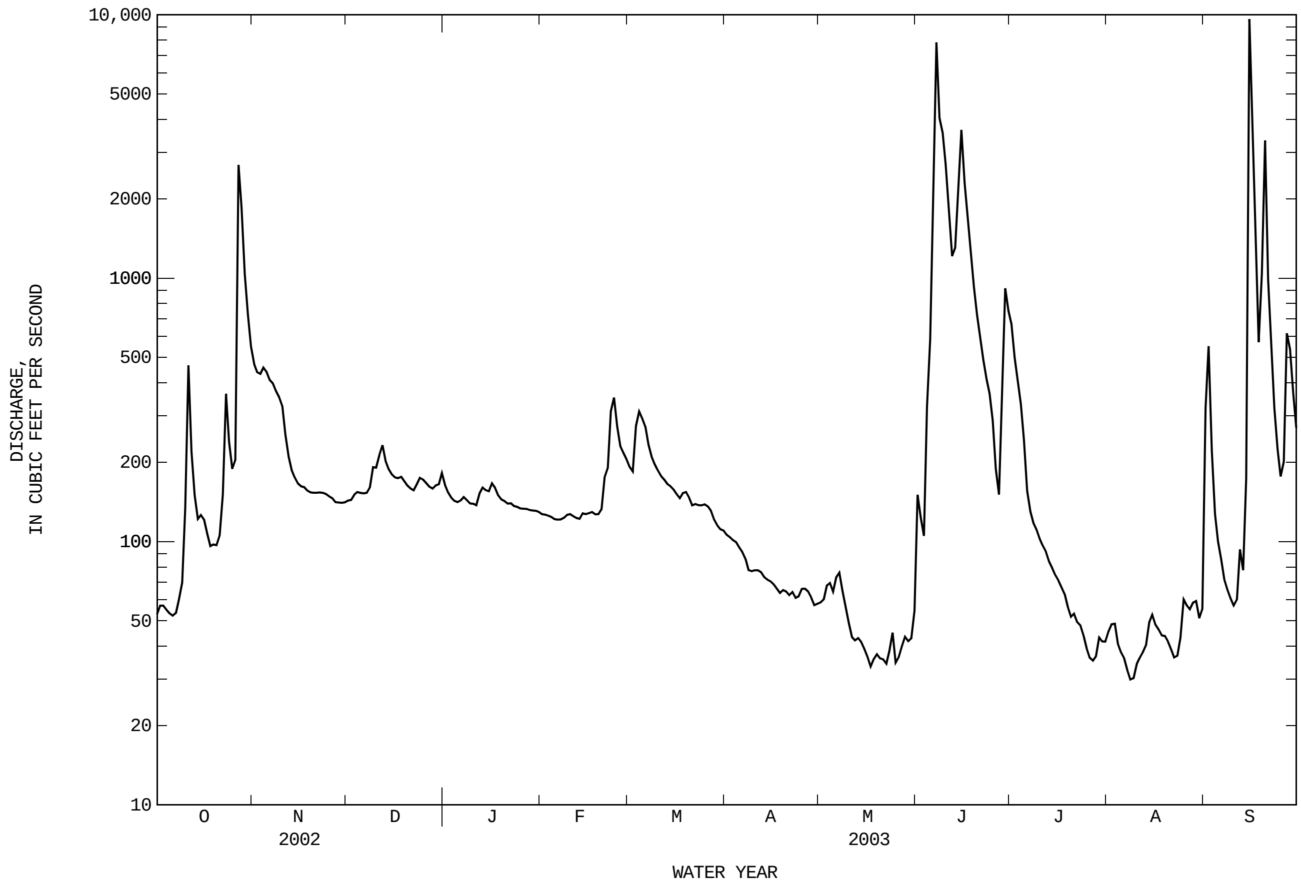
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 2003z, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1307	458	457	499	636	605	955	2275	1673	1284	459	1471
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 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1931 - 2003z	
ANNUAL TOTAL	234377		113373			
ANNUAL MEAN	642		311		1008	
HIGHEST ANNUAL MEAN					3880	1938
LOWEST ANNUAL MEAN					84.1	1984
HIGHEST DAILY MEAN	22600	Jul 10	9620	Sep 15	191000	Jul 23 1938
LOWEST DAILY MEAN	41	May 25	30	Aug 8	0.00	Aug 27 1954
ANNUAL SEVEN-DAY MINIMUM	44	May 20	34	Aug 5	0.00	Aug 3 1963
MAXIMUM PEAK FLOW			13800	Sep 15	224000	Jul 23 1938
MAXIMUM PEAK STAGE			13.96	Sep 15	aa62.24	Jul 23 1938
ANNUAL RUNOFF (AC-FT)	464900		224900		730200	
10 PERCENT EXCEEDS	579		500		1560	
50 PERCENT EXCEEDS	116		137		215	
90 PERCENT EXCEEDS	60		43		52	

z Period of regulated streamflow.
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 fair except 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, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.6	46	22	20	16	19	23	13	5.0	5.9	0.93	0.00
2	5.7	51	22	20	16	20	23	13	4.6	5.3	0.06	0.00
3	6.0	50	25	20	16	21	22	13	4.7	5.8	0.00	0.00
4	5.8	49	27	19	16	20	22	13	7.6	5.7	0.00	0.00
5	5.0	45	25	19	17	20	23	13	8.4	5.9	0.00	0.00
6	4.7	41	25	19	17	20	21	14	13	6.6	0.00	0.00
7	6.2	38	24	19	17	19	21	12	8.3	6.4	0.00	0.00
8	11	37	25	19	17	18	22	12	7.7	6.5	0.00	0.00
9	8.4	38	28	19	17	19	21	12	7.6	6.4	0.00	0.00
10	7.3	39	28	19	16	18	20	11	7.4	5.5	0.00	0.00
11	7.8	39	26	19	15	20	19	10	6.4	4.5	0.00	0.00
12	9.2	37	25	21	15	19	18	9.5	6.4	3.5	0.00	0.00
13	9.8	36	23	21	15	21	18	8.5	11	3.1	0.00	0.00
14	11	35	22	21	16	19	18	8.1	11	2.9	0.00	0.18
15	12	34	22	20	19	21	19	7.2	10	2.8	0.00	0.75
16	11	33	22	e18	20	22	18	6.6	9.1	2.7	0.00	0.02
17	11	31	22	16	17	22	19	6.4	8.9	3.3	0.00	0.00
18	12	30	22	16	17	23	19	6.2	8.8	3.7	0.00	0.00
19	18	29	21	16	17	23	19	5.9	8.7	3.0	0.00	0.00
20	13	29	21	15	19	23	19	5.8	8.4	3.1	0.00	0.00
21	15	27	20	15	22	21	18	6.2	7.6	2.9	0.00	0.01
22	17	27	19	16	24	30	17	6.8	7.6	2.8	0.00	0.27
23	25	25	20	16	22	31	17	6.4	7.3	3.3	0.00	2.5
24	48	26	21	17	22	29	16	5.4	7.0	4.1	0.00	4.2
25	56	26	20	18	20	27	16	5.0	7.4	3.9	0.00	5.3
26	66	26	21	19	20	26	15	9.1	7.7	3.2	0.00	6.6
27	68	25	20	18	19	26	14	6.6	7.3	2.9	0.00	6.5
28	60	23	19	17	19	26	14	6.3	6.8	2.4	0.00	6.4
29	53	23	20	17	---	26	14	6.5	6.3	1.5	0.00	7.2
30	48	24	21	17	---	24	14	5.8	6.4	2.6	0.00	8.1
31	45	---	21	16	---	24	---	5.3	---	2.4	0.00	---
TOTAL	681.5	1019	699	562	503	697	559	269.6	234.4	124.6	0.99	48.03
MEAN	22.0	34.0	22.5	18.1	18.0	22.5	18.6	8.70	7.81	4.02	0.032	1.60
MAX	68	51	28	21	24	31	23	14	13	6.6	0.93	8.1
MIN	4.7	23	19	15	15	18	14	5.0	4.6	1.5	0.00	0.00
AC-FT	1350	2020	1390	1110	998	1380	1110	535	465	247	2.0	95

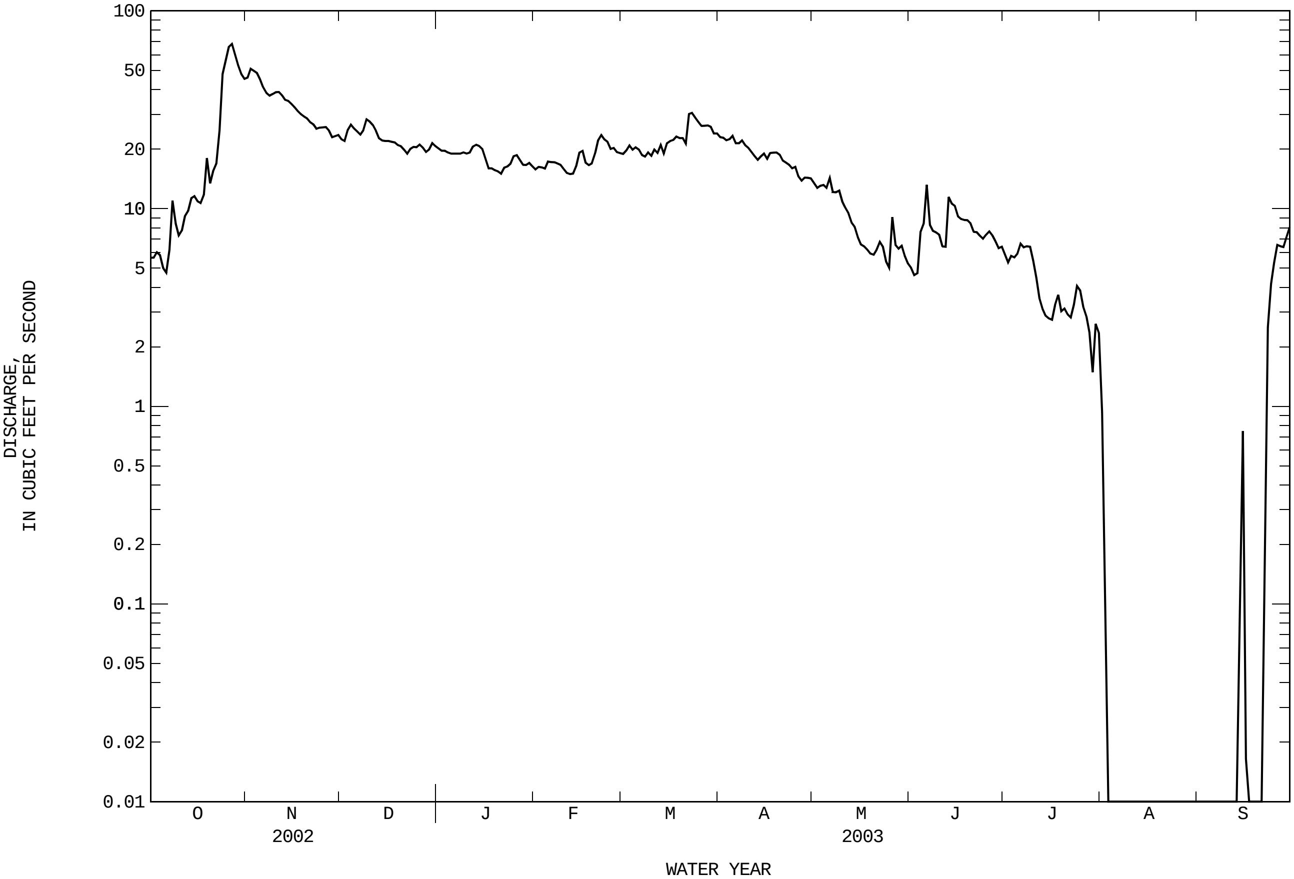
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1916 - 2003h, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	83.3	43.5	30.8	29.3	34.2	30.1	61.0	109	109	80.6	59.3	157
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 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1916 - 2003h	
ANNUAL TOTAL	7589.95		5398.12			
ANNUAL MEAN	20.8		14.8		69.2	
HIGHEST ANNUAL MEAN					298	1938
LOWEST ANNUAL MEAN					0.80	1954
HIGHEST DAILY MEAN	772	Jul 5	68	Oct 27	42400	May 29 1925
LOWEST DAILY MEAN	0.55	Jun 25	0.00	Aug 3	0.00	Jul 16 1917
ANNUAL SEVEN-DAY MINIMUM	0.76	Jun 24	0.00	Aug 3	0.00	Jul 16 1917
MAXIMUM PEAK FLOW			79	Oct 24	i94800	Sep 16 1936
MAXIMUM PEAK STAGE			8.35	Oct 24	g29.20	Sep 16 1936
ANNUAL RUNOFF (AC-FT)	15050		10710		50140	
10 PERCENT EXCEEDS	31		27		71	
50 PERCENT EXCEEDS	19		15		20	
90 PERCENT EXCEEDS	3.7		0.00		0.80	

e Estimated
h See PERIOD OF RECORD paragraph.
i From slope-area measurement of peak flow.
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.--Records fair except those for estimated daily discharges, which are poor. 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 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	75	169	125	123	113	118	110	95	85	72	72	e80
2	75	177	124	122	113	116	109	95	83	71	69	e80
3	75	168	128	121	111	120	109	94	86	73	67	e80
4	74	165	132	122	108	119	109	93	101	71	65	80
5	73	161	128	121	108	118	108	92	99	75	64	80
6	74	156	125	120	110	117	107	94	104	80	64	81
7	78	153	125	120	108	115	104	102	92	80	63	82
8	113	152	126	120	109	114	103	94	88	78	64	80
9	123	150	143	121	110	114	104	91	85	75	69	79
10	105	148	138	121	109	113	105	90	89	73	69	77
11	96	146	130	123	109	113	105	91	90	70	70	90
12	91	145	127	125	108	112	104	91	86	74	69	84
13	89	144	125	127	108	112	105	93	e95	75	71	92
14	89	143	124	126	112	110	104	94	106	70	72	83
15	92	142	124	125	115	112	105	90	109	69	73	142
16	90	142	123	124	112	112	104	87	88	73	70	117
17	87	141	123	124	112	111	101	84	85	75	69	103
18	86	137	122	123	112	111	103	85	82	71	68	100
19	112	134	121	122	111	109	104	83	82	68	67	93
20	113	134	120	122	119	107	102	81	80	66	66	87
21	103	132	117	121	128	107	100	82	80	65	66	85
22	99	131	114	121	130	131	102	85	79	64	69	85
23	1110	130	117	119	124	140	104	87	77	64	78	81
24	810	129	116	117	120	128	103	83	74	70	83	79
25	320	128	114	119	120	122	99	82	73	72	95	81
26	247	128	116	119	119	118	98	99	73	68	97	96
27	219	127	115	120	118	115	97	106	73	66	95	88
28	199	126	114	120	118	112	94	96	75	64	86	84
29	188	126	e120	116	---	110	95	92	75	66	82	79
30	176	125	e125	114	---	112	96	88	74	72	e80	76
31	169	---	124	113	---	113	---	85	---	79	e80	---
TOTAL	5450	4289	3825	3751	3194	3581	3093	2804	2568	2209	2272	2624
MEAN	176	143	123	121	114	116	103	90.5	85.6	71.3	73.3	87.5
MAX	1110	177	143	127	130	140	110	106	109	80	97	142
MIN	73	125	114	113	108	107	94	81	73	64	63	76
AC-FT	10810	8510	7590	7440	6340	7100	6130	5560	5090	4380	4510	5200
CFSM	0.10	0.08	0.07	0.07	0.06	0.06	0.06	0.05	0.05	0.04	0.04	0.05
IN.	0.11	0.09	0.08	0.08	0.06	0.07	0.06	0.06	0.05	0.04	0.05	0.05

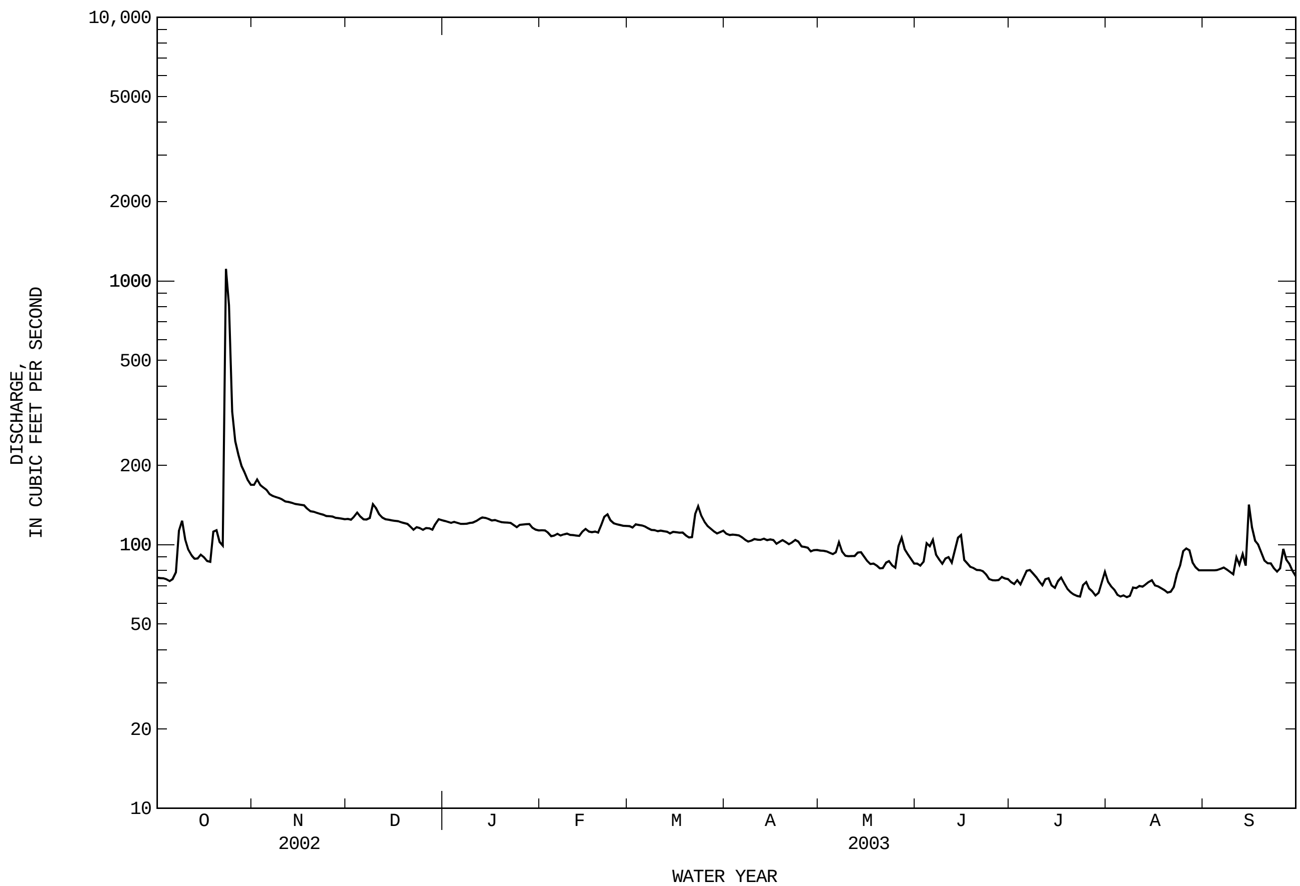
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1916 - 2003h, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	272	191	141	125	132	118	169	236	283	202	180	326
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 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1916 - 2003h	
ANNUAL TOTAL	46735		39660			
ANNUAL MEAN	128		109		198	
HIGHEST ANNUAL MEAN					708	1935
LOWEST ANNUAL MEAN					29.8	1953
HIGHEST DAILY MEAN	1680	Jul 5	1110	Oct 23	124000	Jun 14 1935
LOWEST DAILY MEAN	69	Jun 26	63	Aug 7	3.7	Aug 17 1956
ANNUAL SEVEN-DAY MINIMUM	71	Jun 21	65	Aug 2	4.2	Aug 11 1956
MAXIMUM PEAK FLOW			4310	Oct 23	i319000	Jun 14 1935
MAXIMUM PEAK STAGE			7.24	Oct 23	a43.30	Jun 14 1935
ANNUAL RUNOFF (AC-FT)	92700		78670		143500	
ANNUAL RUNOFF (CFSM)	0.069		0.059		0.11	
ANNUAL RUNOFF (INCHES)	0.94		0.80		1.46	
10 PERCENT EXCEEDS	150		131		220	
50 PERCENT EXCEEDS	121		104		99	
90 PERCENT EXCEEDS	78		72		43	

e Estimated
h See PERIOD OF RECORD paragraph.
i From slope-area measurement of peak flow.
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.--Records good except those for daily discharges from Nov. 21 to Apr. 17, which are fair, and those for estimated daily discharges, which are poor. 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 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	111	172	138	138	123	141	122	105	97	85	67	148
2	112	198	138	135	122	141	123	128	96	84	65	143
3	111	207	144	132	123	147	123	120	97	82	66	143
4	111	196	154	132	120	157	123	126	132	82	62	142
5	109	190	148	132	121	150	120	117	154	93	59	143
6	110	179	145	132	123	144	120	108	172	103	59	145
7	110	171	143	132	121	140	116	111	176	91	58	144
8	122	166	143	132	122	137	116	109	144	89	56	143
9	137	162	178	132	123	136	111	110	130	87	61	144
10	147	158	180	129	121	135	113	109	120	84	59	142
11	147	156	e170	129	121	135	115	106	113	81	61	142
12	138	152	160	135	121	135	115	102	107	78	64	186
13	132	150	153	139	121	135	113	102	109	76	62	187
14	127	149	147	138	132	131	115	102	202	73	61	217
15	126	148	144	135	144	130	116	100	705	72	62	550
16	124	147	144	133	131	134	116	99	423	73	62	193
17	124	145	142	130	124	132	113	95	184	72	61	187
18	124	144	140	128	121	138	113	92	133	73	61	176
19	142	144	138	127	121	132	113	92	119	73	61	1030
20	153	144	135	128	125	127	112	91	112	71	61	199
21	158	142	136	128	149	126	110	92	107	68	58	175
22	162	141	134	126	178	129	110	91	102	65	55	169
23	155	141	138	125	170	138	112	90	99	66	56	166
24	815	141	147	124	156	147	112	90	97	69	62	164
25	976	140	147	124	150	148	109	104	94	65	72	163
26	420	138	143	127	146	140	110	151	91	63	154	371
27	452	137	140	127	144	133	107	136	87	62	167	276
28	220	138	138	129	143	129	105	124	87	61	156	187
29	202	138	138	128	---	124	105	119	86	62	151	171
30	187	138	138	124	---	123	104	110	86	61	146	165
31	175	---	138	126	---	124	---	103	---	62	149	---
TOTAL	6439	4672	4521	4036	3716	4218	3412	3334	4461	2326	2454	6511
MEAN	208	156	146	130	133	136	114	108	149	75.0	79.2	217
MAX	976	207	180	139	178	157	123	151	705	103	167	1030
MIN	109	137	134	124	120	123	104	90	86	61	55	142
AC-FT	12770	9270	8970	8010	7370	8370	6770	6610	8850	4610	4870	12910

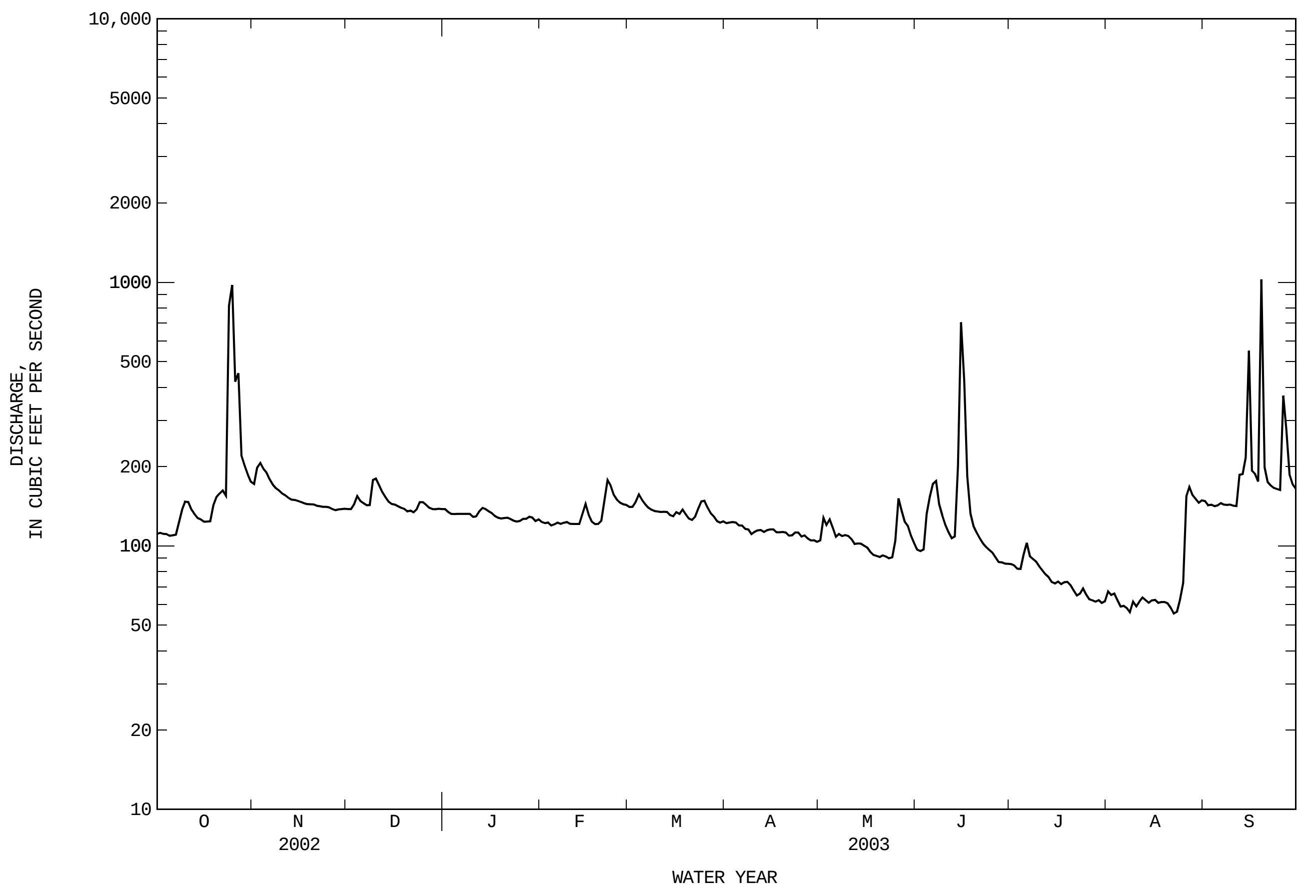
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 2003h, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	525	454	295	236	255	232	281	344	325	237	373	376
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

08150700 Llano River near Mason, TX--Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1968 - 2003h	
ANNUAL TOTAL	64840		50100			
ANNUAL MEAN	178		137		330	
HIGHEST ANNUAL MEAN					870	2001
LOWEST ANNUAL MEAN					77.7	1984
HIGHEST DAILY MEAN	3880	Jul 5	1030	Sep 19	80800	Nov 4 2000
LOWEST DAILY MEAN	70	Jun 29	55	Aug 22	10	Jul 17 1984
ANNUAL SEVEN-DAY MINIMUM	72	Jun 23	59	Aug 5	18	Jul 12 1984
MAXIMUM PEAK FLOW			2360	Sep 19	215000	Sep 8 1980
MAXIMUM PEAK STAGE			4.55	Jun 15	a37.00	Sep 8 1980
ANNUAL RUNOFF (AC-FT)	128600		99370		238800	
10 PERCENT EXCEEDS	185		171		411	
50 PERCENT EXCEEDS	147		129		169	
90 PERCENT EXCEEDS	103		72		90	

e Estimated
h See PERIOD OF RECORD paragraph.
a From floodmark.



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 above 8,000 ft^3/s, which are fair. No known regulation or diversions. No flow at times.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.3	7.0	4.5	6.0	4.6	6.6	4.1	3.0	1.4	3.2	0.20	20
2	1.2	20	4.3	5.1	4.6	6.5	3.7	3.6	1.3	2.4	0.13	12
3	1.3	26	6.6	4.9	4.6	9.5	3.7	2.6	1.3	1.9	0.08	5.7
4	1.3	23	15	4.9	4.3	12	3.7	2.4	60	12	0.03	3.4
5	1.3	21	12	4.9	4.2	8.8	3.6	2.3	45	17	0.02	3.7
6	1.4	17	7.8	4.9	4.7	7.3	3.5	2.2	36	8.6	0.02	25
7	1.4	13	6.6	4.9	5.2	6.5	3.3	2.3	18	9.3	0.03	15
8	4.0	12	7.5	4.9	4.9	5.7	2.9	2.2	10	7.0	0.02	8.3
9	21	9.9	22	5.0	5.3	5.4	2.9	2.0	8.9	7.2	0.03	5.6
10	11	8.9	24	4.9	5.2	5.5	3.0	1.8	8.0	6.9	0.03	4.2
11	4.7	7.8	17	5.2	4.7	5.5	3.2	1.6	9.3	4.0	0.03	4.9
12	3.1	6.8	14	8.5	4.3	5.3	3.1	1.6	6.0	2.7	9.6	30
13	2.6	6.3	11	11	4.4	5.6	3.1	1.7	5.0	1.8	4.3	21
14	2.2	6.2	9.8	8.2	5.1	5.0	3.0	1.7	30	1.2	2.0	16
15	2.4	5.7	9.2	6.7	5.9	4.6	3.0	2.1	1630	0.76	0.98	23
16	2.5	5.6	8.9	5.8	4.5	4.7	3.3	1.5	77	1.0	0.70	13
17	2.1	5.4	8.5	5.1	4.0	4.9	3.2	1.2	39	2.5	0.46	7.2
18	1.9	5.3	7.7	4.9	3.9	8.7	3.2	1.2	29	4.5	0.31	4.4
19	6.8	5.0	7.0	4.9	3.9	14	3.5	1.2	21	2.3	0.17	3.6
20	15	5.0	6.3	5.2	5.5	8.1	3.3	1.3	16	1.2	0.14	3.7
21	9.0	5.1	6.2	5.0	13	6.1	2.9	1.2	13	0.68	0.08	3.0
22	6.6	4.9	6.0	4.8	22	7.0	2.7	1.0	11	0.40	0.03	2.9
23	8.2	4.9	7.1	4.4	14	10	3.1	1.3	9.3	0.35	21	2.6
24	13	4.8	13	4.4	8.4	9.0	3.9	1.7	8.1	2.3	16	2.2
25	18	4.6	9.7	4.7	7.7	6.3	3.5	2.1	6.6	6.6	7.8	2.2
26	16	4.4	7.3	5.2	8.0	5.1	2.8	5.9	5.7	2.2	7.5	8.5
27	16	4.4	6.6	5.6	8.0	4.7	2.3	10	5.2	0.79	8.3	12
28	12	4.4	6.2	5.5	7.6	4.1	2.2	5.9	5.0	0.33	4.4	4.8
29	10	4.5	6.0	5.3	---	3.9	2.1	3.3	4.7	0.18	2.0	2.6
30	8.5	4.6	6.3	4.8	---	4.2	2.2	2.2	3.9	0.15	1.2	1.6
31	6.8	---	6.6	4.6	---	4.5	---	1.7	---	0.34	2.4	---
TOTAL	212.6	263.5	290.7	170.2	182.5	205.1	94.0	75.8	2124.7	111.78	89.99	272.1
MEAN	6.86	8.78	9.38	5.49	6.52	6.62	3.13	2.45	70.8	3.61	2.90	9.07
MAX	21	26	24	11	22	14	4.1	10	1630	17	21	30
MIN	1.2	4.4	4.3	4.4	3.9	3.9	2.1	1.0	1.3	0.15	0.02	1.6
AC-FT	422	523	577	338	362	407	186	150	4210	222	178	540
CFSM	0.03	0.04	0.04	0.03	0.03	0.03	0.01	0.01	0.33	0.02	0.01	0.04
IN.	0.04	0.05	0.05	0.03	0.03	0.04	0.02	0.01	0.37	0.02	0.02	0.05

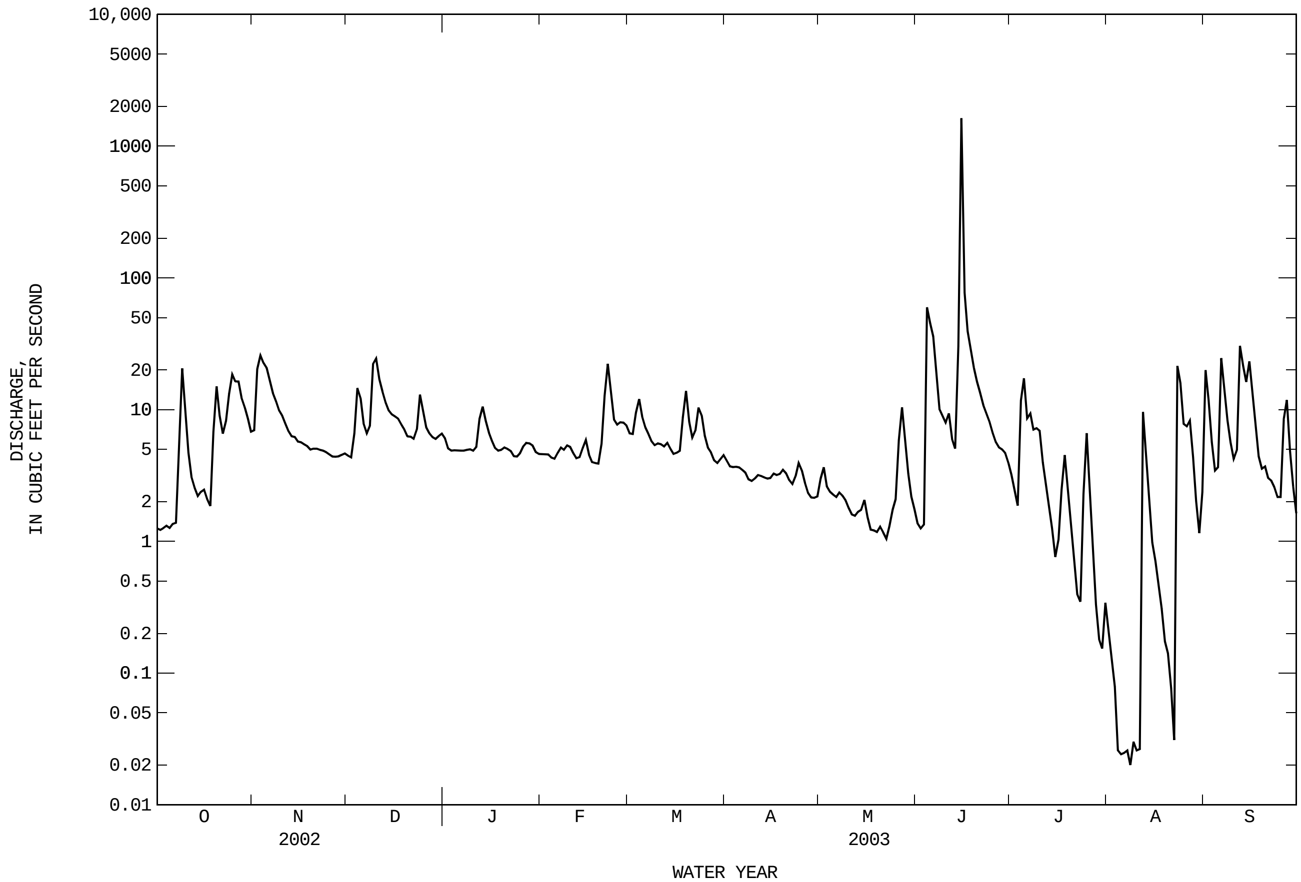
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1963 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	28.4	15.0	14.1	13.0	22.4	22.0	18.5	27.2	27.4	5.35	18.2	10.3
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 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1963 - 2003	
ANNUAL TOTAL	4106.70		4092.97			
ANNUAL MEAN	11.3		11.2		18.5	
HIGHEST ANNUAL MEAN					91.5	1997
LOWEST ANNUAL MEAN					1.97	1967
HIGHEST DAILY MEAN	1620	Jul 5	1630	Jun 15	12800	Aug 3 1978
LOWEST DAILY MEAN	0.28	Jun 26	0.02	Aug 5	0.00	Aug 3 1963
ANNUAL SEVEN-DAY MINIMUM	0.31	Jun 23	0.03	Aug 4	0.00	Aug 3 1963
MAXIMUM PEAK FLOW			19900	Jun 15	i66900	Aug 3 1978
MAXIMUM PEAK STAGE			a12.24	Jun 15	a24.00	Aug 3 1978
ANNUAL RUNOFF (AC-FT)	8150		8120		13410	
ANNUAL RUNOFF (CFSM)	0.052		0.052		0.086	
ANNUAL RUNOFF (INCHES)	0.71		0.71		1.17	
10 PERCENT EXCEEDS	15		14		23	
50 PERCENT EXCEEDS	5.2		4.9		3.3	
90 PERCENT EXCEEDS	0.63		1.2		0.20	

i From slope-area measurement of peak flow.
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. 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 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	85	277	177	195	167	225	133	95	94	98	63	113
2	85	308	178	187	167	216	125	97	119	97	56	99
3	86	395	205	183	165	234	126	132	102	98	59	97
4	87	411	227	179	162	317	127	135	248	122	57	87
5	83	369	229	178	161	307	127	127	711	164	58	87
6	83	335	216	175	162	258	126	123	775	140	52	82
7	84	297	205	175	162	228	122	108	489	140	48	80
8	101	271	207	176	163	208	113	97	429	123	47	92
9	160	254	331	176	166	196	112	99	360	114	45	84
10	167	240	445	172	169	188	78	96	259	108	47	87
11	161	226	364	175	166	183	29	96	246	102	59	351
12	163	216	305	204	159	182	103	94	185	96	64	563
13	147	208	268	222	162	180	113	92	218	88	53	203
14	137	202	242	223	170	175	115	89	241	81	58	310
15	127	198	226	208	209	170	113	87	1940	73	63	396
16	116	195	217	196	246	168	117	84	1200	74	58	463
17	113	191	210	184	204	170	115	78	524	82	56	275
18	111	189	205	177	192	185	115	77	314	78	56	242
19	140	186	194	175	196	226	110	71	230	73	52	313
20	146	185	188	174	201	195	108	68	188	72	50	579
21	223	183	183	174	257	228	104	73	166	70	49	280
22	268	181	180	173	606	221	104	74	150	66	55	201
23	239	179	200	165	477	177	108	74	137	61	51	166
24	241	179	241	162	352	178	109	70	128	68	47	149
25	912	179	242	162	290	193	106	74	122	65	61	143
26	764	176	229	167	261	193	104	112	115	61	81	197
27	582	174	215	171	244	175	100	171	110	58	103	730
28	549	174	204	176	233	159	99	158	106	54	154	402
29	399	175	198	178	---	139	97	136	103	52	117	267
30	342	178	203	175	---	133	95	120	100	56	101	189
31	297	---	199	169	---	142	---	108	---	70	129	---
TOTAL	7198	6931	7133	5606	6269	6149	3253	3115	10109	2704	2049	7327
MEAN	232	231	230	181	224	198	108	100	337	87.2	66.1	244
MAX	912	411	445	223	606	317	133	171	1940	164	154	730
MIN	83	174	177	162	159	133	29	68	94	52	45	80
AC-FT	14280	13750	14150	11120	12430	12200	6450	6180	20050	5360	4060	14530

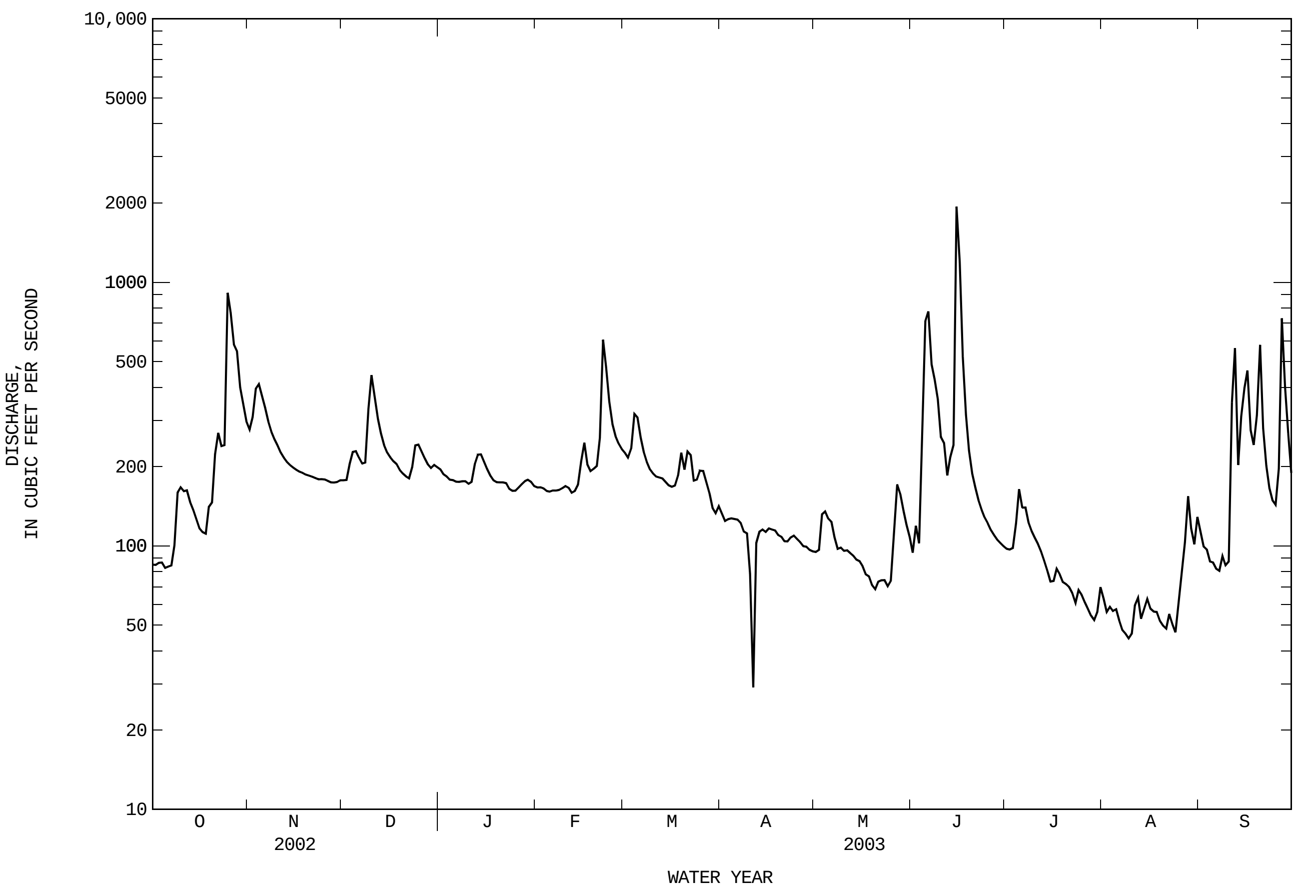
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	530	367	295	283	382	328	369	499	549	236	306	435
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 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1939 - 2003	
ANNUAL TOTAL	93162		67843			
ANNUAL MEAN	255		186		370	
HIGHEST ANNUAL MEAN					1308	1997
LOWEST ANNUAL MEAN					50.0	1954
HIGHEST DAILY MEAN	9590	Jul 5	1940	Jun 15	88500	Nov 4 2000
LOWEST DAILY MEAN	50	Jun 25	29	Apr 11	0.00	Aug 5 1952
ANNUAL SEVEN-DAY MINIMUM	55	Jun 23	51	Aug 4	0.00	Aug 27 1952
MAXIMUM PEAK FLOW			6720	Jun 15	i260000	Jun 23 1997
MAXIMUM PEAK STAGE			p6.39	Jun 15	a38.86	Jun 23 1997
ANNUAL RUNOFF (AC-FT)	184800		134600		268100	
10 PERCENT EXCEEDS	306		307		524	
50 PERCENT EXCEEDS	181		166		156	
90 PERCENT EXCEEDS	84		69		42	

a From floodmark.
i From indirect measurement of peak flow.
p Observed.



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 fair except those for daily discharges below 1 ft^3/s, which are poor. 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 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.3	46	26	37	46	63	24	15	6.1	12	0.14	182
2	4.5	55	30	40	46	63	24	11	24	12	0.09	39
3	3.7	77	35	38	45	71	25	10	58	16	0.09	23
4	4.1	79	45	35	43	81	29	8.9	416	13	0.07	14
5	3.3	86	46	33	43	77	28	8.9	412	13	0.07	11
6	3.0	63	42	30	45	68	27	10	227	26	0.16	13
7	4.2	55	37	29	44	67	27	10	90	29	0.11	9.4
8	41	57	38	29	45	58	28	8.9	63	28	0.16	9.4
9	65	49	96	31	46	58	26	7.8	49	22	0.05	7.8
10	40	39	159	30	46	57	29	7.2	43	16	0.05	6.0
11	25	36	91	31	43	52	24	6.9	38	12	0.04	5.8
12	21	32	78	47	42	48	21	8.0	36	8.2	0.04	30
13	18	30	70	77	42	46	20	7.9	41	4.0	0.57	24
14	20	30	68	72	42	43	18	6.0	39	2.0	0.55	56
15	19	28	63	59	41	42	19	4.8	190	1.3	0.38	89
16	16	33	57	52	43	40	19	4.5	231	2.2	0.26	48
17	14	26	59	53	42	39	17	5.0	82	9.7	0.19	27
18	13	25	57	47	43	63	18	3.5	56	6.4	0.15	20
19	61	28	54	50	41	71	18	3.8	47	1.6	0.10	15
20	63	28	51	55	51	46	18	4.0	41	0.85	0.10	13
21	42	25	51	55	996	44	16	3.2	36	0.58	0.09	15
22	41	25	52	46	426	48	17	4.8	33	0.54	0.08	13
23	38	23	65	43	164	50	20	5.0	29	0.55	0.08	10
24	50	24	76	43	98	47	19	4.6	24	0.50	0.08	11
25	116	25	72	43	72	41	16	11	22	0.40	0.73	9.5
26	77	33	60	46	64	29	15	34	19	0.26	24	9.6
27	74	31	47	48	66	22	15	31	17	0.13	9.9	8.9
28	65	31	51	49	63	28	17	21	15	0.13	1.0	7.4
29	59	31	52	48	---	28	17	15	14	0.09	0.59	6.3
30	54	28	44	46	---	27	17	13	12	0.21	107	5.6
31	47	---	40	46	---	24	---	9.2	---	0.44	304	---
TOTAL	1106.1	1178	1812	1388	2828	1541	628	303.9	2410.1	239.08	450.92	738.7
MEAN	35.7	39.3	58.5	44.8	101	49.7	20.9	9.80	80.3	7.71	14.5	24.6
MAX	116	86	159	77	996	81	29	34	416	29	304	182
MIN	3.0	23	26	29	41	22	15	3.2	6.1	0.09	0.04	5.6
AC-FT	2190	2340	3590	2750	5610	3060	1250	603	4780	474	894	1470
CFSM	0.10	0.11	0.17	0.13	0.29	0.14	0.06	0.03	0.23	0.02	0.04	0.07
IN.	0.12	0.13	0.19	0.15	0.30	0.17	0.07	0.03	0.26	0.03	0.05	0.08

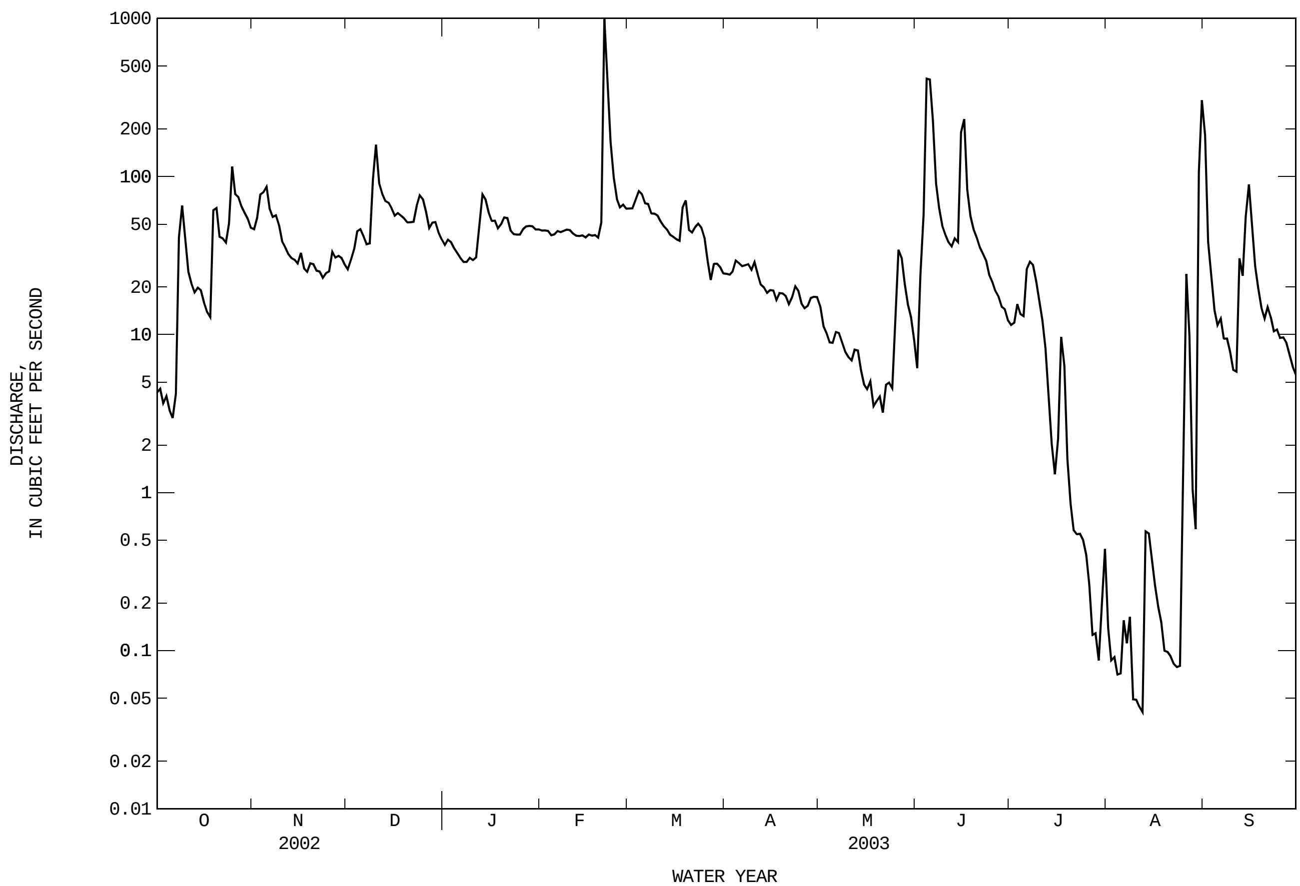
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 2003h, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	61.3	45.7	74.6	57.4	87.6	82.2	56.9	115	109	46.9	21.7	28.0
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 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1967 - 2003h	
ANNUAL TOTAL	33216.55		14623.80			
ANNUAL MEAN	91.0		40.1		65.9	
HIGHEST ANNUAL MEAN					279	1992
LOWEST ANNUAL MEAN					3.62	1984
HIGHEST DAILY MEAN	10300	Jul 4	996	Feb 21	14200	Dec 21 1991
LOWEST DAILY MEAN	0.08	May 31	0.04	Aug 11	0.00	Jul 16 1967
ANNUAL SEVEN-DAY MINIMUM	0.11	May 30	0.09	Aug 6	0.00	Jul 16 1967
MAXIMUM PEAK FLOW			3380	Feb 21	39500	Dec 20 1991
MAXIMUM PEAK STAGE			p8.75	Feb 21	17.63	Jun 16 1987
ANNUAL RUNOFF (AC-FT)	65890		29010		47750	
ANNUAL RUNOFF (CFSM)	0.26		0.12		0.19	
ANNUAL RUNOFF (INCHES)	3.57		1.57		2.59	
10 PERCENT EXCEEDS	74		68		95	
50 PERCENT EXCEEDS	13		29		12	
90 PERCENT EXCEEDS	0.66		0.67		0.11	

p Observed.
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.--Records fair except those for estimated daily discharges, which are poor. No known regulation or diversions. 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 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	100	56	58	49	67	50	35	29	e10	14	79
2	23	113	55	56	50	65	50	36	29	e10	13	43
3	23	134	58	56	50	67	50	39	e24	e9.7	12	31
4	23	124	75	55	47	68	50	36	e31	e9.6	12	27
5	23	121	64	55	47	64	49	35	e63	e11	11	31
6	23	101	58	54	49	61	48	33	e73	e24	11	37
7	177	93	56	54	48	64	47	33	e63	e18	11	27
8	1180	90	57	54	49	63	46	31	e42	e17	11	25
9	225	88	214	54	51	59	45	30	27	e17	11	23
10	117	86	120	53	53	57	44	29	34	e16	11	22
11	82	81	88	55	55	58	44	29	39	e16	12	21
12	66	77	79	63	54	57	44	28	32	e16	12	38
13	58	74	73	67	52	57	43	28	48	e17	11	34
14	56	73	70	62	50	55	44	28	187	e18	12	29
15	56	71	67	59	51	55	44	28	832	e21	11	29
16	49	68	66	58	46	56	44	28	114	e33	11	26
17	45	68	66	55	44	56	42	26	49	28	10	25
18	43	67	65	54	44	63	42	25	33	24	10	25
19	341	65	62	55	44	67	42	24	25	21	10	38
20	130	64	59	56	361	57	42	24	21	19	9.4	27
21	83	63	59	55	254	56	40	25	18	18	9.2	25
22	84	62	58	55	163	64	40	26	15	17	9.2	24
23	97	61	65	53	97	78	45	27	13	85	11	23
24	749	60	77	52	77	65	48	27	12	45	11	22
25	374	59	64	53	74	59	44	28	12	25	29	21
26	212	61	61	53	73	56	42	37	12	20	83	21
27	170	60	59	52	71	54	41	39	12	18	23	23
28	150	58	59	52	69	52	39	37	e11	17	17	23
29	135	57	60	52	---	51	37	34	e10	17	15	22
30	119	57	63	50	---	51	36	32	e10	16	15	21
31	106	---	62	50	---	51	---	30	---	15	258	---
TOTAL	5043	2356	2195	1710	2172	1853	1322	947	1920	648.3	705.8	862
MEAN	163	78.5	70.8	55.2	77.6	59.8	44.1	30.5	64.0	20.9	22.8	28.7
MAX	1180	134	214	67	361	78	50	39	832	85	258	79
MIN	23	57	55	50	44	51	36	24	10	9.6	9.2	21
AC-FT	10000	4670	4350	3390	4310	3680	2620	1880	3810	1290	1400	1710

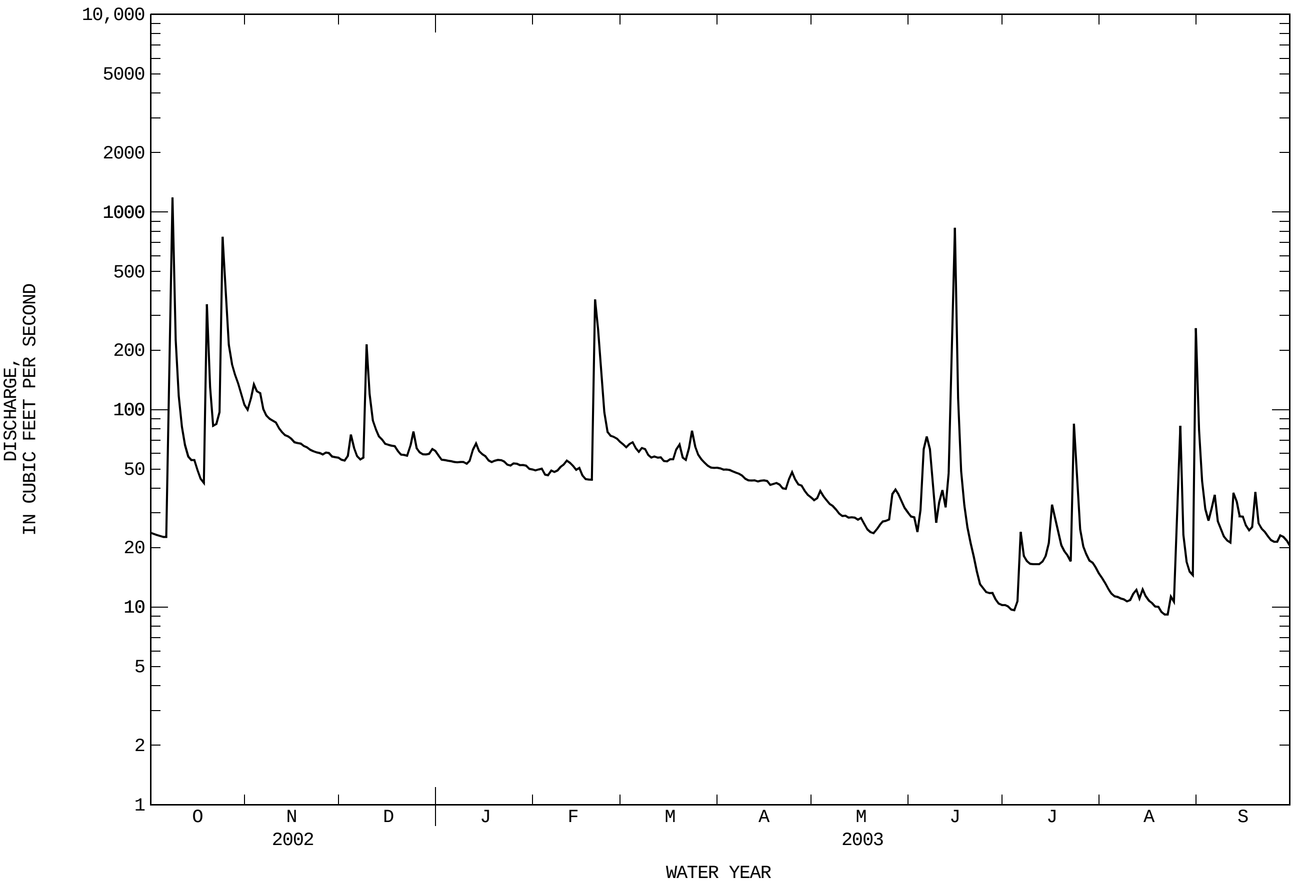
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 2003h, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	64.2	62.1	93.0	42.4	71.7	64.1	48.1	78.7	96.4	96.8	15.9	18.1
MAX	408	333	993	173	631	370	224	261	635	1214	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 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1980 - 2003h	
ANNUAL TOTAL	54512.6		21734.1			
ANNUAL MEAN	149		59.5		64.4	
HIGHEST ANNUAL MEAN					244	1992
LOWEST ANNUAL MEAN					5.31	1984
HIGHEST DAILY MEAN	14500	Jul 5	1180	Oct 8	14800	Dec 20 1991
LOWEST DAILY MEAN	4.0	Jun 23	9.2	Aug 21	0.00	Jul 13 1984
ANNUAL SEVEN-DAY MINIMUM	4.1	Jun 20	9.8	Aug 16	0.00	Sep 2 2000
MAXIMUM PEAK FLOW			6030	Oct 8	55700	Jul 5 2002
MAXIMUM PEAK STAGE			13.01	Oct 8	a32.09	Dec 20 1991
ANNUAL RUNOFF (AC-FT)	108100		43110		46670	
10 PERCENT EXCEEDS	131		85		90	
50 PERCENT EXCEEDS	38		49		22	
90 PERCENT EXCEEDS	8.2		14		3.3	

e Estimated
h See PERIOD OF RECORD paragraph.
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. 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.

REVISIONS.--Revised daily discharges, in cubic feet per second, for period from July 19 to Sept. 30, 2002, are given below. These figures supersede those published in the report for 2002.

DAY	JUL	AUG	SEP
1		238	104
2		225	98
3		214	92
4		203	96
5		194	94
6		196	91
7		192	109
8		185	256
9		189	355
10		205	335
11		269	193
12		191	151
13		169	133
14		157	123
15		151	116
16		143	114
17		137	114
18		130	112
19	784	125	122
20	674	122	130
21	620	119	124
22	569	115	106
23	521	111	101
24	469	109	96
25	415	108	92
26	386	105	90
27	365	101	90
28	338	97	89
29	307	102	87
30	272	109	86
31	254	111	---
TOTAL	1411173	4822	3899
MEAN	4554	156	130
MAX	49100	269	355
MIN	254	97	86
AC-FT	280000	9560	7730

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1939 - 2002	
ANNUAL TOTAL	90388.17	216106.3		
ANNUAL MEAN	248	592	200	
HIGHEST ANNUAL MEAN			840	1992
LOWEST ANNUAL MEAN			4.12	1956
ANNUAL RUNOFF (AC-FT)	179300	428600	144600	
10 PERCENT EXCEEDS	300	373	282	
50 PERCENT EXCEEDS	109	88	52	
90 PERCENT EXCEEDS	4.4	23	4.7	

08153500 Pedernales River near Johnson City, TX--Continued

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	85	266	191	252	183	457	210	130	70	76	41	224
2	82	422	189	231	184	440	205	129	68	78	39	106
3	63	645	193	231	185	486	203	125	108	68	36	64
4	59	659	214	229	183	496	208	126	304	71	32	40
5	58	656	237	224	180	431	204	126	367	70	31	30
6	63	440	210	221	189	402	199	123	381	98	30	31
7	70	370	196	216	188	373	197	122	209	158	29	37
8	1270	343	195	213	197	352	181	119	157	177	28	32
9	672	324	642	205	202	346	179	111	124	116	29	26
10	360	294	585	201	197	332	179	101	121	95	32	26
11	224	274	372	206	186	323	187	96	135	94	31	26
12	172	253	379	368	183	331	185	94	132	87	43	88
13	142	240	325	404	187	327	180	93	137	74	30	89
14	135	240	276	313	254	306	177	96	302	68	30	206
15	138	231	260	271	244	294	175	91	716	63	31	230
16	131	219	250	241	192	297	171	88	675	68	30	92
17	125	214	246	230	186	292	169	79	275	76	30	59
18	119	214	237	224	177	303	171	82	189	89	28	48
19	991	205	215	222	173	351	169	78	156	80	25	45
20	713	198	211	218	2400	281	164	71	136	75	22	49
21	304	195	209	211	4550	266	158	72	121	68	21	70
22	457	197	207	204	1790	268	158	76	115	63	20	63
23	410	199	1230	194	797	297	169	77	108	60	19	59
24	1270	205	516	192	581	301	163	74	102	105	19	53
25	1400	204	378	196	545	286	161	77	95	148	22	49
26	643	218	320	206	544	334	150	107	89	90	23	48
27	482	226	295	210	558	264	140	111	86	66	60	47
28	406	210	280	207	496	224	134	104	85	60	44	46
29	367	200	276	197	---	213	131	88	84	56	29	45
30	321	196	284	192	---	e211	132	83	84	52	23	44
31	283	---	269	187	---	211	---	76	---	46	55	---
TOTAL	12015	8757	9887	7116	15931	10095	5209	3025	5731	2595	962	2072
MEAN	388	292	319	230	569	326	174	97.6	191	83.7	31.0	69.1
MAX	1400	659	1230	404	4550	496	210	130	716	177	60	230
MIN	58	195	189	187	173	211	131	71	68	46	19	26
AC-FT	23830	17370	19610	14110	31600	20020	10330	6000	11370	5150	1910	4110

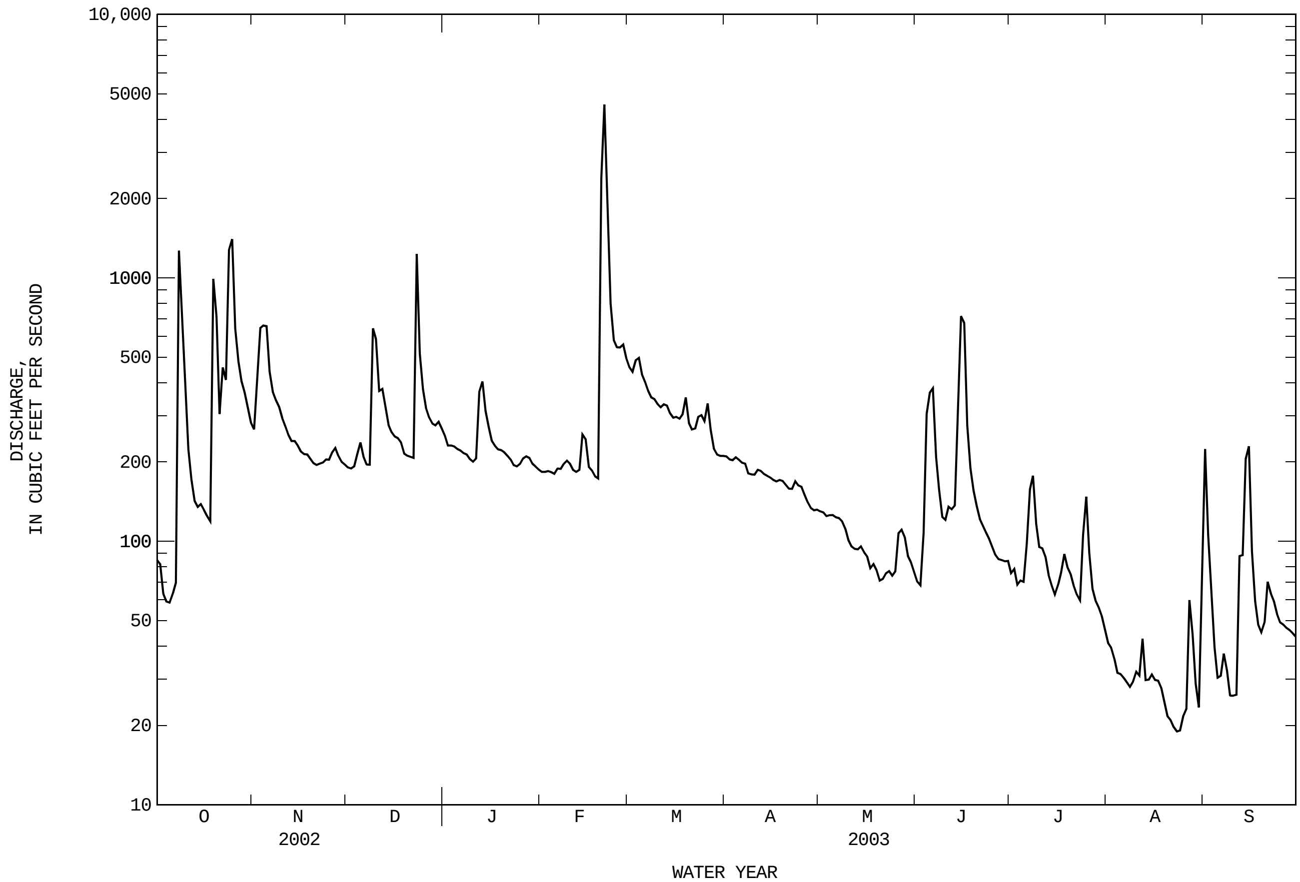
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	228	120	178	129	213	179	233	321	322	166	112	193
MAX	2041	1005	3161	1177	2794	1289	2368	1673	2905	4554	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

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1939 - 2003	
ANNUAL TOTAL	200775.3		83395			
ANNUAL MEAN	550		228		200	
HIGHEST ANNUAL MEAN					840	1992
LOWEST ANNUAL MEAN					4.12	1956
HIGHEST DAILY MEAN	49100	Jul 4	4550	Feb 21	129000	Sep 11 1952
LOWEST DAILY MEAN	3.7	Jun 25	19	Aug 23	0.00	Aug 8 1951
ANNUAL SEVEN-DAY MINIMUM	5.8	Jun 21	21	Aug 20	0.00	Aug 8 1951
MAXIMUM PEAK FLOW			11700	Feb 21	i441000	Sep 11 1952
MAXIMUM PEAK STAGE			14.16	Feb 21	a42.50	Sep 11 1952
ANNUAL RUNOFF (AC-FT)	398200		165400		144900	
10 PERCENT EXCEEDS	540		405		285	
50 PERCENT EXCEEDS	96		184		53	
90 PERCENT EXCEEDS	25		44		4.8	

e Estimated
a From floodmark.
i From indirect measurement of peak flow.

08153500 Pedernales River near Johnson City, TX--Continued



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08154500 Lake Travis near Austin, TX

LOCATION.--Lat 30°23'29" long 97°54'24", Travis County, Hydrologic Unit 12090205, in powerhouse at Mansfield Dam on Colorado River, 7.3 mi downstream from Sandy Creek, 12 mi northwest of Austin, and at mile 318.0.

DRAINAGE AREA.--38,755 mi^2, of which 11,403 mi^2 probably is noncontributing.

PERIOD OF RECORD.--Chemical data: Aug. 2003 to Sept. 2003. Biochemical data: Oct. 2003 to Sept. 2003.
Water-content records: Sept. 1940 to Sept. 1990, contents, 2400 hour observation. Prior to 1948, published as "Marshall Ford Reservoir near Austin."

REVISED RECORDS.--WSP 1342: Drainage Area. WDR TX-83-3: 1982.

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

302233097594000 -- Lk Travis Mid-Lake at Lakeway, TX

Date	Time	Sampling depth, feet (00003)	Specif. conductance, wat unf uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temperature, water, deg C (00010)	Transparency Secchi disc, meters (00078)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Noncarb hardness, wat flt field, mg/L as CaCO3 (00904)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)
AUG													
06...	1050	1.00	440	8.4	29.9	3.05	748	7.0	94	180	14	38.2	21.6
06...	1052	5.00	438	8.4	29.7	--	748	7.0	94	--	--	--	--
06...	1054	10.0	439	8.4	29.6	--	748	7.0	94	--	--	--	--
06...	1056	20.0	440	8.4	29.5	--	748	7.0	93	--	--	--	--
06...	1058	30.0	440	8.3	29.4	--	748	6.5	87	--	--	--	--
06...	1059	35.0	450	7.8	29.1	--	748	3.0	40	--	--	--	--
06...	1100	40.0	456	7.6	28.8	--	748	E.5	--	--	--	--	--
06...	1102	45.0	458	7.5	27.3	--	748	M	--	--	--	--	--
06...	1104	50.0	456	7.5	26.9	--	748	M	--	--	--	--	--
06...	1106	60.0	462	7.5	24.0	--	748	M	--	--	--	--	--
06...	1108	70.0	475	7.5	21.1	--	748	E.1	--	--	--	--	--
06...	1110	80.0	475	7.5	19.4	--	748	M	--	--	--	--	--
06...	1112	90.0	474	7.5	18.2	--	748	E.1	--	--	--	--	--
06...	1114	100	474	7.5	17.3	--	748	E.3	--	--	--	--	--
06...	1116	110	473	7.4	16.6	--	748	E.3e	--	--	--	--	--
06...	1118	125	471	7.4	16.3	--	748	E.4e	--	200	13	45.0	20.9
SEP													
03...	1018	1.00	439	8.4	29.6	3.05	752	6.8	90	170	18	31.6	21.4
03...	1019	5.00	440	8.4	29.5	--	752	6.8	91	--	--	--	--
03...	1020	10.0	437	8.4	29.5	--	752	6.8	90	--	--	--	--
03...	1022	20.0	437	8.4	29.5	--	752	6.7	89	--	--	--	--
03...	1024	30.0	439	8.3	29.4	--	752	6.3	84	--	--	--	--
03...	1026	40.0	440	8.1	29.2	--	752	5.2	69	--	--	--	--
03...	1028	45.0	449	7.7	28.9	--	752	1.6	21	--	--	--	--
03...	1030	50.0	451	7.5	27.8	--	752	Me	--	--	--	--	--
03...	1032	60.0	455	7.5	25.7	--	752	E.1e	--	--	--	--	--
03...	1034	70.0	467	7.4	23.2	--	752	E.1e	--	--	--	--	--
03...	1036	80.0	475	7.4	21.3	--	752	E.1e	--	--	--	--	--
03...	1038	90.0	479	7.4	19.6	--	752	E.1e	--	--	--	--	--
03...	1040	100	481	7.4	18.3	--	752	E.1e	--	--	--	--	--
03...	1042	110	479	7.4	17.4	--	752	E.1e	--	--	--	--	--
03...	1044	122	480	7.3	16.8	--	752	E.2e	--	200	7	46.4	20.7

08154500 Lake Travis near Austin, TX--Continued

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

302233097594000 -- Lk Travis Mid-Lake at Lakeway, TX

Date	Sodium, water, fltrd, mg/L (00930)	Sodium adsorp- tion ratio (00931)	Sodium, percent (00932)	Potas- sium, water, fltrd, mg/L (00935)	Alka- linity, wat flt inc tit field, mg/L as CaCO3 (39086)	Sulfate water, fltrd, mg/L (00945)	Chlor- ide, water, fltrd, mg/L (00940)	Fluor- ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Residue water, fltrd, sum of consti- tuents mg/L (70301)	Nitrite water, fltrd, mg/L as N (00613)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Ammonia water, fltrd, mg/L as N (00608)
AUG													
06...	21.2	.7	20	2.80	171	22.9	33.2	.2	6.9	249	<.002	<.022	<.015
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	<.002	<.022	<.015
06...	--	--	--	--	--	--	--	--	--	--	<.002	<.022	<.015
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	18.7	.6	17	2.60	186	18.3	30.8	.2	11.3	260	<.002	<.022	.247
SEP													
03...	19.6	.7	20	2.98	149	23.1	33.8	.3	7.2	229	<.002	<.022	<.015
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	E.002n	<.022	<.015
03...	--	--	--	--	--	--	--	--	--	--	.017	E.019n	<.015
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
03...	17.5	.5	16	2.91	194	14.9	31.3	.2	13.0	264	<.002	<.022	.642d

302233097594000 -- Lk Travis Mid-Lake at Lakeway, TX

Date	Organic nitro- gen, water, unfltrd mg/L (00605)	Organic nitro- gen, water, fltrd, mg/L (00607)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Phos- phorus, water, unfltrd mg/L (00665)	Phos- phorus, water, fltrd, mg/L (00666)	Ortho- phos- phate, water, fltrd, mg/L as P (00671)	Ortho- phos- phate, water, fltrd, mg/L (00660)	Organic carbon, water, unfltrd mg/L (00680)	Inor- ganic carbon, suspnd sedimnt total, mg/L (00688)	Organic carbon, suspnd sedimnt total, mg/L (00689)	Total carbon, suspnd sedimnt total, mg/L (00694)	Partic- ulate nitro- gen, susp, water, mg/L (49570)
AUG													
06...	--	--	.21	.26	.005	E.003	<.007	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	4.0	<.1	.8	.8	.10
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	.25	.25	.008	E.003n	<.007	--	--	--	--	--	--
06...	--	--	.26	.26	.010	E.004n	<.007	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	.27	.22	.47	.51	.063	.053	.034	.104	--	--	--	--	--
SEP													
03...	--	--	.21	.21	.008	E.003n	<.007	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	5.8	<.1	.6	.6	.08
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	.24	.19	.007	E.004n	<.007	--	--	--	--	--	--
03...	--	--	.23	.20	.007	E.003n	<.007	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
03...	.35	.38	1.0	.99	.106	.09oc	.081	.248	--	--	--	--	--

08154500 Lake Travis near Austin, TX--Continued

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

302233097594000 -- Lk Travis Mid-Lake at Lakeway, TX

Date	Chlorophyll a phytoplankton, fluoro, ug/L (70953)	Pheophytin a, phytoplankton, ug/L (62360)
AUG		
06...	--	--
06...	3.2	1.3
06...	--	--
06...	--	--
06...	--	--
06...	--	--
06...	--	--
06...	--	--
06...	--	--
06...	--	--
06...	--	--
06...	--	--
06...	--	--
06...	--	--
06...	--	--
06...	--	--
SEP		
03...	--	--
03...	4.7	1.1
03...	--	--
03...	--	--
03...	--	--
03...	--	--
03...	--	--
03...	--	--
03...	--	--
03...	--	--
03...	--	--
03...	--	--
03...	--	--
03...	--	--
03...	--	--

08154500 Lake Travis near Austin, TX--Continued

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

302329097542100 -- Lk Travis at Mansfield Dam nr Lakeway, TX

Date	Time	Sampling depth, feet (00003)	Specif. conductance, wat unf uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temperature, water, deg C (00010)	Transparency Secchi disc, meters (00078)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Noncarb hardness, wat flt field, mg/L as CaCO3 (00904)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)
AUG													
06...	0740	1.00	416	8.4	29.3	3.81	748	7.3	98	170	29	35.9	19.7
06...	0742	6.00	416	8.4	29.2	--	748	7.4	98	--	--	--	--
06...	0744	10.0	418	8.4	29.2	--	748	7.4	98	--	--	--	--
06...	0746	20.0	417	8.4	29.1	--	748	7.4	98	--	--	--	--
06...	0748	30.0	416	8.4	29.1	--	748	7.3	98	--	--	--	--
06...	0749	40.0	418	8.4	28.8	--	748	7.2	95	--	--	--	--
06...	0750	43.0	433	7.7	27.7	--	748	2.5	32	--	--	--	--
06...	0752	50.0	440	7.5	25.9	--	748	E.4	--	--	--	--	--
06...	0754	60.0	446	7.5	23.2	--	748	E.8	--	--	--	--	--
06...	0756	70.0	452	7.6	20.6	--	748	1.6	18	--	--	--	--
06...	0758	80.0	452	7.6	19.1	--	748	2.6	29	--	--	--	--
06...	0800	90.0	451	7.6	18.1	--	748	3.1	34	--	--	--	--
06...	0802	100	451	7.6	17.3	--	748	3.2	34	--	--	--	--
06...	0804	110	454	7.6	16.6	--	748	2.5	26	--	--	--	--
06...	0806	120	459	7.5	16.1	--	748	1.3	14	--	--	--	--
06...	0808	130	460	7.5	15.6	--	748	1.2	12	--	--	--	--
06...	0810	140	459	7.5	15.3	--	748	1.1	11	--	--	--	--
06...	0812	150	457	7.4	15.1	--	748	E.7	--	--	--	--	--
06...	0814	155	455	7.4	15.0	--	748	E.8	--	180	7	45.2	16.0
SEP													
03...	0730	1.00	415	8.4	29.2	3.66	751	6.9	92	170	16	33.5	20.1
03...	0732	6.00	416	8.4	29.2	--	751	6.9	91	--	--	--	--
03...	0734	10.0	418	8.4	29.2	--	751	6.9	91	--	--	--	--
03...	0736	20.0	420	8.4	29.2	--	751	6.9	91	--	--	--	--
03...	0738	30.0	417	8.4	29.1	--	751	6.8	90	--	--	--	--
03...	0740	40.0	418	8.3	28.9	--	751	6.3	83	--	--	--	--
03...	0742	50.0	419	8.2	28.5	--	751	3.6	47	--	--	--	--
03...	0744	60.0	439	7.5	25.4	--	751	E.1	--	--	--	--	--
03...	0746	70.0	444	7.5	23.0	--	751	E.1	--	--	--	--	--
03...	0748	80.0	452	7.5	21.0	--	751	E.4	--	--	--	--	--
03...	0750	90.0	450	7.5	19.3	--	751	1.2	14	--	--	--	--
03...	0752	100	454	7.5	18.2	--	751	1.2	13	--	--	--	--
03...	0754	110	456	7.5	17.3	--	751	E.6	--	--	--	--	--
03...	0756	120	458	7.4	16.4	--	751	E.2	--	--	--	--	--
03...	0758	130	458	7.4	15.8	--	751	E.3	--	--	--	--	--
03...	0800	140	461	7.4	15.5	--	751	E.2	--	--	--	--	--
03...	0802	154	455	7.4	15.1	--	751	E.3	--	200	22	46.3	19.7

08154500 Lake Travis near Austin, TX--Continued

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

302329097542100 -- Lk Travis at Mansfield Dam nr Lakeway, TX

Date	Sodium, water, fltrd, mg/L (00930)	Sodium adsorp- tion ratio (00931)	Sodium, percent (00932)	Potas- sium, water, fltrd, mg/L (00935)	Alka- linity, wat flt inc tit field, mg/L as CaCO3 (39086)	Sulfate water, fltrd, mg/L (00945)	Chlor- ide, water, fltrd, mg/L (00940)	Fluor- ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Residue water, fltrd, sum of consti- tuents mg/L (70301)	Nitrite water, fltrd, mg/L as N (00613)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Ammonia water, fltrd, mg/L as N (00608)
AUG													
06...	19.6	.7	20	2.82	142	22.5	31.2	.2	6.8	224	<.002	<.022	<.015
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	<.002	<.022	<.015
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	<.002	.271	<.015
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	18.7	.6	18	3.34	172	21.1	30.3	.2	10.5	250	<.002	.297	<.015
SEP													
03...	17.9	.6	19	3.10	151	23.0	31.9	.2	6.8	227	<.002	<.022	<.015
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	.009	E.011n	<.015
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	<.002	.250	<.015
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
03...	17.1	.5	16	3.04	175	20.5	29.9	.2	10.9	253	E.002n	.185	.051

08154500 Lake Travis near Austin, TX--Continued

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

302329097542100 -- Lk Travis at Mansfield Dam nr Lakeway, TX

Date	Total nitro-gen, water, unfltrd mg/L (00600)	Organic nitro-gen, water, unfltrd mg/L (00605)	Organic nitro-gen, water, fltrd, mg/L (00607)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Phos-phorus, water, unfltrd mg/L (00665)	Phos-phorus, water, fltrd, mg/L (00666)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Ortho-phos-phate, water, fltrd, mg/L (00660)	Organic carbon, water, unfltrd mg/L (00680)	Inor-ganic carbon, suspnd sedimnt total, mg/L (00688)	Organic carbon, suspnd sedimnt total, mg/L (00689)	Total carbon, suspnd sedimnt total, mg/L (00694)
AUG													
06...	--	--	--	.26	.23	.004	E.003	<.007	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	3.6	<.1	.4	.4
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	.21	.24	.008	E.004n	<.007	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	.48	--	--	.21	.21	.004	E.002n	<.007	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	.50	--	--	.20	.20	.016	.012	.007	.021	--	--	--	--
SEP													
03...	--	--	--	.19	.20	.006	E.002n	<.007	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	3.3	<.1	.4	.4
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	.21	.20	.006	E.002n	<.007	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
03...	.41	--	--	.20	.16	.004	E.004n	<.007	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
03...	.42	.18	.22	.27	.23	.036	.024	.017	.052	--	--	--	--

08154500 Lake Travis near Austin, TX--Continued

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

302329097542100 -- Lk Travis at Mansfield Dam nr Lakeway, TX

Date	Particulate nitrogen, susp, water, mg/L (49570)	Chlorophyll a phytoplankton, fluoro, ug/L (70953)	Pheophytin a, phytoplankton, ug/L (62360)
AUG			
06...	--	--	--
06...	.05	2.1	.8
06...	--	--	--
06...	--	--	--
06...	--	--	--
06...	--	--	--
06...	--	--	--
06...	--	--	--
06...	--	--	--
06...	--	--	--
06...	--	--	--
06...	--	--	--
06...	--	--	--
06...	--	--	--
06...	--	--	--
06...	--	--	--
06...	--	--	--
06...	--	--	--
06...	--	--	--
SEP			
03...	--	--	--
03...	.06	3.0	.8
03...	--	--	--
03...	--	--	--
03...	--	--	--
03...	--	--	--
03...	--	--	--
03...	--	--	--
03...	--	--	--
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03...	--	--	--
03...	--	--	--
03...	--	--	--
03...	--	--	--
03...	--	--	--
03...	--	--	--
03...	--	--	--

302859098005300 -- Lk Travis at Cow Creek confl nr Lago Vista, TX

Date	Time	Sampling depth, feet (00003)	Specif. conductance, wat unf uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temperature, water, deg C (00010)	Transparency Secchi disc, meters (00078)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	Nitrite water, fltrd, mg/L as N (00613)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Ammonia water, fltrd, mg/L as N (00608)	Organic nitrogen, water, unfltrd mg/L (00605)
AUG													
06...	1212	1.00	448	8.4	31.6	2.29	748	7.2	100	<.002	<.022	<.015	--
06...	1214	4.00	448	8.4	31.4	--	748	7.2	100	--	--	--	--
06...	1216	10.0	448	8.4	31.1	--	748	7.1	98	--	--	--	--
06...	1218	20.0	450	8.3	30.4	--	748	6.4	87	--	--	--	--
06...	1220	30.0	457	8.0	30.0	--	748	4.0	54	--	--	--	--
06...	1222	40.0	462	7.5	29.2	--	748	E.1e	--	--	--	--	--
06...	1224	50.0	474	7.4	25.8	--	748	E.1e	--	--	--	--	--
06...	1226	60.0	484	7.3	23.1	--	748	E.1e	--	--	--	--	--
06...	1228	70.0	491	7.3	20.8	--	748	E.1e	--	--	--	--	--
06...	1230	81.0	501	7.3	19.2	--	748	E.1e	--	<.002	<.022	.878d	.37
SEP													
03...	1130	1.00	453	8.2	30.1	1.98	752	5.4	72	<.002	<.022	<.015	--
03...	1132	3.00	453	8.2	30.0	--	752	5.3	71	--	--	--	--
03...	1134	10.0	452	8.2	29.7	--	752	5.2	69	--	--	--	--
03...	1136	20.0	453	8.1	29.6	--	752	4.8	64	--	--	--	--
03...	1138	30.0	457	7.9	29.4	--	752	3.4	45	--	--	--	--
03...	1140	40.0	461	7.6	29.1	--	752	E.6e	--	--	--	--	--
03...	1142	50.0	468	7.4	27.9	--	752	E.1e	--	--	--	--	--
03...	1144	60.0	481	7.3	25.1	--	752	E.1e	--	--	--	--	--
03...	1146	70.0	492	7.2	22.8	--	752	E.1e	--	--	--	--	--
03...	1148	80.0	511	7.2	21.2	--	752	E.1e	--	<.002	<.022	1.44d	.42

08154500 Lake Travis near Austin, TX--Continued

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

302859098005300 -- Lk Travis at Cow Creek confl nr Lago Vista, TX

Date	Organic nitro-gen, water, fltrd, mg/L (00607)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Phos-phorus, water, unfltrd mg/L (00665)	Phos-phorus, water, fltrd, mg/L (00666)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Ortho-phos-phate, water, fltrd, mg/L (00660)	Organic carbon, water, unfltrd mg/L (00680)	Inor-ganic carbon, suspnd sedimnt total, mg/L (00688)	Organic carbon, suspnd sedimnt total, mg/L (00689)	Total carbon, suspnd sedimnt total, mg/L (00694)	Partic-ulate nitro-gen, susp, water, mg/L (49570)	Chloro-phyll a phyto-plank-ton, fluoro, ug/L (70953)
AUG													
06...	--	.26	.32	.009	E.003n	<.007	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	4.0	<.1	.5	.5	.07	3.6
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	.38	1.3	1.2	.085	.067	.056	.172	--	--	--	--	--	--
SEP													
03...	--	.32	.40	.012	.005	<.007	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	5.1	<.1	.8	.8	.12	6.4
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
03...	.37	1.8	1.9	.118	.106	.091	.279	--	--	--	--	--	--

302859098005300 -- Lk Travis at Cow Creek confl nr Lago Vista, TX

Date	Pheo-phytin a, phyto-plank-ton, ug/L (62360)
AUG	
06...	--
06...	1.1
06...	--
06...	--
06...	--
06...	--
06...	--
06...	--
06...	--
06...	--
SEP	
03...	--
03...	1.8
03...	--
03...	--
03...	--
03...	--
03...	--
03...	--
03...	--
03...	--

08154500 Lake Travis near Austin, TX--Continued

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

302341097565800 -- Lk Travis at Arkansas Bend nr Lakeway, TX

Date	Time	Sampling depth, feet (00003)	Specif. conductance, wat unf uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temperature, water, deg C (00010)	Transparency Secchi disc, meters (00078)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	Nitrite water, fltrd, mg/L as N (00613)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Ammonia water, fltrd, mg/L as N (00608)	Organic nitrogen, water, unfltrd mg/L (00605)
AUG													
06...	0946	1.00	432	8.4	29.8	--	748	7.1	96	<.002	<.022	<.015	--
06...	0948	5.00	432	8.4	29.7	--	748	7.1	95	--	--	--	--
06...	0950	10.0	432	8.4	29.6	--	748	7.1	95	--	--	--	--
06...	0952	20.0	432	8.4	29.6	--	748	7.0	94	--	--	--	--
06...	0954	30.0	431	8.3	29.3	--	748	6.5	87	--	--	--	--
06...	0956	40.0	447	7.7	28.3	--	748	2.4	31	--	--	--	--
06...	0958	50.0	451	7.5	25.6	--	748	E.2e	--	--	--	--	--
06...	1000	60.0	458	7.5	23.4	--	748	E.2e	--	--	--	--	--
06...	1002	70.0	468	7.5	21.0	--	748	E.2e	--	--	--	--	--
06...	1004	80.0	469	7.5	19.3	--	748	E.2e	--	--	--	--	--
06...	1006	90.0	469	7.5	18.0	--	748	E.2e	--	--	--	--	--
06...	1008	100	469	7.5	17.2	--	748	E.2e	--	--	--	--	--
06...	1010	110	470	7.5	16.7	--	748	E.3e	--	--	--	--	--
06...	1012	120	469	7.4	16.0	--	748	E.2e	--	--	--	--	--
06...	1014	130	465	7.4	15.6	--	748	E.3e	--	--	--	--	--
06...	1016	138	465	7.4	15.6	--	748	E.2e	--	<.002	<.022	.175	.25
SEP													
03...	0922	1.00	433	8.3	29.3	3.66	752	6.6	88	<.002	<.022	<.015	--
03...	0924	6.00	432	8.3	29.3	--	752	6.6	88	--	--	--	--
03...	0926	10.0	433	8.3	29.3	--	752	6.8	90	--	--	--	--
03...	0928	20.0	433	8.3	29.3	--	752	6.7	89	--	--	--	--
03...	0930	30.0	433	8.3	29.2	--	752	6.2	82	--	--	--	--
03...	0932	40.0	437	8.1	28.9	--	752	5.1	68	--	--	--	--
03...	0934	50.0	446	7.6	28.1	--	752	E.5	--	--	--	--	--
03...	0936	60.0	452	7.5	25.5	--	752	E.1e	--	--	--	--	--
03...	0938	70.0	461	7.5	23.0	--	752	E.1e	--	--	--	--	--
03...	0940	80.0	467	7.5	21.2	--	752	E.1e	--	--	--	--	--
03...	0942	90.0	477	7.4	19.4	--	752	E.1e	--	--	--	--	--
03...	0944	100	476	7.4	18.2	--	752	E.2e	--	--	--	--	--
03...	0946	110	476	7.4	17.2	--	752	E.2e	--	--	--	--	--
03...	0948	120	474	7.4	16.5	--	752	E.2e	--	--	--	--	--
03...	0950	130	466	7.4	15.8	--	752	E.2e	--	--	--	--	--
03...	0952	136	469	7.3	15.8	--	752	E.2e	--	<.002	<.022	.455d	.27

302341097565800 -- Lk Travis at Arkansas Bend nr Lakeway, TX

Date	Organic nitrogen, water, fltrd, mg/L (00607)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Phosphorus, water, unfltrd mg/L (00665)	Phosphorus, water, fltrd, mg/L (00666)	Orthophosphate, water, fltrd, mg/L as P (00671)	Orthophosphate, water, fltrd, mg/L (00660)	Organic carbon, water, unfltrd mg/L (00680)	Inorganic carbon, suspnd sedimnt total, mg/L (00688)	Organic carbon, suspnd sedimnt total, mg/L (00689)	Total carbon, suspnd sedimnt total, mg/L (00694)	Particulate nitrogen, susp, water, mg/L (49570)	Chlorophyll a phytoplankton, fluoro, ug/L (70953)
AUG													
06...	--	.27	.25	.005	E.002n	<.007	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	4.2	<.1	.5	.5	.06	2.8
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	.25	.43	.42	.083	.061	.049	.150	--	--	--	--	--	--
SEP													
03...	--	.24	.28	.006	E.004n	<.007	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	3.9	<.1	.5	.5	.07	3.8
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
03...	.30	.76	.73	.120	.108	.089	.273	--	--	--	--	--	--

08154500 Lake Travis near Austin, TX--Continued

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

302341097565800 -- Lk Travis at Arkansas Bend nr Lakeway, TX

Date	Pheo- phytin a, phyto- plank- ton, ug/L (62360)
AUG	
06...	--
06...	.7
06...	--
06...	--
06...	--
06...	--
06...	--
06...	--
06...	--
06...	--
06...	--
06...	--
06...	--
06...	--
06...	--
06...	--
SEP	
03...	--
03...	1.0
03...	--
03...	--
03...	--
03...	--
03...	--
03...	--
03...	--
03...	--
03...	--
03...	--
03...	--
03...	--
03...	--
03...	--

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

Value qualifier codes used in this report:
- c -- See laboratory comment
- d -- Diluted sample: method hi range exceeded
- e -- See field comment
- n -- Below the NDV
- o -- Result determined by alternate method

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 daily discharges above 200 ft^3/s, which are fair. No known regulation or diversions. No flow at times.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.5	18	10	46	17	58	11	4.3	1.9	0.97	0.09	0.58
2	2.4	21	10	37	17	53	11	4.4	1.9	0.85	0.08	0.39
3	2.3	33	14	33	16	60	11	4.0	2.0	0.85	0.14	0.41
4	2.4	80	22	31	15	57	11	3.9	28	2.5	0.08	0.56
5	2.0	78	17	29	14	50	11	3.8	15	2.3	0.05	0.57
6	2.0	50	14	26	27	45	10	4.2	9.9	2.2	0.04	0.68
7	2.0	39	13	24	20	41	9.6	4.2	5.7	2.2	0.04	0.72
8	3.2	33	13	23	17	40	9.3	3.5	4.4	3.8	0.04	0.61
9	21	29	97	22	16	38	8.8	3.0	3.8	3.7	0.06	0.56
10	8.0	25	57	20	14	35	8.3	2.8	3.3	3.1	0.06	0.43
11	5.4	22	41	23	14	34	7.8	2.7	3.0	2.3	0.16	0.77
12	4.5	19	51	84	13	34	7.4	5.4	2.8	2.1	0.13	8.0
13	4.1	18	43	58	14	31	7.1	5.5	24	1.7	1.9	3.0
14	4.4	17	35	45	18	28	6.8	3.7	21	1.5	3.5	118
15	5.0	16	32	40	15	27	6.6	3.1	6.8	1.3	2.0	27
16	4.4	15	29	36	13	26	6.2	2.9	5.3	1.5	1.5	9.7
17	4.1	14	26	33	12	25	6.0	2.4	4.4	1.4	1.1	6.5
18	4.4	14	25	31	11	26	5.8	2.1	3.5	1.2	0.89	5.0
19	79	13	22	29	11	24	5.7	1.7	3.0	1.0	0.76	4.0
20	23	12	20	28	459	21	5.9	1.6	2.6	0.85	0.66	3.8
21	20	11	19	26	254	20	5.5	1.7	2.1	0.71	0.57	8.4
22	174	11	19	24	157	20	8.0	2.9	2.0	0.58	0.63	7.4
23	57	10	67	22	108	19	7.0	2.8	1.6	0.53	0.48	4.8
24	102	10	45	21	87	18	6.1	2.3	1.5	0.49	0.48	3.6
25	72	9.3	34	21	80	17	5.1	1.5	1.5	0.43	0.53	3.3
26	48	37	30	23	72	16	4.7	17	1.5	0.41	0.50	3.2
27	37	21	28	20	71	15	4.4	6.2	1.5	0.31	0.49	3.2
28	31	14	25	20	64	16	4.4	3.6	1.4	0.23	0.44	2.6
29	26	12	25	19	---	14	4.4	3.0	1.3	0.18	0.40	2.3
30	22	11	83	18	---	13	4.3	2.4	1.1	0.14	0.35	2.3
31	19	---	68	17	---	12	---	2.0	---	0.11	0.40	---
TOTAL	794.1	712.3	1034	929	1646	933	220.2	114.6	167.8	41.44	18.55	232.38
MEAN	25.6	23.7	33.4	30.0	58.8	30.1	7.34	3.70	5.59	1.34	0.60	7.75
MAX	174	80	97	84	459	60	11	17	28	3.8	3.5	118
MIN	2.0	9.3	10	17	11	12	4.3	1.5	1.1	0.11	0.04	0.39
AC-FT	1580	1410	2050	1840	3260	1850	437	227	333	82	37	461

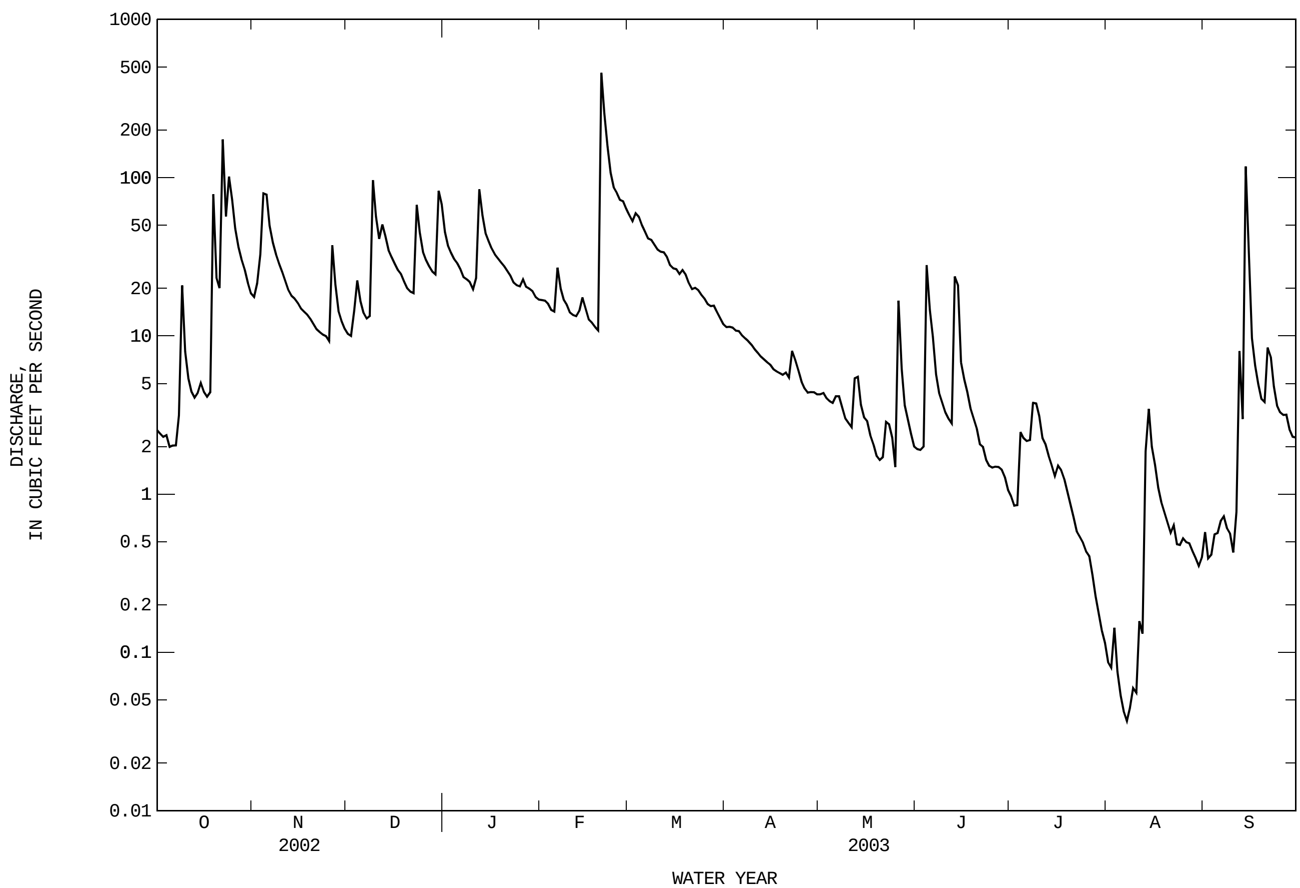
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1978 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	16.8	15.7	18.6	14.4	18.6	17.5	12.0	22.7	24.2	5.58	3.80	4.59
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 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1978 - 2003	
ANNUAL TOTAL	6101.84		6843.37			
ANNUAL MEAN	16.7		18.7		14.5	
HIGHEST ANNUAL MEAN					40.6	1992
LOWEST ANNUAL MEAN					1.86	1984
HIGHEST DAILY MEAN	490	Jul 2	459	Feb 20	1180	Oct 17 1998
LOWEST DAILY MEAN	0.11	Jun 15	0.04	Aug 6	0.00	Jul 4 1984
ANNUAL SEVEN-DAY MINIMUM	0.23	Aug 31	0.05	Aug 4	0.00	Jul 4 1984
MAXIMUM PEAK FLOW			2200	Feb 20	13700	May 13 1982
MAXIMUM PEAK STAGE			a6.75	Feb 20	12.31	Oct 7 1994
ANNUAL RUNOFF (AC-FT)	12100		13570		10530	
10 PERCENT EXCEEDS	33		44		28	
50 PERCENT EXCEEDS	8.1		8.8		4.3	
90 PERCENT EXCEEDS	0.63		0.57		0.29	

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, Oct. 2002 to current year.
SEDIMENT DATA: Oct. 1998 to current year.

INSTRUMENTATION.--Stage-activated automatic sampler.

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

Date	Time	Discharge, cfs (00060)	Specif. conductance, wat unf uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Color, water, fltrd, Pt-Co units (00080)	Turbidity, wat unf lab, Hach 2100AN NTU (99872)	COD, high level, water, unfltrd mg/L (00340)	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)	Residue total at 105 deg. C, suspended, mg/L (00530)	Nitrite water, fltrd, mg/L as N (00613)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Ammonia water, fltrd, mg/L as N (00608)	Total nitrogen, water, unfltrd mg/L (00600)
OCT													
19-19	0632	113	416	7.7	15	14	10	140	13	E.004	.43	<.04	.83
FEB													
20-20	0615	582	392	7.9	38	120	E40	143	206	E.004	.89	E.04	2.4

Date	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Phosphorus, water, unfltrd mg/L (00665)	Phosphorus, water, fltrd, mg/L (00666)	Orthophosphate, water, fltrd, mg/L as P (00671)	Orthophosphate, water, fltrd, mg/L (00660)	Organic carbon, water, unfltrd mg/L (00680)	Suspended sediment load, tons/d (80155)	Suspended sediment concentration mg/L (80154)	Cadmium water, unfltrd ug/L (01027)	Copper, water, unfltrd recover -able, ug/L (01042)	Lead, water, unfltrd recover -able, ug/L (01051)	Zinc, water, unfltrd recover -able, ug/L (01092)	2,4-D water, fltrd, ug/L (39732)
OCT													
19-19	.40	E.04	<.04	<.02	--	6.3	7.3	24	<.2	1.4	M	8	<.02
FEB													
20-20	1.5	.21	.05	.03	.101	14.6	330	210	E.1	2.5	4	13	.15

Date	2,4-DB water, fltrd 0.7u GF ug/L (38746)	2,4-D water, fltrd, ug/L (50470)	2,6-Diethylaniline water fltrd 0.7u GF ug/L (82660)	3-Hydroxy carbofuran, wat flt 0.7u GF ug/L (49308)	3-Ketocarbofuran, water, fltrd, ug/L (50295)	Acetochlor, water, fltrd, ug/L (49260)	Acifluorfen, water, fltrd 0.7u GF ug/L (49315)	Alachlor, water, fltrd, ug/L (46342)	Aldicarb, water, fltrd 0.7u GF ug/L (49312)	Aldicarb sulfone water, fltrd 0.7u GF ug/L (49313)	Aldicarb sulfoxide, wat flt 0.7u GF ug/L (49314)	alpha-HCH, water, fltrd, ug/L (34253)	Atrazine, water, fltrd, ug/L (39632)
OCT													
19-19	<.02	<.009	<.006	<.006	<2	<.006	<.007	<.004	<.04	<.02	<.008	<.005	.052
FEB													
20-20	<.02	<.009	<.006	<.006	<2	<.006	<.007	<.004	<.04	<.02	<.008	<.005	.926

Date	Azinphos-methyl, water, fltrd 0.7u GF ug/L (82686)	Bendiocarb, water, fltrd, ug/L (50299)	Benfluralin, water, fltrd 0.7u GF ug/L (82673)	Benomyl water, fltrd, ug/L (50300)	Bensulfuron, water, fltrd, ug/L (61693)	Bentazon, water, fltrd 0.7u GF ug/L (38711)	Bromacil, water, fltrd, ug/L (04029)	Bromoxynil, water, fltrd 0.7u GF ug/L (49311)	Butylate, water, fltrd, ug/L (04028)	Chlorodiamino-s-triazine, wat flt ug/L (04039)	Caffeine, water, fltrd, ug/L (50305)	Carbaryl, water, fltrd 0.7u GF ug/L (49310)	Carbaryl, water, fltrd 0.7u GF ug/L (82680)
OCT													
19-19	<.050	<.03	<.010	.019	<.02	<.01	<.03	<.02	<.002	<.01	.101	.03	E.071
FEB													
20-20	<.050	<.03	<.010	<.004	<.02	<.01	<.03	<.02	<.002	<.01	.024	<.03	E.007

Date	Carbofuran, water, fltrd 0.7u GF ug/L (49309)	Carbofuran, water, fltrd 0.7u GF ug/L (82674)	CEAT, water, fltrd, ug/L (04038)	Chloramben methyl ester, water, fltrd, ug/L (61188)	Chlorimuron, water, fltrd, ug/L (50306)	Chlorothalonil, water, fltrd 0.7u GF ug/L (49306)	N-(4-Chlorophenyl) -N'-methylurea, ug/L (61692)	Chlorpyrifos water, fltrd, ug/L (38933)	cis-Permethrin water fltrd 0.7u GF ug/L (82687)	Clopyralid, water, fltrd 0.7u GF ug/L (49305)	Cyanazine, water, fltrd, ug/L (04041)	Cycloate, water, fltrd, ug/L (04031)	Dacthal monoacid, water, fltrd 0.7u GF ug/L (49304)
OCT													
19-19	<.006	<.020	E.01	<.02	<.010	<.04	<.02	<.005	<.006	<.01	<.018	<.01	<.01
FEB													
20-20	<.006	<.020	E.04	<.02	<.010	<.04	<.02	<.005	<.006	<.01	<.018	<.01	<.01

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

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

Date	DCPA, water fltrd 0.7u GF ug/L (82682)	CIAT, water, fltrd, ug/L (04040)	Desulf-inyl fipro-nil, water, fltrd, ug/L (62170)	Desulf-inyl-fipro-nil amide, wat flt ug/L (62169)	Diazi-non, water, fltrd, ug/L (39572)	Dicamba water fltrd 0.7u GF ug/L (38442)	Di-chlor-prop, water, fltrd 0.7u GF ug/L (49302)	Diel-drin, water, fltrd, ug/L (39381)	Dinoseb water, fltrd 0.7u GF ug/L (49301)	Diphen-amid, water, fltrd, ug/L (04033)	Disul-foton, water, fltrd 0.7u GF ug/L (82677)	Diuron, water, fltrd 0.7u GF ug/L (49300)	EPTC, water, fltrd 0.7u GF ug/L (82668)
OCT													
19-19	<.003	E.012	<.004	<.009	.036	<.01	<.01	<.005	<.01	<.03	<.02	<.01	<.002
FEB													
20-20	<.003	E.026	<.004	<.009	.023	<.01	<.01	<.005	<.01	<.03	<.02	<.01	<.002

Date	Ethal-flur-alin, water, fltrd 0.7u GF ug/L (82663)	Etho-prop, water, fltrd 0.7u GF ug/L (82672)	Fenuron water, fltrd 0.7u GF ug/L (49297)	Fipro-nil, water, fltrd, ug/L (62166)	Fipro-nil sulfide water, fltrd, ug/L (62167)	Fipro-nil sulfone water, fltrd, ug/L (62168)	Flumet-sulam, water, fltrd, ug/L (61694)	Fluo-meturon water fltrd 0.7u GF ug/L (38811)	Fonofos water, fltrd, ug/L (04095)	Imaza-quin, water, fltrd, ug/L (50356)	Imaze-thapyr, water, fltrd, ug/L (50407)	Lindane water, fltrd, ug/L (39341)	Linuron water fltrd 0.7u GF ug/L (38478)
OCT													
19-19	<.009	<.005	<.03	<.007	<.005	<.005	<.01	<.03	<.003	E.01	<.02	<.004	<.01
FEB													
20-20	<.009	<.005	<.03	<.007	<.005	<.005	<.01	<.03	<.003	M	<.02	<.004	<.01

Date	Linuron water fltrd 0.7u GF ug/L (82666)	Mala-thion, water, fltrd, ug/L (39532)	MCPA, water, fltrd 0.7u GF ug/L (38482)	MCPB, water, fltrd 0.7u GF ug/L (38487)	Methio-carb, water, fltrd 0.7u GF ug/L (38501)	Meth-omyl, water, fltrd 0.7u GF ug/L (49296)	Meta-laxyl, water, fltrd, ug/L (50359)	Metola-chlor, water, fltrd, ug/L (39415)	Metri-buzin, water, fltrd, ug/L (82630)	Metsul-furon, water, fltrd, ug/L (61697)	Imida-cloprid water, fltrd, ug/L (61695)	Moli-nate, water, fltrd 0.7u GF ug/L (82671)	Naprop-amide, water, fltrd 0.7u GF ug/L (82684)
OCT													
19-19	<.035	<.027	<.02	<.01	<.008	<.004	<.02	.014	<.006	<.03	<.007	<.002	<.007
FEB													
20-20	<.035	<.027	.15	<.01	<.008	<.004	<.02	<.013	<.006	<.03	<.007	<.002	<.007

Date	Neburon water, fltrd 0.7u GF ug/L (49294)	Nico-sul-furon, water, fltrd, ug/L (50364)	Norflur azon, water, fltrd 0.7u GF ug/L (49293)	OIET, water, fltrd, ug/L (50355)	Ory-zalin, water, fltrd 0.7u GF ug/L (49292)	Oxamyl, water, fltrd 0.7u GF ug/L (38866)	p,p'-DDE, water, fltrd, ug/L (34653)	Para-thion, water, fltrd, ug/L (39542)	Methyl para-thion, water, fltrd 0.7u GF ug/L (82667)	Peb-ulate, water, fltrd 0.7u GF ug/L (82669)	Pendi-meth-alin, water, fltrd 0.7u GF ug/L (82683)	Phorate water fltrd 0.7u GF ug/L (82664)	Pic-loram, water, fltrd 0.7u GF ug/L (49291)
OCT													
19-19	<.01	<.01	<.02	<.008	<.02	<.01	<.003	<.010	<.006	<.004	<.022	<.011	<.02
FEB													
20-20	<.01	<.01	<.02	E.059	<.02	<.01	<.003	<.010	<.006	<.004	.059	<.011	<.02

Date	Prome-ton, water, fltrd, ug/L (04037)	Propa-chlor, water, fltrd, ug/L (04024)	Pro-panil, water, fltrd 0.7u GF ug/L (82679)	Propar-gite, water, fltrd 0.7u GF ug/L (82685)	Propham water fltrd 0.7u GF ug/L (49236)	Propi-cona-zole, water, fltrd, ug/L (50471)	Pro-poxur, water, fltrd 0.7u GF ug/L (38538)	Pron-amide, water, fltrd 0.7u GF ug/L (82676)	Siduron water, fltrd, ug/L (38548)	Sima-zine, water, fltrd, ug/L (04035)	Sulfo-met-ruron, water, fltrd, ug/L (50337)	Tebu-thiuron water fltrd 0.7u GF ug/L (82670)	Terba-cil, water, fltrd, ug/L (04032)
OCT													
19-19	<.01	<.010	<.011	<.02	<.010	<.02	<.008	<.004	<.02	.059	<.009	<.02	<.010
FEB													
20-20	<.01	<.010	<.011	<.02	<.010	<.02	.010	<.004	<.02	.447	<.009	<.02	<.010

Date	Terba-cil, water, fltrd 0.7u GF ug/L (82665)	Terbu-fos, water, fltrd 0.7u GF ug/L (82675)	Thio-bencarb water fltrd 0.7u GF ug/L (82681)	Tri-allate, water, fltrd 0.7u GF ug/L (82678)	Tri-benuron water, fltrd, ug/L (61159)	Tri-clopyr, water, fltrd 0.7u GF ug/L (49235)	Tri-flur-alin, water, fltrd 0.7u GF ug/L (82661)
OCT							
19-19	<.034	<.02	<.005	<.002	--u	.06	<.009
FEB							
20-20	<.034	<.02	<.005	<.002	--u	<.02	<.009

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

Null value qualifier codes used in this report:
u -- Unable to determine-matrix interference

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 current year.
BIOCHEMICAL DATA: Oct. 1978 to current year.
PESTICIDE DATA: Oct. 1978 to Aug. 1990.
SEDIMENT DATA: June 2001 to current year.
SEDIMENT CHEMISTRY: Mar. 1987 to Aug. 1990, June 2001 to current year.

REMARKS.--Water quality samples collected periodically after storm events.

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

301739097471201 -- Lk Austin Site AC

Date	Time	Sampling depth, feet (00003)	Specif. conductance, wat unf uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temperature, water, deg C (00010)	Transparency Secchi disc, meters (00078)	Turbidity, wat unf lab, Hach 2100AN NTU (99872)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)	Residue on evap. at 180degC wat flt mg/L (70300)	Residue total at 105 deg. C, suspended, mg/L (00530)
FEB													
20...	1308	1.00	441	8.2	12.8	1.52	6.0	755	9.3	89	160	261	<10
20...	1310	10.0	432	8.2	12.7	--	--	755	9.2	88	--	--	--
20...	1312	20.0	432	8.2	12.7	--	--	755	9.2	88	--	--	--
20...	1314	30.0	432	8.2	12.7	--	--	755	9.1	87	--	--	--
20...	1316	40.0	433	8.2	12.6	--	--	755	9.2	87	--	--	--
20...	1318	50.0	437	8.2	12.6	--	4.8	755	8.8	83	162	261	<10
JUL													
17...	0910	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
14...	1530	1.00	450	8.1	24.9	1.28	3.5	758	7.9	96	159	261	<10
14...	1532	10.0	450	8.1	24.6	--	--	758	7.6	92	--	--	--
14...	1534	20.0	453	7.6	21.1	--	--	758	4.8	54	--	--	--
14...	1536	30.0	455	7.5	20.8	--	--	758	3.4	38	--	--	--
14...	1538	40.0	455	7.5	20.7	--	--	758	2.5	29	--	--	--
14...	1540	48.0	455	7.4	20.6	--	13	758	1.8	20	169	262	10

301739097471201 -- Lk Austin Site AC

Date	Nitrate water, fltrd, mg/L as N (00618)	Nitrite water, fltrd, mg/L as N (00613)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Ammonia water, fltrd, mg/L as N (00608)	Total nitrogen, water, unfltrd mg/L (00600)	Organic nitrogen, water, unfltrd mg/L (00605)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Phosphorus, water, unfltrd mg/L (00665)	Phosphorus, water, fltrd, mg/L (00666)	Orthophosphate, water, fltrd, mg/L as P (00671)	Organic carbon, water, unfltrd mg/L (00680)	Total carbon, bed sedimnt total, g/kg (00693)	Chlorophyll a phytoplankton, fluoro, ug/L (70953)
FEB													
20...	--	E.004	.27	E.02	.60	--	.32	<.04	<.04	<.02	3.8	--	1.4
20...	--	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	<.008	.27	E.03	.53	--	.26	E.02	<.04	E.01	3.4	--	--
JUL													
17...	--	--	--	--	--	--	--	--	--	--	--	81	--
SEP													
14...	--	<.008	<.06	<.04	--	--	.27	<.04	<.04	<.02	6.2	--	E1.1
14...	--	--	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--	--	--
14...	.11	.008	.12	.04	.42	.27	.31	E.02n	<.04	<.02	3.3	--	--

08154900 Lake Austin at Austin, TX--Continued

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

301739097471201 -- Lk Austin Site AC

Date	Chloro-phyll b phyto-plank-ton, fluoro, ug/L (70954)	Bed sedi-ment, dry svd sve dia percent <.063mm (80164)	Bed sedi-ment, dry svd sve dia percent <.125mm (80165)	Bed sedi-ment, dry svd sve dia percent <.25mm (80166)	Bed sedi-ment, dry svd sve dia percent <.5 mm (80167)	Bed sedi-ment, dry svd sve dia percent <1 mm (80168)	Cadmium bed sedimnt recover -able, ug/g (01028)	Chrom-ium, bed sedimnt recover -able, ug/g (01029)	Copper, water, unfltrd recover -able, ug/L (01042)	Copper, water, fltrd, ug/L (01040)	Copper, bed sedimnt recover -able, ug/g (01043)	Iron, bed sedimnt total, ug/g (01170)	Lead, bed sedimnt recover -able, ug/g (01052)
FEB													
20...	<.1	--	--	--	--	--	--	--	3.1	2.6	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	3.3	3.0	--	--	--
JUL													
17...	--	14	83	93	100	100	.202	9.4	--	--	16	9500	15
SEP													
14...	<.1	--	--	--	--	--	--	--	4.9	3.4	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	5.6	4.7	--	--	--

301739097471201 -- Lk Austin Site AC

Date	Mangan-ese, bed sedimnt recover -able, ug/g (01053)	Zinc, bed sedimnt recover -able, ug/g (01093)
FEB		
20...	--	--
20...	--	--
20...	--	--
20...	--	--
20...	--	--
20...	--	--
JUL		
17...	1300	47
SEP		
14...	--	--
14...	--	--
14...	--	--
14...	--	--
14...	--	--
14...	--	--

301739097471601 -- Lk Austin Site AR

Date	Time	Sam-pling depth, feet (00003)	Specif. conduc-tance, wat unf uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temper-ature, water, deg C (00010)	Baro-metric pres-sure, mm Hg (00025)	Dis-solved oxygen, mg/L (00300)	Dis-solved oxygen, percent of sat-uration (00301)
FEB								
20...	1258	1.00	434	8.2	12.6	756	9.2	87
20...	1300	10.0	433	8.2	12.6	756	9.2	87
20...	1302	24.0	434	8.2	12.5	756	9.1	86
SEP								
14...	1518	1.00	450	8.1	24.9	758	8.1	98
14...	1520	10.0	451	8.0	24.6	758	7.8	94
14...	1522	20.0	453	7.5	21.1	758	4.7	53
14...	1524	26.0	454	7.4	21.1	758	4.2	48

08154900 Lake Austin at Austin, TX--Continued

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

301739097470901 -- Lk Austin Site AL

Date	Time	Sampling depth, feet (00003)	Specif. conductance, wat unf uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temperature, water, deg C (00010)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)
FEB								
20...	1334	1.00	430	8.2	12.6	755	9.3	88
20...	1336	10.0	428	8.2	12.6	755	9.3	88
20...	1338	22.0	430	8.2	12.6	755	9.3	88
SEP								
14...	1600	1.00	450	8.1	24.8	758	7.7	94
14...	1602	10.0	450	8.1	24.4	758	7.7	92
14...	1604	21.0	454	7.6	21.5	758	4.8	54

302043097472401 -- Lk Austin Site BC

Date	Time	Sampling depth, feet (00003)	Specif. conductance, wat unf uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temperature, water, deg C (00010)	Transparency Secchi disc, meters (00078)	Turbidity, wat unf lab, Hach 2100AN NTU (99872)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)	Residue on evap. at 180degC wat flt mg/L (70300)	Residue total at 105 deg. C, suspended, mg/L (00530)
FEB													
20...	1400	1.00	431	8.2	12.6	.70	17	755	8.9	85	162	257	<10
20...	1402	10.0	431	8.1	12.5	--	--	755	9.2	87	--	--	--
20...	1404	20.0	434	8.1	12.6	--	--	755	9.2	87	--	--	--
20...	1406	30.0	433	8.1	12.5	--	22	755	9.1	86	161	262	11
JUL													
17...	0934	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
14...	1625	1.00	452	8.1	25.2	1.68	1.8	758	7.9	96	163	262	<10
14...	1626	10.0	451	7.7	21.6	--	--	758	6.0	68	--	--	--
14...	1628	20.0	454	7.6	21.0	--	--	758	5.1	57	--	--	--
14...	1630	29.0	454	7.6	20.9	--	6.0	758	4.6	51	170	261	<10

302043097472401 -- Lk Austin Site BC

Date	Nitrite water, fltrd, mg/L as N (00613)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Ammonia water, fltrd, mg/L as N (00608)	Total nitrogen, water, unfltrd mg/L (00600)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Phosphorus, water, unfltrd mg/L (00665)	Phosphorus, water, fltrd, mg/L (00666)	Orthophosphate, water, fltrd, mg/L as P (00671)	Organic carbon, water, unfltrd mg/L (00680)	Total carbon, bed sedimnt total, g/kg (00693)	Chlorophyll a phytoplankton, fluoro, ug/L (70953)	Chlorophyll b phytoplankton, fluoro, ug/L (70954)	Bed sediment, dry svd sve dia percent <.063mm (80164)
FEB													
20...	<.008	.34	E.02	.64	.30	E.02	<.04	E.01	3.8	--	1.4	<.1	--
20...	--	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--	--
20...	E.004	.40	E.03	.74	.35	E.02	<.04	<.02	4.0	--	--	--	--
JUL													
17...	--	--	--	--	--	--	--	--	--	81	--	--	6
SEP													
14...	<.008	<.06	<.04	--	.25	<.04	<.04	<.02	4.1	--	E1.8	<.1	--
14...	--	--	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--	--	--
14...	<.008	.09	E.03n	.36	.27	E.02n	<.04	<.02	3.0	--	--	--	--

302043097472401 -- Lk Austin Site BC

Date	Bed sediment, dry svd sve dia percent <.125mm (80165)	Bed sediment, dry svd sve dia percent <.25mm (80166)	Bed sediment, dry svd sve dia percent <.5 mm (80167)	Bed sediment, dry svd sve dia percent <1 mm (80168)	Cadmium bed sedimnt recoverable, ug/g (01028)	Chromium, bed sedimnt recoverable, ug/g (01029)	Copper, water, unfltrd recoverable, ug/L (01042)	Copper, water, fltrd, ug/L (01040)	Copper, bed sedimnt recoverable, ug/g (01043)	Iron, bed sedimnt total, ug/g (01170)	Lead, bed sedimnt recoverable, ug/g (01052)	Manganese, bed sedimnt recoverable, ug/g (01053)	Zinc, bed sedimnt recoverable, ug/g (01093)
FEB													
20...	--	--	--	--	--	--	3.0	2.2	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	3.4	2.3	--	--	--	--	--
JUL													
17...	73	88	100	100	.162	7.2	--	--	10	5700	14	470	28
SEP													
14...	--	--	--	--	--	--	2.9	3.3	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	4.0	3.5	--	--	--	--	--

08154900 Lake Austin at Austin, TX--Continued

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

302044097472301 -- Lk Austin Site BL

Date	Time	Sampling depth, feet (00003)	Specif. conductance, wat unf uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temperature, water, deg C (00010)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)
FEB								
20...	1350	1.00	436	8.1	12.7	755	9.0	85
20...	1352	10.0	435	8.1	12.7	755	8.9	85
20...	1354	20.0	440	8.2	12.7	755	8.9	85
SEP								
14...	1614	1.00	450	8.1	24.9	758	7.7	93
14...	1616	10.0	451	7.7	21.7	758	5.9	68
14...	1618	19.0	454	7.6	21.4	758	5.4	61

301926097502201 -- Lk Austin Site CC

Date	Time	Sampling depth, feet (00003)	Specif. conductance, wat unf uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temperature, water, deg C (00010)	Transparency Secchi disc, meters (00078)	Turbidity, wat unf lab, Hach 2100AN NTU (99872)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)	Residue on evap. at 180degC wat flt mg/L (70300)	Residue total at 105 deg. C, suspended, mg/L (00530)
FEB													
20...	1432	1.00	429	8.1	12.4	.88	11	755	8.6	81	156	256	<10
20...	1434	10.0	430	8.1	12.4	--	--	755	8.6	81	--	--	--
20...	1436	22.0	430	8.1	12.4	--	12	755	8.4	80	155	257	<10
JUL													
17...	1004	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
14...	1702	1.00	447	7.8	22.1	1.74	1.9	758	7.1	82	166	256	81
14...	1704	10.0	446	7.8	21.6	--	--	758	6.9	79	--	--	--
14...	1706	23.0	448	7.7	21.3	--	2.9	758	6.5	73	169	261	11

301926097502201 -- Lk Austin Site CC

Date	Nitrite water, fltrd, mg/L as N (00613)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Ammonia water, fltrd, mg/L as N (00608)	Total nitrogen, water, unfltrd mg/L (00600)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Phosphorus, water, unfltrd mg/L (00665)	Phosphorus, water, fltrd, mg/L (00666)	Orthophosphate, water, fltrd, mg/L as P (00671)	Organic carbon, water, unfltrd mg/L (00680)	Total carbon, bed sedimnt total, g/kg (00693)	Chlorophyll a phytoplankton, fluoro, ug/L (70953)	Chlorophyll b phytoplankton, fluoro, ug/L (70954)	Bed sediment, dry svd sve dia percent <.063mm (80164)
FEB													
20...	<.008	.30	<.04	.56	.26	E.02	<.04	E.01	3.8	--	.6	<.1	--
20...	--	--	--	--	--	--	--	--	--	--	--	--	--
20...	<.008	.30	<.04	.53	.23	E.03	E.03	E.01	3.9	--	--	--	--
JUL													
17...	--	--	--	--	--	--	--	--	--	27	--	--	10
SEP													
14...	<.008	.07	<.04	.28	.21	<.04	<.04	<.02	3.4	--	E.3	<.1	--
14...	--	--	--	--	--	--	--	--	--	--	--	--	--
14...	<.008	.08	<.04	.34	.26	E.03n	<.04	<.02	5.5	--	--	--	--

301926097502201 -- Lk Austin Site CC

Date	Bed sediment, dry svd sve dia percent <.125mm (80165)	Bed sediment, dry svd sve dia percent <.25mm (80166)	Bed sediment, dry svd sve dia percent <.5 mm (80167)	Bed sediment, dry svd sve dia percent <1 mm (80168)	Cadmium bed sedimnt recover -able, ug/g (01028)	Chromium, bed sedimnt recover -able, ug/g (01029)	Copper, water, unfltrd recover -able, ug/L (01042)	Copper, water, fltrd, ug/L (01040)	Copper, bed sedimnt recover -able, ug/g (01043)	Iron, bed sedimnt total, ug/g (01170)	Lead, bed sedimnt recover -able, ug/g (01052)	Manganese, bed sedimnt recover -able, ug/g (01053)	Zinc, bed sedimnt recover -able, ug/g (01093)
FEB													
20...	--	--	--	--	--	--	2.6	1.9	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	2.7	2.2	--	--	--	--	--
JUL													
17...	39	68	100	100	.102	7.8	--	--	10	7100	6.7	440	25
SEP													
14...	--	--	--	--	--	--	3.2	3.5	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	6.3	5.8	--	--	--	--	--

08154900 Lake Austin at Austin, TX--Continued

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

302021097540001 -- Lk Austin Site DC

Date	Time	Sampling depth, feet (00003)	Specif. conductance, wat unf uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temperature, water, deg C (00010)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	Total carbon, bed sedimnt total, g/kg (00693)	Bed sediment, dry svd sve dia percent <.063mm (80164)	Bed sediment, dry svd sve dia percent <.125mm (80165)	Bed sediment, dry svd sve dia percent <.25mm (80166)	Bed sediment, dry svd sve dia percent <.5 mm (80167)
FEB													
20...	1500	1.00	423	8.2	12.1	755	9.0	85	--	--	--	--	--
20...	1502	10.0	421	8.2	12.1	755	9.0	85	--	--	--	--	--
20...	1504	16.0	423	8.2	12.1	755	8.6	80	--	--	--	--	--
JUL													
17...	1034	--	--	--	--	--	--	--	36	11	58	81	100
SEP													
14...	1728	1.00	446	7.7	20.3	758	6.2	69	--	--	--	--	--
14...	1730	10.0	447	7.7	20.2	758	5.9	66	--	--	--	--	--
14...	1732	17.0	445	7.7	20.3	758	5.9	66	--	--	--	--	--

302021097540001 -- Lk Austin Site DC

Date	Bed sediment, dry svd sve dia percent <1 mm (80168)	Cadmium bed sedimnt recover -able, ug/g (01028)	Chromium, bed sedimnt recover -able, ug/g (01029)	Copper, bed sedimnt recover -able, ug/g (01043)	Iron, bed sedimnt total, ug/g (01170)	Lead, bed sedimnt recover -able, ug/g (01052)	Manganese, bed sedimnt recover -able, ug/g (01053)	Zinc, bed sedimnt recover -able, ug/g (01093)
FEB								
20...	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--
JUL								
17...	100	.125	11	13	9800	8.6	570	32
SEP								
14...	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--

302314097544901 -- Lk Austin Site EC

Date	Time	Sampling depth, feet (00003)	Specif. conductance, wat unf uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temperature, water, deg C (00010)	Transparency Secchi disc, meters (00078)	Turbidity, wat unf lab, Hach 2100AN NTU (99872)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)	Residue on evap. at 180degC wat flt mg/L (70300)	Residue total at 105 deg. C, suspended, mg/L (00530)
FEB													
20...	1522	1.00	426	8.2	12.3	1.37	4.3	754	9.3	88	189	251	<10
20...	1524	8.00	430	8.3	12.4	--	--	754	9.4	89	--	--	--
SEP													
14...	1748	1.00	451	7.5	18.1	2.44	<1.0	759	3.9	41	172	259	<10
14...	1750	8.00	451	7.5	18.2	--	--	759	4.0	42	--	--	--

302314097544901 -- Lk Austin Site EC

Date	Nitrite water, fltrd, mg/L as N (00613)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Ammonia water, fltrd, mg/L as N (00608)	Total nitrogen, water, unfltrd mg/L (00600)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Phosphorus, water, unfltrd mg/L (00665)	Phosphorus, water, fltrd, mg/L (00666)	Orthophosphate, water, fltrd, mg/L as P (00671)	Organic carbon, water, unfltrd mg/L (00680)	Chlorophyll a phytoplankton, fluoro, ug/L (70953)	Chlorophyll b phytoplankton, fluoro, ug/L (70954)	Copper, water, unfltrd recover -able, ug/L (01042)	Copper, water, fltrd, ug/L (01040)
FEB													
20...	<.008	.27	<.04	.51	.25	<.04	<.04	<.02	4.8	1.4	<.1	2.4	2.0
20...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
14...	<.008	.13	<.04	.33	.19	<.04	<.04	<.02	3.5	E.3	<.1	3.2	3.3
14...	--	--	--	--	--	--	--	--	--	--	--	--	--

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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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 fair except those for daily discharges below 5 ft^3/s, which are poor. No known regulation or diversions. No flow at times.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.5	56	42	129	80	180	58	16	3.0	1.5	0.32	0.56
2	4.5	57	41	107	76	173	56	16	2.0	1.4	0.19	0.40
3	4.4	84	42	101	75	178	56	16	2.5	2.4	0.13	0.58
4	4.4	124	45	99	70	181	55	15	37	4.7	0.10	1.2
5	5.3	184	45	94	68	165	52	14	21	11	0.06	0.45
6	8.4	126	43	89	74	156	50	14	26	9.8	0.04	0.37
7	8.4	111	43	82	70	146	50	14	10	8.2	0.01	1.3
8	11	99	43	80	67	135	46	13	9.0	6.0	0.00	0.54
9	27	89	e278	78	68	132	43	12	11	5.2	0.00	0.35
10	25	79	193	72	65	125	41	11	8.7	4.3	0.60	0.54
11	18	71	145	72	62	122	39	11	7.3	3.6	0.53	1.0
12	15	63	124	177	60	121	38	11	6.5	3.2	0.26	3.8
13	13	57	135	191	61	116	37	11	22	2.8	0.13	1.7
14	13	56	128	155	61	107	35	11	24	3.3	0.30	3.6
15	13	54	114	145	57	104	33	10	18	1.5	0.16	2.4
16	13	51	114	137	51	101	32	9.7	12	1.6	0.44	1.4
17	12	50	111	126	47	99	29	8.8	9.3	2.3	0.70	1.1
18	12	49	102	122	45	98	29	7.8	7.5	2.3	1.6	2.7
19	43	49	85	116	42	95	29	7.8	6.2	1.7	0.50	4.5
20	61	48	74	e111	669	87	27	5.3	5.5	1.4	1.0	7.0
21	34	44	71	104	475	83	25	4.9	5.0	2.4	0.47	8.7
22	51	45	66	98	378	83	23	5.1	4.8	1.2	0.56	7.6
23	64	44	120	93	264	81	24	5.1	4.2	0.99	0.56	2.5
24	210	42	99	91	217	78	23	5.3	3.5	0.81	0.59	1.4
25	158	42	78	91	215	77	21	4.5	3.1	0.63	0.56	1.1
26	100	66	72	94	203	74	20	12	3.0	0.50	0.42	3.5
27	88	76	70	90	212	70	19	8.2	2.9	0.58	0.19	2.4
28	78	50	65	90	191	67	18	7.5	2.4	0.61	0.19	1.2
29	71	46	62	88	---	62	17	5.7	2.1	0.52	0.17	0.83
30	62	44	77	84	---	60	17	4.7	1.8	0.36	0.14	1.0
31	57	---	232	82	---	60	---	3.9	---	0.66	0.14	---
TOTAL	1288.9	2056	2959	3288	4023	3416	1042	301.3	281.3	87.46	11.06	65.72
MEAN	41.6	68.5	95.5	106	144	110	34.7	9.72	9.38	2.82	0.36	2.19
MAX	210	184	278	191	669	181	58	16	37	11	1.6	8.7
MIN	4.4	42	41	72	42	60	17	3.9	1.8	0.36	0.00	0.35
AC-FT	2560	4080	5870	6520	7980	6780	2070	598	558	173	22	130

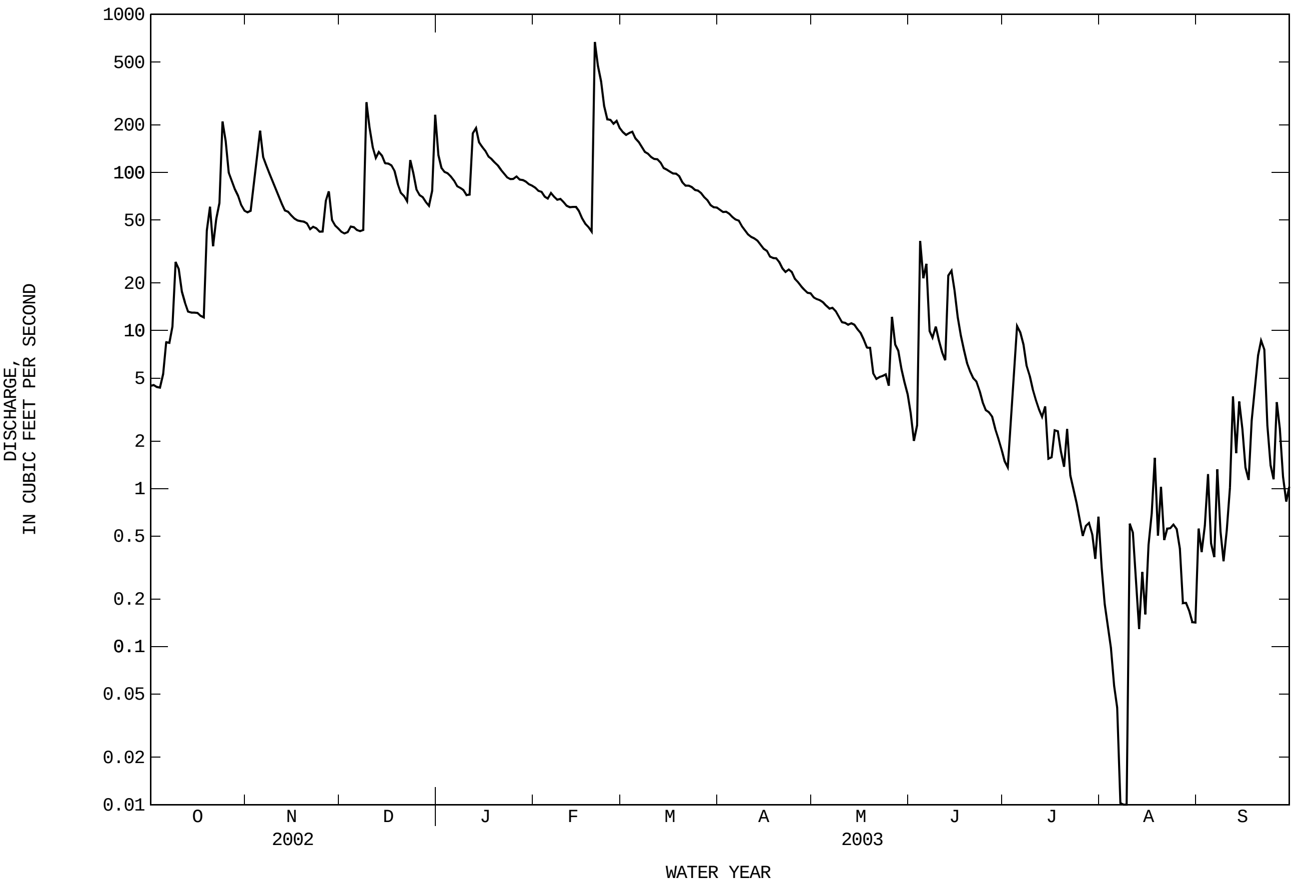
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1978 - 2003h, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	21.9	33.5	59.9	53.1	65.4	63.3	44.8	60.5	87.7	37.1	3.40	2.54
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	2000	2000	2000	1996	1996	1978	1996	1999

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1978 - 2003h	
ANNUAL TOTAL	27552.94		18819.74			
ANNUAL MEAN	75.5		51.6		46.8	
HIGHEST ANNUAL MEAN					182	1992
LOWEST ANNUAL MEAN					0.17	1996
HIGHEST DAILY MEAN	5220	Jul 2	669	Feb 20	5220	Jul 2 2002
LOWEST DAILY MEAN	0.71	Jun 25	0.00	Aug 8	0.00	Feb 7 1978
ANNUAL SEVEN-DAY MINIMUM	0.86	Jun 19	0.05	Aug 3	0.00	Feb 7 1978
MAXIMUM PEAK FLOW			2000	Feb 20	25300	Jul 2 2002
MAXIMUM PEAK STAGE			7.91	Feb 20	a22.82	Jul 2 2002
ANNUAL RUNOFF (AC-FT)	54650		37330		33870	
10 PERCENT EXCEEDS	124		124		105	
50 PERCENT EXCEEDS	16		29		6.2	
90 PERCENT EXCEEDS	1.5		0.57		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 July 1982, Feb. 1989 to current year.
BIOCHEMICAL DATA: Apr. 1978 to July 1982, Feb. 1989 to current year.
RADIOCHEMICAL DATA: Jan. 1980 to June 1981.
PESTICIDE DATA: June 1978 to July 1982, Jan. 1993 to June 1995, June 2002 to current year.
SUSPENDED SEDIMENT CHEMISTRY: May 2000 to current year.
SEDIMENT DATA: Nov. 1998 to current year.

INSTRUMENTATION.--Stage-activated automatic sampler.

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

Date	Time	Dis-charge, cfs (00060)	Instan-taneous dis-charge, cfs (00061)	Baro-metric pres-sure, mm Hg (00025)	Specif. conduc-tance, wat unf uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temper-ature, water, deg C (00010)	Temper-ature, air, deg C (00020)	Color, water, fltrd, Pt-Co units (00080)	Turbid-ity, wat unf lab, Hach 2100AN NTU (99872)	Dis-solved oxygen, mg/L (00300)	Dis-solved oxygen, percent of sat-uration (00301)	COD, high level, water, unfltrd mg/L (00340)
OCT													
19-19	1019	49	--	--	446	8.1	--	--	20	69	--	--	<10
DEC													
09-10	0510	312	--	--	569	8.0	--	--	25	26	--	--	<10
JAN													
21...	1310	--	105	746	612	8.0	14.6	--	5	<1.0	10.2	103	<10
FEB													
20-21	0920	875	--	--	446	7.9	--	--	50	360	--	--	E40
MAR													
26...	1141	--	74	752	581	8.0	19.0	--	5	6.3	9.0	99	<10
JUN													
04...	0220	--	18	--	--	--	--	--	--	--	--	--	--
JUL													
30...	1045	--	.40	754	507	7.8	27.2	--	8	<1.0	5.4	69	<10
SEP													
03...	0955	--	.28	755	525	7.8	25.5	25.4	10	1.2	5.3	66	<10
09...	0900	--	.38	--	530	7.8	24.1	23.0	--	--	8.7	--	--

Date	Fecal coli-form, M-FC 0.7u MF col/ 100 mL (31625)	E coli, m-TEC MF, water, col/ 100 mL (31633)	Hard-ness, water, unfltrd mg/L as CaCO3 (00900)	Noncarb hard-ness, wat flt field, mg/L as CaCO3 (00904)	Calcium water, fltrd, mg/L (00915)	Magnes-ium, water, fltrd, mg/L (00925)	Sodium, water, fltrd, mg/L (00930)	Sodium adsorp-tion ratio (00931)	Sodium, percent (00932)	Potas-sium, water, fltrd, mg/L (00935)	Alka-linity, wat flt inc tit field, mg/L as CaCO3 (39086)	Sulfate water, fltrd, mg/L (00945)	Chlor-ide, water, fltrd, mg/L (00940)
OCT													
19-19	--	--	--	--	--	--	--	--	--	--	179	--	--
DEC													
09-10	E400k@	<1k@	--	--	--	--	--	--	--	--	208	--	--
JAN													
21...	40	22	--	--	--	--	--	--	--	--	240	--	--
FEB													
20-21	E2000@	E980k@	--	--	--	--	--	--	--	--	159	--	--
MAR													
26...	50	27	--	--	--	--	--	--	--	--	226	--	--
JUN													
04...	E1100k@	E340@	--	--	--	--	--	--	--	--	--	--	--
JUL													
30...	E23k	E13k	--	--	--	--	--	--	--	--	182	--	--
SEP													
03...	E57	E80	--	--	--	--	--	--	--	--	184	--	--
09...	--	--	220	32	56.5	19.1	17.7	.5	15	1.41	188	28.7	38.7

Date	Silica, water, fltrd, mg/L (00955)	Residue water, fltrd, sum of consti-tuents mg/L (70301)	Residue total at 105 deg. C, sus-pended, mg/L (00530)	Nitrite water, fltrd, mg/L as N (00613)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Ammonia water, fltrd, mg/L as N (00608)	Total nitro-gen, water, unfltrd mg/L (00600)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Phos-phorus, water, unfltrd mg/L (00665)	Phos-phorus, water, fltrd, mg/L (00666)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Organic carbon, water, unfltrd mg/L (00680)	Chloro-phyll a phyto-plank-ton, fluoro, ug/L (70953)
OCT													
19-19	--	--	72	E.005	.18	<.04	.46	.28	E.03	<.04	<.02	8.0	--
DEC													
09-10	--	--	17	<.008	.12	<.04	.36	.24	<.04	<.04	<.02	3.9	--
JAN													
21...	--	--	<10	<.008	.13	<.04	.27	.14	<.04	<.04	<.02	1.8	<.1
FEB													
20-21	--	--	464	<.008	.16	E.02	1.6	1.5	.19	E.03	<.02	19.3	--
MAR													
26...	--	--	<10	<.008	.07	<.04	.46	.38	<.04	<.04	<.02	2.3	E.6
JUN													
04...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL													
30...	--	--	<10	<.008	<.06	<.04	--	.14	<.04	<.04	<.02	4.0	.2
SEP													
03...	--	--	<10	<.008	<.06	<.04	--	.13	<.04	<.04	<.02	1.7	E.2
09...	12.5	287	--	<.008	<.022	<.015	--	.14	<.04	<.04	<.02	--	--

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

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

Date	Chlorophyll b phytoplankton, fluoro, ug/L (70954)	Suspended sediment load, tons/d (80155)	Suspended sediment concentration mg/L (80154)	Arsenic water, fltrd, ug/L (01000)	Cadmium water, unfltrd ug/L (01027)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Copper, water, unfltrd recover -able, ug/L (01042)	Copper, water, fltrd, ug/L (01040)	Lead, water, unfltrd recover -able, ug/L (01051)	Lead, water, fltrd, ug/L (01049)	Nickel, water, fltrd, ug/L (01065)	Strontium, water, fltrd, ug/L (01080)
OCT													
19-19	--	13	101	--	<.2	--	--	E1.2	--	2	--	--	--
DEC													
09-10	--	42	50	--	<.2	--	--	<1.0	--	<1	--	--	--
JAN													
21...	--m	--	--	--	<.2	--	--	<1.0	--	<1	--	--	--
FEB													
20-21	--	1080	456	--	E.1	--	--	2.9	--	6	--	--	--
MAR													
26...	E.2	--	--	--	<.2	--	--	<1.0	--	<1	--	--	--
JUN													
04...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL													
30...	<.1	--	--	--	<.2	--	--	<1.0	--	<1	--	--	--
SEP													
03...	<.1	--	--	--	<.2	--	--	<1.2	--	<1	--	--	--
09...	--	--	--	.8	--	<.04	<.8	--	.4	--	<.08	1.27	279

Date	Zinc, water, unfltrd recover -able, ug/L (01092)	Zinc, water, fltrd, ug/L (01090)	2,4-D water, fltrd, ug/L (39732)	2,4-DB water, fltrd 0.7u GF ug/L (38746)	2,4-D water, fltrd, ug/L (50470)	2,6-Diethylaniline water fltrd 0.7u GF ug/L (82660)	3-Hydroxy carbofuran, wat flt 0.7u GF ug/L (49308)	3-Ketocarbofuran, water, fltrd, ug/L (50295)	Acetochlor, water, fltrd, ug/L (49260)	Acifluorfen, water, fltrd 0.7u GF ug/L (49315)	Alachlor, water, fltrd, ug/L (46342)	Aldicarb, water, fltrd 0.7u GF ug/L (49312)	Aldicarb sulfone water, fltrd 0.7u GF ug/L (49313)
OCT													
19-19	10	--	<.02	<.02	<.009	<.006	<.006	<2	<.006	<.007	<.004	<.04	<.02
DEC													
09-10	3	--	<.02	<.02	<.009	<.006	<.006	<2	<.006	<.007	<.004	<.04	<.02
JAN													
21...	4	--	--	--	--	--	--	--	--	--	--	--	--
FEB													
20-21	16	--	--	--	--	--	--	--	--	--	--	--	--
MAR													
26...	<2	--	--	--	--	--	--	--	--	--	--	--	--
JUN													
04...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL													
30...	<2	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
03...	E2n	--	--	--	--	--	--	--	--	--	--	--	--
09...	--	<1	--	--	--	<.006	--	--	<.006	--	<.004	--	--

Date	Aldicarb sulfoxide, wat flt 0.7u GF ug/L (49314)	alpha-HCH, water, fltrd, ug/L (34253)	Atrazine, water, fltrd, ug/L (39632)	Azinphos-methyl, water, fltrd 0.7u GF ug/L (82686)	Bendiocarb, water, fltrd, ug/L (50299)	Benfluralin, water, fltrd 0.7u GF ug/L (82673)	Benomyl water, fltrd, ug/L (50300)	Bensulfuron, water, fltrd, ug/L (61693)	Bentazon, water, fltrd 0.7u GF ug/L (38711)	Bromacil, water, fltrd, ug/L (04029)	Bromoxynil, water, fltrd 0.7u GF ug/L (49311)	Butylate, water, fltrd, ug/L (04028)	Chlorodiamino-s-triazine, wat flt ug/L (04039)
OCT													
19-19	<.008	<.005	.013	<.050	<.03	<.010	<.004	<.02	<.01	<.03	<.02	<.002	<.01
DEC													
09-10	<.008	<.005	<.007	<.050	<.03	<.010	<.004	<.02	<.01	<.03	<.02	<.002	<.01
JAN													
21...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB													
20-21	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR													
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN													
04...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL													
30...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
09...	--	<.005	E.003t	<.050	--	<.010	--	--	--	--	--	<.002	--

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

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

Date	Caffeine, water, fltrd, ug/L (50305)	Carbaryl, water, fltrd 0.7u GF ug/L (49310)	Carbaryl, water, fltrd 0.7u GF ug/L (82680)	Carbofuran, water, fltrd 0.7u GF ug/L (49309)	Carbofuran, water, fltrd 0.7u GF ug/L (82674)	CEAT, water, fltrd, ug/L (04038)	Chloramben methyl ester, water, fltrd, ug/L (61188)	Chlorimuron, water, fltrd, ug/L (50306)	Chlorothalonil, water, fltrd 0.7u GF ug/L (49306)	N-(4-Chlorophenyl) -N'-methylurea, ug/L (61692)	Chlorpyrifos water, fltrd, ug/L (38933)	cis-Permethrin water fltrd 0.7u GF ug/L (82687)	Clopyralid, water, fltrd 0.7u GF ug/L (49305)
OCT 19-19	<.010	E.01	E.016	<.006	<.020	<.04	<.02	<.010	<.04	<.02	<.005	<.006	<.01
DEC 09-10	<.010	<.03	<.041	<.006	<.020	<.04	<.02	<.010	<.04	<.02	<.005	<.006	<.01
JAN 21...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 20-21	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR 26...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN 04...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL 30...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 03...	--	--	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	<.041	--	<.020	--	--	--	--	--	<.005	<.006	--

Date	Cyanazine, water, fltrd, ug/L (04041)	Cycloate, water, fltrd, ug/L (04031)	Dacthal monoacid, water, fltrd 0.7u GF ug/L (49304)	DCPA, water fltrd 0.7u GF ug/L (82682)	CIAT, water, fltrd, ug/L (04040)	Desulfinyl fipronil, water, fltrd, ug/L (62170)	Desulfinyl-fipronil amide, wat flt ug/L (62169)	Diazinon, water, fltrd, ug/L (39572)	Dicamba water fltrd 0.7u GF ug/L (38442)	Dichlorprop, water, fltrd 0.7u GF ug/L (49302)	Dieldrin, water, fltrd, ug/L (39381)	Dinoseb water, fltrd 0.7u GF ug/L (49301)	Diphenamid, water, fltrd, ug/L (04033)
OCT 19-19	<.018	<.01	<.01	E.003n	E.004	<.004	<.009	<.005	<.01	.03	<.005	<.01	<.03
DEC 09-10	<.018	<.01	<.01	<.003	<.006	<.004	<.009	<.005	--u	<.01	<.005	<.01	<.03
JAN 21...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 20-21	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR 26...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN 04...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL 30...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 03...	--	--	--	--	--	--	--	--	--	--	--	--	--
09...	<.018	--	--	<.003	<.006	<.004	<.009	<.005	--	--	<.005	--	--

Date	Disulfoton, water, fltrd 0.7u GF ug/L (82677)	Diuron, water, fltrd 0.7u GF ug/L (49300)	EPTC, water, fltrd 0.7u GF ug/L (82668)	Ethalfluralin, water, fltrd 0.7u GF ug/L (82663)	Ethoprop, water, fltrd 0.7u GF ug/L (82672)	Fenuron water, fltrd 0.7u GF ug/L (49297)	Fipronil, water, fltrd, ug/L (62166)	Fipronil sulfide water, fltrd, ug/L (62167)	Fipronil sulfone water, fltrd, ug/L (62168)	Flumetsulam, water, fltrd, ug/L (61694)	Fluometuron water fltrd 0.7u GF ug/L (38811)	Fonofos water, fltrd, ug/L (04095)	Imazaquin, water, fltrd, ug/L (50356)
OCT 19-19	<.02	<.01	<.002	<.009	<.005	<.03	<.007	<.005	<.005	<.01	E.01	<.003	<.02
DEC 09-10	<.02	<.01	<.002	<.009	<.005	<.03	<.007	<.005	<.005	<.01	<.03	<.003	<.02
JAN 21...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 20-21	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR 26...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN 04...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL 30...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 03...	--	--	--	--	--	--	--	--	--	--	--	--	--
09...	<.02	--	<.002	<.009	<.005	--	<.007	<.005	<.005	--	--	<.003	--

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

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

Date	Imazethapyr, water, fltrd, ug/L (50407)	Lindane water, fltrd, ug/L (39341)	Linuron water fltrd 0.7u GF ug/L (38478)	Linuron water fltrd 0.7u GF ug/L (82666)	Malathion, water, fltrd, ug/L (39532)	MCPA, water, fltrd 0.7u GF ug/L (38482)	MCPB, water, fltrd 0.7u GF ug/L (38487)	Methiocarb, water, fltrd 0.7u GF ug/L (38501)	Methomyl, water, fltrd 0.7u GF ug/L (49296)	Metalaxyl, water, fltrd, ug/L (50359)	Metolachlor, water, fltrd, ug/L (39415)	Metribuzin, water, fltrd, ug/L (82630)	Metsulfuron, water, fltrd, ug/L (61697)
OCT													
19-19	<.02	<.004	<.01	<.035	<.027	<.02	<.01	<.008	<.004	<.02	<.013	<.006	<.03
DEC													
09-10	<.02	<.004	<.01	<.035	<.027	<.02	<.01	<.008	<.004	<.02	<.013	<.006	<.03
JAN													
21...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB													
20-21	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR													
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN													
04...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL													
30...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
09...	--	<.004	--	<.035	<.027	--	--	--	--	--	<.013	<.006	--

Date	Imidacloprid water, fltrd, ug/L (61695)	Molinate, water, fltrd 0.7u GF ug/L (82671)	Napropamide, water, fltrd 0.7u GF ug/L (82684)	Neburon water, fltrd 0.7u GF ug/L (49294)	Nicosulfuron, water, fltrd, ug/L (50364)	Norflurazon, water, fltrd 0.7u GF ug/L (49293)	OIET, water, fltrd, ug/L (50355)	Oryzalin, water, fltrd 0.7u GF ug/L (49292)	Oxamyl, water, fltrd 0.7u GF ug/L (38866)	p,p'-DDE, water, fltrd, ug/L (34653)	Parathion, water, fltrd, ug/L (39542)	Methyl parathion, water, fltrd 0.7u GF ug/L (82667)	Pebulate, water, fltrd 0.7u GF ug/L (82669)
OCT													
19-19	<.007	<.002	<.007	<.01	<.01	<.02	<.008	<.02	<.01	<.003	<.010	<.006	<.004
DEC													
09-10	<.007	<.002	<.007	<.01	<.01	<.02	<.008	<.02	<.01	<.003	<.010	<.006	<.004
JAN													
21...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB													
20-21	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR													
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN													
04...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL													
30...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
09...	--	<.002	<.007	--	--	--	--	--	--	<.003	<.010	<.006	<.004

Date	Pendimethalin, water, fltrd 0.7u GF ug/L (82683)	Phorate water fltrd 0.7u GF ug/L (82664)	Picloram, water, fltrd 0.7u GF ug/L (49291)	Prometon, water, fltrd, ug/L (04037)	Propachlor, water, fltrd, ug/L (04024)	Propanil, water, fltrd 0.7u GF ug/L (82679)	Propargite, water, fltrd 0.7u GF ug/L (82685)	Propham water fltrd 0.7u GF ug/L (49236)	Propiconazole, water, fltrd, ug/L (50471)	Propoxur, water, fltrd 0.7u GF ug/L (38538)	Pronamide, water, fltrd 0.7u GF ug/L (82676)	Siduron water, fltrd, ug/L (38548)	Simazine, water, fltrd, ug/L (04035)
OCT													
19-19	<.022	<.011	<.02	<.01	<.010	<.011	<.02	<.010	<.02	<.008	<.004	E.01	.020
DEC													
09-10	<.022	<.011	<.02	<.01	<.010	<.011	<.02	<.010	<.02	<.008	<.004	<.02	<.005
JAN													
21...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB													
20-21	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR													
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN													
04...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL													
30...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
09...	<.022	<.011	--	<.01	<.010	<.011	<.02	--	--	--	<.004	--	.006

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

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

Date	Sulfo-met-ruron, water, fltrd, ug/L (50337)	Tebu-thiuron water fltrd 0.7u GF ug/L (82670)	Terba-cil, water, fltrd, ug/L (04032)	Terba-cil, water, fltrd 0.7u GF ug/L (82665)	Terbu-fos, water, fltrd 0.7u GF ug/L (82675)	Thio-bencarb water fltrd 0.7u GF ug/L (82681)	Tri-allate, water, fltrd 0.7u GF ug/L (82678)	Tri-benuron water, fltrd, ug/L (61159)	Tri-clopyr, water, fltrd 0.7u GF ug/L (49235)	Tri-flur-alin, water, fltrd 0.7u GF ug/L (82661)	Di-bromo-methane water unfltrd ug/L (30217)	Bromo-di-chloro-methane water unfltrd ug/L (32101)	Tetra-chloro-methane water unfltrd ug/L (32102)
OCT													
19-19	<.009	<.02	<.010	<.034	<.02	<.005	<.002	--u	<.02	<.009	--	--	--
DEC													
09-10	<.009	<.02	<.010	<.034	<.02	<.005	<.002	--u	<.02	<.009	--	--	--
JAN													
21...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB													
20-21	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR													
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN													
04...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL													
30...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
09...	--	<.02	--	<.034	<.02	<.005	<.002	--	--	<.009	<.05b	<.05b	<.06b

Date	1,2-Di-chloro-ethane, water, unfltrd ug/L (32103)	Tri-bromo-methane water unfltrd ug/L (32104)	Di-bromo-chloro-methane water unfltrd ug/L (32105)	Tri-chloro-methane water unfltrd ug/L (32106)	Toluene water unfltrd ug/L (34010)	Benzene water unfltrd ug/L (34030)	Acrylo-nitrile water unfltrd ug/L (34215)	Chloro-benzene water unfltrd ug/L (34301)	Chloro-ethane, water, unfltrd ug/L (34311)	Ethyl-benzene water unfltrd ug/L (34371)	Hexa-chloro-ethane, water, unfltrd ug/L (34396)	Bromo-methane water unfltrd ug/L (34413)	Chloro-methane water unfltrd ug/L (34418)
OCT													
19-19	--	--	--	--	--	--	--	--	--	--	--	--	--
DEC													
09-10	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN													
21...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB													
20-21	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR													
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN													
04...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL													
30...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
09...	<.1	<.10	<.2	E.09b	<.05b	<.04b	<1	<.03b	<.1	<.03b	<.2	<.3mc	<.2mc

Date	Di-chloro-methane water unfltrd ug/L (34423)	Tetra-chloro-ethene, water, unfltrd ug/L (34475)	Tri-chloro-fluoro-methane water unfltrd ug/L (34488)	1,1-Di-chloro-ethane, water unfltrd ug/L (34496)	1,1-Di-chloro-ethene, water, unfltrd ug/L (34501)	1,1,1-Tri-chloro-ethane, water, unfltrd ug/L (34506)	1,1,2-Tri-chloro-ethane, water, unfltrd ug/L (34511)	1,1,2,2 -Tetra-chloro-ethane, water, unfltrd ug/L (34516)	1,2-Di-chloro-benzene water unfltrd ug/L (34536)	1,2-Di-chloro-propane water unfltrd ug/L (34541)	trans-1,2-Di-chloro-ethene, water, unfltrd ug/L (34546)	1,2,4-Tri-chloro-benzene water unfltrd ug/L (34551)	1,3-Di-chloro-benzene water unfltrd ug/L (34566)
OCT													
19-19	--	--	--	--	--	--	--	--	--	--	--	--	--
DEC													
09-10	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN													
21...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB													
20-21	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR													
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN													
04...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL													
30...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
09...	<.2	<.03b	<.09b	<.04b	<.04n	<.03b	<.06n	<.09b	<.03n	<.03b	<.03b	<.1	<.03b

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

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

Date	1,4-Di-chloro-benzene water unfltrd ug/L (34571)	Di-chloro-di-fluoro-methane wat unf ug/L (34668)	Naphth-alene, water, unfltrd ug/L (34696)	trans-1,3-Di-chloro-propene water unfltrd ug/L (34699)	cis-1,3-Di-chloro-propene water unfltrd ug/L (34704)	Vinyl chlor-ide, water, unfltrd ug/L (39175)	Tri-chloro-ethene, water, unfltrd ug/L (39180)	Hexa-chloro-buta-diene, water, unfltrd ug/L (39702)	1,2,3,4 Tetra-methyl-benzene water unfltrd ug/L (49999)	1,2,3,5 Tetra-methyl-benzene water unfltrd ug/L (50000)	Bromo-ethene, water, unfltrd ug/L (50002)	t-Butyl ethyl ether, water, unfltrd ug/L (50004)	Methyl tert-pentyl ether, water, unfltrd ug/L (50005)
OCT 19-19	--	--	--	--	--	--	--	--	--	--	--	--	--
DEC 09-10	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN 21...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 20-21	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR 26...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN 04...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL 30...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 03...	--	--	--	--	--	--	--	--	--	--	--	--	--
09...	<.05b	<.18mc	<.5	<.09b	<.09b	<.1	<.04b	<.1	<.2	<.2	<.1	<.05b	<.08b

Date	trans-1,4-Di-chloro-2-butene, wat unf ug/L (73547)	Ethyl methac-rylate, water, unfltrd ug/L (73570)	Carbon di-sulfide water unfltrd ug/L (77041)	cis-1,2-Di-chloro-ethene, water, unfltrd ug/L (77093)	Methyl n-butyl ketone, water, unfltrd ug/L (77103)	Styrene water unfltrd ug/L (77128)	o-Xylene, water, unfltrd ug/L (77135)	1,1-Di-chloro-propene water unfltrd ug/L (77168)	2,2-Di-chloro-propane water unfltrd ug/L (77170)	1,3-Di-chloro-propane water unfltrd ug/L (77173)	2-Ethyl-toluene water unfltrd ug/L (77220)	1,2,3-Tri-methyl-benzene water unfltrd ug/L (77221)	1,2,4-Tri-methyl-benzene water unfltrd ug/L (77222)
OCT 19-19	--	--	--	--	--	--	--	--	--	--	--	--	--
DEC 09-10	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN 21...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 20-21	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR 26...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN 04...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL 30...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 03...	--	--	--	--	--	--	--	--	--	--	--	--	--
09...	<.7b	<.2	<.07b	<.04b	<.7b	<.04b	<.07b	<.05b	<.05b	<.1	<.06b	<.1	<.06b

Date	Iso-propyl-benzene water unfltrd ug/L (77223)	n-propyl-benzene water unfltrd ug/L (77224)	1,3,5-Tri-methyl-benzene water unfltrd ug/L (77226)	2-Chloro-toluene water unfltrd ug/L (77275)	4-Chloro-toluene water unfltrd ug/L (77277)	Bromo-chloro-methane water unfltrd ug/L (77297)	n-Butyl benzene water unfltrd ug/L (77342)	sec-Butyl-benzene water unfltrd ug/L (77350)	tert-Butyl-benzene water unfltrd ug/L (77353)	4-Iso-propyl-toluene water unfltrd ug/L (77356)	Iodo-methane water unfltrd ug/L (77424)	1,2,3-Tri-chloro-propane water unfltrd ug/L (77443)	1,1,1,2 -Tetra-chloro-ethane, water, unfltrd ug/L (77562)
OCT 19-19	--	--	--	--	--	--	--	--	--	--	--	--	--
DEC 09-10	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN 21...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 20-21	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR 26...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN 04...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL 30...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 03...	--	--	--	--	--	--	--	--	--	--	--	--	--
09...	<.06b	<.04b	<.04b	<.04b	<.05b	<.12	<.2	<.06b	<.10	<.12	<.35mc	<.16	<.03b

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

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

Date	1,2,3-Tri-chloro-benzene water unfltrd ug/L (77613)	1,2-Di-bromo-ethane, water, unfltrd ug/L (77651)	CFC-113 water unfltrd ug/L (77652)	Methyl t-butyl ether, water, unfltrd ug/L (78032)	3-Chloro-propene water unfltrd ug/L (78109)	Iso-butyl methyl ketone, water, unfltrd ug/L (78133)	Acetone water unfltrd ug/L (81552)	Bromo-benzene water unfltrd ug/L (81555)	Di-ethyl ether, water, unfltrd ug/L (81576)	Diiso-propyl ether, water, unfltrd ug/L (81577)	Meth-acrylo-nitrile water unfltrd ug/L (81593)	Ethyl methyl ketone, water, unfltrd ug/L (81595)	Methyl methac-rylate, water, unfltrd ug/L (81597)
OCT													
19-19	--	--	--	--	--	--	--	--	--	--	--	--	--
DEC													
09-10	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN													
21...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB													
20-21	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR													
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN													
04...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL													
30...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
09...	<.3	<.04b	<.06b	<.2	<.12	<.4b	<7	<.04b	<.2	<.10	<.6	<5.0	<.3

Date	Tetra-hydro-furan, water, unfltrd ug/L (81607)	Dibromo chloro-propane water unfltrd ug/L (82625)	meta- + para-Xylene, water, unfltrd ug/L (85795)
OCT			
19-19	--	--	--
DEC			
09-10	--	--	--
JAN			
21...	--	--	--
FEB			
20-21	--	--	--
MAR			
26...	--	--	--
JUN			
04...	--	--	--
JUL			
30...	--	--	--
SEP			
03...	--	--	--
09...	<2	<.5	<.06b

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

Value qualifier codes used in this report:
- b -- Value was extrapolated below
- c -- See laboratory comment
- k -- Counts outside acceptable range
- m -- Highly var comp using method, ? prec
- n -- Below the NDV
- t -- Below the long-term MDL

Null value qualifier codes used in this report:
- m -- Results sent by separate memo
- u -- Unable to determine-matrix interference
- @ -- Holding time exceeded

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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.--No estimated daily dischrages. Records good except those for 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 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.5	75	55	146	73	242	64	19	4.2	2.7	0.84	0.28
2	3.5	76	51	120	72	228	62	18	3.8	2.5	0.70	0.22
3	3.2	106	52	109	70	228	61	18	3.5	2.6	0.48	0.19
4	3.2	164	58	110	67	234	60	17	25	2.7	0.41	0.16
5	2.9	286	58	107	64	214	60	16	27	5.1	0.40	0.15
6	2.7	201	52	107	69	198	56	16	40	9.5	0.41	0.14
7	2.6	169	51	94	69	179	54	15	27	9.8	0.44	0.13
8	3.0	151	51	91	66	169	51	15	18	9.7	0.49	0.13
9	6.9	136	254	90	67	166	49	14	13	8.9	0.43	0.12
10	21	126	289	85	61	157	47	13	11	7.1	0.44	0.12
11	16	114	203	84	57	151	47	12	9.1	6.1	0.43	0.17
12	11	105	203	172	57	142	44	12	7.7	5.2	0.39	0.67
13	8.1	96	220	233	56	134	42	11	14	4.6	0.64	0.29
14	7.0	90	182	183	57	129	39	10	32	3.8	0.70	1.1
15	6.5	84	167	164	56	118	36	9.4	22	3.3	0.91	1.6
16	6.2	77	157	155	52	116	36	8.7	19	4.1	0.88	2.5
17	6.0	72	148	147	48	113	34	7.7	15	4.0	0.70	2.7
18	6.1	69	139	139	46	118	33	6.9	12	3.7	0.49	2.6
19	31	65	127	133	46	106	32	6.1	10	3.4	0.42	2.4
20	74	62	114	129	537	98	31	5.6	8.7	3.1	0.39	2.3
21	40	58	109	125	566	94	30	5.3	7.6	2.7	0.36	2.6
22	45	55	106	115	454	91	29	5.1	6.8	2.5	0.31	5.3
23	79	53	146	107	345	90	28	5.0	6.0	2.3	0.27	4.7
24	185	51	149	95	294	85	28	4.7	5.5	2.2	0.27	4.0
25	269	49	122	92	282	82	26	4.6	4.8	2.4	0.24	3.0
26	148	68	114	95	265	81	24	8.2	3.6	2.8	0.24	2.6
27	123	110	110	90	274	78	23	14	3.4	2.1	0.22	2.3
28	113	72	103	88	254	75	21	9.4	3.1	1.7	0.19	2.0
29	102	63	100	83	---	69	20	8.1	3.0	1.4	0.17	1.7
30	90	59	109	79	---	66	20	6.7	3.2	1.1	0.16	1.8
31	79	---	218	77	---	64	---	5.3	---	0.87	0.18	---
TOTAL	1497.4	2962	4017	3644	4424	4115	1187	326.8	369.0	123.97	13.60	47.97
MEAN	48.3	98.7	130	118	158	133	39.6	10.5	12.3	4.00	0.44	1.60
MAX	269	286	289	233	566	242	64	19	40	9.8	0.91	5.3
MIN	2.6	49	51	77	46	64	20	4.6	3.0	0.87	0.16	0.12
AC-FT	2970	5880	7970	7230	8780	8160	2350	648	732	246	27	95

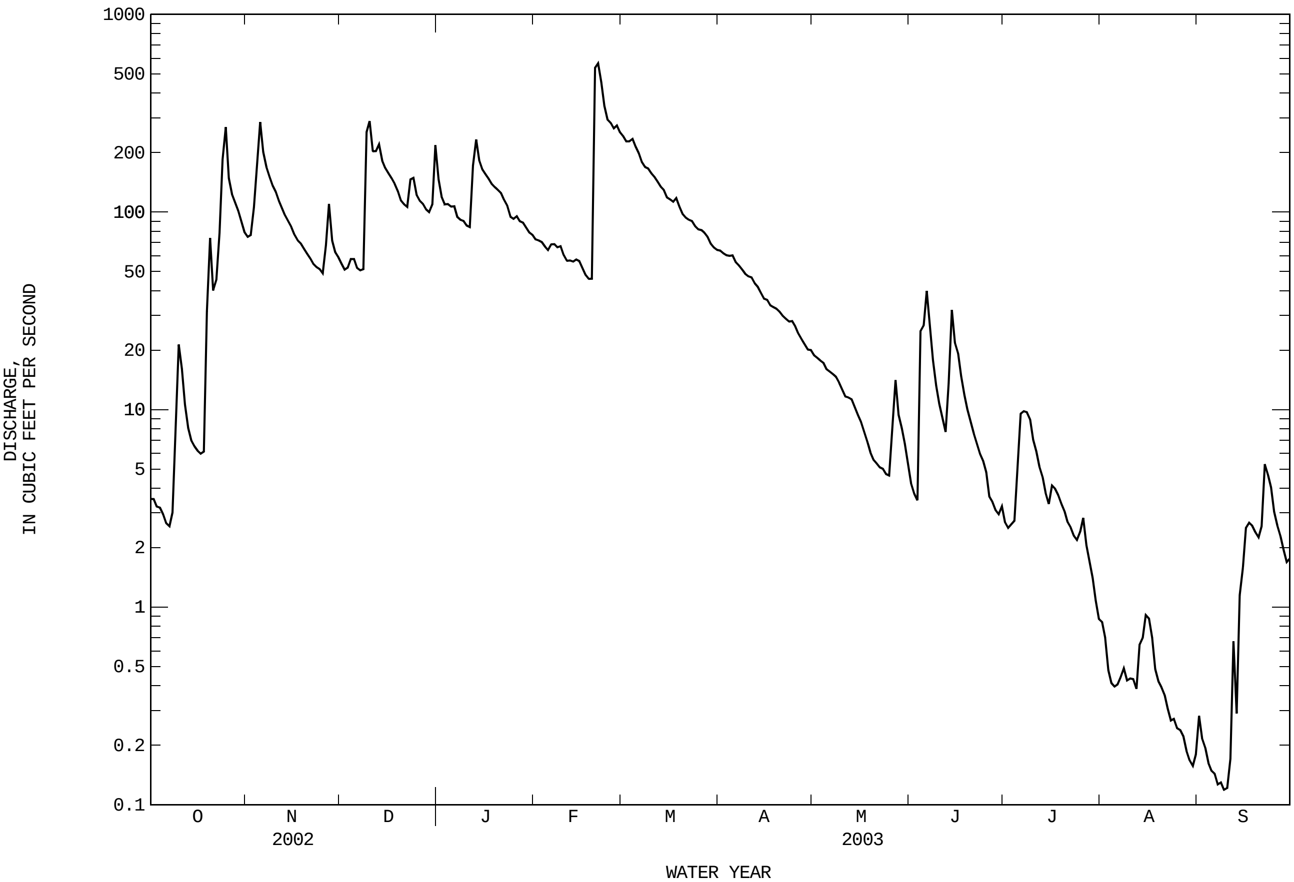
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	28.7	49.2	88.2	72.9	93.3	79.5	56.7	76.4	92.8	50.2	5.10	3.60
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 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1989 - 2003	
ANNUAL TOTAL	33162.36		22727.74			
ANNUAL MEAN	90.9		62.3		59.3	
HIGHEST ANNUAL MEAN					212	1992
LOWEST ANNUAL MEAN					1.14	1996
HIGHEST DAILY MEAN	5770	Jul 2	566	Feb 21	7000	Dec 21 1991
LOWEST DAILY MEAN	0.30	Jun 23	0.12	Sep 9	0.00	Aug 24 1993
ANNUAL SEVEN-DAY MINIMUM	0.41	Jun 19	0.14	Sep 4	0.00	Aug 24 1993
MAXIMUM PEAK FLOW			1690	Feb 20	26600	Jul 2 2002
MAXIMUM PEAK STAGE			5.68	Feb 20	a15.90	Jul 2 2002
ANNUAL RUNOFF (AC-FT)	65780		45080		42970	
10 PERCENT EXCEEDS	166		160		137	
50 PERCENT EXCEEDS	25		32		7.3	
90 PERCENT EXCEEDS	2.2		0.58		0.21	

a From floodmark.

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 2002 TO SEPTEMBER 2003

Date	Time	Dis-charge, cfs (00060)	Instan-taneous dis-charge, cfs (00061)	Baro-metric pres-sure, mm Hg (00025)	Specif. conduc-tance, wat unf uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temper-ature, water, deg C (00010)	Temper-ature, air, deg C (00020)	Color, water, fltrd, Pt-Co units (00080)	Turbid-ity, wat unf lab, Hach 2100AN NTU (99872)	Dis-solved oxygen, mg/L (00300)	Dis-solved oxygen, percent of sat-uration (00301)	COD, high level, water, unfltrd mg/L (00340)
OCT													
19-19	0715	34	--	--	438	7.7	--	--	20	6.6	--	--	<10
DEC 31 2002-													
JAN 01 2003	1000	228	--	--	591	8.1	--	--	10	8.1	--	--	<10
22...	1036	--	116	757	600	8.0	13.0	--	5	<1.0	10.5	101	<10
MAR													
27...	1247	--	80	748	566	8.0	18.4	--	2	8.2	9.6	104	<10
JUL													
30...	1235	--	1.3	754	583	7.7	28.9	--	10	1.1	6.4	84	10
SEP													
03...	1100	--	.20	755	653	7.8	26.2	25.8	12	1.5	6.6	83	<10

Date	Fecal coli-form, M-FC 0.7u MF col/ 100 mL (31625)	E coli, m-TEC MF, water, col/ 100 mL (31633)	Alka-linity, wat flt inc tit field, mg/L as CaCO3 (39086)	Residue total at 105 deg. C, sus-pended, mg/L (00530)	Nitrite water, fltrd, mg/L as N (00613)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Ammonia water, fltrd, mg/L as N (00608)	Total nitro-gen, water, unfltrd mg/L (00600)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Phos-phorus, water, unfltrd mg/L (00665)	Phos-phorus, water, fltrd, mg/L (00666)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Ortho-phos-phate, water, fltrd, mg/L (00660)
OCT													
19-19	--	--	150	<10	E.004	.15	<.04	.37	.22	.05	E.03	.03	.095
DEC 31 2002-													
JAN 01 2003	E230k	250	225	<10	<.008	.21	<.04	.38	.17	<.04	<.04	<.02	--
22...	E11k	E16k	231	<10	<.008	.19	<.04	.36	.17	<.04	<.04	<.02	--
MAR													
27...	E18k	E14k	213	<10	<.008	.11	<.04	.22	.11	<.04	E.02	<.02	--
JUL													
30...	E19k	E9k	198	<10	<.008	.09	E.03	.31	.23	<.04	<.04	<.02	--
SEP													
03...	E98e	E8ke	241	<10	<.008	E.04n	E.03n	--	.26	<.04	<.04	<.02	--

Date	Organic carbon, water, unfltrd mg/L (00680)	Chloro-phyll a phyto-plank-ton, fluoro, ug/L (70953)	Chloro-phyll b phyto-plank-ton, fluoro, ug/L (70954)	Sus-pended sedi-ment load, tons/d (80155)	Sus-pended sedi-ment concen-tration mg/L (80154)	Cadmium water, unfltrd ug/L (01027)	Copper, water, unfltrd recover -able, ug/L (01042)	Lead, water, unfltrd recover -able, ug/L (01051)	Zinc, water, unfltrd recover -able, ug/L (01092)
OCT									
19-19	4.8	--	--	.55	6	<.2	<1.0	<1	5
DEC 31 2002-									
JAN 01 2003	2.1	--	--	15	25	<.2	<1.0	<1	2
22...	1.6	.1	--m	--	--	<.2	<1.0	<1	<2
MAR									
27...	1.5	E.2	<.1	--	--	<.2	<1.0	<1	<2
JUL									
30...	2.8	.5	<.1	--	--	<.2	<1.0	<1	<2
SEP									
03...	2.7	E.3	<.1	--	--	<.2	<1.2	<1	E1n

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

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

Null value qualifier codes used in this report:
m -- Results sent by separate memo

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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.--Records fair except those for daily discharges below 10 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 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	47	35	134	57	243	50	2.7	0.00	0.00	0.00	0.00
2	0.00	48	33	106	54	229	48	1.9	0.00	0.00	0.00	0.00
3	0.00	72	35	96	51	226	45	0.78	0.00	0.00	0.00	0.00
4	0.00	140	42	92	48	234	44	0.45	0.00	0.00	0.00	0.00
5	0.00	253	41	88	45	214	41	0.15	0.18	0.00	0.00	0.00
6	0.00	175	40	83	50	195	39	0.00	7.5	0.00	0.00	0.00
7	0.00	142	39	76	50	181	38	0.00	5.3	0.00	0.00	0.00
8	0.00	125	39	72	47	168	34	0.00	0.00	0.00	0.00	0.00
9	0.00	112	238	69	45	159	31	0.00	0.00	0.00	0.00	0.00
10	0.00	100	280	63	42	152	31	0.00	0.00	0.00	0.00	0.00
11	0.00	86	176	63	40	144	29	0.00	0.00	0.00	0.00	0.00
12	0.00	76	174	145	38	140	27	0.00	0.00	0.00	0.00	0.00
13	0.00	69	e168	215	37	133	25	0.00	0.86	0.00	0.00	0.00
14	0.00	66	e160	160	38	122	23	0.00	3.8	0.00	0.00	0.00
15	0.00	71	153	145	37	116	21	0.00	2.7	0.00	0.00	0.00
16	0.00	66	144	136	34	111	20	0.00	0.00	0.00	0.00	0.00
17	0.00	61	136	126	33	106	18	0.00	0.00	0.00	0.00	0.00
18	0.00	57	129	120	32	104	17	0.00	0.00	0.00	0.00	0.00
19	8.3	53	120	115	31	100	16	0.00	0.00	0.00	0.00	0.00
20	45	50	111	108	562	90	16	0.00	0.00	0.00	0.00	0.00
21	21	47	105	102	704	85	15	0.00	0.00	0.00	0.00	0.00
22	20	43	98	95	543	82	14	0.00	0.00	0.00	0.00	0.00
23	51	40	152	87	392	80	13	0.00	0.00	0.00	0.00	0.00
24	135	38	146	84	320	75	13	0.00	0.00	0.00	0.00	0.00
25	271	35	114	81	306	72	11	0.00	0.00	0.00	0.00	0.00
26	126	48	105	84	281	70	9.0	0.00	0.00	0.00	0.00	0.00
27	101	89	97	78	287	66	6.8	0.00	0.00	0.00	0.00	0.00
28	88	54	92	74	262	64	5.0	0.00	0.00	0.00	0.00	0.00
29	77	44	86	69	---	62	3.7	0.00	0.00	0.00	0.00	0.00
30	63	38	89	63	---	54	3.2	0.00	0.00	0.00	0.00	0.00
31	52	---	192	60	---	52	---	0.00	---	0.00	0.00	---
TOTAL	1058.30	2345	3569	3089	4466	3929	706.7	5.98	20.34	0.00	0.00	0.00
MEAN	34.1	78.2	115	99.6	160	127	23.6	0.19	0.68	0.000	0.000	0.000
MAX	271	253	280	215	704	243	50	2.7	7.5	0.00	0.00	0.00
MIN	0.00	35	33	60	31	52	3.2	0.00	0.00	0.00	0.00	0.00
AC-FT	2100	4650	7080	6130	8860	7790	1400	12	40	0.00	0.00	0.00
CFSM	0.29	0.67	0.99	0.86	1.38	1.09	0.20	0.00	0.01	0.00	0.00	0.00
IN.	0.34	0.75	1.14	0.99	1.43	1.26	0.23	0.00	0.01	0.00	0.00	0.00

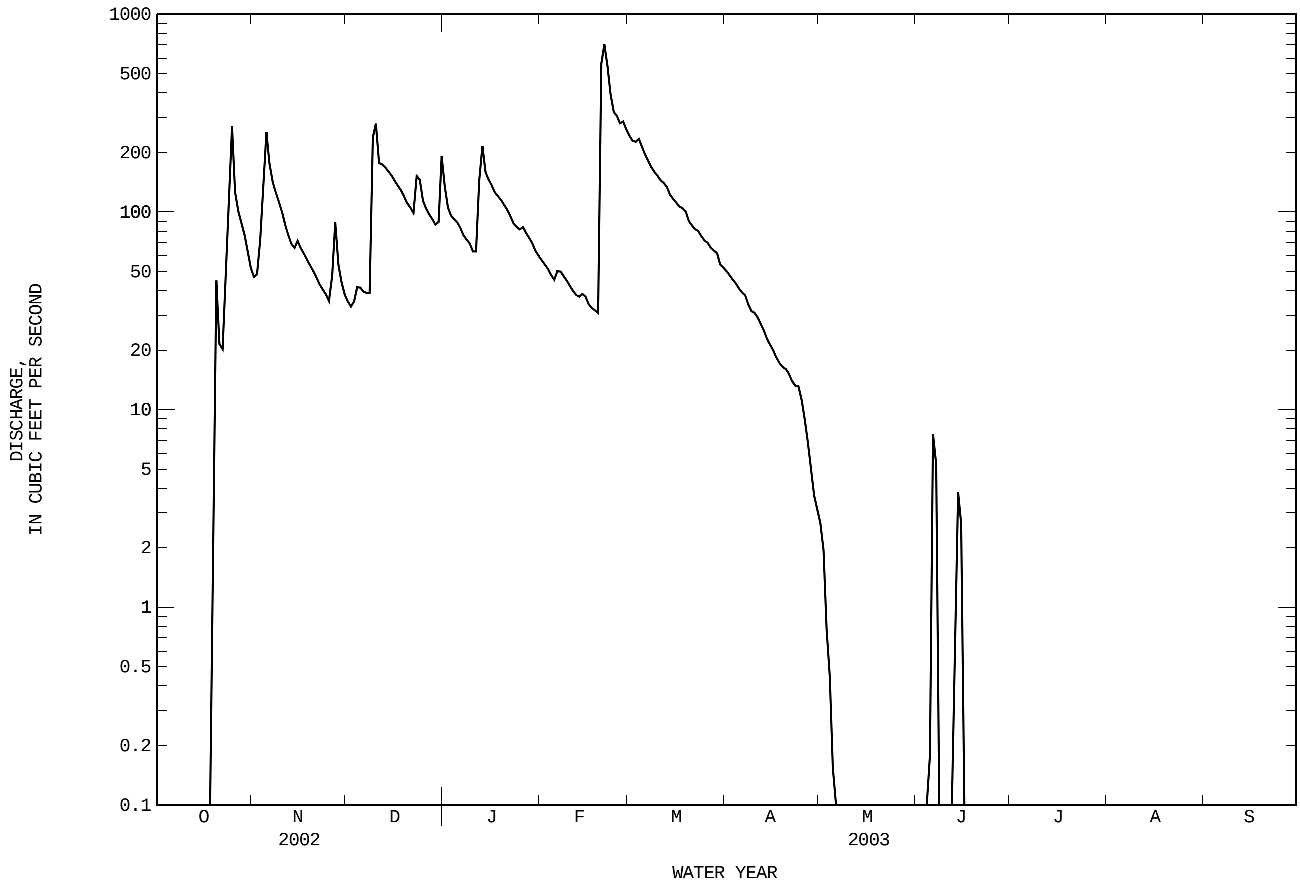
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1977 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	25.6	28.1	75.4	45.3	63.7	55.9	45.5	69.5	135	25.4	1.21	0.44
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 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1977 - 2003	
ANNUAL TOTAL	25430.44		19189.32			
ANNUAL MEAN	69.7		52.6		47.1	
HIGHEST ANNUAL MEAN					229	1992
LOWEST ANNUAL MEAN					0.000	1978
HIGHEST DAILY MEAN	4680	Jul 2	704	Feb 21	10800	Dec 21 1991
LOWEST DAILY MEAN	0.00	Mar 29	0.00	Oct 1	0.00	Apr 11 1977
ANNUAL SEVEN-DAY MINIMUM	0.00	Apr 14	0.00	Oct 1	0.00	Jun 10 1977
MAXIMUM PEAK FLOW			1710	Feb 20	18100	May 25 1981
MAXIMUM PEAK STAGE			6.81	Feb 20	17.88	Jul 2 2002
ANNUAL RUNOFF (AC-FT)	50440		38060		34090	
ANNUAL RUNOFF (CFSM)	0.60		0.45		0.41	
ANNUAL RUNOFF (INCHES)	8.16		6.15		5.51	
10 PERCENT EXCEEDS	143		144		103	
50 PERCENT EXCEEDS	7.2		16		0.00	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

e Estimated

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 June 1995, and April 1997 to current year.
BIOCHEMICAL DATA: Jan. 1979 to June 1995, and April 1997 to current year.
RADIOCHEMICAL DATA: Apr. 1980 to June 1981.
PESTICIDE DATA: Jan. 1979 to June 1985.
SEDIMENT DATA: May 1999 to current year.

INSTRUMENTATION.--Stage-activated automatic sampler.

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

Date	Time	Dis- charge, cfs (00060)	Instan- taneous dis- charge, cfs (00061)	Baro- metric pres- sure, mm Hg (00025)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temper- ature, water, deg C (00010)	Color, water, fltrd, Pt-Co units (00080)	Turbid- ity, wat unf lab, Hach 2100AN NTU (99872)	Dis- solved oxygen, mg/L (00300)	Dis- solved oxygen, percent of sat- uration (00301)	COD, high level, water, unfltrd mg/L (00340)	Fecal coli- form, M-FC 0.7u MF col/ 100 mL (31625)
OCT													
19-20	1645	39	--	--	365	7.9	--	15	5.9	--	--	<10	--
DEC													
09-10	0450	295	--	--	507	8.1	--	15	E11	--	--	<10	E800k@
DEC 31 2002-													
JAN 01 2003	1155	226	--	--	582	7.9	--	10	4.6	--	--	<10	168
22...	1358	--	95	758	583	8.1	13.9	5	<1.0	10.9	106	<10	E5k
FEB													
20-21	1000	861	--	--	436	8.0	--	40	180	--	--	E30	2700
APR													
29...	1430	--	3.6	749	512	7.9	23.5	8	2.6	8.0	96	<10	52

Date	E coli, m-TEC MF, water, col/ 100 mL (31633)	Alka- linity, wat flt inc tit field, mg/L as CaCO3 (39086)	Residue total at 105 deg. C, sus- pended, mg/L (00530)	Nitrite water, fltrd, mg/L as N (00613)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Ammonia water, fltrd, mg/L as N (00608)	Total nitro- gen, water, unfltrd mg/L (00600)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Phos- phorus, water, unfltrd mg/L (00665)	Phos- phorus, water, fltrd, mg/L (00666)	Ortho- phos- phate, water, fltrd, mg/L as P (00671)	Organic carbon, water, unfltrd mg/L (00680)	Chloro- phyll a phyto- plank- ton, fluoro, ug/L (70953)
OCT													
19-20	--	109	<10	<.008	.12	<.04	.31	.19	E.03	<.04	<.02	4.0	--
DEC													
09-10	E4200k@	195	12	<.008	.23	<.04	.46	.23	E.02	<.04	<.02	5.8	--
DEC 31 2002-													
JAN 01 2003	100	222	<10	<.008	.17	<.04	.29	.12	<.04	<.04	<.02	2.0	--
22...	E6k	221	<10	<.008	.16	<.04	.30	.14	<.04	<.04	<.02	1.7	<.1
FEB													
20-21	E1700k	158	226	<.008	.28	<.04	1.3	.98	.12	.10	<.02	11.4	--
APR													
29...	E13k	174	<10	<.008	E.04	<.04	--	.17	<.04	<.04	<.02	2.2	E.2

Date	Chloro- phyll b phyto- plank- ton, fluoro, ug/L (70954)	Sus- pended sedi- ment load, tons/d (80155)	Sus- pended sedi- ment concen- tration mg/L (80154)	Cadmium water, unfltrd ug/L (01027)	Copper, water, unfltrd recover -able, ug/L (01042)	Lead, water, unfltrd recover -able, ug/L (01051)	Zinc, water, unfltrd recover -able, ug/L (01092)
OCT							
19-20	--	.73	7	<.2	10.2	M	4
DEC							
09-10	--	21	26	<.2	<1.0	<1	11
DEC 31 2002-							
JAN 01 2003	--	8.5	14	<.2	<1.0	<1	4
22...	--m	--	--	<.2	<1.0	<1	2
FEB							
20-21	--	546	235	<.2	1.9	4	10
APR							
29...	<.1	--	--	<.2	<1.0	<1	<2

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

Null value qualifier codes used in this report:
m -- Results sent by separate memo

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08155395 Upper Barton Springs, Austin, TX

LOCATION.--Lat 30°15'49", long 97°46'27", Travis County, Hydrologic Unit 12090205, on right bank 0.6 mi upstream from Barton Springs Road bridge over Barton Creek, 0.9 mi upstream from mouth, and 1.9 mi southwest of the State Capitol Building in Austin.

DRAINAGE AREA.--Not applicable. Only springflow is published for this station.

PERIOD OF RECORD.--
CHEMICAL DATA: Mar. 2002 to Sept. 2003.
BIOCHEMICAL DATA: Oct. 2002 to Sept. 2003.
PESTICIDE DATA: May 2001, Oct. 2002 to Sept. 2003.
SEDIMENT CHEMISTRY DATA: Mar. 2002, Oct. 2002 to Sept. 2003.

REMARKS.--Only springflow from the Edwards and associated limestones in the Balcones Fault Zone is published for this station.

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

Date	Time	Barometric pressure, mm Hg (00025)	Specif. conductance, wat unf uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temperature, water, deg C (00010)	Temperature, air, deg C (00020)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Noncarb hardness, wat flt field, mg/L as CaCO3 (00904)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Sodium, water, fltrd, mg/L (00930)
AUG													
06...	1230	--	640	6.9	21.5	--	6.5	--	320	26	91.2	21.1	10.8
20...	0900	752	638	7.1	21.3	--	6.1	70	340	52	94.8	24.2	10.2
SEP													
03...	0730	754	638	7.0	21.3	--	7.7	88	320	37	90.6	23.1	9.25
16...	0630	756	562	7.0	21.5	25.0	7.5	86	310	49	92.5	18.6	8.33
24...	0820	--	635	7.2	--	--	--	--	340	49	96.2	24.4	10.3
24...	1100	--	634	7.1	--	--	--	--	350	68	97.8	24.4	10.5
24...	1300	--	637	7.2	--	--	--	--	350	63	97.7	24.6	10.5
24...	1640	--	634	7.2	--	--	--	--	340	65	97.4	24.4	10.7
24...	1700	--	635	7.2	--	--	--	--	340	--	95.2	24.2	10.4
24...	1900	--	635	7.2	--	--	--	--	340	52	97.1	24.3	10.7
24...	2100	--	637	7.2	--	--	--	--	340	60	96.3	24.2	10.7
24...	2300	--	638	7.2	--	--	--	--	340	55	96.0	24.1	10.6
25...	0100	--	640	7.2	--	--	--	--	340	62	95.8	24.3	10.7
25...	0300	--	643	7.2	--	--	--	--	340	66	97.0	24.3	10.8
25...	0500	--	646	7.1	--	--	--	--	340	--	96.1	24.3	10.7
25...	0700	--	648	7.1	--	--	--	--	340	61	97.1	24.4	10.9
25...	0900	--	642	7.1	--	--	--	--	340	61	95.2	24.3	10.7
25...	1100	--	637	7.1	--	--	--	--	350	39	98.2	24.4	11.0
25...	1300	--	633	7.2	--	--	--	--	350	66	97.7	24.6	11.0
25...	1500	--	627	7.2	--	--	--	--	350	64	98.4	24.6	10.6
25...	1700	--	623	7.2	--	--	--	--	340	62	96.6	24.6	10.6
25...	1900	--	623	7.2	--	--	--	--	340	63	96.3	24.6	10.5
30...	0730	--	653	7.1	21.5	--	6.9	--	330	46	92.7	24.1	10.3

Date	Sodium adsorption ratio (00931)	Sodium, percent (00932)	Potassium, water, fltrd, mg/L (00935)	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)	Sulfate water, fltrd, mg/L (00945)	Chloride, water, fltrd, mg/L (00940)	Silica, water, fltrd, mg/L (00955)	Residue water, fltrd, sum of constituents mg/L (70301)	Nitrite water, fltrd, mg/L as N (00613)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Ammonia water, fltrd, mg/L as N (00608)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Phosphorus, water, unfltrd mg/L (00665)
AUG													
06...	.3	7	1.24	289	27.2	18.9	13.0	373	<.008	3.49d	E.014n	<.10	<.04
20...	.2	6	1.11	285	27.1	18.7	13.1	369	<.008	2.02d	E.009n	<.10	<.04
SEP													
03...	.2	6	1.17	285	26.1	17.9	12.5	361	<.008	2.08d	E.008n	E.05n	<.04
16...	.2	6	1.88	259	18.8	13.7	11.6	329	<.008	1.73d	E.011n	E.06n	E.03n
24...	.2	6	1.25	292	26.1	17.8	12.7	364	--	--	--	--	--
24...	.2	6	1.24	277	25.9	17.7	12.6	357	--	--	--	--	--
24...	.2	6	1.20	283	26.1	17.7	12.7	361	--	--	--	--	--
24...	.3	6	1.23	279	26.9	18.1	12.6	359	--	--	--	--	--
24...	.2	6	1.24	E281	26.8	18.5	12.4	--	--	--	--	--	--
24...	.3	6	1.25	291	27.0	18.8	12.5	367	--	--	--	--	--
24...	.3	6	1.23	281	27.0	18.2	12.5	359	--	--	--	--	--
24...	.3	6	1.26	285	27.1	18.7	12.4	362	--	--	--	--	--
25...	.3	6	1.21	278	27.3	18.3	12.5	357	--	--	--	--	--
25...	.3	6	1.26	277	27.2	19.0	12.5	359	--	--	--	--	--
25...	.3	6	1.20	E279	27.5	18.4	12.4	--	--	--	--	--	--
25...	.3	6	1.23	282	27.4	18.8	12.5	362	--	--	--	--	--
25...	.3	6	1.22	278	27.4	18.4	12.5	357	--	--	--	--	--
25...	.3	6	1.30	307	27.6	18.4	12.5	378	--	--	--	--	--
25...	.3	6	1.26	279	27.7	18.4	12.5	361	--	--	--	--	--
25...	.2	6	1.28	283	--	--	12.8	--	--	--	--	--	--
25...	.2	6	1.22	281	26.5	18.4	12.6	360	--	--	--	--	--
25...	.2	6	1.22	279	26.6	18.1	12.7	358	--	--	--	--	--
30...	.2	6	1.18	285	26.4	18.5	12.3	367	<.008	2.22d	E.010n	<.10	<.04

08155395 Upper Barton Springs, Austin, TX--Continued

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

Date	Phosphorus, water, fltrd, mg/L (00666)	Orthophosphate, water, fltrd, mg/L as P (00671)	Arsenic water, fltrd, ug/L (01000)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Copper, water, fltrd, ug/L (01040)	Lead, water, fltrd, ug/L (01049)	Nickel, water, fltrd, ug/L (01065)	Strontium, water, fltrd, ug/L (01080)	Zinc, water, fltrd, ug/L (01090)	2,6-Diethylaniline water fltrd 0.7u GF ug/L (82660)	Acetochlor, water, fltrd, ug/L (49260)	Alachlor, water, fltrd, ug/L (46342)
AUG													
06...	<.04	E.01n	.5	<.04	<.8	.6	E.04n	2.83	462	1	<.006	<.006	<.004
20...	<.04	E.01n	.5	<.04	<.8	.4	<.08	3.21	520	<1	<.006	<.006	<.004
SEP													
03...	<.04	<.02	.4	<.04	<.8	.7	<.08	1.18	507	<1	<.006	<.006	<.004
16...	E.02n	<.18d	.5	<.04	E.4n	.7	<.08	.71	383	Mn	<.006	<.006	<.004
24...	--	--	--	--	--	--	--	--	482	--	--	--	--
24...	--	--	--	--	--	--	--	--	489	--	--	--	--
24...	--	--	--	--	--	--	--	--	489	--	--	--	--
24...	--	--	--	--	--	--	--	--	484	--	--	--	--
24...	--	--	--	--	--	--	--	--	473	--	--	--	--
24...	--	--	--	--	--	--	--	--	483	--	--	--	--
24...	--	--	--	--	--	--	--	--	481	--	--	--	--
24...	--	--	--	--	--	--	--	--	482	--	--	--	--
25...	--	--	--	--	--	--	--	--	481	--	--	--	--
25...	--	--	--	--	--	--	--	--	488	--	--	--	--
25...	--	--	--	--	--	--	--	--	482	--	--	--	--
25...	--	--	--	--	--	--	--	--	490	--	--	--	--
25...	--	--	--	--	--	--	--	--	481	--	--	--	--
25...	--	--	--	--	--	--	--	--	496	--	--	--	--
25...	--	--	--	--	--	--	--	--	494	--	--	--	--
25...	--	--	--	--	--	--	--	--	501	--	--	--	--
25...	--	--	--	--	--	--	--	--	498	--	--	--	--
25...	--	--	--	--	--	--	--	--	499	--	--	--	--
30...	<.04	E.01n	.6	<.04	<.8	.4	<.08	1.19	496	Mn	<.006	<.006	<.004

Date	alpha-HCH, water, fltrd, ug/L (34253)	Atrazine, water, fltrd, ug/L (39632)	Azinphos-methyl, water, fltrd 0.7u GF ug/L (82686)	Benfluralin, water, fltrd 0.7u GF ug/L (82673)	Butylate, water, fltrd, ug/L (04028)	Carbaryl, water, fltrd 0.7u GF ug/L (82680)	Carbofuran, water, fltrd 0.7u GF ug/L (82674)	Chlorpyrifos water, fltrd, ug/L (38933)	cis-Permethrin water fltrd 0.7u GF ug/L (82687)	Cyanazine, water, fltrd, ug/L (04041)	DCPA, water fltrd 0.7u GF ug/L (82682)	CIAT, water, fltrd, ug/L (04040)	Desulfinyl fipronil, water, fltrd, ug/L (62170)
AUG													
06...	<.005	.012	<.050	<.010	<.002	<.041	<.020	<.005	<.006	<.018	<.003	E.013	<.004
20...	<.005	.014	<.050	<.010	<.002	<.041	<.020	<.005	<.006	<.018	<.003	E.012	<.004
SEP													
03...	<.005	.013	<.050	<.010	<.002	<.041	<.020	<.005	<.006	<.018	<.003	E.015	<.004
16...	<.005	.046	<.050	<.010	<.002	<.041	<.020	<.005	<.006	<.018	<.003	E.014	<.004
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
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30...	<.005	.013	<.050	<.010	<.002	<.041	<.020	<.005	<.006	<.018	<.003	E.016	<.004

08155395 Upper Barton Springs, Austin, TX--Continued

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

Date	Desulf-inyl-fipro-nil amide, wat flt ug/L (62169)	Diazi-non, water, fltrd, ug/L (39572)	Diel-drin, water, fltrd, ug/L (39381)	Disul-foton, water, fltrd 0.7u GF ug/L (82677)	EPTC, water, fltrd 0.7u GF ug/L (82668)	Ethal-flur-alin, water, fltrd 0.7u GF ug/L (82663)	Etho-prop, water, fltrd 0.7u GF ug/L (82672)	Fipro-nil, water, fltrd, ug/L (62166)	Fipro-nil sulfide water, fltrd, ug/L (62167)	Fipro-nil sulfone water, fltrd, ug/L (62168)	Fonofos water, fltrd, ug/L (04095)	Lindane water, fltrd, ug/L (39341)	Linuron water fltrd 0.7u GF ug/L (82666)
AUG													
06...	<.009	<.005	<.005	<.02	<.002	<.009	<.005	<.007	<.005	<.005	<.003	<.004	<.035
20...	<.009	<.005	<.005	<.02	<.002	<.009	<.005	<.007	<.005	<.005	<.003	<.004	<.035
SEP													
03...	<.009	<.005	<.005	<.02	<.002	<.009	<.005	<.007	<.005	<.005	<.003	<.004	<.035
16...	<.009	<.005	<.005	<.02	<.002	<.009	<.005	<.007	<.005	<.005	<.003	<.004	<.035
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30...	<.009	<.005	<.005	<.02	<.002	<.009	<.005	<.007	<.005	<.005	<.003	<.004	<.035

Date	Mala-thion, water, fltrd, ug/L (39532)	Metola-chlor, water, fltrd, ug/L (39415)	Metri-buzin, water, fltrd, ug/L (82630)	Moli-nate, water, fltrd 0.7u GF ug/L (82671)	Naprop-amide, water, fltrd 0.7u GF ug/L (82684)	p,p'-DDE, water, fltrd, ug/L (34653)	Para-thion, water, fltrd, ug/L (39542)	Methyl para-thion, water, fltrd 0.7u GF ug/L (82667)	Peb-ulate, water, fltrd 0.7u GF ug/L (82669)	Pendi-meth-alin, water, fltrd 0.7u GF ug/L (82683)	Phorate water fltrd 0.7u GF ug/L (82664)	Prome-ton, water, fltrd, ug/L (04037)	Propa-chlor, water, fltrd, ug/L (04024)
AUG													
06...	<.027	<.013	<.006	<.002	<.007	<.003	<.010	<.006	<.004	<.022	<.011	E.01t	<.010
20...	<.027	<.013	<.006	<.002	<.007	<.003	<.010	<.006	<.004	<.022	<.011	E.01n	<.010
SEP													
03...	<.027	<.013	<.006	<.002	<.007	<.003	<.010	<.006	<.004	<.022	<.011	E.01t	<.010
16...	<.027	<.013	<.006	<.002	<.007	<.003	<.010	<.006	<.004	<.022	<.011	E.01n	<.010
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30...	<.027	<.013	<.006	<.002	<.007	<.003	<.010	<.006	<.004	<.022	<.011	E.01t	<.010

08155395 Upper Barton Springs, Austin, TX--Continued

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

Date	Pro- panil, water, fltrd 0.7u GF ug/L (82679)	Propar- gite, water, fltrd 0.7u GF ug/L (82685)	Pron- amide, water, fltrd 0.7u GF ug/L (82676)	Sima- zine, water, fltrd, ug/L (04035)	Tebu- thiuron water fltrd 0.7u GF ug/L (82670)	Terba- cil, water, fltrd 0.7u GF ug/L (82665)	Terbu- fos, water, fltrd 0.7u GF ug/L (82675)	Thio- bencarb water fltrd 0.7u GF ug/L (82681)	Tri- allate, water, fltrd 0.7u GF ug/L (82678)	Tri- flur- alin, water, fltrd 0.7u GF ug/L (82661)	Di- bromo- methane water unfltrd ug/L (30217)	Bromo- di- chloro- methane water unfltrd ug/L (32101)	Tetra- chloro- methane water unfltrd ug/L (32102)
AUG													
06...	<.011	<.02	<.004	.006	<.02	<.034	<.02	<.005	<.002	<.009	<.05b	<.05b	<.06b
20...	<.011	<.02	<.004	E.004n	<.02	<.034	<.02	<.005	<.002	<.009	<.05b	E.02t	<.06b
SEP													
03...	<.011	<.02	<.004	<.005	<.02	<.034	<.02	<.005	<.002	<.009	<.05b	<.05b	<.06b
16...	<.011	<.02	<.004	.017	<.02	<.034	<.02	<.005	<.002	<.009	<.05b	<.05b	<.06b
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30...	<.011	<.02	<.004	<.005	<.02	<.034	<.02	<.005	<.002	<.009	<.05b	<.05b	<.06b

Date	1,2-Di- chloro- ethane, water, unfltrd ug/L (32103)	Tri- bromo- methane water unfltrd ug/L (32104)	Di- bromo- chloro- methane water unfltrd ug/L (32105)	Tri- chloro- methane water unfltrd ug/L (32106)	Toluene water unfltrd ug/L (34010)	Benzene water unfltrd ug/L (34030)	Acrylo- nitrile water unfltrd ug/L (34215)	Chloro- benzene water unfltrd ug/L (34301)	Chloro- ethane, water, unfltrd ug/L (34311)	Ethyl- benzene water unfltrd ug/L (34371)	Hexa- chloro- ethane, water, unfltrd ug/L (34396)	Bromo- methane water unfltrd ug/L (34413)	Chloro- methane water unfltrd ug/L (34418)
AUG													
06...	<.1	<.10	<.2	.14	<.05b	<.04b	<1	<.03b	<.1	<.03b	<.2	<.3mc	<.2mc
20...	<.1	<.10	<.2	.15	<.05b	<.04b	<1	<.03b	<.1	<.03b	<.2	<.3mc	<.2mc
SEP													
03...	<.1	<.10	<.2	.13	<.05b	<.04b	<1	<.03b	<.1	<.03b	<.2	<.3mc	<.2mc
16...	<.1	<.10	<.2	.12	<.05b	<.04b	<1	<.03b	<.1	<.03b	<.2	<.3mc	<.2mc
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30...	<.1	<.10	<.2	.15	<.05b	<.04b	<1	<.03b	<.1	<.03b	<.2	<.3mc	<.2mc

08155395 Upper Barton Springs, Austin, TX--Continued

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

Date	Di- chloro- methane water unfltrd ug/L (34423)	Tetra- chloro- ethene, water, unfltrd ug/L (34475)	Tri- chloro- fluoro- methane water unfltrd ug/L (34488)	1,1-Di- chloro- ethane, water unfltrd ug/L (34496)	1,1-Di- chloro- ethene, water, unfltrd ug/L (34501)	1,1,1- Tri- chloro- ethane, water, unfltrd ug/L (34506)	1,1,2- Tri- chloro- ethane, water, unfltrd ug/L (34511)	1,1,2,2 -Tetra- chloro- ethane, water, unfltrd ug/L (34516)	1,2-Di- chloro- benzene water unfltrd ug/L (34536)	1,2-Di- chloro- propane water unfltrd ug/L (34541)	trans- 1,2-Di- chloro- ethene, water, unfltrd ug/L (34546)	1,2,4- Tri- chloro- benzene water unfltrd ug/L (34551)	1,3-Di- chloro- benzene water unfltrd ug/L (34566)
AUG													
06...	<.2	E.06b	<.09b	<.04b	<.04n	<.03b	<.06n	<.09b	<.03n	<.03b	<.03b	<.1	<.03b
20...	<.2	E.06b	<.09b	<.04b	<.04n	<.03b	<.06n	<.09b	<.03n	<.03b	<.03b	<.1	<.03b
SEP													
03...	<.2	E.06b	<.09b	<.04b	<.04n	<.03b	<.06n	<.09b	<.03n	<.03b	<.03b	<.1	<.03b
16...	<.2	E.06b	<.09b	<.04b	<.04n	<.03b	<.06n	<.09b	<.03n	<.03b	<.03b	<.1	<.03b
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30...	<.2	E.06b	<.09b	<.04b	<.04n	<.03b	<.06n	<.09b	<.03n	<.03b	<.03b	<.1	<.03b

Date	1,4-Di- chloro- benzene water unfltrd ug/L (34571)	Di- chloro- di- fluoro- methane wat unf ug/L (34668)	Naphth- alene, water, unfltrd ug/L (34696)	trans- 1,3-Di- chloro- propene water unfltrd ug/L (34699)	cis- 1,3-Di- chloro- propene water unfltrd ug/L (34704)	Vinyl chlor- ide, water, unfltrd ug/L (39175)	Tri- chloro- ethene, water, unfltrd ug/L (39180)	Hexa- chloro- buta- diene, water, unfltrd ug/L (39702)	1,2,3,4 Tetra- methyl- benzene water unfltrd ug/L (49999)	1,2,3,5 Tetra- methyl- benzene water unfltrd ug/L (50000)	Bromo- ethene, water, unfltrd ug/L (50002)	t-Butyl ethyl ether, water, unfltrd ug/L (50004)	Methyl tert- pentyl ether, water, unfltrd ug/L (50005)
AUG													
06...	<.05b	<.18mc	<.5	<.09b	<.09b	<.1	<.04b	<.1	<.2	<.2	<.1	<.05b	<.08b
20...	<.05b	<.18mc	<.5	<.09b	<.09b	<.1	<.04b	<.1	<.2	<.2	<.1	<.05b	<.08b
SEP													
03...	<.05b	<.18mc	<.5	<.09b	<.09b	<.1	<.04b	<.1	<.2	<.2	<.1	<.05b	<.08b
16...	<.05b	<.18mc	<.5	<.09b	<.09b	<.1	<.04b	<.1	<.2	<.2	<.1	<.05b	<.08b
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30...	<.05b	<.18mc	<.5	<.09b	<.09b	<.1	<.04b	<.1	<.2	<.2	<.1	<.05b	<.08b

08155395 Upper Barton Springs, Austin, TX--Continued

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

Date	trans-1,4-Di-chloro-2-butene, wat unf ug/L (73547)	Ethyl methac-rylate, water, unfltrd ug/L (73570)	Carbon di-sulfide water unfltrd ug/L (77041)	cis-1,2-Di-chloro-ethene, water, unfltrd ug/L (77093)	Methyl n-butyl ketone, water, unfltrd ug/L (77103)	Styrene water unfltrd ug/L (77128)	o-Xylene, water, unfltrd ug/L (77135)	1,1-Di-chloro-propene water unfltrd ug/L (77168)	2,2-Di-chloro-propane water unfltrd ug/L (77170)	1,3-Di-chloro-propane water unfltrd ug/L (77173)	2-Ethyl-toluene water unfltrd ug/L (77220)	1,2,3-Tri-methyl-benzene water unfltrd ug/L (77221)	1,2,4-Tri-methyl-benzene water unfltrd ug/L (77222)
AUG													
06...	<.7b	<.2	<.07b	<.04b	<.7b	<.04b	<.07b	<.05b	<.05b	<.1	<.06b	<.1	<.06b
20...	<.7b	<.2	<.07b	<.04b	<.7b	<.04b	<.07b	<.05b	<.05b	<.1	<.06b	<.1	<.06b
SEP													
03...	<.7b	<.2	<.07b	<.04b	<.7b	<.04b	<.07b	<.05b	<.05b	<.1	<.06b	<.1	<.06b
16...	<.7b	<.2b	E.03n	<.04b	<.7b	<.04b	<.07b	<.05b	<.05b	<.1	<.06b	<.1	<.06b
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
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24...	--	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--	--
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25...	--	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--	--
30...	<.7b	<.2	<.07b	<.04b	<.7b	<.04b	<.07b	<.05b	<.05b	<.1	<.06b	<.1	<.06b

Date	Iso-propyl-benzene water unfltrd ug/L (77223)	n-propyl-benzene water unfltrd ug/L (77224)	1,3,5-Tri-methyl-benzene water unfltrd ug/L (77226)	2-Chloro-toluene water unfltrd ug/L (77275)	4-Chloro-toluene water unfltrd ug/L (77277)	Bromo-chloro-methane water unfltrd ug/L (77297)	n-Butyl benzene water unfltrd ug/L (77342)	sec-Butyl-benzene water unfltrd ug/L (77350)	tert-Butyl-benzene water unfltrd ug/L (77353)	4-Iso-propyl-toluene water unfltrd ug/L (77356)	Iodo-methane water unfltrd ug/L (77424)	1,2,3-Tri-chloro-propane water unfltrd ug/L (77443)	1,1,1,2-Tetra-chloro-ethane, water, unfltrd ug/L (77562)
AUG													
06...	<.06b	<.04b	<.04b	<.04b	<.05b	<.12	<.2	<.06b	<.10	<.12	<.35mc	<.16	<.03b
20...	<.06b	<.04b	<.04b	<.04b	<.05b	<.12	<.2	<.06b	<.10	<.12	<.35mc	<.16	<.03b
SEP													
03...	<.06b	<.04b	<.04b	<.04b	<.05b	<.12	<.2	<.06b	<.10	<.12	<.35mc	<.16	<.03b
16...	<.06b	<.04b	<.04b	<.04b	<.05b	<.12	<.2	<.06b	<.10	<.12	<.35mc	<.16b	<.03b
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
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25...	--	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--	--
30...	<.06b	<.04b	<.04b	<.04b	<.05b	<.12	<.2	<.06b	<.10	<.12	<.35mc	<.16	<.03b

08155395 Upper Barton Springs, Austin, TX--Continued

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

Date	1,2,3-Tri-chloro-benzene water unfltrd ug/L (77613)	1,2-Di-bromo-ethane, water, unfltrd ug/L (77651)	CFC-113 water unfltrd ug/L (77652)	Methyl t-butyl ether, water, unfltrd ug/L (78032)	3-Chloro-propene water unfltrd ug/L (78109)	Iso-butyl methyl ketone, water, unfltrd ug/L (78133)	Acetone water unfltrd ug/L (81552)	Bromo-benzene water unfltrd ug/L (81555)	Di-ethyl ether, water, unfltrd ug/L (81576)	Diiso-propyl ether, water, unfltrd ug/L (81577)	Meth-acrylo-nitrile water unfltrd ug/L (81593)	Ethyl methyl ketone, water, unfltrd ug/L (81595)	Methyl methac-rylate, water, unfltrd ug/L (81597)
AUG													
06...	<.3	<.04b	<.06b	<.2	<.12	<.4b	<7	<.04b	<.2	<.10	<.6	<5.0	<.3
20...	<.3	<.04b	<.06b	<.2	<.12	<.4b	<7	<.04b	<.2	<.10	<.6	<5.0	<.3
SEP													
03...	<.3	<.04b	<.06b	<.2	<.12	<.4b	<7	<.04b	<.2	<.10	<.6	<5.0	<.3
16...	<.3	<.04b	<.06b	<.2	<.12	<.4b	<7	<.04b	<.2	<.10	<.6	<5.0	<.3b
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
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25...	--	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--	--
30...	<.3	<.04b	<.06b	<.2	<.50b	<.4b	<7	<.04b	<.2	<.10	<.6	<5.0	<.3

Date	Tetra-hydro-furan, water, unfltrd ug/L (81607)	Dibromo chloro-propane water unfltrd ug/L (82625)	meta- + para-Xylene, water, unfltrd ug/L (85795)
AUG			
06...	<2	<.5	<.06b
20...	<2	<.5	<.06b
SEP			
03...	<2	<.5	<.06b
16...	<2	<.5	<.06b
24...	--	--	--
24...	--	--	--
24...	--	--	--
24...	--	--	--
24...	--	--	--
24...	--	--	--
24...	--	--	--
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25...	--	--	--
25...	--	--	--
25...	--	--	--
25...	--	--	--
25...	--	--	--
25...	--	--	--
30...	<2	<.5	<.06b

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

Value qualifier codes used in this report:
- b -- Value was extrapolated below
- c -- See laboratory comment
- d -- Diluted sample: method hi range exceeded
- m -- Highly var comp using method, ? prec
- n -- Below the NDV
- t -- Below the long-term MDL

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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), Oct. 1999 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 estimated daily discharges. No known regulation or diversions. No flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1998, 14.71 ft, Oct 17, 1998, from floodmark, discharge 7,300 ft^3/s, as determined by indirect methods by U.S. Geological Survey.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.1	23	16	235	70	467	46	4.6	3.4	3.4	1.9	1.3
2	1.2	24	15	164	64	395	44	4.5	3.5	3.3	1.9	1.3
3	1.4	38	17	139	60	375	39	4.6	3.6	3.2	1.9	1.3
4	1.5	146	22	131	52	386	37	4.6	4.2	3.3	1.9	1.2
5	1.4	336	23	123	47	359	33	4.4	6.2	3.4	2.0	1.2
6	1.4	209	22	112	61	337	30	4.5	4.5	3.4	2.0	1.1
7	1.5	145	20	97	55	318	28	4.5	4.2	3.4	2.0	1.1
8	1.6	117	21	88	50	276	24	4.5	4.2	3.6	2.0	0.98
9	1.7	97	325	84	45	214	21	4.4	4.2	3.4	2.0	0.97
10	1.7	73	526	72	40	188	19	4.5	4.0	3.1	2.0	0.94
11	1.7	53	260	69	35	177	17	4.3	4.0	2.7	2.0	0.96
12	1.5	44	233	234	31	171	16	4.3	3.9	2.6	1.9	1.3
13	1.6	38	264	422	30	162	14	4.5	8.6	2.5	2.1	1.3
14	1.7	36	205	320	32	146	13	4.4	6.9	2.4	1.9	1.3
15	1.8	34	180	292	29	134	11	4.3	4.4	2.5	1.8	1.2
16	1.8	30	165	277	23	128	11	4.2	4.1	2.5	1.7	1.1
17	1.9	28	149	255	19	122	9.6	3.9	4.1	2.3	1.6	1.0
18	2.0	27	136	243	17	119	9.2	4.2	4.1	2.2	1.5	1.0
19	8.7	25	119	233	16	112	8.8	4.1	4.1	2.2	1.4	1.0
20	9.9	23	101	223	758	97	8.3	3.9	4.1	2.2	1.4	0.98
21	14	21	95	206	1280	88	7.5	3.7	3.9	2.1	1.5	1.1
22	4.4	19	90	180	1140	82	7.3	3.7	3.9	2.0	1.4	1.0
23	31	17	227	157	969	80	6.7	3.6	3.9	2.0	1.4	0.94
24	111	17	175	145	817	74	6.3	3.5	3.8	2.0	1.4	0.69
25	394	16	121	140	737	70	5.7	3.6	3.7	1.9	1.4	0.53
26	135	22	105	144	688	68	5.0	4.0	3.7	1.9	1.4	0.76
27	80	65	97	132	692	62	4.6	3.9	3.6	1.8	1.4	0.73
28	52	37	89	119	612	58	4.5	3.7	3.6	1.8	1.3	0.72
29	42	24	85	105	---	52	4.6	3.7	3.5	1.8	1.3	0.68
30	33	20	94	88	---	49	4.6	3.7	3.4	1.8	1.3	0.67
31	26	---	279	78	---	48	---	3.5	---	1.8	1.3	---
TOTAL	969.5	1804	4276	5307	8469	5414	495.7	127.8	127.3	78.5	52.0	30.35
MEAN	31.3	60.1	138	171	302	175	16.5	4.12	4.24	2.53	1.68	1.01
MAX	394	336	526	422	1280	467	46	4.6	8.6	3.6	2.1	1.3
MIN	1.1	16	15	69	16	48	4.5	3.5	3.4	1.8	1.3	0.53
AC-FT	1920	3580	8480	10530	16800	10740	983	253	252	156	103	60

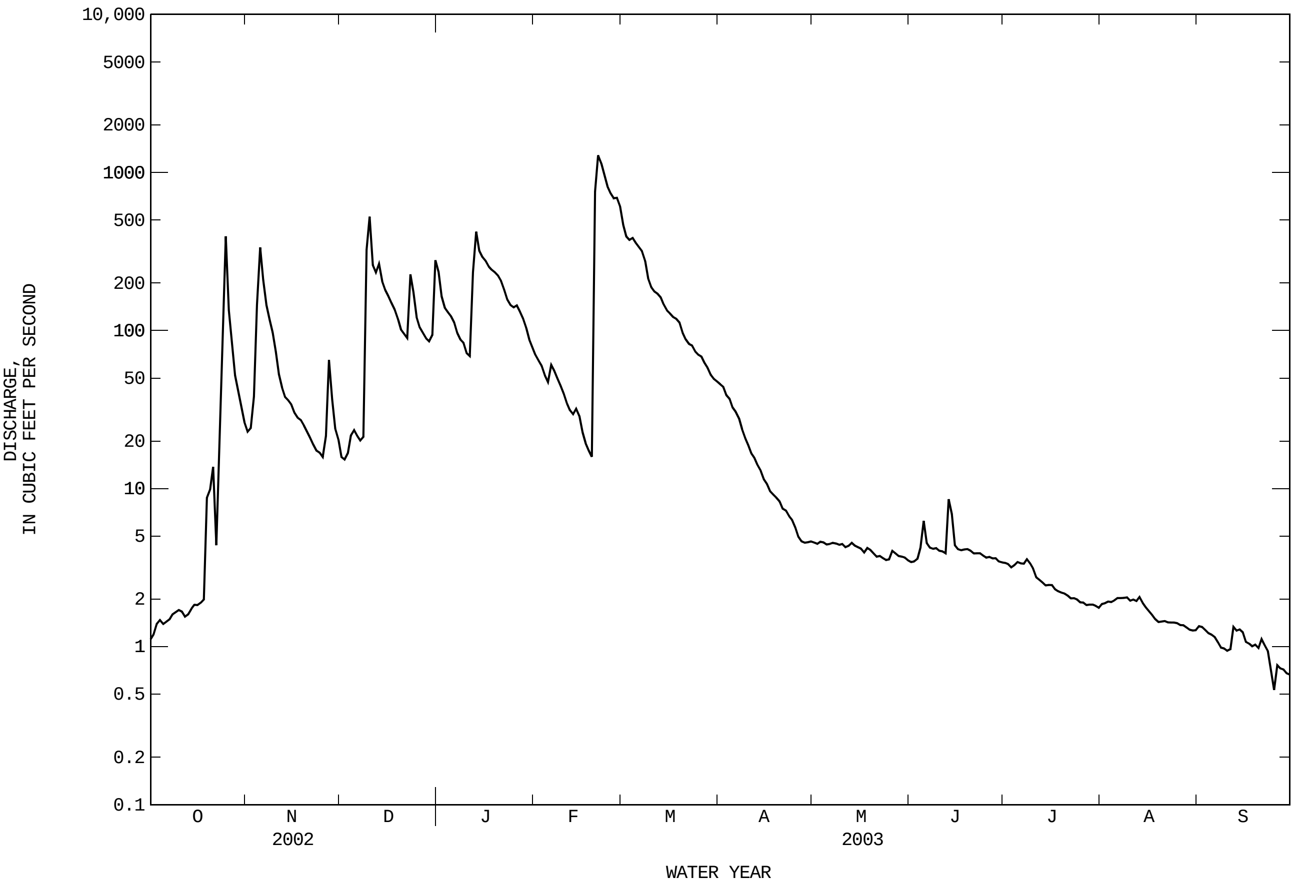
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2000 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	8.08	88.7	96.1	95.8	94.5	79.3	21.5	10.6	14.4	167	4.70	1.39
MAX	31.3	202	176	171	302	175	65.7	35.1	32.5	662	9.05	2.49
(WY)	2003	2002	2002	2003	2003	2003	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 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 2000 - 2003	
ANNUAL TOTAL	30771.9		27151.15			
ANNUAL MEAN	84.3		74.4		56.8	
HIGHEST ANNUAL MEAN					96.7	2002
LOWEST ANNUAL MEAN					2.69	2000
HIGHEST DAILY MEAN	4440	Jul 2	1280	Feb 21	4440	Jul 2 2002
LOWEST DAILY MEAN	1.0	Sep 29	0.53	Sep 25	0.00	Oct 1 1999
ANNUAL SEVEN-DAY MINIMUM	1.1	Sep 24	0.68	Sep 24	0.00	Oct 1 1999
MAXIMUM PEAK FLOW			1970	Feb 20	i17200	Jul 2 2002
MAXIMUM PEAK STAGE			10.85	Feb 20	a18.21	Jul 2 2002
ANNUAL RUNOFF (AC-FT)	61040		53850		41150	
10 PERCENT EXCEEDS	154		218		146	
50 PERCENT EXCEEDS	5.2		8.6		3.4	
90 PERCENT EXCEEDS	2.0		1.4		0.00	

a From floodmark.
i From 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

PERIOD OF RECORD.--
CHEMICAL DATA: Nov. 1969, Jan. 1998 to current year.
BIOCHEMICAL DATA: Nov. 1969, Jan. 1998 to current year.
PESTICIDE DATA: May 2000 to current year.
SUSPENDED SEDIMENT CHEMISTRY: May 2000 to current year.
SEDIMENT DATA: May 1999 to current year.

INSTRUMENTATION.--Stage-activated automatic sampler.

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

Date	Time	Discharge, cfs (00060)	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Specif. conductance, wat unf uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temperature, water, deg C (00010)	Temperature, air, deg C (00020)	Color, water, fltrd, Pt-Co units (00080)	Turbidity, wat unf lab, Hach 2100AN NTU (99872)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	COD, high level, water, unfltrd mg/L (00340)
OCT													
19-19	1210	20	--	--	266	7.4	--	--	20	15	--	--	<10
DEC													
09-10	0315	431	--	--	480	8.0	--	--	18	E8.0	--	--	<10
JAN													
23...	1130	--	157	774	572	8.0	11.4	--	5	<1.0	12.0	109	<10
FEB													
06-06	0650	72	--	--	539	7.8	--	--	12	3.6	--	--	<10
20...	0940	--	213	--	--	--	--	--	--	--	--	--	--
APR													
02...	1101	--	44	760	554	7.9	18.4	--	5	<1.0	9.5	101	<10
JUL													
31...	1105	--	1.8	755	638	7.3	24.0	--	2	1.3	8.5	102	<10
SEP													
03...	1230	--	1.3	760	640	7.3	24.0	27.6	5	2.3	8.3	100	<10

Date	Fecal coliform, M-FC 0.7u MF col/ 100 mL (31625)	E coli, m-TEC MF, water, col/ 100 mL (31633)	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)	Residue total at 105 deg. C, suspended, mg/L (00530)	Nitrite water, fltrd, mg/L as N (00613)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Ammonia water, fltrd, mg/L as N (00608)	Total nitrogen, water, unfltrd mg/L (00600)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Phosphorus, water, unfltrd mg/L (00665)	Phosphorus, water, fltrd, mg/L (00666)	Orthophosphate, water, fltrd, mg/L as P (00671)	Orthophosphate, water, fltrd, mg/L (00660)
OCT													
19-19	--	--	106	<10	E.007	.45	<.04	.79	.33	.07	E.03	.03	.083
DEC													
09-10	E2570k@	E3500k@	178	<10	<.008	.25	<.04	.49	.24	<.04	<.04	<.02	--
JAN													
23...	36	E14k	221	<10	<.008	.20	<.04	.31	.11	<.04	<.04	<.02	--
FEB													
06-06	560	340	196	<10	<.008	.34	<.04	.49	.15	<.04	<.04	<.02	--
20...	5130	8700	--	--	--	--	--	--	--	--	--	--	--
APR													
02...	E15k	E21k	204	<10	<.008	.28	<.04	.39	.11	<.04	<.04	<.02	--
JUL													
31...	240	60	280	<10	<.008	1.50	<.04	1.6	.10	<.04	<.04	<.02	--
SEP													
03...	E180	E100	267	<10	E.006n	1.67	<.04	1.8	.13	<.04	<.04	<.02	--

Date	Organic carbon, water, unfltrd mg/L (00680)	Chlorophyll a phytoplankton, fluoro, ug/L (70953)	Chlorophyll b phytoplankton, fluoro, ug/L (70954)	Suspended sediment load, tons/d (80155)	Suspended sediment concentration mg/L (80154)	Cadmium water, unfltrd ug/L (01027)	Copper, water, unfltrd recoverable, ug/L (01042)	Lead, water, unfltrd recoverable, ug/L (01051)	Zinc, water, unfltrd recoverable, ug/L (01092)	2,4-D water, fltrd, ug/L (39732)	2,4-DB water, fltrd 0.7u GF ug/L (38746)	2,4-D water, fltrd, ug/L (50470)	2,6-Diethylaniline water fltrd 0.7u GF ug/L (82660)
OCT													
19-19	5.4	--	--	.90	17	<.2	E1.2	1	8	.07	<.02	<.009	<.006
DEC													
09-10	4.6	--	--	14	12	<.2	<1.0	<1	2	<.02	<.02	<.009	<.006
JAN													
23...	1.9	.2	--m	--	--	<.2	<1.0	<1	E1	--	--	--	--
FEB													
06-06	2.3	--	--	1.2	6	<.2	<1.0	<1	4	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--	--
APR													
02...	2.0	E.6	<.1	--	--	<.2	<1.0	<1	2	--	--	--	--
JUL													
31...	3.8	.4	<.1	--	--	<.2	<1.0	<1	<2	--	--	--	--
SEP													
03...	8.5	E.5	E.1	--	--	<.2	<1.2	<1	E1n	--	--	--	--

08155400 Barton Creek above Barton Springs, Austin, TX--Continued

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

Date	3-Hydroxy carbo-furan, wat flt 0.7u GF ug/L (49308)	3-Keto-carbo-furan, water, fltrd, ug/L (50295)	Aceto-chlor, water, fltrd, ug/L (49260)	Aci-fluor-fen, water, fltrd 0.7u GF ug/L (49315)	Ala-chlor, water, fltrd, ug/L (46342)	Aldi-carb, water, fltrd 0.7u GF ug/L (49312)	Aldi-carb sulfone water, fltrd 0.7u GF ug/L (49313)	Aldi-carb sulf-oxide, wat flt 0.7u GF ug/L (49314)	alpha-HCH, water, fltrd, ug/L (34253)	Atra-zine, water, fltrd, ug/L (39632)	Azin-phos-methyl, water, fltrd 0.7u GF ug/L (82686)	Bendio-carb, water, fltrd, ug/L (50299)	Ben-flur-alin, water, fltrd 0.7u GF ug/L (82673)
OCT													
19-19	<.006	<2	<.006	<.007	<.004	<.04	<.02	<.008	<.005	.168	<.050	<.03	<.010
DEC													
09-10	<.006	<2	<.006	<.007	<.004	<.04	<.02	<.008	<.005	.016	<.050	<.03	<.010
JAN													
23...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB													
06-06	--	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--	--
APR													
02...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL													
31...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
03...	--	--	--	--	--	--	--	--	--	--	--	--	--

Date	Benomyl water, fltrd, ug/L (50300)	Bensul-furon, water, fltrd, ug/L (61693)	Ben-tazon, water, fltrd 0.7u GF ug/L (38711)	Broma-cil, water, fltrd, ug/L (04029)	Brom-oxynil, water, fltrd 0.7u GF ug/L (49311)	Butyl-ate, water, fltrd, ug/L (04028)	Chloro-di-amino-s-tri-azine, wat flt ug/L (04039)	Caf-feine, water, fltrd, ug/L (50305)	Car-baryl, water, fltrd 0.7u GF ug/L (49310)	Car-baryl, water, fltrd 0.7u GF ug/L (82680)	Carbo-furan, water, fltrd 0.7u GF ug/L (49309)	Carbo-furan, water, fltrd 0.7u GF ug/L (82674)	CEAT, water, fltrd, ug/L (04038)
OCT													
19-19	.027	<.02	<.01	<.03	<.02	<.002	<.01	.078	<.03	E.008	<.006	<.020	<.04
DEC													
09-10	.007	<.02	<.01	<.03	<.02	<.002	<.01	<.010	<.03	E.004	<.006	<.020	<.04
JAN													
23...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB													
06-06	--	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--	--
APR													
02...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL													
31...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
03...	--	--	--	--	--	--	--	--	--	--	--	--	--

Date	Chlor-amben methyl ester, water, fltrd, ug/L (61188)	Chlori-muron, water, fltrd, ug/L (50306)	Chloro-thalo-nil, water, fltrd 0.7u GF ug/L (49306)	N-(4-Chloro-phenyl) -N'-methyl-urea, ug/L (61692)	Chlor-pyrifos water, fltrd, ug/L (38933)	cis-Per-methrin water fltrd 0.7u GF ug/L (82687)	Clopyr-alid, water, fltrd 0.7u GF ug/L (49305)	Cyana-zine, water, fltrd, ug/L (04041)	Cyclo-ate, water, fltrd, ug/L (04031)	Dacthal mono-acid, water, fltrd 0.7u GF ug/L (49304)	DCPA, water fltrd 0.7u GF ug/L (82682)	CIAT, water, fltrd, ug/L (04040)	Desulf-inyl fipro-nil, water, fltrd, ug/L (62170)
OCT													
19-19	<.02	<.010	<.04	<.02	<.005	<.006	<.01	<.018	<.01	<.01	<.003	E.008	<.004
DEC													
09-10	<.02	<.010	<.04	<.02	<.005	<.006	<.01	<.018	<.01	<.01	<.003	E.005	<.004
JAN													
23...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB													
06-06	--	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--	--
APR													
02...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL													
31...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
03...	--	--	--	--	--	--	--	--	--	--	--	--	--

08155400 Barton Creek above Barton Springs, Austin, TX--Continued

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

Date	Desulfinylfipronil amide, wat flt ug/L (62169)	Diazinon, water, fltrd, ug/L (39572)	Dicamba water fltrd 0.7u GF ug/L (38442)	Dichlorprop, water, fltrd 0.7u GF ug/L (49302)	Dieldrin, water, fltrd, ug/L (39381)	Dinoseb water, fltrd 0.7u GF ug/L (49301)	Diphenamid, water, fltrd, ug/L (04033)	Disulfoton, water, fltrd 0.7u GF ug/L (82677)	Diuron, water, fltrd 0.7u GF ug/L (49300)	EPTC, water, fltrd 0.7u GF ug/L (82668)	Ethalfluralin, water, fltrd 0.7u GF ug/L (82663)	Ethoprop, water, fltrd 0.7u GF ug/L (82672)	Fenuron water, fltrd 0.7u GF ug/L (49297)
OCT													
19-19	<.009	.034	<.01	<.01	<.005	<.01	<.03	<.02	<.01	<.002	<.009	<.005	<.03
DEC													
09-10	<.009	E.007	--u	<.01	<.005	<.01	<.03	<.02	<.01	<.002	<.009	<.005	<.03
JAN													
23...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB													
06-06	--	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--	--
APR													
02...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL													
31...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
03...	--	--	--	--	--	--	--	--	--	--	--	--	--

Date	Fipronil, water, fltrd, ug/L (62166)	Fipronil sulfide water, fltrd, ug/L (62167)	Fipronil sulfone water, fltrd, ug/L (62168)	Flumetsulam, water, fltrd, ug/L (61694)	Fluometuron water fltrd 0.7u GF ug/L (38811)	Fonofos water, fltrd, ug/L (04095)	Imazaquin, water, fltrd, ug/L (50356)	Imazethapyr, water, fltrd, ug/L (50407)	Lindane water, fltrd, ug/L (39341)	Linuron water fltrd 0.7u GF ug/L (38478)	Linuron water fltrd 0.7u GF ug/L (82666)	Malathion, water, fltrd, ug/L (39532)	MCPA, water, fltrd 0.7u GF ug/L (38482)
OCT													
19-19	E.006	<.005	.006	<.01	<.03	<.003	<.02	<.02	<.004	<.01	<.035	E.011n	<.02
DEC													
09-10	<.007	<.005	<.005	<.01	<.03	<.003	<.02	<.02	<.004	<.01	<.035	<.027	<.02
JAN													
23...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB													
06-06	--	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--	--
APR													
02...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL													
31...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
03...	--	--	--	--	--	--	--	--	--	--	--	--	--

Date	MCPB, water, fltrd 0.7u GF ug/L (38487)	Methiocarb, water, fltrd 0.7u GF ug/L (38501)	Methomyl, water, fltrd 0.7u GF ug/L (49296)	Metalaxyl, water, fltrd, ug/L (50359)	Metolachlor, water, fltrd, ug/L (39415)	Metribuzin, water, fltrd, ug/L (82630)	Metsulfuron, water, fltrd, ug/L (61697)	Imidacloprid water, fltrd, ug/L (61695)	Molinate, water, fltrd 0.7u GF ug/L (82671)	Napropamide, water, fltrd 0.7u GF ug/L (82684)	Neburon water, fltrd 0.7u GF ug/L (49294)	Nicosulfuron, water, fltrd, ug/L (50364)	Norflurazon, water, fltrd 0.7u GF ug/L (49293)
OCT													
19-19	<.01	<.008	<.004	<.02	<.013	<.006	<.03	<.007	<.002	<.007	<.01	<.01	<.02
DEC													
09-10	<.01	<.008	<.004	<.02	<.013	<.006	<.03	<.007	<.002	<.007	<.01	<.01	<.02
JAN													
23...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB													
06-06	--	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--	--
APR													
02...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL													
31...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
03...	--	--	--	--	--	--	--	--	--	--	--	--	--

08155400 Barton Creek above Barton Springs, Austin, TX--Continued

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

Date	OIET, water, fltrd, ug/L (50355)	Ory-zalin, water, fltrd 0.7u GF ug/L (49292)	Oxamyl, water, fltrd 0.7u GF ug/L (38866)	p,p'-DDE, water, fltrd, ug/L (34653)	Para-thion, water, fltrd, ug/L (39542)	Methyl para-thion, water, fltrd 0.7u GF ug/L (82667)	Peb-ulate, water, fltrd 0.7u GF ug/L (82669)	Pendi-meth-alin, water, fltrd 0.7u GF ug/L (82683)	Phorate water fltrd 0.7u GF ug/L (82664)	Pic-loram, water, fltrd 0.7u GF ug/L (49291)	Prome-ton, water, fltrd, ug/L (04037)	Propa-chlor, water, fltrd, ug/L (04024)	Pro-panil, water, fltrd 0.7u GF ug/L (82679)
OCT													
19-19	<.008	<.02	<.01	<.003	<.010	<.006	<.004	<.022	<.011	<.02	<.01	<.010	<.011
DEC													
09-10	<.008	<.02	<.01	<.003	<.010	<.006	<.004	<.022	<.011	<.02	<.01	<.010	<.011
JAN													
23...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB													
06-06	--	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--	--
APR													
02...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL													
31...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
03...	--	--	--	--	--	--	--	--	--	--	--	--	--

Date	Propar-gite, water, fltrd 0.7u GF ug/L (82685)	Propham water fltrd 0.7u GF ug/L (49236)	Propi-cona-zole, water, fltrd, ug/L (50471)	Pro-poxur, water, fltrd 0.7u GF ug/L (38538)	Pron-amide, water, fltrd 0.7u GF ug/L (82676)	Siduron water, fltrd, ug/L (38548)	Sima-zine, water, fltrd, ug/L (04035)	Sulfo-met-ruron, water, fltrd, ug/L (50337)	Tebu-thiuron water fltrd 0.7u GF ug/L (82670)	Terba-cil, water, fltrd, ug/L (04032)	Terba-cil, water, fltrd 0.7u GF ug/L (82665)	Terbu-fos, water, fltrd 0.7u GF ug/L (82675)	Thio-bencarb water fltrd 0.7u GF ug/L (82681)
OCT													
19-19	<.02	<.010	<.02	<.008	<.004	<.02	.011	<.009	<.02	<.010	<.034	<.02	<.005
DEC													
09-10	<.02	<.010	<.02	<.008	<.004	<.02	.015	.079	<.02	<.010	<.034	<.02	<.005
JAN													
23...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB													
06-06	--	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--	--
APR													
02...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL													
31...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
03...	--	--	--	--	--	--	--	--	--	--	--	--	--

Date	Tri-allate, water, fltrd 0.7u GF ug/L (82678)	Tri-benuron water, fltrd, ug/L (61159)	Tri-clopyr, water, fltrd 0.7u GF ug/L (49235)	Tri-flur-alin, water, fltrd 0.7u GF ug/L (82661)
OCT				
19-19	<.002	--u	<.02	<.009
DEC				
09-10	<.002	--u	.03	<.009
JAN				
23...	--	--	--	--
FEB				
06-06	--	--	--	--
20...	--	--	--	--
APR				
02...	--	--	--	--
JUL				
31...	--	--	--	--
SEP				
03...	--	--	--	--

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

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

Null value qualifier codes used in this report:
- m -- Results sent by separate memo
- u -- Unable to determine-matrix interference

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 Sept. 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 periodically drained for cleaning 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 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	85	93	101	110	110	e121	e113	103	97	92	87	76
2	85	94	101	109	110	e120	e112	103	97	92	86	75
3	85	95	101	107	110	e119	e112	103	98	91	86	75
4	85	97	101	107	110	e118	e111	103	98	91	86	74
5	84	100	102	107	110	e117	e111	103	98	91	86	74
6	84	101	102	107	111	e116	e111	102	98	90	85	73
7	84	101	101	107	110	e116	e111	102	98	90	85	73
8	84	101	101	107	110	e116	e110	102	97	90	85	73
9	85	101	105	108	110	e116	e110	102	97	90	84	72
10	84	98	e105	107	110	e116	e110	102	97	90	84	72
11	84	98	e106	107	110	e115	e110	102	97	90	84	72
12	83	98	e106	109	110	e115	e109	102	97	89	84	74
13	83	97	106	109	110	e115	e109	102	97	89	84	74
14	82	96	107	109	110	e115	e109	102	98	89	84	73
15	82	97	108	109	e109	e115	e109	101	97	89	82	74
16	81	97	108	109	e109	e115	e108	101	97	89	82	72
17	81	98	108	109	e109	e116	e108	101	96	e89	82	72
18	80	99	108	109	e109	e116	e106	101	96	89	82	72
19	82	98	108	109	e109	e115	102	101	96	89	82	71
20	85	98	108	109	e111	e114	103	99	94	88	81	70
21	85	98	108	110	e120	e114	103	98	94	88	80	71
22	86	97	108	110	e125	e114	103	98	95	e88	80	71
23	87	98	109	110	e125	e114	103	97	94	e89	79	71
24	89	98	111	110	e125	e113	104	97	94	89	79	e68
25	92	99	111	110	e125	e114	104	97	94	88	79	e65
26	92	99	111	110	e124	e114	104	97	93	88	78	62
27	92	100	110	110	e123	e114	104	97	93	88	78	62
28	92	100	110	110	e122	e114	103	97	93	88	77	62
29	92	100	110	110	---	e113	103	97	93	88	77	61
30	93	100	110	110	---	e113	103	97	92	87	76	61
31	93	---	110	110	---	e113	---	97	---	87	76	---
TOTAL	2661	2946	3301	3374	3186	3576	3218	3106	2875	2765	2540	2115
MEAN	85.8	98.2	106	109	114	115	107	100	95.8	89.2	81.9	70.5
MAX	93	101	111	110	125	121	113	103	98	92	87	76
MIN	80	93	101	107	109	113	102	97	92	87	76	61
AC-FT	5280	5840	6550	6690	6320	7090	6380	6160	5700	5480	5040	4200

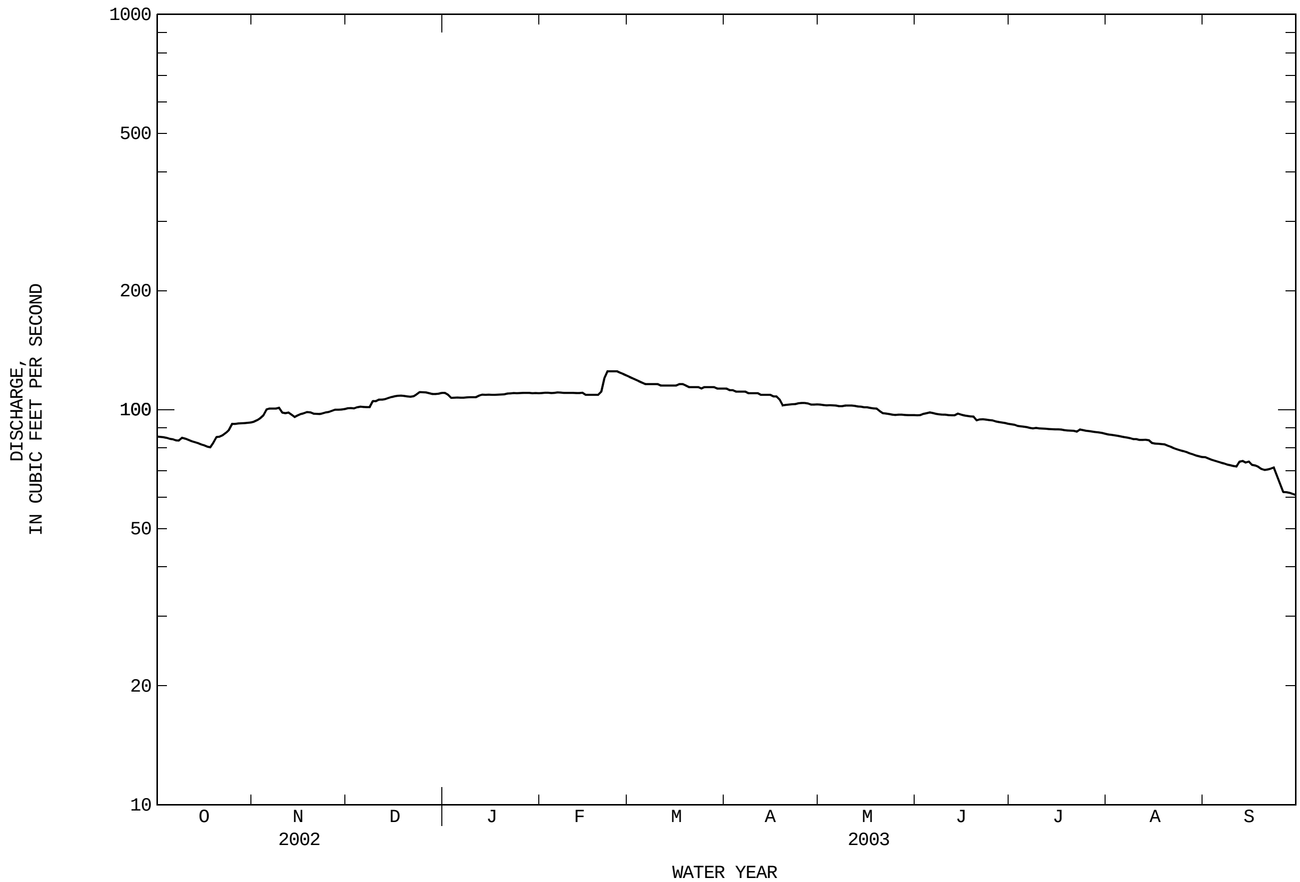
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1978 - 2003h, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	55.5	58.3	59.8	63.0	65.6	67.4	68.6	70.9	73.4	69.2	63.2	57.4
MAX	116	104	106	112	120	115	108	108	106	112	126	123
(WY)	1993	1999	2003	2002	1992	2003	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 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1978 - 2003h	
ANNUAL TOTAL	35578		35663			
ANNUAL MEAN	97.5		97.7		65.3	
HIGHEST ANNUAL MEAN					99.3	1993
LOWEST ANNUAL MEAN					26.8	1990
HIGHEST DAILY MEAN	112	Jan 8	125	Feb 22	130	Dec 24 1991
LOWEST DAILY MEAN	74	Jun 26	61	Sep 29	14	Dec 30 1989
ANNUAL SEVEN-DAY MINIMUM	76	Jun 20	63	Sep 24	15	Jan 9 1990
ANNUAL RUNOFF (AC-FT)	70570		70740		47280	
10 PERCENT EXCEEDS	111		113		103	
50 PERCENT EXCEEDS	98		99		67	
90 PERCENT EXCEEDS	83		79		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, June 1941 to Feb. 1959, Dec. 1978 to current year.
BIOCHEMICAL DATA: Nov. 1969, Dec. 1978 to current year.
RADIOCHEMICAL DATA: Jan. to Sept. 1980.
PESTICIDE DATA: July 1978 to July 1982, Oct. 1984, June 1987 to Nov. 1993, May 2000 to current year.
SEDIMENT DATA: May 1999 to current year.

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

Date	Time	Instan-taneous dis-charge, cfs (00061)	Baro-metric pres-sure, mm Hg (00025)	Specif. conduc-tance, wat unf uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temper-ature, water, deg C (00010)	Temper-ature, air, deg C (00020)	Color, water, fltrd, Pt-Co units (00080)	Turbid-ity, wat unf lab, Hach 2100AN NTU (99872)	Dis-solved oxygen, mg/L (00300)	Dis-solved oxygen, percent of sat-uration (00301)	COD, high level, water, unfltrd mg/L (00340)	Fecal coli-form, M-FC 0.7u MF col/ 100 mL (31625)
NOV													
06...	1243	101	--	595	7.1	--	--	12	2.8	--	--	<10	305
DEC													
10...	1030	52	--	603	7.2	--	--	5	2.9	--	--	<10	E560k
JAN													
23...	1238	110	774	655	6.9	19.6	--	5	<1.0	7.2	77	<10	E3k
FEB													
20...	1845	>120	--	640	7.2	--	--	5	2.7	--	--	<10	196
JUL													
31...	1200	87	755	649	7.0	21.0	--	<1	<1.0	6.3	71	<10	E2k
AUG													
06...	1145	85	--	636	6.9	21.1	--	--	--	6.2	--	--	--
20...	0830	81	752	643	7.1	20.9	--	--	--	7.0	79	--	--
SEP													
03...	0800	75	754	649	7.1	20.9	25.0	--	--	6.2	70	--	--
16...	0730	72	755	637	7.1	21.0	25.0	--	--	6.7	76	--	--
24...	0730	--	--	648	7.2	--	--	--	--	--	--	--	--
24...	1100	--	--	660	7.1	--	--	--	--	--	--	--	--
24...	1300	--	--	645	7.2	--	--	--	--	--	--	--	--
24...	1500	--	--	679	7.1	--	--	--	--	--	--	--	--
24...	1700	--	--	665	7.2	--	--	--	--	--	--	--	--
24...	1900	--	--	664	7.2	--	--	--	--	--	--	--	--
24...	2100	--	--	666	7.2	--	--	--	--	--	--	--	--
24...	2300	--	--	668	7.2	--	--	--	--	--	--	--	--
25...	0100	--	--	667	7.2	--	--	--	--	--	--	--	--
25...	0300	--	--	666	7.2	--	--	--	--	--	--	--	--
25...	0500	--	--	665	7.2	--	--	--	--	--	--	--	--
25...	0700	--	--	664	7.2	--	--	--	--	--	--	--	--
25...	0900	--	--	663	7.2	--	--	--	--	--	--	--	--
25...	1100	--	--	669	7.1	--	--	--	--	--	--	--	--
25...	1300	--	--	660	7.2	--	--	--	--	--	--	--	--
25...	1500	--	--	657	7.2	--	--	--	--	--	--	--	--
25...	1700	--	--	652	7.2	--	--	--	--	--	--	--	--
25...	1930	--	--	644	7.2	--	--	--	--	--	--	--	--
30...	0700	61	--	656	7.2	21.1	--	--	--	6.2	--	--	--

08155500 Barton Springs at Austin, TX--Continued

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

Date	E coli, m-TEC MF, water, col/ 100 mL (31633)	Hard- ness, water, unfltrd mg/L as CaCO3 (00900)	Noncarb hard- ness, wat flt field, mg/L as CaCO3 (00904)	Calcium water, fltrd, mg/L (00915)	Magnes- ium, water, fltrd, mg/L (00925)	Sodium, water, fltrd, mg/L (00930)	Sodium adsorp- tion ratio (00931)	Sodium, percent (00932)	Potas- sium, water, fltrd, mg/L (00935)	Alka- linity, wat flt inc tit field, mg/L as CaCO3 (39086)	Sulfate water, fltrd, mg/L (00945)	Chlor- ide, water, fltrd, mg/L (00940)	Silica, water, fltrd, mg/L (00955)
NOV													
06...	200	--	--	--	--	--	--	--	--	246	--	--	--
DEC													
10...	E320k	--	--	--	--	--	--	--	--	253	--	--	--
JAN													
23...	E3k	--	--	--	--	--	--	--	--	274	--	--	--
FEB													
20...	110	--	--	--	--	--	--	--	--	271	--	--	--
JUL													
31...	E2k	--	--	--	--	--	--	--	--	272	--	--	--
AUG													
06...	--	290	14	84.5	18.4	14.5	.4	10	1.30	274	27.7	25.7	11.7
20...	--	310	35	89.3	21.7	14.4	.4	9	1.29	279	27.1	25.4	13.0
SEP													
03...	--	300	29	84.3	22.4	14.3	.4	9	1.18	275	27.5	26.4	11.8
16...	--	320	54	90.8	22.0	15.7	.4	10	1.52	265	25.9	26.6	11.9
24...	--	330	55	92.5	23.6	16.8	.4	10	1.36	275	28.7	28.1	11.9
24...	--	330	58	91.8	23.5	16.7	.4	10	1.34	269	28.7	29.1	11.9
24...	--	330	64	92.3	23.5	16.9	.4	10	1.34	265	27.4	28.1	11.8
24...	--	330	56	92.9	23.7	19.5	.5	11	1.40	275	31.1	31.9	11.8
24...	--	340	61	94.6	24.0	21.8	.5	12	1.45	275	31.1	34.8	11.9
24...	--	330	61	93.1	23.9	20.7	.5	12	1.44	271	32.0	33.3	11.9
24...	--	330	--	93.0	23.9	20.1	.5	12	1.42	E267	29.7	33.7	11.8
24...	--	340	61	94.4	23.8	19.7	.5	11	1.40	274	30.9	31.8	11.8
25...	--	340	66	94.1	24.0	19.4	.5	11	1.39	269	29.4	31.9	11.9
25...	--	330	70	94.2	23.8	19.2	.5	11	1.40	265	29.2	31.0	11.9
25...	--	340	67	94.0	24.1	19.0	.5	11	1.38	269	30.6	30.8	12.0
25...	--	340	70	94.6	24.0	18.9	.5	11	1.38	267	28.8	30.6	12.0
25...	--	330	66	93.7	23.9	18.9	.5	11	1.41	268	28.7	30.9	11.9
25...	--	330	58	92.5	23.9	18.5	.4	11	1.41	273	30.6	30.6	11.9
25...	--	340	66	94.2	23.9	18.6	.4	11	1.43	269	30.4	30.7	11.9
25...	--	340	55	94.7	24.3	18.6	.4	11	1.42	283	30.1	30.4	12.1
25...	--	330	56	93.4	23.5	16.9	.4	10	1.33	275	26.8	28.1	11.9
25...	--	330	62	93.7	23.3	15.8	.4	9	1.41	269	26.4	26.6	11.8
30...	--	330	40	91.1	23.8	17.1	.4	10	1.37	287	28.5	27.9	11.9

Date	Residue water, fltrd, sum of consti- tuents mg/L (70301)	Residue total at 105 deg. C, sus- pended, mg/L (00530)	Nitrite water, fltrd, mg/L as N (00613)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Ammonia water, fltrd, mg/L as N (00608)	Total nitro- gen, water, unfltrd mg/L (00600)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Phos- phorus, water, unfltrd mg/L (00665)	Phos- phorus, water, fltrd, mg/L (00666)	Ortho- phos- phate, water, fltrd, mg/L as P (00671)	Organic carbon, water, unfltrd mg/L (00680)	Chloro- phyll a phyto- plank- ton, fluoro, ug/L (70953)	Chloro- phyll b phyto- plank- ton, fluoro, ug/L (70954)
NOV													
06...	--	<10	<.008	1.04	<.04	1.1	.11	E.03	<.04	E.01	1.2	--	--
DEC													
10...	--	<10	<.008	1.06	<.04	--	E.07	<.04	<.04	E.01	1.6	--	--
JAN													
23...	--	<10	<.008	1.16	<.04	--	E.06	<.04	<.04	<.02	4.4	<.1	--m
FEB													
20...	--	<10	<.008	1.30	<.04	--	<.10	<.04	E.02	<.02	.9	--	--
JUL													
31...	--	<10	<.008	1.44	<.04	--	<.10	<.04	<.04	<.02	7.1	<.1	<.1
AUG													
06...	355	--	<.008	1.45d	E.012n	--	<.10	<.04	<.04	<.02	--	--	--
20...	367	--	<.008	1.47d	<.015	--	<.10	<.04	<.04	E.01n	--	--	--
SEP													
03...	360	--	<.008	1.46d	<.015	--	E.08n	<.04	<.04	<.02	--	--	--
16...	361	--	E.005n	1.44d	E.008n	--	<.10	<.04	E.02n	<.18d	--	--	--
24...	369	--	--	--	--	--	--	--	--	--	--	--	--
24...	366	--	--	--	--	--	--	--	--	--	--	--	--
24...	362	--	--	--	--	--	--	--	--	--	--	--	--
24...	379	--	--	--	--	--	--	--	--	--	--	--	--
24...	386	--	--	--	--	--	--	--	--	--	--	--	--
24...	380	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
24...	379	--	--	--	--	--	--	--	--	--	--	--	--
25...	375	--	--	--	--	--	--	--	--	--	--	--	--
25...	371	--	--	--	--	--	--	--	--	--	--	--	--
25...	375	--	--	--	--	--	--	--	--	--	--	--	--
25...	372	--	--	--	--	--	--	--	--	--	--	--	--
25...	371	--	--	--	--	--	--	--	--	--	--	--	--
25...	374	--	--	--	--	--	--	--	--	--	--	--	--
25...	374	--	--	--	--	--	--	--	--	--	--	--	--
25...	383	--	--	--	--	--	--	--	--	--	--	--	--
25...	368	--	--	--	--	--	--	--	--	--	--	--	--
25...	362	--	--	--	--	--	--	--	--	--	--	--	--
30...	382	--	<.008	1.50d	E.008n	--	<.10	<.04	<.04	<.02	--	--	--

08155500 Barton Springs at Austin, TX--Continued

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

Date	Sus- pended sedi- ment load, tons/d (80155)	Sus- pended sedi- ment concen- tration mg/L (80154)	Arsenic water, fltrd, ug/L (01000)	Cadmium water, unfltrd ug/L (01027)	Cadmium water, fltrd, ug/L (01025)	Chrom- ium, water, fltrd, ug/L (01030)	Copper, water, unfltrd recover -able, ug/L (01042)	Copper, water, fltrd, ug/L (01040)	Lead, water, unfltrd recover -able, ug/L (01051)	Lead, water, fltrd, ug/L (01049)	Nickel, water, fltrd, ug/L (01065)	Stront- ium, water, fltrd, ug/L (01080)	Zinc, water, unfltrd recover -able, ug/L (01092)
NOV													
06...	1.4	5	--	<.2	--	--	<1.0	--	<1	--	--	--	<2
DEC													
10...	.70	5	--	<.2	--	--	<1.0	--	<1	--	--	--	<2
JAN													
23...	--	--	--	<.2	--	--	E.7	--	<1	--	--	--	<2
FEB													
20...	--	4	--	<.2	--	--	<1.0	--	<1	--	--	--	<2
JUL													
31...	--	--	--	<.2	--	--	<1.2	--	<1	--	--	--	<2
AUG													
06...	--	--	.4	--	<.04	<.8	--	.6	--	<.08	1.94	812	--
20...	--	--	.4	--	<.04	<.8	--	.4	--	<.08	3.12	957	--
SEP													
03...	--	--	.4	--	<.04	<.8	--	.8	--	<.08	1.16	1090	--
16...	--	--	.4	--	<.04	<.8	--	.6	--	<.08	.58	1220	--
24...	--	--	--	--	--	--	--	--	--	--	--	1290	--
24...	--	--	--	--	--	--	--	--	--	--	--	1300	--
24...	--	--	--	--	--	--	--	--	--	--	--	1290	--
24...	--	--	--	--	--	--	--	--	--	--	--	1300	--
24...	--	--	--	--	--	--	--	--	--	--	--	1330	--
24...	--	--	--	--	--	--	--	--	--	--	--	1330	--
24...	--	--	--	--	--	--	--	--	--	--	--	1310	--
24...	--	--	--	--	--	--	--	--	--	--	--	1330	--
25...	--	--	--	--	--	--	--	--	--	--	--	1330	--
25...	--	--	--	--	--	--	--	--	--	--	--	1330	--
25...	--	--	--	--	--	--	--	--	--	--	--	1340	--
25...	--	--	--	--	--	--	--	--	--	--	--	1340	--
25...	--	--	--	--	--	--	--	--	--	--	--	1360	--
25...	--	--	--	--	--	--	--	--	--	--	--	1320	--
25...	--	--	--	--	--	--	--	--	--	--	--	1340	--
25...	--	--	--	--	--	--	--	--	--	--	--	1370	--
25...	--	--	--	--	--	--	--	--	--	--	--	1330	--
25...	--	--	--	--	--	--	--	--	--	--	--	1330	--
30...	--	--	.5	--	<.04	<.8	--	.4	--	<.08	1.08	1380	--

Date	Zinc, water, fltrd, ug/L (01090)	2,4-D water, fltrd, ug/L (39732)	2,4-DB water, fltrd 0.7u GF ug/L (38746)	2,4-D water, fltrd, ug/L (50470)	2,6-Di- ethyl- aniline water fltrd 0.7u GF ug/L (82660)	3- Hydroxy carbo- furan, wat flt 0.7u GF ug/L (49308)	3-Keto- carbo- furan, water, fltrd, ug/L (50295)	Aceto- chlor, water, fltrd, ug/L (49260)	Aci- fluor- fen, water, fltrd 0.7u GF ug/L (49315)	Ala- chlor, water, fltrd, ug/L (46342)	Aldi- carb, water, fltrd 0.7u GF ug/L (49312)	Aldi- carb sulfone water, fltrd 0.7u GF ug/L (49313)	Aldi- carb sulf- oxide, wat flt 0.7u GF ug/L (49314)
NOV													
06...	--	--	--	--	<.006	--	--	<.006	--	<.004	--	--	--
DEC													
10...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN													
23...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB													
20...	--	<.02	<.02	<.009	<.006	<.006	<2	<.006	<.007	<.004	<.04	<.02	<.008
JUL													
31...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG													
06...	Mn	--	--	--	<.006	--	--	<.006	--	<.004	--	--	--
20...	<1	--	--	--	<.006	--	--	<.006	--	<.004	--	--	--
SEP													
03...	Mn	--	--	--	<.006	--	--	<.006	--	<.004	--	--	--
16...	<1	--	--	--	<.006	--	--	<.006	--	<.004	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--	--
30...	<1	--	--	--	<.006	--	--	<.006	--	<.004	--	--	--

08155500 Barton Springs at Austin, TX--Continued

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

Date	alpha-HCH, water, fltrd, ug/L (34253)	Atrazine, water, fltrd, ug/L (39632)	Azinphos-methyl, water, fltrd 0.7u GF ug/L (82686)	Bendiocarb, water, fltrd, ug/L (50299)	Benfluralin, water, fltrd 0.7u GF ug/L (82673)	Benomyl water, fltrd, ug/L (50300)	Bensulfuron, water, fltrd, ug/L (61693)	Bentazon, water, fltrd 0.7u GF ug/L (38711)	Bromacil, water, fltrd, ug/L (04029)	Bromoxynil, water, fltrd 0.7u GF ug/L (49311)	Butylate, water, fltrd, ug/L (04028)	Chlorodiamino-s-triazine, wat flt ug/L (04039)	Caffeine, water, fltrd, ug/L (50305)
NOV													
06...	<.005	.020	<.050	--	<.010	--	--	--	--	--	<.002	--	--
DEC													
10...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN													
23...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB													
20...	<.005	.012	<.050	<.03	<.010	<.004	<.02	<.01	<.03	<.02	<.002	<.01	<.010
JUL													
31...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG													
06...	<.005	<.007	<.050	--	<.010	--	--	--	--	--	<.002	--	--
20...	<.005	<.007	<.050	--	<.010	--	--	--	--	--	<.002	--	--
SEP													
03...	<.005	E.006n	<.050	--	<.010	--	--	--	--	--	<.002	--	--
16...	<.005	.013	<.050	--	<.010	--	--	--	--	--	<.002	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--	--
30...	<.005	E.006n	<.050	--	<.010	--	--	--	--	--	<.002	--	--

Date	Carbaryl, water, fltrd 0.7u GF ug/L (49310)	Carbaryl, water, fltrd 0.7u GF ug/L (82680)	Carbofuran, water, fltrd 0.7u GF ug/L (49309)	Carbofuran, water, fltrd 0.7u GF ug/L (82674)	CEAT, water, fltrd, ug/L (04038)	Chloramben methyl ester, water, fltrd, ug/L (61188)	Chlorimuron, water, fltrd, ug/L (50306)	Chlorothalonil, water, fltrd 0.7u GF ug/L (49306)	N-(4-Chlorophenyl) -N'-methylurea, ug/L (61692)	Chlorpyrifos water, fltrd, ug/L (38933)	cis-Permethrin water fltrd 0.7u GF ug/L (82687)	Clopyralid, water, fltrd 0.7u GF ug/L (49305)	Cyanazine, water, fltrd, ug/L (04041)
NOV													
06...	--	<.041	--	<.020	--	--	--	--	--	<.005	<.006	--	<.018
DEC													
10...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN													
23...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB													
20...	<.03	<.041	<.006	<.020	<.04	<.02	<.010	<.04	<.02	<.005	<.006	<.01	<.018
JUL													
31...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG													
06...	--	<.041	--	<.020	--	--	--	--	--	<.005	<.006	--	<.018
20...	--	<.041	--	<.020	--	--	--	--	--	<.005	<.006	--	<.018
SEP													
03...	--	<.041	--	<.020	--	--	--	--	--	<.005	<.006	--	<.018
16...	--	<.041	--	<.020	--	--	--	--	--	<.005	<.006	--	<.018
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30...	--	<.041	--	<.020	--	--	--	--	--	<.005	<.006	--	<.018

08155500 Barton Springs at Austin, TX--Continued

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

Date	Cyclo-ate, water, fltrd, ug/L (04031)	Dacthal mono-acid, water, fltrd 0.7u GF ug/L (49304)	DCPA, water fltrd 0.7u GF ug/L (82682)	CIAT, water, fltrd, ug/L (04040)	Desulf-inyl fipro-nil, water, fltrd, ug/L (62170)	Desulf-inyl-fipro-nil amide, wat flt ug/L (62169)	Diazi-non, water, fltrd, ug/L (39572)	Dicamba water fltrd 0.7u GF ug/L (38442)	Di-chlor-prop, water, fltrd 0.7u GF ug/L (49302)	Diel-drin, water, fltrd, ug/L (39381)	Dinoseb water, fltrd 0.7u GF ug/L (49301)	Diphen-amid, water, fltrd, ug/L (04033)	Disul-foton, water, fltrd 0.7u GF ug/L (82677)
NOV													
06...	--	--	<.003	E.012	<.004	<.009	<.005	--	--	<.005	--	--	<.02
DEC													
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JAN													
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FEB													
20...	<.01	<.01	<.003	E.009	<.004	<.009	<.005	<.01	<.01	<.005	<.01	<.03	<.02
JUL													
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06...	--	--	<.003	E.005n	<.004	<.009	<.005	--	--	<.005	--	--	<.02
20...	--	--	<.003	<.006	<.004	<.009	<.005	--	--	<.005	--	--	<.02
SEP													
03...	--	--	<.003	E.006n	<.004	<.009	<.005	--	--	<.005	--	--	<.02
16...	--	--	<.003	E.006n	<.004	<.009	<.005	--	--	<.005	--	--	<.02
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Date	Diuron, water, fltrd 0.7u GF ug/L (49300)	EPTC, water, fltrd 0.7u GF ug/L (82668)	Ethal-flur-alin, water, fltrd 0.7u GF ug/L (82663)	Etho-prop, water, fltrd 0.7u GF ug/L (82672)	Fenuron water, fltrd 0.7u GF ug/L (49297)	Fipro-nil, water, fltrd, ug/L (62166)	Fipro-nil sulfide water, fltrd, ug/L (62167)	Fipro-nil sulfone water, fltrd, ug/L (62168)	Flumet-sulam, water, fltrd, ug/L (61694)	Fluo-meturon water fltrd 0.7u GF ug/L (38811)	Fonofos water, fltrd, ug/L (04095)	Imaza-quin, water, fltrd, ug/L (50356)	Imaze-thapyr, water, fltrd, ug/L (50407)
NOV													
06...	--	<.002	<.009	<.005	--	<.007	<.005	<.005	--	--	<.003	--	--
DEC													
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23...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB													
20...	<.01	<.002	<.009	<.005	<.03	<.007	<.005	<.005	<.01	<.03	<.003	<.02	<.02
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AUG													
06...	--	<.002	<.009	<.005	--	<.007	<.005	<.005	--	--	<.003	--	--
20...	--	<.002	<.009	<.005	--	<.007	<.005	<.005	--	--	<.003	--	--
SEP													
03...	--	<.002	<.009	<.005	--	<.007	<.005	<.005	--	--	<.003	--	--
16...	--	<.002	<.009	<.005	--	<.007	<.005	<.005	--	--	<.003	--	--
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30...	--	<.002	<.009	<.005	--	<.007	<.005	<.005	--	--	<.003	--	--

08155500 Barton Springs at Austin, TX--Continued

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

Date	Lindane water, fltrd, ug/L (39341)	Linuron water fltrd 0.7u GF ug/L (38478)	Linuron water fltrd 0.7u GF ug/L (82666)	Mala-thion, water, fltrd, ug/L (39532)	MCPA, water, fltrd 0.7u GF ug/L (38482)	MCPB, water, fltrd 0.7u GF ug/L (38487)	Methio-carb, water, fltrd 0.7u GF ug/L (38501)	Meth-omyl, water, fltrd 0.7u GF ug/L (49296)	Meta-laxyl, water, fltrd, ug/L (50359)	Metola-chlor, water, fltrd, ug/L (39415)	Metri-buzin, water, fltrd, ug/L (82630)	Metsul-furon, water, fltrd, ug/L (61697)	Imida-cloprid water, fltrd, ug/L (61695)
NOV													
06...	<.004	--	<.035	<.027	--	--	--	--	--	<.013	<.006	--	--
DEC													
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JAN													
23...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB													
20...	<.004	<.01	<.035	<.027	<.02	<.01	<.008	<.004	<.02	<.013	<.006	<.03	<.007
JUL													
31...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG													
06...	<.004	--	<.035	<.027	--	--	--	--	--	<.013	<.006	--	--
20...	<.004	--	<.035	<.027	--	--	--	--	--	<.013	<.006	--	--
SEP													
03...	<.004	--	<.035	<.027	--	--	--	--	--	<.013	<.006	--	--
16...	<.004	--	<.035	<.027	--	--	--	--	--	<.013	<.006	--	--
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30...	<.004	--	<.035	<.027	--	--	--	--	--	<.013	<.006	--	--

Date	Moli-nate, water, fltrd 0.7u GF ug/L (82671)	Naprop-amide, water, fltrd 0.7u GF ug/L (82684)	Neburon water, fltrd 0.7u GF ug/L (49294)	Nico-sul-furon, water, fltrd, ug/L (50364)	Norflur azon, water, fltrd 0.7u GF ug/L (49293)	OIET, water, fltrd, ug/L (50355)	Ory-zalin, water, fltrd 0.7u GF ug/L (49292)	Oxamyl, water, fltrd 0.7u GF ug/L (38866)	p,p'-DDE, water, fltrd, ug/L (34653)	Para-thion, water, fltrd, ug/L (39542)	Methyl para-thion, water, fltrd 0.7u GF ug/L (82667)	Peb-ulate, water, fltrd 0.7u GF ug/L (82669)	Pendi-meth-alin, water, fltrd 0.7u GF ug/L (82683)
NOV													
06...	<.002	<.007	--	--	--	--	--	--	<.003	<.010	<.006	<.004	<.022
DEC													
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JAN													
23...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB													
20...	<.002	<.007	<.01	<.01	<.02	E.004	<.02	<.01	<.003	<.010	<.006	<.004	<.022
JUL													
31...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG													
06...	<.002	<.007	--	--	--	--	--	--	<.003	<.010	<.006	<.004	<.022
20...	<.002	<.007	--	--	--	--	--	--	<.003	<.010	<.006	<.004	<.022
SEP													
03...	<.002	<.007	--	--	--	--	--	--	<.003	<.010	<.006	<.004	<.022
16...	<.002	<.007	--	--	--	--	--	--	<.003	<.010	<.006	<.004	<.022
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30...	<.002	<.007	--	--	--	--	--	--	<.003	<.010	<.006	<.004	<.022

08155500 Barton Springs at Austin, TX--Continued

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

Date	Phorate water fltrd 0.7u GF ug/L (82664)	Picloram, water, fltrd 0.7u GF ug/L (49291)	Prometon, water, fltrd, ug/L (04037)	Propachlor, water, fltrd, ug/L (04024)	Propanil, water, fltrd 0.7u GF ug/L (82679)	Propargite, water, fltrd 0.7u GF ug/L (82685)	Propham water fltrd 0.7u GF ug/L (49236)	Propiconazole, water, fltrd, ug/L (50471)	Propoxur, water, fltrd 0.7u GF ug/L (38538)	Pronamide, water, fltrd 0.7u GF ug/L (82676)	Siduron water, fltrd, ug/L (38548)	Simazine, water, fltrd, ug/L (04035)	Sulfometuron, water, fltrd, ug/L (50337)
NOV													
06...	<.011	--	<.01	<.010	<.011	<.02	--	--	--	<.004	--	.012	--
DEC													
10...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN													
23...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB													
20...	<.011	<.02	Mn	<.010	<.011	<.02	<.010	<.02	<.008	<.004	<.02	<.010	<.002
JUL													
31...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG													
06...	<.011	--	<.01	<.010	<.011	<.02	--	--	--	<.004	--	<.005	--
20...	<.011	--	<.01	<.010	<.011	<.02	--	--	--	<.004	--	<.005	--
SEP													
03...	<.011	--	<.01	<.010	<.011	<.02	--	--	--	<.004	--	<.005	--
16...	<.011	--	<.01	<.010	<.011	<.02	--	--	--	<.004	--	<.005	--
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30...	<.011	--	<.01	<.010	<.011	<.02	--	--	--	<.004	--	<.005	--

Date	Tebuthiuron water fltrd 0.7u GF ug/L (82670)	Terbacil, water, fltrd, ug/L (04032)	Terbacil, water, fltrd 0.7u GF ug/L (82665)	Terbufos, water, fltrd 0.7u GF ug/L (82675)	Thiobencarb water fltrd 0.7u GF ug/L (82681)	Triallate, water, fltrd 0.7u GF ug/L (82678)	Tribenuron water, fltrd, ug/L (61159)	Triclopyr, water, fltrd 0.7u GF ug/L (49235)	Trifluralin, water, fltrd 0.7u GF ug/L (82661)	Dibromomethane water unfltrd ug/L (30217)	Bromodichloromethane water unfltrd ug/L (32101)	Tetrachloromethane water unfltrd ug/L (32102)	1,2-Dichloroethane, water, unfltrd ug/L (32103)
NOV													
06...	<.02	--	<.034	<.02	<.005	<.002	--	--	<.009	--	--	--	--
DEC													
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23...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB													
20...	<.02	<.010	<.034	<.02	<.005	<.002	--u	<.02	<.009	--	--	--	--
JUL													
31...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG													
06...	<.02	--	<.034	<.02	<.005	<.002	--	--	<.009	<.05b	<.05b	<.06b	<.1
20...	<.02	--	<.034	<.02	<.005	<.002	--	--	<.009	<.05b	<.05b	<.06b	<.1
SEP													
03...	<.02	--	<.034	<.02	<.005	<.002	--	--	<.009	<.05b	<.05b	<.06b	<.1
16...	<.02	--	<.034	<.02	<.005	<.002	--	--	<.009	<.05b	<.05b	<.06b	<.1
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30...	<.02	--	<.034	<.02	<.005	<.002	--	--	<.009	<.05b	<.05b	<.06b	<.1

08155500 Barton Springs at Austin, TX--Continued

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

Date	Tri-bromo-methane water unfltrd ug/L (32104)	Di-bromo-chloro-methane water unfltrd ug/L (32105)	Tri-chloro-methane water unfltrd ug/L (32106)	Toluene water unfltrd ug/L (34010)	Benzene water unfltrd ug/L (34030)	Acrylo-nitrile water unfltrd ug/L (34215)	Chloro-benzene water unfltrd ug/L (34301)	Chloro-ethane, water, unfltrd ug/L (34311)	Ethyl-benzene water unfltrd ug/L (34371)	Hexa-chloro-ethane, water, unfltrd ug/L (34396)	Bromo-methane water unfltrd ug/L (34413)	Chloro-methane water unfltrd ug/L (34418)	Di-chloro-methane water unfltrd ug/L (34423)
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AUG													
06...	<.10	<.2	E.04b	<.05b	<.04b	<1	<.03b	<.1	<.03b	<.2	<.3mc	<.2mc	<.2
20...	<.10	<.2	E.07b	<.05b	<.04b	<1	<.03b	<.1	<.03b	<.2	<.3mc	<.2mc	<.2
SEP													
03...	<.10	<.2	E.04b	<.05b	<.04b	<1	<.03b	<.1	<.03b	<.2	<.3mc	<.2mc	<.2
16...	<.10	<.2	E.07b	<.05b	<.04b	<1	<.03b	<.1	<.03b	<.2	<.3mc	<.2mc	<.2
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30...	<.10	<.2	E.05b	<.05b	<.04b	<1	<.03b	<.1	<.03b	<.2	<.3mc	<.2mc	<.2

Date	Tetra-chloro-ethene, water, unfltrd ug/L (34475)	Tri-chloro-fluoro-methane water unfltrd ug/L (34488)	1,1-Di-chloro-ethane, water unfltrd ug/L (34496)	1,1-Di-chloro-ethene, water, unfltrd ug/L (34501)	1,1,1-Tri-chloro-ethane, water, unfltrd ug/L (34506)	1,1,2-Tri-chloro-ethane, water, unfltrd ug/L (34511)	1,1,2,2-Tetra-chloro-ethane, water, unfltrd ug/L (34516)	1,2-Di-chloro-benzene water unfltrd ug/L (34536)	1,2-Di-chloro-propane water unfltrd ug/L (34541)	trans-1,2-Di-chloro-ethene, water, unfltrd ug/L (34546)	1,2,4-Tri-chloro-benzene water unfltrd ug/L (34551)	1,3-Di-chloro-benzene water unfltrd ug/L (34566)	1,4-Di-chloro-benzene water unfltrd ug/L (34571)
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AUG													
06...	E.04b	<.09b	<.04b	<.04n	E.01t	<.06n	<.09b	<.03n	<.03b	<.03b	<.1	<.03b	<.05b
20...	E.06b	<.09b	<.04b	<.04n	<.03b	<.06n	<.09b	<.03n	<.03b	<.03b	<.1	<.03b	<.05b
SEP													
03...	E.06b	<.09b	<.04b	<.04n	<.03b	<.06n	<.09b	<.03n	<.03b	<.03b	<.1	<.03b	<.05b
16...	.18	<.09b	<.04b	<.04n	<.03b	<.06n	<.09b	<.03n	<.03b	<.03b	<.1	<.03b	<.05b
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30...	E.06b	<.09b	<.04b	<.04n	<.03b	<.06n	<.09b	<.03n	<.03b	<.03b	<.1	<.03b	<.05b

08155500 Barton Springs at Austin, TX--Continued

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

Date	Di-chloro-di-fluoro-methane wat unf ug/L (34668)	Naphth-alene, water, unfltrd ug/L (34696)	trans-1,3-Di-chloro-propene water unfltrd ug/L (34699)	cis-1,3-Di-chloro-propene water unfltrd ug/L (34704)	Vinyl chlor-ide, water, unfltrd ug/L (39175)	Tri-chloro-ethene, water, unfltrd ug/L (39180)	Hexa-chloro-buta-diene, water, unfltrd ug/L (39702)	1,2,3,4 Tetra-methyl-benzene water unfltrd ug/L (49999)	1,2,3,5 Tetra-methyl-benzene water unfltrd ug/L (50000)	Bromo-ethene, water, unfltrd ug/L (50002)	t-Butyl ethyl ether, water, unfltrd ug/L (50004)	Methyl tert-pentyl ether, water, unfltrd ug/L (50005)	trans-1,4-Di-chloro-2-butene, wat unf ug/L (73547)
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AUG													
06...	<.18mc	<.5	<.09b	<.09b	<.1	<.04b	<.1	<.2	<.2	<.1	<.05b	<.08b	<.7b
20...	<.18mc	<.5	<.09b	<.09b	<.1	<.04b	<.1	<.2	<.2	<.1	<.05b	<.08b	<.7b
SEP													
03...	<.18mc	<.5	<.09b	<.09b	<.1	<.04b	<.1	<.2	<.2	<.1	<.05b	<.08b	<.7b
16...	<.18mc	<.5	<.09b	<.09b	<.1	E.01t	<.1	<.2	<.2	<.1	<.05b	<.08b	<.7b
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30...	<.18mc	<.5	<.09b	<.09b	<.1	<.04b	<.1	<.2	<.2	<.1	<.05b	<.08b	<.7b

Date	Ethyl methac-rylate, water, unfltrd ug/L (73570)	Carbon di-sulfide water unfltrd ug/L (77041)	cis-1,2-Di-chloro-ethene, water, unfltrd ug/L (77093)	Methyl n-butyl ketone, water, unfltrd ug/L (77103)	Styrene water unfltrd ug/L (77128)	o-Xylene, water, unfltrd ug/L (77135)	1,1-Di-chloro-propene water unfltrd ug/L (77168)	2,2-Di-chloro-propane water unfltrd ug/L (77170)	1,3-Di-chloro-propane water unfltrd ug/L (77173)	2-Ethyl-toluene water unfltrd ug/L (77220)	1,2,3-Tri-methyl-benzene water unfltrd ug/L (77221)	1,2,4-Tri-methyl-benzene water unfltrd ug/L (77222)	Iso-propyl-benzene water unfltrd ug/L (77223)
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AUG													
06...	<.2	<.07b	<.04b	<.7b	<.04b	<.07b	<.05b	<.05b	<.1	<.06b	<.1	<.06b	<.06b
20...	<.2	<.07b	<.04b	<.7b	<.04b	<.07b	<.05b	<.05b	<.1	<.06b	<.1	<.06b	<.06b
SEP													
03...	<.2	<.07b	<.04b	<.7b	<.04b	<.07b	<.05b	<.05b	<.1	<.06b	<.1	<.06b	<.06b
16...	<.2b	<.07b	<.04b	<.7b	<.04b	<.07b	<.05b	<.05b	<.1	<.06b	<.1	<.06b	<.06b
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30...	<.2	<.07b	<.04b	<.7b	<.04b	<.07b	<.05b	<.05b	<.1	<.06b	<.1	<.06b	<.06b

08155500 Barton Springs at Austin, TX--Continued

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

Date	n-propyl-benzene water unfltrd ug/L (77224)	1,3,5-Tri-methyl-benzene water unfltrd ug/L (77226)	2-Chloro-toluene water unfltrd ug/L (77275)	4-Chloro-toluene water unfltrd ug/L (77277)	Bromo-chloro-methane water unfltrd ug/L (77297)	n-Butyl benzene water unfltrd ug/L (77342)	sec-Butyl-benzene water unfltrd ug/L (77350)	tert-Butyl-benzene water unfltrd ug/L (77353)	4-Iso-propyl-toluene water unfltrd ug/L (77356)	Iodo-methane water unfltrd ug/L (77424)	1,2,3-Tri-chloro-propane water unfltrd ug/L (77443)	1,1,1,2-Tetra-chloro-ethane, water, unfltrd ug/L (77562)	1,2,3-Tri-chloro-benzene water unfltrd ug/L (77613)
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AUG													
06...	<.04b	<.04b	<.04b	<.05b	<.12	<.2	<.06b	<.10	<.12	<.35mc	<.16	<.03b	<.3
20...	<.04b	<.04b	<.04b	<.05b	<.12	<.2	<.06b	<.10	<.12	<.35mc	<.16	<.03b	<.3
SEP													
03...	<.04b	<.04b	<.04b	<.05b	<.12	<.2	<.06b	<.10	<.12	<.35mc	<.16	<.03b	<.3
16...	<.04b	<.04b	<.04b	<.05b	<.12	<.2	<.06b	<.10	<.12	<.35mc	<.16b	<.03b	<.3
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30...	<.04b	<.04b	<.04b	<.05b	<.12	<.2	<.06b	<.10	<.12	<.35mc	<.16	<.03b	<.3

Date	1,2-Di-bromo-ethane, water, unfltrd ug/L (77651)	CFC-113 water unfltrd ug/L (77652)	Methyl t-butyl ether, water, unfltrd ug/L (78032)	3-Chloro-propene water unfltrd ug/L (78109)	Iso-butyl methyl ketone, water, unfltrd ug/L (78133)	Acetone water unfltrd ug/L (81552)	Bromo-benzene water unfltrd ug/L (81555)	Di-ethyl ether, water, unfltrd ug/L (81576)	Diiso-propyl ether, water, unfltrd ug/L (81577)	Meth-acrylo-nitrile water unfltrd ug/L (81593)	Ethyl methyl ketone, water, unfltrd ug/L (81595)	Methyl methac-rylate, water, unfltrd ug/L (81597)	Tetra-hydro-furan, water, unfltrd ug/L (81607)
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AUG													
06...	<.04b	<.06b	<.2	<.12	<.4b	<7	<.04b	<.2	<.10	<.6	<5.0	<.3	<2
20...	<.04b	<.06b	<.2	<.12	<.4b	<7	<.04b	<.2	<.10	<.6	<5.0	<.3	<2
SEP													
03...	<.04b	<.06b	<.2	<.12	<.4b	<7	<.04b	<.2	<.10	<.6	<5.0	<.3	<2
16...	<.04b	<.06b	<.2	<.12	<.4b	<7	<.04b	<.2	<.10	<.6	<5.0	<.3b	<2
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25...	--	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--	--
30...	<.04b	<.06b	<.2	<.50b	<.4b	<7	<.04b	<.2	<.10	<.6	<5.0	<.3	<2

08155500 Barton Springs at Austin, TX--Continued

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

Date	Dibromo chloro- propane water unfltrd ug/L (82625)	meta- + para- Xylene, water, unfltrd ug/L (85795)
NOV		
06...	--	--
DEC		
10...	--	--
JAN		
23...	--	--
FEB		
20...	--	--
JUL		
31...	--	--
AUG		
06...	<.5	<.06b
20...	<.5	<.06b
SEP		
03...	<.5	<.06b
16...	<.5	<.06b
24...	--	--
24...	--	--
24...	--	--
24...	--	--
24...	--	--
24...	--	--
24...	--	--
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25...	--	--
25...	--	--
25...	--	--
25...	--	--
25...	--	--
25...	--	--
25...	--	--
25...	--	--
30...	<.5	<.06b

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

Value qualifier codes used in this report:
- b -- Value was extrapolated below
- c -- See laboratory comment
- d -- Diluted sample: method hi range exceeded
- k -- Counts outside acceptable range
- m -- Highly var comp using method, ? prec
- n -- Below the NDV
- t -- Below the long-term MDL

Null value qualifier codes used in this report:
- m -- Results sent by separate memo
- u -- Unable to determine-matrix interference

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08155501 Eliza Springs at Austin, TX

WATER-QUALITY RECORDS

LOCATION.--Lat 30°15'51", long 97°46'12", Travis County, Hydrologic Unit 12090205, on left 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.

PERIOD OF RECORD.--
CHEMICAL DATA: Aug. 1997 to Sept. 1998, Aug. 2003 to Sept. 2003.
BIOCHEMICAL DATA: Mar. 1978, Aug. 2003 to Sept. 2003.
PESTICIDE DATA: May 2000 to May 2001.
SEDIMENT CHEMISTRY DATA: Nov. 2001.

REMARKS.--Only springflow from the Edwards and associated limestones in the Balcones Fault Zone is published for this station.

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

Date	Time	Barometric pressure, mm Hg (00025)	Specif. conductance, wat unf uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temperature, water, deg C (00010)	Temperature, air, deg C (00020)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Noncarb hardness, wat flt field, mg/L as CaCO3 (00904)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Sodium, water, fltrd, mg/L (00930)
AUG													
06...	1315	--	638	6.8	21.1	--	6.0	--	290	16	85.4	18.6	15.1
20...	1100	753	623	7.1	21.0	--	6.0	68	320	50	92.9	22.2	15.5
SEP													
03...	1000	753	630	7.1	20.9	28.0	6.3	71	310	38	87.0	22.5	15.1
16...	0830	755	645	7.1	20.9	25.0	6.9	78	320	51	90.1	22.2	16.5
24...	0830	--	661	7.1	--	--	--	--	330	62	92.7	23.3	17.4
24...	1100	--	663	7.1	--	--	--	--	340	--	95.1	23.9	18.0
24...	1300	--	669	7.2	--	--	--	--	330	53	93.6	23.6	17.7
24...	1500	--	666	7.1	--	--	--	--	330	--	91.5	23.2	17.3
24...	1700	--	657	7.2	--	--	--	--	330	59	91.6	23.3	17.4
24...	1900	--	651	7.2	--	--	--	--	330	60	93.7	23.7	17.9
24...	2300	--	652	7.2	--	--	--	--	330	62	92.5	23.4	17.8
25...	0100	--	652	7.2	--	--	--	--	330	65	93.7	23.5	18.0
25...	0300	--	658	7.2	--	--	--	--	330	58	91.8	23.5	18.8
25...	0500	--	664	7.2	--	--	--	--	330	63	93.2	23.7	21.2
25...	0700	--	669	7.2	--	--	--	--	330	62	92.2	23.7	21.4
25...	0900	--	675	7.2	--	--	--	--	330	57	91.7	23.6	20.9
25...	1100	--	654	7.2	--	--	--	--	330	57	92.3	23.7	20.9
25...	1300	--	632	7.2	--	--	--	--	330	68	93.3	23.8	19.8
25...	1500	--	653	7.2	--	--	--	--	320	--	90.3	23.4	18.7
25...	1700	--	651	7.2	--	--	--	--	330	67	93.1	23.9	18.5
25...	1900	--	646	7.2	--	--	--	--	330	--	92.0	23.6	16.5
30...	0900	--	631	7.1	21.1	--	6.1	--	320	52	90.3	23.2	17.7

Date	Sodium adsorption ratio (00931)	Sodium, percent (00932)	Potassium, water, fltrd, mg/L (00935)	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)	Sulfate water, fltrd, mg/L (00945)	Chloride, water, fltrd, mg/L (00940)	Silica, water, fltrd, mg/L (00955)	Residue water, fltrd, sum of constituents mg/L (70301)	Nitrite water, fltrd, mg/L as N (00613)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Ammonia water, fltrd, mg/L as N (00608)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Phosphorus, water, unfltrd mg/L (00665)
AUG													
06...	.4	10	1.30	275	27.7	26.5	11.7	358	<.008	1.39d	E.014n	<.10	<.04
20...	.4	9	1.33	275	25.9	26.9	12.0	369	<.008	1.41d	E.009n	<.10	<.04
SEP													
03...	.4	10	1.26	273	27.3	27.1	11.8	363	<.008	1.41d	<.015	E.06n	<.04
16...	.4	10	1.46	267	26.6	27.2	11.9	364	<.008	1.41d	E.009n	<.10	<.04
24...	.4	10	1.36	267	28.9	29.2	11.8	366	--	--	--	--	--
24...	.4	10	1.44	E271	28.9	28.7	12.1	--	--	--	--	--	--
24...	.4	10	1.36	279	29.0	29.1	11.9	375	--	--	--	--	--
24...	.4	10	1.39	E267	29.0	28.7	11.8	--	--	--	--	--	--
24...	.4	10	1.35	267	28.8	28.8	11.7	365	--	--	--	--	--
24...	.4	10	1.43	273	28.9	28.8	12.0	372	--	--	--	--	--
24...	.4	11	1.40	267	29.3	29.0	11.8	367	--	--	--	--	--
25...	.4	11	1.38	267	29.4	29.5	11.9	369	--	--	--	--	--
25...	.5	11	1.45	269	30.0	31.0	11.8	371	--	--	--	--	--
25...	.5	12	1.46	269	31.8	34.7	11.8	381	--	--	--	--	--
25...	.5	12	1.37	267	32.5	34.9	11.7	379	--	--	--	--	--
25...	.5	12	1.46	271	32.3	34.6	11.7	380	--	--	--	--	--
25...	.5	12	1.44	273	31.9	34.4	11.8	382	--	--	--	--	--
25...	.5	11	1.39	265	30.9	32.1	11.9	374	--	--	--	--	--
25...	.5	11	1.38	E271	30.3	31.5	11.7	--	--	--	--	--	--
25...	.4	11	1.41	265	29.8	30.0	12.0	369	--	--	--	--	--
25...	.4	10	1.38	E271	28.5	27.6	12.0	--	--	--	--	--	--
30...	.4	11	1.37	271	28.8	29.1	11.6	373	<.008	1.45d	E.008n	<.10	<.04

08155501 Eliza Springs at Austin, TX--Continued

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

Date	Phos- phorus, water, fltrd, mg/L (00666)	Ortho- phos- phate, water, fltrd, mg/L as P (00671)	Arsenic water, fltrd, ug/L (01000)	Cadmium water, fltrd, ug/L (01025)	Chrom- ium, water, fltrd, ug/L (01030)	Copper, water, fltrd, ug/L (01040)	Lead, water, fltrd, ug/L (01049)	Nickel, water, fltrd, ug/L (01065)	Stront- ium, water, fltrd, ug/L (01080)	Zinc, water, fltrd, ug/L (01090)	2,6-Di- ethyl- aniline water fltrd 0.7u GF ug/L (82660)	Aceto- chlor, water, fltrd, ug/L (49260)	Ala- chlor, water, fltrd, ug/L (46342)
AUG													
06...	<.04	<.02	.4	<.04	<.8	.7	<.08	2.00	865	1	<.006	<.006	<.004
20...	<.04	<.02	.4	<.04	<.8	.4	<.08	3.11	1050	<1	<.006	<.006	<.004
SEP													
03...	<.04	<.02	.3	<.04	<.8	.7	<.08	1.06	1200	<1	<.006	<.006	<.004
16...	<.04	<.18d	.4	<.04	E.4n	1.1	.11	.70	1300	2	<.006	<.006	<.004
24...	--	--	--	--	--	--	--	--	1380	--	--	--	--
24...	--	--	--	--	--	--	--	--	1420	--	--	--	--
24...	--	--	--	--	--	--	--	--	1410	--	--	--	--
24...	--	--	--	--	--	--	--	--	1360	--	--	--	--
24...	--	--	--	--	--	--	--	--	1360	--	--	--	--
24...	--	--	--	--	--	--	--	--	1400	--	--	--	--
24...	--	--	--	--	--	--	--	--	1380	--	--	--	--
25...	--	--	--	--	--	--	--	--	1400	--	--	--	--
25...	--	--	--	--	--	--	--	--	1360	--	--	--	--
25...	--	--	--	--	--	--	--	--	1390	--	--	--	--
25...	--	--	--	--	--	--	--	--	1400	--	--	--	--
25...	--	--	--	--	--	--	--	--	1370	--	--	--	--
25...	--	--	--	--	--	--	--	--	1380	--	--	--	--
25...	--	--	--	--	--	--	--	--	1420	--	--	--	--
25...	--	--	--	--	--	--	--	--	1410	--	--	--	--
25...	--	--	--	--	--	--	--	--	1430	--	--	--	--
25...	--	--	--	--	--	--	--	--	1410	--	--	--	--
30...	<.04	<.02	.5	<.04	<.8	.4	<.08	1.27	1470	<1	<.006	<.006	<.004

Date	alpha- HCH, water, fltrd, ug/L (34253)	Atra- zine, water, fltrd, ug/L (39632)	Azin- phos- methyl, water, fltrd 0.7u GF ug/L (82686)	Ben- flur- alin, water, fltrd 0.7u GF ug/L (82673)	Butyl- ate, water, fltrd, ug/L (04028)	Car- baryl, water, fltrd 0.7u GF ug/L (82680)	Carbo- furan, water, fltrd 0.7u GF ug/L (82674)	Chlor- pyrifos water, fltrd, ug/L (38933)	cis- Per- methrin water fltrd 0.7u GF ug/L (82687)	Cyana- zine, water, fltrd, ug/L (04041)	DCPA, water fltrd 0.7u GF ug/L (82682)	CIAT, water, fltrd, ug/L (04040)	Desulf- inyl fipro- nil, water, fltrd, ug/L (62170)
AUG													
06...	<.005	E.006n	<.050	<.010	<.002	<.041	<.020	<.005	<.006	<.018	<.003	E.006n	<.004
20...	<.005	<.007	<.050	<.010	<.002	<.041	<.020	<.005	<.006	<.018	<.003	<.006	<.004
SEP													
03...	<.005	E.006n	<.050	<.010	<.002	<.041	<.020	<.005	<.006	<.018	<.003	E.003n	<.004
16...	<.005	.008	<.050	<.010	<.002	<.041	<.020	<.005	<.006	<.018	<.003	<.006	<.004
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
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25...	--	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--	--
30...	<.005	<.007	<.050	<.010	<.002	<.041	<.020	<.005	<.006	<.018	<.003	<.006	<.004

08155501 Eliza Springs at Austin, TX--Continued

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

Date	Desulf- inyl- fipro- nil amide, wat flt ug/L (62169)	Diazi- non, water, fltrd, ug/L (39572)	Diel- drin, water, fltrd, ug/L (39381)	Disul- foton, water, fltrd 0.7u GF ug/L (82677)	EPTC, water, fltrd 0.7u GF ug/L (82668)	Ethal- flur- alin, water, fltrd 0.7u GF ug/L (82663)	Etho- prop, water, fltrd 0.7u GF ug/L (82672)	Fipro- nil, water, fltrd, ug/L (62166)	Fipro- nil sulfide water, fltrd, ug/L (62167)	Fipro- nil sulfone water, fltrd, ug/L (62168)	Fonofos water, fltrd, ug/L (04095)	Lindane water, fltrd, ug/L (39341)	Linuron water fltrd 0.7u GF ug/L (82666)
AUG													
06...	<.009	<.005	<.005	<.02	<.002	<.009	<.005	<.007	<.005	<.005	<.003	<.004	<.035
20...	<.009	<.005	<.005	<.02	<.002	<.009	<.005	<.007	<.005	<.005	<.003	<.004	<.035
SEP													
03...	<.009	<.005	<.005	<.02	<.002	<.009	<.005	<.007	<.005	<.005	<.003	<.004	<.035
16...	<.009	<.005	<.005	<.02	<.002	<.009	<.005	<.007	<.005	<.005	<.003	<.004	<.035
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
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25...	--	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--	--
30...	<.009	<.005	<.005	<.02	<.002	<.009	<.005	<.007	<.005	<.005	<.003	<.004	<.035

Date	Mala- thion, water, fltrd, ug/L (39532)	Metola- chlor, water, fltrd, ug/L (39415)	Metri- buzin, water, fltrd, ug/L (82630)	Moli- nate, water, fltrd 0.7u GF ug/L (82671)	Naprop- amide, water, fltrd 0.7u GF ug/L (82684)	p,p'- DDE, water, fltrd, ug/L (34653)	Para- thion, water, fltrd, ug/L (39542)	Methyl para- thion, water, fltrd 0.7u GF ug/L (82667)	Peb- ulate, water, fltrd 0.7u GF ug/L (82669)	Pendi- meth- alin, water, fltrd 0.7u GF ug/L (82683)	Phorate water fltrd 0.7u GF ug/L (82664)	Prome- ton, water, fltrd, ug/L (04037)	Propa- chlor, water, fltrd, ug/L (04024)
AUG													
06...	<.027	<.013	<.006	<.002	<.007	<.003	<.010	<.006	<.004	<.022	<.011	<.01	<.010
20...	<.027	<.013	<.006	<.002	<.007	<.003	<.010	<.006	<.004	<.022	<.011	<.01	<.010
SEP													
03...	<.027	<.013	<.006	<.002	<.007	<.003	<.010	<.006	<.004	<.022	<.011	<.01	<.010
16...	<.027	<.013	<.006	<.002	<.007	<.003	<.010	<.006	<.004	<.022	<.011	<.01	<.010
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--	--
30...	<.027	<.013	<.006	<.002	<.007	<.003	<.010	<.006	<.004	<.022	<.011	<.01	<.010

08155501 Eliza Springs at Austin, TX--Continued

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

Date	Pro- panil, water, fltrd 0.7u GF ug/L (82679)	Propar- gite, water, fltrd 0.7u GF ug/L (82685)	Pron- amide, water, fltrd 0.7u GF ug/L (82676)	Sima- zine, water, fltrd, ug/L (04035)	Tebu- thiuron water fltrd 0.7u GF ug/L (82670)	Terba- cil, water, fltrd 0.7u GF ug/L (82665)	Terbu- fos, water, fltrd 0.7u GF ug/L (82675)	Thio- bencarb water fltrd 0.7u GF ug/L (82681)	Tri- allate, water, fltrd 0.7u GF ug/L (82678)	Tri- flur- alin, water, fltrd 0.7u GF ug/L (82661)	Di- bromo- methane water unfltrd ug/L (30217)	Bromo- di- chloro- methane water unfltrd ug/L (32101)	Tetra- chloro- methane water unfltrd ug/L (32102)
AUG													
06...	<.011	<.02	<.004	<.005	<.02	<.034	<.02	<.005	<.002	<.009	<.05b	<.05b	<.06b
20...	<.011	<.02	<.004	<.005	<.02	<.034	<.02	<.005	<.002	<.009	<.05b	<.05b	<.06b
SEP													
03...	<.011	<.02	<.004	<.005	<.02	<.034	<.02	<.005	<.002	<.009	<.05b	<.05b	<.06b
16...	<.011	<.02	<.004	<.005	<.02	<.034	<.02	<.005	<.002	<.009	<.05b	<.05b	<.06b
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30...	<.011	<.02	<.004	<.005	<.02	<.034	<.02	<.005	<.002	<.009	<.05b	<.05b	<.06b

Date	1,2-Di- chloro- ethane, water, unfltrd ug/L (32103)	Tri- bromo- methane water unfltrd ug/L (32104)	Di- bromo- chloro- methane water unfltrd ug/L (32105)	Tri- chloro- methane water unfltrd ug/L (32106)	Toluene water unfltrd ug/L (34010)	Benzene water unfltrd ug/L (34030)	Acrylo- nitrile water unfltrd ug/L (34215)	Chloro- benzene water unfltrd ug/L (34301)	Chloro- ethane, water, unfltrd ug/L (34311)	Ethyl- benzene water unfltrd ug/L (34371)	Hexa- chloro- ethane, water, unfltrd ug/L (34396)	Bromo- methane water unfltrd ug/L (34413)	Chloro- methane water unfltrd ug/L (34418)
AUG													
06...	<.1	<.10	<.2	E.04b	<.05b	<.04b	<1	<.03b	<.1	<.03b	<.2	<.3mc	<.2mc
20...	<.1	<.10	<.2	E.06b	<.05b	<.04b	<1	<.03b	<.2	<.03b	<.2	<.3mc	<.2mc
SEP													
03...	<.1	<.10	<.2	E.04b	<.05b	<.04b	<1	<.03b	<.1	<.03b	<.2	<.3mc	<.2mc
16...	<.1	<.10	<.2	E.06b	<.05b	<.04b	<1	<.03b	<.1	<.03b	<.2	<.3mc	<.2mc
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30...	<.1	<.10b	<.2	E.04b	<.05b	<.04b	<1	<.03b	<.1	<.03b	<.2	<.3mc	<.2mc

08155501 Eliza Springs at Austin, TX--Continued

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

Date	Di-chloro-methane water unfltrd ug/L (34423)	Tetra-chloro-ethene, water, unfltrd ug/L (34475)	Tri-chloro-fluoro-methane water unfltrd ug/L (34488)	1,1-Di-chloro-ethane, water unfltrd ug/L (34496)	1,1-Di-chloro-ethene, water, unfltrd ug/L (34501)	1,1,1-Tri-chloro-ethane, water, unfltrd ug/L (34506)	1,1,2-Tri-chloro-ethane, water, unfltrd ug/L (34511)	1,1,2,2-Tetra-chloro-ethane, water, unfltrd ug/L (34516)	1,2-Di-chloro-benzene water unfltrd ug/L (34536)	1,2-Di-chloro-propane water unfltrd ug/L (34541)	trans-1,2-Di-chloro-ethene, water, unfltrd ug/L (34546)	1,2,4-Tri-chloro-benzene water unfltrd ug/L (34551)	1,3-Di-chloro-benzene water unfltrd ug/L (34566)
AUG													
06...	<.2	E.03b	<.09b	<.04b	<.04n	E.01t	<.06n	<.09b	<.03n	<.03b	<.03b	<.1	<.03b
20...	<.2	E.06b	<.09b	<.04b	<.04n	<.03b	<.06n	<.09b	<.03n	<.03b	<.03b	<.1	<.03b
SEP													
03...	<.2	E.06b	<.09b	<.04b	<.04n	<.03b	<.06n	<.09b	<.03n	<.03b	<.03b	<.1	<.03b
16...	<.2	.19	<.09b	<.04b	<.04n	E.01t	<.06n	<.09b	<.03n	<.03b	<.03b	<.1	<.03b
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30...	<.2	E.04b	<.09b	<.04b	<.04n	<.03b	<.06n	<.09b	<.03n	<.03b	<.03b	<.1	<.03b

Date	1,4-Di-chloro-benzene water unfltrd ug/L (34571)	Di-chloro-di-fluoro-methane wat unf ug/L (34668)	Naphth-alene, water, unfltrd ug/L (34696)	trans-1,3-Di-chloro-propene water unfltrd ug/L (34699)	cis-1,3-Di-chloro-propene water unfltrd ug/L (34704)	Vinyl chlor-ide, water, unfltrd ug/L (39175)	Tri-chloro-ethene, water, unfltrd ug/L (39180)	Hexa-chloro-buta-diene, water, unfltrd ug/L (39702)	1,2,3,4 Tetra-methyl-benzene water unfltrd ug/L (49999)	1,2,3,5 Tetra-methyl-benzene water unfltrd ug/L (50000)	Bromo-ethene, water, unfltrd ug/L (50002)	t-Butyl ethyl ether, water, unfltrd ug/L (50004)	Methyl tert-pentyl ether, water, unfltrd ug/L (50005)
AUG													
06...	<.05b	<.18mc	<.5	<.09b	<.09b	<.1	<.04b	<.1	<.2	<.2	<.1	<.05b	<.08b
20...	<.05b	<.18mc	<.5	<.09b	<.09b	<.1	<.04b	<.1	<.2	<.2	<.1	<.05b	<.08b
SEP													
03...	<.05b	<.18mc	<.5	<.09b	<.09b	<.1	<.04b	<.1	<.2	<.2	<.1	<.05b	<.08b
16...	<.05b	<.18mc	<.5	<.09b	<.09b	<.1	E.02t	<.1	<.2	<.2	<.1	<.05b	<.08b
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30...	<.05b	<.18mc	<.5	<.09b	<.09b	<.1	<.04b	<.1	<.2	<.2	<.1	<.05b	<.08b

08155501 Eliza Springs at Austin, TX--Continued

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

Date	trans-1,4-Dichloro-2-butene, wat unf ug/L (73547)	Ethyl methacrylate, water, unfltrd ug/L (73570)	Carbon disulfide water unfltrd ug/L (77041)	cis-1,2-Dichloroethene, water, unfltrd ug/L (77093)	Methyl n-butyl ketone, water, unfltrd ug/L (77103)	Styrene water unfltrd ug/L (77128)	o-Xylene, water, unfltrd ug/L (77135)	1,1-Dichloropropene water unfltrd ug/L (77168)	2,2-Dichloropropane water unfltrd ug/L (77170)	1,3-Dichloropropane water unfltrd ug/L (77173)	2-Ethyltoluene water unfltrd ug/L (77220)	1,2,3-Trimethylbenzene water unfltrd ug/L (77221)	1,2,4-Trimethylbenzene water unfltrd ug/L (77222)
AUG													
06...	<.7b	<.2	<.07b	<.04b	<.7b	<.04b	<.07b	<.05b	<.05b	<.1	<.06b	<.1	<.06b
20...	<.7b	<.2	<.07b	<.04b	<.7b	<.04b	<.07b	<.05b	<.05b	<.1	<.06b	<.1	<.06b
SEP													
03...	<.7b	<.2	<.07b	<.04b	<.7b	<.04b	<.07b	<.05b	<.05b	<.1	<.06b	<.1	<.06b
16...	<.7b	<.2b	E.03n	<.04b	<.7b	<.04b	<.07b	<.05b	<.05b	<.1	<.06b	<.1	<.06b
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30...	<.7b	<.2	<.07b	<.04b	<.7b	<.04b	<.07b	<.05b	<.05b	<.1	<.06b	<.1	<.06b

Date	Isopropylbenzene water unfltrd ug/L (77223)	n-propylbenzene water unfltrd ug/L (77224)	1,3,5-Trimethylbenzene water unfltrd ug/L (77226)	2-Chlorotoluene water unfltrd ug/L (77275)	4-Chlorotoluene water unfltrd ug/L (77277)	Bromochloromethane water unfltrd ug/L (77297)	n-Butyl benzene water unfltrd ug/L (77342)	sec-Butylbenzene water unfltrd ug/L (77350)	tert-Butylbenzene water unfltrd ug/L (77353)	4-Isopropyltoluene water unfltrd ug/L (77356)	Iodomethane water unfltrd ug/L (77424)	1,2,3-Trichloropropane water unfltrd ug/L (77443)	1,1,1,2-Tetrachloroethane, water, unfltrd ug/L (77562)
AUG													
06...	<.06b	<.04b	<.04b	<.04b	<.05b	<.12	<.2	<.06b	<.10	<.12	<.35mc	<.16	<.03b
20...	<.06b	<.04b	<.04b	<.04b	<.05b	<.12	<.2	<.06b	<.10	<.12	<.35mc	<.16	<.03b
SEP													
03...	<.06b	<.04b	<.04b	<.04b	<.05b	<.12	<.2	<.06b	<.10	<.12	<.35mc	<.16	<.03b
16...	<.06b	<.04b	<.04b	<.04b	<.05b	<.12	<.2	<.06b	<.10	<.12	<.35mc	<.16b	<.03b
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30...	<.06b	<.04b	<.04b	<.04b	<.05b	<.12	<.2	<.06b	<.10	<.12	<.35mc	<.16	<.03b

08155501 Eliza Springs at Austin, TX--Continued

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

Date	1,2,3-Tri-chloro-benzene water unfltrd ug/L (77613)	1,2-Di-bromo-ethane, water, unfltrd ug/L (77651)	CFC-113 water unfltrd ug/L (77652)	Methyl t-butyl ether, water, unfltrd ug/L (78032)	3-Chloro-propene water unfltrd ug/L (78109)	Iso-butyl methyl ketone, water, unfltrd ug/L (78133)	Acetone water unfltrd ug/L (81552)	Bromo-benzene water unfltrd ug/L (81555)	Di-ethyl ether, water, unfltrd ug/L (81576)	Diiso-propyl ether, water, unfltrd ug/L (81577)	Meth-acrylo-nitrile water unfltrd ug/L (81593)	Ethyl methyl ketone, water, unfltrd ug/L (81595)	Methyl methac-rylate, water, unfltrd ug/L (81597)
AUG													
06...	<.3	<.04b	<.06b	<.2	<.12	<.4b	<7	<.04b	<.2	<.10	<.6	<5.0	<.3
20...	<.3	<.04b	<.06b	<.2	<.12	<.4b	<7	<.04b	<.2	<.10	<.6	<5.0	<.3
SEP													
03...	<.3	<.04b	<.06b	<.2	<.12	<.4b	<7	<.04b	<.2	<.10	<.6	<5.0	<.3
16...	<.3	<.04b	<.06b	<.2	<.12	<.4b	<7	<.04b	<.2	<.10	<.6	<5.0	<.3b
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30...	<.3	<.04b	<.06b	<.2	<.12	<.4b	<7	<.04b	<.2	<.10	<.6	<5.0	<.3

Date	Tetra-hydro-furan, water, unfltrd ug/L (81607)	Dibromo chloro-propane water unfltrd ug/L (82625)	meta- + para-Xylene, water, unfltrd ug/L (85795)
AUG			
06...	<2	<.5	<.06b
20...	<2	<.5	<.06b
SEP			
03...	<2	<.5	<.06b
16...	<2	<.5	<.06b
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30...	<2	<.5	<.06b

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

Value qualifier codes used in this report:
- b -- Value was extrapolated below
- c -- See laboratory comment
- d -- Diluted sample: method hi range exceeded
- m -- Highly var comp using method, ? prec
- n -- Below the NDV
- t -- Below the long-term MDL

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08155503 Old Mill Springs at Austin, TX

LOCATION.--Lat 30°15'46", long 97°46'02", Travis County, Hydrologic Unit 12090205, on right bank 0.3 mi upstream from Barton Springs Road bridge over Barton Creek, 0.6 mi upstream from mouth, and 1.7 mi southwest of the State Capitol Building in Austin.

DRAINAGE AREA.--Not applicable. Only springflow is published for this station.

PERIOD OF RECORD.--
CHEMICAL DATA: Aug. 1997 to Sept. 1998, Oct. 2002 to Sept. 2003.
BIOCHEMICAL DATA: Mar. 1978, Oct. 2002 to Sept. 2003.
PESTICIDE DATA: May 2000 to May 2001.
SEDIMENT CHEMISTRY DATA: Nov. 2001.

REMARKS.--Only springflow from the Edwards and associated limestones in the Balcones Fault Zone is published for this station.

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

Date	Time	Baro-metric pres-sure, mm Hg (00025)	Specif. conduc-tance, wat unf uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temper-ature, water, deg C (00010)	Temper-ature, air, deg C (00020)	Dis-solved oxygen, mg/L (00300)	Dis-solved oxygen, percent of sat-uration (00301)	Hard-ness, water, unfltrd mg/L as CaCO3 (00900)	Noncarb hard-ness, wat flt field, mg/L as CaCO3 (00904)	Calcium water, fltrd, mg/L (00915)	Magnes-ium, water, fltrd, mg/L (00925)	Sodium, water, fltrd, mg/L (00930)
AUG													
06...	1100	--	725	6.8	21.3	--	5.6	--	300	32	87.5	20.6	28.6
20...	1030	753	729	7.1	21.0	--	6.0	68	330	65	93.2	24.5	28.5
SEP													
03...	0900	754	732	7.1	20.9	27.0	5.4	61	320	55	88.1	24.5	26.8
16...	0800	755	727	7.1	20.9	25.0	5.2	59	330	61	90.7	24.3	28.9
24...	0700	--	730	7.2	--	--	--	--	340	84	94.4	25.7	30.2
24...	1100	--	728	7.2	--	--	--	--	340	--	94.3	25.6	30.2
24...	1300	--	743	7.2	--	--	--	--	340	69	95.1	25.5	30.4
24...	1500	--	744	7.1	--	--	--	--	340	74	93.7	25.5	30.6
24...	1700	--	743	7.2	--	--	--	--	340	71	94.7c	25.6c	31.7c
24...	1900	--	747	7.2	--	--	--	--	340	76	94.5	25.8	32.4
24...	2100	--	751	7.2	--	--	--	--	340	76	94.1	26.0	33.0
24...	2300	--	752	7.2	--	--	--	--	340	61	94.4	25.5	33.2
25...	0100	--	753	7.2	--	--	--	--	350	79	95.4	25.9	33.7
25...	0300	--	751	7.2	--	--	--	--	350	78	96.3	25.6	33.3
25...	0500	--	749	7.2	--	--	--	--	340	75	93.9	25.8	32.2
25...	0700	--	747	7.1	--	--	--	--	350	79	95.9	25.6	32.4
25...	0900	--	744	7.2	--	--	--	--	340	78	94.1	26.0	31.9
25...	1100	--	742	7.2	--	--	--	--	340	76	93.8	25.7	31.8
25...	1400	--	732	7.2	--	--	--	--	340	73	92.8	26.1	31.3
25...	1500	--	730	7.2	--	--	--	--	340	--	91.1	25.9	30.5
25...	1700	--	724	7.3	--	--	--	--	340	--	94.3	25.9	30.9
25...	1900	--	730	7.3	--	--	--	--	340	--	92.9	25.7	30.0
30...	0830	--	748	7.2	21.1	--	5.4	--	330	60	91.2	25.2	30.2

Date	Sodium adsorp-tion ratio (00931)	Sodium, percent (00932)	Potas-sium, water, fltrd, mg/L (00935)	Alka-linity, wat flt inc tit field, mg/L as CaCO3 (39086)	Sulfate water, fltrd, mg/L (00945)	Chlor-ide, water, fltrd, mg/L (00940)	Silica, water, fltrd, mg/L (00955)	Residue water, fltrd, sum of consti-tuents mg/L (70301)	Nitrite water, fltrd, mg/L as N (00613)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Ammonia water, fltrd, mg/L as N (00608)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Phos-phorus, water, unfltrd mg/L (00665)
AUG													
06...	.7	17	1.70	273	41.7	46.1	11.8	409	<.008	1.41d	E.013n	E.07n	E.02n
20...	.7	16	1.54	270	42.1	47.6	12.4	419	<.008	1.46d	E.008n	<.10	<.04
SEP													
03...	.7	15	1.55	267	42.0	46.6	11.8	409	<.008	1.48d	<.015	E.07n	<.04
16...	.7	16	1.82	267	40.0	45.3	12.1	411	<.008	1.48d	<.015	<.10	<.04
24...	.7	16	1.69	259	41.2	47.0	11.9	409	--	--	--	--	--
24...	.7	16	1.65	E269	41.3	47.4	11.9	--	--	--	--	--	--
24...	.7	16	1.69	275	41.5	47.3	11.9	420	--	--	--	--	--
24...	.7	16	1.71	267	41.6	47.9	11.9	414	--	--	--	--	--
24...	.7	17	1.75c	273	43.8	49.1	11.9c	424	--	--	--	--	--
24...	.8	17	1.67	268	43.8	50.4	11.8	422	--	--	--	--	--
24...	.8	17	1.72	267	44.8	52.1	11.9	425	--	--	--	--	--
24...	.8	17	1.75	281	45.4	52.3	11.8	434	--	--	--	--	--
25...	.8	17	1.78	267	45.2	52.2	11.8	427	--	--	--	--	--
25...	.8	17	1.80	269	44.6	52.0	11.9	428	--	--	--	--	--
25...	.8	17	1.70	267	44.4	51.3	11.8	423	--	--	--	--	--
25...	.8	17	1.74	267	44.5	50.1	11.8	424	--	--	--	--	--
25...	.7	17	1.72	265	44.6	50.3	11.8	421	--	--	--	--	--
25...	.7	17	1.74	266	44.7	49.5	12.0	420	--	--	--	--	--
25...	.7	17	1.71	267	44.8	49.6	11.8	420	--	--	--	--	--
25...	.7	17	1.64	E267	44.5	49.4	11.8	--	--	--	--	--	--
25...	.7	16	1.68	E270	44.2	48.5	11.9	--	--	--	--	--	--
25...	.7	16	1.66	E265	43.5	47.6	11.8	--	--	--	--	--	--
30...	.7	16	1.66	273	43.3	48.1	11.6	423	<.008	1.47d	E.009n	<.10	<.04

08155503 Old Mill Springs at Austin, TX--Continued

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

Date	Phos-phorus, water, fltrd, mg/L (00666)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Arsenic water, fltrd, ug/L (01000)	Cadmium water, fltrd, ug/L (01025)	Chrom-ium, water, fltrd, ug/L (01030)	Copper, water, fltrd, ug/L (01040)	Lead, water, fltrd, ug/L (01049)	Nickel, water, fltrd, ug/L (01065)	Stront-ium, water, fltrd, ug/L (01080)	Zinc, water, fltrd, ug/L (01090)	2,6-Di-ethyl-aniline water fltrd 0.7u GF ug/L (82660)	Aceto-chlor, water, fltrd, ug/L (49260)	Ala-chlor, water, fltrd, ug/L (46342)
AUG													
06...	<.04	<.02	.5	<.04	<.8	.5	<.08	2.71	939	<1	<.006	<.006	<.004
20...	<.04	E.01n	.5	<.04	<.8	.5	<.08	3.05	1150	Mn	<.006	<.006	<.004
SEP													
03...	<.04	<.02	.5	<.04	E.5n	.7	<.08	1.02	1180	<1	<.006	<.006	<.004
16...	<.04	<.18d	.6	<.04	<.8	.6	<.08	.67	1280	1	<.006	<.006	<.004
24...	--	--	--	--	--	--	--	--	1310	--	--	--	--
24...	--	--	--	--	--	--	--	--	1300	--	--	--	--
24...	--	--	--	--	--	--	--	--	1320	--	--	--	--
24...	--	--	--	--	--	--	--	--	1300	--	--	--	--
24...	--	--	--	--	--	--	--	--	1320c	--	--	--	--
24...	--	--	--	--	--	--	--	--	1310	--	--	--	--
24...	--	--	--	--	--	--	--	--	1290	--	--	--	--
24...	--	--	--	--	--	--	--	--	1280	--	--	--	--
25...	--	--	--	--	--	--	--	--	1290	--	--	--	--
25...	--	--	--	--	--	--	--	--	1290	--	--	--	--
25...	--	--	--	--	--	--	--	--	1260	--	--	--	--
25...	--	--	--	--	--	--	--	--	1280	--	--	--	--
25...	--	--	--	--	--	--	--	--	1260	--	--	--	--
25...	--	--	--	--	--	--	--	--	1250	--	--	--	--
25...	--	--	--	--	--	--	--	--	1230	--	--	--	--
25...	--	--	--	--	--	--	--	--	1200	--	--	--	--
25...	--	--	--	--	--	--	--	--	1240	--	--	--	--
25...	--	--	--	--	--	--	--	--	1220	--	--	--	--
30...	<.04	<.02	.5	<.04	<.8	.5	<.08	1.21	1350	1	<.006	<.006	<.004

Date	alpha-HCH, water, fltrd, ug/L (34253)	Atra-zine, water, fltrd, ug/L (39632)	Azin-phos-methyl, water, fltrd 0.7u GF ug/L (82686)	Ben-flur-alin, water, fltrd 0.7u GF ug/L (82673)	Butyl-ate, water, fltrd, ug/L (04028)	Car-baryl, water, fltrd 0.7u GF ug/L (82680)	Carbo-furan, water, fltrd 0.7u GF ug/L (82674)	Chlor-pyrifos water, fltrd, ug/L (38933)	cis-Per-methrin water fltrd 0.7u GF ug/L (82687)	Cyana-zine, water, fltrd, ug/L (04041)	DCPA, water fltrd 0.7u GF ug/L (82682)	CIAT, water, fltrd, ug/L (04040)	Desulf-inyl fipro-nil, water, fltrd, ug/L (62170)
AUG													
06...	<.005	E.006n	<.050	<.010	<.002	<.041	<.020	<.005	<.006	<.018	<.003	E.006n	<.004
20...	<.005	<.007	<.050	<.010	<.002	<.041	<.020	<.005	<.006	<.018	<.003	<.006	<.004
SEP													
03...	<.005	E.006n	<.050	<.010	<.002	<.041	<.020	<.005	<.006	<.018	<.003	E.005n	<.004
16...	<.005	.008	<.050	<.010	<.002	<.041	<.020	<.005	<.006	<.018	<.003	E.005n	<.004
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25...	--	--	--	--	--	--	--	--	--	--	--	--	--
30...	<.005	<.007	<.050	<.010	<.002	<.041	<.020	<.005	<.006	<.018	<.003	<.006	<.004

08155503 Old Mill Springs at Austin, TX--Continued

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

Date	Desulfinylfipronil amide, wat flt ug/L (62169)	Diazinon, water, fltrd, ug/L (39572)	Dieldrin, water, fltrd, ug/L (39381)	Disulfoton, water, fltrd 0.7u GF ug/L (82677)	EPTC, water, fltrd 0.7u GF ug/L (82668)	Ethalfluralin, water, fltrd 0.7u GF ug/L (82663)	Ethoprop, water, fltrd 0.7u GF ug/L (82672)	Fipronil, water, fltrd, ug/L (62166)	Fipronil sulfide water, fltrd, ug/L (62167)	Fipronil sulfone water, fltrd, ug/L (62168)	Fonofos water, fltrd, ug/L (04095)	Lindane water, fltrd, ug/L (39341)	Linuron water fltrd 0.7u GF ug/L (82666)
AUG													
06...	<.009	<.005	<.005	<.02	<.002	<.009	<.005	<.007	<.005	<.005	<.003	<.004	<.035
20...	<.009	<.005	<.005	<.02	<.002	<.009	<.005	<.007	<.005	<.005	<.003	<.004	<.035
SEP													
03...	<.009	<.005	<.005	<.02	<.002	<.009	<.005	<.007	<.005	<.005	<.003	<.004	<.035
16...	<.009	<.005	<.005	<.02	<.002	<.009	<.005	<.007	<.005	<.005	<.003	<.004	<.035
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25...	--	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--	--
30...	<.009	<.005	<.005	<.02	<.002	<.009	<.005	<.007	<.005	<.005	<.003	<.004	<.035

Date	Malathion, water, fltrd, ug/L (39532)	Metolachlor, water, fltrd, ug/L (39415)	Metribuzin, water, fltrd, ug/L (82630)	Molinate, water, fltrd 0.7u GF ug/L (82671)	Napropamide, water, fltrd 0.7u GF ug/L (82684)	p,p'-DDE, water, fltrd, ug/L (34653)	Parathion, water, fltrd, ug/L (39542)	Methyl parathion, water, fltrd 0.7u GF ug/L (82667)	Pebulate, water, fltrd 0.7u GF ug/L (82669)	Pendimethalin, water, fltrd 0.7u GF ug/L (82683)	Phorate water fltrd 0.7u GF ug/L (82664)	Prometon, water, fltrd, ug/L (04037)	Propachlor, water, fltrd, ug/L (04024)
AUG													
06...	<.027	<.013	<.006	<.002	<.007	<.003	<.010	<.006	<.004	<.022	<.011	<.01	<.010
20...	<.027	<.013	<.006	<.002	<.007	<.003	<.010	<.006	<.004	<.022	<.011	<.01	<.010
SEP													
03...	<.027	<.013	<.006	<.002	<.007	<.003	<.010	<.006	<.004	<.022	<.011	<.01	<.010
16...	<.027	<.013	<.006	<.002	<.007	<.003	<.010	<.006	<.004	<.022	<.011	Mt	<.010
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
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25...	--	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--	--
30...	<.027	<.013	<.006	<.002	<.007	<.003	<.010	<.006	<.004	<.022	<.011	<.01	<.010

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

Date	Pro-panil, water, fltrd 0.7u GF ug/L (82679)	Propar-gite, water, fltrd 0.7u GF ug/L (82685)	Pron-amide, water, fltrd 0.7u GF ug/L (82676)	Sima-zine, water, fltrd, ug/L (04035)	Tebu-thiuron water fltrd 0.7u GF ug/L (82670)	Terba-cil, water, fltrd 0.7u GF ug/L (82665)	Terbu-fos, water, fltrd 0.7u GF ug/L (82675)	Thio-bencarb water fltrd 0.7u GF ug/L (82681)	Tri-allate, water, fltrd 0.7u GF ug/L (82678)	Tri-flur-alin, water, fltrd 0.7u GF ug/L (82661)	Di-bromo-methane water unfltrd ug/L (30217)	Bromo-di-chloro-methane water unfltrd ug/L (32101)	Tetra-chloro-methane water unfltrd ug/L (32102)
AUG													
06...	<.011	<.02	<.004	<.005	<.02	<.034	<.02	<.005	<.002	<.009	<.05b	<.05b	<.06b
20...	<.011	<.02	<.004	<.005	<.02	<.034	<.02	<.005	<.002	<.009	<.05b	<.05b	<.06b
SEP													
03...	<.011	<.02	<.004	<.005	<.02	<.034	<.02	<.005	<.002	<.009	<.05b	<.05b	<.06b
16...	<.011	<.02	<.004	<.005	<.02	<.034	<.02	<.005	<.002	<.009	<.05b	<.05b	<.06b
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
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30...	<.011	<.02	<.004	<.005	<.02	<.034	<.02	<.005	<.002	<.009	<.05b	<.05b	<.06b

Date	1,2-Di-chloro-ethane, water, unfltrd ug/L (32103)	Tri-bromo-methane water unfltrd ug/L (32104)	Di-bromo-chloro-methane water unfltrd ug/L (32105)	Tri-chloro-methane water unfltrd ug/L (32106)	Toluene water unfltrd ug/L (34010)	Benzene water unfltrd ug/L (34030)	Acrylo-nitrile water unfltrd ug/L (34215)	Chloro-benzene water unfltrd ug/L (34301)	Chloro-ethane, water, unfltrd ug/L (34311)	Ethyl-benzene water unfltrd ug/L (34371)	Hexa-chloro-ethane, water, unfltrd ug/L (34396)	Bromo-methane water unfltrd ug/L (34413)	Chloro-methane water unfltrd ug/L (34418)
AUG													
06...	<.1	<.10	<.2	E.03b	<.05b	<.04b	<1	<.03b	<.1	<.03b	<.2	<.3mc	<.2mc
20...	<.1	<.10	<.2	E.06b	<.05b	<.04b	<1	<.03b	<.1	<.03b	<.2	<.3mc	<.2mc
SEP													
03...	<.1	<.10	<.2	E.04b	<.05b	<.04b	<1	<.03b	<.1	<.03b	<.2	<.3mc	<.2mc
16...	<.1	<.10	<.2	E.05b	<.05b	<.04b	<1	<.03b	<.1	<.03b	<.2	<.3mc	<.2mc
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30...	<.1	<.10	<.2	E.04b	E.01n	<.04b	<1	<.03b	<.1	<.03b	<.2	<.3mc	<.2mc

08155503 Old Mill Springs at Austin, TX--Continued

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

Date	Di-chloro-methane water unfltrd ug/L (34423)	Tetra-chloro-ethene, water, unfltrd ug/L (34475)	Tri-chloro-fluoro-methane water unfltrd ug/L (34488)	1,1-Di-chloro-ethane, water unfltrd ug/L (34496)	1,1-Di-chloro-ethene, water, unfltrd ug/L (34501)	1,1,1-Tri-chloro-ethane, water, unfltrd ug/L (34506)	1,1,2-Tri-chloro-ethane, water, unfltrd ug/L (34511)	1,1,2,2-Tetra-chloro-ethane, water, unfltrd ug/L (34516)	1,2-Di-chloro-benzene water unfltrd ug/L (34536)	1,2-Di-chloro-propane water unfltrd ug/L (34541)	trans-1,2-Di-chloro-ethene, water, unfltrd ug/L (34546)	1,2,4-Tri-chloro-benzene water unfltrd ug/L (34551)	1,3-Di-chloro-benzene water unfltrd ug/L (34566)
AUG													
06...	<.2	E.04b	<.09b	<.04b	<.04n	E.01t	<.06n	<.09b	<.03n	<.03b	<.03b	<.1	<.03b
20...	<.2	E.06b	<.09b	<.04b	<.04n	<.03b	<.06n	<.09b	<.03n	<.03b	<.03b	<.1	<.03b
SEP													
03...	<.2	E.06b	<.09b	<.04b	<.04n	<.03b	<.06n	<.09b	<.03n	<.03b	<.03b	<.1	<.03b
16...	<.2	.15	<.09b	<.04b	<.04n	E.01t	<.06n	<.09b	<.03n	<.03b	<.03b	<.1	<.03b
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30...	<.2	E.05b	<.09b	<.04b	<.04n	<.03b	<.06n	<.09b	<.03n	<.03b	<.03b	<.1	<.03b

Date	1,4-Di-chloro-benzene water unfltrd ug/L (34571)	Di-chloro-di-fluoro-methane wat unf ug/L (34668)	Naphth-alene, water, unfltrd ug/L (34696)	trans-1,3-Di-chloro-propene water unfltrd ug/L (34699)	cis-1,3-Di-chloro-propene water unfltrd ug/L (34704)	Vinyl chlor-ide, water, unfltrd ug/L (39175)	Tri-chloro-ethene, water, unfltrd ug/L (39180)	Hexa-chloro-buta-diene, water, unfltrd ug/L (39702)	1,2,3,4 Tetra-methyl-benzene water unfltrd ug/L (49999)	1,2,3,5 Tetra-methyl-benzene water unfltrd ug/L (50000)	Bromo-ethene, water, unfltrd ug/L (50002)	t-Butyl ethyl ether, water, unfltrd ug/L (50004)	Methyl tert-pentyl ether, water, unfltrd ug/L (50005)
AUG													
06...	<.05b	<.18mc	<.5	<.09b	<.09b	<.1	<.04b	<.1	<.2	<.2	<.1	<.05b	<.08b
20...	<.05b	<.18mc	<.5	<.09b	<.09b	<.1	<.04b	<.1	<.2	<.2	<.1	<.05b	<.08b
SEP													
03...	<.05b	<.18mc	<.5	<.09b	<.09b	<.1	<.04b	<.1	<.2	<.2	<.1	<.05b	<.08b
16...	<.05b	<.18mc	<.5	<.09b	<.09b	<.1	<.04b	<.1	<.2	<.2	<.1	<.05b	<.08b
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30...	<.05b	<.18mc	<.5	<.09b	<.09b	<.1	<.04b	<.1	<.2	<.2	<.1	<.05b	<.08b

08155503 Old Mill Springs at Austin, TX--Continued

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

Date	trans-1,4-Dichloro-2-butene, wat unf ug/L (73547)	Ethyl methacrylate, water, unfltrd ug/L (73570)	Carbon disulfide water unfltrd ug/L (77041)	cis-1,2-Dichloroethene, water, unfltrd ug/L (77093)	Methyl n-butyl ketone, water, unfltrd ug/L (77103)	Styrene water unfltrd ug/L (77128)	o-Xylene, water, unfltrd ug/L (77135)	1,1-Dichloropropene water unfltrd ug/L (77168)	2,2-Dichloropropane water unfltrd ug/L (77170)	1,3-Dichloropropane water unfltrd ug/L (77173)	2-Ethyltoluene water unfltrd ug/L (77220)	1,2,3-Trimethylbenzene water unfltrd ug/L (77221)	1,2,4-Trimethylbenzene water unfltrd ug/L (77222)
AUG													
06...	<.7b	<.2	E.03n	<.04b	<.7b	<.04b	<.07b	<.05b	<.05b	<.1	<.06b	<.1	<.06b
20...	<.7b	<.2	E.04n	<.04b	<.7b	<.04b	<.07b	<.05b	<.05b	<.1	<.06b	<.1	<.06b
SEP													
03...	<.7b	<.2	<.07b	<.04b	<.7b	<.04b	<.07b	<.05b	<.05b	<.1	<.06b	<.1	<.06b
16...	<.7b	<.2b	E.03n	<.04b	<.7b	<.04b	<.07b	<.05b	<.05b	<.1	<.06b	<.1	<.06b
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30...	<.7b	<.2	<.07b	<.04b	<.7b	<.04b	<.07b	<.05b	<.05b	<.1	<.06b	<.1	<.06b

Date	Isopropylbenzene water unfltrd ug/L (77223)	n-propylbenzene water unfltrd ug/L (77224)	1,3,5-Trimethylbenzene water unfltrd ug/L (77226)	2-Chlorotoluene water unfltrd ug/L (77275)	4-Chlorotoluene water unfltrd ug/L (77277)	Bromochloromethane water unfltrd ug/L (77297)	n-Butyl benzene water unfltrd ug/L (77342)	sec-Butylbenzene water unfltrd ug/L (77350)	tert-Butylbenzene water unfltrd ug/L (77353)	4-Isopropyltoluene water unfltrd ug/L (77356)	Iodomethane water unfltrd ug/L (77424)	1,2,3-Trichloropropane water unfltrd ug/L (77443)	1,1,1,2-Tetrachloroethane, water, unfltrd ug/L (77562)
AUG													
06...	<.06b	<.04b	<.04b	<.04b	<.05b	<.12	<.2	<.06b	<.10	<.12	<.35mc	<.16	<.03b
20...	<.06b	<.04b	<.04b	<.04b	<.05b	<.12	<.2	<.06b	<.10	<.12	<.35mc	<.16	<.03b
SEP													
03...	<.06b	<.04b	<.04b	<.04b	<.05b	<.12	<.2	<.06b	<.10	<.12	<.35mc	<.16	<.03b
16...	<.06b	<.04b	<.04b	<.04b	<.05b	<.12	<.2	<.06b	<.10	<.12	<.35mc	<.16b	<.03b
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30...	<.06b	<.04b	<.04b	<.04b	<.05b	<.12	<.2	<.06b	<.10	<.12	<.35mc	<.16	<.03b

08155503 Old Mill Springs at Austin, TX--Continued

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

Date	1,2,3-Tri-chloro-benzene water unfltrd ug/L (77613)	1,2-Di-bromo-ethane, water, unfltrd ug/L (77651)	CFC-113 water unfltrd ug/L (77652)	Methyl t-butyl ether, water, unfltrd ug/L (78032)	3-Chloro-propene water unfltrd ug/L (78109)	Iso-butyl methyl ketone, water, unfltrd ug/L (78133)	Acetone water unfltrd ug/L (81552)	Bromo-benzene water unfltrd ug/L (81555)	Di-ethyl ether, water, unfltrd ug/L (81576)	Diiso-propyl ether, water, unfltrd ug/L (81577)	Meth-acrylo-nitrile water unfltrd ug/L (81593)	Ethyl methyl ketone, water, unfltrd ug/L (81595)	Methyl methac-rylate, water, unfltrd ug/L (81597)
AUG													
06...	<.3	<.04b	<.06b	<.2	<.12	<.4b	<7	<.04b	<.2	<.10	<.6	<5.0	<.3
20...	<.3	<.04b	<.06b	<.2	<.12	<.4b	<7	<.04b	<.2	<.10	<.6	<5.0	<.3
SEP													
03...	<.3	<.04b	<.06b	<.2	<.12	<.4b	<7	<.04b	<.2	<.10	<.6	<5.0	<.3
16...	<.3	<.04b	<.06b	<.2	<.12	<.4b	<7	<.04b	<.2	<.10	<.6	<5.0	<.3b
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30...	<.3	<.04b	<.06b	<.2	<.50b	<.4b	<7	<.04b	<.2	<.10	<.6	<5.0	<.3

Date	Tetra-hydro-furan, water, unfltrd ug/L (81607)	Dibromo chloro-propane water unfltrd ug/L (82625)	meta- + para-Xylene, water, unfltrd ug/L (85795)
AUG			
06...	<2	<.5	<.06b
20...	<2	<.5	<.06b
SEP			
03...	<2	<.5	<.06b
16...	<2	<.5	<.06b
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30...	<2	<.5	<.06b

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

Value qualifier codes used in this report:
- b -- Value was extrapolated below
- c -- See laboratory comment
- d -- Diluted sample: method hi range exceeded
- m -- Highly var comp using method, ? prec
- n -- Below the NDV
- t -- Below the long-term MDL

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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 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.14	0.09	1.2	0.29	2.4	0.37	0.00	0.05	0.00	0.00	0.06
2	0.00	12	0.09	0.43	0.31	2.0	0.40	0.00	0.03	0.00	0.00	0.00
3	0.00	5.2	0.15	0.30	0.30	13	0.39	0.00	0.01	0.00	0.00	0.00
4	0.00	89	5.7	0.23	0.30	4.5	0.37	0.00	130	12	0.00	0.00
5	0.00	14	0.56	0.23	0.31	2.1	0.32	0.00	46	0.12	0.00	0.00
6	0.00	1.7	0.12	0.23	12	1.8	0.29	0.09	5.3	0.67	0.00	0.00
7	0.00	0.44	0.11	0.24	1.2	1.6	0.27	0.00	0.10	0.04	0.00	0.00
8	0.11	0.33	0.54	0.28	0.41	1.2	0.26	0.00	0.00	2.2	0.00	0.00
9	40	0.37	109	0.28	0.34	1.2	0.25	0.00	0.00	0.35	0.00	0.00
10	0.88	0.28	5.7	0.27	0.31	1.0	0.23	0.00	0.00	0.03	0.01	0.00
11	0.26	0.23	1.6	7.5	0.29	0.93	0.22	0.00	0.00	0.02	0.00	0.08
12	0.15	0.22	25	102	0.29	0.95	0.21	14	0.00	0.01	0.00	44
13	0.10	0.22	3.4	9.7	0.30	0.72	0.17	1.1	90	0.01	49	0.43
14	0.24	0.24	0.83	3.4	0.30	0.71	0.15	0.16	23	0.00	26	84
15	0.11	0.22	0.45	1.9	0.30	0.70	0.16	0.14	0.46	0.00	0.69	3.8
16	0.06	0.19	0.52	1.0	0.28	0.80	0.21	0.14	0.03	0.35	0.03	0.12
17	0.04	0.16	0.54	0.59	0.29	0.76	0.17	0.14	0.01	0.03	0.00	0.06
18	0.00	0.14	0.49	0.45	0.25	0.80	0.17	0.11	0.01	0.01	0.00	0.06
19	182	0.12	0.32	0.40	0.23	1.2	0.15	0.09	0.00	0.00	0.00	0.05
20	5.0	0.11	0.27	0.45	299	0.57	0.13	0.16	0.00	0.00	0.00	0.03
21	2.9	0.10	0.27	0.39	63	0.61	0.09	0.08	0.00	0.00	0.00	0.42
22	86	0.09	0.25	0.33	26	0.54	0.06	0.05	0.00	0.00	0.00	0.24
23	6.7	0.08	136	0.30	7.8	0.53	0.05	0.01	0.00	0.00	0.00	0.07
24	131	0.08	11	0.30	5.3	0.57	0.03	0.00	0.00	0.00	0.00	0.06
25	15	0.06	2.3	0.30	12	0.82	0.00	0.00	0.00	0.00	0.00	0.05
26	18	48	1.1	0.46	5.0	0.61	0.00	44	0.80	0.00	0.00	0.07
27	2.1	4.8	0.71	1.2	5.6	0.56	0.00	0.54	0.00	0.00	0.00	0.02
28	0.40	0.13	0.78	0.40	3.5	0.53	0.00	0.14	0.00	0.00	0.00	0.00
29	0.19	0.09	0.61	0.33	---	0.29	0.00	0.13	0.00	0.00	0.00	0.00
30	0.15	0.10	25	0.31	---	0.29	0.00	0.12	0.00	0.00	0.00	0.00
31	0.14	---	13	0.30	---	0.31	---	0.09	---	0.00	0.00	---
TOTAL	491.53	178.84	346.50	135.70	445.50	44.60	5.12	61.29	295.80	15.84	75.73	133.62
MEAN	15.9	5.96	11.2	4.38	15.9	1.44	0.17	1.98	9.86	0.51	2.44	4.45
MAX	182	89	136	102	299	13	0.40	44	130	12	49	84
MIN	0.00	0.06	0.09	0.23	0.23	0.29	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	975	355	687	269	884	88	10	122	587	31	150	265

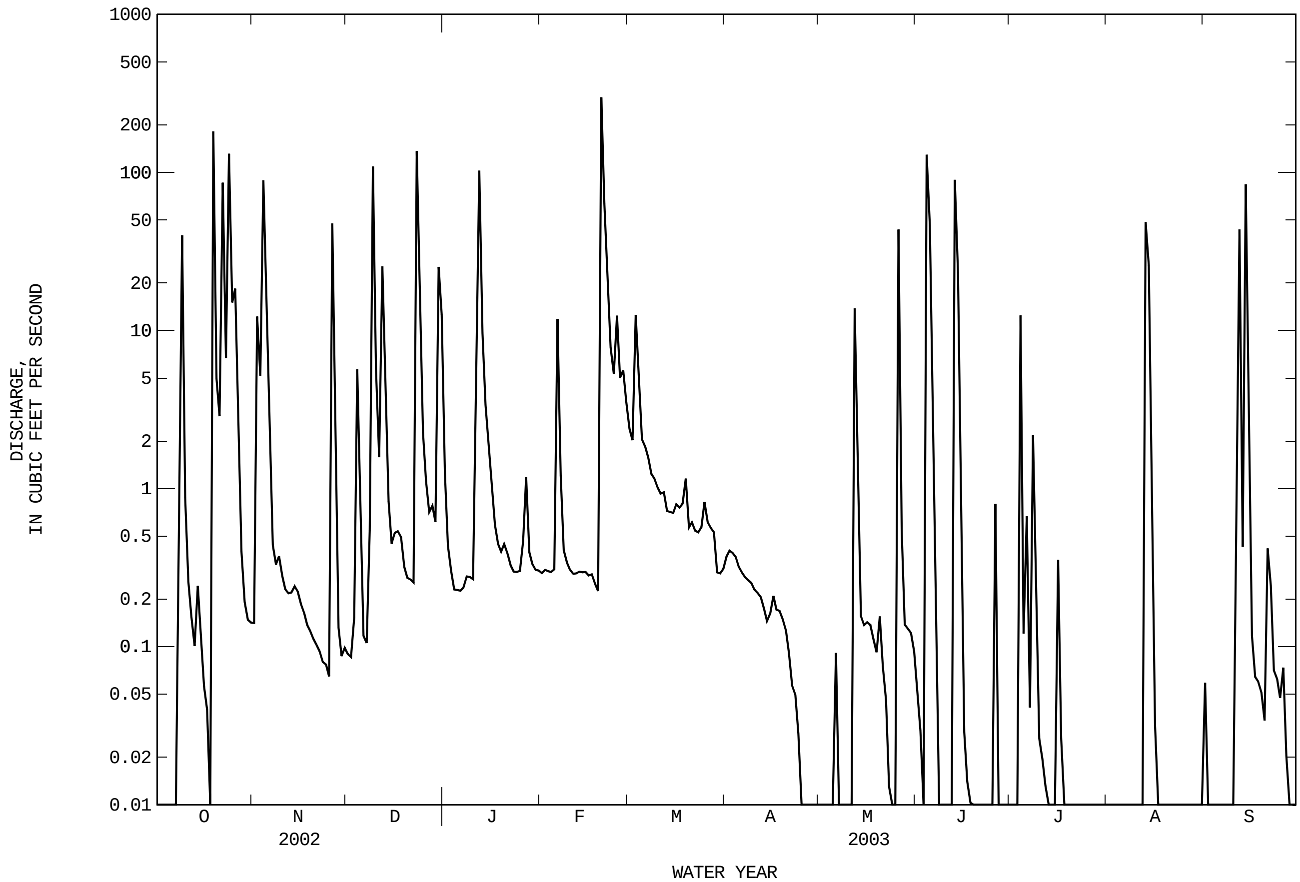
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1985 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	13.5	9.22	10.2	5.18	5.85	5.72	4.65	14.4	10.6	3.33	6.77	5.29
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	0.17	0.11	0.29	0.000	0.000	0.000
(WY)	1997	2000	1996	1996	1999	1996	2003	1998	2001	1989	1993	1999

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1985 - 2003	
ANNUAL TOTAL	2823.74		2230.07			
ANNUAL MEAN	7.74		6.11		7.92	
HIGHEST ANNUAL MEAN					15.7	1992
LOWEST ANNUAL MEAN					3.26	1988
HIGHEST DAILY MEAN	565	Jul 2	299	Feb 20	1040	Nov 15 2001
LOWEST DAILY MEAN	0.00	May 9	0.00	Oct 1	0.00	Oct 1 1984
ANNUAL SEVEN-DAY MINIMUM	0.00	May 9	0.00	Oct 1	0.00	May 6 1985
MAXIMUM PEAK FLOW			1830	Dec 23	i16000	May 24 1981
MAXIMUM PEAK STAGE			p8.29	Dec 23	a23.22	May 24 1981
ANNUAL RUNOFF (AC-FT)	5600		4420		5740	
10 PERCENT EXCEEDS	5.7		7.6		12	
50 PERCENT EXCEEDS	0.10		0.21		0.02	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

a From floodmark.
i From indirect measurement of peak flow.
p Observed.

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 Dec. 2002. (discontinued)
BIOCHEMICAL DATA: Feb. 1943, Nov. 1974 to current year.(discontinued)
RADIOCHEMICAL DATA: Apr. 1980. (discontinued)
PESTICIDE DATA: Jan. 1975 to Sept. 1985, Jan. 1993 to May 1996, March 2002 to June 2002.(discontinued)
SUSPENDED SEDIMENT CHEMISTRY: Mar. 1999 to Mar. 2001.(discontinued)
SEDIMENT DATA: Oct. 1998 to Dec. 2002.(discontinued)

INSTRUMENTATION.--Stage-activated automatic sampler.

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

Date	Time	Dis- charge, cfs (00060)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Color, water, fltrd, Pt-Co units (00080)	Turbid- ity, wat unf lab, Hach 2100AN NTU (99872)	COD, high level, water, unfltrd mg/L (00340)	Alka- linity, wat flt inc tit field, mg/L as CaCO3 (39086)	Residue total at 105 deg. C, sus- pended, mg/L (00530)	Nitrate water, fltrd, mg/L as N (00618)	Nitrite water, fltrd, mg/L as N (00613)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Ammonia water, fltrd, mg/L as N (00608)
OCT													
19-19	0545	423	139	7.8	15	600	60	36	672	.29	.009	.30	.06
DEC													
23-23	0730	682	196	7.6	200	1600	E240	58	1820	.34	.011	.35	.11

Date	Total nitro- gen, water, unfltrd mg/L (00600)	Organic nitro- gen, water, unfltrd mg/L (00605)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Phos- phorus, water, unfltrd mg/L (00665)	Phos- phorus, water, fltrd, mg/L (00666)	Ortho- phos- phate, water, fltrd, mg/L as P (00671)	Ortho- phos- phate, water, fltrd, mg/L (00660)	Organic carbon, water, unfltrd mg/L (00680)	Sus- pended sedi- ment load, tons/d (80155)	Sus- pended sedi- ment concen- tration mg/L (80154)	Cadmium water, unfltrd ug/L (01027)	Copper, water, unfltrd recover -able, ug/L (01042)	Lead, water, unfltrd recover -able, ug/L (01051)
OCT													
19-19	1.9	1.5	1.6	.70	.06	.05	.156	22.9	927	812	.3	13.6	19
DEC													
23-23	5.0	4.5	4.6	1.70	<.04	.03	.086	54.4	4180	2270	.6	31.4	56

Date	Zinc, water, unfltrd recover -able, ug/L (01092)
OCT	
19-19	138
DEC	
23-23	164

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

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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. 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 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1180	517	305	2630	160	4010	624	1010	1910	1820	1400	1380
2	890	602	290	2220	221	4130	744	882	1660	2000	1170	1210
3	942	613	277	1510	850	4080	618	1190	1780	2240	1080	1340
4	987	1310	335	1530	1850	4120	812	305	2360	1760	840	1270
5	805	780	270	1400	2310	4130	820	1490	1790	1840	1340	1030
6	857	662	385	1220	2040	4130	883	1280	1920	1680	1340	1070
7	829	619	337	1080	863	4170	1160	1300	2000	1920	2700	1160
8	890	611	300	302	180	1550	933	1420	1880	1760	1790	1300
9	923	681	1280	360	322	3020	597	1300	2050	1960	1170	1220
10	643	594	633	321	334	3510	1140	1300	1400	1450	1560	1140
11	568	576	426	368	327	2680	969	1150	2120	2400	1320	1300
12	550	520	580	1880	312	1100	886	1770	1780	2750	1630	1580
13	559	289	464	2220	292	1280	895	1430	2630	2530	1620	1080
14	572	424	445	1200	307	950	846	1250	2440	2360	1900	1450
15	554	510	401	862	289	1300	1660	1290	2200	519	1420	1340
16	549	522	385	369	235	1530	1420	1340	1600	178	1610	1060
17	546	514	582	1120	335	1800	1020	1360	2150	2190	1890	1120
18	553	505	276	1380	2130	2150	1060	1510	1860	2540	1440	961
19	1360	356	361	1110	2720	1260	1300	1440	1980	2710	1110	1060
20	590	253	1030	870	6200	1140	1140	1410	1950	2520	1400	915
21	573	309	2110	1180	6050	850	1320	1500	1870	2600	1340	720
22	1020	317	1190	689	5800	807	1380	1700	1890	2650	1520	662
23	664	250	3440	1160	5390	1660	864	1700	2190	2680	1290	692
24	1180	314	4300	1030	5310	820	868	1780	2070	2550	1370	696
25	581	272	2530	392	6150	861	827	2230	1730	2590	1110	693
26	784	381	1270	817	5460	2600	728	1920	2310	2610	1260	383
27	673	392	1220	556	5230	1290	879	2240	1950	2570	1240	963
28	685	289	1240	837	4400	1110	947	1600	2020	2540	1260	374
29	693	330	2120	1150	---	718	861	2060	2080	2600	1350	742
30	465	262	1160	1030	---	986	828	2230	1760	2560	1300	879
31	793	---	1940	664	---	860	---	1850	---	2560	1300	---
TOTAL	23458	14574	31882	33457	66067	64602	29029	46237	59330	67637	44070	30790
MEAN	757	486	1028	1079	2360	2084	968	1492	1978	2182	1422	1026
MAX	1360	1310	4300	2630	6200	4170	1660	2240	2630	2750	2700	1580
MIN	465	250	270	302	160	718	597	305	1400	178	840	374
AC-FT	46530	28910	63240	66360	131000	128100	57580	91710	117700	134200	87410	61070

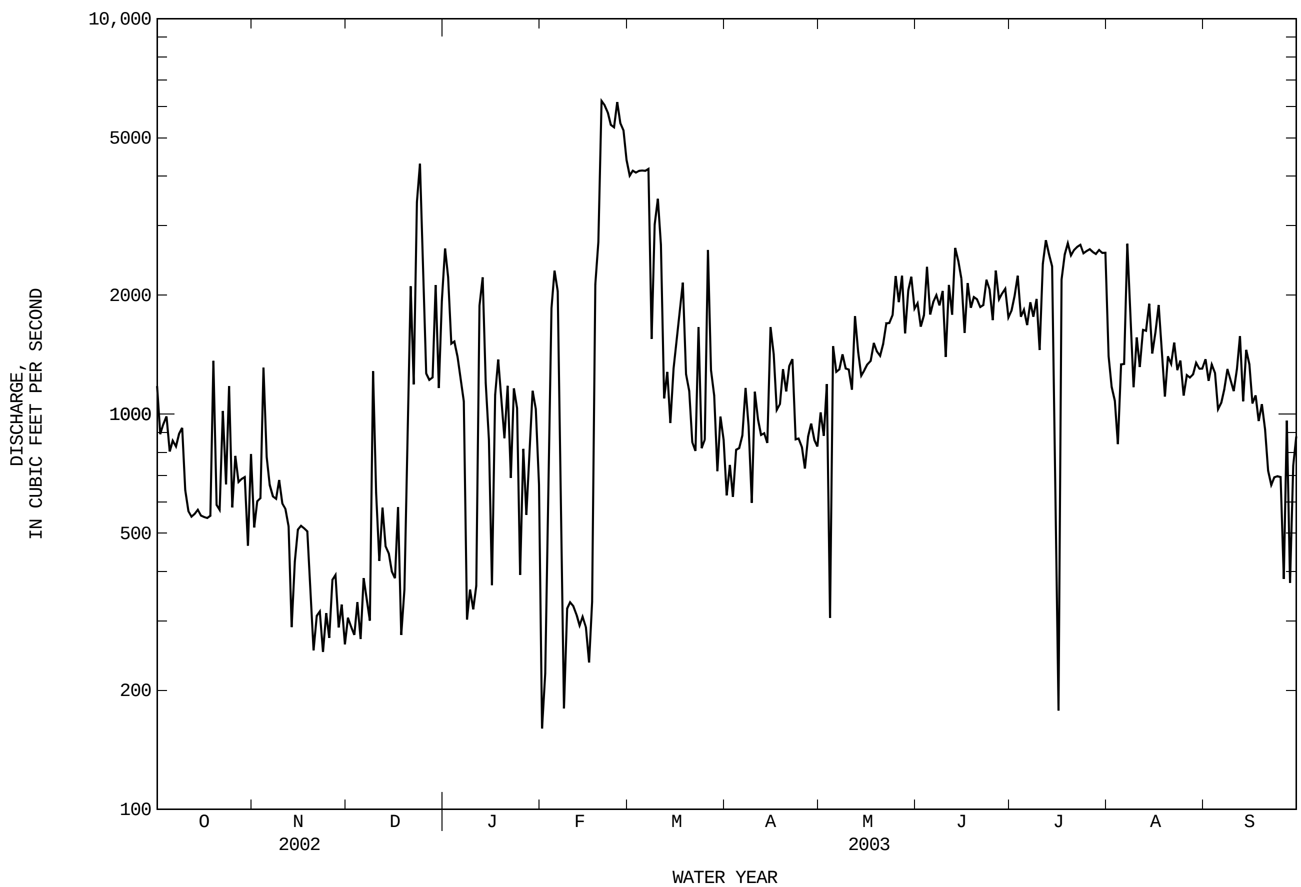
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1898 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1940	1458	1331	1217	1471	1535	2634	4086	3763	2816	1784	2522
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 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1898 - 2003	
ANNUAL TOTAL	770024		511133			
ANNUAL MEAN	2110		1400		2176	
HIGHEST ANNUAL MEAN					7535	1914
LOWEST ANNUAL MEAN					590	1917
HIGHEST DAILY MEAN	26800	Jul 9	6200	Feb 20	323000	Jun 15 1935
LOWEST DAILY MEAN	179	Feb 10	160	Feb 1	0.00	Sep 29 1914
ANNUAL SEVEN-DAY MINIMUM	247	Feb 7	296	Nov 29	18	Oct 25 1990
MAXIMUM PEAK FLOW			12200	Feb 20	481000	Jun 15 1935
MAXIMUM PEAK STAGE			12.41	Feb 20	g50.00	Jun 15 1935
ANNUAL RUNOFF (AC-FT)	1527000		1014000		1577000	
10 PERCENT EXCEEDS	2970		2560		3790	
50 PERCENT EXCEEDS	1100		1190		1140	
90 PERCENT EXCEEDS	300		361		176	

g From floodmark at site and datum then in use.



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 good except those for daily discharges above 800 ft^3/s, which are 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 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

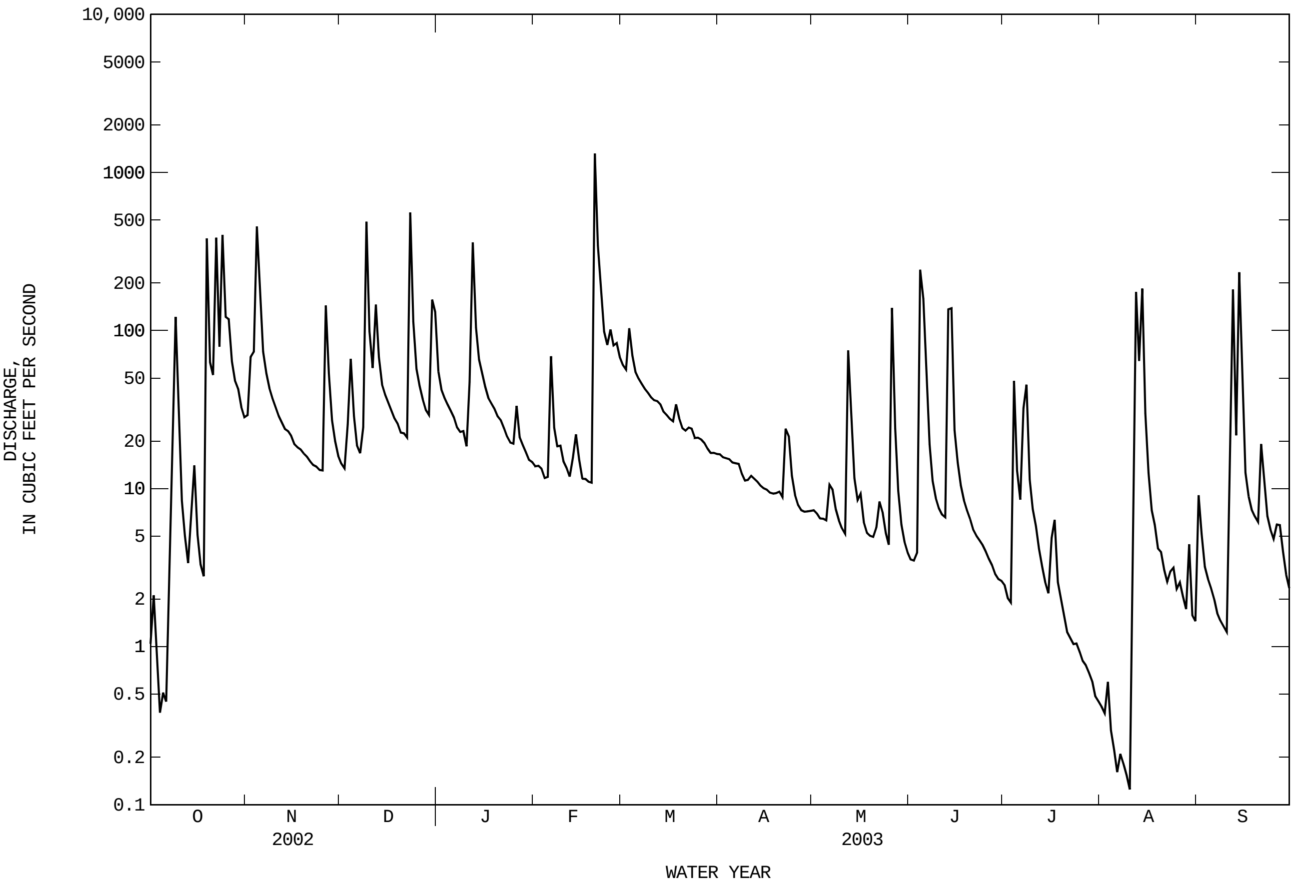
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.0	29	14	55	14	60	16	7.3	3.6	2.5	0.42	9.1
2	2.1	68	13	42	14	57	16	6.9	3.5	2.0	0.38	5.2
3	0.94	74	25	37	13	103	16	6.5	3.9	1.9	0.60	3.2
4	0.38	456	66	34	12	69	15	6.5	243	48	0.29	2.7
5	0.51	162	29	31	12	55	15	6.3	159	13	0.22	2.3
6	0.45	74	19	28	69	50	14	11	65	8.5	0.16	2.0
7	2.4	54	17	24	24	46	14	9.9	19	32	0.21	1.6
8	28	43	24	23	19	43	12	7.4	11	45	0.18	1.5
9	122	37	488	23	19	40	11	6.3	8.7	11	0.15	1.3
10	27	33	99	19	15	38	11	5.6	7.5	7.4	0.12	1.2
11	8.4	29	58	47	13	36	12	5.2	6.8	5.8	15	13
12	5.0	26	146	361	12	36	12	75	6.6	4.2	176	182
13	3.4	24	68	104	16	34	11	27	136	3.2	64	22
14	7.0	23	45	66	22	31	10	12	138	2.6	184	234
15	14	22	39	54	15	29	10	8.4	23	2.2	30	38
16	5.1	19	35	44	12	28	9.8	9.3	15	4.9	13	13
17	3.3	18	31	37	12	27	9.4	6.1	11	6.3	7.3	8.9
18	2.8	18	28	34	11	34	9.3	5.2	8.4	2.6	5.9	7.4
19	383	17	26	32	11	28	9.4	5.0	7.3	2.0	4.2	6.7
20	63	16	23	29	1320	24	9.5	4.9	6.4	1.6	4.0	6.1
21	52	15	22	27	346	23	8.8	5.6	5.5	1.2	3.1	19
22	386	14	21	24	179	24	24	8.3	5.0	1.1	2.6	11
23	79	14	558	21	99	24	21	7.1	4.7	1.0	3.0	6.7
24	403	13	114	20	81	21	12	5.3	4.4	1.0	3.2	5.5
25	122	13	57	19	101	21	9.1	4.4	4.0	0.93	2.3	4.8
26	118	144	45	33	80	20	7.9	139	3.6	0.81	2.5	5.9
27	64	54	37	21	83	19	7.3	24	3.3	0.76	2.1	5.9
28	48	27	31	19	68	18	7.1	9.7	2.9	0.68	1.7	4.0
29	43	20	29	17	---	17	7.2	5.9	2.7	0.60	4.4	2.8
30	33	16	157	15	---	17	7.2	4.6	2.6	0.49	1.6	2.3
31	28	---	131	15	---	17	---	3.9	---	0.45	1.4	---
TOTAL	2055.78	1572	2495	1355	2692	1089	354.0	449.6	921.4	215.72	534.03	629.1
MEAN	66.3	52.4	80.5	43.7	96.1	35.1	11.8	14.5	30.7	6.96	17.2	21.0
MAX	403	456	558	361	1320	103	24	139	243	48	184	234
MIN	0.38	13	13	15	11	17	7.1	3.9	2.6	0.45	0.12	1.2
AC-FT	4080	3120	4950	2690	5340	2160	702	892	1830	428	1060	1250

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	34.3	29.0	37.3	30.3	32.7	28.7	23.8	55.4	41.5	13.8	13.4	14.3
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 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1966 - 2003	
ANNUAL TOTAL	14628.96		14362.63			
ANNUAL MEAN	40.1		39.3		29.7	
HIGHEST ANNUAL MEAN					94.6	1992
LOWEST ANNUAL MEAN					1.91	1967
HIGHEST DAILY MEAN	2580	Jul 2	1320	Feb 20	4330	Dec 21 1991
LOWEST DAILY MEAN	0.38	Oct 4	0.12	Aug 10	0.00	Jun 17 1967
ANNUAL SEVEN-DAY MINIMUM	0.81	Aug 31	0.19	Aug 4	0.00	Jun 17 1967
MAXIMUM PEAK FLOW			4350	Feb 20	14300	May 25 1981
MAXIMUM PEAK STAGE			16.98	Feb 20	27.24	May 25 1981
ANNUAL RUNOFF (AC-FT)	29020		28490		21500	
10 PERCENT EXCEEDS	65		79		46	
50 PERCENT EXCEEDS	12		14		7.8	
90 PERCENT EXCEEDS	1.3		2.0		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 June 1985, Apr. 2002 to May 2002.
SUSPENDED SEDIMENT CHEMISTRY: Jan 1980, May 2002 to June 2002.
SEDIMENT DATA: Dec. 1976, Jan. 1978 to Apr. 1980, July 1982, May 1999, Mar. 2001 to current year.

INSTRUMENTATION.--Stage-activated automatic sampler.

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

Date	Time	Dis-charge, cfs (00060)	Specif. conduc-tance, wat unf uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Color, water, fltrd, Pt-Co units (00080)	Turbid-ity, wat unf lab, Hach 2100AN NTU (99872)	COD, high level, water, unfltrd mg/L (00340)	Alka-linity, wat flt inc tit field, mg/L as CaCO3 (39086)	Residue total at 105 deg. C, sus-pended, mg/L (00530)	Nitrate water, fltrd, mg/L as N (00618)	Nitrite water, fltrd, mg/L as N (00613)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Ammonia water, fltrd, mg/L as N (00608)
MAY													
12-12	1245	163	329	7.6	125	890	100	96	900	.87	.034	.91	.55
JUN													
04-04	0340	452	192	7.4	125	E920	100	60	1240	.57	.024	.59	.09

Date	Total nitro-gen, water, unfltrd mg/L (00600)	Organic nitro-gen, water, unfltrd mg/L (00605)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Phos-phorus, water, unfltrd mg/L (00665)	Phos-phorus, water, fltrd, mg/L (00666)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Organic carbon, water, unfltrd mg/L (00680)	Sus-pended sedi-ment load, tons/d (80155)	Sus-pended sedi-ment concen-tration mg/L (80154)	Cadmium water, unfltrd ug/L (01027)	Copper, water, unfltrd recover -able, ug/L (01042)	Lead, water, unfltrd recover -able, ug/L (01051)	Zinc, water, unfltrd recover -able, ug/L (01092)
MAY													
12-12	5.2	3.8	4.3	.99	E.02	<.02	33.7	514	1170	.4	13.9	21	114
JUN													
04-04	3.7	3.0	3.1	1.05	<.04	--r	43.2	2640	2160	.4	12.9	23	101

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

Null value qualifier codes used in this report:
r -- Sample ruined in preparation

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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 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	155	80	170	99	231	81	23	4.5	4.2	1.7	0.40
2	9.6	160	78	154	98	225	80	21	5.9	4.3	1.7	0.35
3	9.3	200	83	148	96	224	78	20	5.8	4.0	1.6	0.36
4	9.4	257	90	144	90	222	75	21	6.4	6.3	1.6	0.30
5	8.4	298	82	140	89	213	72	20	15	5.1	1.5	0.29
6	8.4	243	79	135	98	205	69	18	23	4.6	1.4	0.29
7	8.1	226	78	130	91	197	67	18	13	4.1	1.4	0.28
8	38	214	80	129	88	192	61	17	9.8	4.0	1.3	0.28
9	73	203	367	126	90	188	58	15	8.8	3.7	1.3	0.28
10	39	191	279	116	85	181	56	13	8.6	3.5	1.5	0.28
11	24	174	245	116	82	176	56	12	7.5	3.3	1.6	0.28
12	19	161	246	181	81	174	53	12	6.9	3.3	1.6	0.29
13	18	154	246	183	81	167	51	12	10	3.1	1.5	0.41
14	18	148	229	163	83	160	49	11	16	3.1	2.4	0.52
15	18	140	222	159	81	155	46	9.9	15	3.0	2.2	0.55
16	15	131	217	156	74	151	45	8.7	12	4.2	1.8	0.42
17	14	124	212	147	72	146	42	7.5	10	4.8	1.5	0.40
18	14	119	206	147	74	144	42	7.2	8.6	3.2	1.3	0.36
19	183	111	194	143	74	136	42	7.2	8.1	3.0	1.2	0.30
20	102	107	184	141	630	126	41	6.7	7.3	2.9	1.1	0.30
21	47	103	180	139	385	119	37	6.1	6.6	2.6	0.98	0.35
22	72	99	173	130	314	117	35	5.9	6.2	2.4	1.0	0.50
23	93	95	198	122	268	115	36	5.6	5.7	2.4	0.79	0.48
24	309	94	188	119	252	109	35	5.4	5.8	2.7	0.76	0.40
25	322	88	169	120	251	106	31	5.2	5.0	2.4	0.70	0.37
26	244	117	162	120	246	104	28	6.0	4.7	2.3	0.64	0.32
27	230	119	156	114	246	100	26	5.6	4.7	2.2	0.58	0.30
28	213	96	150	113	236	95	25	5.5	4.4	2.4	0.47	0.30
29	198	90	149	109	---	88	24	5.2	4.5	2.2	0.44	0.30
30	179	86	153	104	---	86	24	5.0	4.2	1.9	0.46	0.29
31	163	---	222	102	---	84	---	4.6	---	1.7	0.39	---
TOTAL	2709.2	4503	5397	4220	4454	4736	1465	340.3	254.0	102.9	38.41	10.55
MEAN	87.4	150	174	136	159	153	48.8	11.0	8.47	3.32	1.24	0.35
MAX	322	298	367	183	630	231	81	23	23	6.3	2.4	0.55
MIN	8.1	86	78	102	72	84	24	4.6	4.2	1.7	0.39	0.28
AC-FT	5370	8930	10700	8370	8830	9390	2910	675	504	204	76	21
CFSM	0.70	1.21	1.40	1.10	1.28	1.23	0.39	0.09	0.07	0.03	0.01	0.00
IN.	0.81	1.35	1.62	1.27	1.34	1.42	0.44	0.10	0.08	0.03	0.01	0.00

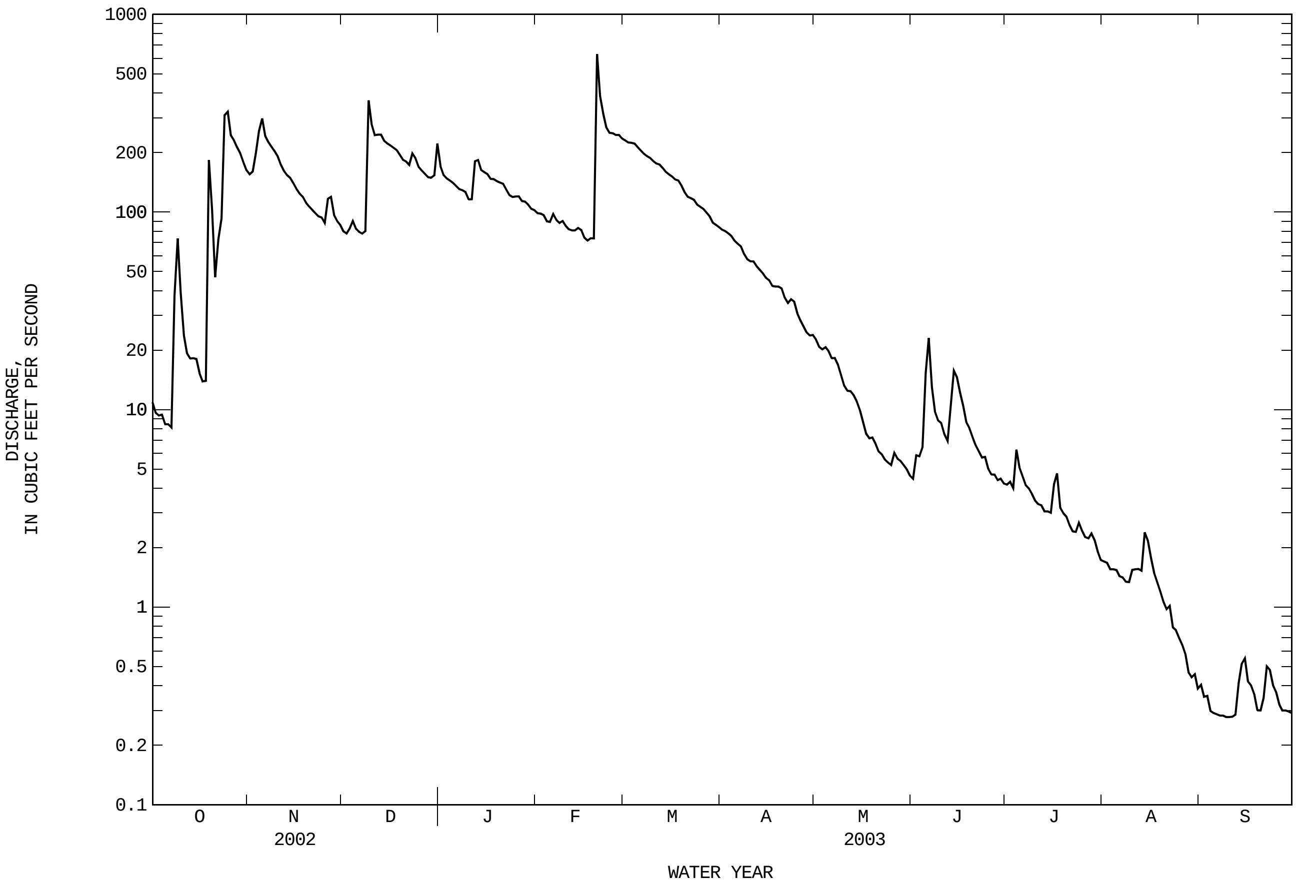
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1979 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	34.9	46.6	76.0	60.4	71.4	74.2	49.2	67.0	129	45.4	6.73	7.57
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 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1979 - 2003	
ANNUAL TOTAL	37396.5		28230.36			
ANNUAL MEAN	102		77.3		55.7	
HIGHEST ANNUAL MEAN					196	1992
LOWEST ANNUAL MEAN					1.11	2000
HIGHEST DAILY MEAN	3790	Jul 2	630	Feb 20	5060	Dec 21 1991
LOWEST DAILY MEAN	1.0	Jun 25	0.28	Sep 7	0.00	Aug 21 1984
ANNUAL SEVEN-DAY MINIMUM	1.3	Jun 20	0.28	Sep 5	0.00	Sep 14 1984
MAXIMUM PEAK FLOW			2030	Feb 20	i15800	Oct 17 1998
MAXIMUM PEAK STAGE			7.10	Feb 20	a25.10	Oct 17 1998
ANNUAL RUNOFF (AC-FT)	74180		55990		40340	
ANNUAL RUNOFF (CFSM)	0.83		0.62		0.45	
ANNUAL RUNOFF (INCHES)	11.22		8.47		6.10	
10 PERCENT EXCEEDS	222		204		135	
50 PERCENT EXCEEDS	31		42		9.8	
90 PERCENT EXCEEDS	3.5		0.68		0.30	

a From floodmark.
i From indirect measurement of peak flow.

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, Sept. 2003.
SEDIMENT DATA: Nov. 2000 to current year.

INSTRUMENTATION.--Stage-activated automatic sampler.

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

Date	Time	Dis- charge, cfs (00060)	Instan- taneous dis- charge, cfs (00061)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temper- ature, water, deg C (00010)	Temper- ature, air, deg C (00020)	Color, water, fltrd, Pt-Co units (00080)	Turbid- ity, wat unf lab, Hach 2100AN NTU (99872)	Dis- solved oxygen, mg/L (00300)	COD, high level, water, unfltrd mg/L (00340)	Hard- ness, water, unfltrd mg/L as CaCO3 (00900)	Noncarb hard- ness, wat flt field, mg/L as CaCO3 (00904)
DEC													
31-31	0305	229	--	520	7.9	--	--	8	12	--	<10	--	--
SEP													
09...	1200	--	.28	505	7.6	26.0	25.2	--	--	5.6	--	240	35

Date	Calcium water, fltrd, mg/L (00915)	Magnes- ium, water, fltrd, mg/L (00925)	Sodium, water, fltrd, mg/L (00930)	Sodium adsorp- tion ratio (00931)	Sodium, percent (00932)	Potas- sium, water, fltrd, mg/L (00935)	Alka- linity, wat flt inc tit field, mg/L as CaCO3 (39086)	Sulfate water, fltrd, mg/L (00945)	Chlor- ide, water, fltrd, mg/L (00940)	Silica, water, fltrd, mg/L (00955)	Residue water, fltrd, sum of consti- tuents mg/L (70301)	Residue total at 105 deg. C, sus- pended, mg/L (00530)	Nitrite water, fltrd, mg/L as N (00613)
DEC													
31-31	--	--	--	--	--	--	233	--	--	--	--	21	<.008
SEP													
09...	65.0	17.9	10.2	.3	9	1.34	201	30.9	20.9	15.4	283	--	<.008

Date	Nitrite + nitrate water fltrd, mg/L as N (00631)	Ammonia water, fltrd, mg/L as N (00608)	Total nitro- gen, water, unfltrd mg/L (00600)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Phos- phorus, water, unfltrd mg/L (00665)	Phos- phorus, water, fltrd, mg/L (00666)	Ortho- phos- phate, water, fltrd, mg/L as P (00671)	Organic carbon, water, unfltrd mg/L (00680)	Sus- pended sedi- ment load, tons/d (80155)	Sus- pended sedi- ment concen- tration mg/L (80154)	Arsenic water, fltrd, ug/L (01000)	Cadmium water, unfltrd ug/L (01027)	Cadmium water, fltrd, ug/L (01025)
DEC													
31-31	.20	<.04	.42	.22	<.04	<.04	<.02	2.8	30	48	--	<.2	--
SEP													
09...	<.022	<.015	--	.10	<.04	<.04	<.02	--	--	--	.7	--	<.04

Date	Chrom- ium, water, fltrd, ug/L (01030)	Copper, water, unfltrd recover -able, ug/L (01042)	Copper, water, fltrd, ug/L (01040)	Lead, water, unfltrd recover -able, ug/L (01051)	Lead, water, fltrd, ug/L (01049)	Nickel, water, fltrd, ug/L (01065)	Stront- ium, water, fltrd, ug/L (01080)	Zinc, water, unfltrd recover -able, ug/L (01092)	Zinc, water, fltrd, ug/L (01090)	2,6-Di- ethyl- aniline water fltrd 0.7u GF ug/L (82660)	Aceto- chlor, water, fltrd, ug/L (49260)	Ala- chlor, water, fltrd, ug/L (46342)	alpha- HCH, water, fltrd, ug/L (34253)
DEC													
31-31	--	<1.0	--	<1	--	--	--	3	--	--	--	--	--
SEP													
09...	<.8	--	.6	--	<.08	.29	367	--	<1	<.006	<.006	<.004	<.005

Date	Atra- zine, water, fltrd, ug/L (39632)	Azin- phos- methyl, water, fltrd 0.7u GF ug/L (82686)	Ben- flur- alin, water, fltrd 0.7u GF ug/L (82673)	Butyl- ate, water, fltrd, ug/L (04028)	Car- baryl, water, fltrd 0.7u GF ug/L (82680)	Carbo- furan, water, fltrd 0.7u GF ug/L (82674)	Chlor- pyrifos water, fltrd, ug/L (38933)	cis- Per- methrin water fltrd 0.7u GF ug/L (82687)	Cyana- zine, water, fltrd, ug/L (04041)	DCPA, water fltrd 0.7u GF ug/L (82682)	CIAT, water, fltrd, ug/L (04040)	Desulf- inyl fipro- nil, water, fltrd, ug/L (62170)	Desulf- inyl- fipro- nil amide, wat flt ug/L (62169)
DEC													
31-31	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
09...	<.007	<.050	<.010	<.002	<.041	<.020	<.005	<.006	<.018	<.003	<.006	<.004	<.009

08158700 Onion Creek near Driftwood, TX--Continued

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

Date	Diazi- non, water, fltrd, ug/L (39572)	Diel- drin, water, fltrd, ug/L (39381)	Disul- foton, water, fltrd 0.7u GF ug/L (82677)	EPTC, water, fltrd 0.7u GF ug/L (82668)	Ethal- flur- alin, water, fltrd 0.7u GF ug/L (82663)	Etho- prop, water, fltrd 0.7u GF ug/L (82672)	Fipro- nil, water, fltrd, ug/L (62166)	Fipro- nil sulfide water, fltrd, ug/L (62167)	Fipro- nil sulfone water, fltrd, ug/L (62168)	Fonofos water, fltrd, ug/L (04095)	Lindane water, fltrd, ug/L (39341)	Linuron water fltrd 0.7u GF ug/L (82666)	Mala- thion, water, fltrd, ug/L (39532)
DEC 31-31	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 09...	<.005	<.005	<.02	<.002	<.009	<.005	<.007	<.005	<.005	<.003	<.004	<.035	<.027

Date	Metola- chlor, water, fltrd, ug/L (39415)	Metri- buzin, water, fltrd, ug/L (82630)	Moli- nate, water, fltrd 0.7u GF ug/L (82671)	Naprop- amide, water, fltrd 0.7u GF ug/L (82684)	p,p'- DDE, water, fltrd, ug/L (34653)	Para- thion, water, fltrd, ug/L (39542)	Methyl para- thion, water, fltrd 0.7u GF ug/L (82667)	Peb- ulate, water, fltrd 0.7u GF ug/L (82669)	Pendi- meth- alin, water, fltrd 0.7u GF ug/L (82683)	Phorate water fltrd 0.7u GF ug/L (82664)	Prome- ton, water, fltrd, ug/L (04037)	Propa- chlor, water, fltrd, ug/L (04024)	Pro- panil, water, fltrd 0.7u GF ug/L (82679)
DEC 31-31	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 09...	<.013	<.006	<.002	<.007	<.003	<.010	<.006	<.004	<.022	<.011	<.01	<.010	<.011

Date	Propar- gite, water, fltrd 0.7u GF ug/L (82685)	Pron- amide, water, fltrd 0.7u GF ug/L (82676)	Sima- zine, water, fltrd, ug/L (04035)	Tebu- thiuron water fltrd 0.7u GF ug/L (82670)	Terba- cil, water, fltrd 0.7u GF ug/L (82665)	Terbu- fos, water, fltrd 0.7u GF ug/L (82675)	Thio- bencarb water fltrd 0.7u GF ug/L (82681)	Tri- allate, water, fltrd 0.7u GF ug/L (82678)	Tri- flur- alin, water, fltrd 0.7u GF ug/L (82661)	Di- bromo- methane water unfltrd ug/L (30217)	Bromo- di- chloro- methane water unfltrd ug/L (32101)	Tetra- chloro- methane water unfltrd ug/L (32102)	1,2-Di- chloro- ethane, water, unfltrd ug/L (32103)
DEC 31-31	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 09...	<.02	<.004	<.005	<.02	<.034	<.02	<.005	<.002	<.009	<.05b	<.05b	<.06b	<.1

Date	Tri- bromo- methane water unfltrd ug/L (32104)	Di- bromo- chloro- methane water unfltrd ug/L (32105)	Tri- chloro- methane water unfltrd ug/L (32106)	Toluene water unfltrd ug/L (34010)	Benzene water unfltrd ug/L (34030)	Acrylo- nitrile water unfltrd ug/L (34215)	Chloro- benzene water unfltrd ug/L (34301)	Chloro- ethane, water, unfltrd ug/L (34311)	Ethyl- benzene water unfltrd ug/L (34371)	Hexa- chloro- ethane, water, unfltrd ug/L (34396)	Bromo- methane water unfltrd ug/L (34413)	Chloro- methane water unfltrd ug/L (34418)	Di- chloro- methane water unfltrd ug/L (34423)
DEC 31-31	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 09...	<.10	<.2	E.03b	E.01n	<.04b	<1	<.03b	<.1	<.03b	<.2	<.3mc	<.2mc	<.2

Date	Tetra- chloro- ethene, water, unfltrd ug/L (34475)	Tri- chloro- fluoro- methane water unfltrd ug/L (34488)	1,1-Di- chloro- ethane, water unfltrd ug/L (34496)	1,1-Di- chloro- ethene, water, unfltrd ug/L (34501)	1,1,1- Tri- chloro- ethane, water, unfltrd ug/L (34506)	1,1,2- Tri- chloro- ethane, water, unfltrd ug/L (34511)	1,1,2,2 -Tetra- chloro- ethane, water, unfltrd ug/L (34516)	1,2-Di- chloro- benzene water unfltrd ug/L (34536)	1,2-Di- chloro- propane water unfltrd ug/L (34541)	trans- 1,2-Di- chloro- ethene, water, unfltrd ug/L (34546)	1,2,4- Tri- chloro- benzene water unfltrd ug/L (34551)	1,3-Di- chloro- benzene water unfltrd ug/L (34566)	1,4-Di- chloro- benzene water unfltrd ug/L (34571)
DEC 31-31	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 09...	<.03b	<.09b	<.04b	<.04n	<.03b	<.06n	<.09b	<.03n	<.03b	<.03b	<.1	<.03b	<.05b

Date	Di- chloro- di- fluoro- methane wat unf ug/L (34668)	Naphth- alene, water, unfltrd ug/L (34696)	trans- 1,3-Di- chloro- propene water unfltrd ug/L (34699)	cis- 1,3-Di- chloro- propene water unfltrd ug/L (34704)	Vinyl chlor- ide, water, unfltrd ug/L (39175)	Tri- chloro- ethene, water, unfltrd ug/L (39180)	Hexa- chloro- buta- diene, water, unfltrd ug/L (39702)	1,2,3,4 Tetra- methyl- benzene water unfltrd ug/L (49999)	1,2,3,5 Tetra- methyl- benzene water unfltrd ug/L (50000)	Bromo- ethene, water, unfltrd ug/L (50002)	t-Butyl ethyl ether, water, unfltrd ug/L (50004)	Methyl tert- pentyl ether, water, unfltrd ug/L (50005)	trans- 1,4-Di- chloro- 2- butene, wat unf ug/L (73547)
DEC 31-31	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 09...	<.18mc	<.5	<.09b	<.09b	<.1	<.04b	<.1	<.2	<.2	<.1	<.05b	<.08b	<.7b

08158700 Onion Creek near Driftwood, TX--Continued

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

Date	Ethyl methac-rylate, water, unfltrd ug/L (73570)	Carbon di-sulfide water unfltrd ug/L (77041)	cis-1,2-Di-chloro-ethene, water, unfltrd ug/L (77093)	Methyl n-butyl ketone, water, unfltrd ug/L (77103)	Styrene water unfltrd ug/L (77128)	o-Xylene, water, unfltrd ug/L (77135)	1,1-Di-chloro-propene water unfltrd ug/L (77168)	2,2-Di-chloro-propane water unfltrd ug/L (77170)	1,3-Di-chloro-propane water unfltrd ug/L (77173)	2-Ethyl-toluene water unfltrd ug/L (77220)	1,2,3-Tri-methyl-benzene water unfltrd ug/L (77221)	1,2,4-Tri-methyl-benzene water unfltrd ug/L (77222)	Iso-propyl-benzene water unfltrd ug/L (77223)
DEC													
31-31	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
09...	<.2b	E.10b	<.04b	<.7b	<.04b	<.07b	<.05b	<.05b	<.1	<.06b	<.1	<.06b	<.06b

Date	n-propyl-benzene water unfltrd ug/L (77224)	1,3,5-Tri-methyl-benzene water unfltrd ug/L (77226)	2-Chloro-toluene water unfltrd ug/L (77275)	4-Chloro-toluene water unfltrd ug/L (77277)	Bromo-chloro-methane water unfltrd ug/L (77297)	n-Butyl benzene water unfltrd ug/L (77342)	sec-Butyl-benzene water unfltrd ug/L (77350)	tert-Butyl-benzene water unfltrd ug/L (77353)	4-Iso-propyl-toluene water unfltrd ug/L (77356)	Iodo-methane water unfltrd ug/L (77424)	1,2,3-Tri-chloro-propane water unfltrd ug/L (77443)	1,1,1,2-Tetra-chloro-ethane, water, unfltrd ug/L (77562)	1,2,3-Tri-chloro-benzene water unfltrd ug/L (77613)
DEC													
31-31	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
09...	<.04b	<.04b	<.04b	<.05b	<.12	<.2	<.06b	<.10	E.03t	<.35mc	<.16b	<.03b	<.3

Date	1,2-Di-bromo-ethane, water, unfltrd ug/L (77651)	CFC-113 water unfltrd ug/L (77652)	Methyl t-butyl ether, water, unfltrd ug/L (78032)	3-Chloro-propene water unfltrd ug/L (78109)	Iso-butyl methyl ketone, water, unfltrd ug/L (78133)	Acetone water unfltrd ug/L (81552)	Bromo-benzene water unfltrd ug/L (81555)	Di-ethyl ether, water, unfltrd ug/L (81576)	Diiso-propyl ether, water, unfltrd ug/L (81577)	Meth-acrylo-nitrile water unfltrd ug/L (81593)	Ethyl methyl ketone, water, unfltrd ug/L (81595)	Methyl methac-rylate, water, unfltrd ug/L (81597)	Tetra-hydro-furan, water, unfltrd ug/L (81607)
DEC													
31-31	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
09...	<.04b	<.06b	<.2	<.12	<.4b	<7	<.04b	<.2	<.10	<.6	<5.0	<.3b	<2

Date	Dibromo chloro-propane water unfltrd ug/L (82625)	meta-+ para-Xylene, water, unfltrd ug/L (85795)
DEC		
31-31	--	--
SEP		
09...	<.5	<.06b

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

Value qualifier codes used in this report:
- b -- Value was extrapolated below
- c -- See laboratory comment
- m -- Highly var comp using method, ? prec
- n -- Below the NDV
- t -- Below the long-term MDL

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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.

WATER-DISCHARGE RECORDS

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.--No estimated daily discharges. Records good. 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 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.83	14	8.6	14	7.3	26	5.7	2.2	0.38	0.12	0.00	0.00
2	0.77	15	8.5	13	6.6	25	5.6	2.1	0.65	0.10	0.00	0.00
3	0.80	18	9.1	11	5.3	25	5.5	2.0	0.59	0.09	0.00	0.00
4	0.74	39	10	11	4.8	24	5.3	1.9	0.88	0.13	0.00	0.00
5	0.67	38	9.5	10	4.9	22	5.1	1.8	0.71	0.17	0.00	0.00
6	0.62	31	9.0	10	5.6	21	5.0	1.7	0.65	0.17	0.00	0.00
7	0.89	28	8.7	9.6	4.8	19	4.9	1.7	0.49	0.13	0.00	0.00
8	0.84	26	9.3	9.4	4.8	18	4.5	1.6	0.44	0.12	0.00	0.00
9	1.7	24	88	9.1	4.7	17	4.3	1.4	0.41	0.13	0.00	0.00
10	1.1	22	38	8.5	4.1	17	4.3	1.3	0.41	0.12	0.00	0.00
11	0.56	21	35	8.6	3.9	16	4.2	1.3	0.36	0.07	0.00	0.00
12	0.73	18	38	18	3.9	16	4.0	1.3	0.34	0.04	0.00	0.00
13	0.58	17	34	15	4.1	15	3.8	1.3	0.60	0.03	0.00	0.00
14	0.70	17	31	14	4.1	14	3.7	1.1	0.61	0.02	0.00	0.00
15	0.65	16	29	13	4.6	13	3.7	0.97	0.45	0.01	0.00	0.00
16	0.62	15	27	13	5.0	12	3.6	0.90	0.36	0.01	0.00	0.00
17	0.60	14	26	12	5.0	11	3.6	0.81	0.32	0.02	0.00	0.00
18	0.61	14	24	12	5.0	11	3.5	0.77	0.30	0.01	0.00	0.00
19	10	13	22	11	5.2	10	3.5	0.75	0.30	0.00	0.00	0.00
20	4.9	13	20	11	162	10	3.5	0.69	0.28	0.00	0.00	0.00
21	2.7	12	19	10	59	9.5	3.3	0.69	0.27	0.00	0.00	0.00
22	4.8	11	18	9.4	46	9.3	3.4	0.72	0.24	0.00	0.00	0.00
23	7.1	11	20	8.8	37	8.8	3.5	0.70	0.20	0.00	0.00	0.00
24	37	10	18	8.5	33	8.4	3.3	0.63	0.19	0.00	0.00	0.00
25	20	10	17	8.7	32	8.3	2.9	0.58	0.16	0.00	0.00	0.00
26	21	13	16	8.9	31	8.0	2.7	0.61	0.15	0.00	0.00	0.00
27	19	11	15	8.6	30	7.6	2.6	0.57	0.14	0.00	0.00	0.00
28	18	10	15	8.5	27	7.1	2.4	0.51	0.14	0.00	0.00	0.00
29	16	10	15	8.2	---	6.6	2.4	0.50	0.13	0.00	0.00	0.00
30	15	9.6	14	7.8	---	6.4	2.3	0.49	0.11	0.00	0.00	0.00
31	14	---	15	7.6	---	6.1	---	0.41	---	0.00	0.00	---
TOTAL	203.51	520.6	666.7	328.2	550.7	428.1	116.1	34.00	11.26	1.49	0.00	0.00
MEAN	6.56	17.4	21.5	10.6	19.7	13.8	3.87	1.10	0.38	0.048	0.000	0.000
MAX	37	39	88	18	162	26	5.7	2.2	0.88	0.17	0.00	0.00
MIN	0.56	9.6	8.5	7.6	3.9	6.1	2.3	0.41	0.11	0.00	0.00	0.00
AC-FT	404	1030	1320	651	1090	849	230	67	22	3.0	0.00	0.00
CFSM	0.54	1.42	1.76	0.87	1.61	1.13	0.32	0.09	0.03	0.00	0.00	0.00
IN.	0.62	1.59	2.03	1.00	1.68	1.31	0.35	0.10	0.03	0.00	0.00	0.00

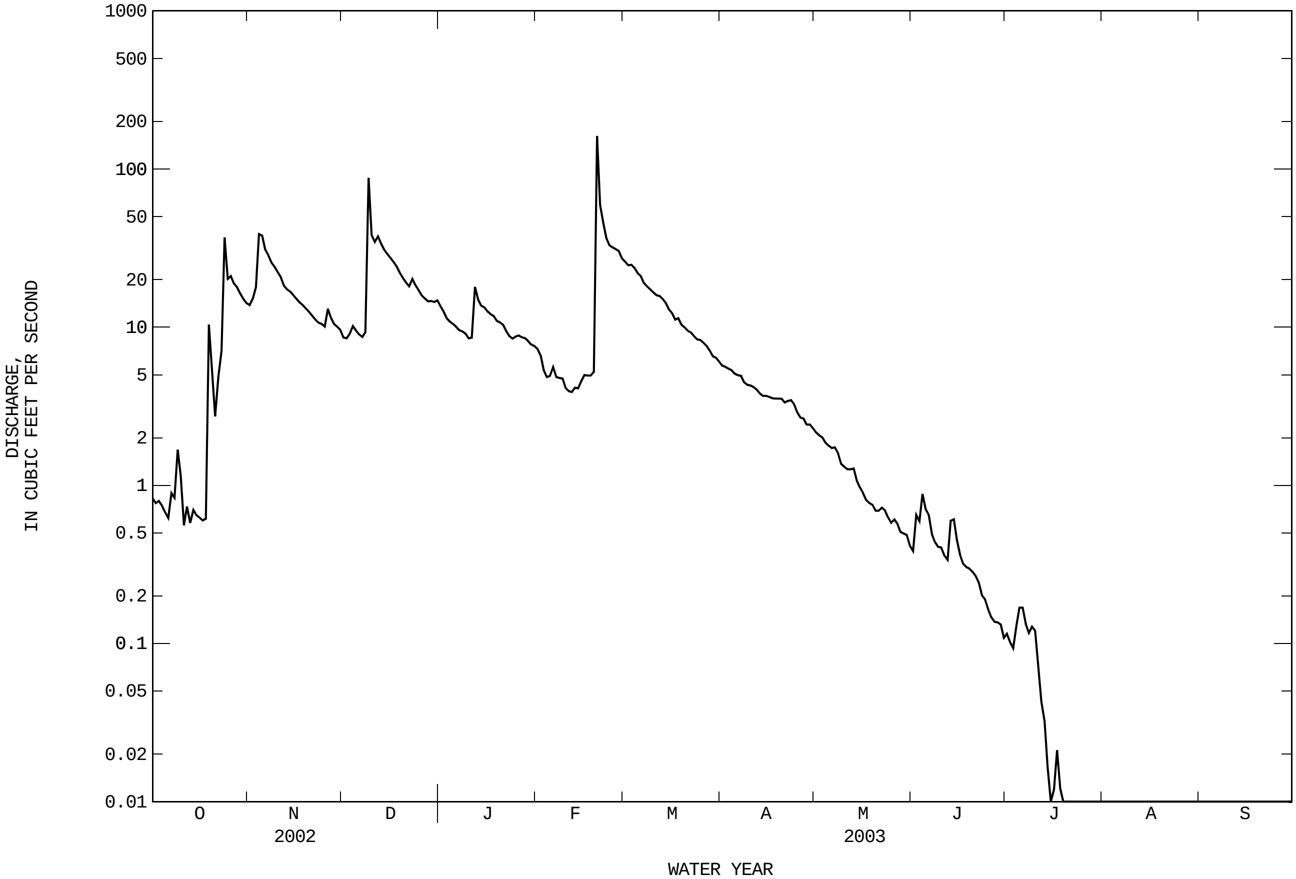
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1979 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	4.19	5.15	10.8	6.96	8.50	7.77	5.61	7.26	16.1	4.61	0.79	0.56
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 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1979 - 2003	
ANNUAL TOTAL	4251.04		2860.66			
ANNUAL MEAN	11.6		7.84		6.49	
HIGHEST ANNUAL MEAN					22.3	1992
LOWEST ANNUAL MEAN					0.10	1996
HIGHEST DAILY MEAN	997	Jul 2	162	Feb 20	1000	Dec 20 1991
LOWEST DAILY MEAN	0.00	Jun 13	0.00	Jul 19	0.00	Aug 28 1980
ANNUAL SEVEN-DAY MINIMUM	0.00	Jun 19	0.00	Jul 19	0.00	Aug 28 1980
MAXIMUM PEAK FLOW			1030	Feb 20	10300	Jul 2 2002
MAXIMUM PEAK STAGE			6.50	Feb 20	a14.27	Jul 2 2002
ANNUAL RUNOFF (AC-FT)	8430		5670		4700	
ANNUAL RUNOFF (CFSM)	0.95		0.64		0.53	
ANNUAL RUNOFF (INCHES)	12.96		8.72		7.23	
10 PERCENT EXCEEDS	21		20		14	
50 PERCENT EXCEEDS	3.1		3.5		1.2	
90 PERCENT EXCEEDS	0.24		0.00		0.00	

a From floodmark.

08158810 Bear Creek below Farm Road 1826, near Driftwood, TX--Continued



08158810 Bear Creek below Farm Road 1826, near Driftwood, TX

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 1978 to Feb. 1983 and Jan. 1993.
SUSPENDED SEDIMENT CHEMISTRY: June 2002 to current year.

INSTRUMENTATION.--Stage-activated automatic sampler.

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

Date	Time	Dis-charge, cfs (00060)	Specif. conduc-tance, wat unf uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Color, water, fltrd, Pt-Co units (00080)	Turbid-ity, wat unf lab, Hach 2100AN NTU (99872)	COD, high level, water, unfltrd mg/L (00340)	Alka-linity, wat flt inc tit field, mg/L as CaCO3 (39086)	Residue total at 105 deg. C, sus-pended, mg/L (00530)	Nitrate water, fltrd, mg/L as N (00618)	Nitrite water, fltrd, mg/L as N (00613)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Ammonia water, fltrd, mg/L as N (00608)
OCT													
24-25	1010	51	423	7.6	80	32	10	182	36	.23	.008	.24	E.03

Date	Total nitro-gen, water, unfltrd mg/L (00600)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Phos-phorus, water, unfltrd mg/L (00665)	Phos-phorus, water, fltrd, mg/L (00666)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Organic carbon, water, unfltrd mg/L (00680)	Sus-pended sedi-ment load, tons/d (80155)	Sus-pended sedi-ment concen-tration mg/L (80154)	Cadmium water, unfltrd ug/L (01027)	Copper, water, unfltrd recover -able, ug/L (01042)	Lead, water, unfltrd recover -able, ug/L (01051)	Zinc, water, unfltrd recover -able, ug/L (01092)
OCT												
24-25	.78	.54	E.03	<.04	<.02	8.3	5.4	39	<.2	E1.0	M	31

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.--Records fair except those for daily discharges below 1 ft^3/s, which are poor. No known regulation or diversions. No flow at times.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.09	3.5	2.9	8.4	4.0	22	2.7	0.52	0.07	0.00	0.00	0.00
2	0.08	5.6	2.9	5.8	4.1	20	2.6	0.48	0.06	0.00	0.00	0.00
3	0.07	11	3.1	5.5	3.7	21	2.5	0.46	0.06	0.00	0.00	0.00
4	0.07	31	3.7	5.3	3.4	20	2.3	0.45	0.15	0.06	0.00	0.00
5	e0.08	33	3.4	5.1	3.4	18	2.2	0.42	0.15	0.04	0.00	0.00
6	e0.08	23	3.2	4.7	4.7	16	2.2	0.40	0.11	0.03	0.00	0.00
7	e0.07	19	3.1	4.2	3.8	15	2.0	0.39	0.10	0.02	0.00	0.00
8	0.06	17	3.4	4.1	3.7	14	1.7	0.35	0.08	0.02	0.00	0.00
9	0.08	15	55	4.0	3.7	13	1.7	0.33	0.08	0.02	0.00	0.00
10	0.07	14	31	3.4	3.3	12	1.7	0.32	0.07	0.00	0.00	0.00
11	0.06	13	25	3.8	3.1	12	1.6	0.30	0.07	0.00	0.00	0.00
12	0.05	11	29	16	3.1	12	1.5	0.32	0.07	0.00	0.00	0.00
13	0.06	10	25	16	3.2	11	1.4	0.31	0.15	0.00	0.00	0.00
14	0.06	9.7	21	15	3.4	10	1.3	0.27	0.17	0.00	0.00	0.00
15	0.06	8.5	19	14	3.1	9.4	1.3	0.24	0.11	0.00	0.00	0.00
16	0.06	6.7	17	13	2.8	8.6	1.2	0.21	0.10	0.03	0.00	0.00
17	0.06	5.9	16	12	2.8	8.0	1.1	0.17	0.09	0.01	0.00	0.00
18	0.05	5.0	15	11	2.8	8.7	1.1	0.15	0.10	0.00	0.00	0.00
19	0.52	4.7	14	10	2.8	6.9	1.1	0.14	0.08	0.00	0.00	0.00
20	0.25	4.4	13	9.5	81	5.2	1.0	0.13	0.08	0.00	0.00	0.00
21	0.21	4.0	13	8.6	87	4.9	0.90	0.13	0.08	0.00	0.00	0.00
22	0.49	3.8	11	6.4	56	4.8	0.88	0.13	0.07	0.00	0.00	0.00
23	0.67	3.6	15	5.1	34	4.3	0.92	0.12	0.07	0.00	0.00	0.00
24	13	3.5	13	5.2	26	4.0	0.81	0.11	0.06	0.00	0.00	0.00
25	12	3.2	12	5.2	26	3.9	0.69	0.10	0.05	0.00	0.00	0.00
26	8.0	5.4	11	6.2	26	3.7	0.63	0.13	0.04	0.00	0.00	0.00
27	5.4	5.5	9.7	5.2	27	3.5	0.60	0.10	0.04	0.00	0.00	0.00
28	4.9	3.7	8.7	5.0	23	3.3	0.57	0.09	0.03	0.00	0.00	0.00
29	4.5	3.4	8.7	4.6	---	3.0	0.57	0.09	0.02	0.00	0.00	0.00
30	3.9	3.2	9.8	4.1	---	2.8	0.57	0.07	0.01	0.00	0.00	0.00
31	3.6	---	11	4.0	---	2.8	---	0.07	---	0.00	0.00	---
TOTAL	58.65	290.3	428.6	230.4	450.9	303.8	41.34	7.50	2.42	0.23	0.00	0.00
MEAN	1.89	9.68	13.8	7.43	16.1	9.80	1.38	0.24	0.081	0.007	0.000	0.000
MAX	13	33	55	16	87	22	2.7	0.52	0.17	0.06	0.00	0.00
MIN	0.05	3.2	2.9	3.4	2.8	2.8	0.57	0.07	0.01	0.00	0.00	0.00
AC-FT	116	576	850	457	894	603	82	15	4.8	0.5	0.00	0.00
CFSM	0.23	1.17	1.68	0.90	1.95	1.19	0.17	0.03	0.01	0.00	0.00	0.00
IN.	0.26	1.31	1.93	1.04	2.04	1.37	0.19	0.03	0.01	0.00	0.00	0.00

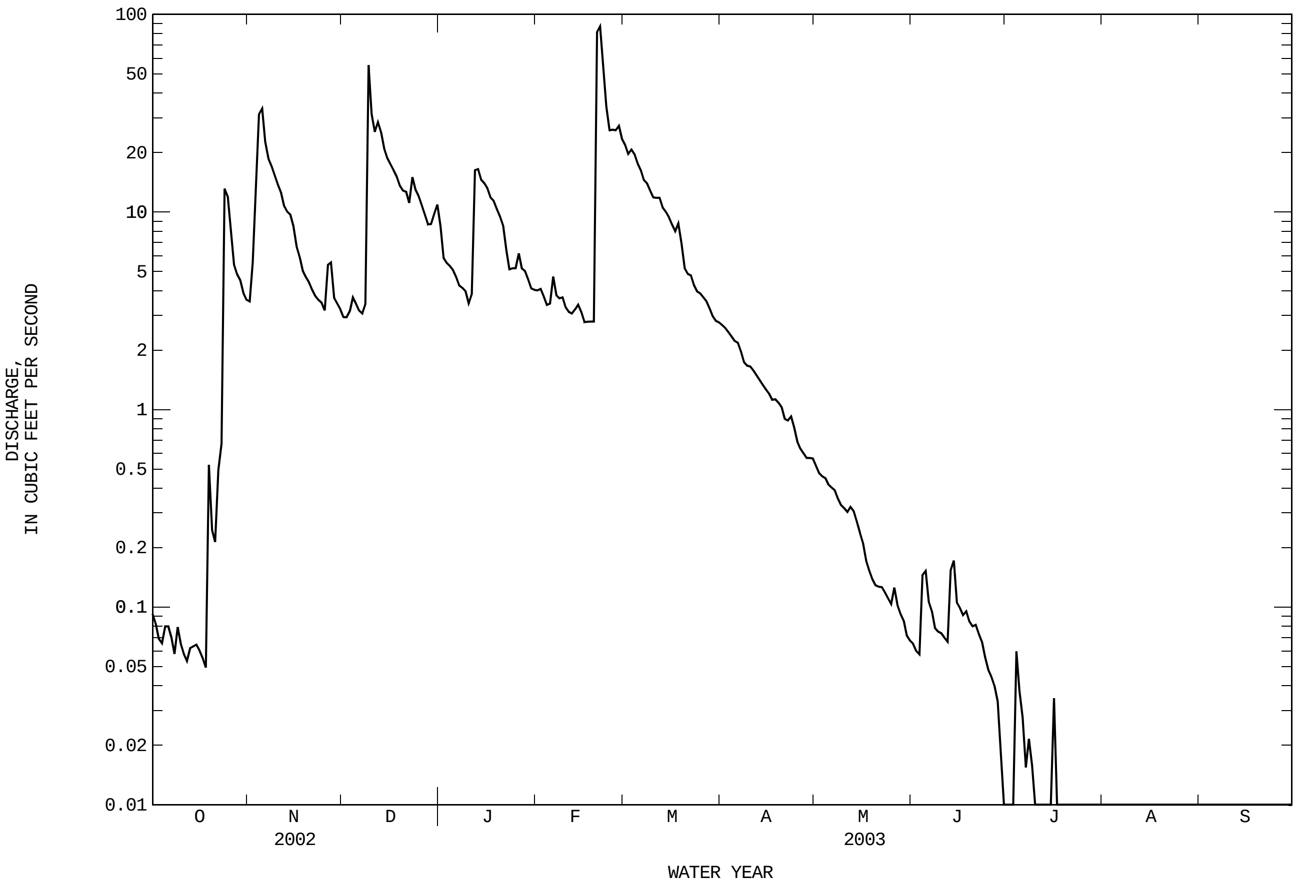
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1978 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	3.86	3.42	9.48	5.82	6.45	6.36	4.35	8.81	13.9	2.28	0.34	0.36
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 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1978 - 2003	
ANNUAL TOTAL	2283.50		1814.14			
ANNUAL MEAN	6.26		4.97		5.58	
HIGHEST ANNUAL MEAN					17.9	1992
LOWEST ANNUAL MEAN					0.003	1996
HIGHEST DAILY MEAN	396	Jul 2	87	Feb 21	901	Jun 11 1981
LOWEST DAILY MEAN	0.00	May 27	0.00	Jul 1	0.00	Jan 26 1978
ANNUAL SEVEN-DAY MINIMUM	0.00	May 30	0.00	Jul 18	0.00	Jan 26 1978
MAXIMUM PEAK FLOW			277	Feb 20	i6330	Dec 20 1991
MAXIMUM PEAK STAGE			5.76	Feb 20	a10.79	Jun 11 1981
ANNUAL RUNOFF (AC-FT)	4530		3600		4040	
ANNUAL RUNOFF (CFSM)	0.76		0.60		0.68	
ANNUAL RUNOFF (INCHES)	10.31		8.19		9.21	
10 PERCENT EXCEEDS	14		14		12	
50 PERCENT EXCEEDS	1.2		0.81		0.42	
90 PERCENT EXCEEDS	0.06		0.00		0.00	

e Estimated
a From floodmark.
i From indirect measurement of peak flow.

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 Feb. 1995, Mar. 1997 to current year.
BIOCHEMICAL DATA: June 1983 to Feb. 1995, Mar. 1997 to current year.
PESTICIDE DATA: Oct. 1984.
SEDIMENT DATA: June 2000 to current year.

INSTRUMENTATION.--Stage-activated automatic sampler.

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

Date	Time	Dis- charge, cfs (00060)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Color, water, fltrd, Pt-Co units (00080)	Turbid- ity, wat unf lab, Hach 2100AN NTU (99872)	COD, high level, water, unfltrd mg/L (00340)	Alka- linity, wat flt inc tit field, mg/L as CaCO3 (39086)	Residue total at 105 deg. C, sus- pended, mg/L (00530)	Nitrite water, fltrd, mg/L as N (00613)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Ammonia water, fltrd, mg/L as N (00608)	Ammonia + org-N, water, unfltrd mg/L as N (00625)
OCT													
24-25	0935	18	516	8.0	35	20	<10	197	18	<.008	E.05	E.04	.28

Date	Phos- phorus, water, unfltrd mg/L (00665)	Phos- phorus, water, fltrd, mg/L (00666)	Ortho- phos- phate, water, fltrd, mg/L as P (00671)	Organic carbon, water, unfltrd mg/L (00680)	Sus- pended sedi- ment load, tons/d (80155)	Sus- pended sedi- ment concen- tration mg/L (80154)	Cadmium water, unfltrd ug/L (01027)	Copper, water, unfltrd recover -able, ug/L (01042)	Lead, water, unfltrd recover -able, ug/L (01051)	Zinc, water, unfltrd recover -able, ug/L (01092)
OCT										
24-25	E.02	<.04	<.02	6.1	.86	18	<.2	E.7	M	8

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

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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 Sept. 2003 (discontinued).
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 and crest-stage gage. Datum of gage is 740.25 ft above NGVD of 1929, city of Austin bench mark. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records poor. No known regulation or diversions. No flow at times.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

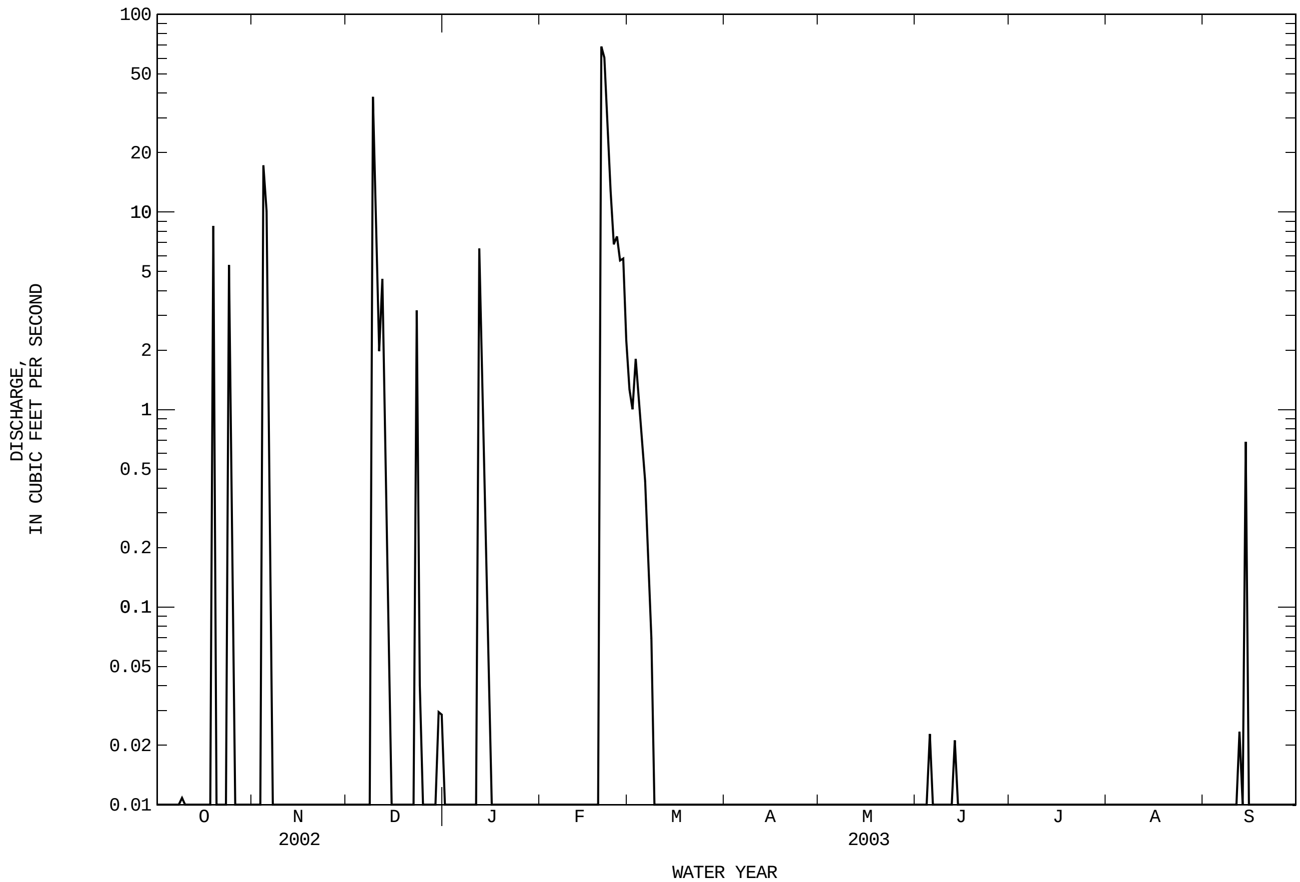
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	1.3	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	1.0	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	1.8	0.00	0.00	0.00	0.00	0.00	0.00
4	0.00	17	0.00	0.00	0.00	1.2	0.00	0.00	0.01	0.00	0.00	0.00
5	0.00	10	0.00	0.00	0.00	0.70	0.00	0.00	0.02	0.00	0.00	0.00
6	0.00	0.26	0.00	0.00	0.01	0.43	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.17	0.00	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.00
9	0.01	0.00	38	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	2.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	4.6	6.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
13	0.00	0.00	1.0	1.5	0.00	0.00	0.00	0.00	0.02	0.00	0.01	0.00
14	0.00	0.00	0.12	0.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.69
15	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	8.5	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	69	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	60	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.01	0.00	0.00	0.00	31	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	3.2	0.00	13	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	5.4	0.00	0.04	0.00	6.9	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	0.10	0.00	0.00	0.00	7.5	0.01	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	5.7	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	5.8	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	2.2	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	0.03	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	---	0.03	0.00	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	14.02	27.26	60.02	8.47	201.11	6.69	0.00	0.00	0.05	0.00	0.01	0.71
MEAN	0.45	0.91	1.94	0.27	7.18	0.22	0.000	0.000	0.002	0.000	0.000	0.024
MAX	8.5	17	38	6.5	69	1.8	0.00	0.00	0.02	0.00	0.01	0.69
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	28	54	119	17	399	13	0.00	0.00	0.1	0.00	0.02	1.4

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1993 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	3.04	2.51	1.67	0.42	2.32	0.76	0.35	1.87	2.11	1.08	0.30	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	2003	2001	1993	1999	1993

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1993 - 2003	
ANNUAL TOTAL	549.36		318.34			
ANNUAL MEAN	1.51		0.87		1.41	
HIGHEST ANNUAL MEAN					2.62	2002
LOWEST ANNUAL MEAN					0.039	1996
HIGHEST DAILY MEAN	177	Jul 2	69	Feb 20	455	Oct 17 1998
LOWEST DAILY MEAN	0.00	Jan 1	0.00	Oct 1	0.00	Mar 11 1993
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 14	0.00	Oct 1	0.00	Mar 11 1993
MAXIMUM PEAK FLOW			228	Feb 20	2700	Oct 17 1998
MAXIMUM PEAK STAGE			3.68	Feb 20	7.10	Oct 17 1998
ANNUAL RUNOFF (AC-FT)	1090		631		1020	
10 PERCENT EXCEEDS	0.29		0.03		0.09	
50 PERCENT EXCEEDS	0.00		0.00		0.00	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

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 except those for estimated daily discharges, which are poor. 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 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.03	0.00	0.24	0.07	0.28	0.11	0.00	e0.00	0.00	0.00	0.93
2	0.00	5.3	0.00	0.10	0.09	0.28	0.10	0.00	e0.00	0.00	0.00	0.03
3	0.00	0.74	0.56	0.11	0.09	1.3	0.10	0.00	e0.00	0.00	0.00	0.00
4	0.00	48	2.5	0.10	0.07	0.32	0.09	0.00	e5.7	0.01	0.00	0.00
5	0.00	15	0.09	0.09	0.11	0.21	0.07	0.00	13	0.78	0.00	0.00
6	0.00	0.32	0.01	0.09	3.6	0.19	0.07	0.00	0.06	0.01	0.00	0.00
7	0.0	0.17	0.00	0.09	0.09	0.16	0.07	0.00	0.00	0.07	0.00	0.00
8	4.6	0.10	1.6	0.09	0.18	0.14	0.03	0.00	0.00	1.9	0.03	0.00
9	8.5	0.09	125	0.09	0.13	0.14	0.02	0.00	0.00	0.06	0.00	0.00
10	0.43	0.08	12	0.07	0.08	0.14	0.02	0.00	0.00	0.00	1.5	0.02
11	0.10	0.07	0.80	3.2	0.06	0.13	0.01	0.00	0.00	0.00	0.75	0.06
12	0.02	0.07	8.4	23	0.06	0.18	0.01	0.01	0.00	0.00	0.50	13
13	0.00	0.01	1.3	3.0	0.23	0.16	0.00	0.00	15	0.00	2.4	0.27
14	0.02	0.00	0.33	0.42	0.11	0.12	0.00	0.00	2.6	0.00	0.51	4.3
15	0.00	0.00	0.29	0.27	0.07	0.13	0.00	0.07	0.07	0.00	0.06	0.45
16	0.00	0.00	0.25	0.18	0.05	0.12	0.00	0.32	0.01	0.90	0.00	0.05
17	0.00	0.00	0.20	0.15	0.05	0.11	0.00	0.01	0.00	0.06	0.00	0.00
18	0.00	0.00	0.16	0.14	0.05	0.24	0.00	0.00	0.00	0.00	0.00	0.00
19	35	0.00	0.13	0.13	0.05	0.13	0.00	0.00	0.00	0.00	0.00	0.00
20	0.83	0.00	0.11	0.12	274	0.10	0.00	0.00	0.00	0.00	0.00	0.00
21	0.05	0.00	0.10	0.16	70	0.11	0.00	0.00	0.00	0.00	0.00	2.6
22	13	0.00	0.68	0.09	25	0.17	0.00	0.00	0.00	0.00	0.00	0.09
23	3.7	0.00	63	0.08	5.1	0.17	0.00	0.00	0.00	0.00	0.00	0.03
24	33	0.00	1.7	0.08	1.0	0.19	0.00	0.00	0.00	0.00	0.00	0.00
25	2.8	0.00	0.39	0.08	2.4	3.1	0.00	0.00	0.00	0.00	0.00	0.00
26	0.39	3.8	0.26	0.27	0.82	0.66	0.00	3.1	0.00	0.00	0.00	0.01
27	0.19	0.09	0.20	0.09	1.0	0.16	0.00	0.00	0.00	0.00	0.00	0.00
28	0.09	0.00	0.14	0.09	0.35	0.11	0.00	0.00	0.00	0.00	0.00	0.00
29	0.07	0.00	0.14	0.10	---	0.10	0.00	0.00	0.00	0.00	0.00	0.00
30	0.05	0.00	4.0	0.09	---	0.10	0.00	0.00	0.00	0.00	0.00	0.00
31	0.03	---	5.2	0.06	---	0.10	---	e0.00	---	0.00	0.01	---
TOTAL	102.87	73.87	229.54	32.87	384.91	9.55	0.70	3.51	36.44	3.79	5.76	21.84
MEAN	3.32	2.46	7.40	1.06	13.7	0.31	0.023	0.11	1.21	0.12	0.19	0.73
MAX	35	48	125	23	274	3.1	0.11	3.1	15	1.9	2.4	13
MIN	0.00	0.00	0.00	0.06	0.05	0.10	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	204	147	455	65	763	19	1.4	7.0	72	7.5	11	43

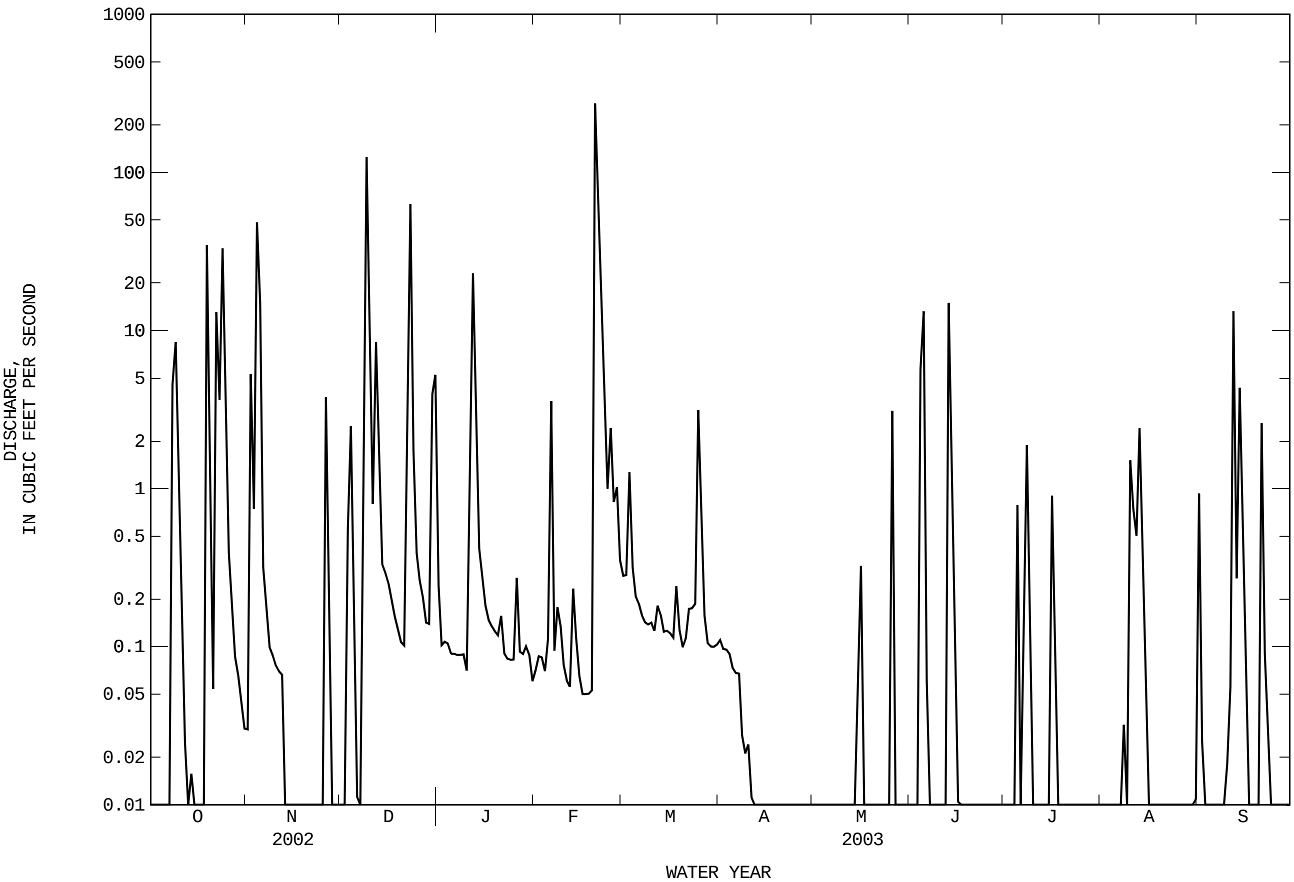
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1985 - 2003h, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	16.9	23.8	10.9	3.80	6.04	3.86	2.37	3.63	10.3	6.25	6.58	2.58
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	2.46	5.45	1.06	0.40	0.31	0.023	0.11	0.14	0.000	0.085	0.000
(WY)	2002	2003	2001	2003	2002	2003	2003	2003	2001	2000	2000	2000

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1985 - 2003h	
ANNUAL TOTAL	1599.20		905.65			
ANNUAL MEAN	4.38		2.48		8.58	
HIGHEST ANNUAL MEAN					15.7	1985
LOWEST ANNUAL MEAN					2.48	2003
HIGHEST DAILY MEAN	476	Jul 2	274	Feb 20	1230	Nov 15 2001
LOWEST DAILY MEAN	0.00	Mar 16	0.00	Oct 1	0.00	Apr 22 2000
ANNUAL SEVEN-DAY MINIMUM	0.00	Apr 15	0.00	Oct 1	0.00	Apr 22 2000
MAXIMUM PEAK FLOW			1160	Feb 20	i5830	Nov 15 2001
MAXIMUM PEAK STAGE			7.55	Feb 20	a16.85	Nov 15 2001
ANNUAL RUNOFF (AC-FT)	3170		1800		6220	
10 PERCENT EXCEEDS	3.9		2.4		8.8	
50 PERCENT EXCEEDS	0.05		0.05		0.20	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

e Estimated
a From floodmark.
i From indirect 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 current year.
BIOCHEMICAL DATA: Mar. 2002 to current year.
PESTICIDE DATA: May 2000, and Mar. 2002 to current year.
SUSPENDED SEDIMENT CHEMISTRY: May 2000 to current year.
SEDIMENT DATA: May 2000, and Mar. 2002 to current year.

INSTRUMENTATION.--Stage-activated automatic sampler.

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

Date	Time	Dis- charge, cfs (00060)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Color, water, fltrd, Pt-Co units (00080)	Turbid- ity, wat unf lab, Hach 2100AN NTU (99872)	COD, high level, water, unfltrd mg/L (00340)	Alka- linity, wat flt inc tit field, mg/L as CaCO3 (39086)	Residue total at 105 deg. C, sus- pended, mg/L (00530)	Nitrate water, fltrd, mg/L as N (00618)	Nitrite water, fltrd, mg/L as N (00613)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Ammonia water, fltrd, mg/L as N (00608)
OCT													
08-08	1250	10	222	7.5	E50	32	E20	76	33	.28	.018	.30	<.04
FEB													
20-20	0415	373	144	7.6	150	130	E40	54	190	--	<.008	.36	.05

Date	Total nitro- gen, water, unfltrd mg/L (00600)	Organic nitro- gen, water, unfltrd mg/L (00605)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Phos- phorus, water, unfltrd mg/L (00665)	Phos- phorus, water, fltrd, mg/L (00666)	Ortho- phos- phate, water, fltrd, mg/L as P (00671)	Ortho- phos- phate, water, fltrd, mg/L (00660)	Organic carbon, water, unfltrd mg/L (00680)	Sus- pended sedi- ment load, tons/d (80155)	Sus- pended sedi- ment concen- tration mg/L (80154)	Cadmium water, unfltrd ug/L (01027)	Copper, water, unfltrd recover -able, ug/L (01042)	Lead, water, unfltrd recover -able, ug/L (01051)
OCT													
08-08	.90	--	.60	.12	.05	.04	.113	--	--	--	<.2	3.0	3
FEB													
20-20	1.6	1.2	1.2	.34	.12	.10	.319	14.6	189	188	E.1	4.5	9

Date	Zinc, water, unfltrd recover -able, ug/L (01092)	2,4-D water, fltrd, ug/L (39732)	2,4-DB water, fltrd 0.7u GF ug/L (38746)	2,4-D water, fltrd, ug/L (50470)	2,6-Di- ethyl- aniline water fltrd 0.7u GF ug/L (82660)	3- Hydroxy carbo- furan, wat flt 0.7u GF ug/L (49308)	3-Keto- carbo- furan, water, fltrd, ug/L (50295)	Aceto- chlor, water, fltrd, ug/L (49260)	Aci- fluor- fen, water, fltrd 0.7u GF ug/L (49315)	Ala- chlor, water, fltrd, ug/L (46342)	Aldi- carb, water, fltrd 0.7u GF ug/L (49312)	Aldi- carb sulfone water, fltrd 0.7u GF ug/L (49313)	Aldi- carb sulf- oxide, wat flt 0.7u GF ug/L (49314)
OCT													
08-08	18	<.02	<.02	<.009	<.006	<.006	<2	<.006	<.007	<.004	<.04	<.02	<.008
FEB													
20-20	30	.13	<.02	<.009	<.006	<.006	<2	<.006	<.007	<.004	<.04	<.02	<.008

Date	alpha- HCH, water, fltrd, ug/L (34253)	Atra- zine, water, fltrd, ug/L (39632)	Azin- phos- methyl, water, fltrd 0.7u GF ug/L (82686)	Bendio- carb, water, fltrd, ug/L (50299)	Ben- flur- alin, water, fltrd 0.7u GF ug/L (82673)	Benomyl water, fltrd, ug/L (50300)	Bensul- furon, water, fltrd, ug/L (61693)	Ben- tazon, water, fltrd 0.7u GF ug/L (38711)	Broma- cil, water, fltrd, ug/L (04029)	Brom- oxynil, water, fltrd 0.7u GF ug/L (49311)	Butyl- ate, water, fltrd, ug/L (04028)	Chloro- di- amino- s-tri- azine, wat flt ug/L (04039)	Caf- feine, water, fltrd, ug/L (50305)
OCT													
08-08	<.005	.019	<.050	<.03	<.010	<.004	<.02	<.01	<.03	<.02	<.002	<.01	E2.22
FEB													
20-20	<.005	1.19	<.050	<.03	<.010	<.004	<.02	<.01	<.03	<.02	<.002	<.01	<.010

Date	Car- baryl, water, fltrd 0.7u GF ug/L (49310)	Car- baryl, water, fltrd 0.7u GF ug/L (82680)	Carbo- furan, water, fltrd 0.7u GF ug/L (49309)	Carbo- furan, water, fltrd 0.7u GF ug/L (82674)	CEAT, water, fltrd, ug/L (04038)	Chlor- amben methyl ester, water, fltrd, ug/L (61188)	Chlori- muron, water, fltrd, ug/L (50306)	Chloro- thalo- nil, water, fltrd 0.7u GF ug/L (49306)	N-(4- Chloro- phenyl) -N'- methyl- urea, ug/L (61692)	Chlor- pyrifos water, fltrd, ug/L (38933)	cis- Per- methrin water fltrd 0.7u GF ug/L (82687)	Clopyr- alid, water, fltrd 0.7u GF ug/L (49305)	Cyana- zine, water, fltrd, ug/L (04041)
OCT													
08-08	<.03	E.033	<.006	<.020	<.04	<.02	<.010	<.04	<.02	<.005	<.006	<.01	<.018
FEB													
20-20	.09	E.146	<.006	<.020	<.04	<.02	<.010	<.04	<.02	<.005	<.006	<.01	<.018

08158930 Williamson Creek at Manchaca Road, Austin, TX--Continued

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

Date	Cyclo-ate, water, fltrd, ug/L (04031)	Dacthal mono-acid, water, fltrd 0.7u GF ug/L (49304)	DCPA, water fltrd 0.7u GF ug/L (82682)	CIAT, water, fltrd, ug/L (04040)	Desulf-inyl fipro-nil, water, fltrd, ug/L (62170)	Desulf-inyl-fipro-nil amide, wat flt ug/L (62169)	Diazi-non, water, fltrd, ug/L (39572)	Dicamba water fltrd 0.7u GF ug/L (38442)	Di-chlor-prop, water, fltrd 0.7u GF ug/L (49302)	Diel-drin, water, fltrd, ug/L (39381)	Dinoseb water, fltrd 0.7u GF ug/L (49301)	Diphen-amid, water, fltrd, ug/L (04033)	Disul-foton, water, fltrd 0.7u GF ug/L (82677)
OCT													
08-08	<.01	<.01	<.003	<.008	<.004	<.009	.029	<.01	<.01	<.005	<.01	<.03	<.02
FEB													
20-20	<.01	<.01	<.003	E.031	<.004	<.009	.054	<.01	<.01	<.005	<.01	<.03	<.02

Date	Diuron, water, fltrd 0.7u GF ug/L (49300)	EPTC, water, fltrd 0.7u GF ug/L (82668)	Ethal-flur-alin, water, fltrd 0.7u GF ug/L (82663)	Etho-prop, water, fltrd 0.7u GF ug/L (82672)	Fenuron water, fltrd 0.7u GF ug/L (49297)	Fipro-nil, water, fltrd, ug/L (62166)	Fipro-nil sulfide water, fltrd, ug/L (62167)	Fipro-nil sulfone water, fltrd, ug/L (62168)	Flumet-sulam, water, fltrd, ug/L (61694)	Fluo-meturon water fltrd 0.7u GF ug/L (38811)	Fonofos water, fltrd, ug/L (04095)	Imaza-quin, water, fltrd, ug/L (50356)	Imaze-thapyr, water, fltrd, ug/L (50407)
OCT													
08-08	<.01	<.002	<.009	<.005	<.03	<.007	<.005	<.005	<.01	<.03	<.003	<.02	<.02
FEB													
20-20	<.01	<.002	<.009	<.005	<.03	E.013	<.005	<.005	<.01	<.03	<.003	<.02	<.02

Date	Lindane water, fltrd, ug/L (39341)	Linuron water fltrd 0.7u GF ug/L (38478)	Linuron water fltrd 0.7u GF ug/L (82666)	Mala-thion, water, fltrd, ug/L (39532)	MCPA, water, fltrd 0.7u GF ug/L (38482)	MCPB, water, fltrd 0.7u GF ug/L (38487)	Methio-carb, water, fltrd 0.7u GF ug/L (38501)	Meth-omyl, water, fltrd 0.7u GF ug/L (49296)	Meta-laxyl, water, fltrd, ug/L (50359)	Metola-chlor, water, fltrd, ug/L (39415)	Metri-buzin, water, fltrd, ug/L (82630)	Metsul-furon, water, fltrd, ug/L (61697)	Imida-cloprid water, fltrd, ug/L (61695)
OCT													
08-08	<.004	<.01	<.035	.245	<.02	<.01	<.008	<.004	<.02	<.013	<.006	<.03c	<.007
FEB													
20-20	<.004	<.01	<.035	E.018n	.08	<.01	<.008	<.004	<.02	<.013	<.006	<.03	<.007

Date	Moli-nate, water, fltrd 0.7u GF ug/L (82671)	Naprop-amide, water, fltrd 0.7u GF ug/L (82684)	Neburon water, fltrd 0.7u GF ug/L (49294)	Nico-sul-furon, water, fltrd, ug/L (50364)	Norflur azon, water, fltrd 0.7u GF ug/L (49293)	OIET, water, fltrd, ug/L (50355)	Ory-zalin, water, fltrd 0.7u GF ug/L (49292)	Oxamyl, water, fltrd 0.7u GF ug/L (38866)	p,p'-DDE, water, fltrd, ug/L (34653)	Para-thion, water, fltrd, ug/L (39542)	Methyl para-thion, water, fltrd 0.7u GF ug/L (82667)	Peb-ulate, water, fltrd 0.7u GF ug/L (82669)	Pendi-meth-alin, water, fltrd 0.7u GF ug/L (82683)
OCT													
08-08	<.002	<.007	<.01	<.01	<.02	<.008	<.02	<.01	<.003	<.010	<.006	<.004	<.022
FEB													
20-20	<.002	<.007	<.01	<.01	<.02	E.085	<.02	<.01	<.003	<.010	<.006	<.004	<.022

Date	Phorate water fltrd 0.7u GF ug/L (82664)	Pic-loram, water, fltrd 0.7u GF ug/L (49291)	Prome-ton, water, fltrd, ug/L (04037)	Propa-chlor, water, fltrd, ug/L (04024)	Pro-panil, water, fltrd 0.7u GF ug/L (82679)	Propar-gite, water, fltrd 0.7u GF ug/L (82685)	Propham water fltrd 0.7u GF ug/L (49236)	Propi-cona-zole, water, fltrd, ug/L (50471)	Pro-poxur, water, fltrd 0.7u GF ug/L (38538)	Pron-amide, water, fltrd 0.7u GF ug/L (82676)	Siduron water, fltrd, ug/L (38548)	Sima-zine, water, fltrd, ug/L (04035)	Sulfo-met-ruron, water, fltrd, ug/L (50337)
OCT													
08-08	<.011	<.02	E.01n	<.010	<.011	<.02	<.010	<.02	<.008	<.004	<.02	.036	<.009
FEB													
20-20	<.011	<.02	.02	<.010	<.011	<.02	<.010	<.02	.008	.088	<.02	.024	<.010

08158930 Williamson Creek at Manchaca Road, Austin, TX--Continued

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

Date	Tebuthiuron water fltrd 0.7u GF ug/L (82670)	Terbacil, water, fltrd, ug/L (04032)	Terbacil, water, fltrd 0.7u GF ug/L (82665)	Terbufos, water, fltrd 0.7u GF ug/L (82675)	Thiobencarb water fltrd 0.7u GF ug/L (82681)	Triallate, water, fltrd 0.7u GF ug/L (82678)	Tribenuron water, fltrd, ug/L (61159)	Triclopyr, water, fltrd 0.7u GF ug/L (49235)	Trifluralin, water, fltrd 0.7u GF ug/L (82661)
OCT									
08-08	<.02	<.010	<.034	<.02	<.005	<.002	--u	<.02	<.009
FEB									
20-20	<.02	<.010	<.034	<.02	<.005	<.002	--u	.22	<.009

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

Value qualifier codes used in this report:
- c -- See laboratory comment
- n -- Below the NDV

Null value qualifier codes used in this report:
- u -- Unable to determine-matrix interference

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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 poor. 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 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.35	72	39	227	45	268	39	11	2.6	1.0	e0.00	e0.02
2	0.30	75	35	162	44	263	37	11	2.4	0.80	e0.00	e0.06
3	0.12	108	36	141	43	300	33	10	2.0	0.58	e0.00	e0.09
4	0.00	e1910	54	135	41	306	29	10	17	1.1	e0.00	e0.17
5	0.00	e1480	52	127	38	269	25	10	29	2.8	e0.00	e0.15
6	0.00	375	45	118	42	240	23	10	19	4.9	e0.00	e0.23
7	0.02	275	39	106	46	220	22	11	13	4.0	e0.06	e0.27
8	20	240	41	98	43	200	21	9.9	7.7	20	e0.05	e0.20
9	67	215	1050	94	40	187	19	8.7	5.9	15	e0.02	e0.27
10	15	189	577	87	39	173	18	8.2	5.1	4.3	e0.01	e0.18
11	6.1	160	311	88	37	162	18	8.2	4.8	2.7	e0.01	e0.29
12	3.2	134	353	367	34	154	17	8.1	4.3	2.3	1.9	26
13	2.3	117	335	308	32	144	16	9.8	7.1	1.8	0.76	11
14	2.0	86	255	194	32	132	16	8.1	26	0.97	2.8	9.0
15	2.0	75	231	158	32	119	15	7.0	17	0.48	0.89	10
16	1.9	62	214	143	28	112	16	6.4	11	4.6	0.19	4.9
17	1.6	54	199	127	26	103	15	5.7	8.4	5.1	e0.00	2.7
18	1.4	49	186	116	25	97	15	5.3	6.7	1.7	e0.00	1.7
19	115	48	168	112	25	94	14	5.1	5.3	1.1	e0.00	1.4
20	75	45	150	107	3270	84	15	4.9	4.5	0.61	e0.00	1.1
21	52	38	122	100	1570	76	14	4.7	3.9	0.35	e0.00	3.6
22	137	36	116	90	657	76	15	4.6	3.3	0.25	e0.00	4.9
23	72	32	1610	76	429	74	15	4.5	2.9	0.20	e0.00	2.6
24	229	29	423	69	337	70	15	4.3	2.8	0.22	e0.02	1.6
25	e390	27	253	67	332	69	13	3.9	2.6	1.6	e0.01	0.43
26	e270	44	210	71	306	88	12	4.1	2.3	0.57	e0.01	0.88
27	e220	44	185	70	305	61	11	4.6	1.9	0.29	e0.01	3.7
28	175	71	167	64	281	55	11	3.9	1.8	0.21	e0.00	2.1
29	e143	49	150	60	---	49	11	3.3	1.5	0.05	e0.01	e0.65
30	e111	41	153	54	---	44	11	2.9	1.4	e0.00	e0.05	e0.40
31	90	---	326	48	---	41	---	2.6	---	e0.00	e0.00	---
TOTAL	2202.29	6180	8085	3784	8179	4330	551	211.8	223.2	79.58	6.80	90.59
MEAN	71.0	206	261	122	292	140	18.4	6.83	7.44	2.57	0.22	3.02
MAX	390	1910	1610	367	3270	306	39	11	29	20	2.8	26
MIN	0.00	27	35	48	25	41	11	2.6	1.4	0.00	0.00	0.02
AC-FT	4370	12260	16040	7510	16220	8590	1090	420	443	158	13	180

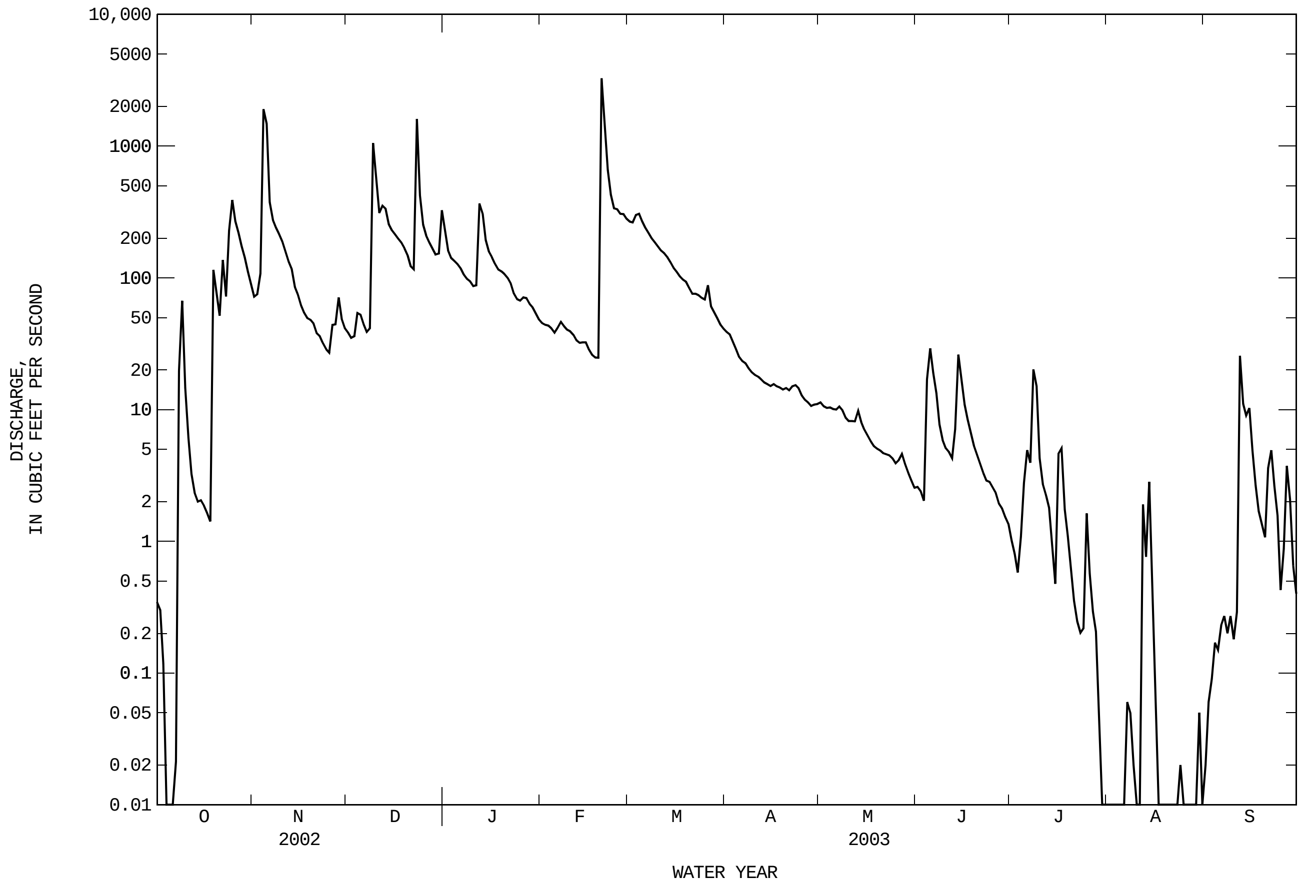
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1924 - 2003h, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	77.5	79.5	103	56.2	82.6	82.0	95.1	163	218	53.8	8.30	8.51
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 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1924 - 2003h	
ANNUAL TOTAL	48340.85		33923.26			
ANNUAL MEAN	132		92.9		84.7	
HIGHEST ANNUAL MEAN					379	1992
LOWEST ANNUAL MEAN					1.49	1925
HIGHEST DAILY MEAN	5620	Jul 2	3270	Feb 20	30500	May 28 1929
LOWEST DAILY MEAN	0.00	Jun 7	0.00	Oct 4	0.00	Jun 3 1925
ANNUAL SEVEN-DAY MINIMUM	0.01	Jun 20	0.00	Jul 30	0.00	Jun 3 1925
MAXIMUM PEAK FLOW			7280	Feb 20	i93200	Nov 16 2001
MAXIMUM PEAK STAGE			17.97	Feb 20	a36.50	Nov 16 2001
ANNUAL RUNOFF (AC-FT)	95880		67290		61370	
10 PERCENT EXCEEDS	254		228		132	
50 PERCENT EXCEEDS	23		17		6.3	
90 PERCENT EXCEEDS	0.70		0.11		0.00	

e Estimated
a From floodmark.
i From indirect measurement of peak flow.
h See PERIOD OF RECORD paragraph.

08159000 Onion Creek at U.S. Highway 183, Austin, TX--Continued



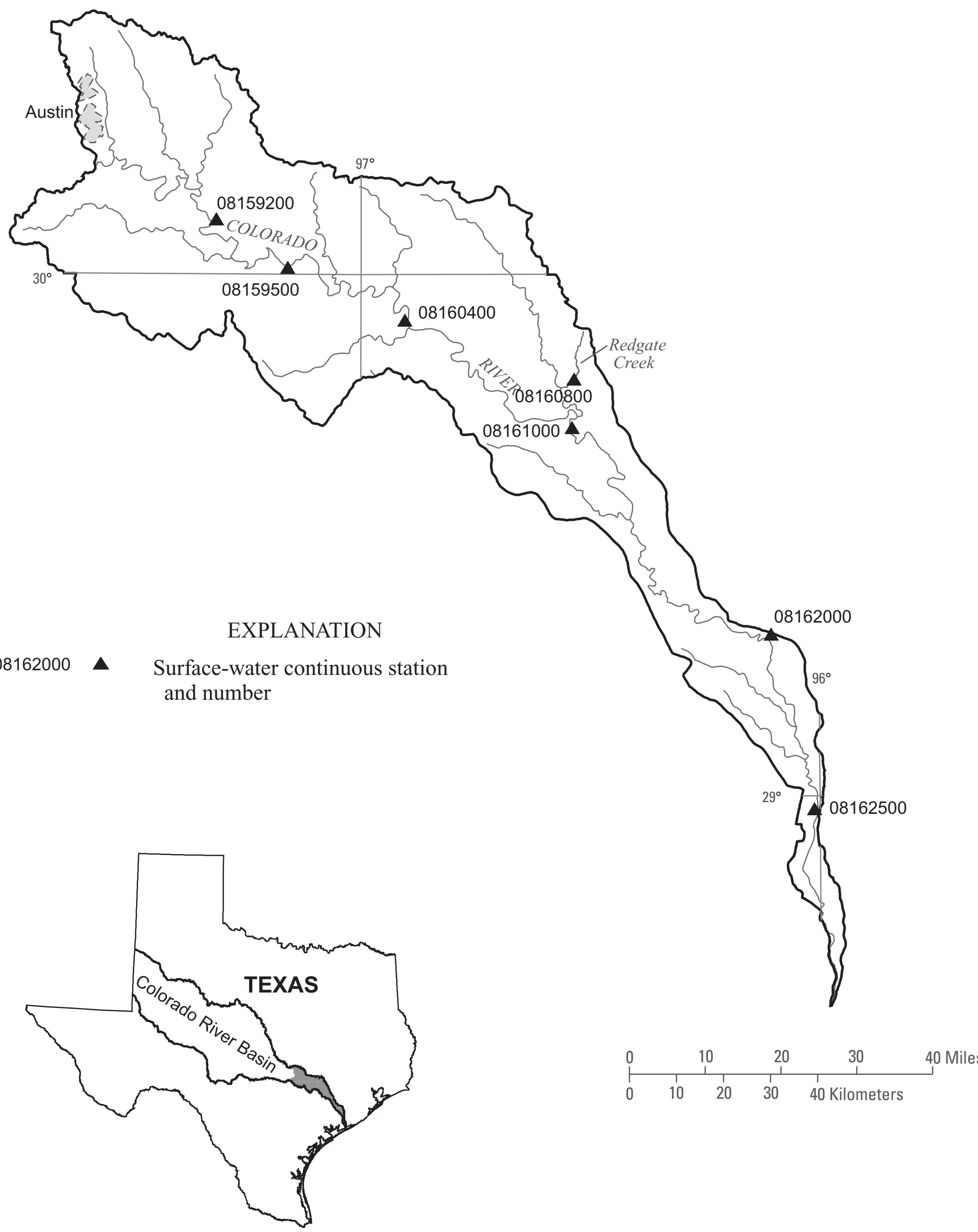


Figure 8.--Map showing location of gaging stations in the fifth section of the Colorado River Basin

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 poor. 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 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1190	1200	755	3040	1200	5530	1340	1230	2070	1880	2360	1300
2	1420	1050	725	3370	777	5140	1310	1320	2080	1870	1500	1340
3	1260	1170	757	2530	692	5240	1260	1270	1940	1960	1200	1270
4	1280	4820	1620	2140	1200	6400	1350	1470	2140	2070	1110	1320
5	1330	20400	1800	2010	2100	5600	1260	1050	e2710	1900	1010	1290
6	1120	4330	1070	1900	2560	5240	1390	1450	e2800	1830	1150	1140
7	1230	1930	957	1730	2400	5100	1460	1550	2300	1720	1420	1090
8	1220	1600	895	1580	1380	4980	1650	1610	2190	1920	2300	1150
9	1380	1440	5280	1010	885	2790	1450	1700	2040	1910	1670	1270
10	1540	1400	11500	895	740	3750	1290	1620	2080	1870	1130	1230
11	1150	1320	2460	874	860	3940	1580	1670	1710	1540	1410	1270
12	1020	1220	1890	1440	804	e2950	1280	1660	2060	2290	1360	1580
13	1000	1200	3810	6510	792	2210	1360	1920	1970	2530	1580	1780
14	976	871	1760	3350	725	2080	1380	1740	3130	2480	1770	1410
15	978	908	1260	1940	760	1780	1350	1680	2860	2230	1910	1710
16	977	1010	1150	1550	740	e1900	2000	1600	2160	1190	1540	1490
17	955	1030	1080	1110	783	e2100	1740	1550	1850	615	1550	1190
18	956	1010	1210	1530	716	2320	1480	1660	2040	1570	1620	e1220
19	e1370	1020	874	1800	2110	e2580	1490	1830	1940	2210	1400	e1070
20	e2350	947	927	1600	8570	e2160	1660	1700	2000	2410	1230	e1160
21	e1500	825	e1580	1390	30400	1820	1600	1450	1940	2300	1320	1080
22	1840	806	e2890	1520	14200	1630	1680	1730	1860	2380	1290	986
23	e3900	796	e1940	1270	8710	1540	1690	1870	1900	e2440	1340	850
24	e3000	743	e7550	1480	7230	2050	1360	1960	2060	2440	1250	856
25	5080	738	5310	1450	6920	1560	1270	2010	2050	2360	1300	848
26	2830	712	3050	1040	7710	2110	1230	2260	1900	2390	1170	858
27	2850	988	2060	1250	7120	2850	1210	2330	2130	2410	1250	759
28	1690	1000	1910	1100	6710	1880	1200	2350	2010	2380	1240	883
29	1540	871	1850	1260	---	1740	1280	2040	1990	2340	1260	782
30	1370	789	2670	1530	---	1440	1250	2200	1980	2410	1290	792
31	1190	---	2810	1400	---	1630	---	2250	---	2380	1280	---
TOTAL	51492	58144	75400	56599	119794	94040	42850	53730	63890	64225	44210	34974
MEAN	1661	1938	2432	1826	4278	3034	1428	1733	2130	2072	1426	1166
MAX	5080	20400	11500	6510	30400	6400	2000	2350	3130	2530	2360	1780
MIN	955	712	725	874	692	1440	1200	1050	1710	615	1010	759
AC-FT	102100	115300	149600	112300	237600	186500	84990	106600	126700	127400	87690	69370

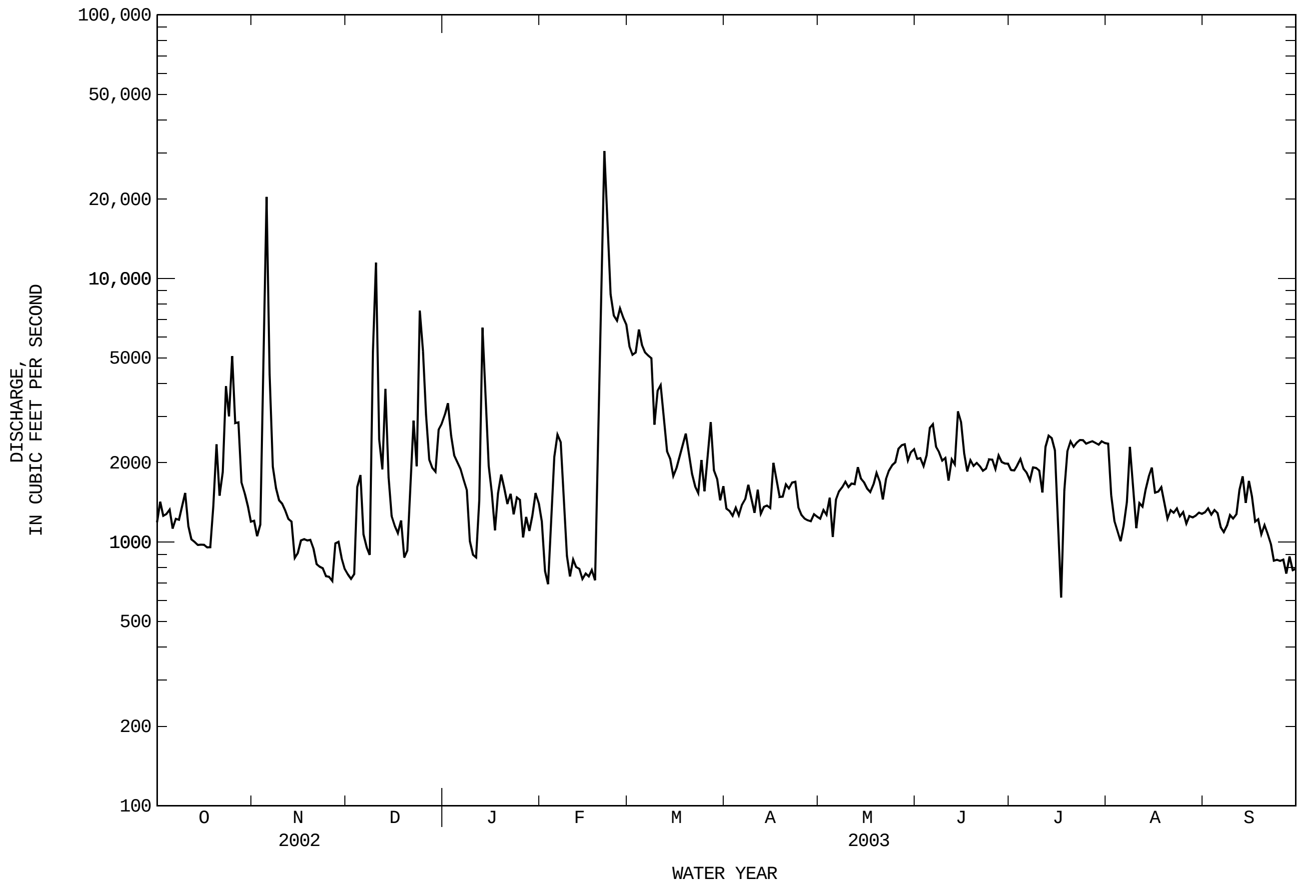
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1412	1344	1535	1692	2157	2319	2448	3329	4288	2790	1877	1706
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 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1960 - 2003	
ANNUAL TOTAL	943550		759348			
ANNUAL MEAN	2585		2080		2240	
HIGHEST ANNUAL MEAN					9073	1992
LOWEST ANNUAL MEAN					828	1964
HIGHEST DAILY MEAN	23900	Jul 10	30400	Feb 21	65800	Dec 22 1991
LOWEST DAILY MEAN	500	Apr 10	615	Jul 17	75	Apr 1 1964
ANNUAL SEVEN-DAY MINIMUM	577	Feb 20	760	Feb 12	84	Oct 19 1964
MAXIMUM PEAK FLOW			35600	Feb 21	79600	Oct 29 1960
MAXIMUM PEAK STAGE			23.66	Feb 21	37.48	Dec 22 1991
ANNUAL RUNOFF (AC-FT)	1872000		1506000		1623000	
10 PERCENT EXCEEDS	3850		2970		4190	
50 PERCENT EXCEEDS	1550		1580		1540	
90 PERCENT EXCEEDS	731		895		263	

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 area. 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 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1370	1320	902	4600	1540	5910	1310	1280	2170	2050	2510	1360
2	1360	1250	856	2930	1280	5170	1460	1350	2180	2060	2240	1400
3	1340	1190	892	3240	917	5210	1260	1360	2040	2100	1460	1410
4	1310	4400	2600	2330	1030	6470	1470	1440	2130	2210	1260	1370
5	1360	33800	4660	2260	2080	5910	1260	1490	2900	2100	1240	1380
6	1280	16900	1620	2190	2560	5270	1430	1190	2670	2080	1160	1310
7	1270	2990	1210	2000	2680	5110	1470	1510	2580	1920	1220	1170
8	1310	2170	1110	1850	2250	5010	1650	1700	2340	1960	2030	1130
9	1410	1860	2200	1490	1360	3580	1530	1780	2230	2120	2370	1250
10	2050	1660	15200	1090	1030	3480	1430	1720	2350	2140	1270	1290
11	1450	1690	4330	1090	1060	4170	1600	1700	1870	1860	1420	1300
12	1170	1490	2950	1200	1050	3470	1210	2000	2140	1950	1520	2060
13	1090	1490	6400	6240	1020	2660	1380	1840	2180	2670	1550	1830
14	1020	1190	3050	4640	996	2430	1410	1850	2650	2590	1680	1700
15	1020	1080	1780	2700	934	1890	1440	1920	3640	2530	2090	1590
16	1020	1140	1570	2010	958	1890	1540	1700	2710	2100	1830	1790
17	997	1190	1440	1640	940	2350	2160	1570	1870	963	1660	1440
18	985	1180	1520	1380	893	2560	1550	1730	2260	827	1680	1300
19	1130	1170	1220	2110	1510	2480	1520	1990	2130	2250	1550	1270
20	2400	1140	1180	1870	7550	2480	1670	1810	2180	2440	1480	1210
21	1740	972	1180	1880	39400	2090	1670	1350	2190	2480	1350	1210
22	1520	897	2640	1690	25100	1820	1720	1740	2100	2460	e1450	1150
23	4330	898	1820	1560	10900	1580	1740	1850	2050	2570	e1380	1030
24	3550	892	7130	1820	7580	2060	1590	2050	2190	2610	e1400	929
25	9490	853	5720	1680	6870	1810	1370	2020	2230	2530	e1350	935
26	4730	874	4090	1470	7230	1920	1320	2440	2120	2520	1360	924
27	3630	932	2190	1290	7090	2970	1340	2230	2190	2570	1300	928
28	2360	1140	2030	1370	6640	2300	1210	2560	2190	2550	1290	830
29	1970	1040	1950	1300	---	2020	1270	2120	2160	2520	1330	940
30	1680	943	2170	1680	---	1590	1340	2250	2140	2510	1340	810
31	1460	---	4810	1700	---	1950	---	2420	---	2590	1360	---
TOTAL	62802	89741	92420	66300	144448	99610	44320	55960	68780	68830	48130	38246
MEAN	2026	2991	2981	2139	5159	3213	1477	1805	2293	2220	1553	1275
MAX	9490	33800	15200	6240	39400	6470	2160	2560	3640	2670	2510	2060
MIN	985	853	856	1090	893	1580	1210	1190	1870	827	1160	810
AC-FT	124600	178000	183300	131500	286500	197600	87910	111000	136400	136500	95470	75860

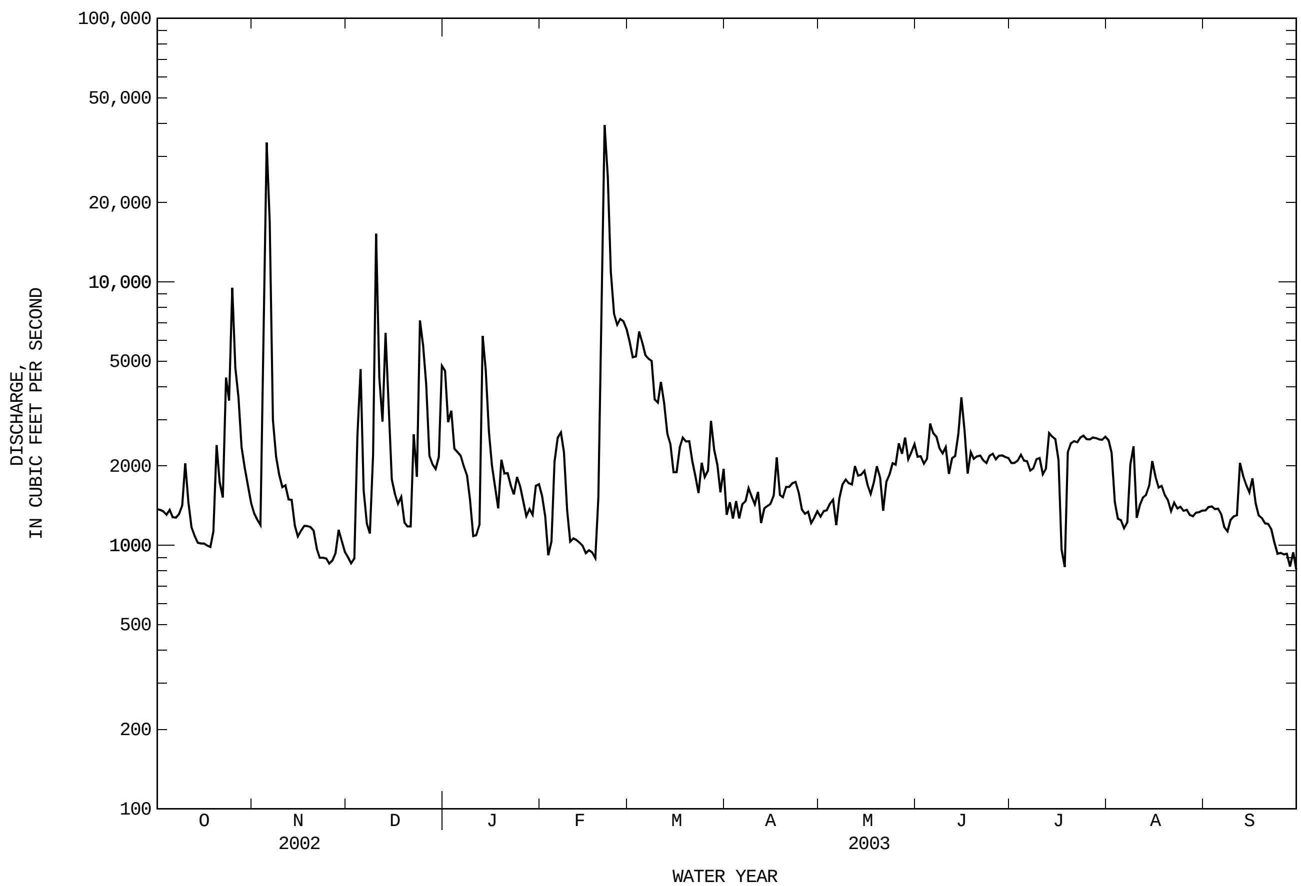
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 2003h, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2779	1996	1752	1895	2208	2050	2482	4332	4056	3612	1912	2905
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 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1930 - 2003h	
ANNUAL TOTAL	1099577		879587			
ANNUAL MEAN	3013		2410		2673	
HIGHEST ANNUAL MEAN					6780	1935
LOWEST ANNUAL MEAN					794	1952
HIGHEST DAILY MEAN	33800	Nov 5	39400	Feb 21	219000	Jun 16 1935
LOWEST DAILY MEAN	691	Feb 24	810	Sep 30	79	Nov 1 1934
ANNUAL SEVEN-DAY MINIMUM	742	Feb 22	899	Sep 24	84	Oct 27 1934
MAXIMUM PEAK FLOW			45500	Feb 21	i305000	Jun 16 1935
MAXIMUM PEAK STAGE			22.47	Feb 21	a42.50	Jun 16 1935
ANNUAL RUNOFF (AC-FT)	2181000		1745000		1936000	
10 PERCENT EXCEEDS	4510		3630		4700	
50 PERCENT EXCEEDS	1690		1720		1640	
90 PERCENT EXCEEDS	906		1050		352	

e Estimated
h See PERIOD OF RECORD paragraph.
a From floodmark.
i From indirect measurement of peak flow.



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 except those for estimated daily discharges, which are fair. 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 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1380	1390	941	6610	1620	7030	1720	1340	2270	2080	2550	1520
2	1190	1310	904	3820	1410	5940	1410	1310	2120	1980	2540	1620
3	1380	1200	863	3880	1040	6040	1400	1410	2120	2000	1790	1720
4	1240	8290	4500	2940	818	7760	1320	1360	2010	2170	1450	1580
5	1240	40400	8330	2560	1230	7300	1420	1550	2290	2200	1300	1570
6	1290	38600	3530	2420	2350	5980	1300	1230	2730	2060	1210	1530
7	1160	8330	1680	2270	2970	5580	1440	1470	2650	1980	1280	1390
8	1360	3400	1350	2080	2770	5370	1480	1640	2340	1890	1570	1290
9	4030	2650	2660	1910	1700	4960	1660	1720	2250	2060	2410	1310
10	3420	2270	12100	1300	e1180	3370	1520	1800	2150	2130	1880	1470
11	1820	2070	10700	1090	e1080	4080	1390	1730	2200	2030	1340	1470
12	1240	1880	4320	2100	986	3970	1630	1810	1880	1730	1620	2610
13	1070	1700	8250	6380	922	3640	1350	1790	2190	2350	1570	2410
14	1030	1640	6090	7350	898	2630	1440	2000	2260	2570	1770	2340
15	971	1280	2830	3960	858	2400	1440	1870	3280	2560	1980	2070
16	954	1210	2050	2610	832	2090	1410	1810	2870	2390	2130	2070
17	951	1270	1780	2100	846	2300	2020	1750	2280	1550	1820	1860
18	933	1290	1600	1570	869	2620	1790	1660	2040	914	1810	1550
19	1550	1260	1680	1890	793	2500	1580	1780	2170	1470	1860	1520
20	2890	1240	1260	2200	5720	2940	1570	1920	2090	2300	1650	1370
21	3000	1180	1250	2010	44000	2220	1730	1790	2140	2500	1480	1480
22	2130	1020	1910	1770	45000	2050	1690	1540	2080	2440	1630	1360
23	3850	955	3720	1840	19800	1860	1780	1820	2010	2530	1530	1250
24	6590	946	6550	1600	9710	1800	e1610	1950	2030	2590	1560	1090
25	13300	917	8520	1760	8080	2190	e1480	2040	2160	2580	1490	1020
26	9870	908	5510	1750	7790	1810	1380	2090	2140	2530	1520	1020
27	4190	896	3220	1310	8180	2410	1330	2300	2010	2570	1420	1010
28	3470	1040	2440	1430	7560	2830	1310	2370	2180	2580	1470	986
29	2280	1130	2240	1310	---	2050	1280	2380	2100	2560	1450	917
30	2000	1030	2200	1450	---	1900	1360	2130	2080	2520	1480	981
31	1640	---	5910	1740	---	1660	---	2230	---	2580	1530	---
TOTAL	83419	132702	120888	79010	181012	111280	45240	55590	67120	68394	52090	45384
MEAN	2691	4423	3900	2549	6465	3590	1508	1793	2237	2206	1680	1513
MAX	13300	40400	12100	7350	45000	7760	2020	2380	3280	2590	2550	2610
MIN	933	896	863	1090	793	1660	1280	1230	1880	914	1210	917
AC-FT	165500	263200	239800	156700	359000	220700	89730	110300	133100	135700	103300	90020

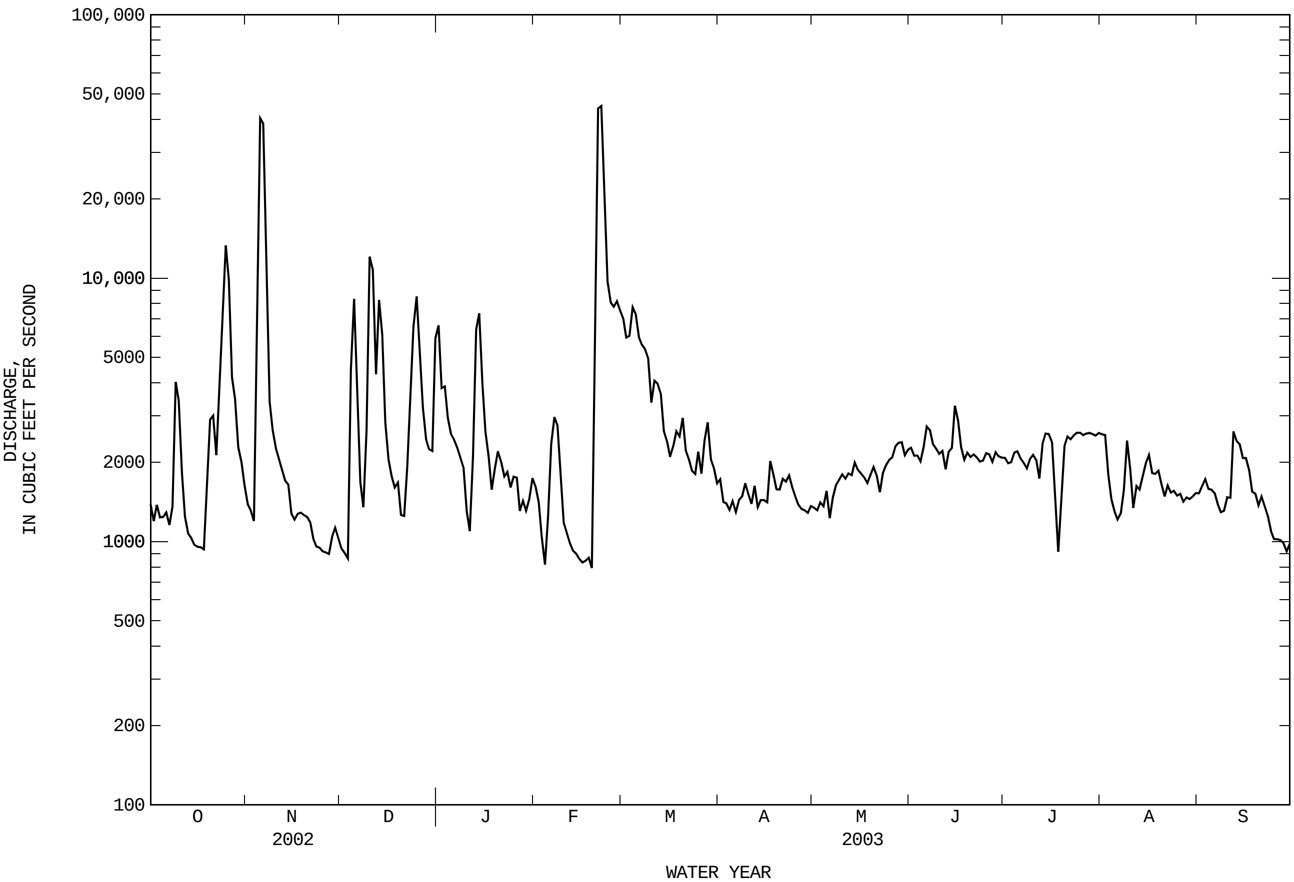
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1881	1441	2484	2651	3695	3660	2665	3153	4022	3367	1704	1620
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

08160400 Colorado River above LaGrange, TX--Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1988 - 2003	
ANNUAL TOTAL	1158656		1042129			
ANNUAL MEAN	3174		2855		2713	
HIGHEST ANNUAL MEAN					9913	1992
LOWEST ANNUAL MEAN					930	2000
HIGHEST DAILY MEAN	40400	Nov 5	45000	Feb 22	84000	Dec 23 1991
LOWEST DAILY MEAN	604	Feb 26	793	Feb 19	167	Dec 21 1989
ANNUAL SEVEN-DAY MINIMUM	638	Feb 22	860	Feb 13	170	Dec 16 1989
MAXIMUM PEAK FLOW			50300	Feb 21	89800	Oct 20 1998
MAXIMUM PEAK STAGE			32.46	Feb 21	p45.47	Oct 20 1998
ANNUAL RUNOFF (AC-FT)	2298000		2067000		1966000	
10 PERCENT EXCEEDS	6460		5120		4770	
50 PERCENT EXCEEDS	1700		1860		1500	
90 PERCENT EXCEEDS	872		1090		390	

e Estimated
p Observed.



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 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

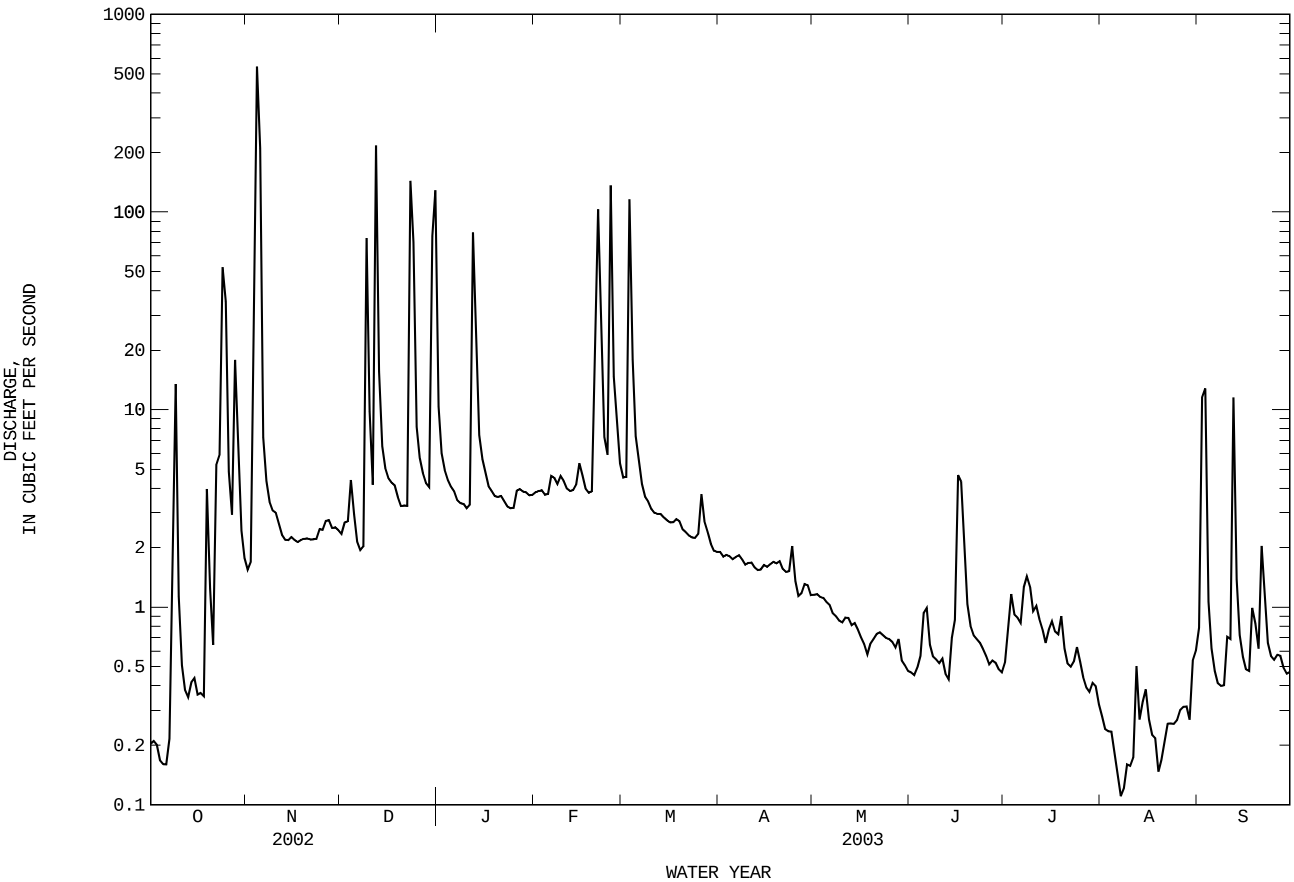
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.20	1.5	2.3	10	3.8	4.5	1.9	1.2	0.47	0.52	0.28	0.79
2	0.21	1.7	2.7	6.0	3.9	4.6	1.8	1.2	0.45	0.81	0.24	12
3	0.20	22	2.7	4.9	3.9	116	1.8	1.1	0.50	1.2	0.24	13
4	0.17	544	4.4	4.4	3.7	18	1.8	1.1	0.57	0.92	0.23	1.1
5	0.16	210	2.9	4.1	3.7	7.3	1.7	1.1	0.94	0.89	0.19	0.62
6	0.16	7.2	2.1	3.8	4.6	5.4	1.8	1.0	0.99	0.83	0.15	0.48
7	0.22	4.4	1.9	3.5	4.5	4.2	1.8	0.93	0.65	1.3	0.11	0.41
8	1.7	3.4	2.0	3.4	4.2	3.6	1.7	0.90	0.56	1.4	0.12	0.40
9	13	3.1	74	3.3	4.6	3.4	1.6	0.86	0.54	1.3	0.16	0.40
10	1.1	3.0	9.8	3.2	4.4	3.1	1.7	0.84	0.52	0.95	0.16	0.71
11	0.51	2.7	4.2	3.3	4.0	3.0	1.7	0.89	0.55	1.0	0.17	0.69
12	0.38	2.3	217	79	3.9	3.0	1.6	0.88	0.46	0.87	0.50	11
13	0.35	2.2	16	20	3.9	3.0	1.5	0.81	0.43	0.77	0.27	1.4
14	0.42	2.2	6.5	7.4	4.2	2.8	1.6	0.83	0.70	0.66	0.33	0.72
15	0.44	2.3	5.1	5.6	5.3	2.8	1.6	0.77	0.86	0.77	0.38	0.56
16	0.36	2.2	4.5	4.8	4.6	2.7	1.6	0.71	4.7	0.85	0.27	0.48
17	0.37	2.1	4.3	4.1	4.0	2.7	1.6	0.65	4.3	0.75	0.23	0.48
18	0.35	2.2	4.1	3.9	3.8	2.8	1.7	0.58	1.9	0.73	0.22	0.99
19	4.0	2.2	3.6	3.6	3.9	2.7	1.7	0.65	1.0	0.90	0.15	0.83
20	1.2	2.2	3.2	3.6	13	2.5	1.7	0.69	0.80	0.62	0.17	0.62
21	0.64	2.2	3.3	3.7	103	2.4	1.6	0.73	0.72	0.52	0.21	2.0
22	5.2	2.2	3.3	3.4	19	2.3	1.5	0.74	0.69	0.50	0.26	1.1
23	5.9	2.2	144	3.2	7.3	2.3	1.5	0.72	0.66	0.53	0.26	0.66
24	53	2.5	70	3.2	5.9	2.2	2.0	0.70	0.61	0.63	0.26	0.56
25	35	2.5	8.2	3.2	136	2.3	1.4	0.69	0.56	0.53	0.27	0.54
26	4.8	2.7	5.7	3.9	15	3.7	1.1	0.67	0.51	0.44	0.30	0.57
27	2.9	2.8	4.8	4.0	8.4	2.7	1.2	0.62	0.54	0.39	0.31	0.57
28	18	2.5	4.2	3.8	5.3	2.4	1.3	0.69	0.52	0.37	0.31	0.49
29	7.4	2.5	4.1	3.8	---	2.1	1.3	0.54	0.49	0.41	0.27	0.46
30	2.4	2.5	76	3.7	---	1.9	1.1	0.51	0.47	0.40	0.54	0.47
31	1.8	---	129	3.7	---	1.9	---	0.48	---	0.32	0.60	---
TOTAL	162.54	847.5	825.9	221.5	391.8	224.3	47.9	24.78	27.66	23.08	8.16	55.10
MEAN	5.24	28.2	26.6	7.15	14.0	7.24	1.60	0.80	0.92	0.74	0.26	1.84
MAX	53	544	217	79	136	116	2.0	1.2	4.7	1.4	0.60	13
MIN	0.16	1.5	1.9	3.2	3.7	1.9	1.1	0.48	0.43	0.32	0.11	0.40
AC-FT	322	1680	1640	439	777	445	95	49	55	46	16	109
CFSM	0.30	1.63	1.54	0.41	0.81	0.42	0.09	0.05	0.05	0.04	0.02	0.11
IN.	0.35	1.82	1.78	0.48	0.84	0.48	0.10	0.05	0.06	0.05	0.02	0.12

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	6.49	5.47	5.28	6.49	7.69	6.40	6.93	11.0	8.91	1.09	1.16	3.12
MAX	69.3	98.4	26.6	31.9	67.5	38.1	39.9	55.5	83.4	4.44	17.4	38.5
(WY)	1999	1999	2003	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 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1962 - 2003	
ANNUAL TOTAL	2258.72		2860.22			
ANNUAL MEAN	6.19		7.84		5.85	
HIGHEST ANNUAL MEAN					20.7	1992
LOWEST ANNUAL MEAN					0.82	1964
HIGHEST DAILY MEAN	544	Nov 4	544	Nov 4	1180	Jun 13 1973
LOWEST DAILY MEAN	0.10	Jun 15	0.11	Aug 7	0.00	Aug 7 1962
ANNUAL SEVEN-DAY MINIMUM	0.18	Jun 9	0.15	Aug 5	0.00	Aug 7 1962
MAXIMUM PEAK FLOW			1450	Dec 12	5360	May 22 1979
MAXIMUM PEAK STAGE			17.77	Dec 12	27.19	May 22 1979
ANNUAL RUNOFF (AC-FT)	4480		5670		4240	
ANNUAL RUNOFF (CFSM)	0.36		0.45		0.34	
ANNUAL RUNOFF (INCHES)	4.86		6.15		4.60	
10 PERCENT EXCEEDS	4.1		6.2		5.1	
50 PERCENT EXCEEDS	1.1		1.7		0.89	
90 PERCENT EXCEEDS	0.28		0.35		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.--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 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1360	1820	1250	8660	1810	7750	2070	1480	2240	2120	2600	1440
2	1290	1500	1180	6180	1670	7050	1830	1460	2230	2050	2540	1740
3	1130	1620	1150	4010	1460	e8500	1710	1450	2110	2010	2500	2020
4	1250	13800	2150	4100	1160	10000	1640	1500	2100	2040	1790	2050
5	1130	40800	11000	3150	1020	8690	1610	1480	2070	2160	1510	1690
6	1130	50200	7610	2870	1570	7150	1630	1640	2590	2120	1400	1600
7	1190	34900	3620	2700	2650	6210	1580	1340	2650	2040	1310	1500
8	1120	7810	2380	2490	3080	5850	1650	1580	2640	1970	1360	1330
9	4670	5050	3540	2300	2770	5650	1710	1710	2330	1890	1700	1220
10	6740	4260	10700	2070	1720	4760	1840	1780	2240	2020	2350	1260
11	4070	3750	15100	1490	1300	4070	1680	1840	2200	2050	1770	1410
12	2020	3420	10300	2180	1130	4600	1650	1780	2110	1920	1520	2150
13	1310	3050	12600	7900	1160	4190	1680	1960	1930	1670	1710	2480
14	1070	2770	9090	8390	1110	3770	1540	1850	2240	2330	1650	1740
15	994	2490	5370	6170	1100	3190	1580	1950	2430	2440	1760	1880
16	926	2090	3410	3940	1070	2780	1580	1880	3850	2460	1990	1470
17	896	1910	2700	2860	1080	2580	1580	1780	3030	2250	2040	1470
18	879	1840	2330	2360	1050	2880	2270	1670	2300	1370	1800	1280
19	894	1760	2130	1820	1050	3140	1860	1660	2200	938	1780	1110
20	3530	1680	1990	2280	1110	2960	1740	1810	2190	1480	1780	1070
21	3680	1610	1600	2340	27500	3240	1730	1820	2140	2340	1630	1030
22	3600	1510	1530	2200	49400	2590	1850	1670	2160	2540	1520	1070
23	6200	1370	3340	1910	43100	2380	1830	1590	2090	2500	1600	979
24	6850	1290	8410	1940	17400	2180	1930	1770	2010	2640	1490	907
25	17800	1260	9070	1820	10500	2300	1960	1930	2050	2660	1500	825
26	15600	1220	6960	1850	8770	2460	1610	2000	2170	2620	1420	785
27	7600	1210	5200	1820	8610	2220	1510	2140	2130	2590	1430	777
28	4980	1180	3290	1430	8330	2990	1470	2210	2030	2610	1330	765
29	4190	1290	2780	1540	---	2920	1440	2400	2150	2610	1350	742
30	2790	1330	2610	1410	---	2340	1430	2270	2120	2590	1350	719
31	2270	---	8010	1600	---	2130	---	2140	---	2540	1360	---
TOTAL	113159	199790	162400	97780	203680	133520	51190	55540	68730	67568	52840	40509
MEAN	3650	6660	5239	3154	7274	4307	1706	1792	2291	2180	1705	1350
MAX	17800	50200	15100	8660	49400	10000	2270	2400	3850	2660	2600	2480
MIN	879	1180	1150	1410	1020	2130	1430	1340	1930	938	1310	719
AC-FT	224500	396300	322100	193900	404000	264800	101500	110200	136300	134000	104800	80350

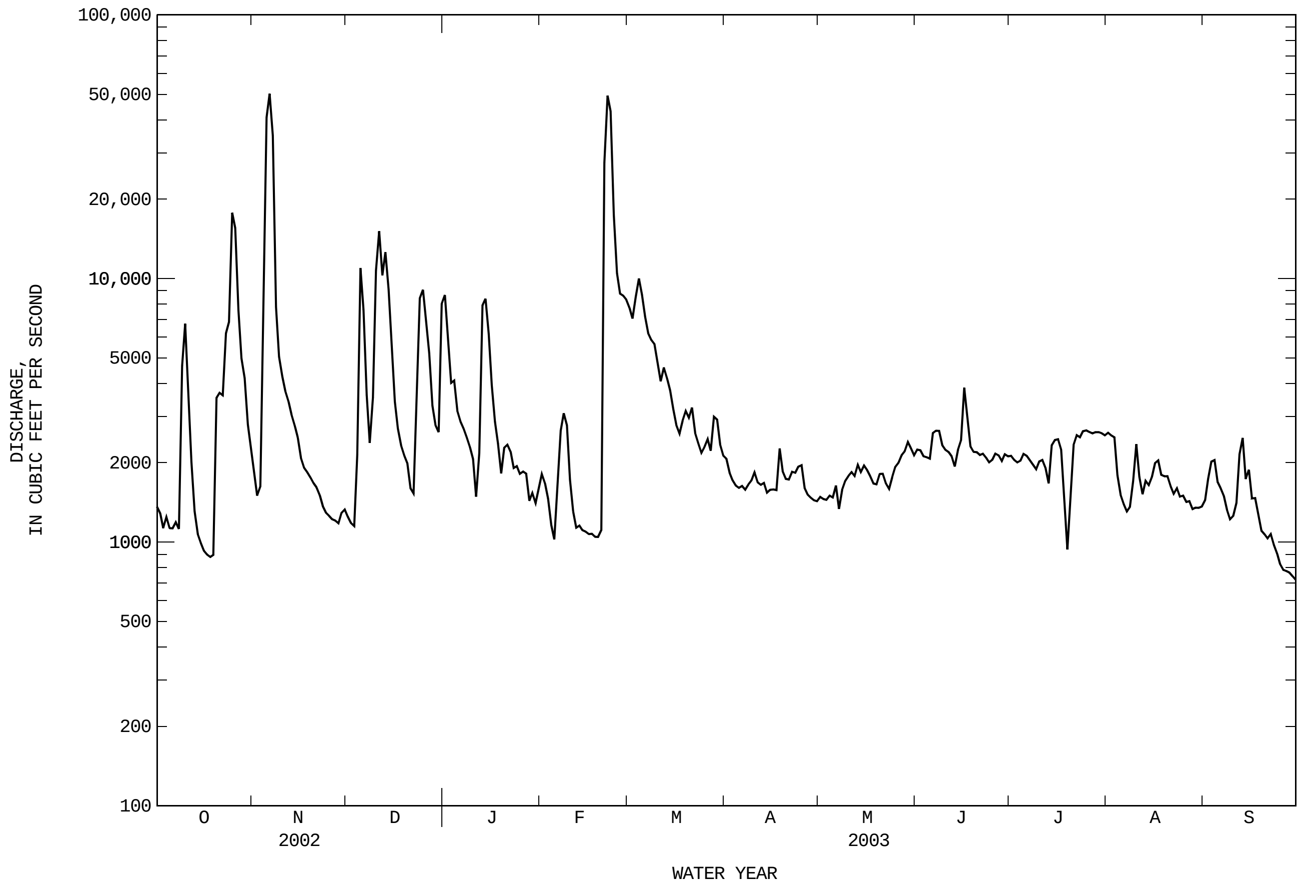
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1916 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2980	2391	2176	2368	2697	2559	3459	5312	5174	3357	1928	2843
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 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1916 - 2003	
ANNUAL TOTAL	1296709		1246706			
ANNUAL MEAN	3553		3416		3112	
HIGHEST ANNUAL MEAN					10810	1992
LOWEST ANNUAL MEAN					653	1917
HIGHEST DAILY MEAN	50200	Nov 6	50200	Nov 6	164000	Jun 19 1935
LOWEST DAILY MEAN	675	Feb 26	719	Sep 30	93	Sep 1 1918
ANNUAL SEVEN-DAY MINIMUM	695	Feb 24	789	Sep 24	106	Aug 22 1917
MAXIMUM PEAK FLOW			52000	Nov 6	190000	Jun 18 1935
MAXIMUM PEAK STAGE			36.45	Nov 6	48.50	Jun 18 1935
ANNUAL RUNOFF (AC-FT)	2572000		2473000		2255000	
10 PERCENT EXCEEDS	8070		6890		5940	
50 PERCENT EXCEEDS	1680		2020		1630	
90 PERCENT EXCEEDS	876		1180		404	

e Estimated



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.--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 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1070	3370	1790	9620	1960	9810	2370	969	1200	1350	2270	605
2	1080	2790	1710	9980	2220	9060	2080	937	1250	1410	2260	771
3	1070	2980	1630	7120	2160	8190	1980	913	1270	1480	2120	1080
4	1070	9050	1590	4860	1980	9800	1750	819	1180	1500	2090	1480
5	1190	24100	2800	4760	1720	11900	1710	934	1220	1610	1540	1510
6	1210	38800	10500	3800	1500	10300	1630	846	1220	1740	1080	1240
7	1150	44700	8010	3420	1680	8390	1720	930	1730	1860	870	1050
8	1200	40300	4360	3210	2770	7290	1620	839	2090	1750	773	988
9	1750	12600	3440	3020	3370	6810	1700	703	2120	1680	680	928
10	4260	7010	5790	2810	3190	6520	1770	962	1790	1670	715	834
11	6290	5670	13200	2590	2390	5510	1840	971	1580	1750	1360	682
12	4210	4850	17000	2390	1890	4750	1660	966	1340	1830	1310	1010
13	2470	4310	15200	3730	1630	5230	1460	913	1270	1750	892	2000
14	1770	3860	15100	9430	1570	4800	1450	1000	1050	1450	993	3100
15	1460	3460	10700	9700	1840	4320	1190	1040	1600	1850	1080	2850
16	1400	3140	6640	7050	1880	3650	1200	999	1900	2700	1200	2370
17	1280	2750	4480	4790	1620	3300	1220	973	3310	2700	1450	2120
18	1210	2520	3610	e3760	1540	3020	1310	969	2720	2510	1590	1950
19	1210	2380	3170	e3300	1490	3150	1810	859	2050	1730	1290	1880
20	1510	2350	2880	e2740	1450	3370	1850	694	1510	1010	1070	1550
21	2820	2290	2740	e2780	2810	3240	1720	722	1500	883	966	2110
22	3850	2170	2360	2790	29000	3450	1700	822	1350	1580	867	1800
23	4230	2090	2220	2640	40600	2990	1870	732	1320	1780	842	1590
24	6560	1940	4000	2420	42700	2780	1920	525	1270	1780	923	1490
25	9640	1840	9340	2380	23200	2460	1890	692	1130	1960	916	1210
26	19100	1780	10200	2250	12900	2440	1800	829	1090	2170	849	1000
27	16700	1780	7810	2350	10700	2650	1500	977	1230	2310	817	889
28	9340	1710	5920	2280	10300	2350	1320	1090	1250	2320	735	809
29	9350	1680	4050	2000	---	2950	1170	1360	1110	2290	674	755
30	6520	1690	3450	1980	---	3120	1100	1390	1230	2320	578	603
31	4380	---	3690	1920	---	2660	---	1450	---	2340	499	---
TOTAL	130350	239960	189380	127870	212060	160260	49310	28825	45880	57063	35299	42254
MEAN	4205	7999	6109	4125	7574	5170	1644	930	1529	1841	1139	1408
MAX	19100	44700	17000	9980	42700	11900	2370	1450	3310	2700	2270	3100
MIN	1070	1680	1590	1920	1450	2350	1100	525	1050	883	499	603
AC-FT	258500	476000	375600	253600	420600	317900	97810	57170	91000	113200	70020	83810

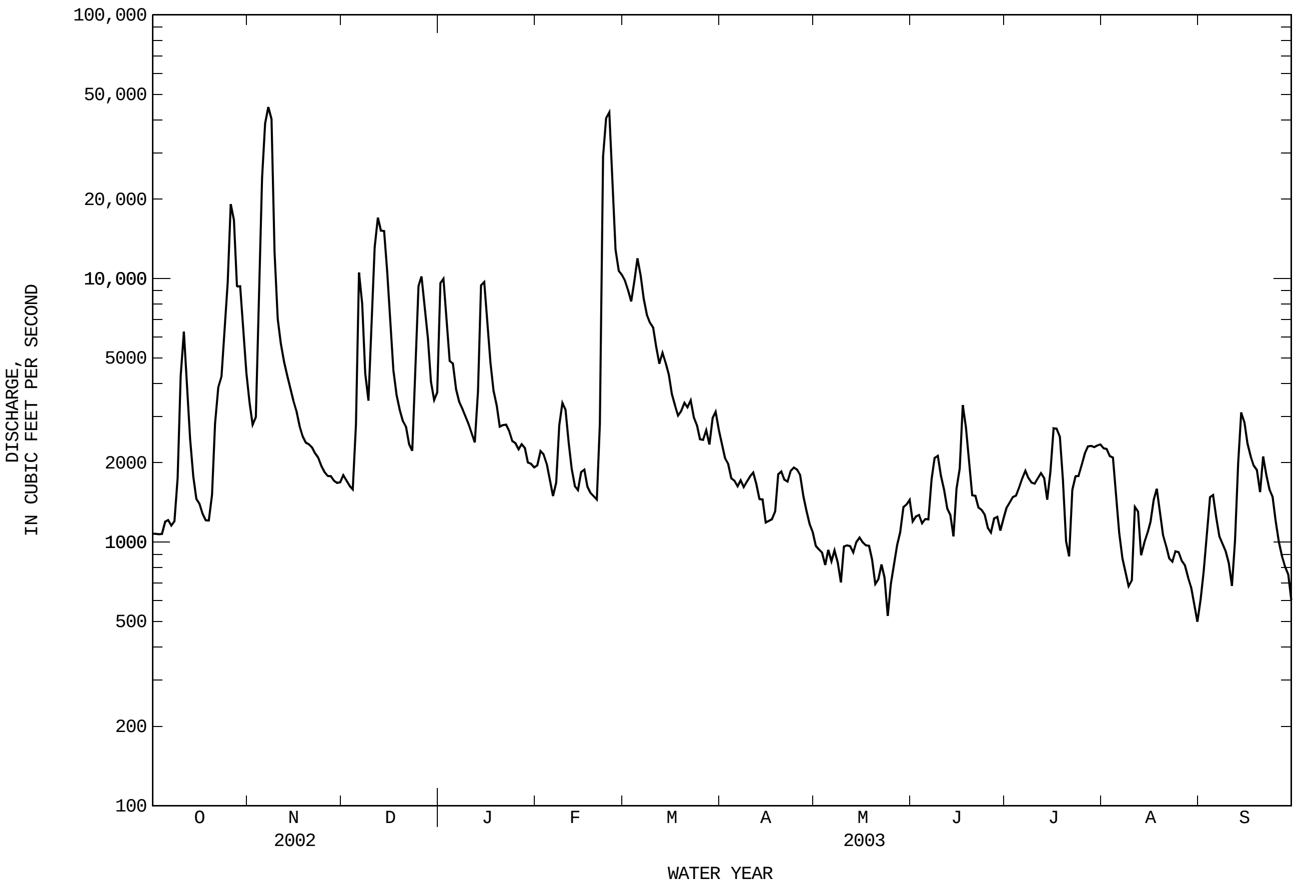
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2306	2530	2349	2524	3005	2813	3040	4007	4559	2644	1362	1873
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 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1939 - 2003	
ANNUAL TOTAL	1361053		1318511			
ANNUAL MEAN	3729		3612		2746	
HIGHEST ANNUAL MEAN					11120	1992
LOWEST ANNUAL MEAN					615	1964
HIGHEST DAILY MEAN	44700	Nov 7	44700	Nov 7	90600	Jul 3 1940
LOWEST DAILY MEAN	478	Jun 8	499	Aug 31	42	Aug 22 1964
ANNUAL SEVEN-DAY MINIMUM	626	Jun 7	668	Aug 27	110	Dec 11 1956
MAXIMUM PEAK FLOW			46000	Nov 8	100000	Jul 3 1940
MAXIMUM PEAK STAGE			39.16	Nov 8	48.99	Jul 3 1940
ANNUAL RUNOFF (AC-FT)	2700000		2615000		1990000	
10 PERCENT EXCEEDS	9180		8270		5490	
50 PERCENT EXCEEDS	1510		1850		1320	
90 PERCENT EXCEEDS	811		915		473	

e Estimated



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. 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 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1040	3870	1710	6400	1750	9450	2190	879	740	900	1800	593
2	1030	3090	1680	10300	1900	8680	1980	731	650	1050	1730	705
3	1180	3630	1680	7760	2010	7870	1850	718	700	1180	1650	925
4	1080	16100	1580	5270	1890	7440	1650	657	653	1200	1560	1240
5	1020	27100	1530	4410	1740	11300	1580	689	771	1590	1370	1270
6	1090	40000	7510	3790	1520	10200	1500	741	986	1780	830	1090
7	1200	44700	9240	3200	1320	8470	1460	613	1030	1630	538	817
8	1470	45800	5260	2970	1820	6990	1490	721	1540	1600	443	759
9	3300	22000	4150	2850	2710	6370	1450	552	1660	1510	379	646
10	4770	8440	6370	2660	2830	5970	1550	649	1530	1200	382	665
11	7110	6020	11000	2500	2530	5510	869	685	1210	1280	557	608
12	4770	5110	16600	2720	1950	4280	1360	615	1030	1890	1050	734
13	2950	4450	17100	5230	1580	4440	1110	646	958	1610	e834	1380
14	1970	3920	17100	7990	1480	4790	1220	614	778	1190	e742	2320
15	1480	3630	12000	9580	1600	4320	1070	705	956	2370	e765	3140
16	1570	3360	7620	8240	2350	3630	996	648	1410	7200	858	2180
17	1270	2920	4940	5290	1750	3240	888	591	2240	7980	969	1920
18	1270	2860	3690	3810	1500	2780	1120	577	2720	4540	1150	1590
19	1270	2370	3140	3050	1410	2790	1170	466	1980	2360	1060	1700
20	2490	2290	2760	2630	1300	2880	1680	324	1370	1230	834	1440
21	2310	2250	2620	2360	1580	2940	1480	212	934	578	621	5810
22	3920	2170	2410	2620	15900	2950	1480	227	967	706	561	6880
23	4680	2050	2180	2470	37600	2880	1500	264	862	1140	496	2860
24	8260	1880	2350	2390	44500	2560	1680	216	941	1520	504	1820
25	12500	1880	7530	2220	32500	2350	1650	115	801	2730	488	1360
26	18700	1780	9610	2180	14100	2160	1500	194	631	2240	422	965
27	21500	1750	8760	2130	10800	2360	1390	267	713	1860	437	794
28	12500	1790	6220	2170	9660	2260	1180	452	806	1700	368	667
29	16400	1510	4570	2070	---	2220	1050	763	791	1620	346	615
30	12500	1620	3260	1790	---	2790	951	795	735	1580	249	610
31	5970	---	3250	1850	---	2600	---	866	---	1810	390	---
TOTAL	162570	270340	189420	124900	203580	149470	42044	17192	33093	62774	24383	48103
MEAN	5244	9011	6110	4029	7271	4822	1401	555	1103	2025	787	1603
MAX	21500	45800	17100	10300	44500	11300	2190	879	2720	7980	1800	6880
MIN	1020	1510	1530	1790	1300	2160	869	115	631	578	249	593
AC-FT	322500	536200	375700	247700	403800	296500	83390	34100	65640	124500	48360	95410

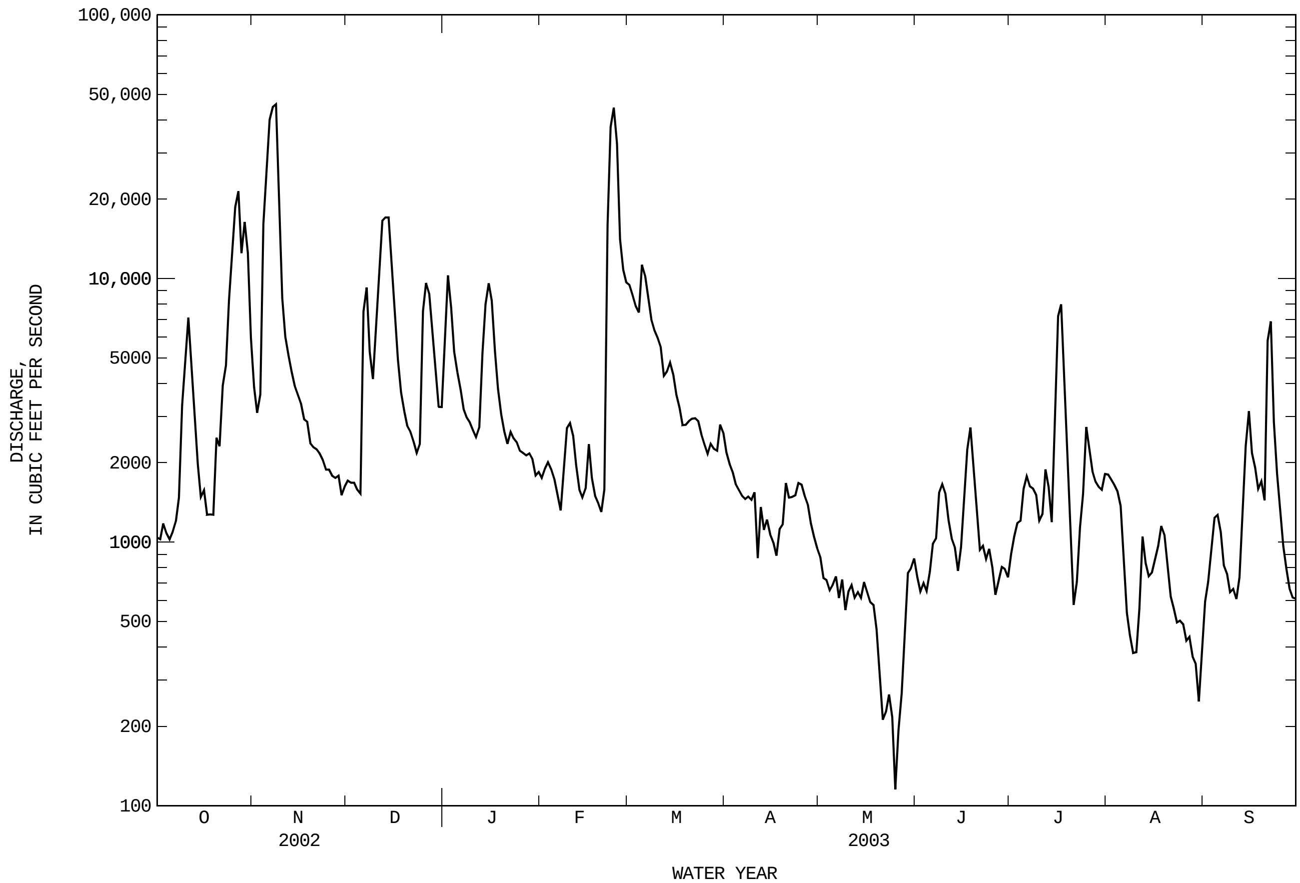
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1948 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2525	2543	2390	2606	3263	2839	2778	3753	4278	1862	846	1807
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

08162500 Colorado River near Bay City, TX--Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1948 - 2003	
ANNUAL TOTAL	1378845		1327869			
ANNUAL MEAN	3778		3638		2631	
HIGHEST ANNUAL MEAN					14270	1992
LOWEST ANNUAL MEAN					375	1964
HIGHEST DAILY MEAN	45800	Nov 8	45800	Nov 8	79300	Oct 23 1998
LOWEST DAILY MEAN	120	Jun 17	115	May 25	0.00	Jun 1 1951
ANNUAL SEVEN-DAY MINIMUM	206	Jun 11	214	May 21	0.44	Oct 4 1969
MAXIMUM PEAK FLOW			48300	Nov 8	84100	Jun 26 1960
MAXIMUM PEAK STAGE			32.56	Nov 8	46.40	Jun 26 1960
ANNUAL RUNOFF (AC-FT)	2735000		2634000		1906000	
10 PERCENT EXCEEDS	10300		8250		5820	
50 PERCENT EXCEEDS	1480		1700		925	
90 PERCENT EXCEEDS	476		619		247	

e Estimated



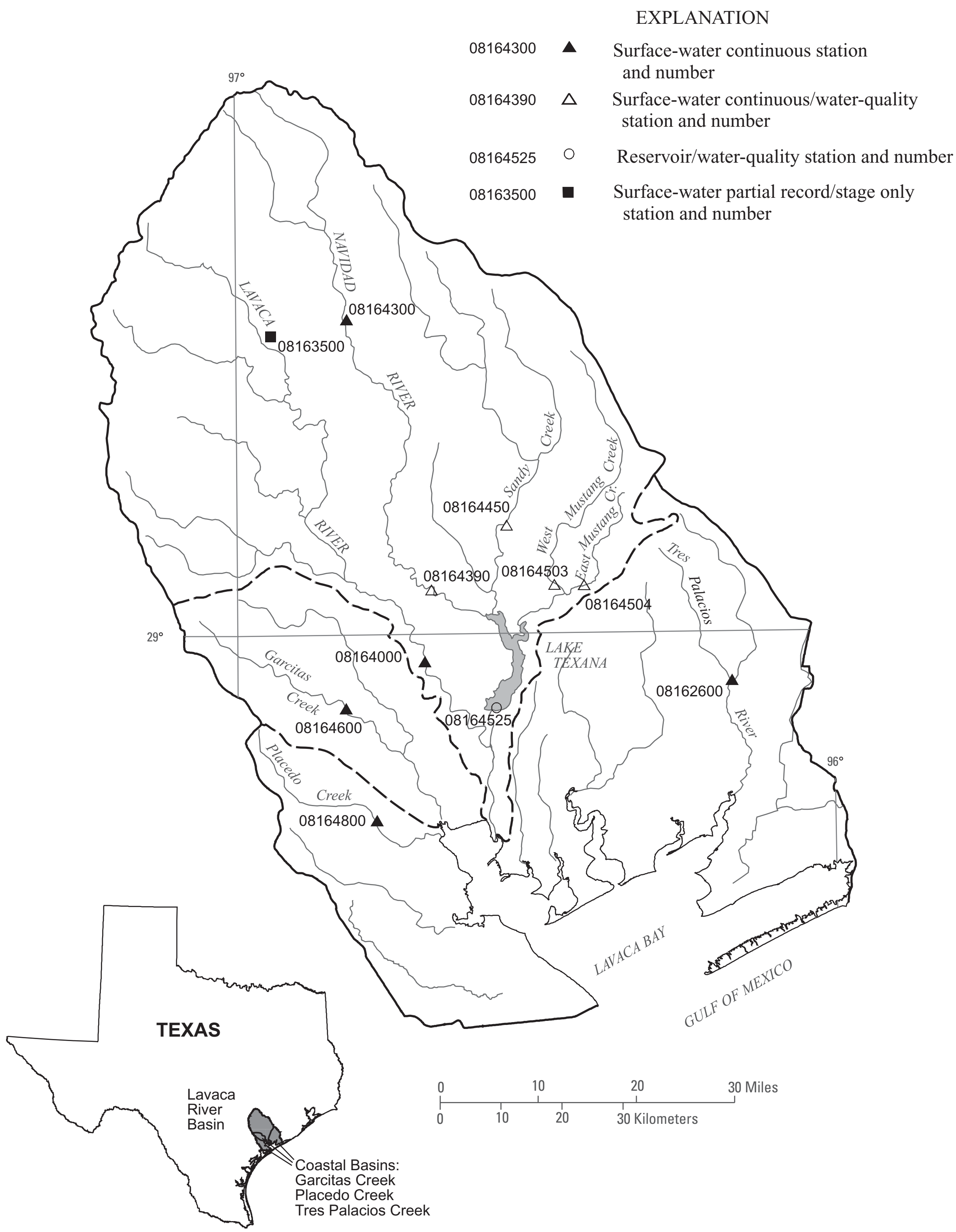


Figure 9.--Map showing location of gaging stations in the Lavaca and Coastal River Basins

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 good. 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, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

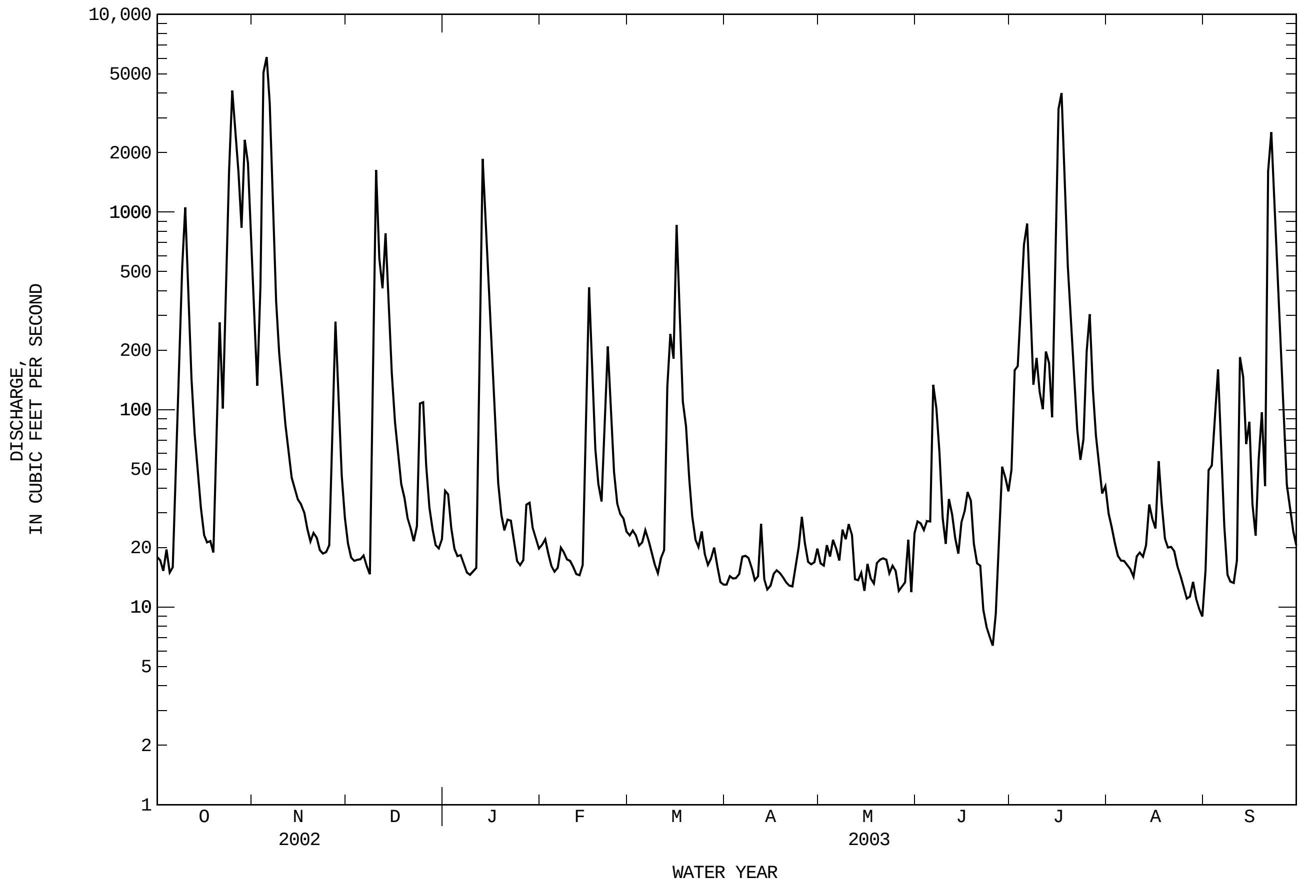
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	236	21	39	21	23	13	17	27	50	30	15
2	17	132	18	37	22	24	14	16	27	158	25	49
3	15	420	17	25	19	23	14	21	25	165	21	52
4	20	5090	17	20	16	20	14	18	27	331	18	99
5	15	6080	17	18	15	21	15	22	27	682	17	160
6	16	3560	18	18	16	25	18	20	133	872	17	60
7	60	1000	16	17	20	22	18	17	101	287	16	26
8	142	355	15	15	19	19	18	25	60	134	16	15
9	527	194	410	15	17	16	16	22	28	182	14	13
10	1060	124	1630	15	17	15	14	26	21	123	18	13
11	363	84	583	16	16	18	14	23	35	101	19	17
12	144	60	411	293	15	19	26	14	29	197	18	184
13	75	45	781	1860	14	130	14	14	22	172	21	146
14	46	40	343	683	16	241	12	15	19	91	33	67
15	32	35	153	243	139	181	13	12	27	441	28	87
16	23	33	86	124	415	860	15	17	30	3320	25	33
17	21	30	62	68	157	280	15	14	38	4000	55	23
18	22	25	42	43	63	110	15	13	35	1690	33	56
19	19	21	36	29	42	82	14	17	21	534	22	97
20	88	24	28	24	34	45	13	17	17	247	20	41
21	277	22	25	28	82	29	13	18	16	133	20	1610
22	101	19	22	27	209	22	13	17	9.7	79	19	2530
23	287	19	26	21	106	20	16	15	8.0	56	16	760
24	1620	19	107	17	48	24	20	16	7.1	71	14	286
25	4130	21	109	16	34	19	29	15	6.4	197	13	130
26	2440	55	52	17	30	16	21	12	9.3	304	11	68
27	1580	279	32	33	28	18	17	13	25	126	11	42
28	832	110	25	34	24	20	16	13	51	74	13	31
29	2320	46	21	25	---	16	17	22	46	53	11	24
30	1770	28	20	22	---	13	20	12	39	38	9.8	21
31	537	---	22	20	---	13	---	24	---	41	9.0	---
TOTAL	18617	18206	5165	3862	1654	2384	487	537	966.5	14949	612.8	6755
MEAN	601	607	167	125	59.1	76.9	16.2	17.3	32.2	482	19.8	225
MAX	4130	6080	1630	1860	415	860	29	26	133	4000	55	2530
MIN	15	19	15	15	14	13	12	12	6.4	38	9.0	13
AC-FT	36930	36110	10240	7660	3280	4730	966	1070	1920	29650	1220	13400

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1970 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	254	166	135	139	142	115	138	221	167	118	53.5	269
MAX	1375	607	568	542	978	1058	689	1080	699	623	166	1308
(WY)	1985	2003	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 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1970 - 2003	
ANNUAL TOTAL	67468.0		74195.3			
ANNUAL MEAN	185		203		160	
HIGHEST ANNUAL MEAN					325	1992
LOWEST ANNUAL MEAN					42.2	1986
HIGHEST DAILY MEAN	6080	Nov 5	6080	Nov 5	12500	Oct 19 1994
LOWEST DAILY MEAN	6.5	Apr 22	6.4	Jun 25	0.22	Aug 18 2000
ANNUAL SEVEN-DAY MINIMUM	7.2	Apr 18	10	Jun 20	1.0	Aug 17 2000
MAXIMUM PEAK FLOW			6760	Nov 5	17000	Oct 17 1984
MAXIMUM PEAK STAGE			28.55	Nov 5	32.43	Oct 17 1984
ANNUAL RUNOFF (AC-FT)	133800		147200		116100	
10 PERCENT EXCEEDS	410		348		255	
50 PERCENT EXCEEDS	18		25		22	
90 PERCENT EXCEEDS	8.6		14		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, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	289	124	1880	167	239	118	65	34	25	59	20
2	21	225	116	1230	164	225	116	65	33	433	53	21
3	22	487	116	508	162	214	116	64	35	245	48	144
4	22	5110	120	369	158	247	116	63	33	331	44	1580
5	22	10000	121	308	154	772	115	63	38	353	40	1670
6	22	15000	695	276	152	471	114	61	50	216	37	429
7	36	15700	335	254	166	354	114	60	61	113	35	167
8	63	6760	185	237	172	276	113	59	51	259	32	114
9	34	977	856	226	168	232	108	57	41	662	30	87
10	588	666	4920	217	163	208	104	56	36	406	27	71
11	1500	521	8130	206	163	195	102	54	34	195	27	62
12	265	424	4480	735	164	189	99	52	33	114	32	500
13	141	350	4000	4670	157	185	97	51	31	92	25	3440
14	98	304	7170	6850	152	183	95	50	32	116	24	2890
15	77	273	6820	1740	204	181	93	49	30	125	30	3230
16	66	245	888	619	934	178	91	47	34	3380	29	1220
17	58	221	565	413	658	171	91	46	33	3020	26	387
18	52	204	447	312	336	166	88	45	33	1020	24	301
19	51	192	376	264	231	162	86	45	41	633	21	1310
20	50	180	317	244	193	156	e84	45	36	324	22	1020
21	50	170	274	231	790	150	e82	44	31	215	24	773
22	53	161	244	218	3490	145	93	42	29	163	20	1590
23	839	153	238	204	3110	142	112	42	27	133	69	1010
24	2640	147	440	190	619	138	92	41	26	115	67	409
25	5520	148	1960	180	407	138	85	39	27	102	37	253
26	6170	149	816	179	319	141	80	38	25	92	26	186
27	2580	176	385	177	276	138	75	38	28	88	22	151
28	1120	177	293	178	254	136	72	37	24	81	20	127
29	1910	153	252	179	---	132	68	36	24	74	17	109
30	726	136	238	175	---	126	66	35	23	72	17	96
31	431	---	603	172	---	123	---	34	---	66	17	---
TOTAL	25248	59698	46524	23641	14083	6513	2885	1523	1013	13263	1001	23367
MEAN	814	1990	1501	763	503	210	96.2	49.1	33.8	428	32.3	779
MAX	6170	15700	8130	6850	3490	772	118	65	61	3380	69	3440
MIN	21	136	116	172	152	123	66	34	23	25	17	20
AC-FT	50080	118400	92280	46890	27930	12920	5720	3020	2010	26310	1990	46350

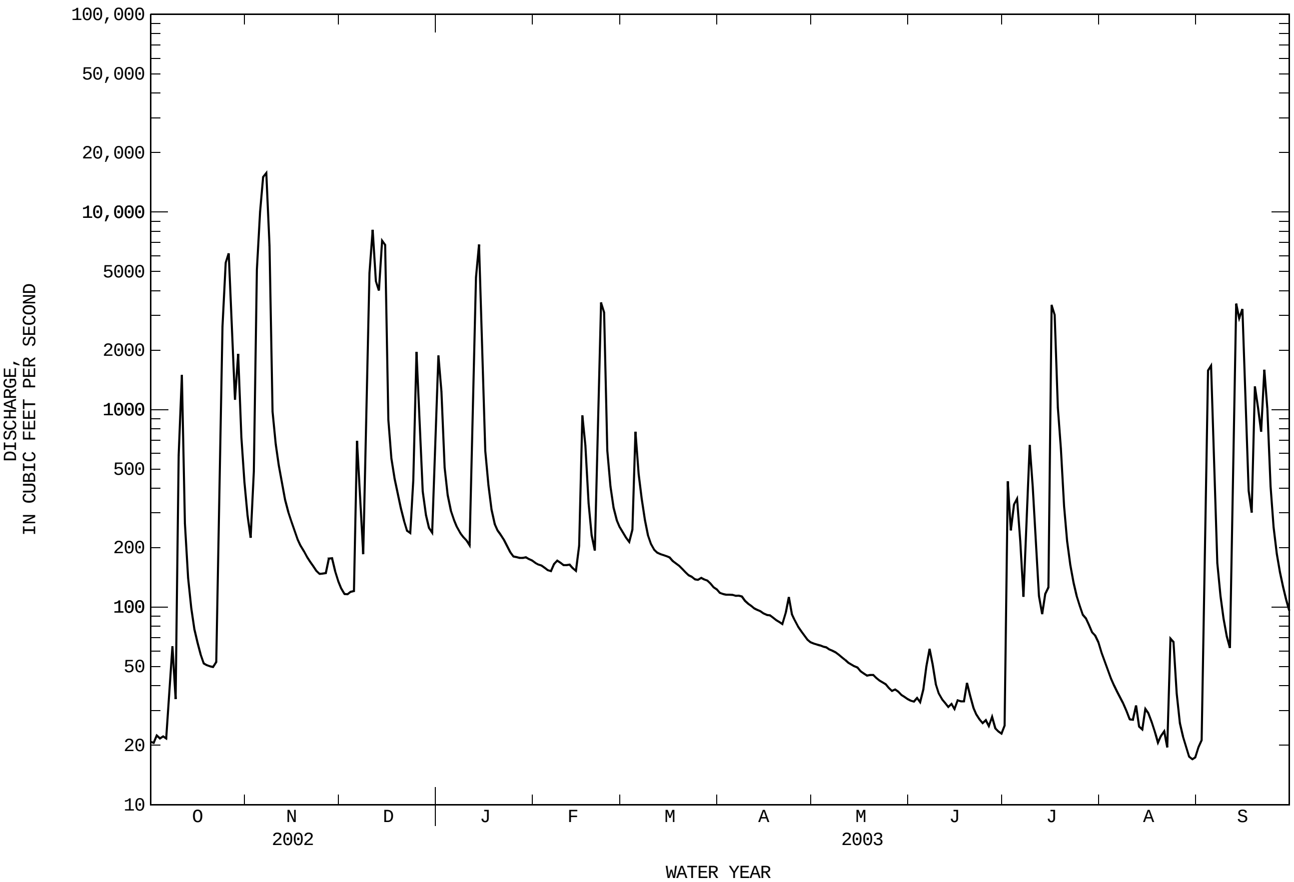
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	482	362	277	291	384	275	481	652	616	222	90.8	392
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 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1938 - 2003	
ANNUAL TOTAL	195065		218759			
ANNUAL MEAN	534		599		377	
HIGHEST ANNUAL MEAN					1385	1992
LOWEST ANNUAL MEAN					6.12	1956
HIGHEST DAILY MEAN	15700	Nov 7	15700	Nov 7	122000	Oct 19 1994
LOWEST DAILY MEAN	18	Jun 23	17	Aug 29	0.00	Nov 10 1954
ANNUAL SEVEN-DAY MINIMUM	20	Jun 19	19	Aug 27	0.00	Jul 2 1956
MAXIMUM PEAK FLOW			16700	Nov 6	150000	Oct 19 1994
MAXIMUM PEAK STAGE			25.40	Nov 6	a35.54	Oct 19 1994
ANNUAL RUNOFF (AC-FT)	386900		433900		272800	
10 PERCENT EXCEEDS	825		1060		429	
50 PERCENT EXCEEDS	77		147		55	
90 PERCENT EXCEEDS	28		30		9.8	

e Estimated
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 8.0 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 fair. 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, CUBIC FEET PER SECOND WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

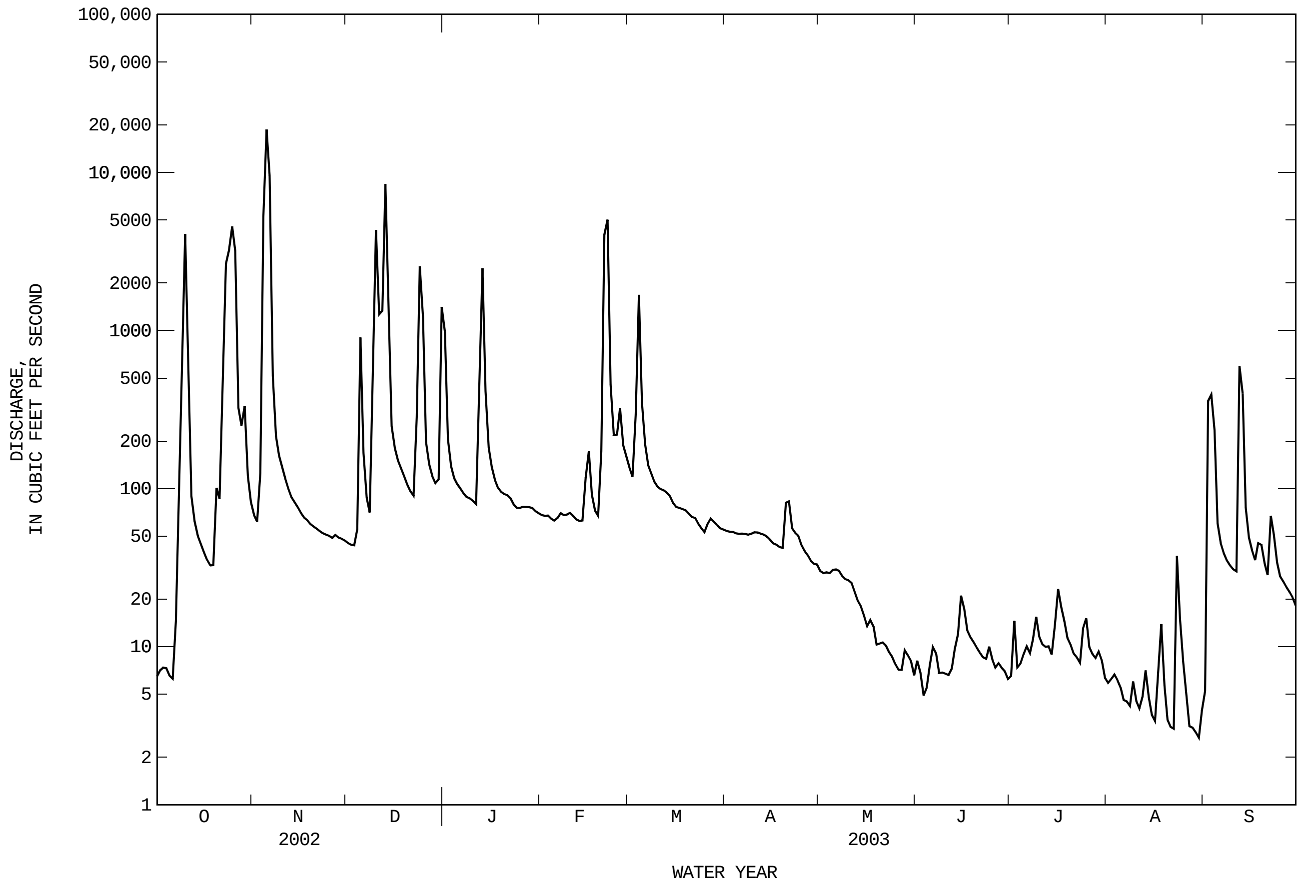
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.5	68	45	981	68	136	54	30	8.1	6.5	5.9	5.2
2	7.1	62	44	205	67	119	53	29	6.9	15	6.2	358
3	7.4	125	44	138	68	295	53	30	4.9	7.4	6.7	392
4	7.3	5260	55	116	64	1680	52	29	5.5	7.8	6.1	234
5	6.5	18700	903	106	63	351	52	31	7.6	8.9	5.5	60
6	6.3	9600	168	100	65	190	52	31	9.9	10	4.6	45
7	15	517	88	93	70	141	52	30	9.1	9.1	4.5	39
8	184	214	71	88	68	125	51	28	6.8	11	4.2	35
9	1030	162	1140	87	68	110	52	27	6.9	15	6.0	33
10	4080	136	4330	83	70	103	53	26	6.7	12	4.5	31
11	563	116	1270	80	67	99	53	25	6.6	10	4.1	30
12	89	99	1340	676	64	97	52	22	7.2	10	4.8	598
13	62	88	8460	2470	62	94	51	19	9.7	10	7.1	399
14	50	82	2170	415	63	89	50	18	12	8.9	4.8	76
15	45	76	249	182	117	81	47	16	21	14	3.7	49
16	40	70	181	137	172	76	45	13	17	23	3.4	41
17	35	66	152	114	92	75	44	15	13	18	7.0	35
18	33	63	134	101	72	74	43	13	11	15	14	45
19	33	60	120	95	67	73	42	10	11	11	5.7	44
20	101	58	106	92	173	69	81	10	9.9	10	3.5	34
21	86	56	96	91	4050	66	83	11	9.2	9.1	3.1	28
22	322	54	90	87	5030	65	56	10	8.6	8.5	3.0	67
23	2650	52	284	79	455	60	52	9.2	8.4	7.9	37	51
24	3220	51	2550	76	219	56	50	8.6	10	13	15	34
25	4550	50	1220	75	219	53	44	7.8	8.3	15	8.0	28
26	3190	49	197	77	324	60	40	7.2	7.4	10	4.9	26
27	324	51	142	77	188	65	38	7.1	7.8	9.0	3.1	24
28	250	49	119	76	160	62	35	9.5	7.3	8.5	3.1	22
29	333	48	108	75	---	59	33	8.8	7.0	9.3	2.9	20
30	120	47	114	72	---	56	33	8.1	6.2	8.2	2.7	18
31	82	---	1410	70	---	55	---	6.6	---	6.3	3.9	---
TOTAL	21528.1	36129	27400	7214	12265	4734	1496	545.9	271.0	337.4	199.0	2901.2
MEAN	694	1204	884	233	438	153	49.9	17.6	9.03	10.9	6.42	96.7
MAX	4550	18700	8460	2470	5030	1680	83	31	21	23	37	598
MIN	6.3	47	44	70	62	53	33	6.6	4.9	6.3	2.7	5.2
AC-FT	42700	71660	54350	14310	24330	9390	2970	1080	538	669	395	5750
CFSM	2.09	3.63	2.66	0.70	1.32	0.46	0.15	0.05	0.03	0.03	0.02	0.29
IN.	2.41	4.05	3.07	0.81	1.37	0.53	0.17	0.06	0.03	0.04	0.02	0.33

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	168	163	138	133	166	123	194	297	242	25.0	27.1	154
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 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1962 - 2003	
ANNUAL TOTAL	106491.1		115020.6			
ANNUAL MEAN	292		315		152	
HIGHEST ANNUAL MEAN					508	1992
LOWEST ANNUAL MEAN					11.5	1990
HIGHEST DAILY MEAN	18700	Nov 5	18700	Nov 5	30500	Sep 14 1974
LOWEST DAILY MEAN	1.2	Jun 25	2.7	Aug 30	0.00	Aug 5 1964
ANNUAL SEVEN-DAY MINIMUM	1.7	Aug 31	3.7	Aug 26	0.00	Sep 2 1964
MAXIMUM PEAK FLOW			20200	Nov 5	53500	Sep 13 1974
MAXIMUM PEAK STAGE			30.27	Nov 5	36.05	Sep 13 1974
ANNUAL RUNOFF (AC-FT)	211200		228100		110100	
ANNUAL RUNOFF (CFSM)	0.88		0.95		0.46	
ANNUAL RUNOFF (INCHES)	11.93		12.89		6.22	
10 PERCENT EXCEEDS	298		324		131	
50 PERCENT EXCEEDS	26		51		22	
90 PERCENT EXCEEDS	5.3		6.7		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, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	245	77	1780	99	249	87	51	22	13	18	6.2
2	12	188	74	1590	96	215	80	50	23	61	15	6.3
3	11	374	72	389	94	197	80	48	22	113	13	e676
4	10	3610	72	250	93	579	79	46	21	141	12	e636
5	10	5820	76	199	88	1780	79	44	21	126	11	e210
6	11	7030	1140	171	85	739	80	44	27	107	9.9	e70
7	16	13300	353	154	114	361	77	44	28	62	8.8	e34
8	12	10900	171	141	105	255	76	43	32	41	7.9	28
9	146	2810	567	132	97	203	73	43	30	39	8.3	22
10	712	612	3200	126	103	172	67	41	25	64	7.9	17
11	2170	444	3940	119	103	151	67	40	23	55	12	15
12	1990	352	3950	359	93	138	72	39	21	33	15	89
13	214	286	2540	2250	87	132	75	38	18	25	9.9	702
14	123	243	3530	2830	84	129	66	37	19	25	7.5	622
15	88	213	5670	1390	126	123	64	34	18	135	6.4	612
16	71	189	2390	430	680	120	63	33	19	1040	7.1	208
17	61	168	499	292	363	113	61	32	24	516	7.0	107
18	53	150	376	224	198	108	61	33	27	296	6.0	79
19	48	138	313	189	136	104	61	34	28	169	5.5	187
20	46	128	267	172	114	99	60	33	24	103	7.2	170
21	54	117	233	162	657	93	61	31	22	67	10	131
22	148	110	208	154	2600	88	120	29	20	48	7.0	210
23	563	103	200	143	4290	86	74	28	19	38	8.0	118
24	2050	98	595	126	2930	84	63	28	17	32	15	108
25	3200	94	2030	114	444	83	63	26	14	28	20	62
26	3710	91	2050	112	379	84	62	26	15	28	20	42
27	4170	98	409	114	479	84	58	25	20	33	12	33
28	1960	94	274	114	290	87	55	26	17	32	8.4	28
29	1010	87	222	111	---	83	53	24	15	28	6.5	25
30	787	81	198	111	---	79	52	25	14	25	6.1	23
31	365	---	542	105	---	77	---	23	---	22	7.6	---
TOTAL	23832	48173	36238	14553	15027	6895	2089	1098	645	3545	316.0	5276.5
MEAN	769	1606	1169	469	537	222	69.6	35.4	21.5	114	10.2	176
MAX	4170	13300	5670	2830	4290	1780	120	51	32	1040	20	702
MIN	10	81	72	105	84	77	52	23	14	13	5.5	6.2
AC-FT	47270	95550	71880	28870	29810	13680	4140	2180	1280	7030	627	10470

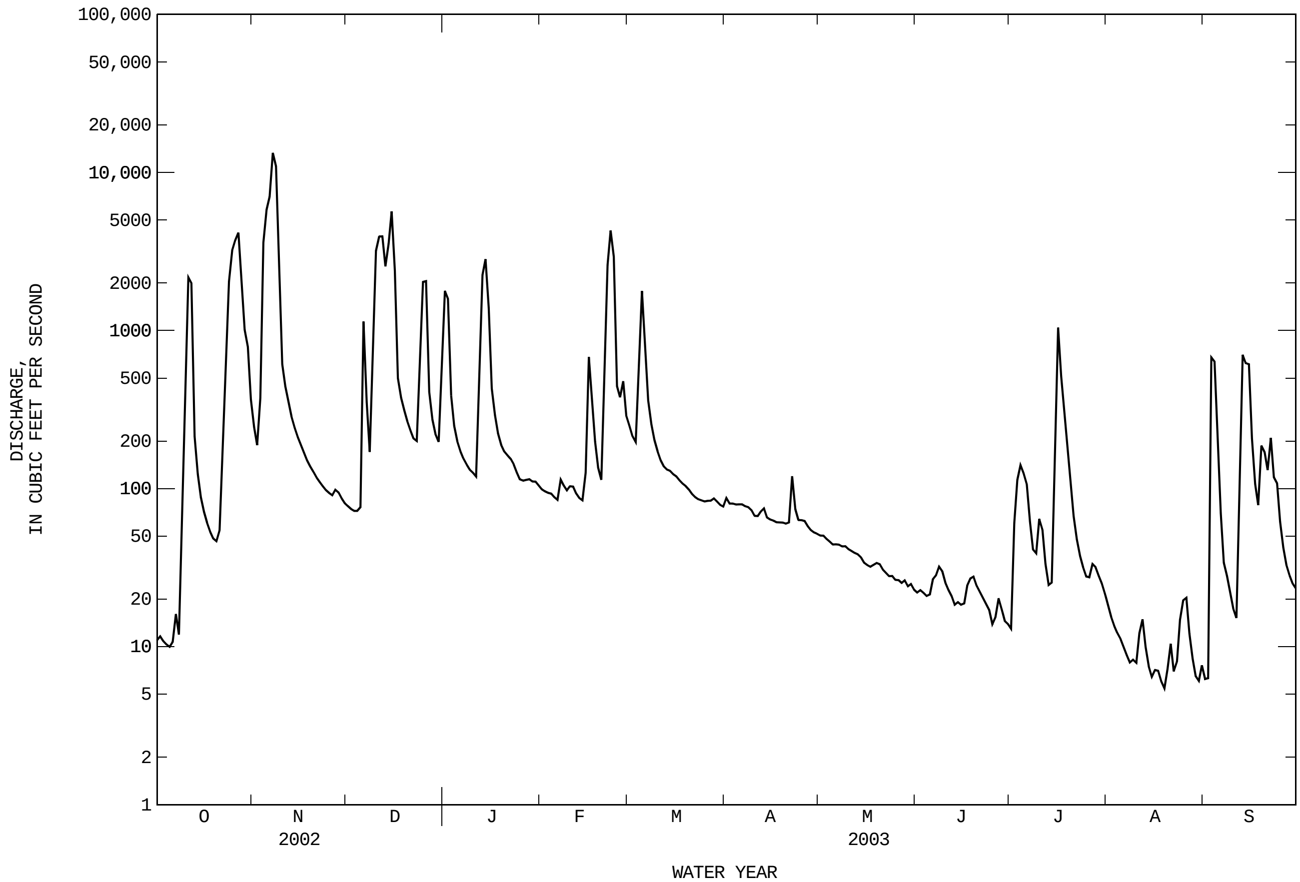
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1997 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	711	683	369	271	278	412	383	265	349	75.4	56.4	335
MAX	2636	2334	1169	690	904	1540	2030	1038	1632	231	210	1107
(WY)	1999	1999	2003	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 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1997 - 2003	
ANNUAL TOTAL	139238.4		157687.5			
ANNUAL MEAN	381		432		349	
HIGHEST ANNUAL MEAN					627	1997
LOWEST ANNUAL MEAN					44.8	2000
HIGHEST DAILY MEAN	13300	Nov 7	13300	Nov 7	23300	Oct 19 1998
LOWEST DAILY MEAN	3.7	Sep 6	5.5	Aug 19	0.00	Sep 23 2000
ANNUAL SEVEN-DAY MINIMUM	4.4	Sep 1	6.7	Aug 14	0.00	Aug 20 2001
MAXIMUM PEAK FLOW			14700	Nov 7	c25000	Oct 19 1998
MAXIMUM PEAK STAGE			28.23	Nov 7	a30.08	Oct 19 1998
ANNUAL RUNOFF (AC-FT)	276200		312800		252500	
10 PERCENT EXCEEDS	714		723		534	
50 PERCENT EXCEEDS	39		84		42	
90 PERCENT EXCEEDS	8.9		14		7.1	

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 2002 TO SEPTEMBER 2003

Date	Time	Instan-taneous dis-charge, cfs (00061)	Specif. conduc-tance, wat unf uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temper-ature, water, deg C (00010)	Dis-solved oxygen, mg/L (00300)	Dis-solved oxygen, percent of sat-uration (00301)	2,4,5-T water, fltrd, ug/L (39742)	2,4-D water, fltrd, ug/L (39732)	2,4-DB water, fltrd 0.7u GF ug/L (38746)	2,6-Di-ethyl-aniline water fltrd 0.7u GF ug/L (82660)	Silvex, water, fltrd, ug/L (39762)	3-Hydroxy carbo-furan, wat flt 0.7u GF ug/L (49308)
APR													
16...	1230	62	836	7.8	21.5	8.3	94	<.07	<.16	<.25	<.006	<.03	<.11
16...	1230	--	--	--	--	--	--	--	--	--	--	--	--
JUN													
25...	0820	14	798	8.3	27.0	6.8	86	<.07	<.16	<.25	<.006	<.03b	<.11
25...	0820	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
03...	1030	5.8	563	8.0	26.0	6.7	83	<.07	<.16	<.25	<.006	<.03b	<.11
03...	1030	--	--	--	--	--	--	--	--	--	--	--	--

Date	2Methyl 4,6-di-nitro-phenol, wat flt 0.7u GF ug/L (49299)	Aceto-chlor, water, fltrd, ug/L (49260)	Aci-fluor-fen, water, fltrd 0.7u GF ug/L (49315)	Ala-chlor, water, fltrd, ug/L (46342)	Aldi-carb, water, fltrd 0.7u GF ug/L (49312)	Aldi-carb sulfone water, fltrd 0.7u GF ug/L (49313)	Aldi-carb sulf-oxide, wat flt 0.7u GF ug/L (49314)	alpha-HCH, water, fltrd, ug/L (34253)	Atra-zine, water, fltrd, ug/L (39632)	Azin-phos-methyl, water, fltrd 0.7u GF ug/L (82686)	Ben-flur-alin, water, fltrd 0.7u GF ug/L (82673)	Ben-tazon, water, fltrd 0.7u GF ug/L (38711)	Broma-cil, water, fltrd, ug/L (04029)
APR													
16...	<.25	<.006	<.05	.009	<.21	<.20	<.27	<.005	.025	<.050	<.010	<.05	<.09
16...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN													
25...	<.25	<.006	<.05	<.004	<.21	<.20	<.27	<.005	.007	<.050	<.010	<.05	<.09
25...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
03...	<.25	<.006	<.05	<.004	<.21	<.20	<.27	<.005	<.007	<.050	<.010	<.05	<.09
03...	--	--	--	--	--	--	--	--	--	--	--	--	--

Date	Brom-oxynil, water, fltrd 0.7u GF ug/L (49311)	Butyl-ate, water, fltrd, ug/L (04028)	Car-baryl, water, fltrd 0.7u GF ug/L (49310)	Car-baryl, water, fltrd 0.7u GF ug/L (82680)	Carbo-furan, water, fltrd 0.7u GF ug/L (49309)	Carbo-furan, water, fltrd 0.7u GF ug/L (82674)	Carbo-pheno-thion, bed sedimnt ug/kg (39787)	Chloro-thalo-nil, water, fltrd 0.7u GF ug/L (49306)	Chlor-pyrifos water, fltrd, ug/L (38933)	cis-Per-methrin water fltrd 0.7u GF ug/L (82687)	Clopyr-alid, water, fltrd 0.7u GF ug/L (49305)	Cyana-zine, water, fltrd, ug/L (04041)	Dacthal mono-acid, water, fltrd 0.7u GF ug/L (49304)
APR													
16...	<.07	<.002	<.080	<.041	<.15	<.020	--	<.25	<.005	<.006	<.42	<.018	<.07
16...	--	--	--	--	--	--	<.2	--	--	--	--	--	--
JUN													
25...	<.07	<.002	<.080	<.041	<.15	<.020	--	<.25	<.005	<.006	<.42	<.018	<.07
25...	--	--	--	--	--	--	<.2	--	--	--	--	--	--
SEP													
03...	<.07	<.002	<.080	<.041	<.15	<.020	--	<.25	<.005	<.006	<.42	<.018	<.07
03...	--	--	--	--	--	--	<.2	--	--	--	--	--	--

Date	DCPA, water fltrd 0.7u GF ug/L (82682)	CIAT, water, fltrd, ug/L (04040)	Diazi-non, bed sedimnt ug/kg (39571)	Diazi-non, water, fltrd, ug/L (39572)	Dicamba water fltrd 0.7u GF ug/L (38442)	Dichlo-benil, water, fltrd 0.7u GF ug/L (49303)	Di-chlor-prop, water, fltrd 0.7u GF ug/L (49302)	Diel-drin, water, fltrd, ug/L (39381)	Dinoseb water, fltrd 0.7u GF ug/L (49301)	Disul-foton, water, fltrd 0.7u GF ug/L (82677)	Diuron, water, fltrd 0.7u GF ug/L (49300)	EPTC, water, fltrd 0.7u GF ug/L (82668)	Ethal-flur-alin, water, fltrd 0.7u GF ug/L (82663)
APR													
16...	<.003	E.004	--	<.005	<.11	<.09	<.12	<.005	<.09	<.02	<.12	<.002	<.009
16...	--	--	<.2	--	--	--	--	--	--	--	--	--	--
JUN													
25...	<.003	<.006	--	<.005	<.11	<.09	<.12	<.005	<.09	<.02	E.02	<.002	<.009
25...	--	--	<2.0	--	--	--	--	--	--	--	--	--	--
SEP													
03...	<.003	<.006	--	<.005	<.11	<.09	<.12	<.005	<.09	<.02	E.02	<.002	<.009
03...	--	--	<.2	--	--	--	--	--	--	--	--	--	--

08164390 Navidad River at Strane Park near Edna, TX--Continued

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

Date	Ethion, bed sedimnt ug/kg (39399)	Etho-prop, water, fltrd 0.7u GF ug/L (82672)	Fenuron water, fltrd 0.7u GF ug/L (49297)	Fluo-meturon water fltrd 0.7u GF ug/L (38811)	Fonofos water, fltrd, ug/L (04095)	Lindane water, fltrd, ug/L (39341)	Linuron water fltrd 0.7u GF ug/L (38478)	Linuron water fltrd 0.7u GF ug/L (82666)	Mala-thion, bed sedimnt ug/kg (39531)	Mala-thion, water, fltrd, ug/L (39532)	MCPA, water, fltrd 0.7u GF ug/L (38482)	MCPB, water, fltrd 0.7u GF ug/L (38487)	Methio-carb, water, fltrd 0.7u GF ug/L (38501)
APR													
16...	--	<.005	<.07	<.06	<.003	<.004	<.06	<.035	--	<.027	<.20	<.26	<.07
16...	<.2	--	--	--	--	--	--	--	<.2	--	--	--	--
JUN													
25...	--	<.005	<.07	<.06	<.003	<.004	<.06	<.035	--	E.009n	<.20	<.26	<.07
25...	<.2	--	--	--	--	--	--	--	<.2	--	--	--	--
SEP													
03...	--	<.005	<.07	<.06	<.003	<.004	<.06	<.035	--	<.027	<.20	<.26	<.07
03...	<.2	--	--	--	--	--	--	--	<.2	--	--	--	--

Date	Meth-omyl, water, fltrd 0.7u GF ug/L (49296)	Metola-chlor, water, fltrd, ug/L (39415)	Metri-buzin, water, fltrd, ug/L (82630)	Moli-nate, water, fltrd 0.7u GF ug/L (82671)	Naprop-amide, water, fltrd 0.7u GF ug/L (82684)	Neburon water, fltrd 0.7u GF ug/L (49294)	Norflur azon, water, fltrd 0.7u GF ug/L (49293)	Ory-zalin, water, fltrd 0.7u GF ug/L (49292)	Oxamyl, water, fltrd 0.7u GF ug/L (38866)	p,p'-DDE, water, fltrd, ug/L (34653)	Para-thion, bed sedimnt ug/kg (39541)	Para-thion, water, fltrd, ug/L (39542)	Methyl para-thion, bed sedimnt ug/kg (39601)
APR													
16...	<.22	E.011n	<.006	<.002	<.007	<.07	<.04	<.28	<.16	<.003	--	<.010	--
16...	--	--	--	--	--	--	--	--	--	--	<.2	--	<.2
JUN													
25...	<.22	<.013	<.006	.004	<.007	<.07	<.04	<.28	<.16	<.003	--	<.010	--
25...	--	--	--	--	--	--	--	--	--	--	<.2	--	<.2
SEP													
03...	<.22	<.013	<.006	<.002	<.007	<.07	<.04	<.28	<.16	<.003	--	<.010	--
03...	--	--	--	--	--	--	--	--	--	--	<.2	--	<.2

Date	Methyl para-thion, water, fltrd 0.7u GF ug/L (82667)	Peb-ulate, water, fltrd 0.7u GF ug/L (82669)	Pendi-meth-alin, water, fltrd 0.7u GF ug/L (82683)	Phorate water fltrd 0.7u GF ug/L (82664)	Pic-loram, water, fltrd 0.7u GF ug/L (49291)	Prome-ton, water, fltrd, ug/L (04037)	Propa-chlor, water, fltrd, ug/L (04024)	Pro-panil, water, fltrd 0.7u GF ug/L (82679)	Propar-gite, water, fltrd 0.7u GF ug/L (82685)	Propham water fltrd 0.7u GF ug/L (49236)	Pro-poxur, water, fltrd 0.7u GF ug/L (38538)	Pron-amide, water, fltrd 0.7u GF ug/L (82676)	Sima-zine, water, fltrd, ug/L (04035)
APR													
16...	<.006	<.004	<.022	<.011	<.09	<.01	<.010	<.011	<.02	<.22	<.12	<.004	<.005
16...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN													
25...	<.006	<.004	<.022	<.011	E.14	Mn	<.010	<.011	<.02	<.22	<.12	<.004	<.005
25...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
03...	<.006	<.004	<.022	<.011	<.09	<.01	<.010	<.011	<.02	<.22	<.12	<.004	<.005
03...	--	--	--	--	--	--	--	--	--	--	--	--	--

Date	Tebu-thiuron water fltrd 0.7u GF ug/L (82670)	Terba-cil, water, fltrd 0.7u GF ug/L (82665)	Terbu-fos, water, fltrd 0.7u GF ug/L (82675)	Thio-bencarb water fltrd 0.7u GF ug/L (82681)	Tri-allate, water, fltrd 0.7u GF ug/L (82678)	Tri-clopyr, water, fltrd 0.7u GF ug/L (49235)	Tri-flur-alin, water, fltrd 0.7u GF ug/L (82661)	Fipro-nil, water, fltrd, ug/L (62166)	Fipro-nil sulfide water, fltrd, ug/L (62167)	Fipro-nil sulfone water, fltrd, ug/L (62168)	Desulf-inyl-fipro-nil amide, wat flt ug/L (62169)	Desulf-inyl fipro-nil, water, fltrd, ug/L (62170)
APR												
16...	<.02	<.034	<.02	<.005	<.002	<.10	<.009	<.007	<.005	<.005	<.009	<.004
16...	--	--	--	--	--	--	--	--	--	--	--	--
JUN												
25...	<.02	<.034	<.02	<.005	<.002	<.15	<.009	<.007	E.004	.009	E.002	E.003
25...	--	--	--	--	--	--	--	--	--	--	--	--
SEP												
03...	<.02	<.034	<.02	<.005	<.002	<.07	<.009	<.007	<.005	<.005	<.009	<.004
03...	--	--	--	--	--	--	--	--	--	--	--	--

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

Value qualifier codes used in this report:
- b -- Value was extrapolated below
- 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.--Records fair except those for estimated daily discharges, which are poor. 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, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	41	449	12	1130	21	37	13	0.19	0.30	55	29	22
2	68	212	10	605	19	30	8.6	0.19	0.14	495	23	61
3	81	539	10	276	20	27	4.8	2.4	0.03	395	23	129
4	84	4620	11	160	23	374	6.4	3.6	0.06	338	17	137
5	78	8310	12	107	22	382	7.3	2.9	7.2	691	9.5	135
6	89	7720	14	77	21	256	21	0.69	45	642	0.69	103
7	103	3420	15	52	29	192	41	0.21	69	426	0.18	72
8	95	1910	13	45	50	123	48	0.49	57	344	0.13	34
9	126	1090	258	36	41	84	27	0.14	33	293	0.08	23
10	213	631	2640	36	35	71	10	0.14	16	261	2.2	22
11	233	385	1490	32	33	55	5.5	0.14	12	e230	0.08	36
12	172	226	1310	122	26	43	4.4	0.14	8.6	e168	0.03	236
13	115	138	2720	1930	26	35	4.0	0.14	7.3	e108	e0.01	577
14	74	85	1540	1230	25	30	10	0.11	9.2	e72	e8.6	456
15	42	58	873	645	88	27	3.4	0.11	7.4	264	19	523
16	35	42	452	304	567	27	4.3	0.11	9.4	1510	15	514
17	33	33	254	170	358	27	8.7	0.11	22	996	17	222
18	35	29	168	96	156	25	22	0.11	e42	659	7.8	137
19	29	26	122	58	96	23	35	0.11	e55	483	3.4	125
20	42	23	93	42	71	22	25	0.11	39	305	2.5	98
21	102	20	75	37	395	22	25	0.11	31	197	1.9	192
22	82	16	60	57	1260	17	27	0.11	23	125	1.4	355
23	124	13	54	81	548	11	19	0.11	18	92	2.1	224
24	720	12	568	55	249	7.9	7.4	0.05	12	99	15	125
25	e1490	12	833	34	128	14	8.2	0.05	8.2	137	16	71
26	e1360	12	578	32	77	17	9.3	0.05	5.3	196	5.3	42
27	970	14	277	31	55	15	4.0	0.48	25	155	2.3	30
28	939	16	172	29	44	14	5.2	0.12	81	103	5.6	21
29	2560	16	120	27	---	13	3.0	0.05	84	70	3.7	11
30	1960	13	97	e25	---	12	0.46	0.05	71	49	2.9	6.5
31	1030	---	752	23	---	12	---	0.93	---	36	2.7	---
TOTAL	13125	30090	15603	7584	4483	2044.9	417.96	14.25	798.13	9994	237.10	4739.5
MEAN	423	1003	503	245	160	66.0	13.9	0.46	26.6	322	7.65	158
MAX	2560	8310	2720	1930	1260	382	48	3.6	84	1510	29	577
MIN	29	12	10	23	19	7.9	0.46	0.05	0.03	36	0.01	6.5
AC-FT	26030	59680	30950	15040	8890	4060	829	28	1580	19820	470	9400

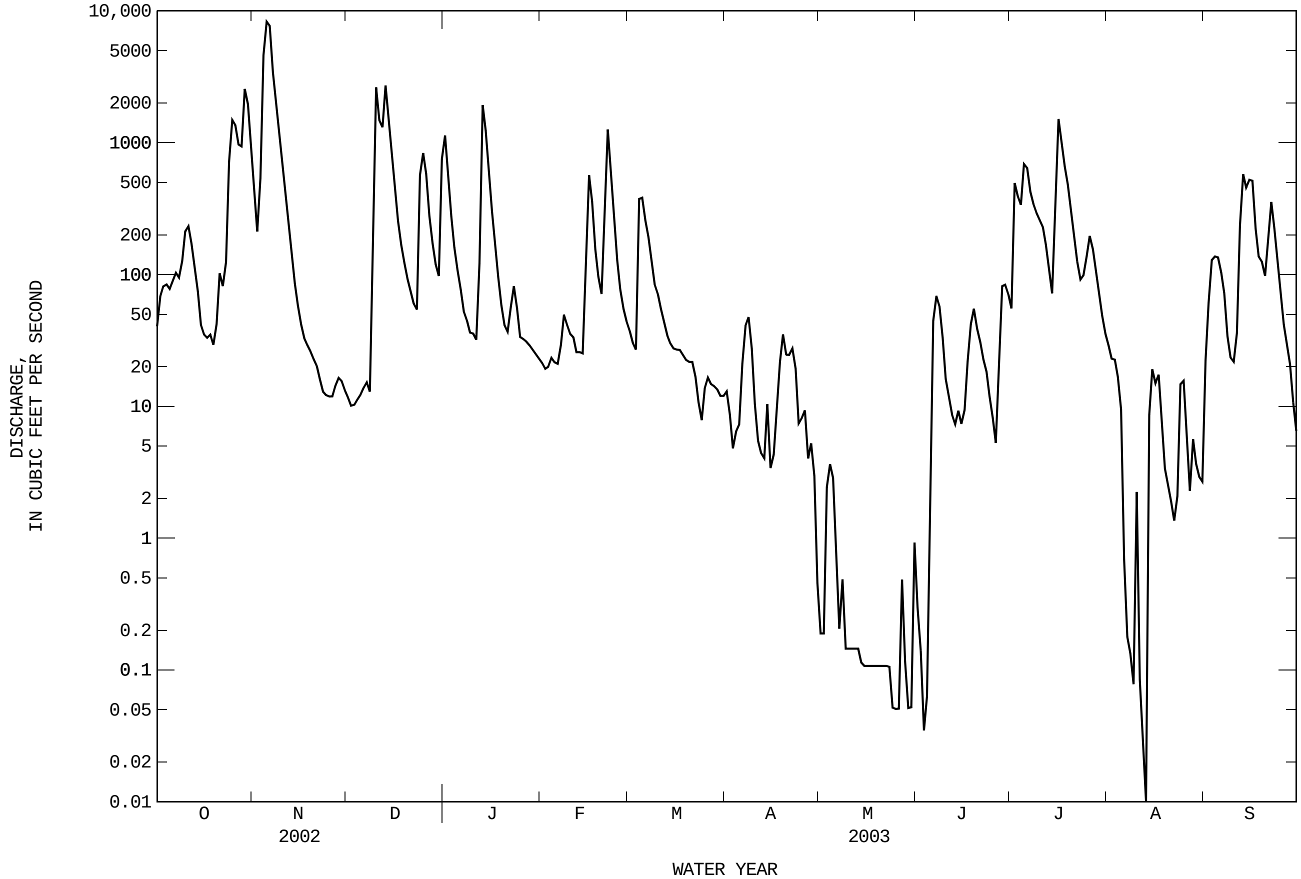
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1978 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	351	237	162	255	247	179	204	280	326	146	40.8	268
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 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1978 - 2003	
ANNUAL TOTAL	95834.41		89130.84			
ANNUAL MEAN	263		244		224	
HIGHEST ANNUAL MEAN					606	1992
LOWEST ANNUAL MEAN					51.2	1990
HIGHEST DAILY MEAN	8310	Nov 5	8310	Nov 5	41100	Oct 19 1998
LOWEST DAILY MEAN	0.00	Feb 27	0.01	Aug 13	0.00	Apr 5 1978
ANNUAL SEVEN-DAY MINIMUM	0.00	Feb 27	0.08	May 20	0.00	Mar 10 1980
MAXIMUM PEAK FLOW			8650	Nov 5	63400	Oct 19 1998
MAXIMUM PEAK STAGE			19.96	Nov 5	a32.72	Oct 19 1998
ANNUAL RUNOFF (AC-FT)	190100		176800		162400	
10 PERCENT EXCEEDS	781		572		467	
50 PERCENT EXCEEDS	14		35		21	
90 PERCENT EXCEEDS	0.00		0.49		0.05	

e Estimated
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 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specif. conductance, wat unf uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temperature, water, deg C (00010)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	2,4,5-T water, fltrd, ug/L (39742)	2,4-D water, fltrd, ug/L (39732)	2,4-DB water, fltrd 0.7u GF ug/L (38746)	2,6-Diethylaniline water fltrd 0.7u GF ug/L (82660)	Silvex, water, fltrd, ug/L (39762)	3-Hydroxy carbofuran, wat flt 0.7u GF ug/L (49308)
APR													
16...	1300	5.5	560	7.1	23.0	8.1	95	<.07	<.18	<.25	<.006	<.03	<.11
16...	1300	--	--	--	--	--	--	--	--	--	--	--	--
JUN													
25...	1100	8.4	490	8.3	30.0	7.3	96	<.07	<.16	<.25	<.006	<.03b	<.11
25...	1100	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
03...	0840	136	503	7.8	26.5	5.8	72	<.07	<.21	<.25	<.006	<.04	<.11
03...	0840	--	--	--	--	--	--	--	--	--	--	--	--

Date	2Methyl 4,6-dinitrophenol, wat flt 0.7u GF ug/L (49299)	Acetochlor, water, fltrd, ug/L (49260)	Acifluorfen, water, fltrd 0.7u GF ug/L (49315)	Alachlor, water, fltrd, ug/L (46342)	Aldicarb, water, fltrd 0.7u GF ug/L (49312)	Aldicarb sulfone water, fltrd 0.7u GF ug/L (49313)	Aldicarb sulfoxide, wat flt 0.7u GF ug/L (49314)	alpha-HCH, water, fltrd, ug/L (34253)	Atrazine, water, fltrd, ug/L (39632)	Azinphos-methyl, water, fltrd 0.7u GF ug/L (82686)	Benfluralin, water, fltrd 0.7u GF ug/L (82673)	Bentazon, water, fltrd 0.7u GF ug/L (38711)	Bromacil, water, fltrd, ug/L (04029)
APR													
16...	<.25	<.006	<.05	.064	<.21	<.27	<.27	<.005	.308	<.050	<.010	<.05	<16.0
16...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN													
25...	<.25	<.006	<.05	<.004	<.21	<.23	<.31	<.005	.067	<.050	<.010	<.23	<.09
25...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
03...	<.25	<.006	<.06	<.004	<.21	<.20	<.46	<.005	E.006n	<.050	<.010	E1.64	<.09
03...	--	--	--	--	--	--	--	--	--	--	--	--	--

Date	Bromoxynil, water, fltrd 0.7u GF ug/L (49311)	Butylate, water, fltrd, ug/L (04028)	Carbaryl, water, fltrd 0.7u GF ug/L (49310)	Carbaryl, water, fltrd 0.7u GF ug/L (82680)	Carbofuran, water, fltrd 0.7u GF ug/L (49309)	Carbofuran, water, fltrd 0.7u GF ug/L (82674)	Carbophenothion, bed sedimnt ug/kg (39787)	Chlorothalonil, water, fltrd 0.7u GF ug/L (49306)	Chlorpyrifos water, fltrd, ug/L (38933)	cis-Permethrin water fltrd 0.7u GF ug/L (82687)	Clopyralid, water, fltrd 0.7u GF ug/L (49305)	Cyanazine, water, fltrd, ug/L (04041)	Dacthal monoacid, water, fltrd 0.7u GF ug/L (49304)
APR													
16...	<.07	<.002	<.080	<.041	<.15	<.020	--	<.25	<.005	<.006	<.42	<.018	<.07
16...	--	--	--	--	--	--	<.2	--	--	--	--	--	--
JUN													
25...	<.07	<.002	<.080	E.010	<.15	<.020	--	<.25	<.005	<.006	<.42	<.018	<.07
25...	--	--	--	--	--	--	<.2	--	--	--	--	--	--
SEP													
03...	<.07	<.002	<.080	E.017t	<.15	<.020	--	<.25	<.005	<.006	<.42	<.018	<.07
03...	--	--	--	--	--	--	<.2	--	--	--	--	--	--

Date	DCPA, water fltrd 0.7u GF ug/L (82682)	CIAT, water, fltrd, ug/L (04040)	Diazinon, bed sedimnt ug/kg (39571)	Diazinon, water, fltrd, ug/L (39572)	Dicamba water fltrd 0.7u GF ug/L (38442)	Dichlobenil, water, fltrd 0.7u GF ug/L (49303)	Dichlorprop, water, fltrd 0.7u GF ug/L (49302)	Dieldrin, water, fltrd, ug/L (39381)	Dinoseb water, fltrd 0.7u GF ug/L (49301)	Disulfoton, water, fltrd 0.7u GF ug/L (82677)	Diuron, water, fltrd 0.7u GF ug/L (49300)	EPTC, water, fltrd 0.7u GF ug/L (82668)	Ethalfluralin, water, fltrd 0.7u GF ug/L (82663)
APR													
16...	<.003	E.026	--	<.005	<.11	<.09	<.12	<.005	<.09	<.02	<.16	<.002	<.009
16...	--	--	<.2	--	--	--	--	--	--	--	--	--	--
JUN													
25...	<.003	E.010	--	<.015	<.11	<.09	<.12	<.005	<.09	<.02	<.12	<.002	<.009
25...	--	--	<.2	--	--	--	--	--	--	--	--	--	--
SEP													
03...	<.003	<.006	--	<.005	<.11	<.09	<.12	<.005	<.09	<.02	<.12	<.002	<.009
03...	--	--	<.4	--	--	--	--	--	--	--	--	--	--

08164450 Sandy Creek near Ganado, TX--Continued

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

Date	Ethion, bed sedimnt ug/kg (39399)	Ethoprop, water, fltrd 0.7u GF ug/L (82672)	Fenuron water, fltrd 0.7u GF ug/L (49297)	Fluometuron water fltrd 0.7u GF ug/L (38811)	Fonofos water, fltrd, ug/L (04095)	Lindane water, fltrd, ug/L (39341)	Linuron water fltrd 0.7u GF ug/L (38478)	Linuron water fltrd 0.7u GF ug/L (82666)	Malathion, bed sedimnt ug/kg (39531)	Malathion, water, fltrd, ug/L (39532)	MCPA, water, fltrd 0.7u GF ug/L (38482)	MCPB, water, fltrd 0.7u GF ug/L (38487)	Methiocarb, water, fltrd 0.7u GF ug/L (38501)
APR													
16...	--	<.005	<.07	<.16	<.003	<.004	<.06	<.035	--	<.027	<.20	<.26	<.07
16...	<.2	--	--	--	--	--	--	--	<.2	--	--	--	--
JUN													
25...	--	<.005	<.07	<.12	<.003	<.004	<.06	<.035	--	E.027n	<.20	<.26	<.07
25...	<.2	--	--	--	--	--	--	--	<.2	--	--	--	--
SEP													
03...	--	<.005	<.08	<.06	<.003	<.004	<.06	<.035	--	<.027	<.20	<.26	<.09
03...	<.2	--	--	--	--	--	--	--	<.2	--	--	--	--

Date	Methomyl, water, fltrd 0.7u GF ug/L (49296)	Metolachlor, water, fltrd, ug/L (39415)	Metribuzin, water, fltrd, ug/L (82630)	Molinate, water, fltrd 0.7u GF ug/L (82671)	Napropamide, water, fltrd 0.7u GF ug/L (82684)	Neburon water, fltrd 0.7u GF ug/L (49294)	Norflurazon, water, fltrd 0.7u GF ug/L (49293)	Oryzalin, water, fltrd 0.7u GF ug/L (49292)	Oxamyl, water, fltrd 0.7u GF ug/L (38866)	p,p'-DDE, water, fltrd, ug/L (34653)	Parathion, bed sedimnt ug/kg (39541)	Parathion, water, fltrd, ug/L (39542)	Methyl parathion, bed sedimnt ug/kg (39601)
APR													
16...	<.22	.107	<.006	.021	<.007	<.07	<.04	<.28	<.16	<.003	--	<.010	--
16...	--	--	--	--	--	--	--	--	--	--	<.2	--	<.2
JUN													
25...	<.22	.036	<.006	.065	<.007	<.07	<.04	<.28	<.16	<.003	--	<.010	--
25...	--	--	--	--	--	--	--	--	--	--	<.2	--	<.2
SEP													
03...	<.22	E.002t	<.006	.004	<.007	<.07	<.04	<.28	<.16	<.003	--	<.010	--
03...	--	--	--	--	--	--	--	--	--	--	<.2	--	<.2

Date	Methyl parathion, water, fltrd 0.7u GF ug/L (82667)	Pebulate, water, fltrd 0.7u GF ug/L (82669)	Pendimethalin, water, fltrd 0.7u GF ug/L (82683)	Phorate water fltrd 0.7u GF ug/L (82664)	Picloram, water, fltrd 0.7u GF ug/L (49291)	Prometon, water, fltrd, ug/L (04037)	Propachlor, water, fltrd, ug/L (04024)	Propanil, water, fltrd 0.7u GF ug/L (82679)	Propargite, water, fltrd 0.7u GF ug/L (82685)	Propham water fltrd 0.7u GF ug/L (49236)	Propoxur, water, fltrd 0.7u GF ug/L (38538)	Pronamide, water, fltrd 0.7u GF ug/L (82676)	Simazine, water, fltrd, ug/L (04035)
APR													
16...	<.006	<.004	.031	<.011	<.09	<.01	<.010	E.008n	<.02	<.17	<16.0	<.004	<.005
16...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN													
25...	<.006	<.004	<.022	<.011	<.09	E.01n	<.010	<.011	<.02	<.22	<.12	<.004	<.008
25...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
03...	.018	<.004	<.022	<.011	<.09	<.01	<.010	<.011	<.02	<.22	<.12	<.004	<.005
03...	--	--	--	--	--	--	--	--	--	--	--	--	--

Date	Tebuthiuron water fltrd 0.7u GF ug/L (82670)	Terbacil, water, fltrd 0.7u GF ug/L (82665)	Terbufos, water, fltrd 0.7u GF ug/L (82675)	Thiobencarb water fltrd 0.7u GF ug/L (82681)	Triallate, water, fltrd 0.7u GF ug/L (82678)	Triclopyr, water, fltrd 0.7u GF ug/L (49235)	Trifluralin, water, fltrd 0.7u GF ug/L (82661)	Fipronil, water, fltrd, ug/L (62166)	Fipronil sulfide water, fltrd, ug/L (62167)	Fipronil sulfone water, fltrd, ug/L (62168)	Desulfinylfipronil amide, wat flt ug/L (62169)	Desulfinyl fipronil, water, fltrd, ug/L (62170)
APR												
16...	<.02	<.034	<.02	.010	<.002	<.07	<.009	E.034	.010	.015	<.009	.031
16...	--	--	--	--	--	--	--	--	--	--	--	--
JUN												
25...	<.02	<.034	<.02	.033	<.002	<.13	<.009	E.009	.020	.024	E.014	.017
25...	--	--	--	--	--	--	--	--	--	--	--	--
SEP												
03...	<.02	<.034	<.02	<.005	<.002	<.20	<.009	E.006	.014	.014	E.007	.005
03...	--	--	--	--	--	--	--	--	--	--	--	--

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

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

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 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, CUBIC FEET PER SECOND WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	654	7.7	226	6.5	6.3	2.6	14	3.6	31	24	22
2	15	282	4.9	116	4.8	4.7	2.0	8.1	4.4	138	14	160
3	23	427	3.8	54	4.1	3.9	5.4	2.5	5.7	136	11	305
4	22	6000	3.3	27	3.5	5.1	5.1	14	7.3	118	12	609
5	20	8600	2.6	16	4.4	4.3	2.6	23	8.9	695	13	304
6	21	5280	2.1	10	3.6	9.1	9.7	32	84	1070	19	122
7	25	3050	2.0	8.8	2.6	13	13	27	124	428	16	68
8	32	2150	1.9	7.4	7.0	13	60	14	74	224	13	40
9	106	1090	219	5.4	10	14	57	8.6	38	157	12	24
10	191	353	1530	3.3	8.5	12	19	8.7	18	121	8.3	19
11	127	205	1190	2.8	7.7	17	7.0	5.3	10	e99	9.6	86
12	94	116	699	172	9.1	12	11	4.2	6.9	e66	9.2	497
13	69	75	1910	1420	4.5	5.2	12	2.6	4.6	e56	8.8	1330
14	47	53	1380	911	3.0	3.8	5.4	4.8	7.4	e53	13	611
15	31	39	475	276	32	3.4	7.9	5.1	7.5	248	15	371
16	26	32	201	129	492	3.1	25	7.4	24	2860	16	334
17	30	30	104	69	215	2.8	22	6.7	52	2390	40	118
18	27	20	69	39	76	2.6	25	5.4	45	1040	38	94
19	87	15	47	26	36	2.5	41	3.9	37	498	23	269
20	676	11	32	20	26	2.1	36	2.9	27	287	17	102
21	445	9.3	24	18	23	1.9	35	4.1	18	143	9.9	331
22	199	7.8	18	26	132	1.8	27	1.9	14	90	5.7	1120
23	1080	6.5	14	27	122	1.7	13	4.4	13	85	4.5	429
24	2060	5.9	19	22	56	1.5	10	7.2	11	64	3.7	125
25	2520	5.8	40	16	31	1.4	7.4	5.9	8.6	154	6.0	62
26	2470	8.9	55	15	19	1.9	8.4	6.0	6.5	199	13	35
27	1690	6.1	29	11	11	7.7	5.5	2.2	30	128	13	21
28	1160	49	18	8.6	8.9	10	5.2	4.3	91	94	11	12
29	4150	29	12	6.7	---	6.0	6.3	4.8	72	56	11	13
30	4340	14	21	5.2	---	4.0	7.6	11	51	41	8.8	13
31	2190	---	252	6.4	---	3.2	---	6.9	---	31	14	---
TOTAL	23986	28624.3	8386.3	3700.6	1359.2	181.0	494.1	258.9	904.4	11800	432.5	7646
MEAN	774	954	271	119	48.5	5.84	16.5	8.35	30.1	381	14.0	255
MAX	4340	8600	1910	1420	492	17	60	32	124	2860	40	1330
MIN	13	5.8	1.9	2.8	2.6	1.4	2.0	1.9	3.6	31	3.7	12
AC-FT	47580	56780	16630	7340	2700	359	980	514	1790	23410	858	15170
CFSM	4.35	5.36	1.52	0.67	0.27	0.03	0.09	0.05	0.17	2.14	0.08	1.43
IN.	5.01	5.98	1.75	0.77	0.28	0.04	0.10	0.05	0.19	2.47	0.09	1.60

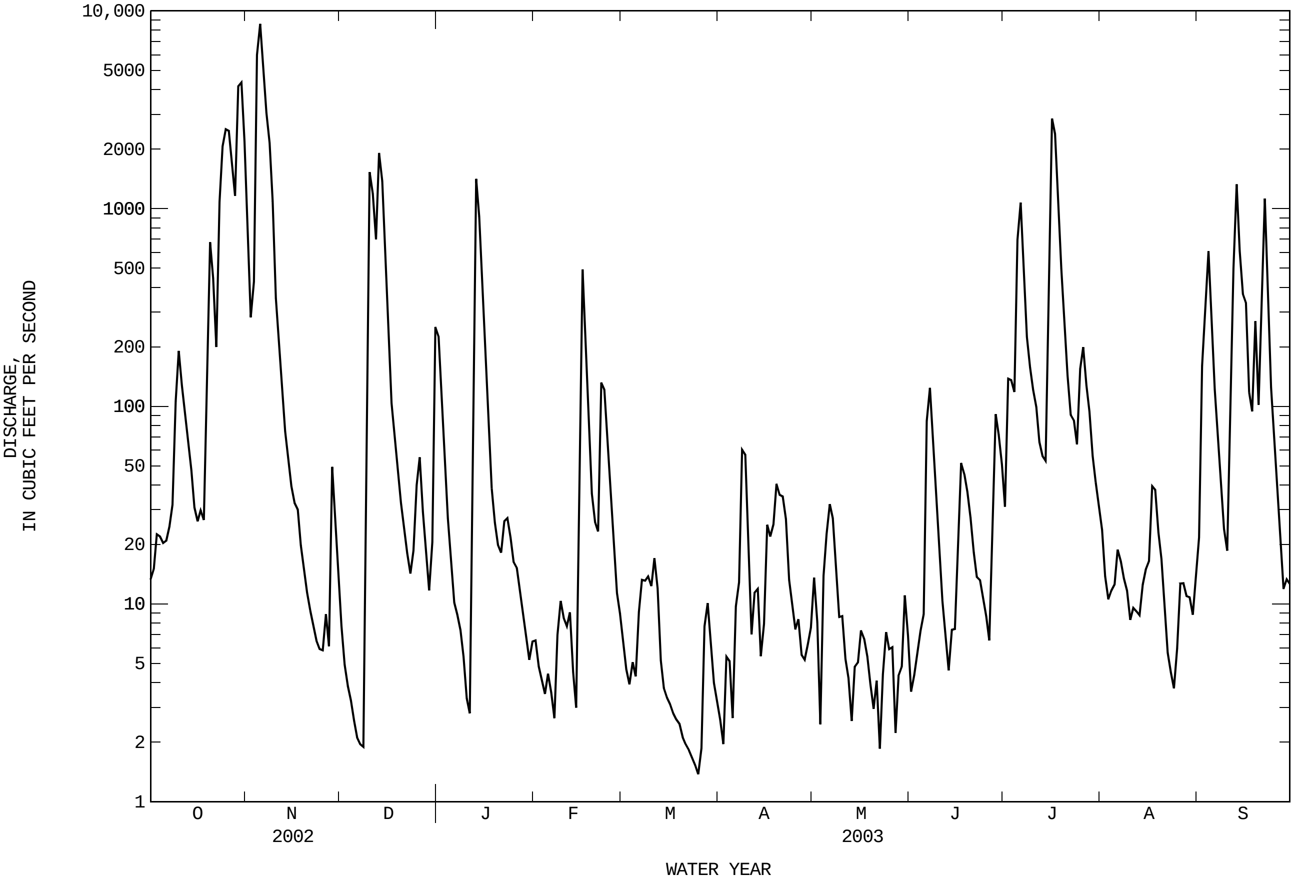
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1978 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	267	189	121	172	142	110	157	194	188	135	55.5	260
MAX	1746	954	587	881	1243	988	1107	702	958	682	179	1173
(WY)	1995	2003	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	8.35	5.56	38.1	14.0	5.33
(WY)	1988	2000	1991	1982	1986	1986	1983	2003	1990	1986	2003	1988

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1978 - 2003	
ANNUAL TOTAL	106742.39		87773.3			
ANNUAL MEAN	292		240		166	
HIGHEST ANNUAL MEAN					325	1997
LOWEST ANNUAL MEAN					45.2	1990
HIGHEST DAILY MEAN	8600	Nov 5	8600	Nov 5	18700	Oct 19 1994
LOWEST DAILY MEAN	0.32	Mar 13	1.4	Mar 25	0.00	Dec 19 1990
ANNUAL SEVEN-DAY MINIMUM	0.35	Mar 11	1.8	Mar 20	0.01	Dec 19 1990
MAXIMUM PEAK FLOW			9330	Nov 5	20000	Oct 19 1994
MAXIMUM PEAK STAGE			21.52	Nov 5	a28.39	Oct 19 1994
ANNUAL RUNOFF (AC-FT)	211700		174100		120000	
ANNUAL RUNOFF (CFSM)	1.64		1.35		0.93	
ANNUAL RUNOFF (INCHES)	22.31		18.34		12.64	
10 PERCENT EXCEEDS	682		482		304	
50 PERCENT EXCEEDS	18		19		22	
90 PERCENT EXCEEDS	1.6		3.9		1.6	

e Estimated
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 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specif. conductance, wat unf uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temperature, water, deg C (00010)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	2,4,5-T water, fltrd, ug/L (39742)	2,4-D water, fltrd, ug/L (39732)	2,4-DB water, fltrd 0.7u GF ug/L (38746)	2,6-Diethylaniline water fltrd 0.7u GF ug/L (82660)	Silvex, water, fltrd, ug/L (39762)	3-Hydroxy carbofuran, wat flt 0.7u GF ug/L (49308)
APR													
16...	1500	30	1150	7.5	21.5	6.4	73	<.07	<.16	<.25	<.006	<.03	<.11
16...	1500	--	--	--	--	--	--	--	--	--	--	--	--
JUN													
25...	1240	8.7	603	8.2	29.0	6.3	82	<.07	<.17	<.25	<.006	<.03b	<.11
25...	1240	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
03...	0810	341	275	7.3	27.0	4.4	55	<.07	E1.58	<.25	<.006	<.04	<.14
03...	0810	--	--	--	--	--	--	--	--	--	--	--	--

Date	2Methyl 4,6-dinitrophenol, wat flt 0.7u GF ug/L (49299)	Acetochlor, water, fltrd, ug/L (49260)	Acifluorfen, water, fltrd 0.7u GF ug/L (49315)	Alachlor, water, fltrd, ug/L (46342)	Aldicarb, water, fltrd 0.7u GF ug/L (49312)	Aldicarb sulfone water, fltrd 0.7u GF ug/L (49313)	Aldicarb sulfoxide, wat flt 0.7u GF ug/L (49314)	alpha-HCH, water, fltrd, ug/L (34253)	Atrazine, water, fltrd, ug/L (39632)	Azinphos-methyl, water, fltrd 0.7u GF ug/L (82686)	Benfluralin, water, fltrd 0.7u GF ug/L (82673)	Bentazon, water, fltrd 0.7u GF ug/L (38711)	Bromacil, water, fltrd, ug/L (04029)
APR													
16...	<.25	<.006	<.16	.316	<.21	<.72	<.27	<.005	1.41	<.050	<.010	<.05	<.68
16...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN													
25...	<.25	E.005n	.08	<.004	<.21	<.20	<.27	<.005	.067	<.050	<.010	.82	<.09
25...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
03...	<.25	<.006	<.07	<.004	<.30	<.20	<.27	<.005	.023	<.050	<.010	<.09	<.19
03...	--	--	--	--	--	--	--	--	--	--	--	--	--

Date	Bromoxynil, water, fltrd 0.7u GF ug/L (49311)	Butylate, water, fltrd, ug/L (04028)	Carbaryl, water, fltrd 0.7u GF ug/L (49310)	Carbaryl, water, fltrd 0.7u GF ug/L (82680)	Carbofuran, water, fltrd 0.7u GF ug/L (49309)	Carbofuran, water, fltrd 0.7u GF ug/L (82674)	Carbophenothion, bed sedimnt ug/kg (39787)	Chlorothalonil, water, fltrd 0.7u GF ug/L (49306)	Chlorpyrifos water, fltrd, ug/L (38933)	cis-Permethrin water fltrd 0.7u GF ug/L (82687)	Clopyralid, water, fltrd 0.7u GF ug/L (49305)	Cyanazine, water, fltrd, ug/L (04041)	Dacthal monoacid, water, fltrd 0.7u GF ug/L (49304)
APR													
16...	<.17	<.002	<.080	<.041	<.15	<.020	--	<.25	<.005	<.006	<.42	<.018	<.07
16...	--	--	--	--	--	--	<.2	--	--	--	--	--	--
JUN													
25...	<.07	<.002	<.080	<.041	<.15	<.020	--	<.25	<.005	<.006	<.42	<.018	<.07
25...	--	--	--	--	--	--	<1.0	--	--	--	--	--	--
SEP													
03...	<.07	<.002	.179	E.411	<.15	E.079	--	<.25	<.005	<.006	<.42	<.018	<.17
03...	--	--	--	--	--	--	<.2	--	--	--	--	--	--

Date	DCPA, water fltrd 0.7u GF ug/L (82682)	CIAT, water, fltrd, ug/L (04040)	Diazinon, bed sedimnt ug/kg (39571)	Diazinon, water, fltrd, ug/L (39572)	Dicamba water fltrd 0.7u GF ug/L (38442)	Dichlobenil, water, fltrd 0.7u GF ug/L (49303)	Dichlorprop, water, fltrd 0.7u GF ug/L (49302)	Dieldrin, water, fltrd, ug/L (39381)	Dinoseb water, fltrd 0.7u GF ug/L (49301)	Disulfoton, water, fltrd 0.7u GF ug/L (82677)	Diuron, water, fltrd 0.7u GF ug/L (49300)	EPTC, water, fltrd 0.7u GF ug/L (82668)	Ethalfluralin, water, fltrd 0.7u GF ug/L (82663)
APR													
16...	<.003	E.181	--	<.005	<.11	<.09	<.12	<.005	<.09	<.02	<.12	<.002	<.009
16...	--	--	<.2	--	--	--	--	--	--	--	--	--	--
JUN													
25...	<.003	E.013	--	<.005	<.11	<.09	<.12	<.005	<.09	<.02	<.13	<.002	<.009
25...	--	--	<2.0	--	--	--	--	--	--	--	--	--	--
SEP													
03...	<.003	E.006	--	<.005	<.11	<.09	<.12	<.005	<.09	<.02	<.12	<.002	<.009
03...	--	--	<2.0	--	--	--	--	--	--	--	--	--	--

08164503 West Mustang Creek near Ganado, TX--Continued

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

Date	Ethion, bed sedimnt ug/kg (39399)	Ethoprop, water, fltrd 0.7u GF ug/L (82672)	Fenuron water, fltrd 0.7u GF ug/L (49297)	Fluometuron water fltrd 0.7u GF ug/L (38811)	Fonofos water, fltrd, ug/L (04095)	Lindane water, fltrd, ug/L (39341)	Linuron water fltrd 0.7u GF ug/L (38478)	Linuron water fltrd 0.7u GF ug/L (82666)	Malathion, bed sedimnt ug/kg (39531)	Malathion, water, fltrd, ug/L (39532)	MCPA, water, fltrd 0.7u GF ug/L (38482)	MCPB, water, fltrd 0.7u GF ug/L (38487)	Methiocarb, water, fltrd 0.7u GF ug/L (38501)
APR													
16...	--	<.005	<.07	<.85	<.003	<.004	<.06	<.035	--	<.027	<.20	<.26	<.07
16...	<.2	--	--	--	--	--	--	--	<.2	--	--	--	--
JUN													
25...	--	<.005	<.07	.10	<.003	<.004	<.06	<.035	--	.061	<.20	<.26	<.07
25...	<1.0	--	--	--	--	--	--	--	<.4	--	--	--	--
SEP													
03...	--	<.005	<.09	<.20	<.003	<.004	<.06	<.035	--	E.022n	.57	<.26	<.09
03...	<.2	--	--	--	--	--	--	--	<.2	--	--	--	--

Date	Methomyl, water, fltrd 0.7u GF ug/L (49296)	Metolachlor water, fltrd, ug/L (39415)	Metribuzin, water, fltrd, ug/L (82630)	Molinate, water, fltrd 0.7u GF ug/L (82671)	Napropamide, water, fltrd 0.7u GF ug/L (82684)	Neburon water, fltrd 0.7u GF ug/L (49294)	Norflurazon, water, fltrd 0.7u GF ug/L (49293)	Oryzalin, water, fltrd 0.7u GF ug/L (49292)	Oxamyl, water, fltrd 0.7u GF ug/L (38866)	p,p'-DDE, water, fltrd, ug/L (34653)	Parathion, bed sedimnt ug/kg (39541)	Parathion, water, fltrd, ug/L (39542)	Methyl parathion, bed sedimnt ug/kg (39601)
APR													
16...	<.22	.484	<.006	.089	<.007	<.07	<.04	<.31	<.21	<.003	--	<.010	--
16...	--	--	--	--	--	--	--	--	--	--	<.2	--	<.2
JUN													
25...	<.22	.051	<.006	.132	<.007	<.78	<.04	<.28	<.16	<.003	--	<.010	--
25...	--	--	--	--	--	--	--	--	--	--	<1.0	--	<.4
SEP													
03...	<.22	.107	<.006	<.002	<.007	<.07	<.04	<.28	<.16	<.003	--	<.010	--
03...	--	--	--	--	--	--	--	--	--	--	<.2	--	<.2

Date	Methyl parathion, water, fltrd 0.7u GF ug/L (82667)	Pebulate, water, fltrd 0.7u GF ug/L (82669)	Pendimethalin, water, fltrd 0.7u GF ug/L (82683)	Phorate water fltrd 0.7u GF ug/L (82664)	Picloram, water, fltrd 0.7u GF ug/L (49291)	Prometon, water, fltrd, ug/L (04037)	Propachlor, water, fltrd, ug/L (04024)	Propanil, water, fltrd 0.7u GF ug/L (82679)	Propargite, water, fltrd 0.7u GF ug/L (82685)	Propham water fltrd 0.7u GF ug/L (49236)	Propoxur, water, fltrd 0.7u GF ug/L (38538)	Pronamide, water, fltrd 0.7u GF ug/L (82676)	Simazine, water, fltrd, ug/L (04035)
APR													
16...	<.006	<.004	<.022	<.011	<.09	<.01	<.010	<.011	<.02	<.22	<.12	<.004	.112
16...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN													
25...	<.006	<.004	<.022	<.011	<.09	<.01	<.010	<.011	<.02	<.22	<.12	<.004	.009
25...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
03...	<.006	<.004	<.022	<.011	<.09	<.01	<.010	<.011	<.02	<.22	<.19	<.004	<.005
03...	--	--	--	--	--	--	--	--	--	--	--	--	--

Date	Tebuthiuron water fltrd 0.7u GF ug/L (82670)	Terbacil, water, fltrd 0.7u GF ug/L (82665)	Terbufos, water, fltrd 0.7u GF ug/L (82675)	Thiobencarb water fltrd 0.7u GF ug/L (82681)	Triallate, water, fltrd 0.7u GF ug/L (82678)	Triclopyr, water, fltrd 0.7u GF ug/L (49235)	Trifluralin, water, fltrd 0.7u GF ug/L (82661)	Fipronil, water, fltrd, ug/L (62166)	Fipronil sulfide water, fltrd, ug/L (62167)	Fipronil sulfone water, fltrd, ug/L (62168)	Desulfinylfipronil amide, wat flt ug/L (62169)	Desulfinyl fipronil, water, fltrd, ug/L (62170)
APR												
16...	<.02	<.034	<.02	.014	<.002	<.07	<.009	E.031	.006	.010	<.009	.026
16...	--	--	--	--	--	--	--	--	--	--	--	--
JUN												
25...	<.02	<.034	<.02	.023	<.002	<.10	<.009	E.008	.017	.024	E.017	.022
25...	--	--	--	--	--	--	--	--	--	--	--	--
SEP												
03...	E.01n	<.034	<.02	.006	<.002	<.13	<.009	<.007	.010	.014	<.009	.004
03...	--	--	--	--	--	--	--	--	--	--	--	--

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

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

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 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, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

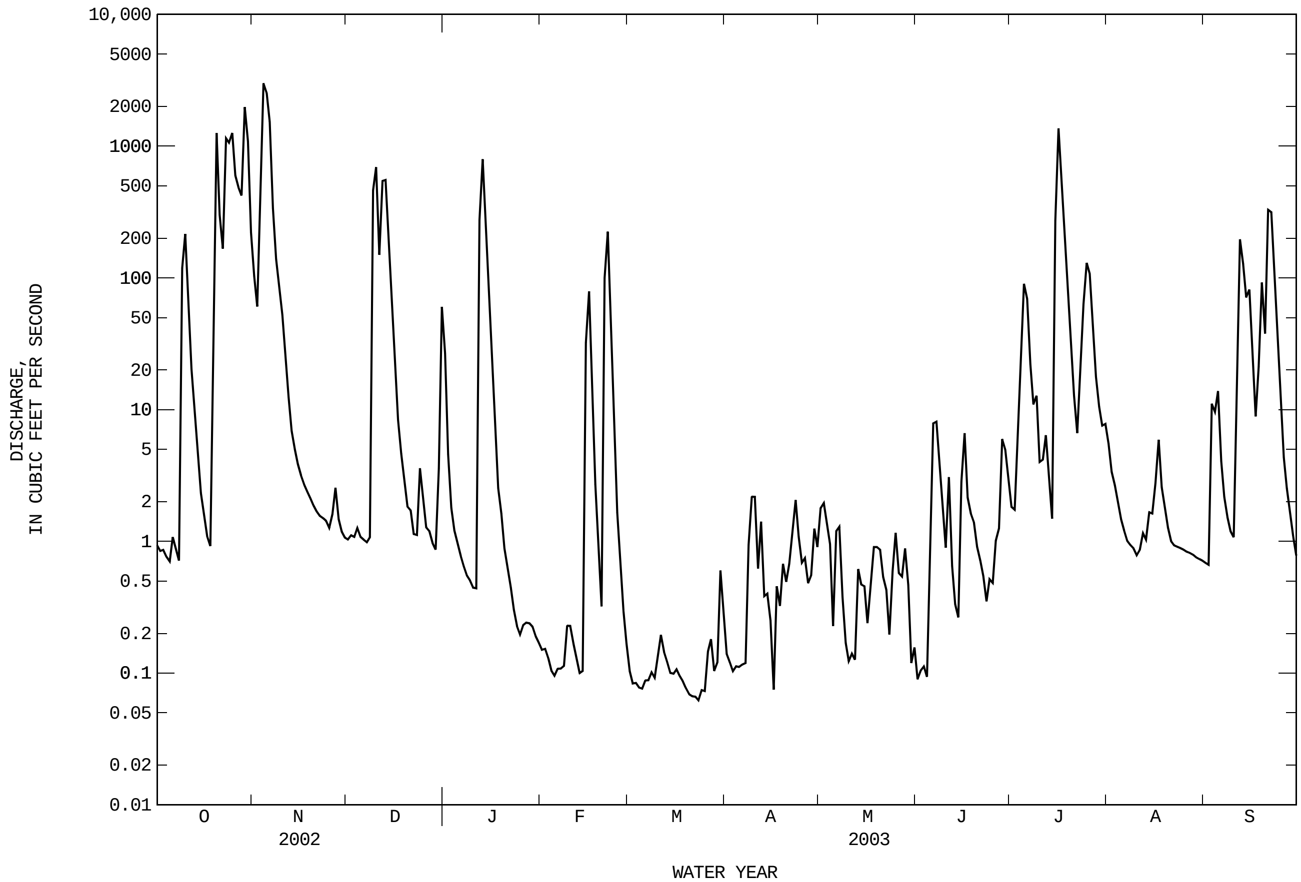
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.93	103	1.0	27	0.15	0.10	0.14	1.8	0.09	1.8	5.5	0.69
2	0.84	61	1.1	4.6	0.15	0.08	0.12	2.0	0.10	1.7	3.4	0.66
3	0.86	424	1.1	1.8	0.13	0.08	0.10	1.3	0.11	5.0	2.7	11
4	0.76	3000	1.3	1.2	0.10	0.08	0.11	0.95	0.09	17	2.0	9.6
5	0.70	2540	1.1	0.97	0.10	0.08	0.11	0.23	0.57	90	1.5	14
6	1.1	1530	1.0	0.78	0.11	0.09	0.12	1.2	7.9	69	1.2	4.1
7	0.88	339	0.98	0.65	0.11	0.09	0.12	1.3	8.1	22	1.0	2.2
8	0.71	139	1.1	0.55	0.11	0.10	0.94	0.38	4.1	11	0.94	1.5
9	119	89	461	0.50	0.23	0.09	2.2	0.17	1.8	13	0.88	1.2
10	216	52	693	0.44	0.23	0.13	2.2	0.12	0.90	4.0	0.78	1.1
11	68	27	150	0.44	0.17	0.19	0.62	0.14	3.1	4.2	0.86	6.4
12	20	12	543	275	0.13	0.14	1.4	0.13	0.65	6.4	1.2	196
13	9.1	6.9	553	795	0.10	0.12	0.38	0.62	0.33	2.9	1.0	127
14	4.7	5.0	128	153	0.10	0.10	0.40	0.47	0.26	1.5	1.7	71
15	2.3	3.8	47	47	32	0.10	0.25	0.46	2.8	271	1.6	81
16	1.5	3.2	18	16	79	0.11	0.07	0.24	6.6	1360	2.8	30
17	1.1	2.7	8.4	5.7	14	0.09	0.45	0.49	2.2	517	5.9	8.9
18	0.92	2.4	4.6	2.5	2.7	0.09	0.32	0.90	1.6	170	2.6	21
19	58	2.1	2.9	1.6	1.0	0.08	0.67	0.90	1.4	75	1.8	92
20	1260	1.9	1.8	0.88	0.32	0.07	0.49	0.86	0.91	29	1.3	38
21	302	1.7	1.7	0.62	100	0.07	0.67	0.54	0.71	13	1.00	329
22	167	1.6	1.1	0.44	224	0.07	1.1	0.43	0.54	6.6	0.93	315
23	1150	1.5	1.1	0.30	43	0.06	2.1	0.20	0.35	24	0.91	95
24	1060	1.4	3.6	0.23	7.2	0.07	1.1	0.59	0.52	63	0.89	31
25	1260	1.3	2.2	0.20	1.7	0.07	0.69	1.2	0.48	130	0.86	10
26	600	1.6	1.3	0.23	0.69	0.15	0.75	0.57	1.0	108	0.83	4.3
27	487	2.5	1.2	0.24	0.30	0.18	0.48	0.54	1.3	42	0.81	2.5
28	422	1.5	0.97	0.24	0.17	0.10	0.55	0.88	6.0	18	0.79	1.6
29	1980	1.2	0.86	0.22	---	0.12	1.2	0.47	5.0	10	0.76	1.1
30	1090	1.1	3.6	0.19	---	0.60	0.90	0.12	3.0	7.5	0.73	0.78
31	221	---	60	0.17	---	0.27	---	0.16	---	7.8	0.71	---
TOTAL	10506.40	8359.4	2697.01	1338.69	508.00	3.77	20.75	20.36	62.51	3101.4	49.88	1507.63
MEAN	339	279	87.0	43.2	18.1	0.12	0.69	0.66	2.08	100	1.61	50.3
MAX	1980	3000	693	795	224	0.60	2.2	2.0	8.1	1360	5.9	329
MIN	0.70	1.1	0.86	0.17	0.10	0.06	0.07	0.12	0.09	1.5	0.71	0.66
AC-FT	20840	16580	5350	2660	1010	7.5	41	40	124	6150	99	2990

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1997 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	127	120	41.3	41.6	20.8	60.1	61.1	38.4	12.3	42.0	24.0	148
MAX	371	279	87.0	161	63.3	310	374	131	39.7	176	83.5	368
(WY)	1998	2003	2003	1997	1997	1997	1997	1997	2000	2002	1998	1998
MIN	0.21	0.063	0.073	0.11	0.041	0.12	0.69	0.66	0.43	0.62	0.26	0.000
(WY)	2000	2000	2000	2000	2002	2003	2003	2003	2001	2001	2000	2000

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1997 - 2003	
ANNUAL TOTAL	35860.49		28175.80			
ANNUAL MEAN	98.2		77.2		61.4	
HIGHEST ANNUAL MEAN					104	1997
LOWEST ANNUAL MEAN					13.0	2000
HIGHEST DAILY MEAN	3000	Nov 4	3000	Nov 4	3640	Sep 11 1998
LOWEST DAILY MEAN	0.00	Feb 14	0.06	Mar 23	0.00	Jul 14 2000
ANNUAL SEVEN-DAY MINIMUM	0.00	Feb 14	0.07	Mar 19	0.00	Jul 14 2000
MAXIMUM PEAK FLOW			3290	Nov 4	4100	Sep 11 1998
MAXIMUM PEAK STAGE			22.08	Nov 4	22.16	Sep 11 1998
ANNUAL RUNOFF (AC-FT)	71130		55890		44510	
10 PERCENT EXCEEDS	190		129		66	
50 PERCENT EXCEEDS	1.1		1.2		1.4	
90 PERCENT EXCEEDS	0.00		0.11		0.08	

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 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specif. conductance, wat unf uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temperature, water, deg C (00010)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	2,4,5-T water, fltrd, ug/L (39742)	2,4-D water, fltrd, ug/L (39732)	2,4-DB water, fltrd 0.7u GF ug/L (38746)	2,6-Diethyl-aniline water fltrd 0.7u GF ug/L (82660)	Silvex, water, fltrd, ug/L (39762)	3-Hydroxy carbofuran, wat flt 0.7u GF ug/L (49308)
APR													
17...	0810	.57	1170	7.3	22.5	4.2	49	<.07	<.38	<.25	E.002n	<.03	<.28
17...	0810	--	--	--	--	--	--	--	--	--	--	--	--
JUN													
25...	1400	.49	478	8.2	32.5	5.0	69	<.07	<.16	<.25	<.006	<.03b	<.11
25...	1400	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
03...	0730	14	156	7.7	28.0	4.7	60	<.07	E.90	<.25	<.006	<.03b	<.55
03...	0730	--	--	--	--	--	--	--	--	--	--	--	--

Date	2Methyl 4,6-dinitrophenol, wat flt 0.7u GF ug/L (49299)	Acetochlor, water, fltrd, ug/L (49260)	Acifluorfen, water, fltrd 0.7u GF ug/L (49315)	Alachlor, water, fltrd, ug/L (46342)	Aldicarb, water, fltrd 0.7u GF ug/L (49312)	Aldicarb sulfone water, fltrd 0.7u GF ug/L (49313)	Aldicarb sulfoxide, wat flt 0.7u GF ug/L (49314)	alpha-HCH, water, fltrd, ug/L (34253)	Atrazine, water, fltrd, ug/L (39632)	Azinphos-methyl, water, fltrd 0.7u GF ug/L (82686)	Benfluralin, water, fltrd 0.7u GF ug/L (82673)	Bentazon, water, fltrd 0.7u GF ug/L (38711)	Bromacil, water, fltrd, ug/L (04029)
APR													
17...	<.25	<.006	<.06	.469	<.21	<.20	<.27	<.005	1.67	<.050	<.010	<.10	<.72
17...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN													
25...	<.25	<.006	<.05	.132	<.21	<1.70	<.27	<.005	1.19	<.050	<.010	<.05	<.09
25...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
03...	<.25	<.006	<.05	.045	<.21	<.20	<.27	<.005	.015	<.050	<.010	<.05	<.17
03...	--	--	--	--	--	--	--	--	--	--	--	--	--

Date	Bromoxynil, water, fltrd 0.7u GF ug/L (49311)	Butylate, water, fltrd, ug/L (04028)	Carbaryl, water, fltrd 0.7u GF ug/L (49310)	Carbaryl, water, fltrd 0.7u GF ug/L (82680)	Carbofuran, water, fltrd 0.7u GF ug/L (49309)	Carbofuran, water, fltrd 0.7u GF ug/L (82674)	Carbophenothion, bed sedimnt ug/kg (39787)	Chlorothalonil, water, fltrd 0.7u GF ug/L (49306)	Chlorpyrifos water, fltrd, ug/L (38933)	cis-Permethrin water fltrd 0.7u GF ug/L (82687)	Clopyralid, water, fltrd 0.7u GF ug/L (49305)	Cyanazine, water, fltrd, ug/L (04041)	Dacthal monoacid, water, fltrd 0.7u GF ug/L (49304)
APR													
17...	<.28	<.002	<.080	<.041	<.15	<.020	--	<.25	<.005	<.006	<.42	<.018	<.07
17...	--	--	--	--	--	--	<.2	--	--	--	--	--	--
JUN													
25...	<.07	<.002	<.100	<.041	<.15	<.020	--	<.25	<.005	<.006	<.42	<.018	<.07
25...	--	--	--	--	--	--	<.2	--	--	--	--	--	--
SEP													
03...	<.12	<.002	.179	E.364	<.22	<.020	--	<.25	<.005	<.006	<.47	<.018	<.07
03...	--	--	--	--	--	--	<.2	--	--	--	--	--	--

Date	DCPA, water fltrd 0.7u GF ug/L (82682)	CIAT, water, fltrd, ug/L (04040)	Diazinon, bed sedimnt ug/kg (39571)	Diazinon, water, fltrd, ug/L (39572)	Dicamba water fltrd 0.7u GF ug/L (38442)	Dichlobenil, water, fltrd 0.7u GF ug/L (49303)	Dichlorprop, water, fltrd 0.7u GF ug/L (49302)	Dieldrin, water, fltrd, ug/L (39381)	Dinoseb water, fltrd 0.7u GF ug/L (49301)	Disulfoton, water, fltrd 0.7u GF ug/L (82677)	Diuron, water, fltrd 0.7u GF ug/L (49300)	EPTC, water, fltrd 0.7u GF ug/L (82668)	Ethalfluralin, water, fltrd 0.7u GF ug/L (82663)
APR													
17...	<.003	E.222	--	<.005	<.11	<.09	<.12	<.005	<.09	<.02	<.14	<.002	<.009
17...	--	--	<.2	--	--	--	--	--	--	--	--	--	--
JUN													
25...	<.003	E.098	--	<.005	<.11	<.09	<.12	<.005	<.09	<.02	<.23	<.002	<.009
25...	--	--	<.2	--	--	--	--	--	--	--	--	--	--
SEP													
03...	<.003	E.008	--	<.005	<.11	<.21	<.12	<.005	<.09	<.02	<.12	<.002	<.009
03...	--	--	<1.0	--	--	--	--	--	--	--	--	--	--

08164504 East Mustang Creek near Louise, TX--Continued

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

Date	Ethion, bed sedimnt ug/kg (39399)	Ethoprop, water, fltrd 0.7u GF ug/L (82672)	Fenuron water, fltrd 0.7u GF ug/L (49297)	Fluometuron water fltrd 0.7u GF ug/L (38811)	Fonofos water, fltrd, ug/L (04095)	Lindane water, fltrd, ug/L (39341)	Linuron water fltrd 0.7u GF ug/L (38478)	Linuron water fltrd 0.7u GF ug/L (82666)	Malathion, bed sedimnt ug/kg (39531)	Malathion, water, fltrd, ug/L (39532)	MCPA, water, fltrd 0.7u GF ug/L (38482)	MCPB, water, fltrd 0.7u GF ug/L (38487)	Methiocarb, water, fltrd 0.7u GF ug/L (38501)
APR													
17...	--	<.005	<.11	<3.04	<.003	<.004	<.06	<.035	--	<.027	<.20	<.26	<.09
17...	<.2	--	--	--	--	--	--	--	<.2	--	--	--	--
JUN													
25...	--	<.005	<.07	4.77	<.003	<.004	<.07	<.035	--	.443	<.20	<.26	<.07
25...	<.2	--	--	--	--	--	--	--	<.2	--	--	--	--
SEP													
03...	--	<.005	<.07	.32	<.003	<.004	<.06	<.035	--	.123	<.20	<.26	<.08
03...	<.2	--	--	--	--	--	--	--	<.2	--	--	--	--

Date	Methomyl, water, fltrd 0.7u GF ug/L (49296)	Metolachlor, water, fltrd, ug/L (39415)	Metribuzin, water, fltrd, ug/L (82630)	Molinate, water, fltrd 0.7u GF ug/L (82671)	Napropamide, water, fltrd 0.7u GF ug/L (82684)	Neburon water, fltrd 0.7u GF ug/L (49294)	Norflurazon, water, fltrd 0.7u GF ug/L (49293)	Oryzalin, water, fltrd 0.7u GF ug/L (49292)	Oxamyl, water, fltrd 0.7u GF ug/L (38866)	p,p'-DDE, water, fltrd, ug/L (34653)	Parathion, bed sedimnt ug/kg (39541)	Parathion, water, fltrd, ug/L (39542)	Methyl parathion, bed sedimnt ug/kg (39601)
APR													
17...	<.22	.483	<.006	<.002	<.007	<.09	<.04	<.42	<.16	<.003	--	<.010	--
17...	--	--	--	--	--	--	--	--	--	--	<.2	--	<.2
JUN													
25...	<.22	2.31	<.006	.422	<.007	<.07	<.04	<.28	<.16	<.003	--	<.010	--
25...	--	--	--	--	--	--	--	--	--	--	<.2	--	<.2
SEP													
03...	<.22	.303	<.006	<.002	<.007	<.07	<.04	<.28	<.16	<.003	--	<.010	--
03...	--	--	--	--	--	--	--	--	--	--	<.2	--	<.2

Date	Methyl parathion, water, fltrd 0.7u GF ug/L (82667)	Pebulate, water, fltrd 0.7u GF ug/L (82669)	Pendimethalin, water, fltrd 0.7u GF ug/L (82683)	Phorate water fltrd 0.7u GF ug/L (82664)	Picloram, water, fltrd 0.7u GF ug/L (49291)	Prometon, water, fltrd, ug/L (04037)	Propachlor, water, fltrd, ug/L (04024)	Propanil, water, fltrd 0.7u GF ug/L (82679)	Propargite, water, fltrd 0.7u GF ug/L (82685)	Propham water fltrd 0.7u GF ug/L (49236)	Propoxur, water, fltrd 0.7u GF ug/L (38538)	Pronamide, water, fltrd 0.7u GF ug/L (82676)	Simazine, water, fltrd, ug/L (04035)
APR													
17...	<.006	<.004	.034	<.011	<.09	<.01	<.010	<.011	<.02	<6.42	<.64	<.004	.009
17...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN													
25...	<.006	<.004	<.022	<.011	<.09	E.01n	<.010	<.011	<.02	<4.70	<.12	<.004	<.005
25...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
03...	<.006	<.004	<.022	<.011	<.09	<.01	<.010	<.011	<.02	<.22	<.12	<.004	.015
03...	--	--	--	--	--	--	--	--	--	--	--	--	--

Date	Tebuthiuron water fltrd 0.7u GF ug/L (82670)	Terbacil, water, fltrd 0.7u GF ug/L (82665)	Terbufos, water, fltrd 0.7u GF ug/L (82675)	Thiobencarb water fltrd 0.7u GF ug/L (82681)	Triallate, water, fltrd 0.7u GF ug/L (82678)	Triclopyr, water, fltrd 0.7u GF ug/L (49235)	Trifluralin, water, fltrd 0.7u GF ug/L (82661)	Fipronil, water, fltrd, ug/L (62166)	Fipronil sulfide water, fltrd, ug/L (62167)	Fipronil sulfone water, fltrd, ug/L (62168)	Desulfinylfipronil amide, wat flt ug/L (62169)	Desulfinyl fipronil, water, fltrd, ug/L (62170)
APR												
17...	.06	<.034	<.02	<.005	<.002	<.07	<.009	<.007	<.005	<.005	<.009	<.004
17...	--	--	--	--	--	--	--	--	--	--	--	--
JUN												
25...	.03	<.034	<.02	.028	<.002	<.15	<.009	<.007	<.005	<.005	<.009	<.004
25...	--	--	--	--	--	--	--	--	--	--	--	--
SEP												
03...	E.03	<.034	<.02	.005	<.002	<.07	<.009	<.007	<.005	<.005	<.009	<.004
03...	--	--	--	--	--	--	--	--	--	--	--	--

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

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

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-STAGE RECORDS

PERIOD OF RECORD.--July 1999 to Sept. 2002 (contents), Oct 2002 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.--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 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. 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

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.

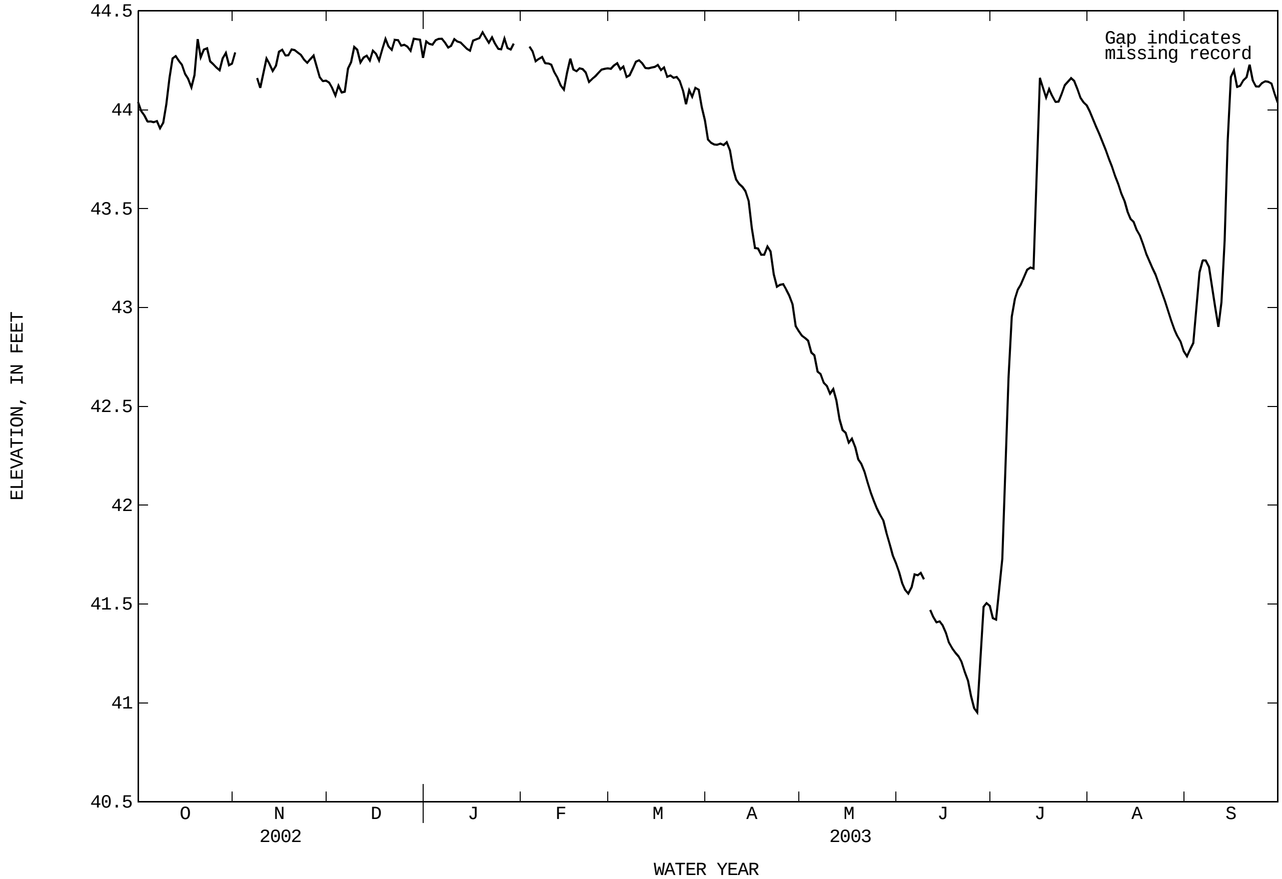
EXTREMES FOR CURRENT YEAR.--Maximum elevation, 44.54 ft, Dec. 23; minimum elevation, 40.91 ft, June 27.

ELEVATION, IN FEET (NGVD), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	44.04	44.29	44.14	44.35	---	44.21	43.85	42.86	41.66	41.43	43.99	42.75
2	43.99	---	44.11	44.33	---	44.22	43.83	42.85	41.61	41.42	43.95	42.79
3	43.97	---	44.07	44.33	44.32	44.24	43.82	42.83	41.57	41.56	43.91	42.82
4	43.94	---	44.12	44.35	44.29	44.20	43.82	42.77	41.55	41.73	43.88	42.99
5	43.94	---	44.09	44.36	44.25	44.22	43.83	42.76	41.58	42.14	43.84	43.18
6	43.94	---	44.09	44.36	44.26	44.17	43.82	42.68	41.65	42.65	43.80	43.24
7	43.94	---	44.21	44.34	44.27	44.17	43.84	42.66	41.64	42.95	43.76	43.24
8	43.91	44.16	44.24	44.32	44.24	44.21	43.80	42.62	41.66	43.04	43.72	43.21
9	43.93	44.11	44.32	44.32	44.23	44.24	43.70	42.60	41.62	43.09	43.67	43.11
10	44.03	44.19	44.30	44.36	44.23	44.25	43.65	42.56	---	43.12	43.63	43.00
11	44.16	44.26	44.24	44.35	44.19	44.24	43.62	42.59	41.47	43.16	43.58	42.90
12	44.26	44.23	44.27	44.34	44.16	44.21	43.61	42.53	41.43	43.19	43.54	43.03
13	44.27	44.20	44.27	44.32	44.12	44.21	43.59	42.43	41.41	43.20	43.49	43.34
14	44.25	44.22	44.25	44.31	44.10	44.21	43.54	42.38	41.41	43.20	43.45	43.84
15	44.23	44.29	44.30	44.30	44.19	44.22	43.40	42.36	41.39	43.64	43.43	44.17
16	44.18	44.30	44.28	44.35	44.26	44.23	43.30	42.32	41.35	44.16	43.39	44.20
17	44.16	44.27	44.25	44.36	44.20	44.20	43.30	42.34	41.30	44.11	43.36	44.11
18	44.11	44.28	44.31	44.36	44.20	44.21	43.27	42.29	41.28	44.06	43.32	44.12
19	44.17	44.31	44.36	44.39	44.21	44.17	43.27	42.23	41.25	44.10	43.27	44.15
20	44.36	44.30	44.32	44.36	44.21	44.17	43.31	42.21	41.24	44.07	43.24	44.16
21	44.27	44.29	44.30	44.34	44.19	44.16	43.28	42.17	41.21	44.04	43.20	44.23
22	44.30	44.28	44.35	44.37	44.14	44.17	43.17	42.11	41.16	44.04	43.17	44.15
23	44.31	44.25	44.35	44.33	44.16	44.15	43.11	42.07	41.11	44.08	43.12	44.12
24	44.24	44.24	44.32	44.31	44.17	44.10	43.11	42.02	41.04	44.12	43.08	44.12
25	44.23	44.26	44.33	44.31	44.19	44.03	43.12	41.98	40.97	44.14	43.03	44.14
26	44.21	44.27	44.32	44.36	44.20	44.10	43.09	41.95	40.95	44.16	42.98	44.14
27	44.20	44.22	44.30	44.31	44.21	44.07	43.06	41.92	41.24	44.14	42.93	44.14
28	44.26	44.16	44.36	44.30	44.21	44.11	43.02	41.86	41.49	44.11	42.89	44.13
29	44.29	44.15	44.36	44.33	---	44.10	42.91	41.81	41.50	44.06	42.85	44.08
30	44.23	44.15	44.36	---	---	44.01	42.88	41.75	41.49	44.04	42.83	44.04
31	44.23	---	44.26	---	---	43.95	---	41.71	---	44.02	42.78	---
MEAN	44.15	---	44.26	---	---	44.17	43.43	42.33	---	43.39	43.39	43.65
MAX	44.36	---	44.36	---	---	44.25	43.85	42.86	---	44.16	43.99	44.23
MIN	43.91	---	44.07	---	---	43.95	42.88	41.71	---	41.42	42.78	42.75

CAL YR 2002 MAX 44.38 MIN 41.70
WTR YR 2003 MAX 44.39 MIN 40.95

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 2002 TO SEPTEMBER 2003

285331096343501 -- Lk Texana Site AC

Date	Time	Reservoir storage acre-ft (00054)	Sampling depth, feet (00003)	Specif. conductance, wat unf uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temperature, water, deg C (00010)	Transparency Secchi disc, meters (00078)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Noncarb hardness, wat flt field, mg/L as CaCO3 (00904)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)
MAR													
26...	0855	157000	1.00	186	7.8	17.0	.30	8.7	90	75	8	25.9	2.34
26...	0857	--	10.0	186	7.7	17.0	--	8.7	90	--	--	--	--
26...	0859	--	20.0	187	7.7	17.0	--	8.7	90	--	--	--	--
26...	0901	--	30.0	185	7.5	16.0	--	8.0	81	--	--	--	--
26...	0903	--	40.0	184	7.4	15.0	--	7.7	76	--	--	--	--
26...	0905	--	50.0	181	7.3	14.5	--	7.6	74	--	--	--	--
26...	0907	--	60.0	181	7.3	14.0	--	7.6	74	--	--	--	--
26...	0909	--	70.0	182	7.2	14.5	--	7.7	75	71	5	24.8	2.27
MAY													
22...	0745	137000	1.00	229	8.0	27.5	.21	7.3	92	85	9	29.8	2.62
22...	0747	--	10.0	228	8.0	27.5	--	7.3	92	--	--	--	--
22...	0749	--	20.0	230	8.0	27.0	--	7.3	91	--	--	--	--
22...	0751	--	30.0	229	7.9	26.5	--	7.1	88	--	--	--	--
22...	0753	--	40.0	226	7.7	25.0	--	6.4	77	--	--	--	--
22...	0755	--	50.0	208	7.0	20.5	--	2.7	30	--	--	--	--
22...	0757	--	60.0	212	7.0	18.5	--	E.2	--	--	--	--	--
22...	0759	--	66.0	216	6.7	18.5	--	E.2	--	83	4	28.7	2.67
JUL													
30...	0740	156000	1.00	270	8.1	29.0	.70	6.8	88	98	9	33.1	3.61
30...	0742	--	10.0	271	7.8	28.5	--	5.8	75	--	--	--	--
30...	0744	--	20.0	275	7.2	28.0	--	2.7	34	--	--	--	--
30...	0746	--	30.0	270	6.9	27.5	--	E.6	--	--	--	--	--
30...	0748	--	40.0	266	6.9	27.5	--	E.3	--	--	--	--	--
30...	0750	--	50.0	267	6.9	27.0	--	E.1	--	--	--	--	--
30...	0752	--	60.0	272	6.9	26.5	--	E.1	--	--	--	--	--
30...	0754	--	66.0	288	6.9	26.0	--	E.2	--	100	6	33.3	4.14

285331096343501 -- Lk Texana Site AC

Date	Sodium, water, fltrd, mg/L (00930)	Sodium adsorption ratio (00931)	Sodium, percent (00932)	Potassium, water, fltrd, mg/L (00935)	Carbonate, wat flt incrm. titr., field, mg/L (00452)	Bicarbonate, wat flt incrm. titr., field, mg/L (00453)	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)	Sulfate water, fltrd, mg/L (00945)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Residue water, fltrd, sum of constituents mg/L (70301)	Oil and grease, water, unfltrd freon extract mg/L (00556)
MAR													
26...	8.29	.4	19	3.78	<1	80	66	5.7	10.5	.11	10.0	106	--
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
26...	7.91	.4	18	3.73	<1	81	66	5.7	9.93	.10	10.3	105	--
MAY													
22...	9.34	.4	18	4.09	<1	93	77	6.5	13.0	<.2	10.8	122	<7
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--	--	<7
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
22...	8.09	.4	17	3.79	<1	96	79	6.2	11.6	<.2	12.1	121	--
JUL													
30...	14.5	.6	24	4.07	<1	109	91	7.5	21.4	<.2	9.75	148	--
30...	--	--	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--	--	--
30...	14.7	.6	23	3.81	<1	115	94	5.8	23.1	<.2	14.4	158	--

08164525 Lake Texana near Edna, TX--Continued

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

285331096343501 -- Lk Texana Site AC

Date	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Cobalt water, fltrd, ug/L (01035)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Lithium water, fltrd, ug/L (01130)	Manganese, water, fltrd, ug/L (01056)
MAR													
26...	E1	<.30	M	90	<.06	<.04	<.8	.09	3.1	22	E.04	E2	.4
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
26...	M	<.30	<2	91	<.06	<.04	<.8	.16	3.3	36	<.08	<4	18.6
MAY													
22...	2	<.30	M	95	<.06	<.04	<.8	.12	2.4	E6	<.08	<4	.6
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
22...	E1	<.30	E1	94	<.06	<.04	<.8	.20	2.2	14	<.08	<4	298
JUL													
30...	E1n	<.30	3	96	<.06	<.04	<.8	.13	2.7	<8	<.08	E2n	.9
30...	--	--	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--	--	--
30...	<2	E.19n	12	107	<.06	<.04	<.8	.99	.9	161	<.08	E2n	1470d

285331096343501 -- Lk Texana Site AC

Date	Mercury water, fltrd, ug/L (71890)	Molybdenum, water, fltrd, ug/L (01060)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Strontium, water, fltrd, ug/L (01080)	Vanadium, water, fltrd, ug/L (01085)	Zinc, water, fltrd, ug/L (01090)	Uranium natural water, fltrd, ug/L (22703)
MAR									
26...	<.02	E.2	1.68	<3	<.20	78.0	E6	1	.29
26...	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--
26...	<.02	.5	1.66	<3	<.20	75.8	<8	3	.27
MAY									
22...	<.02	.4	1.05	<3	<.20	91.0	E5	2	.36
22...	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--
22...	<.02	.4	1.36	<3	<.20	86.5	<8	3	.24
JUL									
30...	<.02	.7	1.33	<3	<.20	106	E5n	1	.39
30...	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--
30...	<.02	.8	1.75	<3	<.20	112	E3n	13	.37

08164525 Lake Texana near Edna, TX--Continued

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

285326096342101 -- Lk Texana Site AL

Date	Time	Sampling depth, feet (00003)	Specif. conductance, wat unf uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temperature, water, deg C (00010)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)
MAR							
26...	0945	1.00	186	7.7	17.0	8.7	90
26...	0947	10.0	186	7.7	17.0	8.7	90
26...	0949	20.0	186	7.7	17.0	8.7	90
26...	1001	30.0	186	7.7	17.0	8.6	89
26...	1003	37.0	184	7.5	15.5	7.8	78
MAY							
22...	0830	1.00	229	8.0	26.5	7.3	90
22...	0832	10.0	229	8.0	26.5	7.3	90
22...	0834	20.0	239	8.0	26.5	7.4	92
22...	0836	33.0	230	8.0	26.5	7.4	92
JUL							
30...	0810	1.00	269	8.0	29.0	6.7	87
30...	0812	10.0	269	8.0	29.0	6.5	84
30...	0814	20.0	275	7.4	28.0	3.8	48
30...	0816	30.0	271	7.0	27.5	E.8	--
30...	0818	35.0	274	7.0	27.5	E.4	--

285534096322301 -- Lk Texana Site BC

Date	Time	Sampling depth, feet (00003)	Specif. conductance, wat unf uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temperature, water, deg C (00010)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)
MAR							
26...	1008	1.00	197	7.8	17.5	8.6	90
26...	1010	10.0	196	7.7	17.5	8.4	88
26...	1012	20.0	196	7.6	17.5	8.4	88
26...	1014	30.0	192	7.5	16.5	7.6	78
26...	1016	39.0	192	7.5	16.5	7.6	78
MAY							
22...	0849	1.00	237	7.9	26.5	7.1	88
22...	0851	10.0	237	7.9	26.5	7.0	87
22...	0853	20.0	236	7.9	26.5	7.0	87
22...	0855	30.0	237	7.9	26.5	7.0	87
22...	0857	37.0	236	7.9	26.5	7.0	87
JUL							
30...	0830	1.00	264	8.3	30.0	7.5	99
30...	0832	10.0	264	8.3	29.5	7.4	97
30...	0834	20.0	264	7.3	28.5	3.0	38
30...	0836	30.0	255	7.0	28.0	E.5	--
30...	0838	37.0	254	7.0	27.5	E.6	--

285816096320201 -- Lk Texana Site CC

Date	Time	Sampling depth, feet (00003)	Specif. conductance, wat unf uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temperature, water, deg C (00010)	Transparency Secchi disc, meters (00078)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	2,4,5-T water, fltrd, ug/L (39742)	2,4-D water, fltrd, ug/L (39732)	2,4-DB water, fltrd 0.7u GF ug/L (38746)	2,6-Diethylaniline water fltrd 0.7u GF ug/L (82660)	Silvex, water, fltrd, ug/L (39762)
MAR													
26...	1045	1.00	219	7.7	18.5	.24	8.0	85	--	--	--	--	--
MAR													
26-26	1045	--	--	--	--	--	--	--	<.07	<.16	<.25	<.006	<.03
26...	1047	10.0	219	7.7	18.5	--	8.0	85	--	--	--	--	--
26...	1049	20.0	219	7.7	18.5	--	8.0	85	--	--	--	--	--
26...	1051	30.0	219	7.7	18.0	--	7.9	83	--	--	--	--	--
26...	1053	40.0	217	7.6	18.0	--	7.9	83	--	--	--	--	--
MAY													
22...	0910	1.00	297	8.0	27.0	.21	6.9	86	--	--	--	--	--
MAY													
22-22	0910	--	--	--	--	--	--	--	<.07	<.16	<.25	<.006	<.03
22...	0912	10.0	296	7.9	27.0	--	6.9	86	--	--	--	--	--
22...	0914	20.0	282	7.9	26.5	--	6.9	85	--	--	--	--	--
22...	0916	30.0	277	7.9	26.5	--	6.9	85	--	--	--	--	--
22...	0918	37.0	--	--	--	--	--	--	--	--	--	--	--
22...	0918	37.0	273	7.9	26.5	--	6.9	85	--	--	--	--	--
JUL													
30-30	0855	--	--	--	--	--	--	--	<.07	<.16	<.25	<.006	<.03b
30...	0855	1.00	250	7.7	29.5	.34	5.8	76	--	--	--	--	--
30...	0857	10.0	235	7.4	29.5	--	4.9	64	--	--	--	--	--
30...	0859	20.0	226	7.2	29.5	--	4.0	52	--	--	--	--	--
30...	0901	30.0	238	7.0	28.0	--	E.6	--	--	--	--	--	--
30...	0903	40.0	240	7.0	28.0	--	E.8	--	--	--	--	--	--

08164525 Lake Texana near Edna, TX--Continued

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

285816096320201 -- Lk Texana Site CC

Date	3-Hydroxy carbo-furan, wat flt 0.7u GF ug/L (49308)	2Methyl 4,6-di-nitro-phenol, wat flt 0.7u GF ug/L (49299)	Aceto-chlor, water, fltrd, ug/L (49260)	Aci-fluor-fen, water, fltrd 0.7u GF ug/L (49315)	Ala-chlor, water, fltrd, ug/L (46342)	Aldi-carb, water, fltrd 0.7u GF ug/L (49312)	Aldi-carb sulfone water, fltrd 0.7u GF ug/L (49313)	Aldi-carb sulf-oxide, wat flt 0.7u GF ug/L (49314)	alpha-HCH, water, fltrd, ug/L (34253)	Atra-zine, water, fltrd, ug/L (39632)	Azin-phos-methyl, water, fltrd 0.7u GF ug/L (82686)	Ben-flur-alin, water, fltrd 0.7u GF ug/L (82673)	Ben-tazon, water, fltrd 0.7u GF ug/L (38711)
MAR													
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR													
26-26	<.11	<.25	<.006	<.05	<.004	<.21	<.20	<.27	<.005	.014	<.050	<.010	<.05
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY													
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY													
22-22	<.11	<.25	<.006	<.05	.020	<.21	<.20	<.27	<.005	.414	<.050	<.010	<.05
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL													
30-30	<.16	<.25	<.006	<.05	.030	<.21	<.20	<.27	<.005	.301	<.050	<.010	<.05
30...	--	--	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--	--	--

285816096320201 -- Lk Texana Site CC

Date	Broma-cil, water, fltrd, ug/L (04029)	Brom-oxynil, water, fltrd 0.7u GF ug/L (49311)	Butyl-ate, water, fltrd, ug/L (04028)	Car-baryl, water, fltrd 0.7u GF ug/L (49310)	Car-baryl, water, fltrd 0.7u GF ug/L (82680)	Carbo-furan, water, fltrd 0.7u GF ug/L (49309)	Carbo-furan, water, fltrd 0.7u GF ug/L (82674)	Carbo-pheno-thion, bed sedimnt ug/kg (39787)	Chloro-thalo-nil, water, fltrd 0.7u GF ug/L (49306)	Chlor-pyrifos water, fltrd, ug/L (38933)	cis-Per-methrin water fltrd 0.7u GF ug/L (82687)	Clopyr-alid, water, fltrd 0.7u GF ug/L (49305)	Cyana-zine, water, fltrd, ug/L (04041)
MAR													
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR													
26-26	<.09	<.07	<.002	<.080	<.041	<.15	<.020	--	<.25	<.005	<.006	<.95	<.018
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY													
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY													
22-22	<.09	<.07	<.002	<.080	<.041	<.15	<.020	--	<.25	<.005	<.006	<.42	<.018
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	<.4	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL													
30-30	<.10	<.07	<.002	<.080	E.025n	<.15	<.020	--	<.25	<.005	<.006	<.42	<.018
30...	--	--	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--	--	--

08164525 Lake Texana near Edna, TX--Continued

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

285816096320201 -- Lk Texana Site CC

Date	Dacthal mono-acid, water, fltrd 0.7u GF ug/L (49304)	DCPA, water fltrd 0.7u GF ug/L (82682)	CIAT, water, fltrd, ug/L (04040)	Diazi-non, bed sedimnt ug/kg (39571)	Diazi-non, water, fltrd, ug/L (39572)	Dicamba water fltrd 0.7u GF ug/L (38442)	Dichlo-benil, water, fltrd 0.7u GF ug/L (49303)	Di-chlor-prop, water, fltrd 0.7u GF ug/L (49302)	Diel-drin, water, fltrd, ug/L (39381)	Dinoseb water, fltrd 0.7u GF ug/L (49301)	Disul-foton, water, fltrd 0.7u GF ug/L (82677)	Diuron, water, fltrd 0.7u GF ug/L (49300)	EPTC, water, fltrd 0.7u GF ug/L (82668)
MAR													
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR													
26-26	<.07	<.003	E.006	--	<.005	<.11	<.09	<.12	<.005	<.09	<.02	<.12	<.002
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY													
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY													
22-22	<.07	<.003	E.055	--	<.005	<.11	<.09	<.12	<.005	<.09	<.02	E.02	<.002
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	<.4	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL													
30-30	<.07	<.003	E.031	--	<.005	<.11	<.09	<.12	<.005	<.18	<.02	E.08n	<.002
30...	--	--	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--	--	--

285816096320201 -- Lk Texana Site CC

Date	Ethal-flur-alin, water, fltrd 0.7u GF ug/L (82663)	Ethion, bed sedimnt ug/kg (39399)	Etho-prop, water, fltrd 0.7u GF ug/L (82672)	Fenuron water, fltrd 0.7u GF ug/L (49297)	Fluo-meturon water fltrd 0.7u GF ug/L (38811)	Fonofos water, fltrd, ug/L (04095)	Lindane water, fltrd, ug/L (39341)	Linuron water fltrd 0.7u GF ug/L (38478)	Linuron water fltrd 0.7u GF ug/L (82666)	Mala-thion, bed sedimnt ug/kg (39531)	Mala-thion, water, fltrd, ug/L (39532)	MCPA, water, fltrd 0.7u GF ug/L (38482)	MCPB, water, fltrd 0.7u GF ug/L (38487)
MAR													
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR													
26-26	<.009	--	<.005	<.07	<.06	<.003	<.004	<.06	<.035	--	<.027	<.20	<.26
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY													
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY													
22-22	<.009	--	<.005	<.07	<.06	<.003	<.004	<.06	<.035	--	E.021n	<.20	<.26
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
22...	--	<.4	--	--	--	--	--	--	--	<.4	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL													
30-30	<.009	--	<.005	<.07	.15	<.003	<.004	<.06	<.035	--	.049	<.20	<.26
30...	--	--	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--	--	--

08164525 Lake Texana near Edna, TX--Continued

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

285816096320201 -- Lk Texana Site CC

Date	Methiocarb, water, fltrd 0.7u GF ug/L (38501)	Methomyl, water, fltrd 0.7u GF ug/L (49296)	Metolachlor, water, fltrd, ug/L (39415)	Metribuzin, water, fltrd, ug/L (82630)	Molinate, water, fltrd 0.7u GF ug/L (82671)	Napropamide, water, fltrd 0.7u GF ug/L (82684)	Neburon water, fltrd 0.7u GF ug/L (49294)	Norflurazon, water, fltrd 0.7u GF ug/L (49293)	Oryzalin, water, fltrd 0.7u GF ug/L (49292)	Oxamyl, water, fltrd 0.7u GF ug/L (38866)	p,p'-DDE, water, fltrd, ug/L (34653)	Parathion, bed sedimnt ug/kg (39541)	Parathion, water, fltrd, ug/L (39542)
MAR													
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR													
26-26	<.07	<.22	E.009n	<.006	<.002	<.007	<.07	<.04	<.28	<.16	<.003	--	<.010
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY													
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY													
22-22	<.07	<.22	.056	<.006	.009	<.007	<.07	<.04	<.28	<.16	<.003	--	<.010
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--	<.4	--
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL													
30-30	<.07	<.22	.154	<.006	.003	<.007	<.07	<.04	<.28	<.16	<.003	--	<.010
30...	--	--	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--	--	--

285816096320201 -- Lk Texana Site CC

Date	Methyl parathion, bed sedimnt ug/kg (39601)	Methyl parathion, water, fltrd 0.7u GF ug/L (82667)	Pebulate, water, fltrd 0.7u GF ug/L (82669)	Pendimethalin, water, fltrd 0.7u GF ug/L (82683)	Phorate water fltrd 0.7u GF ug/L (82664)	Picloram, water, fltrd 0.7u GF ug/L (49291)	Prometon, water, fltrd, ug/L (04037)	Propachlor, water, fltrd, ug/L (04024)	Propanil, water, fltrd 0.7u GF ug/L (82679)	Propargite, water, fltrd 0.7u GF ug/L (82685)	Propham water fltrd 0.7u GF ug/L (49236)	Propoxur, water, fltrd 0.7u GF ug/L (38538)	Pronamide, water, fltrd 0.7u GF ug/L (82676)
MAR													
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR													
26-26	--	<.006	<.004	<.022	<.011	<.09	<.01	<.010	<.011	<.02	<.22	<.12	<.004
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY													
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY													
22-22	--	<.006	<.004	<.022	<.011	<.09	<.01	<.010	<.011	<.02	<.22	<.12	<.004
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
22...	<.4	--	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL													
30-30	--	<.010	<.004	<.022	<.011	<.09	<.01	<.010	<.011	<.02	<.22	<.12	<.004
30...	--	--	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--	--	--

08164525 Lake Texana near Edna, TX--Continued

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

285816096320201 -- Lk Texana Site CC

Date	Sima-zine, water, fltrd, ug/L (04035)	Tebu-thiuron water fltrd 0.7u GF ug/L (82670)	Terba-cil, water, fltrd 0.7u GF ug/L (82665)	Terbu-fos, water, fltrd 0.7u GF ug/L (82675)	Thio-bencarb water fltrd 0.7u GF ug/L (82681)	Tri-allate, water, fltrd 0.7u GF ug/L (82678)	Tri-clopyr, water, fltrd 0.7u GF ug/L (49235)	Tri-flur-alin, water, fltrd 0.7u GF ug/L (82661)	Fipro-nil, water, fltrd, ug/L (62166)	Fipro-nil sulfide water, fltrd, ug/L (62167)	Fipro-nil sulfone water, fltrd, ug/L (62168)	Desulf-inyl-fipro-nil amide, wat flt ug/L (62169)	Desulf-inyl fipro-nil, water, fltrd, ug/L (62170)
MAR													
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR													
26-26	<.005	<.02	<.034	<.02	<.005	<.002	<.07	<.009	<.007	<.005	<.005	<.009	<.004
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY													
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY													
22-22	.008	E.01n	<.034	<.02	<.005	<.002	<.07	<.009	<.007	<.005	<.005	<.009	<.004
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL													
30-30	.021	E.01t	<.034	<.02	<.005	<.002	<.07	<.009	<.007	<.005	<.005	<.009	<.004
30...	--	--	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--	--	--

290042096331401 -- Lk Texana Site DC

Date	Time	Sam-pling depth, feet (00003)	Specif. conduc-tance, wat unf uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temper-ature, water, deg C (00010)	Trans-parency Secchi disc, meters (00078)	Dis-solved oxygen, mg/L (00300)	Dis-solved oxygen, percent of sat-uration (00301)	Oil and grease, water, unfltrd freon extract mg/L (00556)	2,4,5-T water, fltrd, ug/L (39742)	2,4-D water, fltrd, ug/L (39732)	2,4-DB water, fltrd 0.7u GF ug/L (38746)	2,6-Di-ethyl-aniline water fltrd 0.7u GF ug/L (82660)
MAR													
26...	1126	1.00	388	7.9	19.5	.24	7.4	80	--	--	--	--	--
MAR													
26-26	1126	--	--	--	--	--	--	--	--	<.07	<.16	<.25	<.006
26...	1128	10.0	391	7.9	19.5	--	7.3	79	--	--	--	--	--
26...	1130	18.0	391	7.8	19.5	--	7.3	79	--	--	--	--	--
MAY													
22...	1106	1.00	403	8.1	26.5	.24	6.9	86	<7	--	--	--	--
MAY													
22-22	1106	--	--	--	--	--	--	--	--	<.07	<.16	<.25	<.006
22...	1108	10.0	390	8.0	26.0	--	6.5	80	--	--	--	--	--
22...	1110	20.0	--	--	--	--	--	--	--	--	--	--	--
22...	1110	20.0	388	8.0	26.0	--	6.3	77	--	--	--	--	--
JUL													
30-30	0930	--	--	--	--	--	--	--	--	<.07	<.16	<.25	<.006
30...	0930	1.00	229	7.2	30.5	.30	4.9	65	--	--	--	--	--
30...	0932	10.0	250	7.0	29.5	--	2.3	30	--	--	--	--	--
30...	0934	22.0	249	6.9	29.5	--	1.4	18	--	--	--	--	--

08164525 Lake Texana near Edna, TX--Continued

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

290042096331401 -- Lk Texana Site DC

Date	Silvex, water, fltrd, ug/L (39762)	3-Hydroxy carbo-furan, wat flt 0.7u GF ug/L (49308)	2Methyl 4,6-di-nitro-phenol, wat flt 0.7u GF ug/L (49299)	Aceto-chlor, water, fltrd, ug/L (49260)	Aci-fluor-fen, water, fltrd 0.7u GF ug/L (49315)	Ala-chlor, water, fltrd, ug/L (46342)	Aldi-carb, water, fltrd 0.7u GF ug/L (49312)	Aldi-carb sulfone water, fltrd 0.7u GF ug/L (49313)	Aldi-carb sulf-oxide, wat flt 0.7u GF ug/L (49314)	alpha-HCH, water, fltrd, ug/L (34253)	Atra-zine, water, fltrd, ug/L (39632)	Azin-phos-methyl, water, fltrd 0.7u GF ug/L (82686)	Ben-flur-alin, water, fltrd 0.7u GF ug/L (82673)
MAR													
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR													
26-26	<.03	--r	<.25	<.006	<.05	.011	--r	--r	--r	<.005	.249	<.050	<.010
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY													
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY													
22-22	<.03	<.11	<.25	<.006	<.05	.015	<.21	<.20	<.27	<.005	.394	<.050	<.010
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL													
30-30	<.03b	<.52	<.25	<.006	<.05	.011	<.42	<.24	<.27	<.005	.084	<.050	<.010
30...	--	--	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--	--	--

290042096331401 -- Lk Texana Site DC

Date	Ben-tazon, water, fltrd 0.7u GF ug/L (38711)	Broma-cil, water, fltrd, ug/L (04029)	Brom-oxynil, water, fltrd 0.7u GF ug/L (49311)	Butyl-ate, water, fltrd, ug/L (04028)	Car-baryl, water, fltrd 0.7u GF ug/L (49310)	Car-baryl, water, fltrd 0.7u GF ug/L (82680)	Carbo-furan, water, fltrd 0.7u GF ug/L (49309)	Carbo-furan, water, fltrd 0.7u GF ug/L (82674)	Carbo-pheno-thion, bed sedimnt ug/kg (39787)	Chloro-thalo-nil, water, fltrd 0.7u GF ug/L (49306)	Chlor-pyrifos water, fltrd, ug/L (38933)	cis-Per-methrin water fltrd 0.7u GF ug/L (82687)	Clopyr-alid, water, fltrd 0.7u GF ug/L (49305)
MAR													
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR													
26-26	<.05	--r	<.07	<.002	--r	<.041	--r	<.020	--	--r	<.005	<.006	<.42
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY													
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY													
22-22	<.05	<.10	<.07	<.002	<.080	<.041	<.15	<.020	--	<.25	<.005	<.006	<.42
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	<.4	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL													
30-30	<.05	<.09	<.07	<.002	<.080	<.041	<.15	<.020	--	<.25	<.005	<.006	<.42
30...	--	--	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--	--	--

290042096331401 -- Lk Texana Site DC

Date	Cyana-zine, water, fltrd, ug/L (04041)	Dacthal mono-acid, water, fltrd 0.7u GF ug/L (49304)	DCPA, water fltrd 0.7u GF ug/L (82682)	CIAT, water, fltrd, ug/L (04040)	Diazi-non, bed sedimnt ug/kg (39571)	Diazi-non, water, fltrd, ug/L (39572)	Dicamba water fltrd 0.7u GF ug/L (38442)	Dichlo-benil, water, fltrd 0.7u GF ug/L (49303)	Di-chlor-prop, water, fltrd 0.7u GF ug/L (49302)	Diel-drin, water, fltrd, ug/L (39381)	Dinoseb water, fltrd 0.7u GF ug/L (49301)	Disul-foton, water, fltrd 0.7u GF ug/L (82677)	Diuron, water, fltrd 0.7u GF ug/L (49300)
MAR													
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR													
26-26	<.018	<.07	<.003	E.029	--	<.005	<.11	--r	<.12	<.005	<.09	<.02	--r
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY													
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY													
22-22	<.018	<.07	<.003	E.054	--	<.005	<.11	<.09	<.12	<.005	<.09	<.02	E.04
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	<2.0	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL													
30-30	<.018	<.07	<.003	E.009	--	<.005	<.11	<.09	<.12	<.005	<.42	<.02	<.12
30...	--	--	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--	--	--

08164525 Lake Texana near Edna, TX--Continued

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

290042096331401 -- Lk Texana Site DC

Date	EPTC, water, fltrd 0.7u GF ug/L (82668)	Ethal- flur- alin, water, fltrd 0.7u GF ug/L (82663)	Ethion, bed sedimnt ug/kg (39399)	Etho- prop, water, fltrd 0.7u GF ug/L (82672)	Fenuron water, fltrd 0.7u GF ug/L (49297)	Fluo- meturon water fltrd 0.7u GF ug/L (38811)	Fonofos water, fltrd, ug/L (04095)	Lindane water, fltrd, ug/L (39341)	Linuron water fltrd 0.7u GF ug/L (38478)	Linuron water fltrd 0.7u GF ug/L (82666)	Mala- thion, bed sedimnt ug/kg (39531)	Mala- thion, water, fltrd, ug/L (39532)	MCPA, water, fltrd 0.7u GF ug/L (38482)
MAR													
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR													
26-26	<.002	<.009	--	<.005	--r	--r	<.003	<.004	--r	<.035	--	<.027	<.20
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY													
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY													
22-22	.003	<.009	--	<.005	<.07	<.06	<.003	<.004	<.06	<.035	--	E.012n	<.20
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	<.4	--	--	--	--	--	--	--	<.4	--	--
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL													
30-30	<.002	<.009	--	<.005	<.10	<.09	<.003	<.004	<.06	<.035	--	.363	<.20
30...	--	--	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--	--	--

290042096331401 -- Lk Texana Site DC

Date	MCPB, water, fltrd 0.7u GF ug/L (38487)	Methio- carb, water, fltrd 0.7u GF ug/L (38501)	Meth- omyl, water, fltrd 0.7u GF ug/L (49296)	Metola- chlor, water, fltrd, ug/L (39415)	Metri- buzin, water, fltrd, ug/L (82630)	Moli- nate, water, fltrd 0.7u GF ug/L (82671)	Naprop- amide, water, fltrd 0.7u GF ug/L (82684)	Neburon water, fltrd 0.7u GF ug/L (49294)	Norflur azon, water, fltrd 0.7u GF ug/L (49293)	Ory- zalin, water, fltrd 0.7u GF ug/L (49292)	Oxamyl, water, fltrd 0.7u GF ug/L (38866)	p,p'- DDE, water, fltrd, ug/L (34653)	Para- thion, bed sedimnt ug/kg (39541)
MAR													
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR													
26-26	<.26	--r	--r	.015	<.006	<.002	<.007	--r	--r	--r	--r	<.003	--
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY													
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY													
22-22	<.26	<.07	<.22	.057	<.006	.022	<.007	<.07	<.04	<.28	<.16	<.003	--
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--	--	<.4
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL													
30-30	<.26	<.07	<.22	.047	<.006	<.004	<.007	<.07	<.04	<.28	<.16	<.003	--
30...	--	--	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--	--	--

290042096331401 -- Lk Texana Site DC

Date	Para- thion, water, fltrd, ug/L (39542)	Methyl para- thion, bed sedimnt ug/kg (39601)	Methyl para- thion, water, fltrd 0.7u GF ug/L (82667)	Peb- ulate, water, fltrd 0.7u GF ug/L (82669)	Pendi- meth- alin, water, fltrd 0.7u GF ug/L (82683)	Phorate water fltrd 0.7u GF ug/L (82664)	Pic- loram, water, fltrd 0.7u GF ug/L (49291)	Prome- ton, water, fltrd, ug/L (04037)	Propa- chlor, water, fltrd, ug/L (04024)	Pro- panil, water, fltrd 0.7u GF ug/L (82679)	Propar- gite, water, fltrd 0.7u GF ug/L (82685)	Propham water fltrd 0.7u GF ug/L (49236)	Pro- poxur, water, fltrd 0.7u GF ug/L (38538)
MAR													
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR													
26-26	<.010	--	<.006	<.004	<.022	<.011	<.09	<.01	<.010	<.011	<.02	--r	--r
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY													
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY													
22-22	<.010	--	<.006	<.004	<.022	<.011	<.09	<.01	<.010	<.011	<.02	<1.20	<.12
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
22...	--	<.4	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL													
30-30	<.010	--	<.006	<.004	<.022	<.011	<.09	<.01	<.010	<.011	<.02	<.22	<.12
30...	--	--	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--	--	--

08164525 Lake Texana near Edna, TX--Continued

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

290042096331401 -- Lk Texana Site DC

Date	Pron-amide, water, fltrd 0.7u GF ug/L (82676)	Sima-zine, water, fltrd, ug/L (04035)	Tebu-thiuron water fltrd 0.7u GF ug/L (82670)	Terba-cil, water, fltrd 0.7u GF ug/L (82665)	Terbu-fos, water, fltrd 0.7u GF ug/L (82675)	Thio-bencarb water fltrd 0.7u GF ug/L (82681)	Tri-allate, water, fltrd 0.7u GF ug/L (82678)	Tri-clopyr, water, fltrd 0.7u GF ug/L (49235)	Tri-flur-alin, water, fltrd 0.7u GF ug/L (82661)	Fipro-nil, water, fltrd, ug/L (62166)	Fipro-nil sulfide water, fltrd, ug/L (62167)	Fipro-nil sulfone water, fltrd, ug/L (62168)	Desulf-inyl-fipro-nil amide, wat flt ug/L (62169)
MAR													
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR													
26-26	<.004	<.005	<.02	<.034	<.02	<.005	<.002	<.07	<.009	<.007	<.005	<.005	<.009
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY													
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY													
22-22	<.004	.006	E.01n	<.034	<.02	<.005	<.002	<.07	<.009	<.007	<.005	<.005	<.009
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL													
30-30	<.004	.005	E.02	<.034	<.02	<.005	<.002	<.07	<.009	E.004	.009	.008	<.009
30...	--	--	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--	--	--

290042096331401 -- Lk Texana Site DC

Date	Desulf-inyl fipro-nil, water, fltrd, ug/L (62170)
MAR	
26...	--
MAR	
26-26	<.004
26...	--
26...	--
MAY	
22...	--
MAY	
22-22	<.004
22...	--
22...	--
22...	--
JUL	
30-30	.004
30...	--
30...	--
30...	--

285940096312101 -- Lk Texana Site EC

Date	Time	Sam-pling depth, feet (00003)	Specif. conduc-tance, wat unf uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temper-ature, water, deg C (00010)	Trans-parency Secchi disc, meters (00078)	Dis-solved oxygen, mg/L (00300)	Dis-solved oxygen, percent of sat-uration (00301)	2,4,5-T water, fltrd, ug/L (39742)	2,4-D water, fltrd, ug/L (39732)	2,4-DB water, fltrd 0.7u GF ug/L (38746)	2,6-Di-ethyl-aniline water fltrd 0.7u GF ug/L (82660)	Silvex, water, fltrd, ug/L (39762)
MAR													
26...	1104	1.00	211	7.5	18.5	.21	7.5	80	--	--	--	--	--
MAR													
26-26	1104	--	--	--	--	--	--	--	<.07	<.16	<.25	<.006	<.03
26...	1106	10.0	210	7.5	18.5	--	7.4	79	--	--	--	--	--
26...	1108	20.0	208	7.5	18.5	--	7.2	77	--	--	--	--	--
26...	1110	26.0	209	7.4	18.5	--	7.0	75	--	--	--	--	--
MAY													
22...	1030	1.00	304	7.7	27.0	.21	6.1	76	--	--	--	--	--
MAY													
22-22	1030	--	--	--	--	--	--	--	<.07	<.16	<.25	<.006	<.03
22...	1032	10.0	304	7.7	27.0	--	6.0	75	--	--	--	--	--
22...	1034	20.0	302	7.7	26.5	--	5.8	72	--	--	--	--	--
22...	1036	24.0	--	--	--	--	--	--	--	--	--	--	--
22...	1036	24.0	302	7.7	26.5	--	5.8	72	--	--	--	--	--
JUL													
30-30	0915	--	--	--	--	--	--	--	<.07	<.16	<.25	E.003n	<.03b
30...	0915	1.00	224	7.7	30.5	.37	6.9	92	--	--	--	--	--
30...	0917	10.0	196	6.7	29.5	--	1.6	21	--	--	--	--	--
30...	0919	20.0	194	6.7	29.5	--	1.4	18	--	--	--	--	--
30...	0921	26.0	194	6.7	29.5	--	1.1	14	--	--	--	--	--

08164525 Lake Texana near Edna, TX--Continued

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

285940096312101 -- Lk Texana Site EC

Date	3-Hydroxy carbofuran, wat flt 0.7u GF ug/L (49308)	2Methyl 4,6-dinitrophenol, wat flt 0.7u GF ug/L (49299)	Acetochlor, water, fltrd, ug/L (49260)	Acifluorfen, water, fltrd 0.7u GF ug/L (49315)	Alachlor, water, fltrd, ug/L (46342)	Aldicarb, water, fltrd 0.7u GF ug/L (49312)	Aldicarb sulfone water, fltrd 0.7u GF ug/L (49313)	Aldicarb sulfoxide, wat flt 0.7u GF ug/L (49314)	alpha-HCH, water, fltrd, ug/L (34253)	Atrazine, water, fltrd, ug/L (39632)	Azinphos-methyl, water, fltrd 0.7u GF ug/L (82686)	Benfluralin, water, fltrd 0.7u GF ug/L (82673)	Bentazon, water, fltrd 0.7u GF ug/L (38711)
MAR													
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR													
26-26	--r	<.25	<.006	<.05	.014	--r	--r	--r	<.005	.360	<.050	<.010	<.05
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY													
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY													
22-22	<.11	<.25	<.006	<.05	.028	<.21	<.20	<.27	<.005	.456	<.050	<.010	<.05
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL													
30-30	<.23	<.25	<.006	<.05	.029	<.41	<.20	<.27	<.005	.202	<.050	<.010	<.05
30...	--	--	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--	--	--

285940096312101 -- Lk Texana Site EC

Date	Bromacil, water, fltrd, ug/L (04029)	Bromoxynil, water, fltrd 0.7u GF ug/L (49311)	Butylate, water, fltrd, ug/L (04028)	Carbaryl, water, fltrd 0.7u GF ug/L (49310)	Carbaryl, water, fltrd 0.7u GF ug/L (82680)	Carbofuran, water, fltrd 0.7u GF ug/L (49309)	Carbofuran, water, fltrd 0.7u GF ug/L (82674)	Carbophenothion, bed sedimnt ug/kg (39787)	Chlorothalonil, water, fltrd 0.7u GF ug/L (49306)	Chlorpyrifos water, fltrd, ug/L (38933)	cis-Permethrin water fltrd 0.7u GF ug/L (82687)	Clopyralid, water, fltrd 0.7u GF ug/L (49305)	Cyanazine, water, fltrd, ug/L (04041)
MAR													
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR													
26-26	--r	<.07	<.002	--r	<.041	--r	<.020	--	--r	<.005	<.006	<.42	<.018
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY													
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY													
22-22	<.13	<.07	<.002	<.080	<.041	<.15	<.020	--	<.25	<.005	<.006	<.42	<.018
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	<.4	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL													
30-30	<.09	<.07	<.002	<.080	E.022n	<.15	<.020	--	<.25	<.005	<.006	<.42	<.018
30...	--	--	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--	--	--

08164525 Lake Texana near Edna, TX--Continued

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

285940096312101 -- Lk Texana Site EC

Date	Dacthal mono-acid, water, fltrd 0.7u GF ug/L (49304)	DCPA, water fltrd 0.7u GF ug/L (82682)	CIAT, water, fltrd, ug/L (04040)	Diazi-non, bed sedimnt ug/kg (39571)	Diazi-non, water, fltrd, ug/L (39572)	Dicamba water fltrd 0.7u GF ug/L (38442)	Dichlo-benil, water, fltrd 0.7u GF ug/L (49303)	Di-chlor-prop, water, fltrd 0.7u GF ug/L (49302)	Diel-drin, water, fltrd, ug/L (39381)	Dinoseb water, fltrd 0.7u GF ug/L (49301)	Disul-foton, water, fltrd 0.7u GF ug/L (82677)	Diuron, water, fltrd 0.7u GF ug/L (49300)	EPTC, water, fltrd 0.7u GF ug/L (82668)
MAR													
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR													
26-26	<.07	<.003	E.111	--	<.005	<.11	--r	<.12	<.005	<.09	<.02	--r	<.002
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY													
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY													
22-22	<.10	<.003	E.111	--	<.005	<.11	<.09	<.12	<.005	<.09	<.02	E.04	<.002
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	<.4	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL													
30-30	<.07	<.003	E.029	--	<.005	<.11	<.09	<.12	<.005	<.18	<.02	E.10n	<.002
30...	--	--	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--	--	--

285940096312101 -- Lk Texana Site EC

Date	Ethal-flur-alin, water, fltrd 0.7u GF ug/L (82663)	Ethion, bed sedimnt ug/kg (39399)	Etho-prop, water, fltrd 0.7u GF ug/L (82672)	Fenuron water, fltrd 0.7u GF ug/L (49297)	Fluo-meturon water fltrd 0.7u GF ug/L (38811)	Fonofos water, fltrd, ug/L (04095)	Lindane water, fltrd, ug/L (39341)	Linuron water fltrd 0.7u GF ug/L (38478)	Linuron water fltrd 0.7u GF ug/L (82666)	Mala-thion, bed sedimnt ug/kg (39531)	Mala-thion, water, fltrd, ug/L (39532)	MCPA, water, fltrd 0.7u GF ug/L (38482)	MCPB, water, fltrd 0.7u GF ug/L (38487)
MAR													
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR													
26-26	<.009	--	<.005	--r	--r	<.003	<.004	--r	<.035	--	<.027	<.20	<.26
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY													
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY													
22-22	<.009	--	<.005	<.07	<.06	<.003	<.004	<.06	<.035	--	E.022n	<.20	<.26
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
22...	--	<.4	--	--	--	--	--	--	--	<.4	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL													
30-30	<.009	--	<.005	<.07	.21	<.003	<.004	<.06	<.035	--	.164	<.20	<.26
30...	--	--	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--	--	--

08164525 Lake Texana near Edna, TX--Continued

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

285940096312101 -- Lk Texana Site EC

Date	Methiocarb, water, fltrd 0.7u GF ug/L (38501)	Methomyl, water, fltrd 0.7u GF ug/L (49296)	Metolachlor, water, fltrd, ug/L (39415)	Metribuzin, water, fltrd, ug/L (82630)	Molinate, water, fltrd 0.7u GF ug/L (82671)	Napropamide, water, fltrd 0.7u GF ug/L (82684)	Neburon water, fltrd 0.7u GF ug/L (49294)	Norflurazon, water, fltrd 0.7u GF ug/L (49293)	Oryzalin, water, fltrd 0.7u GF ug/L (49292)	Oxamyl, water, fltrd 0.7u GF ug/L (38866)	p,p'-DDE, water, fltrd, ug/L (34653)	Parathion, bed sedimnt ug/kg (39541)	Parathion, water, fltrd, ug/L (39542)
MAR													
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR													
26-26	--r	--r	.064	<.006	<.002	<.007	--r	--r	--r	--r	<.003	--	<.010
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY													
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY													
22-22	<.07	<.22	.104	<.006	.005	<.007	<.07	<.04	<.28	<.16	<.003	--	<.010
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--	<.4	--
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL													
30-30	<.07	<.22	.224	<.006	.004	<.007	<.07	<.04	<.28	<.16	<.003	--	<.010
30...	--	--	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--	--	--

285940096312101 -- Lk Texana Site EC

Date	Methyl parathion, bed sedimnt ug/kg (39601)	Methyl parathion, water, fltrd 0.7u GF ug/L (82667)	Pebulate, water, fltrd 0.7u GF ug/L (82669)	Pendimethalin, water, fltrd 0.7u GF ug/L (82683)	Phorate water fltrd 0.7u GF ug/L (82664)	Picloram, water, fltrd 0.7u GF ug/L (49291)	Prometon, water, fltrd, ug/L (04037)	Propachlor, water, fltrd, ug/L (04024)	Propanil, water, fltrd 0.7u GF ug/L (82679)	Propargite, water, fltrd 0.7u GF ug/L (82685)	Propham water fltrd 0.7u GF ug/L (49236)	Propoxur, water, fltrd 0.7u GF ug/L (38538)	Pronamide, water, fltrd 0.7u GF ug/L (82676)
MAR													
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR													
26-26	--	<.006	<.004	<.022	<.011	<.09	<.01	<.010	<.011	<.02	--r	--r	<.004
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY													
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY													
22-22	--	<.006	<.004	<.022	<.011	<.09	<.01	<.010	<.011	<.02	<.22	<.12	<.004
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
22...	<.4	--	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL													
30-30	--	<.010	<.004	<.022	<.011	<.09	<.01	<.010	<.011	<.02	<.22	<.12	<.004
30...	--	--	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--	--	--

08164525 Lake Texana near Edna, TX--Continued

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

285940096312101 -- Lk Texana Site EC

Date	Simazine, water, fltrd, ug/L (04035)	Tebuthiuron water fltrd 0.7u GF ug/L (82670)	Terbacil, water, fltrd 0.7u GF ug/L (82665)	Terbufos, water, fltrd 0.7u GF ug/L (82675)	Thiobencarb water fltrd 0.7u GF ug/L (82681)	Triallate, water, fltrd 0.7u GF ug/L (82678)	Triclopyr, water, fltrd 0.7u GF ug/L (49235)	Trifluralin, water, fltrd 0.7u GF ug/L (82661)	Fipronil, water, fltrd, ug/L (62166)	Fipronil sulfide water, fltrd, ug/L (62167)	Fipronil sulfone water, fltrd, ug/L (62168)	Desulfinyl-fipronil amide, wat flt ug/L (62169)	Desulfinyl fipronil, water, fltrd, ug/L (62170)
MAR													
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR													
26-26	.008	<.02	<.034	<.02	<.005	<.002	<.07	<.009	<.007	<.005	<.005	<.009	<.004
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY													
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY													
22-22	.022	E.01n	<.034	<.02	<.005	<.002	<.07	<.009	<.007	<.005	<.005	<.009	<.004
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL													
30-30	.015	E.01t	<.034	<.02	<.005	<.002	<.07	<.009	<.007	.006	.006	<.009	<.004
30...	--	--	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--	--	--

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

Value qualifier codes used in this report:
- b -- Value was extrapolated below
- d -- Diluted sample: method hi range exceeded
- n -- Below the NDV
- t -- Below the long-term MDL

Null value qualifier codes used in this report:
- r -- Sample ruined in preparation

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.--June 1970 to current year.
Water-quality records.--Chemical data: Apr. 1965 to Aug. 1988. Biochemical data: Apr. 1965 to Aug. 1988. Pesticide data: July 1970 to July 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, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.33	40	3.9	12	5.3	5.3	2.8	1.3	0.16	0.16	1.6	1.0
2	0.31	27	3.7	9.4	5.0	5.0	2.7	1.3	0.18	0.18	1.3	1.4
3	0.30	74	3.6	6.5	4.5	4.9	2.7	1.2	0.16	0.24	1.5	2.7
4	0.30	1900	3.9	4.8	4.3	4.9	2.7	1.2	0.15	2.8	1.3	8.0
5	0.27	2630	3.9	4.0	4.2	4.9	2.8	1.2	0.72	3.8	1.2	8.2
6	0.32	1100	3.6	3.4	4.2	4.8	5.2	1.2	0.44	0.61	1.1	5.0
7	1.4	166	3.6	3.0	4.2	4.8	5.7	1.1	0.26	8.5	0.86	2.7
8	1.7	82	3.8	2.7	4.4	5.2	6.4	1.5	0.18	54	0.72	1.4
9	1.6	54	122	2.5	4.4	5.4	5.0	1.4	0.15	52	0.60	0.87
10	1.2	39	556	2.3	4.2	5.0	3.2	0.98	0.20	25	0.51	0.55
11	0.96	30	227	2.4	4.0	4.9	2.5	0.88	0.14	e14	0.60	0.51
12	1.3	23	125	59	4.1	4.9	2.3	0.81	0.13	e6.2	0.56	67
13	1.5	17	293	1270	4.1	4.8	2.1	0.66	0.25	e2.4	0.91	271
14	1.6	14	117	700	4.1	4.5	2.1	0.60	0.32	1.1	1.1	94
15	1.4	12	55	132	8.8	4.5	2.0	0.57	0.12	42	0.94	796
16	1.1	10	33	71	69	4.3	2.0	0.54	0.13	265	1.1	305
17	0.86	8.6	22	43	46	4.2	1.9	0.47	0.14	396	1.0	69
18	0.68	7.7	16	28	21	4.0	1.9	0.39	0.18	227	0.98	163
19	1.4	6.9	12	19	13	3.8	1.9	0.36	0.21	88	1.1	373
20	1.4	6.2	9.2	15	9.3	3.6	3.0	0.33	0.13	38	1.1	182
21	0.80	5.6	7.5	12	9.0	3.5	3.7	0.30	0.10	17	1.3	247
22	1.0	5.2	6.3	10	30	3.5	3.4	0.27	0.08	8.8	1.3	257
23	94	4.8	6.8	8.9	25	3.5	2.8	0.26	0.07	5.2	1.1	102
24	192	4.6	9.7	7.7	14	3.4	3.6	0.27	0.24	3.5	1.0	57
25	1240	7.0	7.3	7.1	9.8	3.6	2.4	0.26	0.07	2.4	0.94	34
26	471	6.5	6.0	7.2	7.4	4.1	2.1	0.26	0.07	1.9	0.87	21
27	195	7.0	5.3	6.5	6.4	3.5	1.6	0.24	2.5	1.5	0.80	15
28	283	4.8	4.7	6.2	5.7	3.4	1.4	0.23	0.40	2.7	0.78	12
29	848	4.4	4.3	5.9	---	3.2	1.3	0.20	0.21	2.3	0.75	9.0
30	164	4.1	4.6	5.7	---	3.0	1.3	0.20	0.13	3.5	0.66	6.5
31	68	---	4.7	5.5	---	2.9	---	0.19	---	2.4	0.75	---
MEAN	115	210	54.3	79.8	12.0	4.24	2.82	0.67	0.27	41.2	0.98	104
MAX	1240	2630	556	1270	69	5.4	6.4	1.5	2.5	396	1.6	796
MIN	0.27	4.1	3.6	2.3	4.0	2.9	1.3	0.19	0.07	0.16	0.51	0.51
AC-FT	7090	12500	3340	4900	665	260	168	41	16	2540	60	6170

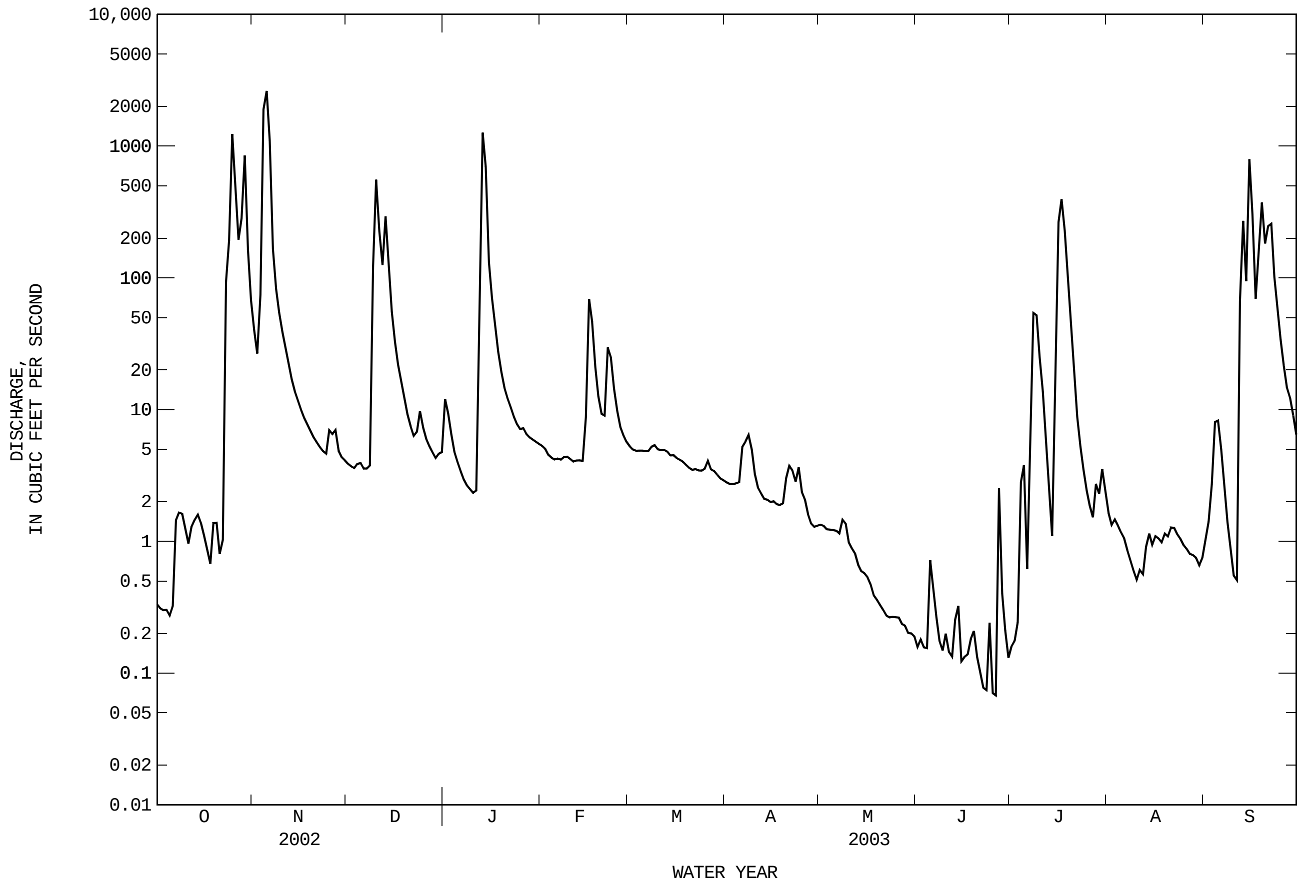
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1970 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	69.7	50.6	40.9	41.1	46.9	40.7	76.0	102	106	27.8	8.70	82.3
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 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1970 - 2003	
ANNUAL MEAN	58.9		52.2		57.7	
HIGHEST ANNUAL MEAN					144	1992
LOWEST ANNUAL MEAN					2.65	1989
HIGHEST DAILY MEAN	3640	Jul 17	2630	Nov 5	13100	Oct 19 1994
LOWEST DAILY MEAN	0.00	Jun 12	0.07	Jun 23	0.00	May 22 1971
ANNUAL SEVEN-DAY MINIMUM	0.00	Jun 12	0.11	Jun 20	0.00	May 26 1971
MAXIMUM PEAK FLOW			2980	Nov 5	19700	Jun 12 1981
MAXIMUM PEAK STAGE			19.03	Nov 5	a33.43	Oct 19 1994
ANNUAL RUNOFF (AC-FT)	42610		37760		41830	
10 PERCENT EXCEEDS	57		77		55	
50 PERCENT EXCEEDS	2.1		3.7		3.1	
90 PERCENT EXCEEDS	0.32		0.27		0.21	

e Estimated
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.--June 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.--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, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.77	44	9.3	6.5	1.7	2.8	1.5	0.88	0.03	4.8	3.1	0.64
2	0.72	22	6.1	5.1	1.8	2.5	1.7	0.37	0.06	17	2.4	1.9
3	0.66	91	4.6	3.3	1.8	3.8	1.9	0.12	0.06	16	2.1	1.0
4	0.60	3950	3.6	2.5	1.6	5.1	2.1	0.10	0.08	12	1.8	29
5	0.55	2280	2.7	2.0	1.5	3.9	2.3	0.10	0.60	58	1.9	93
6	0.63	375	2.2	1.6	2.8	3.8	2.6	0.09	1.4	99	2.1	159
7	0.57	85	2.0	1.4	3.0	3.1	3.0	0.08	0.28	47	1.9	54
8	0.55	35	2.0	1.3	2.3	2.7	2.9	0.06	1.1	66	1.5	17
9	21	18	163	1.3	2.7	2.7	2.9	0.06	0.37	249	1.1	8.1
10	25	10	534	1.2	2.9	2.3	3.1	0.06	0.14	135	0.90	6.1
11	15	6.1	127	1.7	2.3	2.0	3.3	0.22	0.54	52	0.94	7.9
12	5.5	4.1	439	91	2.1	1.9	3.3	0.21	0.19	20	1.3	147
13	1.8	3.3	340	561	2.1	1.8	3.2	0.13	0.12	11	1.1	354
14	0.80	2.7	78	136	2.2	1.7	2.9	0.13	0.39	5.9	1.3	95
15	0.62	2.5	33	48	106	1.7	3.0	0.14	0.21	227	1.2	73
16	0.53	2.0	18	23	204	2.0	3.4	0.18	1.6	970	1.0	67
17	0.48	1.6	12	14	113	1.6	3.7	0.20	11	750	0.84	27
18	0.46	1.5	8.3	12	17	1.4	3.2	0.22	3.5	539	0.76	64
19	0.71	1.4	6.1	9.9	7.9	1.3	2.9	0.26	2.2	e132	0.67	504
20	14	1.2	4.6	8.6	5.2	1.2	3.0	0.24	1.2	e63	0.64	271
21	19	0.99	4.0	7.9	101	1.2	3.0	0.27	0.86	e28	0.74	843
22	7.8	0.83	3.7	7.3	54	1.3	2.9	0.31	0.71	e12	0.76	413
23	164	0.75	3.9	6.7	14	1.4	2.6	0.25	0.72	8.2	0.60	170
24	1250	0.74	3.8	e5.6	7.1	1.2	2.4	0.18	0.84	7.1	0.67	65
25	2680	0.71	7.6	e4.4	4.6	1.3	2.1	0.11	0.72	6.0	0.56	30
26	648	476	8.4	e3.4	9.2	110	1.5	0.06	1.2	7.7	0.50	16
27	430	1050	4.6	2.5	3.1	79	1.4	0.13	3.4	8.9	0.48	9.2
28	254	116	3.3	2.3	2.9	9.4	e1.4	0.32	53	6.0	0.51	6.4
29	2590	37	2.8	2.4	---	2.6	e1.4	0.20	36	6.6	0.49	5.1
30	566	17	4.0	2.1	---	1.5	1.3	0.10	10	7.0	0.49	4.3
31	107	---	9.5	1.9	---	1.3	---	0.04	---	4.5	0.52	---
TOTAL	8806.75	8636.42	1851.1	977.9	679.8	259.5	75.9	5.82	132.52	3575.7	34.87	3541.64
MEAN	284	288	59.7	31.5	24.3	8.37	2.53	0.19	4.42	115	1.12	118
MAX	2680	3950	534	561	204	110	3.7	0.88	53	970	3.1	843
MIN	0.46	0.71	2.0	1.2	1.5	1.2	1.3	0.04	0.03	4.5	0.48	0.64
AC-FT	17470	17130	3670	1940	1350	515	151	12	263	7090	69	7020

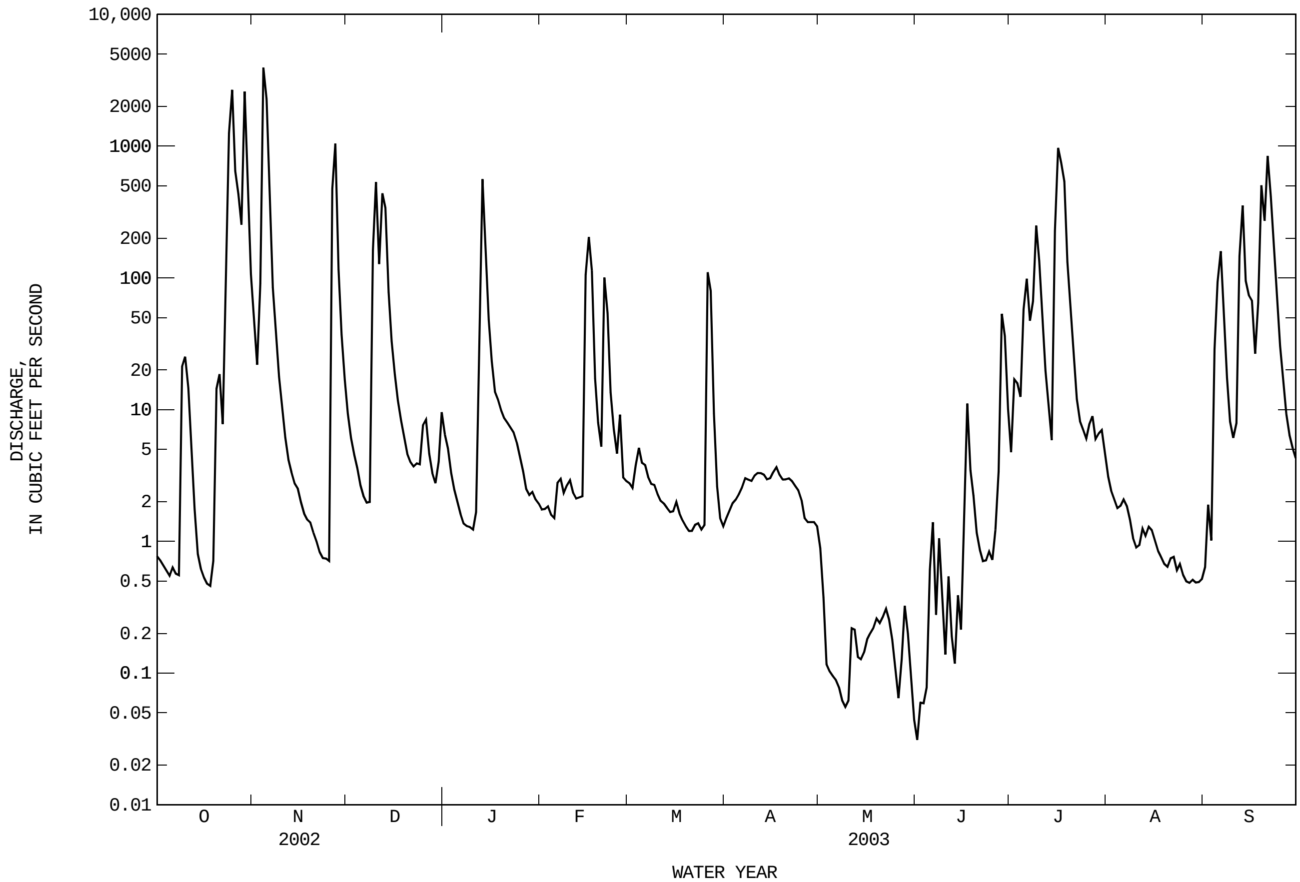
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1970 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	76.9	77.9	42.8	40.2	50.1	42.5	56.9	85.4	80.7	60.4	13.6	110
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 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1970 - 2003	
ANNUAL TOTAL	26106.10		28577.92			
ANNUAL MEAN	71.5		78.3		61.2	
HIGHEST ANNUAL MEAN					154	1992
LOWEST ANNUAL MEAN					1.20	1989
HIGHEST DAILY MEAN	3950	Nov 4	3950	Nov 4	11400	Nov 1 1981
LOWEST DAILY MEAN	0.24	Jun 23	0.03	Jun 1	0.00	Aug 12 1981
ANNUAL SEVEN-DAY MINIMUM	0.26	Jun 19	0.08	May 4	0.00	Jul 27 1982
MAXIMUM PEAK FLOW			4860	Nov 4	18300	Oct 31 1981
MAXIMUM PEAK STAGE			24.89	Nov 4	31.62	Nov 13 1998
ANNUAL RUNOFF (AC-FT)	51780		56680		44340	
10 PERCENT EXCEEDS	60		120		46	
50 PERCENT EXCEEDS	0.98		2.9		1.5	
90 PERCENT EXCEEDS	0.40		0.30		0.14	

e Estimated

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 2003

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✞, 1959-2003	10-01-02	4.58
					12-11-02	6.31
					02-03-03	5.66
					03-21-03	5.41
					05-22-03	4.92
					07-10-03	4.94
					08-29-03	4.52
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, 1958-2003	10-03-02	8.67
					12-02-02	15.8
					01-16-03	15.0
					03-17-03	16.6
					05-13-03	12.2
					06-30-03	12.5
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, 1959-2003	10-01-02	7.49
					11-20-02	10.3
					01-14-03	8.67
					03-11-03	8.92
					05-06-03	9.52
					06-25-03	10.1
					08-13-03	8.57
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, 1959-2003	10-03-02	23.6
					11-26-02	29.1
					01-15-03	25.3
					03-12-03	29.3
					05-12-03	26.5
					06-25-03	20.3
					09-04-03	19.7
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, 1959-2003	10-03-02	16.8
					11-26-02	23.2
					01-15-03	21.5
					03-12-03	16.3
					05-12-03	13.9
					06-25-03	16.5
					09-04-03	15.2

✞ 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 2003

Station name and number	Location	Period of record	Water Year 2003 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✞ 1993-2003	11-05-02	20.83	--	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 2003

Station number	Tributary to	Location	Drainage area (mi^2)	Measured previously (water years)	Measurements: Date	Measurements: 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	1984-2003	12-02-02	13.0
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, 1987-2003	10-03-02	11.8
					11-26-02	14.1
					01-15-03	12.2
					03-12-03	12.1
					05-12-03	12.5
					06-25-03	10.2
					09-04-03	9.20

✞ Operated as a continuous-record station.

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CALENDAR FOR WATER YEAR 2003

2002

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					

2003

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 (mm)
	2.54×10^{-2}	meter
foot (ft)	3.048×10^{-1}	meter (m)
mile (mi)	1.609×10^{0}	kilometer (km)
Area		
acre	4.047×10^{3}	square meter (m^2)
	4.047×10^{-1}	square hectometer (hm^2)
	4.047×10^{-3}	square kilometer (km^2)
square mile (mi^2)	2.590×10^{0}	square kilometer (km^2)
Volume		
gallon (gal)	3.785×10^{0}	liter (L)
	3.785×10^{-3}	cubic meter (m^3)
	3.785×10^{0}	cubic decimeter (dm^3)
million gallons (Mgal)	3.785×10^{3}	cubic meter (m^3)
	3.785×10^{-3}	cubic hectometer (hm^3)
cubic foot (ft^3)	2.832×10^{-2}	cubic meter (m^3)
	2.832×10^{1}	cubic decimeter (dm^3)
cubic-foot-per-second-per-day [(ft^3/s/d]	2.447×10^{3}	cubic meter (m^3)
	2.447×10^{-3}	cubic hectometer (hm^3)
acre-foot (acre-ft)	1.223×10^{3}	cubic meter (m^3)
	1.223×10^{-3}	cubic hectometer (hm^3)
	1.223×10^{-6}	cubic kilometer (km^3)
Flow rate		
cubic foot per second (ft^3/s)	2.832×10^{1}	liter (L/s)
	2.832×10^{-2}	cubic meter per second (m^3/s)
	2.832×10^{1}	cubic decimeter per second (dm^3/s)
gallon per minute (gal/min)	6.309×10^{-2}	liter per second (L/s)
	6.309×10^{-5}	cubic meter per second (m^3/s)
	6.309×10^{-2}	cubic decimeter per second (dm^3/s)
million gallons per day (Mgal/d)	4.381×10^{-2}	cubic meter per second
	4.381×10^{1}	cubic decimeter per second (dm^3/s)
Mass		
ton, short (2,000 lb)	9.072×10^{-1}	megagram (Mg) or metric ton

Temperature in degrees Celsius (°C) may be converted to degrees Fahrenheit (°F) as follows:

$$°F = (1.8 \times °C) + 32$$