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

Water Resources Data
Texas
Water Year 2000

Volume 5. Guadalupe River Basin, Nueces River Basin, Rio Grande Basin, and Intervening Coastal Basins

By S.C. Gandara, W.J. Gibbons, and D.L. Barbie

Water-Data Report TX-00-05

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

UNITED STATES DEPARTMENT OF THE INTERIOR

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2001

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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This report was prepared in cooperation with the State of Texas and other agencies under the supervision of Jayne E. May, District Data Chief.

REPORT DOCUMENTATION PAGE

Form Approved
OMB No. 0704-0188

Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503.

1. AGENCY USE ONLY *(Leave blank)*	2. REPORT DATE	3. REPORT TYPE AND DATES COVERED
	March 2001	Annual--Oct. 1, 1999, to Sept. 30, 2000

4. TITLE AND SUBTITLE

Water Resources Data--Texas, Water Year 2000, Volume 5
Guadalupe River, Nueces River, Rio Grande River Basins
and Intervening Coastal Basins

5. FUNDING NUMBERS

6. AUTHOR(S)

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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-00-5

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-00-5

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 2000 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 5 contains records for water discharge at 71 gaging stations; stage only at 4 gaging stations; stage and contents at 4 lakes and reservoirs; water quality at 29 gaging stations; and data for 23 partial-record stations comprised of 3 flood-hydrograph, 10 low-flow, 6 crest-stage, and 4 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

416

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; (p) precipitation.]

	Station number	Page
WESTERN GULF OF MEXICO BASINS		
GUADALUPE RIVER BASIN		
Guadalupe River:		
North Fork Guadalupe River near Hunt (d)	08165300	30
Guadalupe River at Hunt (d)	08165500	32
Johnson Creek near Ingram (d)	08166000	34
Guadalupe River above Bear Creek at Kerrville (d)	08166140	38
Guadalupe River at Kerrville (d)	08166200	42
Guadalupe River at Comfort (d)	08167000	44
Guadalupe River near Spring Branch (d)	08167500	46
Canyon Lake near New Braunfels (e)	08167700	48
Guadalupe River at Sattler (d)	08167800	50
Guadalupe River above Comal River at New Braunfels (d)	08168500	52
Comal River:		
Comal Springs at New Braunfels (d)	08168710	54
Comal River at New Braunfels (d)	08169000	56
Guadalupe River at New Braunfels (d)	08169500	58
San Marcos Springs at San Marcos (d)	08170000	60
San Marcos River at San Marcos (d)	08170500	62
Blanco River at Wimberley (d)	08171000	64
Blanco River near Kyle (d)	08171300	66
San Marcos River at Luling (d)	08172000	68
Plum Creek at Lockhart (d)	08172400	70
Guadalupe River at Gonzales (d)	08173900	72
Sandies Creek near Westhoff (d)	08175000	74
Guadalupe River at Cuero (d)	08175800	76
Guadalupe River at Victoria (d)	08176500	78
Coleto Creek:		
Fifteenmile Creek near Weser (d)	08176550	80
Coleto Creek at Arnold Road Crossing near Schroeder (d)	08176900	82
Perdido Creek at Farm to Market Road 622 near Fannin (d)	08177300	84
Coleto Creek Reservoir near Victoria (e)	08177400	86
Coleto Creek near Victoria (d)	08177500	88
Guadalupe River near Bloomington (e)	08177520	90
SAN ANTONIO RIVER BASIN		
San Antonio River:		
Olmos Creek at Dresden Drive, San Antonio (d)	08177700	94
San Antonio River at San Antonio (d)	08178000	96
San Antonio River at Mitchell Street, San Antonio (d)	08178050	98
San Antonio River at Loop 410 at San Antonio (d) (c) (t)	08178565	100
Salado Creek at Wilderness Road at San Antonio (d)	08178585	108
Salado Creek (upper station) at San Antonio (d)	08178700	110
Salado Creek (lower station) at San Antonio (d) (c) (t)	08178800	112
Medina River at Bandera (d)	08178880	120
Medina Lake near San Antonio (e)	08179500	122
Medina River at La Coste (d) (c) (t) (b) (s) (p)	08180640	124
Medina River near Macdona (d) (c) (t) (s)	08180700	136
Medina River near Somerset (d) (c) (t) (b) (s)	08180800	142
Leon Creek:		
Culebra Creek:		
Helotes Creek at Helotes (d) (c) (t) (b)	08181400	148
Ingram Road Outfall at Leon Creek Tributary at San Antonio (c) (t) (b)	08181440	152
Leon Creek at Interstate Highway 35 at San Antonio (d) (c) (t)	08181480	156
Medina River at San Antonio (d) (t) (c)	08181500	164
San Antonio River near Elmendorf (d) (c) (t) (s)	08181800	172
San Antonio River near Falls City (d)	08183500	184
Cibolo Creek at Interstate Highway 10 above Boerne (d)	08183850	186
Cibolo Creek at Selma (d)	08185000	188
Cibolo Creek near Falls City (d)	08186000	190

	Station number	Page
WESTERN GULF OF MEXICO BASINS--Continued		
GUADALUPE RIVER BASIN--Continued		
San Antonio River Basin--Continued		
San Antonio River at Goliad (d)	08188500	192
Guadalupe-Blanco River Authority Calhoun Canal Pump Station near Long Mott (d)	08188600	194
Guadalupe River near Tivoli (e)	08188800	196
COPANO CREEK BASIN		
Copano Creek near Refugio (d)	08189200	200
MISSION RIVER BASIN		
Mission River at Refugio (d)	08189500	202
ARANSAS RIVER BASIN		
Aransas River near Skidmore (d)	08189700	204
NUECES RIVER BASIN		
Nueces River at Laguna (d)	08190000	208
West Nueces River near Brackettville (d)	08190500	210
Nueces River below Uvalde (d)	08192000	212
Nueces River near Asherton (d)	08193000	214
Nueces River at Cotulla (d)	08194000	216
San Casimiro Creek near Freer (d)	08194200	218
Nueces River near Tilden (d) (c) (t)	08194500	220
Frio River at Concan (d)	08195000	224
Dry Frio River near Reagan Wells (d)	08196000	226
Frio River below Dry Frio River near Uvalde (d)	08197500	228
Sabinal River near Sabinal (d)	08198000	230
Sabinal River at Sabinal (d)	08198500	232
Hondo Creek near Tarpley (d)	08200000	234
Hondo Creek at King Waterhole near Hondo (d)	08200700	236
Seco Creek at Miller Ranch near Utopia (d)	08201500	238
Seco Creek at Rowe Ranch near D'Hanis (d)	08202700	240
Frio River near Derby (d)	08205500	242
Frio River at Tilden (d) (c) (t)	08206600	244
San Miguel Creek near Tilden (d)	08206700	250
Choke Canyon Reservoir near Three Rivers (e) (c) (t) (s)	08206900	252
Choke Canyon Reservoir (Outlet Works Channel) near Three Rivers (d)	08206910	276
Atascosa River at Whitsett (d)	08208000	278
Nueces River near Three Rivers (d) (c) (t)	08210000	280
Lake Corpus Christi near Mathis (e) (c) (t) (s)	08210500	286
Nueces River near Mathis (d)	08211000	304
Nueces River at Bluntzer (d)	08211200	306
Nueces River at Calallen (d)	08211500	308
Rincon Bayou Channel near Calallen (d)	08211503	310
OSO CREEK BASIN		
Oso Creek at Corpus Christi (d)	08211520	314
SAN FERNANDO CREEK BASIN		
San Fernando Creek at Alice (d)	08211900	316
COASTAL BASIN		
Los Olmos Creek near Falfurias (d)	08212400	320
RIO GRANDE BASIN		
Rio Grande at El Paso (c) (t) (s)	08364000	324
Rio Grande below Rio Conchos near Presidio (c) (t)	08374200	328
Rio Grande at Foster Ranch near Langtry (c) (t) (s)	08377200	332
Pecos River near Girvin (d)	08446500	336
Pecos River near Langtry (c) (t) (s)	08447410	338
Rio Grande below Amistad Dam near Del Rio (c) (t) (s)	08450900	344
Rio Grande at Pipeline Crossing below Laredo (d) (c) (t) (s)	08459200	348
Rio Grande below Falcon Dam (c) (t) (s)	08461300	356
Rio Grande at Fort Ringgold, Rio Grande City (c) (t)	08464700	360
Rio Grande near Los Ebanos (c) (t)	08466300	362
Rio Grande below Anzalduas Dam (c) (t)	08469200	364
Arroyo Colorado at Harlingen (c) (t) (s)	08470400	368
Rio Grande near Brownsville (c) (t) (s)	08475000	372

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. 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	0.86	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
Tierra Blanca Creek below Buffalo Lake near Umbarger (d)	07296100	2,075	1967-73
Prairie Dog Town Fork Red River near Canyon (d)	07297500	3,369	1924-26, 1938-49
Middle Tule Draw near Tulia (e)	07297920	313	1967-74
North Tule Draw at Reservoir near Tulia (d)	07298000	189	1939-40, 1941-73
Rock Creek Tributary near Silverton (d)	07298150	13.7	1966-74
Tule Creek near Silverton (d)	07298200	1,150	1964-86
Prairie Dog Town Fork Red River near Brice (d)	07298500	6,082	1939-44, 1949-51, 1960-63
Mulberry Creek near Brice (d)	07299000	534	1949-51
Prairie Dog Town Fork Red River near Lakeview (d)	07299200	6,792	1963-80
Little Red River near Turkey (d)	07299300	139	1968-81
Prairie Dog Town Fork Red River near Estelline (d)	07299500	7,293	1924-25, 1938-47
Prairie Dog Town Fork Red River below Mountain Creek near Estelline (e)	07299505	7,341	1974-77
Prairie Dog Town Fork Red River above Jonah Creek near Estelline (e)	07299510	7,533	1974-77
Jonah Creek at Weir near Estelline (d)	07299512	65.50	1974-82
Jonah Creek below Weir near Estelline (d)	07299514	66.60	1974-76
Jonah Creek at mouth near Estelline (d)	07299516	76	1974-76
Salt Creek near Estelline (d)	07299530	142	1974-79
Buck Creek near Wellington (e)	07299550	210	1951-64
Red River near Quanah (d)	07299570	8,321	1960-82
North Groesbeck Creek Tributary near Kirkland (d)	07299575	0.16	1966-74
Wanders Creek at Odell (e)	07299750	199	1949-50, 1952-89
Salt Fork Red River near Clarendon (d)	07299850	457	1960-64
Lelia Lake Creek near Hedley (e)	07299900	86	1951-70
Salt Fork Red River near Hedley (e)	07299930	744	1951, 1956-62
Oklahoma Draw Tributary near Hedley (e)	07299940	1.1	1965-74
Sweetwater Creek near Wheeler (e)	07301400	164	1951-64
Doodlebug Creek near Wheeler (e)	07301405	0.19	1967-73
Elm Creek near Shamrock (e)	07303300	N/A	1947-89
Quitaque Creek near Quitaque (d)	07307500	293	1945-59
North Pease River near Childress (d)	07307600	1,434	1973-79
North Pease River near Kirkland (e)	07307660	N/A	1973-79
Roaring Springs near Roaring Springs (e)	07307700	N/A	1937, 1943-95
Cottonwood Creek Tributary near Afton (e)	07307720	0.68	1967-74
Middle Pease River near Paducah (d)	07307750	1,086	1973-79
Middle Pease River near Paducah (d)	07307760	1,123	1980-82

Station name	Station number	Drainage area (mi^2)	Period of record (water years)
Middle Pease River near Kirkland (e)	07307780	1,250	1973-79
Canal Creek near Crowell (e)	07307950	49.0	1968-70, 1978-79
Pease River near Crowell (d)	07308000	3,037	1924-47
Plum Creek near Vernon (e)	07308220	4.99	1967-74
China Creek near Electra (e)	07308400	37	1967-76
North Fork Wichita River near Crowell (d)	07311622	591	1971-76
Middle Fork Wichita River near Truscott (d)	07311648	161	1971-76
South Fork Wichita River near Guthrie (d)	07311780	239	1952-54, 1956-57 1971-76
South Fork Wichita River at Ross Ranch near Benjamin (d)	07311790	499	1971-79
Beaver Creek near Electra (d)	07312200*	652	1960-99
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	1943-93
Red River at Denison Dam near Denison (d)	07331600	39,720	1924-89
Bois D'Arc Creek near Randolph (d)	07332600	72	1963-85
Cooper Creek near Bonham (e)	07332602	6.21	1966-74
Pat Mayse Lake near Chicota (d)	07335390	175	1968-96
Sanders Creek near Chicota (d)	07335400	175	1968-86
Little Pine Creek near Kanawha (d)	07336750	75.40	1969-80
Pecan Bayou near Clarksville (d)	07336800	100	1962-77
Red River near DeKalb (d)	07336820	47,348	1967-98
McKinney Bayou near Leary (e)	07336940	3.33	1966-73
Barkman Creek near Leary (e)	07336950	31.5	1958-64
Nelson Branch near Leonard (e)	07342450	0.22	1966-74
South Sulphur River near Commerce (d)	07342470	189	1980-91
Cuthand Creek near Bogata (d)	07343300	69	1964-74
Dial Branch near Bagwell (e)	07343350	1.00	1966-74
White Oak Creek near Mt. Vernon (e)	07343480	434	1966, 1969-75
White Oak Creek below Talco (d)	07343800	579	1938-50
Buck Creek near Cookville (e)	07343900	0.78	1966-74
Sulphur River near Darden (d)	07344000	2,774	1924-56
Sulphur River near Texarkana (d)	07344210	3,443	1980-85
Big Cypress Creek near Winnsboro (d)	07344482	27.2	1974-92
Dragoo Creek near Mt. Pleasant (e)	07344490	4.27	1967-74
Williamson Creek near Pittsburg (e)	07344600	7.11	1967-74
Boggy Creek near Daingerfield (d)	07345000	72	1943-77
Ellison Creek Reservoir near Lone Star (e)	07345500	37	1943-62, 1974-89
Cypress Creek Tributary near Jefferson (e)	07346010	0.51	1966-74
Taylor Branch near Smithland (e)	07346072	0.73	1966-74
Big Cypress Creek near Karnack (e)	07346085	2,174	1980-85
Frazier Creek near Linden (d)	07346140	48.0	1965-91
Sabine River near Emory (d)	08017500	888	1952-73
Burnett Branch near Canton (e)	08017700	0.33	1966-74
Grand Saline Creek near Grand Saline (d)	08018200	91.4	1968-73
Burke Creek near Yantis (d)	08018730	33.10	1979-89
Dry Creek near Quitman (e)	08018950	63.6	1968-75
Lake Winnsboro near Winnsboro (d)	08019300	27.1	1962-86
Big Sandy Creek near Hawkins (e)	08019430	196	1980-82
Prairie Creek near Gladewater (d)	08020200	48.90	1968-77

Station name	Station number	Drainage area (mi^2)	Period of record (water years)
Sabine River near Longview (d)	08020500	2,947	1904-07, 1924-33
Rabbit Creek at Kilgore (d)	08020700	75.80	1964-77
Grace Creek Tributary at Longview (e)	08020800	5.05	1967-74
Mill Creek near Henderson (d)	08020960	20.30	1979-81
Mill Creek near Longview (d)	08020980	47.90	1979-81
Tiawichi Creek near Longview (d)	08020990	62.70	1978-81
Cherokee Bayou near Elderville (d)	08021000	120	1940-49
Lake Cherokee near Longview (e)	08021500	158	1951-83
Sabine River near Tatum (d)	08022000	3,493	1939-78,
" " " " (e)			1979-82
Redmon Branch near Hallesville (e)	08022010	0.46	1966-74
Eight Mile Creek near Tatum (e)	08022050	106	1962-71
Martin Creek near Tatum (d)	08022070	148	1974-96
Martin Creek near Beckville (e)	08022080	192	1962-71
Murvaul Bayou near Gary (d)	08022300	134	1958-83
Socagee Creek near Carthage (d)	08022400	82.60	1962-73
Tenaha Creek near Shelbyville (d)	08023200	97.80	1952-81
Dorsey Branch near Milam (e)	08024290	0.70	1967-74
Patroon Bayou near Milam (e)	08024300	130	1952-54, 1959-63
Sabine River near Milam (d)	08024400	6,508	1924-25, 1939-68
Palo Gaucho Bayou near Hemphill (d)	08024500	123	1952-65
Housen Bayou near Yellowpine (e)	08025250	92.1	1952-54, 1957, 1959-63
Sandy Creek near Yellowpine (e)	08025300	135	1952-54, 1957, 1959-63
Mill Creek near Burkeville (d)	08025307	17.6	1974-79
Little Cow Creek below McGraw Creek near Burkeville (e)	08026500	112	1952-58
Moore Branch near Newton (e)	08028505	3.77	1967-74
Nichols Creek near Buna (e)	08029750	54.4	1959-64
Cypress Creek near Buna (d)	08030000	69.20	1952-83
Adams Bayou Tributary near Deweyville (e)	08030700	12.4	1966-74
Cow Bayou near Mauriceville (d)	08031000	83.30	1952-86
Bethlehem Branch near Van (e)	08031100	1.09	1966-74
Kickapoo Creek near Brownsboro (d)	08031200	232	1962-89
Neches River near Reese (d)	08031500	851	1924-27
Hurricane Creek Tributary near Palestine (e)	08032100	0.39	1966-74
One Arm Creek near Maydelle (e)	08032250	6.01	1967-74
Squirrel Creek near Elkhart (e)	08032300	1.57	1967-74
Neches River near Alto (d)	08032500	1,945	1944-79
Piney Creek Tributary near Pennington (e)	08033250	1.17	1967-74
Piney Creek near Groveton (d)	08033300	79	1962-89
Shawnee Creek Tributary near Huntington (e)	08033450	0.52	1966-74
Greenwood Creek Tributary near Colmesneil (e)	08033480	0.15	1966-74
Bowles Creek near Selman City (e)	08033600	14.5	1968-85
Striker Creek near Summerfield (d)	08033700	146	1941-49
Striker Creek Reservoir near New Salem (e)	08033800	148	1941-49
East Fork Angelina River near Cushing (d)	08033900	158	1964-89
Mud Creek near Jacksonville (d)	08034500	376	1939-79
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

Station name	Station number	Drainage area (mi^2)	Period of record (water years)
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
Drakes Branch near Spurger (e)	08041400	5.03	1967-74
Hillebrandt Bayou near Lovell Lake (d)	08042500	128	1954-84
West Fork Double Bayou near Anahuac (e)	08042550	4.43	1967-74
North Creek SWS No. 28-A near Jermyn (e)	08042650	6.82	1972-80
North Creek near Jacksboro (d)	08042700	21.60	1956-80
Beans Creek at Wizard Wells (e)	08042900	29.60	1993-95
West Fork Trinity River at Bridgeport (d)	08043100	1,113	1984-89
West Fork Trinity River at Bridgeport (d)	08043500	1,147	1908-30
Big Sandy Creek near Bridgeport (d)	08044000	333	1937-95
Garrett Creek near Paradise (e)	08044135	52.5	1992-95
Salt Creek near Paradise (e)	08044140	52.7	1992-95
Walker Creek near Boyd (e)	08044200	2.95	1965-74
West Fork Trinity River at Lake Worth, Fort Worth (d)	08045500	2,069	1924-34
Clear Fork Trinity River near Aledo (d)	08046000	251	1947-75
Marine Creek at Fort Worth (d)	08048500	16.80	1950-58
Sycamore Creek at I.H. 35W, Fort Worth (d)	08048520	17.70	1970-76
Sycamore Creek Trib. above Seminary South, Fort Worth (d)	08048530	0.97	1970-76
Sycamore Creek Trib. at I.H. 35W, Fort Worth (d)	08048540	1.35	1970-76
Dry Branch at Fain Street at Fort Worth (d)	08048600	2.15	1969-76
Big Fossil Creek at Haltom City (d)	08048800*	52.8	1959-73
Little Fossil Creek at I.H. 820, Fort Worth (e)	08048820	5.64	1969-73
Little Fossil Creek at Mesquite Street, Fort Worth (d)	08048850	12.30	1969-76
Deer Creek Tributary near Crowley (e)	08048900	5.86	1967-74
Village Creek at Kennedale (d)	08048980	100	1986-89
Village Creek near Handley (d)	08049000	126	1925-30
Big Bear Creek near Grapevine (d)	08049550	29.6	1967-79
Trigg Branch at DFW Airport near Euless (d)	08049565	1.73	1983-87
Mountain Creek near Cedar Hill (d)	08049600	119	1961-84
Mountain Creek above Duncanville (e)	08049850	224	1986-87
Mountain Creek near Duncanville (e)	08049900	225	1971-90
Mountain Creek near Grand Prairie (d)	08050000	273	1925-33
Elm Fork Trinity River SWS 6-O near Muenster (e)	08050200	0.77	1957-73
Elm Fork Trinity River near Muenster (d)	08050300	46	1957-73
Elm Fork Trinity River near Sanger (d)	08050500	381	1949-85
Isle Du Bois Creek near Pilot Point (d)	08051000	266	1949-85
Elm Fork Trinity River near Pilot Point (d)	08051130	692	1985-92
Elm Fork Trinity River above Aubrey (e)	08051190	684	1981-89
Elm Fork Trinity River near Denton (d)	08052000	1,084	1924-27
Lake Dallas near Lake Dallas (e)	08052500	1,165	1929-57
Little Elm Creek SWS #10 near Gunter (e)	08052630	2.10	1966-72
Little Elm Creek near Celina (d)	08052650	46.70	1966-76
Hickory Creek at Denton (d)	08052780	129	1985-87
Indian Creek at Hebron Parkway at Carrollton (d)	08053010	15.0	1987-90
Furneaux Creek at Josey Lane at Carrollton (d)	08053030	4.10	1987-90
Hutton Branch at Broadway at Carrollton (e)	08053090	9.10	1987-90
Jones Valley Creek Tributary near Forestburg (e)	08053100	1.70	1966-74
Denton Creek near Roanoke (d)	08054000	621	1924-28, 1939-55
Gamble Branch near Argyle (e)	08054200	0.50	1965-74
Denton Creek near Grapevine (d)	08055000	705	1948-91
Joe's Creek at Royal Lane, Dallas (e)	08055580	1.94	1973-78
Joes Creek near Dallas (e)	08055600	7.4	1964-79
Bachman Branch at Dallas (d)	08055700	10	1964-79
Turtle Creek at Dallas (d)	08056500	7.98	1952-80, 1984-91
Coombs Creek at Sylvan Avenue, Dallas (e)	08057020	4.75	1965-78

Station name	Station number	Drainage area (mi^2)	Period of record (water years)
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
Cottonwood Creek at Forest Lane, Dallas (e)	08057140	8.50	1962-78
Floyd Branch at Forrest Lane, Dallas (e)	08057160	4.17	1962-78
White Rock Creek at White Rock Lake, Dallas (d)	08057300	100	1963-79
Ash Creek at Highland Road, Dallas (e)	08057320	6.92	1963-78
Forney Creek at Lawnview Avenue, Dallas (e)	08057340	1.84	1963-72
White Rock Creek at Scyene Road, Dallas (d)	08057400	122	1963-79
Elm Creek at Seco Boulevard, Dallas (e)	08057415	1.25	1973-78
Fivemile Creek at 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
Newton Creek at Interstate Highway 635, Dallas (e)	08057135	5.91	1974-78
Trinity River below Dallas (d)	08057410	6,278	1956-58
White Branch at Interstate Highway 635, Dallas (e)	08057440	2.53	1974-78
Tenmile Creek at State Highway 342 at Lancaster (d)	08057450	52.80	1970-79
Honey Creek SWS #11 near McKinney (e)	08057500	2.14	1952-73
Honey Creek SWS #12 near McKinney (e)	08058000	1.26	1952-77
Honey Creek near McKinney (d)	08058500	39	1951-73
East Fork Trinity River near McKinney (d)	08059000	190	1949-75
Arls Branch near Westminster (e)	08059200	0.52	1965-74
Sister Grove Creek near Princeton (d)	08059500	113	1949-75
East Fork Trinity River above Pilot Grove near Lavon (d)	08060000	324	1949-53
East Fork Trinity River near Lavon (d)	08061000	773	1954-89
East Fork Trinity River near Rockwall (d)	08061500	840	1924-54
Duck Creek at Buckingham Road, Garland (e)	08061620	8.05	1969-76
Duck Creek near Garland (d)	08061700	31.6	1958-93
South Mesquite Creek at State Highway 352, Mesquite (e)	08061920	13.40	1969-76
South Mesquite Creek at Mercury Road near Mesquite (d)	08061950	23	1969-79
Cedar Creek Reservoir Spillway Outflow near Trinidad (d)	08062650	1,007	1966-82
Cedar Creek near Kemp (d)	08062800	189	1963-87
Bachelor Creek near Terrell (e)	08062850	13.0	1967-74
Kings Creek near Kaufman (d)	08062900	233	1963-87
Lacey Fork near Mabank (d)	08062980	118	1983-84
Cedar Creek near Mabank (d)	08063000	733	1939-66
South Twin Creek near Eustace (d)	08063003	27.40	1983-84
Red Oak Branch near Eustace (e)	08063005	0.90	1966-74
Cedar Creek at Trinidad (d)	08063020	1,011	1965-71
Briar Creek Tributary near Corsicana (e)	08063180	0.72	1966-74
Pin Oak Creek near Hubbard (d)	08063200	17.60	1956-72
Richland Creek near Richland (d)	08063500	734	1939-88
Alvarado Branch near Alvarado (e)	08063550	0.84	1966-74
Kings Branch near Reagor Springs (e)	08063620	0.62	1966-74
Chambers Creek near Corsicana (d)	08064500	963	1939-84
Richland Creek near Fairfield (d)	08064600	1,957	1972-83
Saline Branch Tributary near Bethel (e)	08064630	0.22	1967-74
Catfish Creek near Tennessee Colony (d)	08064800	207	1962-89
Mayes Branch near Latexo (e)	08065320	4.26	1967-74
Trinity River near Midway (d)	08065500	14,450	1939-71
Caney Creek near Madisonville (d)	08065700	112	1963-77
Nelson Creek near Riverside (e)	08065950	86.4	1949, 1965, 1970-74
Harmon Creek near Huntsville (e)	08065975	89.2	1973-81
West Carolina Creek near Oakhurst (e)	08066050	15.2	1949, 1966-73
White Rock Creek near Trinity (e)	08066100	222	1974-85
White Rock Creek near Trinity (e)	08066130	228	1966-74

Station name	Station number	Drainage area (mi^2)	Period of record (water years)
Tantaboque Creek near Trinity (e)	08066140	61.3	1966-73
Caney Creek near Groveton (e)	08066145	41.4	1966-73
Brushy Creek near Onalaska (d)	08066150	29.1	1966-70
Rocky Creek near Onalaska (e)	08066180	40.6	1966-73
Livingston Reservoir outflow weir near Goodrich (d)	08066191	16,583	1969-94
Long King Creek near Goodrich (d)	08066210	220	1972-81
Bluff Creek Tributary near Livingston (e)	08066280	0.62	1965-74
Big Creek near Shepherd(e)	08066400	38.80	1966-89
Gaylor Creek near Moss Hill (e)	08066800	32.3	1966-73
Devers Canal near Liberty (d)	08067080	N/A	1972-82
Cedar Bayou at Crosby (d)	08067500*	65.0	1972-91
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
Little Cypress Creek near Cypress (d)	08068780*	41.0	1983-92
Cypress Creek at Grant Road near Houston (d)	08068800*	214	1983-92
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
Langham Creek at West Little York Road, Addicks (d)	08072760*	25.0	1977-85
Bettina Street Ditch at Houston (e)	08073630	1.37	1979-85
Stony Brook Street Ditch at Houston (e)	08073750	0.50	1967-72
Bering Ditch at Woodway Drive, Houston (e)	08073800	2.77	1965-73
Cole Creek at Guhn Road at Houston (e)	08074100	7.05	1964-72
Bingle Road Storm Sewer at Houston (e)	08074145	0.21	1980-88
Cole Creek at Deihl Road at Houston (d)	08074150*	7.50	1964-86
Brickhouse Gully at Clarblak Street at Houston (e)	08074200	2.56	1965-83
Brickhouse Gully at Costa Rica Street at Houston (d)	08074250*	11.4	1964-81
Lazybrook Street Storm Sewer, Houston (e)	08074400	0.13	1978-88
Little White Oak Bayou at Houston (e)	08074550	20.9	1971-79
Buffalo Bayou at Main St., Houston (d)	08074600*	469	1962-94
Buffalo Bayou at 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

Station name	Station number	Drainage area (mi^2)	Period of record (water years)
Sims Bayou at Carlsbad Street, Houston (e)	08075300	3.81	1964-72
Sims Bayou at MLK Blvd., Houston (e)	08075470	48.4	1978-89
Berry Bayou at Gilpin Street, Houston (e)	08075550	2.87	1965-84
Berry Bayou Tributary at Globe Street, Houston (e)	08075600	1.58	1965-72
Berry Bayou at Forest Oaks Street, Houston (e)	08075650*	10.7	1968-82
Berry Bayou at Galveston Road, Houston (e)	08075700	4.86	1965-72
Huntington Bayou Tributary at Cavalcade Street, Houston (e)	08075750	1.20	1965-72
Huntington Bayou at Falls Street, Houston (e)	08075760	2.75	1964-84
Halls Bayou at Deertrail Street at Houston (e)	08076200	8.69	1965-84
Carpenters Bayou at Cloverleaf (e)	08076900	25.8	1964, 1971-93
Clear Creek near Pearland (d)	08077000	38.8	1944-45, 1946-60, 1963-94
Clear Creek Tributary at Hall Road, Houston (e)	08077100	1.31	1965-86
Clear Creek at Friendswood (d)	08077540	99.6	1994-97
Cowart Creek near Friendswood (e)	08077550	18	1965-74
Clear Creek near Friendswood (e)	08077600	126	1966-94
Armand Bayou near Genoa (e)	08077620	18.2	1968, 1971-73
Highland Bayou at Hitchcock (e)	08077700	15.6	1963-82
Highland Bayou Tributary near Texas City (e)	08077750	1.97	1966-73
Highland Bayou near Texas City (e)	08077780	20.8	1965-88
Flores Bayou near Danbury (e)	08078700	23.3	1967-72
Oyster Creek near Angleton (d)	08079000	171	1945-80
North Fork Double Mountain Fork Brazos River at Lubbock (d)	08079500	5,300	1940-49,
North Fork Double Mountain Fork Brazos River above Buffalo Springs nr Lubbock (e)	08079530	29.3	1952-54, 1957, 1962, 1967-76
Buffalo Springs Lake near Lubbock (e)	08079550	236	1967-77
Barnum Springs Draw near Post (e)	08079570	4.99	1965-73
North Fork Double Mountain Fork Brazos River near Post (d)	08079575	438	1984-93
Rattlesnake Creek near Post (e)	08079580	2.75	1966-74
Double Mountain Fork Brazos River near Rotan (d)	08080000	8,536	1950-51
Guest-Flowers Draw near Aspermont (e)	08080510	3.02	1965-74
McDonald Creek near Post (d)	08080540	103	1966-78
Running Water Draw at Plainview (d)	08080700	1,291	1939-53, 1957-78
Callahan Draw near Lockney (e)	08080750	37.5	1966-77
White River near Crosbytown (e)	08080800	529	1951-64
White River below falls near Crosbytown (e)	08080900	529	1951-64
Salt Fork Brazos River at Farm Road 1081 near Clairemont (e)	08080916	1,135	1968-77
Red Mud Creek near Spur (e)	08080918	65.1	1967-74
Salt Fork Brazos River at State Highway 208 near Clairemont (e)	08080940	1,357	1968-77
Duck Creek near Girard (d)	08080950	431	1965-89
Salt Fork Brazos River at U.S. Highway 380 near Jayton (e)	08080959	1,797	1968-77
Salt Fork Brazos River near Peacock (d)	08081000	4,619	1950-51, 1965-86
Short Croton Creek at mouth near Jayton (e)	08081050	18.1	1959-82
Croton Creek below Short Croton Creek near Jayton (e)	08081100	250	1959-82
Croton Creek near Jayton (d)	08081200	290	1959-86
Salt Croton Creek at Weir D near Aspermont (e)	08081400	55.5	1957-76
Haystack Creek at Weir E near Aspermont (e)	08081450	15.1	1957-77
Salt Croton Creek near Aspermont (d)	08081500	64.30	1957-77
Stinking Creek near Aspermont (d)	08082100	88.80	1966-83
North Croton Creek near Knox City (d)	08082180	251	1965-86
Millers Creek Reservoir near Bomartin (d)	08082800	240	1975-94
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

Station name	Station number	Drainage area (mi^2)	Period of record (water years)
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
Cat Claw Creek at Abilene (d)	08083420*	13	1971-79
Elm Creek at Abilene (d)	08083430	422	1980-83
Cedar Creek at Abilene (d)	08083470	119	1971-84
Paint Creek near Haskell (d)	08085000	914	1950-51
Humphries Draw near Haskell (e)	08085300	3.51	1965-77
Clear Fork Brazos River at Crystall Falls (d)	08086000	4,323	1922-29
Hubbard Creek near Sedwick (d)	08086015	128	1964-66
Hubbard Creek at Highway 380 near Moran (e)	08086020	152	1963-76
Deep Creek near Putnam (e)	08086030	33.8	1963-66
Brushy Creek near Putnam (e)	08086040	27.6	1963-66
Mexia Creek near Putnam (e)	08086045	67.0	1963-66
Deep Creek at Moran (d)	08086050	228	1963-75
Hubbard Creek near Albany (d)	08086100	454	1962-75
Salt Prong Hubbard Creek below Lake McCarty near Albany (e)	08086110	45.5	1963-66
Salt Prong Hubbard Creek at U.S. 380 near Albany (d)	08086120	61	1964-68
Cook Creek near Albany (e)	08086130	11.3	1963-76
North Fork Hubbard Creek near Albany (d)	08086150	39.3	1963-90
Salt Prong Hubbard Creek near Albany (d)	08086200	115	1962-63
Snailum Creek near Albany (d)	08086210	22.90	1964-66
Big Sandy Creek near Eolian (e)	08086220	91.4	1963-76
Battle Creek near Putnam (e)	08086230	32.0	1963-66
Battle Creek near Moran (d)	08086235	108	1967-68
Battle Creek near Eolian (e)	08086240	137	1963-66
Pecan Creek at FM 1853 near Eolian (e)	08086250	6.95	1963-66
Pecan Creek near Eolian (d)	08086260	26.40	1967-75
Big Sandy Creek near Breckenridge (e)	08086300	288	1962-75
Hubbard Creek near Breckenridge (d)	08086500	1,089	1955-86
Clear Fork Brazos River near Crystal Falls (e)	08087000	5,658	1916-20, 1928-51
Clear Fork Brazos River near Eliasville (d)	08087300	5,697	1916-20, 1924-25, 1928-51, 1962-82
Salt Creek at Olney (d)	08088100	11.80	1958-77
Salt Creek near Newcastle (d)	08088200	120	1958-60
Briar Creek near Graham (d)	08088300	24.20	1958-89
Brazos River at Farm Road 1287 near Graham (e)	08088420	13,432	1970-77
Big Cedar Creek near Ivan (d)	08088450	97	1965-89
Brazos River at Morris Sheppard Dam near Graford (d)	08088600	14,030	1990-94
Elm Creek Tributary near Graford (e)	08089100	1.10	1965-74
Lake Palo Pinto near Santo (e)	08090300	461	1964-82
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
Lake Pat Cleburne near Cleburne (d)	08091900	100	1965-85
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
Aquilla Creek above Aquilla (d)	08093360*	255.0	1980-92
Cobb Creek near Abbott (d)	08093400	12.40	1967-79
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

Station name	Station number	Drainage area (mi^2)	Period of record (water years)
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
Cow Bayou SWS No. 4 (inflow) near Bruceville (e)	08096800	5.04	1958-75
Cow Bayou at Mooreville (d)	08097000	83.50	1958-75
Brazos River near Marlin (d)	08097500	30,211	1939-51
Deer Creek at Chilton (d)	08098000	84.50	1934-36
Little Pond Creek at Burlington (d)	08098300	23	1963-82
Leon River near De Leon (d)	08099100*	479.0	1960-87
Sabana River near De Leon (d)	08099300*	264.0	1960-87
Sabana River Tributary near De Leon (e)	08099350	0.48	1966-74
Leon River near Hasse (d)	08099500	1,261	1939-91
Eidson Creek near Hamilton (e)	08100100	2.91	1965-73
Bermuda Branch near Gatesville (e)	08100400	0.50	1966-73
Hoffman Branch near Hamilton (e)	08100800	5.56	1966-74
Cowhouse Creek near Killeen (d)	08101500	667	1925, 1939-42
Nolan Creek at Belton (d)	08102600	112	1974-82
School Branch near Lampasas (e)	08102900	0.90	1966-73
Fleece Branch near Lampasas (e)	08103450	1.08	1965-74
Lampasas River at Youngsport (d)	08104000	1,240	1924-80
Lampasas River near Belton (d)	08104100*	1,321	1963-89
Salado Creek above Salado (e)	08104290*	134	1985-88
Salado Creek below Salado Springs (d)	08104310*	136	1985-87
N. Fork San Gabriel River upstream from State Highway 418 at Georgetown (e)	08104795*	271	1985-88
North Fork San Gabriel River at Georgetown (d)	08104800	268	1964-68
South Fork San Gabriel River near Bertram (e)	08104850	8.9	1967-74
San Gabriel River at Georgetown (d)	08105000*	405	1924-25, 1934-73, 1984-87
Berry Creek at State Hwy. 971 near Georgetown (d)	08105200*	117	1985-87
San Gabriel River near Weir (d)	08105300*	563	1977-90
San Gabriel River near Circleville (d)	08105400	599	1924-34, 1967-77
Avery Branch near Taylor (e)	08105900	3.52	1966-73
Brushy Creek at Coupland (d)	08106000	205.0	1924-26
Brushy Creek near Rockdale (d)	08106300	505	1967-80
San Gabriel River near Rockdale (d)	08106310	1,359	1975-92
Big Elm Creek near Temple (d)	08107000	74.70	1934-36
Big Elm Creek near Buckholts (d)	08107500	171	1934-36
North Elm Creek near Ben Arnold (d)	08108000	32.20	1935-36
North Elm Creek near Cameron (d)	08108200	44.80	1963-73
Little Branch near Bryan (e)	08108800	0.14	1966-73
Brazos River near Bryan (d)	08109000	39,515	1899-1903, 1918-92
Brazos River near College Station (d)	08109500	30,033	1899-1902, 1918-25
Yegua Creek near Somerville (d)	08110000	1,009	1924-92
Brazos River at Washington (e)	08110200	41,192	1966-95
Plummers Creek at Mexia (e)	08110350	4.42	1965-73
Navasota River near Groesbeck (d)	08110400	311	1965-79
Navasota River near Bryan (d)	08111000	1,454	1951-94, 1994-97

Station name	Station number	Drainage area (mi^2)	Period of record (water years)
Navasota River near College Station (d)	08111010	1,809	1977-85
Burton Creek at Villa Maria Road, Bryan (d)	08111025	1.33	1968-70
Hudson Creek near Bryan (d)	08111050	1.94	1968-70
Winkleman Creek near Brenham (e)	08111100	0.75	1965-73
Piney Creek near Bellville (e)	08111600	30.7	1948, 1955, 1958, 1964-89
West Fork Mill Creek near Industry (e)	08111650	15.3	1964-89
Mill Creek near Bellville (d)	08111700	376	1963-93
Brazos River near San Felipe (d)	08112000	35,100	1939-57
Brazos River near Wallis (e)	08112200	44,700	1974-75
Brazos River Authority Canal A near Fulshear (d)	08112500	N/A	1932-54, 1958-73
Richmond Irrigation Co. Canal near Richmond (d)	08113500	N/A	1932-54, 1956-78
Brazos River near Juliff (d)	08114500	45,084	1949-69
Seabourne Creek near Rosenberg (e)	08114900	5.78	1968-74
Fairchild Creek near Needville (d)	08115500	26.20	1947-55
Big Creek near Guy (d)	08116000	116	1947-50
Dry Creek near Rosenberg (d)	08116400	8.65	1959-79
Dry Creek near Richmond (d)	08116500	12.20	1947-50, 1957-58
San Bernard River near West Columbia (e)	08117700	766	1949, 1971-77
Mound Creek Tributary at Guy (e)	08117800	1.48	1966-73
Big Boggy Creek near Wadsworth (d)	08117900	10.30	1970-77
Bull Creek near Ira (d)	08118500	26.30	1948-54, 1959-62
Colorado River below Bull Creek near Ira (e)	08118600	3,524	1975-78
Bluff Creek near Ira (d)	08119000	42.60	1948-65
Bluff Creek at mouth near Ira (e)	08119100	44.1	1975-78
Colorado River near Ira (d)	08119500	3,483	1948-52, 1959-89
Deep Creek near Dunn (d)	08120500	198	1953-86
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
Oak Creek Reservoir near Blackwell (e)	08125500	238	1953-83
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
South Concho River at Christoval (d)	08128000*	412.6	1931-95
Middle Concho River above Tankersley (d)	08128400*	2,084	1962-95
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*	226.43	1961-95

Station name	Station number	Drainage area (mi^2)	Period of record (water years)
Spring Creek near Tankersley (d)	08131000	699	1930-60
South Concho River above Pecan Creek near San Angelo (e)	08131300	470	1963-84
Pecan Creek near San Angelo (d)	08131400	81.10	1961-86
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
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
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 at Brady (d)	08145000	588	1939-86
Brady Creek Tributary near Brady (e)	08145100	4.05	1967-73
Lake Buchanan near Burnet (e)	08148000	31,910	1937-90
North Llano River near Junction (d)	08148500	914	1915-77
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
Sandy Creek near Kingsland (d)	08152000	327	1967-93
Little Flatrock Creek near Marble Falls (e)	08152700	3.20	1966-74
Spring Creek near Fredricksburg (e)	08152800	15.20	1967-73
Pedernales River at Stonewall (d)	08153000	647	1924-34
Cane Branch at Stonewall (e)	08153100	1.37	1965-71
Pedernales River near Spicewood (d)	08154000	1,294	1924-39
Lake Travis near Austin (d)	08154500	38,755	1940-90
Colorado River below Mansfield Dam, Austin (d)	08154510	38,755	1975-90
West Bull Creek at Loop 360 near Austin (e)	08154750	6.77	1976-82
Bull Creek at FM 2222, Austin (e)	08154760	30.4	1975-78
Bee Creek at West Lake Drive near Austin (e)	08154950	3.28	1980-82
Barton Creek near Camp Craft Road near Austin (d)	08155260	109	1982-89
Skunk Hollow Creek below Pond 1 at Austin (e)	08155400	0.12	1982-84
West Bouldin Creek at Riverside Drive, Austin (e)	08155550	3.12	1976-82
Shoal Creek at Steck Avenue, Austin (e)	08156650	2.79	1975-82
Shoal Creek at Northwest Park at Austin (d)	08156700	6.52	1975-84
Shoal Creek at White Rick Drive, Austin (e)	08156750	12.30	1975-82
Waller Creek at 38th Street, Austin (d)	08157000	2.31	1955-80
Waller Creek at 23rd Street, Austin (d)	08157500	4.13	1955-80
Walnut Creek at Farm-Market 1325 near Austin (e)	08158100	12.60	1975-88

Station name	Station number	Drainage area (mi^2)	Period of record (water years)
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
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 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
Guadalupe River at New Braunfels (d)	08169500*	1,652	1915-27
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
Plum Creek near Lockhart (d)	08172500	184	1925-30
Plum Creek near Luling (d)	08173000	309	1930-93
San Marcos River at Ottine (d)	08173500	1,249	1915-43
Peach Creek below Dilworth (d)	08174600	460	1959-79
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

Station name	Station number	Drainage area (mi^2)	Period of record (water years)
Olmos Creek at Dresden Drive, San Antonio (d)	08177700*	21.2	1968-81
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
San Antonio River at San Antonio (d)	08178000	41.8	1895-1906, 1915-29, 1939-97
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
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 Lake near San Antonio (e)	08179500	634	1913-94
Medina Canal near Riomedina (e)	08180000	N/A	1922-34, 1957-93
Medina River near Riomedina (d)	08180500	650	1922-34, 1953-73
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
Medio Creek near Beeville (d)	08189300	204	1962-77
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

Station name	Station number	Drainage area (mi^2)	Period of record (water years)
Frio River at Knippa (d)	08195700	N/A	1953
Dry Frio River at Knippa (d)	08196500	179	1953
East Elm Creek near Sabinal (e)	08198900	10.6	1967-74
Frio River near Frio Town (d)	08199700	1,460	1924-27
Hondo Creek near Hondo (d)	08200500	132	1953-64
Bone Creek near Hondo (e)	08200900	0.19	1965-74
Seco Creek near Utopia (d)	08202000	53.20	1952-61
Seco Creek Reservoir inflow near Utopia (d)	08202450	59.5	1991-98
Seco Creek near D'Hanis (d)	08202500	87.40	1952-64
Parkers Creek Reservoir (d)	08202800	10.0	1991-99
Leona River Tributary near Uvalde (e)	08203500	1.21	1966-74
Leona River Spring Flow near Uvalde (d)	08204000*	1.21	1939-77
Leona River near Divot (d)	08204500	565	1924-29
Frio River at Calliham (d)	08207000	5,491	1925-26, 1932-81
Rutledge Hollow Creek near Poteet (e)	08207200	9.33	1966-74
Atascosa River near McCoy (d)	08207500	530	1951-57
Lucas Creek near Pleasanton (e)	08207700	32.80	1966-73
Ramirena Creek near George West (d)	08210300	84.40	1968-72
Lagarto Creek near George West (d)	08210400	155	1972-89
Nueces River below Mathis (d)	08211100	16,726	1966-67
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
Sanderson Canyon at Sanderson (d)	08376300	195	1968-80
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,

Station name	Station number	Drainage area (mi^2)	Period of record (water years)
			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
Giffin Springs at Toyahvale (d)	08427000*	N/A	1932-33
San Solomon Springs at Toyahvale (d)	08427500	N/A	1932-34, 1941-65
West Sandia Spring at Balmorhea (d)	08429000	N/A	1932-33
East Sandia Spring at Balmorhea (d)	08430000	N/A	1932-33
Toyah Creek near Pecos (d)	08431000	1,024	1940-41, 1944-45
Salt Draw near Pecos (d)	08431500	1,882	1939-41, 1944-45
Limpia Creek above Fort Davis (d)	08431700	52.40	1966-86
Limpia Creek below Fort Davis (d)	08431800	227	1962-77
Limpia Creek near Fort Davis (d)	08432000	303	1925-32
Barrilla Draw near Saragosa (d)	08433000	612	1925-26, 1932, 1976-83
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
Independence Creek near Sheffield (d)	08447020	763	1974-85
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

Station name	Station number	Drainage area (mi^2)	Period of record (water years)
Sonora Field Creek at Sonora (e)	08448800	2.60	1965-71
Devils River near Juno (d)	08449000	2,730	1925-49, 1964-73
Devils River near Comstock (d)	08449300	3,903	1955-58
Rough Canyon Tributary near Del Rio (e)	08449470	7.90	1967-73
Devils River near Del Rio (d)	08449500	4,185	1900-14, 1924-57
Evans Creek Tributary near Del Rio (e)	08449600	0.39	1966-73
Devils River near mouth, Del Rio (d)	08450500	4,305	1954-60
Rio Grande near Del Rio (d)	08452500	123,303	1900-15, 1920, 1924-54
San Felipe Creek near Del Rio (e)	08453000	46.0	1931-60
Zorro Creek near Del Rio (e)	08453100	10.0	1966-74
East Perdido Creek near Brackettville (e)	08454900	3.39	1965-74
Pinto Creek near Del Rio (d)	08455000	249	1929-69, 1971-72
Rio Grande at San Antonio Crossing (d)	08458700	129,226	1952-60
Arroyo San Bartolo at Zapata (e)	08459600	0.61	1966-74
Rio Grande near Zapata (d)	08460500	163,344	1932-53
International Falcon Reservoir near Falcon Heights (d)	08461200	N/A	1953-60
Rio Grande at Roma (d)	08462500	166,464	1900-13, 1923-54
Rio Grande near Rio Grande City (d)	08465500	180,941	1932-54
Rio Grande Tributary near Rio Grande City (e)	08466100	1.20	1966-74
Rio Grande Tributary near Sullivan City (e)	08466200	0.40	1966-74
North Floodway South of McAllen (d)	08468000	N/A	1928-60
South Floodway South of McAllen (d)	08470000	N/A	1929-60
Rio Grande at Hildalgo (d)	08471500	176,100	1928-32, 1935, 1939, 1941-51
Rio Grande near Progreso Bridge (d)	08473300	176,228	1953-60
Rio Grande near San Beniot (d)	08473700	176,304	1953-60
Rio Grande at Matamoros, MX (d)	08474500	182,211	1900-13, 1923-54
Rio Grande near Brownsville (d)	08475000	176,333	1935-50

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

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

Station name	Station number	Drainage area (mi^2)	Type of record	Period of record (water years)
Canadian River at Tascosa	07227470	19,200	SC, T, Cl	1948-53,
		18,536	SC, T, pH, Cl	1969-77
Canadian River near Canadian	07228000	22,866	SC, T	1974-81
Prairie Dog Town Fork Red River near Wayside	07297910	4,221	SC, T	1969-81
Tule Creek near Silverton	07298200	1,150	SC, T, pH, Cl	1968-69
Prairie Dog Town Fork Red River near Brice	07298500	6,082	SC, pH, Cl, S	1949-51,
			T	1950-51
Mulberry Creek near Brice	07299000	534	SC, pH, Cl, S	1949-51
Prairie Dog Town Fork Red River near Lakeview	07299200	6,792	SC, T	1968-80,
			S	1979-80
Little Red River near Turkey	07299300	139	SC, T	1968-81,
			S	1979-81
Jonah Creek at Weir near Estelline	07299512	65.50	SC	1974-82
Jonah Creek below Weir near Estelline	07299514	66.60	SC	1974-76
Salt Creek near Estelline	07299530	142	SC	1974-79
Prairie Dog Town Fork Red River near Childress	07299540	7,725	SC, T	1968-82,
				1994-97
Salt Fork Red River near Hedley	07299930	868	SC, T, pH, Cl	1956-61
Salt Fork Red River near Wellington	07300000	1,222	SC, T, pH, Cl	1952-54,
			SC, T	1968-91
North Pease River near Childress	07307600	1,434	SC, T	1973-79
Middle Pease River near Paducah	07307750	1,086	SC	1973-79,
			T	1973-79,
			S	1994-97
Middle Pease River near Paducah	07307760	1,128	SC	1980-82,
			T	1980
Pease River near Childress	07307800	2,754	SC, T	1968-82,
				1994-97
Pease River near Crowell	07308000	3,037	SC	1942-43
Pease River near Vernon	07308200	3,488	SC,T	1999
Red River near Burkburnett	07308500	20,570	SC, T	1968-81
North Fork Wichita River near Paducah	07311600	540	SC, T	1968-76
North Fork Wichita River near Crowell	07311622	591	SC	1971-76
Middle Fork Wichita River near Truscott	07311648	161	SC	1970-76
Truscott Brine Lake near Truscott	07311669	26.2	SC, T	1985-90
North Fork Wichita River near Truscott	07311700	937	SC, T	1969-92
South Fork Wichita River near Guthrie	07311780	239	SC	1970-76
South Wichita River below Low-Flow Dam near Guthrie	07311783	223	SC, T	1987-89
South Fork Wichita River at Ross Ranch near Guthrie	07311790	499	SC	1971-79,
			Cl	1988-97,
			S	1978-79
Wichita River near Seymour	07311900	1,874	SC, T	1968-79
Beaver Creek near Electra	07312200	652	SC,T	1969-70
				1996-99
Little Wichita River near Archer City	07314500	481	SC	1953-55,
			T	1953-54
Little Wichita River near Henrietta	07314900	1,037	SC, DO	1999
Little Wichita River near Henrietta	07315000	1,037	SC, T, pH, Cl	1953-56,
			S, T	1959-66,
East Fork Little Wichita River near Henrietta	07315200	178	T	1954
Little Wichita River near Ringgold	07315400	1,350	SC, pH, Cl	1959-62
Red River near Gainesville	07316000	30,872	SC, Cl	1944-46,
			SC, T, pH, Cl	1953-63,

Station name	Station number	Drainage area (mi^2)	Type of record	Period of record (water years)
			SC, T	1967-89,
Red River at Denison Dam near Denison	07331600	39,720	SC	1944-89,
			T	1945-89
Little Pine Creek near Kanawha	07336750	75.40	T	1980
Red River near De Kalb	07336820	47,348	SC, T	1968-91
South Sulphur River near Cooper	07342500	527	SC, T, pH, Cl	1959-66,
				1968-72,
			SC, T	1973-89
Sulphur River near Talco	07343200	1,365	SC, T, pH, Cl	1966-72,
			SC, T	1973-91
White Oak Creek near Talco	07343500	494	SC, T, pH, Cl	1966-72,
			SC, T	1973-91
Sulphur River near Darden	07344000	2,774	SC, T, pH, Cl	1947-50
Big Cypress Creek near Pittsburg	07344500	366	SC, T, pH, Cl	1968-72,
			SC, T	1973-89
Little Cypress Creek near Jefferson	07346070	675	SC, T, pH, Cl	1968-72,
			SC, T	1973-91
Sabine River near Emory	08017500	888	SC, T, pH, Cl	1952-54
Grand Saline Creek near Grand Saline	08018200	91.40	SC, T, pH, Cl	1968-73
Sabine River near Mineola	08018500	1,357	SC, T, pH, Cl	1968-72,
			SC, T	1973-92
Lake Fork Creek near Quitman	08019000	585	SC, T, pH, Cl	1968-72,
			SC, T	1973-89
Big Sandy Creek near Big Sandy	08019500	231	SC, T, S	1985-86
Sabine River near Beckville	08022040	3,589	SC, T	1952-98
Sabine River below Toledo Bend near Burkeville	08026000	7,482	SC, T	1969-86,
			C	1969-75
Sabine River near Bon Wier	08028500	8,229	SC, T, C	1969-84
Sabine River near Ruliff	08030500	9,329	SC	1945,
				1947-98
			T	1947-98
			pH, DO	1968-75,
			C	1970-76,
			Cl	1968
Cow Bayou near Mauriceville	08031000	83.30	SC, T, pH, Cl	1952-54,
			SC, T	1954-56
Neches River near Neches	08032000	1,145	SC, T	1974-91
Neches River near Alto	08032500	1,945	SC, T	1950-69
Neches River near Diboll	08033000	2,724	SC, T	1970-81
Neches River near Rockland	08033500	3,636	SC	1941-42,
				1946-47
Angelina River near Lufkin	08037000	1,600	SC, T, pH, Cl	1955-78,
			SC, T	1955-
Attoyac Bayou near Chireno	08038000	503	SC, T	1984-99
Sam Rayburn Reservoir near Jasper	08039300	3,449	SC, T	1964-84,
				1993-99
Angelina River below Sam Rayburn Dam near Jasper	08039400	3,449	SC, T	1964-79
Angelina River at SH 63 near Ebenezer	08039500	3,435	SC, T	1994-99
Village Creek near Kountze	08041500	860	SC, T	1968-70
Pine Island Bayou near Sour Lake	08041700	336	SC, T, pH, Cl	1968-72,
			SC, T	1973-89
Big Sandy Creek near Bridgeport	08044000	333	SC, T, S	1968-77,
Lake Worth above Fort Worth	08045400	2,064	pH, Cl	
Clear Fork Trinity River at Fort Worth	08047500	518	SC, pH, Cl	1949-52,
			T	1948-62
Village Creek at Everman	08048970	84.5	SC, pH, T, DO	1990
Elm Fork Trinity River SWS # 6-0 near Muenster	08050200	0.77	S	1957-66
Elm Fork Trinity River near Muenster	08050300	46	SC	1967-68,

Station name	Station number	Drainage area (mi^2)	Type of record	Period of record (water years)
			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	1966-75
Elm Fork Trinity River near Lewisville	08053000	1,673	SC	1982-86,
			T	1976-86
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
Cedar Creek near Mabank	08063000	733	SC, T, pH, Cl	1956-57
Pin Oak Creek near Hubbard	08063200	17.60	SC	1967-72,
			T	1957-60,
				1965-72,
			S	1957-60,
				1962-72
Richland Creek near Richland	08063500	734	SC, T, pH, Cl	1968-69,
			SC, T	1983-89
Chambers Creek near Corsicana	08064500	963	SC, T, pH, Cl	1961-70
Richland Creek near Fairfield	08064600	1,957	SC, T, pH, Cl	1956-66,
				1972,
			SC, T	1973-83
Trinity River near Oakwood	08065000	12,833	SC, T, pH, Cl	1948-54,
			SC, T, S	1977-81
Bedias Creek near Madisonville	08065800	321	SC, T	1985-87,
			S	1986
Long King Creek at Livingston	08066200	141	SC, T, pH, Cl	1963-72
Trinity River near Goodrich	08066250	16,844	SC, T	1970-73
Trinity River near Moss Bluff	08067100	17,738	SC, pH, Cl	1950-65
Old River near Cove	08067200	19.0	SC, pH, Cl	1950-65,
			T	1965
Trinity River at Anahuac	08067300	17,912	SC, pH, Cl	1950-65
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
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
Sims Bayou at Houston	08075500	63.0	SC, T, DO	1994-97
Chocolate Bayou near Alvin	08078000	87.70	SC, T	1978-81
North Fork Double Mountain Fork Brazos River near Post	08079575	438	SC, T	1984-93
Double Mountain Fork Brazos River near Rotan	08080000	8,536	SC, T	1950-51
Double Mountain Fork Brazos River near Aspermont	08080500	8,796	SC, T, S	1949-51
			SC, T	1957-95
McDonald Creek near Post	08080540	103	SC, T	1964-78
Salt Fork Brazos River near Peacock	08081000	4,619	SC, T	1950-51,
				1965-86

Station name	Station number	Drainage area (mi^2)	Type of record	Period of record (water years)
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
Clear Fork Brazos River at Hawley	08083240	1,416	SC, T	1968-79,
				1982-84
Clear Fork Brazos River at Nugent	08084000	2,199	SC, T, pH, Cl	1948-53
California Creek near Stamford	08084800	478	SC, T	1963-79
Paint Creek near Haskell	08085000	914	SC, T	1950-5
Clear Fork Brazos River at Fort Griffin	08085500	3,988	SC, T, S	1950-51,
			SC, T	1968-79,
				1982-84
Hubbard Creek near Sedwick	08086015	128	SC, T	1964-66
Deep Creek at Moran	08086050	228	SC, T	1963-75
Hubbard Creek near Albany	08086100	454	SC, T	1962-75
Salt Prong Hubbard Creek at U.S. Highway 380 near Albany	08086120	61	SC, T	1964-68
North Fork Hubbard Creek near Albany	08086150	39.30	SC, T	1964-90
Salt Prong Hubbard Creek near Albany	08086200	115	SC, T	1962-63
Snailum Creek near Albany	08086210	22.90	SC, T	1964-66
Battle Creek near Moran	08086235	108	SC, T	1967-68
Pecan Creek near Eolian	08086260	26.40	SC, T	1967-75
Big Sandy Creek near Breckenridge	08086300	288	SC, T	1962-77
Hubbard Creek near Breckenridge	08086500	1,089	SC, T	1955-75
Clear Fork Brazos River at Eliasville	08087300	5,697	SC, T	1962-82
Brazos River near South Bend	08088000	22,673	SC, Cl	1942-48,
			SC, T	1978-81
Salt Creek at Olney	08088100	11.80	SC, T	1958-60
Salt Creek near Newcastle	08088200	120	SC, T	1958-60
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	1966,
				1968-82
Brazos River near Highbank	08098290	30,436	T	1968-84
Leon River near Eastland	08098500	235	SC, T	1950-53
Leon River near Hasse	08099500	1,261	SC, T	1980-82,
				1990-97
Leon River near Belton	08102500	3,542	T	1957-72
South Fork Rocky Creek near Briggs	08103900	33.30	S	1963-65
Lampasas River at Youngsport	08104000	1,240	SC, T	1961-64
Little River near Little River	08104500	5,228	SC, T	1965-73,
				1980-82
Little River near Cameron	08106500	7,065	SC, T	1959-97
San Gabriel River near Weir	08105300	563	T	1977-82
San Gabriel River at Laneport	08105700	738	T	1977-82
Brazos River at State Highway 21 near Bryan	08108700	39,049	SC, T	1961-65
Brazos River near Bryan	08109000	39,515	SC, T	1966
Brazos River near College Station	08109500	39,599	SC, T	1961-84
Yegua Creek near Somerville	08110000	1,009	SC, T	1961-67
Navasota River above Groesbeck	08110325	239	SC, T	1968-89

Station name	Station number	Drainage area (mi^2)	Type of record	Period of record (water years)
Navasota River near Groesbeck	08110400	311	SC, T	1968-78
Navasota River near Easterly	08110500	968	SC	1942-43, 1947
Navasota River near Bryan	08111000	1,454	SC, T S	1959-81, 1976-81
Brazos River near Richmond	08114000	45,007	S SC T	1966-86, 1942-95, 1951-95
Brazos River near Rosharon	08116650	45,399	SC, T	1969-80
Brazos River at Harris Reservoir near Angleton	08116700	44,000	SC T	1962-77, 1967-77
Brazos River at Brazoria Reservoir near Brazoria	08117200	44,000	SC T	1962-77, 1967-77
San Bernard River near Boling	08117500	727	SC, T	1978-81
Colorado River above Bull Creek near Knapp	08118200	N/A	SC, T, Cl	1950-52
Bull Creek near Ira	08118500	26.30	SC, T, pH, Cl	1950-51
Bluff Creek near Ira	08119000	42.60	SC, T, pH, Cl	1950
Colorado River near Ira	08119500	3,483	SC, T Cl	1950-52, 1959-70, 1975-82, 1951-52
Deep Creek near Dunn	08120500	198	SC, T	1953-54
Colorado River near Cuthbert	08120700	3,912	SC T	1965-99 1965-80, 1983-99
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 S	1948-51, 1949-51
Oak Creek near Blackwell	08126000	209	SC, T	1950
Colorado River at Ballinger	08126500	16,413	SC, T S	1961-79, 1978-79
Elm Creek at Ballinger	08127000	450	SC, T	1968-91
Concho River at Paint Rock	08136500	6,574	SC, T S	1946-50, 1967-90, 1978-81
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 T	1962-69, 1963-70
Colorado River near San Saba	08147000	37,217	SC, T S	1947-92, 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
Colorado River at Austin	08158000	39,009	SC, T	1948-91

Station name	Station number	Drainage area (mi^2)	Type of record	Period of record (water years)
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 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
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
San Antonio River at San Antonio	08178000	41.8	SC, T	1991-92,
				1996-97
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
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
Nueces River near Tilden	08194500	8,093	SC, T, S	1950
Frio River at Calliham	08207000	5,491	SC, T	1968-81
Nueces River near Three Rivers	08210000	15,427	SC	1945-47,
			SC, T, pH, Cl, S	1951-52,
			SC, T	1975-81
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 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,

Station name	Station number	Drainage area (mi^2)	Type of record	Period of record (water years)
				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 Mission Pumping Plant	08468000	171,800	SC	1945-50
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, 2000

VOLUME 5

GUADALUPE RIVER BASIN, NUECES RIVER BASIN, RIO GRANDE 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 5 contains records for water discharge at 71 gaging stations; stage only at 4 gaging stations; stage and contents at 4 lakes and reservoirs; and water quality at 29 gaging stations. Also included are data for 23 partial-record stations comprised of 3 flood-hydrograph, 10 low-flow, 6 crest-stage, and 4 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-00-5." 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 2000 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, G.E. Kretzschmar, Executive Administrator; the cities of Abilene, Arlington, Austin, Corpus Christi, Fort Worth, Gainesville, Garland, Georgetown, Graham, Houston, Lubbock, Nacogdoches, San Angelo, and Wichita Falls; Bexar, Medina, and Atascosa Counties Water Improvement District No. 1; Barton Springs/Edwards Aquifer Conservation District; Brazos River Authority; Canadian Municipal Water Authority; Coastal Water Authority; Colorado River Municipal Water District; Dallas Public Works Department; Dallas Water Utilities; Edwards Underground Aquifer Authority; Fort Bend Subsidence District; Franklin County Water District; Galveston County; Greenbelt Municipal and Industrial Water Authority; Guadalupe-Blanco River Authority; Harris-Galveston Coastal Subsidence District; Harris County Office of Emergency Management; Harris County Flood Control District: Houston-Galveston Area Council; Lavaca-Navidad River Authority; Lower Colorado River Authority; Lower Neches Valley Authority; North Central Texas Municipal Water Authority; Northeast Texas Municipal Water District; North Texas Municipal Water District; Orange County; Pecos River Commission; Red Bluff Water Power Control District; Red River Authority of Texas; Sabine River Authority of Texas; Sabine River Compact Administration; San Antonio City Public Service Board; San Antonio River Authority; San Antonio Water System; San Jacinto River Authority; Somervell County Water District; Tarrant Regional Water District; Texas Soil & Water Conservation Board; Texas State Department of Highways & Public Transportations; Texas Natural Resources Conservation Commission; Titus County Fresh Water Supply District No. 1; Trinity River Authority; Upper Colorado River Authority; Upper Guadalupe River Authority; Upper Neches River Municipal Water Authority; West Central Texas Municipal Water District; and Wichita County Water Improvement District No. 2.

HYDROLOGIC CONDITIONS

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

Streamflow across the State averaged normal during water year 2000 .

Conservation storage in 77 selected reservoirs throughout the State, with a combined conservation capacity of 34,481,000 acre-feet, decreased from 76 percent at the end of September 1999 to 73 percent at the end of September 2000. Records from these reservoirs indicate that storage decreased in 70, increased in 5, and remained the same in 2.

The area for which water resources data are presented in volume 5 includes the Guadalupe River Basin, Nueces River Basin, Rio Grande Basin, and Intervening Coastal Basins. The area described in volume 5 and the location of selected streamflow-gaging and water-quality stations in the area are shown in figure 1.

Streamflow

In the area covered in volume 5, streamflow averaged normal during water year 2000. Streamflow for water year 2000 and streamflow for the period of record at the four selected stations (fig. 1) for which data are included in volume 5 is presented in table 1.

At the four long-term hydrologic index stations in the State, monthly mean streamflow during water year 2000 averaged below normal. Monthly mean discharges for water year 2000 and the median of the long-term monthly means for water years 1961–90 for the four long-term hydrologic index stations in the State are shown in figure 2. Streamflow at the hydrologic index station Guadalupe River near Spring Branch was below normal for each month of water year 2000. Streamflow for the station Neches River near Rockland was below normal during November through April and normal for the remaining 6 months. The station North Bosque River near Clifton had above normal streamflow during June, normal streamflow during November and December, and below normal streamflow for the remaining 9 months. The station North Concho River near Carlsbad had above normal streamflow for March, below normal streamflow for May, and normal streamflow for the remaining 10 months.

Conservation storage in 8 selected reservoirs in this area of the State, with a total combined conservation capacity of 5,244,000 acre-feet, decreased from 50 percent of capacity at the end of September 1999 to 49 percent of capacity at the end of September 2000. Records from these reservoirs indicate that storage decreased in 5 and increased in 1.

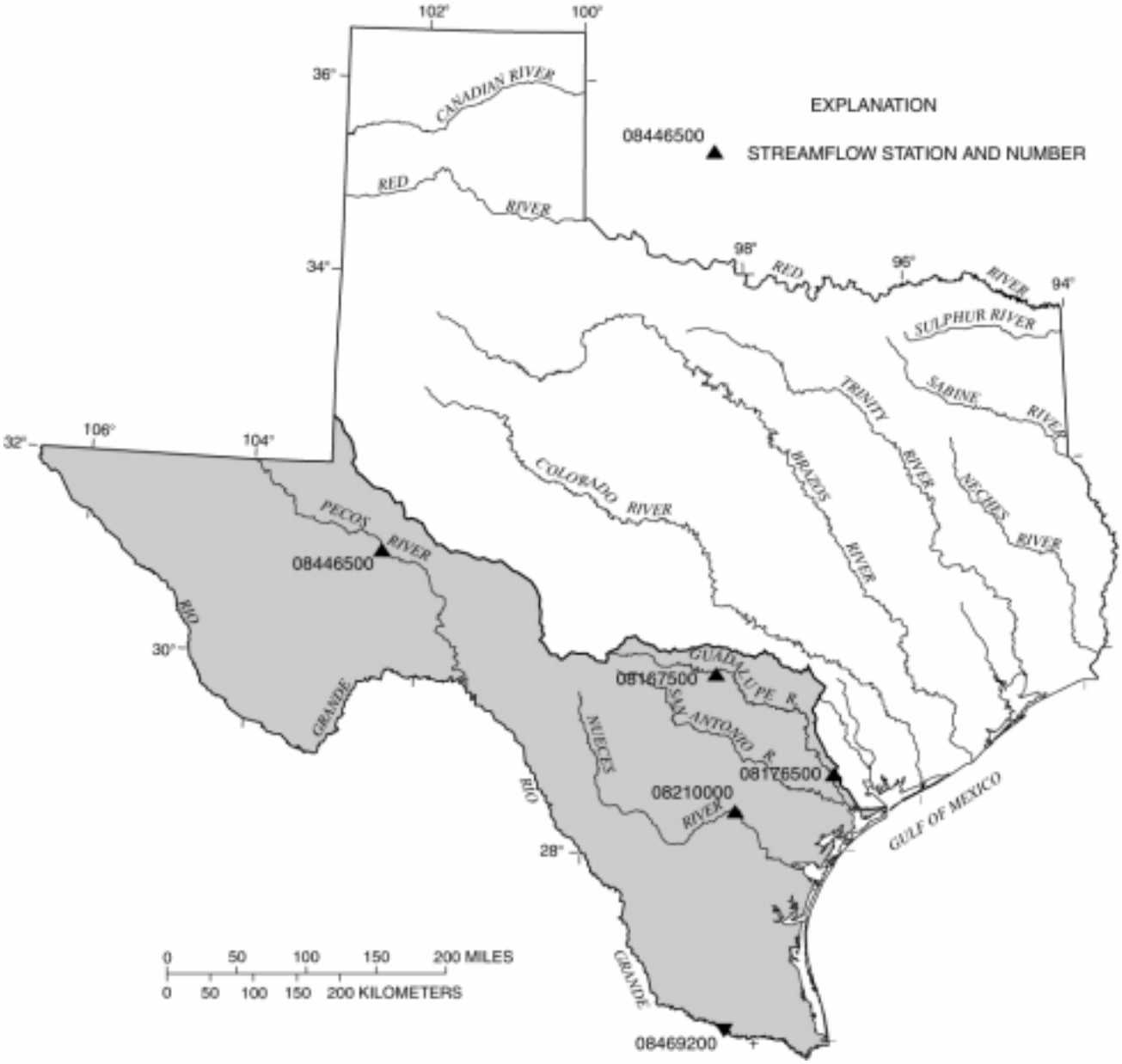
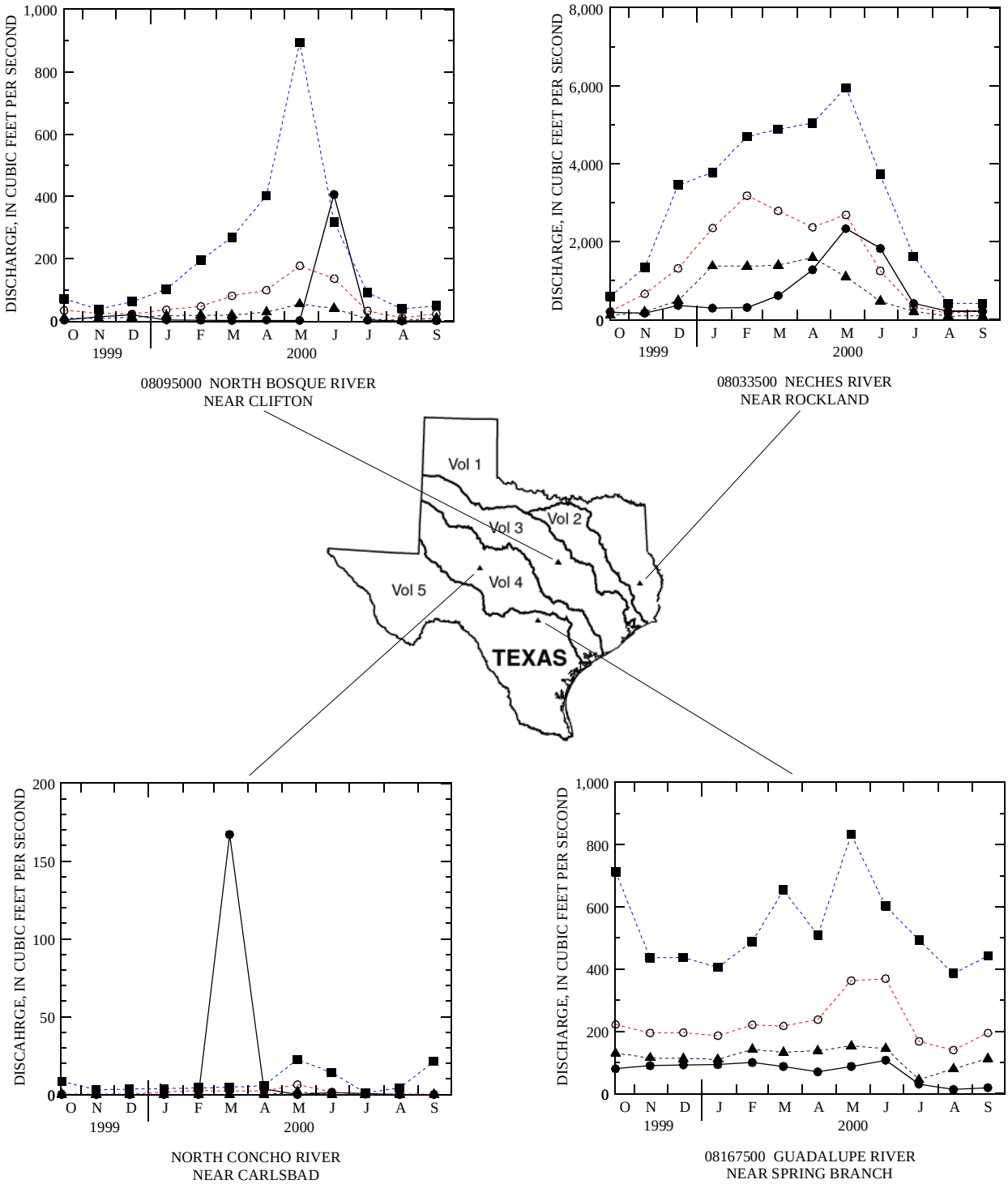


Figure 1. Area of Texas covered by volume 5 (shaded) and location of selected streamflow and water-quality stations in volume 5.



EXPLANATION

MONTHLY MEAN DISCHARGE FOR 2000 WATER YEAR

MEDIAN OF MONTHLY MEAN DISCHARGE FOR 1961–90 WATER YEARS

25 PERCENT QUARTILE

75 PERCENT QUARTILE

Figure 2. Monthly mean discharges at four long-term hydrologic index stations during 2000 water year and median of the monthly mean discharges for 1961–90 water years.

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.

Records of discharge-weighted-average concentrations of dissolved solids for water year 2000 are compared with those for water years 1996–2000 for selected long-term daily or continuous-record water-quality stations (fig. 1) in the Rio Grande Basin. Results are shown in table 2.

Table 1. Streamflow at four selected stations

Station no. and name		Discharge during 2000 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
Guadalupe River Basin							
08167500	Guadalupe River near Spring Branch, TX 1/	739	5.4	70.7	i160,000	0	423 (1922-2000)
08176500	Guadalupe River at Victoria, TX	6,220	165	637	i466,000	14	1,893 (1935-2000)
Nueces River Basin							
08210000	Nueces River near Three Rivers, TX	3,850	27	94.7	18,300	0	682 (1946-2000)
Rio Grande Basin							
08446500	Pecos River near Girvin, TX	k2,060	7.6	25.4	k20,000	1.9	71.5 (1939-2000)

1/ Hydrologic index station.
i From indirect measurement of peak flow.
k From supplementary gage.

Table 2.--Comparison of records of discharge-weighted-average concentrations of dissolved solids for the 2000 and 1996-2000 water years

Station no. and name		Mean discharge (cubic feet per second)		Discharge-weighted-average concentration of dissolved solids (milligrams per liter)	
		2000	1996-2000	2000	1996-2000
Rio Grande Basin					
08469200	Rio Grande below Anzalduas Dam, TX	39.5	862	565	725

SPECIAL NETWORKS AND PROGRAMS

Hydrologic Benchmark Network is a network of 50 sites in small drainage basins around the country whose purpose is to provide consistent data on the hydrology, including water quality, and related factors in representative undeveloped watersheds nationwide, and to provide analyses on a continuing basis to compare and contrast conditions observed in basins more obviously affected by human activities.

National Stream-Quality Accounting Network (NASQAN) monitors the water quality of large rivers within four of the Nation's largest river basins--the Mississippi, Columbia, Colorado, and Rio Grande. The network consists of 40 stations. 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 the constituents; (2) to test findings of the National Water-Quality Assessment Program (NAWQA); (3) to characterize processes unique to large-river systems such as storage and remobilization of sediments and associated contaminants; and (4) to refine existing estimates of off-continent transport of water, sediment, and chemicals for assessing human effects on the world's oceans and for determining global cycles of carbon, nutrients, and other chemicals.

Additional information about the NASQAN program is available through the world wide web at:

http://water.usgs.gov/nasqan/

The National Atmospheric Deposition Program/National Trends Network (NAPD/NTN) provides continuous measurement and assessment of the chemical climate of precipitation throughout the United States. As the lead federal agency, the USGS works together with over 100 organizations to accomplish the following objectives; (1) Provide a long-term, spatial and temporal record of atmospheric deposition generated from a network of over 200 precipitation chemistry monitoring sites. (2) Provide the mechanism to evaluate the effectiveness of the significant reduction in SO_2 emissions that began in 1995 as implementation of the Clean Air Act Amendments (CAAA) occurred. (3) Provide the scientific basis and nationwide evaluation mechanism for implementation of the Phase II CAAA emission reductions for SO_2 and NOx scheduled to begin in 2000.

Data from the network, as well as information about individual sites, are available through the world wide web at:

http://nadp.sws.uiuc.edu

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

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

Communication and coordination between USGS personnel and other local, State, and federal interests are critical components of the NAWQA Program. Each study unit has a local liaison committee consisting of representatives from key federal, State, and local water resources agencies, Indian nations, and universities in the study unit. Liaison committees typically meet semiannually to discuss their information needs, monitoring plans and progress, desired information products, and opportunities to collaborate efforts among the agencies. There are currently two NAWQA Programs operating in Texas; the Trinity NAWQA and the South Central Texas NAWQA.

Additional information about the NAWQA Program is available through the world wide web at:

http://water.usgs.gov/nawqa/nawqa_home.html
http://tx.usgs.gov/trin
http://tx.usgs.gov/sctx

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

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

EXPLANATION OF THE RECORDS

The surface-water records published in this report are for the 2000 water year that began October 1, 1999, and ended September 30, 2000. A calendar of the water year is provided on the inside of the front cover. The records contain streamflow data, stage and content data for lakes and reservoirs, and water-quality data for surface water. The following sections of the introductory text are presented to provide users with a more detailed explanation of how the hydrologic data published in this report were collected, analyzed, computed, and arranged for presentation.

Station Identification Numbers

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

Downstream Order Numbering

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

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

Records of Stage and Water Discharge

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

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

Data Collection and Computation

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

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

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

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

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

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

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

Data Presentation

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

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

Station Manuscript

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

LOCATION.--Information on locations is obtained from the most accurate maps available. The location of the gage with respect to the cultural and physical features in the vicinity and with respect to the reference place mentioned in the station

name is given. River mileages, given for only a few stations, were determined by methods given in "River Mileage Measurement," Bulletin 14, Revision of October 1968, prepared by the Water Resources Council or were provided by the U.S. Army Corps of Engineers.

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

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

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

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

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

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

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

REVISIONS.--If a critical error in published records is discovered, a revision is included in the first report published following discovery of the error. Although rare, occasionally the records of a discontinued gaging station may need revision. Because, for these stations, there would be no current or, possibly, future station manuscripts published 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 offices whose addresses are given on the back of the title page of this report to determine if the published records were ever revised after the station was discontinued. Of course, if the data were obtained by computer retrieval, the data would be current and there would be no need to check, because any published revision of data is always accompanied by revision of the corresponding data in computer storage.

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

Data table of daily mean values

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

Statistics of monthly mean data

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

Summary statistics

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

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

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

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

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

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

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

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

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

ANNUAL 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.)

INSTANTANEOUS PEAK FLOW.--The maximum instantaneous discharge occurring for the water year or for the designated period.

INSTANTANEOUS PEAK STAGE.--The maximum instantaneous stage occurring for the water year or for the designated period. If the dates of occurrence for the instantaneous peak flow and instantaneous peak stage differ, the REMARKS paragraph in the manuscript or a footnote may be used to provide further information.

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

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

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

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

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

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

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

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

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

Identifying Estimated Daily Discharge

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

Accuracy of the Records

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

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

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

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

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

Other Records Available

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

Records of Surface-Water Quality

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

Classification of Records

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

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

Arrangement of Records

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

On-Site Measurements and Sample Collection

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

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

Procedures for on site measurements and for collecting, treating, and shipping samples are given in publications on "Techniques of Water-Resources Investigations," Book 1, Chap. D2; Book 3, Chap. C2; Book 5, Chap. A1, A3, and A4. All of these references are listed under "PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS" which appears at the end of the introductory text. Detailed information on collecting, treating, and shipping samples may be obtained from the Texas Office of the Central Region Office.

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

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

Detailed information on sampling methods may be found in the following publications: OFR-90-127 "Guidelines for Collection and Analysis of Water-Quality Samples from Streams in Texas", OFR-94-455 "Field Guide for Collecting and Processing Stream-Water Samples for the National Water-Quality Assessment Program", and OFR-94-539 "U.S. Geological Survey protocol for the collection and processing of surface-water samples for the subsequent determination of inorganic constituents in filtered water". Specific questions pertaining to water-quality sample collection may be directed to the District

Water-Quality Specialist in Austin, Texas, or the Regional Water-Quality Specialist in Denver, Colorado.

Additional information about the NASQAN program is available through the world wide web at:

http://water.usgs.gov/public/nasqan/

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

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

Water Temperature

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

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

Sediment

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

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

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

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

Laboratory Measurements

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

Historical and current (2000) dissolved trace-element concentrations are reported herein for water that was collected, processed, and analyzed by using either ultraclean or other than ultraclean techniques. If ultraclean techniques were used, then those concentrations are reported in nanograms per liter. If other than ultraclean techniques were used, then those concentrations are reported in micrograms per liter and could reflect contamination introduced during some phase of the procedure.

Data Presentation

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

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

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

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

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

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

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

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

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

REVISIONS.--If errors in published water-quality records are discovered after publication, appropriate updates are made to the Water-Quality File in the U.S. Geological Survey's computerized data system, WATSTORE, and subsequently by monthly transfer of update transactions to the U.S. Environmental Protection Agency's STORET system. Because the usual volume of updates makes it impractical to document individual changes in the State data-report series or elsewhere, potential users of U.S. Geological Survey water-quality data are encouraged to obtain all required data from the appropriate computer file to insure the most recent updates.

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
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.
K	Results based on colony count outside the acceptance range (non-ideal colony count).
L	Biological organism count less than 0.5 percent (Organism may be observed rather than counted).
D	Biological organism count equal to or greater than 15 percent (dominant).
&	Biological organism estimated as dominant.
V	Analyte was detected in both the environmental sample and the associated blanks.
M	Presence of material verified but not qualtified.

Dissolved Trace-Element Concentrations

NOTE: Traditionally, dissolved trace-element concentrations have been reported at the microgram per liter (mg/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 mg/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/NTN Coordination Office, Colorado State University, Fort Collins, CO 80523 (303-491-5643).

Water-Quality Control Data

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

Blank Samples

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

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

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

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

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

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

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

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

Reference Samples

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

Replicate Samples

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

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

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

Spike Samples

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

ACCESS TO USGS WATER DATA

The USGS provides near real-time stage and discharge data for many of the gaging stations equipped with necessary telemetry and historic daily-mean and peak-flow discharge

data for most current or discontinued gaging stations through the world wide web (WWW). These data may be accessed at

http://tx.usgs.gov

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

DEFINITION OF TERMS

Terms related to streamflow, water-quality, and other hydrologic data, as used in this report, are defined below. See also table for converting English units to International System (SI) Units on the inside of the back cover.

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

Acre-foot (AC-FT, acre-ft) is 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 325,851 gallons or 1,233 cubic meters.

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

Algae are mostly aquatic single-celled, colonial, or multicelled plants, containing chlorophyll and lacking roots, stems, and leaves.

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.

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

Bacteria are microscopic unicellular organisms, typically spherical, rod-like, or spiral and threadlike in shape, often clumped into colonies. Some bacteria cause disease, while 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.

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-sha-ped bacteria which ferment lactose with gas formation within 48 hours at 35 ºC. 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 ºC ± 1.0 ºC on M-Endo medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

Fecal coliform bacteria are bacteria that are present in the intestine or feces of warm-blooded animals. They are often 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 ºC ± 0.2 ºC on M-FC medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

Fecal streptococcal bacteria are bacteria found in the intestine of warm-blooded animals. Their presence in water is considered to verify fecal pollution. 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 ºC ± 1.0 ºC on KF-streptococcus medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

Bed material is the sediment mixture of which a streambed, lake, pond, reservoir, or estuary bottom is composed.

Benthic organisms (invertebrates) are the group of animals inhabiting the bottom of an aquatic invironment. 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 the mass per unit area or volume of habitat.

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

Dry mass refers to the mass of residue present after drying in an oven at 105 ºC for zooplankton and periphyton, 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.

Organic mass or volatile mass of the 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.

Wet mass is the mass of living matter plus contained water.

Bottom material: See "Bed material".

Cells/volume refers to the number of plankton cells or natural units counted using a microscope and grid or counting cell. Results are generally reported as cells or units per milliliter.

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.

Chlorophyll refers to the green pigments of plants. Chlorophyll a and b are the two most common green pigments in plants.

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

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.

Control designates a feature downstream from the gage that determines the stage-discharge relation at the gage. This feature may be a natural constriction of the channel, 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 salt water.

Cubic foot per second (ft^3/s) is the rate of discharge representing a volume of 1 cubic foot passing a given point during 1 second and is equivalent to 7.48 gallons per second or 448.8 gallons per minute or 0.02832 cubic meters per second.

Cubic foot per second per 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, approximately 1.9835 acre-feet, about 646,000 gallons, or 2,447 cubic meters.

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

Discharge is the volume of water (or more broadly, volume of fluid plus suspended sediment) that passes a given point within a given period of time.

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

Instantaneous discharge is the discharge at a particular instant of time.

Dissolved refers to that material in a representative water sample which passes through a 0.45 µm membrane filter. This is a convenient operational definition used by Federal agencies that collect water data. Determinations of "dissolved" constituents are made on subsamples of the filtrate.

Dissolved-solids concentration of water 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 of dissolved solids, the bicarbonate (generally a major dissolved component of water) is converted to carbonate. Therefore, in the mathematical calculation of dissolved-solids concentration, the bicarbonate value, in milligrams per liter, is multiplied by 0.4926 to reflect the change.

Drainage area of a site on a stream at a specified location is that area, measured in a horizontal plane, enclosed by a topographic divide from which direct surface runoff from precipitation normally drains by gravity into the stream above the specified point. Figures of drainage area given herein include all closed basins, or noncontributing areas, within the area unless otherwise specified.

Drainage basin is a part of the surface of the earth that is occupied by a drainage system with a common outley for it's surface runoff, which consists of a surface stream or a body of impounded surface water together with all tributary surface streams and bodies of impounded surface water.

Extractable organic halides (EOX) are organic compounds which contain halogen atoms such as chlorine. These organic compounds are semi-volatile and extractable by ethyl acetate from air-dried stream bottom sediments. 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 th stream bottom sediments.

Gage height (G.H.) is the water-surface elevation referred to some arbitrary gage datum. Gage height is often used interchangeably with the more general term "stage," although gage height is more appropriate when used with a reading on a gage.

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

Supplementary gage is a gage used to obtain additional data. A supplementary gage may be used in place of the principal gage if the latter is isolated or cut

off from the channel, or registers only above (or below) a certain gage height. One or more supplementary gages may be used on bypass channels or overflow channels, or on streams that flow in several channels, each of which is rated independently.

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

High tide is the maximum height reached by each rising tide.

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

Low tide is the minimum height reached by each falling tide.

Mean high tide is the average of all high tides over a specified period.

Mean low tide is the average of all low tides over a specified period.

Mean water level is the average of all tides over a specified period.

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.

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

Micrograms per gram (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 liter (UG/L, µg/L) is a unit expressing the concentration of chemical constituents in solution as mass (micrograms) of solute per unit volume (liter) of water. One thousand micrograms per liter is equivalent to one milligram per liter.

Microsiemens per centimeter (µS/cm, US/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 solution. Milligrams per liter represents the mass of solute per unit volume (liter) of water. Concentration of suspended sediment also is expressed in mg/L and is based on the mass of dry sediment per liter of water-sediment mixture.

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.

Organism is any living entity.

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.

Total organism count is the total number of organisms collected and enumerated in any particular sample.

Parameter Code is a 5-digit number used in the U.S. Geological Survey computerized data system, National Water Information System (NWIS), to uniquely identify a specific constituent. The codes used in NWIS are the same as those used in the U.S. Environmental Protection Agency data system, STORET. The Environmental Protection Agency assigns and approves all requests for new codes.

Partial-record station is a particular site where limited streamflow and/or water-quality data are collected systematically over a period of years for use in hydrologic analyses.

Particle size is the diameter, in millimeters (mm), of a particle determined by either sieve or sedimentation methods. Sedimentation methods (pipet, bottom-withdrawal tube, visual-accumulation tube) 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 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

The partial size distributions given in this report are not necessarily representative of all particles in transport in the stream. 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.

Percent composition 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, mass, or volume.

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

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

Picocurie (PC, pCi) is one trillionth (1×10^{-12}) of the amount of radioactivity represented by a curie (Ci). A curie is the amount of radioactivity that yields 3.7×10^{10} radioactive disintegrations per second. A picocurie yields 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).

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

Blue-green algae are a group of phytoplankton organisms having a blue pigment, in addition to the green pigment called chlorophyll. Blue-green algae often cause nuisance conditions in water.

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

Green algae have chlorophyll pigments similar in color to those of higher green plants. Some forms produce algae mats or floating “moss” in lakes. Their concentrations are expressed as number of cells per milliliter (cells/mL) of sample.

Zooplankton is the animal part of the plankton. Zooplankton are capable of extensive movements within the water column and are often 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, zooplankton are a vital part of the aquatic food web. The zooplankton community is dominated by small crustaceans and rotifers.

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.

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 by the plants (carbon method).

Milligrams of carbon per area or volume per unit time [mg C/(m^2/time)] for periphyton and macrophytes and [mg C/(m^3/time)] for phytoplankton are units for expressing primary productivity. They define 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 in unenriched waters. Unit time may be either the hour or day, depending on the incubation period.

Milligrams of oxygen per area or volume per unit time [mg 0/(m^2/time)] for periphyton and macrophytes and [mg 0/(m^3/time)] for phytoplankton are the units for expressing primary productivity. They define 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.

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

Recoverable from 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.

Return period is the average time interval between occurrences of a hydrological event of a given or greater magnitude, usually expressed in years. May also be called recurrence interval.

Runoff in inches (IN., in.) shows the depth to which the drainage area would be covered if all the runoff for a given time period were uniformly distributed on it.

Sea level was formerly called "Sea Level Datum of 1929" or "mean sea level" in this series of reports and refers to the National Geodetic Vertical Datum of 1929 (NGVD of 1929)--a geodetic datum derived from a general adjustment of the first-order level nets of both the United States and Canada, formerly called Sea Level Datum of 1929.

Sediment is solid material that originates mostly from disintegrated rocks and is transported by, suspended in, or deposited from water; it 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 influenced by environmental factors. Some major factors are degree of slope, length of slope, soil characteristics, land usage, and quantity and intensity of precipitation.

Bed load is the sediment that is transported in a stream by rolling, sliding, or skipping along the bed and very close to it. In this report, bed load is considered to consist of particles in transit within 0.25 ft of the streambed.

Bed-load discharge (tons per day) is the quantity of bed load measured by dry weight that moves past a section as bed load in a given time.

Suspended sediment is the sediment that at any given time is maintained in suspension by the upward components of turbulent currents or that exists in suspension as a colloid.

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 ft above the bed) expressed as milligrams of dry sediment per liter of water-sediment mixture (mg/L). The entire sample is used for the analysis.

Mean concentration is the time-weighted concentration of suspended sediment passing a stream section during a 24-hour day.

Suspended-sediment discharge (tons/day) is the rate at which dry mass of sediment passes a section of a stream or is the quantity of sediment, as measured by dry mass or volume, that passes a 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.

Suspended-sediment load is a general term that refers to material in suspension. 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 discharge or concentration.

Suspended total residue at 105 ^oC concentration is the concentration of suspended sediment in the sampled zone expressed as milligrams of dry sediment per liter of water-sediment mixture (mg/L). A small aliquot of the sample is used for the analysis.

Total-sediment discharge (tons/day) is the sum of the suspended-sediment discharge and the bed-load discharge. It is the total quantity of sediment, as measured by dry mass or volume, that passes a cross section during a given time.

Total-sediment load or total load is a term which refers to the total sediment (bed load plus suspended-sediment load) that is in transport. 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 total-sediment discharge.

Sodium-absorption-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. Waters range in respect to sodium hazard from those which can be used for irrigation on almost all soils to those which are generally unsatisfactory for irrigation.

Solute is any substance that is dissolved in water.

Specific conductance is a measure of the ability of a water to conduct an electrical current. It is expressed in microsiemens per centimeter at 25 ^oC. Specific conductance is related to the type and concentration of ions in solution and can be used for approximating the dissolved-solids content of the water. Commonly, the concentration of dissolved solids (in milligrams per liter) is about 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.

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

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.

Natural substrate refers to any naturally occurring imersed or submersed solid surface, such as a rock or tree, upon which an organism lives.

Artificial substrate is a device which is purposely placed in a stream or lake for colonization of organisms. The artificial substrate simplifies the community structure by standardizing the substrate from which each sample is taken. Examples of artificial substrates

are basket samplers (made of wire cages filled with clean streamside rocks) and multiplate samplers (made of hard-board) for benthic organism collection, and plexiglass strips for periphyton collection.

Surface area of a lake is that area outlined on the latest USGS topographic map as the boundary of the lake and measured by a planimeter in acres. In localities not covered by topographic maps, the areas are computed from the best maps available at the time planimetered. All areas shown are those for the stage when the planimetered map was made.

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

Suspended (as used in tables of chemical analyses) refers to the amount (concentration) of undissolved material in a water-sediment mixture. It is associated with 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 water-suspended sediment sample that is retained on a 0.45 µm 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 analyzing portions of the material collected on the filter or, more commonly, by difference, based on determinations of (1) dissolved and (2) total-recoverable concentrations of the constituent.

Suspended, total is the total amount of a given constituent in the part of a representative water-suspended sediment sample that is retained on a 0.45 µm membrane filter. 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 determine when the results should be reported as "suspended, total."

Determinations of "suspended, total" constituents are made either by analyzing portions of the material collected on the filter or, more commonly, by difference, based on determinations of (1) dissolved and (2) total concentrations of the constituent.

Synoptic Studies Short-term investigations of specific water-quality conditions during selected seasonal or hydrologic peri ods 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.

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

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

Thermograph is an instrument that continuously records variations of temperature on a chart. The more general term "temperature recorder" is used in the table headings 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 that would be contained in a vessel or reservoir that had received equal quantities of water from the stream each day for the year.

Tons per acre-foot indicates the dry mass of dissolved solids in 1 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) is the rate representing a mass of 1 ton of a constituent in streamflow passing a cross section in 1 day. It is equivalent to 2,000 poinds per day, or 0.9072 metric tons per day.

Total is the total amount of a given constituent in a representative water-suspended sediment 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 all of the constituent in the sample.)

Total discharge is the total quantity of any individual constituent, as measured by dry mass or volume, that passes through a stream cross-section per unit of time. This term needs to be qualified, such as "total sediment discharge," "total chloride discharge," and so on.

Total recoverable is the amount of a given constituent that is in solution after a representative water- suspended sediment 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, equivalent digestion procedures are required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

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

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 man-made chemicals that are used and produced in the manufacture of paints, adhesives, petroleum products, pharmaceuticals, and refrigerants. They are often components of fuels, solvents, hydraulic fluids, paint thinners, and dry cleaning agents commonly used in urban settings. VOC contamination of drinking-water supplies is a human health concern because many are toxid and are known or suspected human carcinogens (U.S. Environmental Protection Agency, 1996).

Water year in U.S. Geological Survey 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, 1990, is called the "1990 water year."

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

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

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

PUBLICATIONS OF TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS

The U.S. Geological Survey publishes a series of manuals describing procedures for planning and conducting specialized work in water-resources investigations. The material 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. The chapter, the unit of publication, is limited to a narrow field of subject matter. This format permits flexibility in revision and publication as the need arises.

The reports listed below are for sale by the U.S. Geological Survey, Books and Open-File Reports Section, Federal Center, Box 25425, Denver, Colorado 80225 (authorized agent of the Superintendent of Documents, Government Printing Office). Prepayment is required. Remittance should be sent by check or money order payable to the U.S. Geological Survey. Prices are not included because they are subject to change. Current prices can be obtained by writing to the above address. When ordering or inquiring about prices for any of these publications, please give the title, book number, chapter number, and "U.S. Geological Survey Techniques of Water-Resources Investigations."

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, Chapter D1. 1975. 65 pages.

1-D2. ***Guidelines for collection and field analysis of ground-water samples for selected unstable constituents***, by W.W. Wood: USGS--TWRI Book 1, Chapter D2. 1976. 24 pages.

Book 2. Collection of Environmental Data

Section D. Surface Geophysical Methods

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

2-D2. ***Application of seismic-refraction techniques to hydrologic studies***, by F.P. Haeni: USGS--TWRI Book 2, Chapter D2. 1988. 86 pages.

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 11.0

2-E2. ***Borehole geophysics applied to ground-water investigations***, by W.S. Scott Keys: USGS--TWRI Book 2, Chapter E2. 1990. 150 pages.

Section F. Drilling and Sampling Methods

2-F1. ***Application of drilling, coring, and sampling techniques to test holes and wells***, by Eugene Shuter and Warren E. Teasdale: USGS--TWRI Book 2, Chapter F1. 1989. 97 pages.

Book 3. Applications of Hydraulics

Section A. Surface-Water Techniques

3-A1. ***General field and office procedures for indirect discharge measurements***, by M.A. Benson and Tate Dalrymple: USGS--TWRI Book 3, Chapter A1. 1967. 30 pages.

3-A2. ***Measurement of peak discharge by the slope-area method***, by Tate Dalrymple and M.A. Benson: USGS--TWRI Book 3, Chapter A2. 1967. 12 pages.

3-A3. ***Measurement of peak discharge at culverts by indirect methods***, by G.L. Bodhaine: USGS--TWRI Book 3, Chapter A3. 1968. 60 pages.

3-A4. ***Measurement of peak discharge at width contractions by indirect methods***, by H.F. Matthai: USGS--TWRI Book 3, Chapter A4. 1967. 44 pages.

3-A5. ***Measurement of peak discharge at dams by indirect methods***, by Harry Hulsing: USGS--TWRI Book 3, Chapter A5. 1967. 29 pages.

3-A6. ***General procedure for gaging streams***, by R.W. Carter and Jacob Davidian: USGS--TWRI Book 3, Chapter A6. 1968. 13 pages.

3-A7. ***Stage measurements at gaging stations***, by T.J. Buchanan and W.P. Somers: USGS--TWRI Book 3, Chapter A7. 1968. 28 pages.

3-A8. ***Discharge measurements at gaging stations***, by T.J. Buchanan and W.P. Somers: USGS--TWRI Book 3, Chapter A8. 1969. 65 pages.

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, Chapter A9. 1989. 27 pages.

3-A10. ***Discharge ratings at gaging stations***, by E.J. Kennedy: USGS--TWRI Book 3, Chapter A10. 1984. 59 pages.

3-A11. ***Measurement of discharge by moving-boat method***, by G.F. Smoot and C.E. Novak: USGS--TWRI Book 3, Chapter A11. 1969. 22 pages.

3-A12. ***Fluorometric procedures for dye tracing***, by J.F. Wilson, Jr., E.D. Cobb, and F.A. Kilpatrick: USGS--TWRI Book 3, Chapter A12, 1986. 41 pages.

3-A13. ***Computations of continuous records of streamflow***, by E.J. Kennedy: USGS-- TWRI Book 3, Chapter A13, 1983. 53 pages.

3-A14. ***Use of flumes in measuring discharge***, by F.A. Kilpatrick and V.R. Schneider: USGS--TWRI Book 3, Chapter A14. 1983. 46 pages.

3-A15. ***Computation of water-surface profiles in open channels***, by Jacob Davidian: USGS--TWRI Book 3, Chapter A15. 1984. 48 pages.

3-A16. ***Measurement of discharge using tracers***, by F.A. Kilpatrick and E.D. Cobb: USGS--TWRI Book 3, Chapter A16. 1985. 52 pages.

3-A17. ***Acoustic velocity meter systems***, by Antonius Laenen: USGS--TWRI Book 3, Chapter A17. 1985. 38 pages.

3-A18. ***Determination of stream reaeration coefficients by use of tracers***, by F.A. Kilpatrick, R.E. Rathbun, N. Yotsukura, G.W. Parker, and L.L. DeLong: USGS--TWRI Book 3, Chapter A18. 1989. 52 pages.

3-A19. ***Levels of streamflow gaging stations***, by E.J. Kennedy: USGS--TWRI Book 3, Chapter A19. 1990. 27 pages.

3-A20. ***Simulation of soluble waste transport and buildup in surface waters using tracers***, by F.A. Kilpatrick: USGS --TWRI Book 3, Chapter A20. 1993. 38 pages.

3-A21. ***Stream-gaging cableways***, by C. Russell Wagner: USGS--TWRI Book 3, Chapter A21. 1995. 56 pages.

Section B. Ground-Water Techniques

3-B1. ***Aquifer-test design, observation, and data analysis***, by R.W. Stallman: USGS--TWRI Book 3, Chapter B1. 1971. 26 pages.

3-B2. ***Introduction to ground-water hydraulics, a programmed text for self instruction***, by G.D. Bennett: USGS--TWRI Book 3, Chapter B2. 1976. 172 pages.

3-B3. ***Type curves for selected problems of flow to wells in confined aquifers***, by J.E. Reed: USGS--TWRI Book 3, Chapter B3. 1980. 106 pages.

3-B4. ***Regression modeling of ground-water flow***, by Richard L. Cooley and Richard L. Naff: USGS--TWRI Book 3, Chapter B4. 1990. 232 pages.

3-B4. ***Supplement 1. Regression modeling of ground-water flow-Modifications to the computer code for nonlinear regression solution of steady-state ground-water flow problems***, by R.L. Cooley. USGS--TWRI Book 3, Chapter B4. 1993. 8 pages.

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

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

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

Section C. Sedimentation and Erosion Techniques

3-C1. ***Fluvial sediment concepts***, by H.P. Guy: USGS--TWRI Book 3, Chapter C1. 1970. 55 pages.

3-C2. ***Field methods for measurement of fluvial sediment***, by H.P. Guy and V.W. Norman: USGS--TWRI Book 3, Chapter C2. 1970. 59 pages.

3-C3. ***Computation of fluvial-sediment discharge***, by George Porterfield: USGS--TWRI Book 3, Chapter C3. 1972. 66 pages.

Book 4. Hydrologic Analysis and Interpretation

Section A. Statistical Analysis

4-A1. ***Some statistical tools in hydrology***, by H.C. Riggs: USGS--TWRI Book 4, Chapter A1. 1968. 39 pages.

4-A2. ***Frequency curves***, by H.C. Riggs: USGS--TWRI Book 4, Chapter A2. 1968. 15 pages.

Section B. Surface Water

4-B1. ***Low-flow investigations***, by H.C. Riggs: USGS--TWRI Book 4, Chapter B1. 1972. 18 pages.

4-B2. ***Storage analyses for water supply***, by H.C. Riggs and C.H. Hardison: USGS--TWRI Book 4, Chapter B2. 1973. 20 pages.

4-B3. ***Regional analyses of streamflow characteristics***, by H.C. Riggs: USGS--TWRI Book 4, Chapter B3. 1973. 15 pages.

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,Chapter D1. 1970. 17 pages.

Book 5. Laboratory Analysis

Section A. Water Analysis

5-A1. ***Methods for determination of inorganic substances in water and fluvial sediments***, by M.J. Fishman and L.C. Friedman: USGS--TWRI Book 5, Chapter A1. 1989. 545 pages.

5-A2. ***Determination of minor elements in water by emission spectroscopy***, by P.R. Barnett and E.C. Mallory, Jr.: USGS--TWRI Book 5, Chapter A2. 1971. 31 pages.

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

5-A4. ***Methods for collection and analysis of aquatic biological and microbiological samples***, by L.J. Britton and P.E. Greeson, editors: USGS--TWRI Book 5, Chapter A4. 1989. 363 pages.

5-A5. ***Methods for determination of radioactive substances in water and fluvial sediments***, by L.L. Thatcher, V.J. Janzer, and K.W. Edwards: USGS--TWRI Book 5, Chapter A5. 1977. 95 pages.

5-A6. ***Quality assurance practices for the chemical and biological analyses of water and fluvial sediments***, by L.C. Friedman and D.E. Erdmann: USGS--TWRI Book 5, Chapter A6. 1982. 181 pages.

Section A. Sediment Analysis

5-C1. ***Laboratory theory and methods for sediment analysis***, by H.P. Guy: USGS--TWRI Book 5, Chapter C1. 1969. 58 pages.

Book 6. Modeling Techniques

Section A. Ground Water

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

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

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

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

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

6-A6. ***A coupled surface-water and ground-water flow model (MODBRANCH) for simulation of stream-aquifer interaction***, by Eric D. Swain and Eliezer J. Wexler. 1995. 125 pages.

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 pages.C. Trescott, G.F. Pinder, and S.P. Larson: USGS--TWRI Book 7, Chapter C1. 1976. 116 pages.

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

7-C3. ***A model for simulation of flow in singular and interconnected channels***, by R.W. Schaffrannek, R.A. Baltzer, and D.E. Goldberg: USGS--TWRI Book 7, Chapter C3. 1983. 110 pages.

Book 8. Instrumentation

Section A. Instruments for Measurement of Water Level

8-A1. ***Methods of measuring water levels in deep wells***, by M.S. Garber and F.C. Koopman: USGS--TWRI Book 8, Chapter A1. 1968. 23 pages.

8-A2. ***Installation and service manual for U.S. Geological Survey manometers***, by J.D. Craig: USGS--TWRI Book 8, Chapter A2. 1983. 57 pages.

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, Chapter B2. 1968. 15 pages.

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, Chapter A1. 1998. 47 pages.

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, Chapter A2. 1998. 94 pages.

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, Chapter A3. 1998. 75 pages.

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, Chapter A5. 1999. 149 pages.

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, Chapter 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, Chapter A7. 1997. 49 pages.

9-A7. ***National Field Manual for the Collection of Water-Quality Data: Five-Day Biochemical Oxygen Demand,*** by G.C. Delzer and S.W. McKenzie: USGS-TWRI Book 9, Chapter A7.2. 1999. 28 pages.

9-A8. ***National Field Manual for the Collection of Water-Quality Data: Bottom Material Samples***, by D.B. Radtke: USGS--TWRI Book 9, Chapter A8. 1998. 48 pages.

9-A9. ***National Field Manual for the Collection of Water-Quality Data: Saafety in Field Activities***, by S.L. Lane and R.G. Fay: USGS--TWRI Book 9, Chapter A9. 1998. 60 pages.

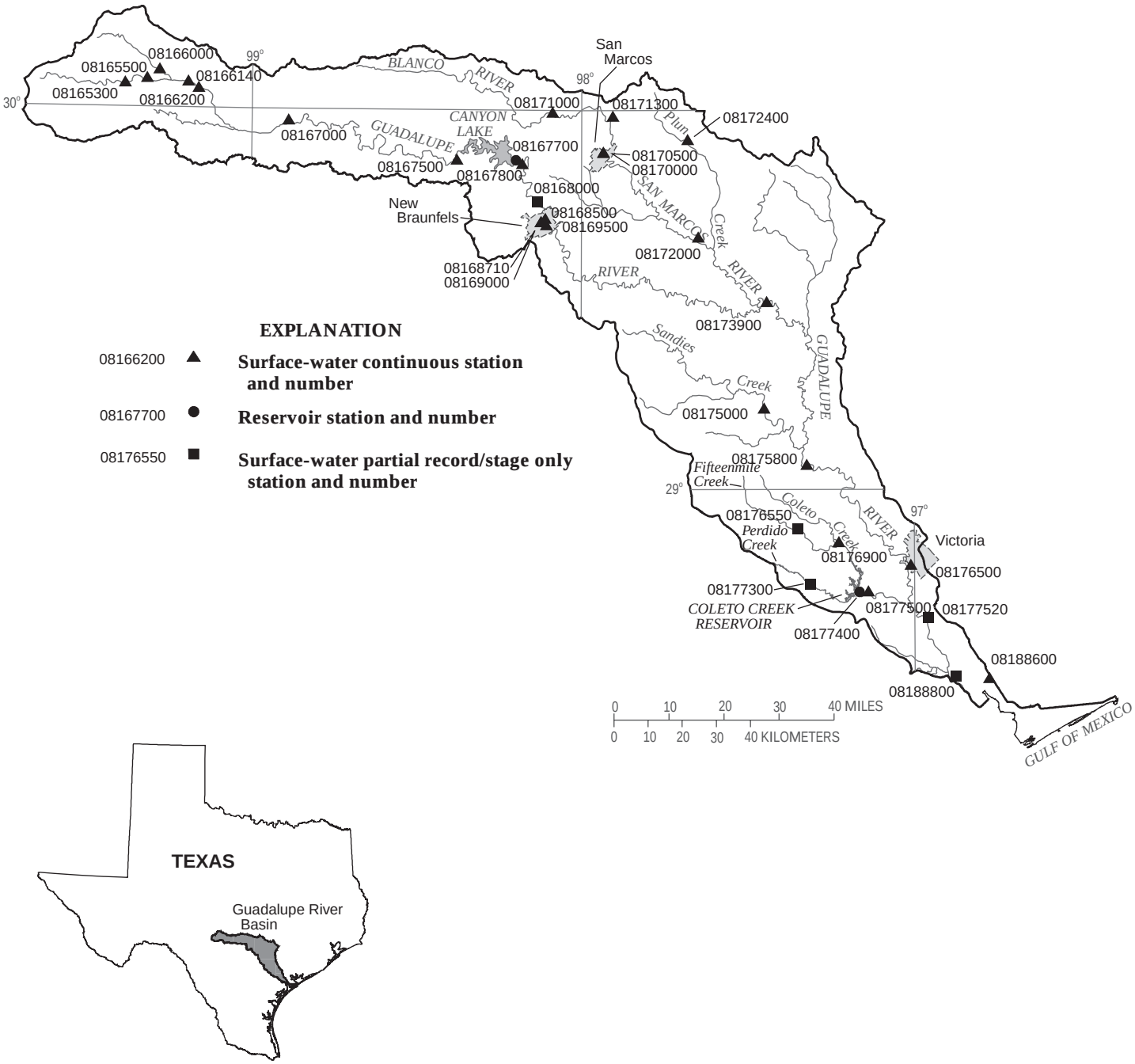


Figure 3.--Map showing location of gaging stations in the Guadalupe River Basin

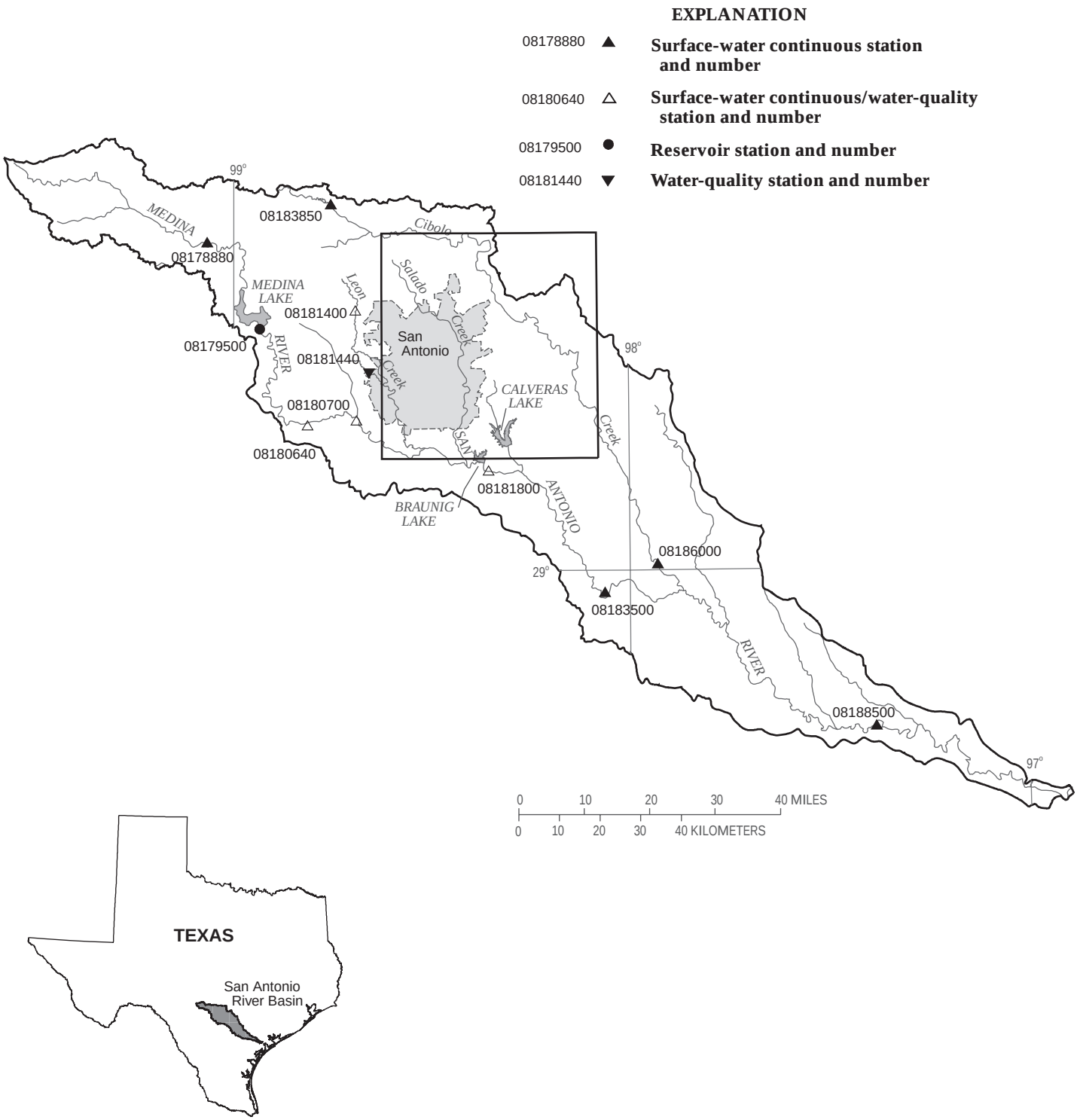
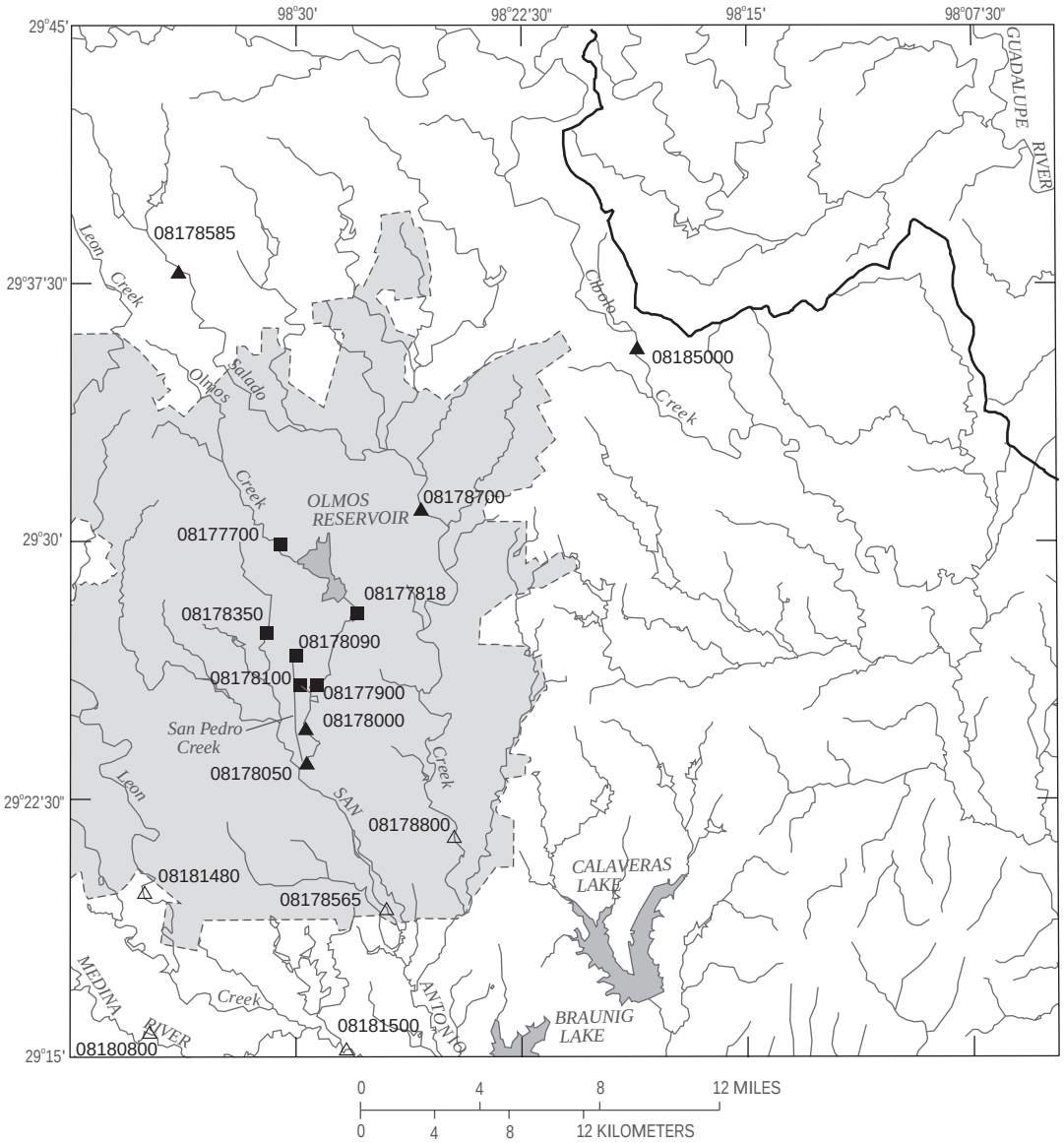


Figure 4.--Map showing location of gaging stations in the San Antonio River Basin



EXPLANATION

08178050	▲	**Surface-water continuous station and number**
08178700	△	**Surface-water continuous/water-quality station and number**
08178000	■	**Surface-water partial record/stage only station and number**
08177700	□	**Surface-water partial record/stage only/water-quality station and number**
08178602	▼	**Water-quality station and number**

Figure 5.--Map showing location of gaging stations in the San Antonio inset of the San Antonio River Basin

08165300 North Fork Guadalupe River near Hunt, TX 30
08165500 Guadalupe River at Hunt, TX 32
08166000 Johnson Creek near Ingram, TX 34
08166140 Guadalupe River above Bear Creek at Kerrville, TX 38
08166200 Guadalupe River at Kerrville, TX 42
08167000 Guadalupe River at Comfort, TX 44
08167500 Guadalupe River near Spring Branch, TX 46
08167700 Canyon Lake near New Braunfels, TX 48
08167800 Guadalupe River at Sattler, Tx 50
08168000 Hueco Springs near New Braunfels, TX 381
08168500 Guadalupe River above Comal River at New Braunfels, TX 52
08168710 Comal Springs at New Braunfels, Tx 54
08169000 Comal River at New Braunfels, TX 56
08169500 Guadalupe River at New Braunfels, TX 58
08170000 San Marcos Springs at San Marcos, TX 60
08170500 San Marcos River at San Marcos, TX 62
08171000 Blanco River at Wimberley, TX 64
08171300 Blanco River near Kyle, Tx 66
08172000 San Marcos River at Luling, TX 68
08172400 Plum Creek at Lockhart, TX 70
08173900 Guadalupe River at Gonzales, TX 72
08175000 Sandies Creek near Westhoff, TX 74
08175800 Guadalupe River at Cuero, TX 76
08176500 Guadalupe River at Victoria, TX 78
08176550 Fifteenmile Creek near Weser, TX 80
08176900 Coleto Creek at Arnold Road Crossing near Schroeder, TX 82
08177300 Perdido Creek at Farm to Market Road 622 near Fannin, TX 84
08177400 Coleto Creek Reservoir near Victoria, TX 86
08177500 Coleto Creek near Victoria, TX 88
08177520 Guadalupe River near Bloomington, TX 90
08177700 Olmos Creek at Dresden Drive, San Antonio, TX 94
08177818 San Antonio Springs at San Antonio, TX 381
08177900 San Antonio River at Navarro Street, San Antonio, TX 383
08178000 San Antonio River at San Antonio, TX 96
08178050 San Antonio River at Mitchell Street, San Antonio, TX 98
08178090 San Pedro Springs at San Antonio, TX 381
08178100 San Pedro Creek at Santa Rosa Street, San Antonio, TX 383
08178350 Martinez Creek at Fredericksburg Road, San Antonio, TX 383
08178565 San Antonio River at Loop 410, San Antonio, TX 100
08178585 Salado Creek at Wilderness Road at San Antonio, TX 108
08178700 Salado Creek (upper station) at San Antonio, TX 110
08178800 Salado Creek (lower station) at San Antonio, TX 112
08178880 Medina River at Bandera, TX 120
08179500 Medina Lake near San Antonio, TX 122
08180640 Medina River at LaCoste, TX 124
08180700 Medina River near Macdona, TX 136
08180800 Medina River near Somerset, TX 142
08181400 Helotes Creek at Helotes, TX 148
08181440 Ingram Road Outfall at Leon Creek Tributary, San Antonio, TX 152
08181480 Leon Creek at Interstate Highway 35 at San Antonio, TX 156
08181500 Medina River at San Antonio, TX 164
08181800 San Antonio river near Elemendorf, TX 172
08183500 San Antonio River near Falls City, TX 184
08183850 Cibolo Creek at Interstate Highway 10 above Boerne, TX 186
08185000 Cibolo Creek at Selma, TX 188
08186000 Cibolo Creek near Falls City, TX 190
08188500 San Antonio River at Goliad, TX 192
08188600 GBRA Calhoun Canal Pump Station near Long Mott, TX 194
08188800 Guadalupe River near Tivoli, TX 196

08165300 NORTH FORK GUADALUPE RIVER NEAR HUNT, TX

LOCATION.--Lat 30°03'50", long 99°23'12", Kerr County, Hydrologic Unit 12100201, on right bank, 1,000 ft upstream from Ranch Road 1340, 1.9 mi downstream from Bear Creek, 3.1 mi west of Hunt, and 3.5 mi upstream from Honey Creek.

DRAINAGE AREA.--169.0 mi^2.

PERIOD OF RECORD.--Aug 1967 to current year. Low-flow records not equivalent prior to Jun 7, 1989, because of undetermined channel flow loss between present and former site 0.58 mi upstream.

REVISED RECORDS.--WRD TX-74-1: 1971(P).

GAGE.--Water-stage recorder. Datum of gage is 1,800.10 ft above sea level. Prior to Jun 7, 1989, at site 0.58 mi upstream at same datum. Satellite telemeter at station.

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

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1900 occurred Jul 1, 1932 (gage height, 37.3 ft, at site 0.58 mi upstream), discharge, 140,000 ft^3/s, by slope-area measurements, combined flow of North Fork Guadalupe River 5 mi upstream and Bear Creek 2 mi upstream from mouth, and adjusted for difference in drainage area.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 500 ft^3/s:

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)

No peak greater than base discharge.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	e28	25	20	23	20	20	19	20	22	e15	12
2	19	e26	26	20	25	19	21	26	22	21	e14	12
3	20	e25	25	20	24	19	20	22	23	21	e13	12
4	20	e23	27	24	24	19	19	19	26	20	e13	12
5	20	e24	28	25	24	18	18	19	26	22	e14	11
6	20	23	27	25	24	19	18	18	24	15	e13	11
7	19	23	28	24	24	19	18	17	22	17	e14	11
8	20	22	23	20	24	20	17	20	21	17	e14	11
9	22	22	23	20	25	21	15	16	22	19	e14	11
10	22	22	22	19	25	20	15	16	28	e18	14	12
11	23	22	23	19	26	19	17	15	30	e17	14	12
12	24	22	26	20	26	18	22	15	27	e17	13	12
13	24	22	25	20	26	17	22	17	25	e16	14	15
14	24	21	24	20	27	18	19	16	23	e16	13	15
15	25	21	24	19	27	19	17	14	22	e17	13	13
16	25	21	23	20	28	19	17	14	21	e17	13	13
17	30	21	23	20	27	18	17	e15	21	e18	14	13
18	31	21	23	20	25	18	15	e14	31	e17	13	12
19	28	21	23	21	20	18	15	23	e28	e17	13	12
20	27	22	22	21	20	18	15	e34	e26	e16	13	12
21	26	22	22	21	20	18	13	e31	e24	e16	12	13
22	26	22	22	23	20	18	13	e30	e23	e17	12	13
23	26	23	22	23	22	19	13	e28	22	e18	12	12
24	25	23	21	22	22	18	14	e26	23	e18	13	13
25	25	23	21	22	21	17	16	e25	26	e17	13	19
26	25	24	21	22	23	17	17	24	25	e16	13	16
27	25	24	20	23	22	16	17	24	23	e15	13	14
28	24	24	20	24	20	15	16	28	23	e15	13	13
29	25	25	20	23	20	16	16	27	23	e14	12	13
30	27	25	19	23	---	20	16	25	22	e14	12	13
31	31	---	19	23	---	19	---	22	---	e14	12	---
TOTAL	742	687	717	666	684	569	508	659	722	534	408	383
MEAN	23.9	22.9	23.1	21.5	23.6	18.4	16.9	21.3	24.1	17.2	13.2	12.8
MAX	31	28	28	25	28	21	22	34	31	22	15	19
MIN	14	21	19	19	20	15	13	14	20	14	12	11
AC-FT	1470	1360	1420	1320	1360	1130	1010	1310	1430	1060	809	760
CFSM	.14	.14	.14	.13	.14	.11	.10	.13	.14	.10	.08	.08
IN.	.16	.15	.16	.15	.15	.13	.11	.15	.16	.12	.09	.08

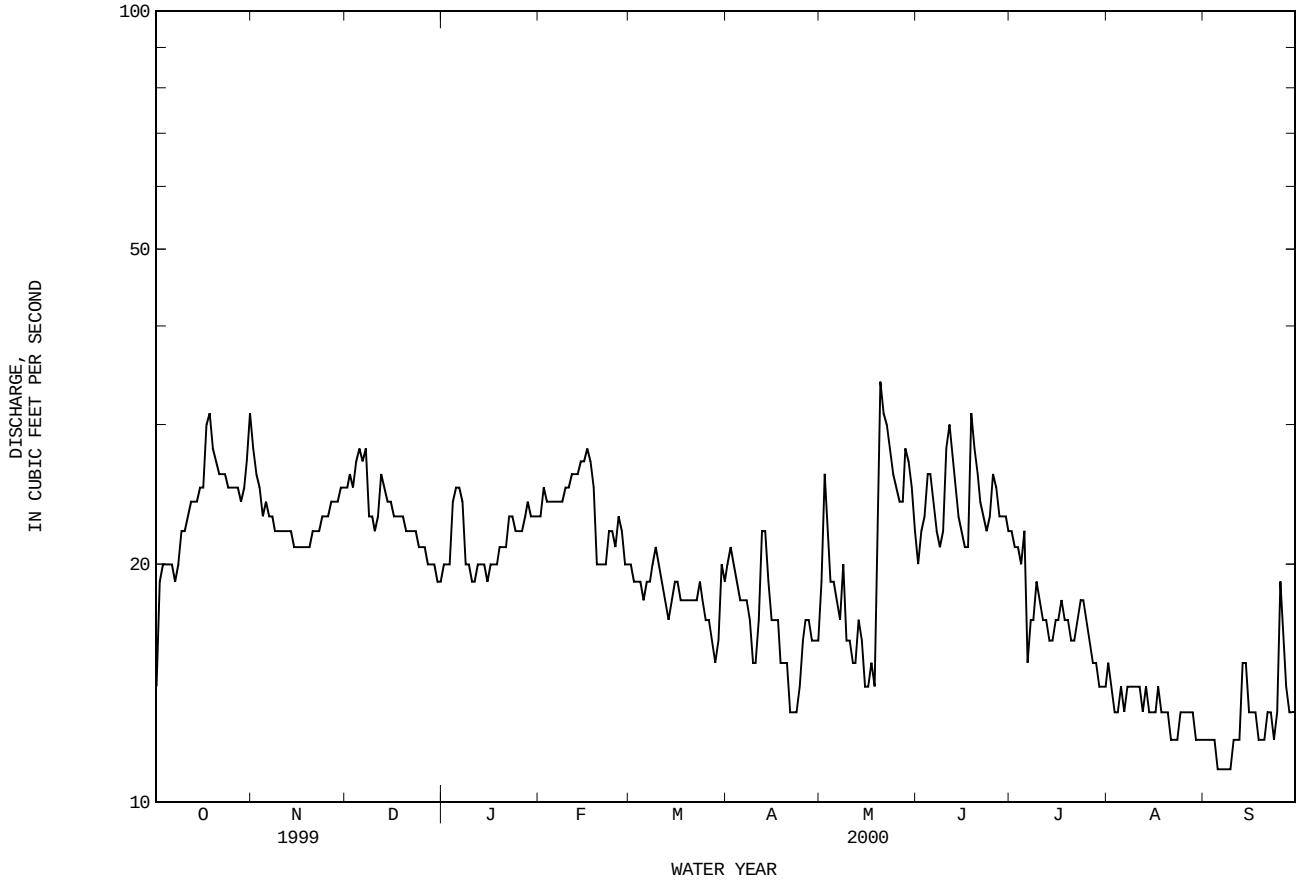
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 2000, BY WATER YEAR (WY)

MEAN	65.2	31.2	41.9	31.2	30.1	29.3	39.6	42.3	43.6	39.5	53.0	38.6
MAX	529	54.4	296	113	108	144	351	149	278	465	452	198
(WY)	1986	1975	1985	1968	1992	1992	1977	1990	1981	1987	1978	1986
MIN	12.5	14.8	16.2	15.2	13.3	13.6	13.6	11.8	10.8	11.0	10.6	10.8
(WY)	1984	1984	1990	1990	1984	1971	1971	1971	1971	1971	1984	1984

08165300 NORTH FORK GUADALUPE RIVER NEAR HUNT, TX--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1967 - 2000	
ANNUAL TOTAL	9379		7279			
ANNUAL MEAN	25.7		19.9		40.7	
HIGHEST ANNUAL MEAN					103	1987
LOWEST ANNUAL MEAN					13.4	1984
HIGHEST DAILY MEAN	296	Jun 20	34	May 20	14900	Oct 19 1985
LOWEST DAILY MEAN	14	Oct 1	11	Sep 5	6.6	May 30 1969
ANNUAL SEVEN-DAY MINIMUM	17	Jun 2	11	Sep 3	8.3	Jun 7 1971
INSTANTANEOUS PEAK FLOW			53	May 19	c57000	Oct 19 1985
INSTANTANEOUS PEAK STAGE			2.32	May 19	a29.81	Oct 19 1985
ANNUAL RUNOFF (AC-FT)	18600		14440		29500	
ANNUAL RUNOFF (CFSM)	.15		.12		.24	
ANNUAL RUNOFF (INCHES)	2.06		1.60		3.27	
10 PERCENT EXCEEDS	33		26		47	
50 PERCENT EXCEEDS	23		20		24	
90 PERCENT EXCEEDS	19		13		15	

e Estimated
c From rating curve extended above indirect measurement of 39,000 ft^3/s.
a From floodmark.



08165500 GUADALUPE RIVER AT HUNT, TX

LOCATION.--Lat 30°04'11", long 99°19'17", Kerr County, Hydrologic Unit 12100201, on left bank, 56 ft upstream and 252 ft to left of left end of bridge on State Highway 39, 0.6 mi downstream from confluence of North and South Forks, 0.8 mi east of Hunt, and at mile 430.9.

DRAINAGE AREA.--288 mi^2.

PERIOD OF RECORD.--Oct 1941 to Sep 1949 (discharge not computed above 600 ft^3/s), Apr 1965 to current year. Occasional discharge measurements made 1950-64.

REVISED RECORDS.--WSP 2123: Drainage area.

GAGE.--Water-stage recorder and crest-stage gages. Datum of gage is 1,722.70 ft above sea level. Satellite telemeter at station.

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

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1900, 36.6 ft Jul 2, 1932, from information by local resident (discharge, 206,000 ft^3/s, determined by slope-area measurement 4.5 mi downstream from gage).

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

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)

No peak greater than base discharge.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

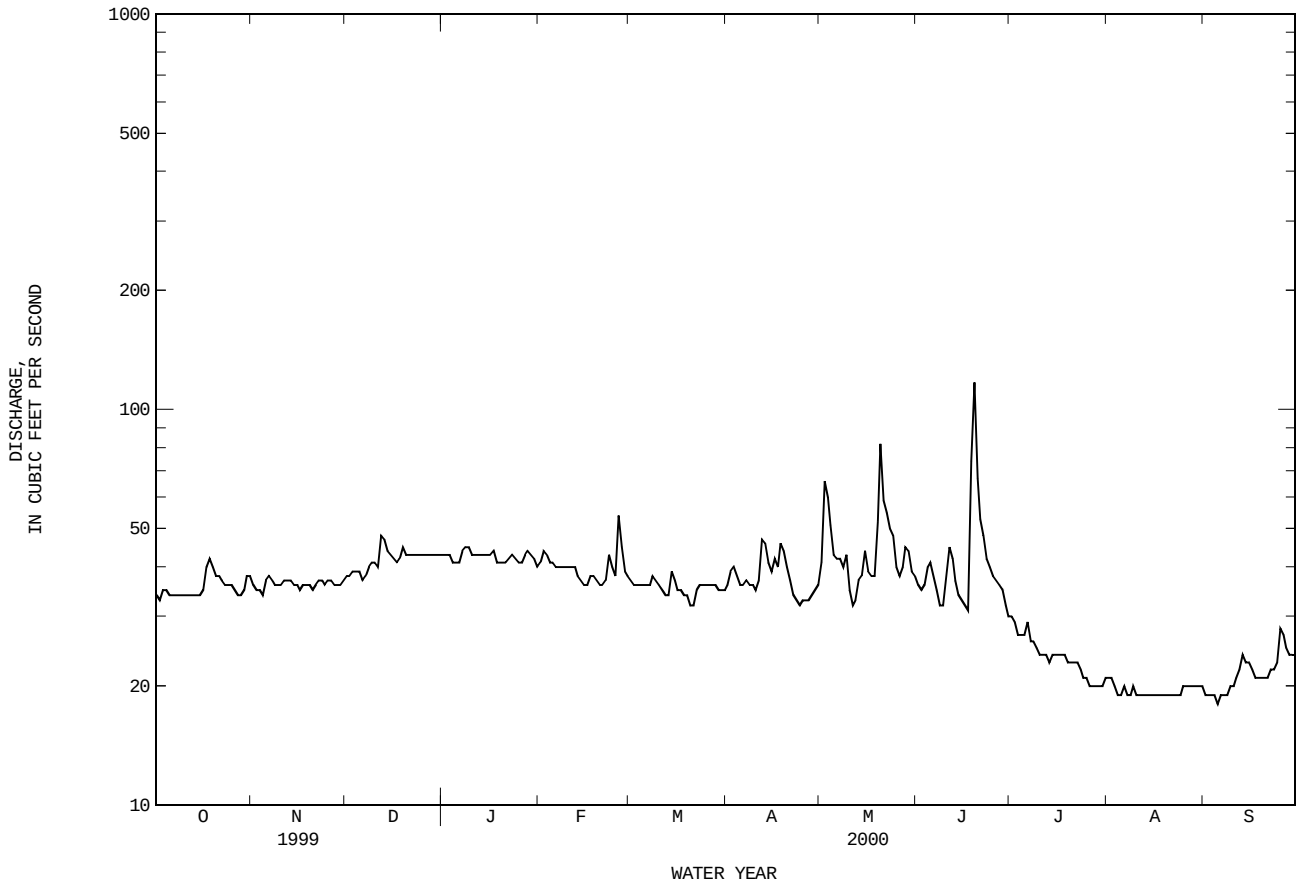
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	34	36	38	43	41	37	36	41	36	30	21	19
2	33	35	38	43	44	36	39	66	35	29	21	19
3	35	35	39	43	43	36	40	60	36	27	20	19
4	35	34	39	41	41	36	38	51	40	27	19	19
5	34	37	39	41	41	36	36	43	41	27	19	18
6	34	38	37	41	40	36	36	42	38	29	20	19
7	34	37	38	44	40	36	37	42	35	26	19	19
8	34	36	40	45	40	38	36	40	32	26	19	19
9	34	36	41	45	40	37	36	43	32	25	20	20
10	34	36	41	43	40	36	35	35	38	24	19	20
11	34	37	40	43	40	35	37	32	45	24	19	21
12	34	37	48	43	40	34	47	33	42	24	19	22
13	34	37	47	43	38	34	46	37	37	23	19	24
14	34	36	44	43	37	39	41	38	34	24	19	23
15	34	36	43	43	36	37	39	44	33	24	19	23
16	35	35	42	43	36	35	42	39	32	24	19	22
17	40	36	41	44	38	35	40	38	31	24	19	21
18	42	36	42	41	38	34	46	38	74	24	19	21
19	40	36	45	41	37	34	44	52	117	23	19	21
20	38	35	43	41	36	32	40	82	67	23	19	21
21	38	36	43	41	36	32	37	59	53	23	19	21
22	37	37	43	42	37	35	34	55	48	23	19	22
23	36	37	43	43	43	36	33	50	42	22	19	22
24	36	36	43	42	40	36	32	48	40	21	19	23
25	36	37	43	41	38	36	33	40	38	21	20	28
26	35	37	43	41	54	36	33	38	37	20	20	27
27	34	36	43	43	45	36	33	40	36	20	20	25
28	34	36	43	44	39	36	34	45	35	20	20	24
29	35	36	43	43	38	35	35	44	32	20	20	24
30	38	37	43	42	---	35	36	39	30	20	20	24
31	38	---	43	40	---	35	---	38	---	21	20	---
TOTAL	1103	1086	1298	1316	1156	1101	1131	1392	1266	738	603	650
MEAN	35.6	36.2	41.9	42.5	39.9	35.5	37.7	44.9	42.2	23.8	19.5	21.7
MAX	42	38	48	45	54	39	47	82	117	30	21	28
MIN	33	34	37	40	36	32	32	32	30	20	19	18
AC-FT	2190	2150	2570	2610	2290	2180	2240	2760	2510	1460	1200	1290
CFSM	.12	.13	.15	.15	.14	.12	.13	.16	.15	.08	.07	.08
IN.	.14	.14	.17	.17	.15	.14	.15	.18	.16	.10	.08	.08

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 2000, BY WATER YEAR (WY)

MEAN	102	60.8	71.6	60.4	61.7	62.6	75.2	85.5	82.9	77.6	107	69.8
MAX	677	114	322	151	213	257	570	286	551	956	992	312
(WY)	1986	1975	1985	1968	1992	1992	1977	1994	1987	1987	1978	1980
MIN	33.4	34.0	35.3	31.1	30.4	28.8	28.6	21.1	17.0	14.9	14.6	17.1
(WY)	1966	1966	1966	1966	1966	1966	1984	1984	1984	1984	1984	1984

08165500 GUADALUPE RIVER AT HUNT, TX--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1965 - 2000	
ANNUAL TOTAL	17759		12840			
ANNUAL MEAN	48.7		35.1		77.0	
HIGHEST ANNUAL MEAN					223	1987
LOWEST ANNUAL MEAN					27.6	1984
HIGHEST DAILY MEAN	657	Jun 20	117	Jun 19	22200	Jul 17 1987
LOWEST DAILY MEAN	33	Sep 21	18	Sep 5	8.2	Jul 17 1984
ANNUAL SEVEN-DAY MINIMUM	34	Sep 19	19	Sep 1	9.4	Jul 12 1984
INSTANTANEOUS PEAK FLOW			197	Jun 18	108000	Jul 17 1987
INSTANTANEOUS PEAK STAGE			8.44	Jun 18	28.38	Jul 17 1987
ANNUAL RUNOFF (AC-FT)	35220		25470		55770	
ANNUAL RUNOFF (CFSM)	.17		.12		.27	
ANNUAL RUNOFF (INCHES)	2.29		1.66		3.63	
10 PERCENT EXCEEDS	58		43		95	
50 PERCENT EXCEEDS	44		36		48	
90 PERCENT EXCEEDS	35		20		28	



08166000 JOHNSON CREEK NEAR INGRAM, TX

LOCATION.--Lat 30°06′00", long 99°16′58", Kerr County, Hydrologic Unit 12100201, on right bank 1.6 mi upstream from Henderson Branch, 3.4 mi northwest of Ingram, 3.8 mi upstream from mouth, and 9.2 mi northwest of Kerrville.

DRAINAGE AREA.--114 mi^2.

PERIOD OF RECORD.--Sep 1941 to Nov 1959, Oct 1961 to Sep 1993, Apr 1999 to current year.
Water quality records.-- Chemical data: Jun 1952 to Jul 1966.

REVISED RECORDS.--WSP 1058: 1942-45. WSP 2123: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,721.30 ft above sea level. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. There are numerous small diversions above station for irrigation. No known regulation. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water-quality data.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1852, 35 ft Jul 2, 1932, from information by local resident: discharge 138,000 ft^3/s, by slope-area measurement at point 0.5 mi downstream from State fish hatchery and 6 or 7 mi upstream from gage. Flood of Jun 14, 1935 reached a stage of 31 or 32 ft, from information by local resident.

PEAK DISCHARGES FOR WATER YEAR 1999.--Peak discharges greater than base discharge of 500 ft^3/s:

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)

No peak greater than base discharge.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 500 ft^3/s:

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)

No peak greater than base discharge.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	28	36	35	28	25
2	---	---	---	---	---	---	---	28	35	35	28	25
3	---	---	---	---	---	---	---	29	34	36	27	24
4	---	---	---	---	---	---	---	28	32	36	28	25
5	---	---	---	---	---	---	---	26	32	35	27	24
6	---	---	---	---	---	---	---	26	31	34	27	25
7	---	---	---	---	---	---	---	26	31	35	26	28
8	---	---	---	---	---	---	---	26	29	36	27	25
9	---	---	---	---	---	---	---	26	29	34	27	24
10	---	---	---	---	---	---	---	37	30	34	27	25
11	---	---	---	---	---	---	---	34	29	34	26	24
12	---	---	---	---	---	---	---	211	31	34	26	24
13	---	---	---	---	---	---	---	47	106	33	25	23
14	---	---	---	---	---	---	---	42	31	32	25	24
15	---	---	---	---	---	---	---	41	28	30	25	25
16	---	---	---	---	---	---	---	39	28	30	25	24
17	---	---	---	---	---	---	---	37	25	30	26	23
18	---	---	---	---	---	---	---	36	26	30	26	22
19	---	---	---	---	---	---	27	36	26	30	25	23
20	---	---	---	---	---	---	27	40	132	29	25	23
21	---	---	---	---	---	---	27	51	145	29	25	22
22	---	---	---	---	---	---	27	49	51	30	26	22
23	---	---	---	---	---	---	27	47	44	29	26	22
24	---	---	---	---	---	---	27	45	42	28	28	23
25	---	---	---	---	---	---	31	45	40	28	27	24
26	---	---	---	---	---	---	36	44	43	29	25	25
27	---	---	---	---	---	---	32	44	40	29	25	24
28	---	---	---	---	---	---	29	45	39	29	26	23
29	---	---	---	---	---	---	28	50	38	31	26	22
30	---	---	---	---	---	---	28	41	37	28	26	22
31	---	---	---	---	---	---	---	37	---	28	25	---
TOTAL	---	---	---	---	---	---	---	1341	1300	980	811	714
MEAN	---	---	---	---	---	---	---	43.3	43.3	31.6	26.2	23.8
MAX	---	---	---	---	---	---	---	211	145	36	28	28
MIN	---	---	---	---	---	---	---	26	25	28	25	22
AC-FT	---	---	---	---	---	---	---	2660	2580	1940	1610	1420
CFSM	---	---	---	---	---	---	---	.38	.38	.28	.23	.21
IN.	---	---	---	---	---	---	---	.44	.42	.32	.26	.23

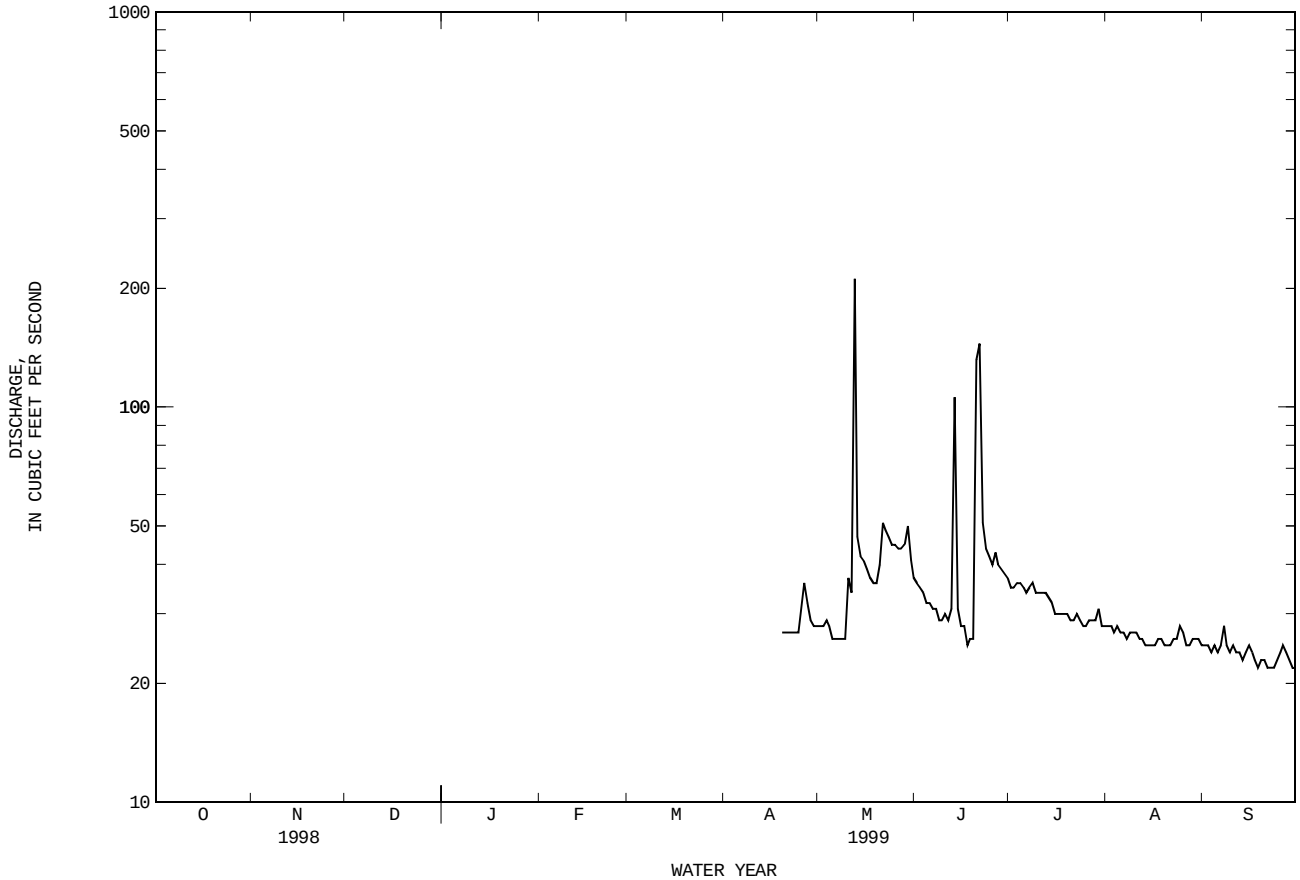
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1942 - 1999h, BY WATER YEAR (WY)

MEAN	34.2	19.0	22.2	20.6	20.8	19.5	24.0	25.6	27.0	18.7	36.0	20.7
MAX	361	51.4	178	97.8	114	108	195	101	165	188	726	71.0
(WY)	1986	1975	1985	1968	1992	1992	1977	1977	1987	1987	1978	1974
MIN	4.80	5.17	5.44	5.31	6.05	5.27	4.20	5.54	2.84	1.16	1.13	3.02
(WY)	1952	1957	1955	1956	1952	1956	1954	1953	1956	1954	1954	1954

08166000 JOHNSON CREEK NEAR INGRAM, TX--Continued

SUMMARY STATISTICS	WATER YEARS 1942 - 1999h		
ANNUAL MEAN	23.5		
HIGHEST ANNUAL MEAN	79.0		1978
LOWEST ANNUAL MEAN	4.78		1954
HIGHEST DAILY MEAN	17200	Aug 3	1978
LOWEST DAILY MEAN	.40	Jul 26	1956
ANNUAL SEVEN-DAY MINIMUM	.59	Jul 23	1956
INSTANTANEOUS PEAK FLOW	95900	Oct 4	1959
INSTANTANEOUS PEAK STAGE	24.25	Oct 4	1959
INSTANTANEOUS LOW FLOW	.40	Jul 26	1956
ANNUAL RUNOFF (AC-FT)	17060		
ANNUAL RUNOFF (CFSM)	.21		
ANNUAL RUNOFF (INCHES)	2.81		
10 PERCENT EXCEEDS	37		
50 PERCENT EXCEEDS	14		
90 PERCENT EXCEEDS	5.8		

h See PERIOD OF RECORD paragraph.



08166000 JOHNSON CREEK NEAR INGRAM, TX--Continued

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	24	21	23	22	17	22	23	13	16	16	13
2	23	24	23	23	23	15	21	48	13	15	17	12
3	23	24	22	23	23	14	19	39	13	16	14	11
4	23	24	23	23	22	14	18	30	12	15	12	11
5	23	24	22	23	22	14	22	27	12	13	12	11
6	22	23	22	23	21	16	20	24	12	13	12	10
7	21	23	22	24	19	17	17	23	11	14	11	10
8	22	23	23	25	19	30	14	21	10	13	12	10
9	22	23	23	24	19	25	13	19	13	12	13	11
10	23	23	22	24	18	22	14	19	19	12	11	11
11	23	23	23	23	17	20	18	18	22	11	12	10
12	23	23	25	22	17	18	27	17	19	11	12	14
13	22	23	23	22	17	19	21	18	18	11	11	27
14	22	22	22	22	17	19	17	15	17	11	9.2	19
15	23	22	22	23	18	19	16	15	16	15	9.7	15
16	24	21	22	22	18	18	18	15	16	14	11	13
17	29	22	22	22	19	18	17	14	14	12	10	12
18	26	21	23	23	18	18	17	13	30	11	9.5	11
19	25	22	23	22	18	19	16	34	41	10	11	12
20	25	21	23	21	18	17	19	29	29	9.7	13	12
21	24	21	25	23	18	18	16	21	25	9.1	14	11
22	23	22	25	22	20	20	15	18	23	9.5	14	12
23	24	22	25	22	25	20	15	18	21	15	15	12
24	24	21	24	22	21	19	14	18	20	18	14	16
25	25	21	24	21	19	19	14	17	20	16	14	30
26	26	21	24	21	25	18	13	15	20	14	16	19
27	25	22	24	22	20	19	13	16	18	12	14	16
28	24	22	24	22	18	22	13	24	17	10	14	13
29	24	22	23	21	18	19	14	18	16	11	14	11
30	26	21	23	21	---	19	15	16	16	11	15	12
31	25	---	23	21	---	18	---	14	---	12	13	---
TOTAL	737	670	715	695	569	580	508	656	546	392.3	395.4	407
MEAN	23.8	22.3	23.1	22.4	19.6	18.7	16.9	21.2	18.2	12.7	12.8	13.6
MAX	29	24	25	25	25	30	27	48	41	18	17	30
MIN	21	21	21	21	17	14	13	13	10	9.1	9.2	10
AC-FT	1460	1330	1420	1380	1130	1150	1010	1300	1080	778	784	807
CFSM	.21	.20	.20	.20	.17	.16	.15	.19	.16	.11	.11	.12
IN.	.24	.22	.23	.23	.19	.19	.17	.21	.18	.13	.13	.13

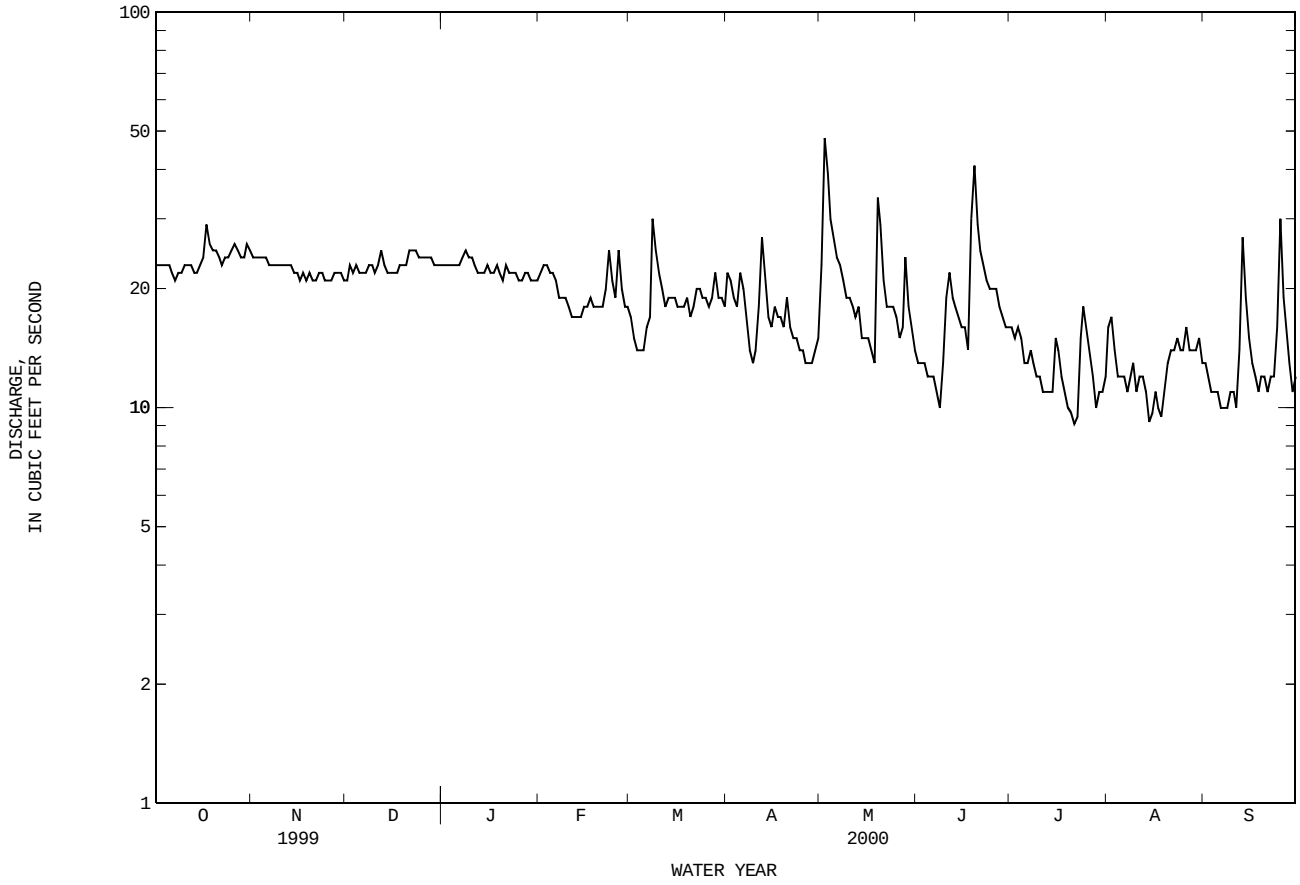
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1942 - 2000h, BY WATER YEAR (WY)

MEAN	34.0	19.0	22.2	20.6	20.8	19.5	23.8	25.5	26.9	18.5	35.6	20.6
MAX	361	51.4	178	97.8	114	108	195	101	165	188	726	71.0
(WY)	1986	1975	1985	1968	1992	1992	1977	1977	1987	1987	1978	1974
MIN	4.80	5.17	5.44	5.31	6.05	5.27	4.20	5.54	2.84	1.16	1.13	3.02
(WY)	1952	1957	1955	1956	1952	1956	1954	1953	1956	1954	1954	1954

SUMMARY STATISTICS	FOR 2000 WATER YEAR		WATER YEARS 1942 - 2000h		
ANNUAL TOTAL	6870.7				
ANNUAL MEAN	18.8		23.5		
HIGHEST ANNUAL MEAN			79.0		1978
LOWEST ANNUAL MEAN			4.78		1954
HIGHEST DAILY MEAN	48	May 2	17200	Aug 3	1978
LOWEST DAILY MEAN	9.1	Jul 21	.40	Jul 26	1956
ANNUAL SEVEN-DAY MINIMUM	10	Aug 13	.59	Jul 23	1956
INSTANTANEOUS PEAK FLOW	62	May 2	95900	Oct 4	1959
INSTANTANEOUS PEAK STAGE	.86	May 2	24.25	Oct 4	1959
INSTANTANEOUS LOW FLOW			.40	Jul 26	1956
ANNUAL RUNOFF (AC-FT)	13630		16990		
ANNUAL RUNOFF (CFSM)	.16		.21		
ANNUAL RUNOFF (INCHES)	2.24		2.79		
10 PERCENT EXCEEDS	24		37		
50 PERCENT EXCEEDS	19		14		
90 PERCENT EXCEEDS	12		5.9		

h See PERIOD OF RECORD paragraph.

08166000 JOHNSON CREEK NEAR INGRAM, TX--Continued



08166140 GUADALUPE RIVER ABOVE BEAR CREEK AT KERRVILLE, TX

LOCATION.--Lat 30°04'10", long 99°11'42", Kerr County, Hydrologic Unit 12100201, on left bank 600 ft downstream from Goat Creek, 900 ft upstream from Bear Creek and Bear Creek Crossing, and 2.4 mi east of intersection of State Highway 27 and 39 in Ingram.

DRAINAGE AREA.--494 mi^2.

PERIOD OF RECORD.--Apr 1978 to Jun 1986 (daily mean discharges when the instantaneous maximum discharge is less than 400 ft^3/s), Dec 1994 to Mar 1999 (periodic discharge measurements only), Apr 1999 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,623.20 ft above sea level.

REMARKS.--No estimated daily discharges. Records good. Numerous diversions for irrigation above station, amounts unknown.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1900, 34.1 ft Jul 2, 1932, from information by local resident.

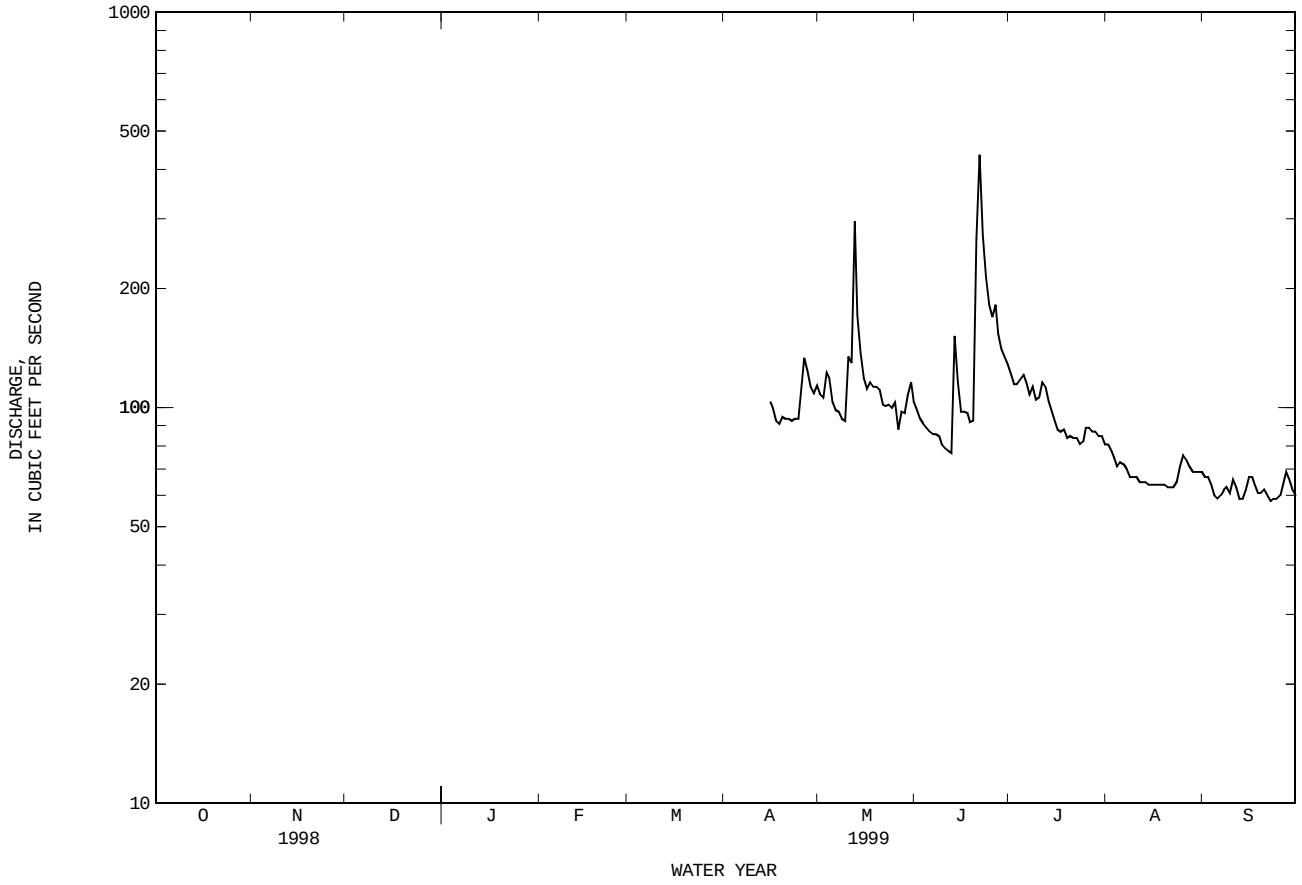
EXTREMES FOR WATER 1999.--Maximum discharge, 814 ft^3/s, Jun 20, gage height, 6.38 ft; minimum discharge, 57 ft^3/s, Sep 5, 22, gage height, 2.89 ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 228 ft^3/s, Jun 19, gage height, 3.90 ft; minimum discharge, 8.5 ft^3/s, Jan 7, gage height, 2.30 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	108	99	122	81	67
2	---	---	---	---	---	---	---	106	94	115	78	67
3	---	---	---	---	---	---	---	123	91	115	75	64
4	---	---	---	---	---	---	---	119	89	118	71	60
5	---	---	---	---	---	---	---	104	87	121	73	59
6	---	---	---	---	---	---	---	99	86	116	72	60
7	---	---	---	---	---	---	---	98	86	108	70	62
8	---	---	---	---	---	---	---	94	85	113	67	63
9	---	---	---	---	---	---	---	93	81	105	67	61
10	---	---	---	---	---	---	---	135	79	106	67	66
11	---	---	---	---	---	---	---	130	78	116	65	63
12	---	---	---	---	---	---	---	296	77	113	65	59
13	---	---	---	---	---	---	---	171	152	104	65	59
14	---	---	---	---	---	---	---	138	116	98	64	62
15	---	---	---	---	---	---	104	119	98	92	64	67
16	---	---	---	---	---	---	100	112	98	88	64	67
17	---	---	---	---	---	---	93	116	97	87	64	64
18	---	---	---	---	---	---	91	113	92	88	64	61
19	---	---	---	---	---	---	95	113	93	84	64	61
20	---	---	---	---	---	---	94	111	267	85	63	62
21	---	---	---	---	---	---	94	102	436	84	63	60
22	---	---	---	---	---	---	93	101	274	84	63	58
23	---	---	---	---	---	---	94	102	214	81	65	59
24	---	---	---	---	---	---	94	100	182	82	71	59
25	---	---	---	---	---	---	108	103	170	89	76	60
26	---	---	---	---	---	---	134	88	182	89	74	64
27	---	---	---	---	---	---	124	98	154	87	71	69
28	---	---	---	---	---	---	113	97	141	87	69	66
29	---	---	---	---	---	---	109	108	135	85	69	62
30	---	---	---	---	---	---	114	116	129	85	69	60
31	---	---	---	---	---	---	---	104	---	81	69	---
TOTAL	---	---	---	---	---	---	---	3617	4062	3028	2122	1871
MEAN	---	---	---	---	---	---	---	117	135	97.7	68.5	62.4
MAX	---	---	---	---	---	---	---	296	436	122	81	69
MIN	---	---	---	---	---	---	---	88	77	81	63	58
AC-FT	---	---	---	---	---	---	---	7170	8060	6010	4210	3710

08166140 GUADALUPE RIVER ABOVE BEAR CREEK AT KERRVILLE, TX--Continued

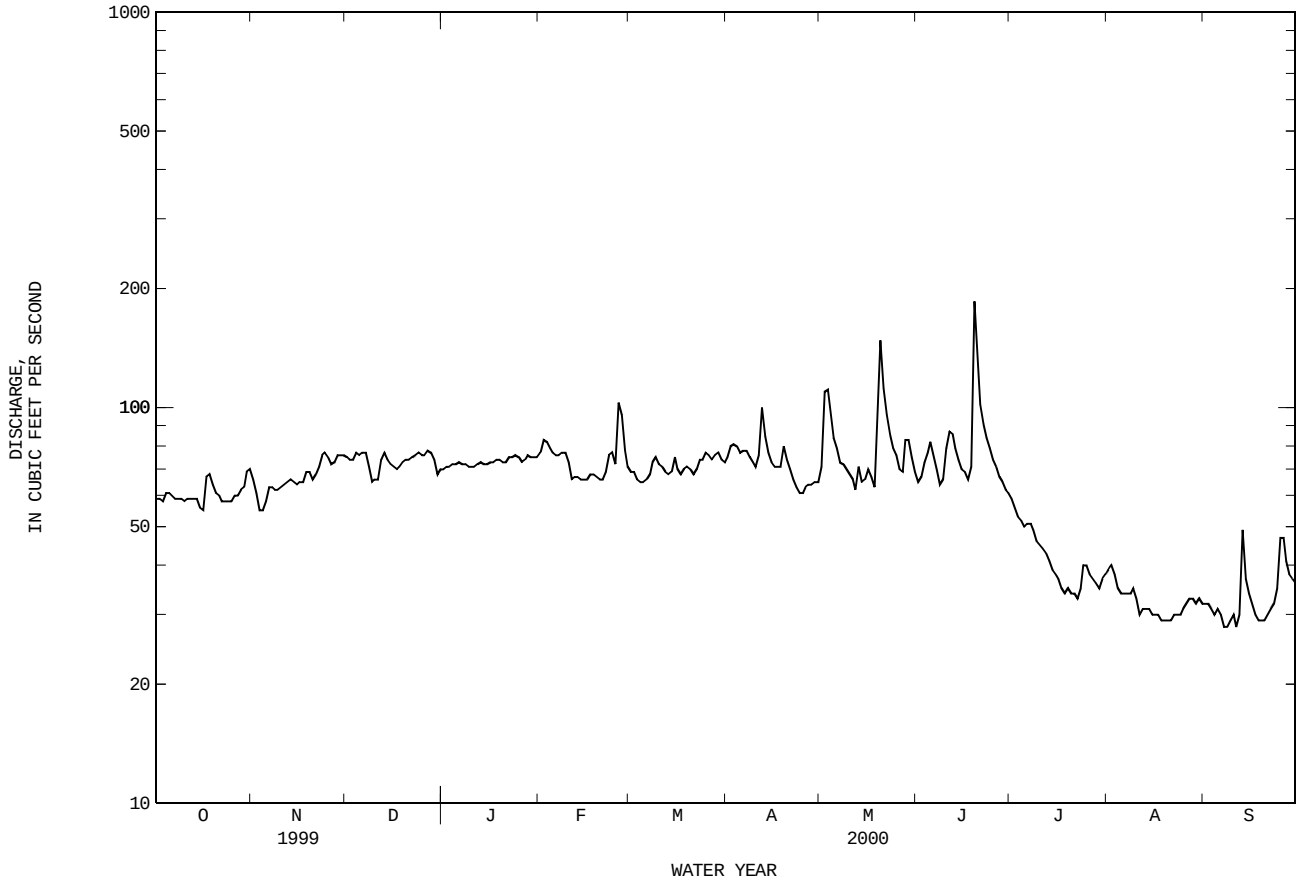


08166140 GUADALUPE RIVER ABOVE BEAR CREEK AT KERRVILLE, TX--Continued

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	59	66	75	70	77	69	75	71	65	59	39	32
2	59	61	74	71	83	69	80	110	67	56	40	32
3	58	55	74	71	82	66	81	111	73	53	38	31
4	61	55	77	72	79	65	80	98	77	52	35	30
5	61	58	76	72	77	65	77	84	82	50	34	31
6	60	63	77	73	76	66	78	79	76	51	34	30
7	59	63	77	72	76	68	78	73	70	51	34	28
8	59	62	71	72	77	73	75	72	64	49	34	28
9	59	62	65	71	77	75	73	70	66	46	35	29
10	58	63	66	71	73	72	71	68	79	45	33	30
11	59	64	66	71	66	71	76	66	87	44	30	28
12	59	65	74	72	67	69	100	62	86	43	31	30
13	59	66	77	73	67	68	85	71	79	41	31	49
14	59	65	74	72	66	69	77	65	74	39	31	37
15	56	64	72	72	66	75	73	66	70	38	30	34
16	55	65	71	73	66	70	71	70	69	37	30	32
17	67	65	70	73	68	68	71	67	66	35	30	30
18	68	69	71	74	68	70	71	63	71	34	29	29
19	64	69	73	74	67	71	80	95	186	35	29	29
20	61	66	74	73	66	70	74	148	129	34	29	29
21	60	68	74	73	66	68	70	112	102	34	29	30
22	58	71	75	75	69	70	66	96	91	33	30	31
23	58	76	76	75	76	74	63	86	84	35	30	32
24	58	77	77	76	77	74	61	79	79	40	30	35
25	58	75	76	75	72	77	61	76	74	40	31	47
26	60	72	76	73	103	76	63	70	71	38	32	47
27	60	73	78	74	96	74	64	69	67	37	33	41
28	62	76	77	76	78	76	64	83	65	36	33	38
29	63	76	74	75	71	77	65	83	62	35	32	37
30	69	76	68	75	---	74	65	75	61	37	33	36
31	70	---	70	75	---	73	---	69	---	38	32	---
TOTAL	1876	2006	2275	2264	2152	2202	2188	2507	2392	1295	1001	1002
MEAN	60.5	66.9	73.4	73.0	74.2	71.0	72.9	80.9	79.7	41.8	32.3	33.4
MAX	70	77	78	76	103	77	100	148	186	59	40	49
MIN	55	55	65	70	66	65	61	62	61	33	29	28
AC-FT	3720	3980	4510	4490	4270	4370	4340	4970	4740	2570	1990	1990

08166140 GUADALUPE RIVER ABOVE BEAR CREEK AT KERRVILLE, TX--Continued



08166200 GUADALUPE RIVER AT KERRVILLE, TX

LOCATION.--Lat 30°03'11", long 99°09'47", Kerr County, Hydrologic Unit 12100201, on left bank 300 ft below left end of Kerrville Dam, 1.0 mi upstream from mouth of Town Creek, and 1.4 mi upstream from State Highway 16 on Guadalupe Street at Guadalupe Park in Kerrville.

DRAINAGE AREA.--510 mi^2.

PERIOD OF RECORD.--Jul 1986 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,601.00 ft above sea level. Prior to Apr 4, 1989, at site 300 ft upstream, and on opposite bank at datum 1.0 ft lower. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. Since installation of gage in 1986, at least 10% of contributing drainage area has been regulated by Kerrville Dam (capacity, 2,499 acre-ft). Numerous diversions for irrigation above station, amounts unknown.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum estimated discharge, 196,000 ft^3/s Jul 2, 1932 (estimated gage height, 39 ft).

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

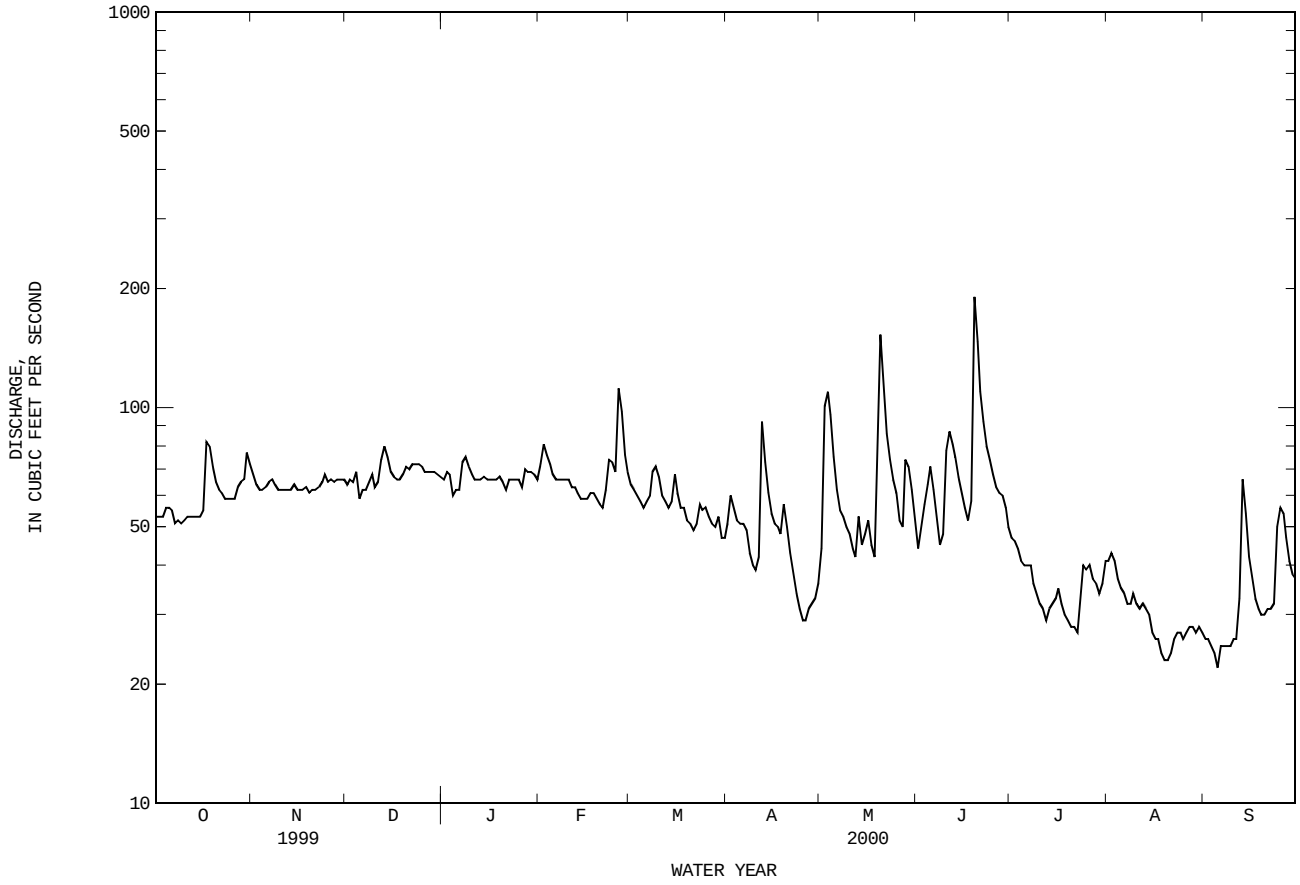
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	53	68	64	66	72	64	51	44	44	47	41	26
2	53	64	66	69	81	62	60	101	50	46	43	26
3	53	62	65	68	76	60	56	110	57	44	41	25
4	56	62	69	60	72	58	52	96	64	41	37	24
5	56	63	59	62	68	56	51	75	71	40	35	22
6	55	65	62	62	66	58	51	62	62	40	34	25
7	51	66	62	73	66	60	49	55	53	40	32	25
8	52	64	65	75	66	69	43	53	45	36	32	25
9	51	62	68	71	66	71	40	50	48	34	34	25
10	52	62	63	68	66	67	39	48	78	32	32	26
11	53	62	65	66	63	60	42	44	87	31	31	26
12	53	62	74	66	63	58	92	42	81	29	32	33
13	53	62	80	66	61	56	73	53	75	31	31	66
14	53	64	75	67	59	58	61	45	67	32	30	54
15	53	62	69	66	59	68	54	48	61	33	27	42
16	55	62	67	66	59	61	51	52	56	35	26	37
17	82	62	66	66	61	56	50	45	52	32	26	33
18	80	63	66	66	61	56	48	42	58	30	24	31
19	71	61	68	67	59	52	57	94	191	29	23	30
20	65	62	71	65	57	51	50	153	147	28	23	30
21	62	62	70	62	56	49	43	111	110	28	24	31
22	61	63	72	66	62	51	38	86	92	27	26	31
23	59	65	72	66	74	57	34	74	80	33	27	32
24	59	68	72	66	73	55	31	66	74	40	27	50
25	59	65	71	66	69	56	29	61	68	39	26	56
26	59	66	69	63	112	53	29	52	63	40	27	54
27	63	65	69	70	98	51	31	50	61	37	28	47
28	65	66	69	69	76	50	32	74	60	36	28	41
29	66	66	69	69	69	53	33	71	56	34	27	38
30	77	66	68	68	---	47	36	62	50	36	28	37
31	72	---	67	66	---	47	---	52	---	41	27	---
TOTAL	1852	1912	2112	2066	1990	1770	1406	2071	2161	1101	929	1048
MEAN	59.7	63.7	68.1	66.6	68.6	57.1	46.9	66.8	72.0	35.5	30.0	34.9
MAX	82	68	80	75	112	71	92	153	191	47	43	66
MIN	51	61	59	60	56	47	29	42	44	27	23	22
AC-FT	3670	3790	4190	4100	3950	3510	2790	4110	4290	2180	1840	2080
CFSM	.12	.12	.13	.13	.13	.11	.09	.13	.14	.07	.06	.07
IN.	.14	.14	.15	.15	.15	.13	.10	.15	.16	.08	.07	.08

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1986 - 2000, BY WATER YEAR (WY)

MEAN	130	110	143	122	151	158	124	169	223	215	108	112
MAX	442	180	572	282	555	547	329	313	1088	1572	281	256
(WY)	1997	1987	1992	1992	1992	1992	1992	1994	1987	1987	1987	1986
MIN	59.7	63.7	64.1	56.6	59.4	57.1	46.9	55.6	40.1	27.3	30.0	34.9
(WY)	2000	2000	1990	1996	1996	2000	2000	1996	1996	1996	2000	2000

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1986 - 2000	
ANNUAL TOTAL	35005		20418			
ANNUAL MEAN	95.9		55.8		148	
HIGHEST ANNUAL MEAN					399	1987
LOWEST ANNUAL MEAN					55.8	2000
HIGHEST DAILY MEAN	972	Jun 21	191	Jun 19	36100	Jul 17 1987
LOWEST DAILY MEAN	51	Sep 2	22	Sep 5	17	Aug 7 1996
ANNUAL SEVEN-DAY MINIMUM	52	Oct 7	24	Sep 3	19	Aug 4 1996
INSTANTANEOUS PEAK FLOW			286	May 19	141000	Jul 17 1987
INSTANTANEOUS PEAK STAGE			2.22	May 19	37.72	Jul 17 1987
ANNUAL RUNOFF (AC-FT)	69430		40500		106900	
ANNUAL RUNOFF (CFSM)	.19		.11		.29	
ANNUAL RUNOFF (INCHES)	2.55		1.49		3.93	
10 PERCENT EXCEEDS	127		73		220	
50 PERCENT EXCEEDS	88		58		91	
90 PERCENT EXCEEDS	56		30		47	

08166200 GUADALUPE RIVER AT KERRVILLE, TX--Continued



08167000 GUADALUPE RIVER AT COMFORT, TX

LOCATION.--Lat 29°58′10", long 98°53′33", Kendall County, Hydrologic Unit 12100201, on right bank at downstream side of southbound bridge on Interstate Highway 10 at Comfort, 0.5 mi downstream from Cypress Creek, and at mile 396.2.

DRAINAGE AREA.--839 mi^2.

PERIOD OF RECORD.--May 1939 to current year.

REVISED RECORDS.--WSP 1632: 1958. WSP 1732: 1939(M). WSP 2123: Drainage area, 1944(M), 1952(M), 1957(M), 1960(M).

GAGE.--Water-stage recorder. Datum of gage is 1,369.83 ft above sea level. Prior to Nov 27, 1939, nonrecording gage. Nov 27, 1939 to Jun 2, 1980, water-stage recorder at site 0.4 mi upstream at datum 2.22 ft higher. Jun 2, 1980 to Sep 30, 1986, at present site at datum 2.00 ft higher. Satellite telemeter at station.

REMARKS.--Records good except those for estimated daily discharge, which is fair. Since 1956, at least 10% of contributing drainage area has been regulated by Kerrville Dam (capacity 2,499 acre-ft). There are many small diversions above station for irrigation. No flow at times.

AVERAGE DISCHARGE PRIOR TO REGULATION.--17 years (water years 1939-55) prior to regulation by Kerrville Dam, 127 ft^3/s (92,340 acre-ft/yr).

EXTREMES FOR PERIOD PRIOR TO REGULATION (WATER YEARS 1939-1955).--Maximum discharge 74,200 ft^3/s May 26, 1944 (gage height 29.40 ft); no flow at times 1952-55.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Jul 1869 reached a stage of 42.3 ft, present datum, from report by U.S. Army Corps of Engineers. Flood of Jul 1, 1932, reached a stage of 38.4 ft, from floodmark, and from information by Texas Department of Transportation. Flood of Jul 16, 1900, reached about the same stage as that of Jul 1, 1932, from information by local residents. All stages are at site and datum then in use. Maximum stage since at least 1848, that of Aug 2, 1978.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	54	86	74	80	82	84	51	41	59	55	42	19
2	55	81	73	80	105	79	66	87	47	51	52	16
3	59	74	75	80	102	78	79	113	65	49	35	15
4	60	72	79	80	95	71	71	110	74	45	35	14
5	61	73	83	67	88	68	62	100	97	41	31	14
6	63	73	74	69	84	68	59	81	92	41	29	14
7	61	75	74	76	82	68	56	69	79	42	25	14
8	56	77	75	99	80	73	53	59	71	45	24	14
9	55	77	81	93	78	79	46	54	64	40	25	15
10	56	73	83	88	77	80	44	50	84	38	22	16
11	55	74	77	83	77	77	47	47	132	35	24	16
12	52	75	92	78	75	69	83	42	124	32	20	19
13	56	77	91	77	74	67	115	45	111	32	20	86
14	55	76	94	76	75	66	89	55	101	28	18	62
15	52	76	90	77	72	69	75	46	92	29	19	63
16	56	75	81	77	73	75	70	45	86	29	18	48
17	86	74	80	78	73	73	65	48	78	31	18	32
18	108	73	80	77	73	67	62	41	78	29	19	25
19	101	75	80	76	73	68	60	48	106	e27	18	24
20	90	75	82	75	69	62	65	160	192	26	16	24
21	86	73	84	71	70	57	59	169	138	23	14	25
22	82	74	84	73	71	54	49	121	114	21	15	28
23	79	75	85	76	94	57	43	96	102	20	16	24
24	75	77	86	75	95	69	37	83	91	25	19	29
25	72	78	85	73	89	68	31	72	85	35	19	66
26	71	76	83	74	101	67	28	66	79	32	18	58
27	69	75	82	75	127	63	23	63	75	32	20	49
28	70	78	82	86	107	58	24	87	69	28	18	43
29	70	80	79	84	91	56	30	94	67	25	20	37
30	78	78	77	84	---	60	33	85	63	25	18	31
31	96	---	80	81	---	52	---	73	---	31	18	---
TOTAL	2139	2275	2525	2438	2452	2102	1675	2350	2715	1042	705	940
MEAN	69.0	75.8	81.5	78.6	84.6	67.8	55.8	75.8	90.5	33.6	22.7	31.3
MAX	108	86	94	99	127	84	115	169	192	55	52	86
MIN	52	72	73	67	69	52	23	41	47	20	14	14
AC-FT	4240	4510	5010	4840	4860	4170	3320	4660	5390	2070	1400	1860

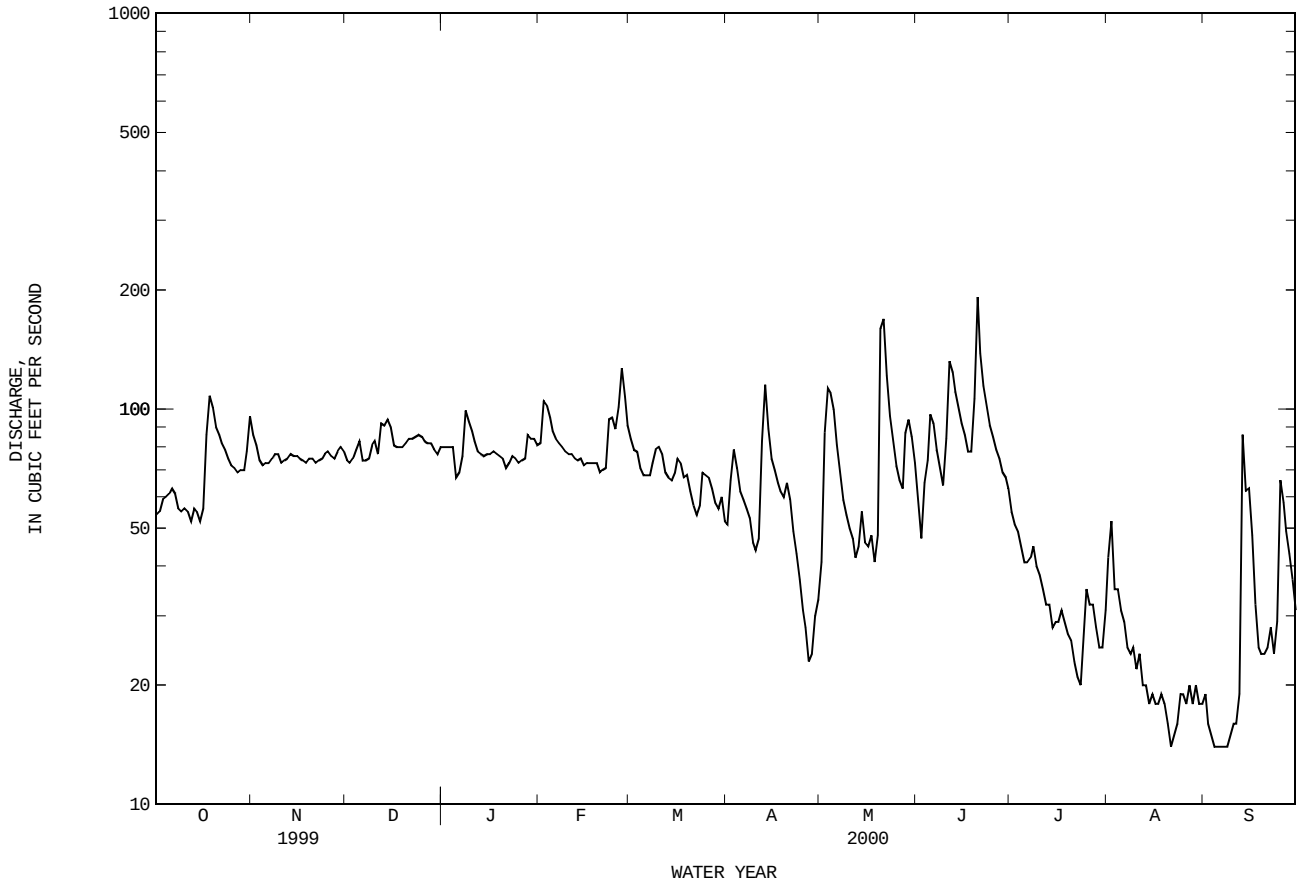
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1956 - 2000z, BY WATER YEAR (WY)

MEAN	322	176	232	198	243	238	249	298	340	196	283	171
MAX	2417	518	2700	987	1728	1559	1598	1122	2820	1974	4782	575
(WY)	1986	1975	1992	1992	1992	1992	1977	1975	1987	1987	1978	1978
MIN	.000	3.63	10.5	16.8	24.4	16.6	15.5	14.9	.097	.000	2.66	5.90
(WY)	1957	1957	1957	1957	1957	1956	1956	1956	1956	1956	1963	1956

08167000 GUADALUPE RIVER AT COMFORT, TX--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1956 - 2000z		
ANNUAL TOTAL	48886		23358				
ANNUAL MEAN	134		63.8		246		
HIGHEST ANNUAL MEAN					894		1992
LOWEST ANNUAL MEAN					14.5		1956
HIGHEST DAILY MEAN	1440	Jun 21	192	Jun 20	74200	Aug 2	1978
LOWEST DAILY MEAN	51	Sep 23	14	Aug 21	.00	Jun 5	1956
ANNUAL SEVEN-DAY MINIMUM	54	Oct 9	14	Sep 3	.00	Jun 5	1956
INSTANTANEOUS PEAK FLOW			417	Sep 3	c240000	Aug 2	1978
INSTANTANEOUS PEAK STAGE			3.09	Sep 3	a40.90	Aug 2	1978
ANNUAL RUNOFF (AC-FT)	96970		46330		178000		
10 PERCENT EXCEEDS	203		91		398		
50 PERCENT EXCEEDS	125		71		128		
90 PERCENT EXCEEDS	61		23		33		

e Estimated
z Period of regulated streamflow.
c From rating curve extended above 92,000 ft^3/s.
a From floodmark.



08167500 GUADALUPE RIVER NEAR SPRING BRANCH, TX
(Hydrologic index station)

LOCATION.--Lat 29°51'37", long 98°23'00", Comal County, Hydrologic Unit 12100201, at downstream side of bridge on Ranch Road 311, 1.9 mi southeast of Spring Branch Post Office, 7.5 mi downstream from Curry Creek, and at mile 334.4.

DRAINAGE AREA.--1,315 mi^2.

PERIOD OF RECORD.--Jun 1922 to current year.
Water-quality records.--Chemical data: Water years 1942 to 1945, Oct 1980 to Sep 1982, Oct 1989 to Aug 1995, Apr 1996 to Apr 1998. Biochemical data: Oct 1980 to Sep 1982, Oct 1989 to Aug 1995, Apr 1996 to Apr 1998. Sediment data: Apr 1996 to Apr 1998.

REVISED RECORDS.--WSP 1562: 1923-24, 1926, 1927-28(M), 1929, 1930(M). WSP 2123: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 948.10 ft above sea level. Prior to Jan 14, 1981, at site 220 ft downstream at same datum. Satellite telemeter at station.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Since 1956, at least 10% of contributing drainage area has been regulated by Kerrville Dam (capacity 2,499 acre-ft). Several small diversions above station for irrigation. No flow at times. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water-quality data.

AVERAGE DISCHARGE PRIOR TO REGULATION.--34 years (water years 1922-55) prior to regulation by Kerrville Dam, 249 ft^3/s (180,400 acre-ft/yr).

EXTREMES FOR PERIOD PRIOR TO REGULATION (WATER YEARS 1922-55).--Maximum discharge 121,000 ft^3/s Jul 3, 1932 (gage height 42.10 ft); no flow at times 1951-52, 1954-55.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1859, about 53 ft in 1869; flood in Jul 1900 reached a stage of about 49 ft, from information by local resident.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	68	87	87	86	94	125	70	53	83	61	19	6.8
2	62	97	87	89	109	111	87	72	74	59	18	7.0
3	58	83	84	89	107	102	92	64	e72	52	25	7.2
4	58	81	82	86	121	94	84	99	e71	48	36	6.6
5	60	78	80	88	110	90	88	124	71	46	29	6.9
6	62	77	82	87	103	87	81	120	69	44	22	6.9
7	63	80	87	84	99	84	70	109	91	40	20	6.0
8	66	78	83	90	92	85	65	94	83	40	19	5.7
9	64	79	83	90	92	86	57	80	98	e38	17	5.4
10	60	81	81	107	91	91	59	74	136	36	15	6.4
11	59	81	86	100	90	96	60	67	265	34	14	7.4
12	58	79	101	96	88	93	69	60	213	32	14	7.4
13	59	77	91	92	87	91	68	62	172	30	12	7.5
14	57	79	99	85	86	87	105	56	141	27	12	8.9
15	59	84	97	83	86	86	120	50	123	25	11	49
16	58	84	98	82	89	85	104	55	107	23	8.9	46
17	69	83	96	84	85	100	91	51	93	20	9.0	44
18	71	82	90	83	88	96	85	45	86	18	8.3	43
19	103	83	91	83	82	92	82	64	88	14	8.3	30
20	112	81	90	81	79	83	79	83	86	18	7.5	24
21	104	82	89	79	79	85	73	96	155	18	7.4	21
22	98	87	89	82	79	82	69	189	166	18	7.7	19
23	94	82	91	83	125	75	62	168	135	17	7.5	18
24	90	77	90	81	101	72	62	136	116	17	6.7	18
25	87	85	92	86	120	71	51	114	105	16	6.4	22
26	79	85	92	86	115	79	47	98	92	16	5.5	20
27	77	85	91	93	103	80	45	86	84	17	6.9	33
28	76	84	90	90	126	77	42	91	74	18	9.7	53
29	74	84	89	88	139	78	37	99	70	18	8.2	41
30	77	86	88	95	---	74	35	103	64	19	7.5	37
31	80	---	86	93	---	68	---	95	---	18	7.3	---
TOTAL	2262	2471	2762	2721	2865	2705	2139	2757	3283	897	405.8	614.1
MEAN	73.0	82.4	89.1	87.8	98.8	87.3	71.3	88.9	109	28.9	13.1	20.5
MAX	112	97	101	107	139	125	120	189	265	61	36	53
MIN	57	77	80	79	79	68	35	45	64	14	5.5	5.4
AC-FT	4490	4900	5480	5400	5680	5370	4240	5470	6510	1780	805	1220

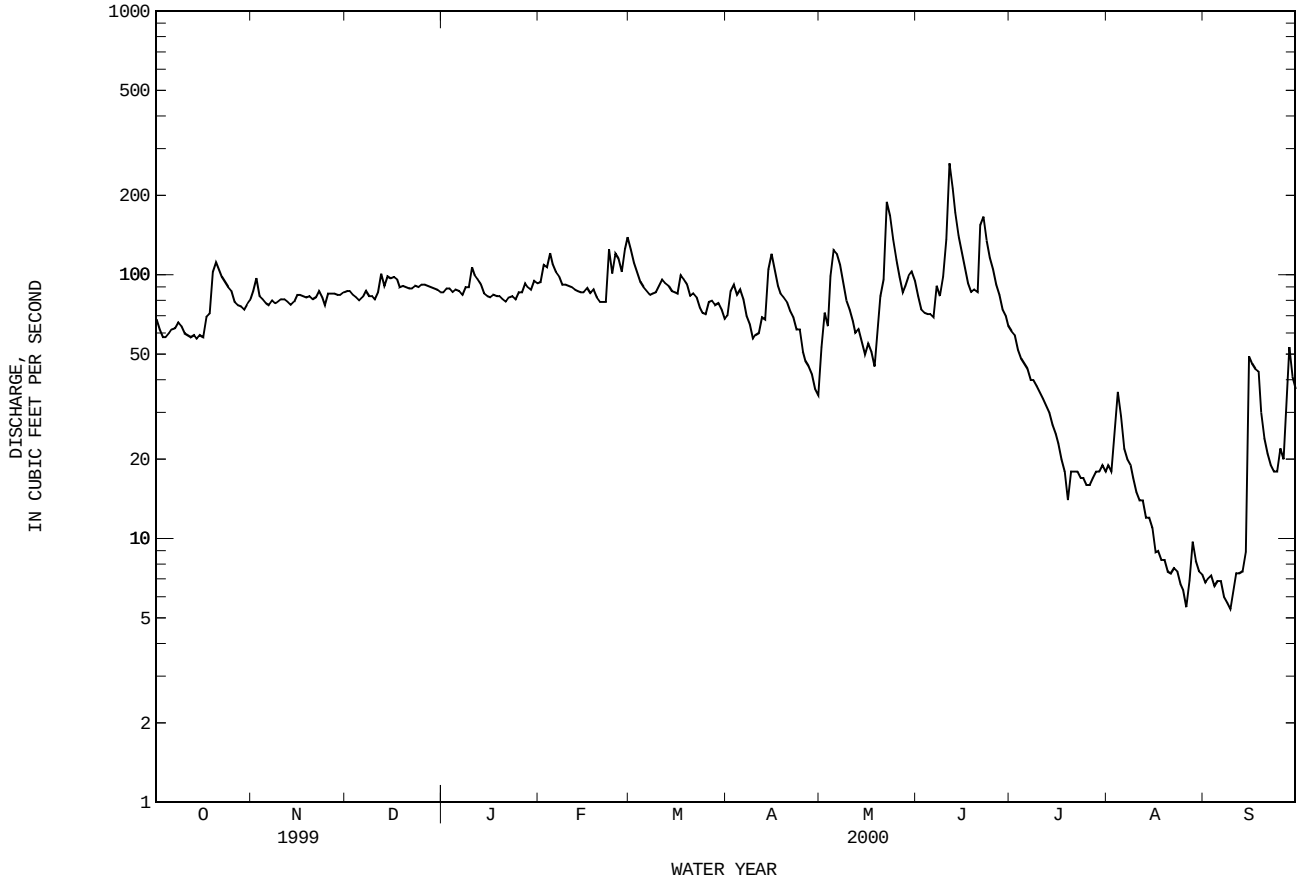
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1956 - 2000z, BY WATER YEAR (WY)

MEAN	459	290	392	354	451	439	449	567	727	347	354	256
MAX	1584	938	4927	1903	4164	3306	2417	2216	6329	2626	4980	941
(WY)	1982	1975	1992	1992	1992	1992	1977	1992	1987	1987	1978	1978
MIN	6.77	11.1	6.48	10.9	29.3	16.8	6.11	19.3	.000	.000	3.24	6.85
(WY)	1957	1957	1957	1957	1956	1956	1956	1956	1956	1956	1963	1956

08167500 GUADALUPE RIVER NEAR SPRING BRANCH, TX--Continued
(Hydrologic index station)

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1956 - 2000z	
ANNUAL TOTAL	61948		25881.9			
ANNUAL MEAN	170		70.7		423	
HIGHEST ANNUAL MEAN					1819	1992
LOWEST ANNUAL MEAN					13.3	1956
HIGHEST DAILY MEAN	1500	Jun 22	265	Jun 11	76500	Aug 3 1978
LOWEST DAILY MEAN	50	Sep 26	5.4	Sep 9	.00	May 29 1956
ANNUAL SEVEN-DAY MINIMUM	58	Sep 23	6.3	Sep 4	.00	May 29 1956
INSTANTANEOUS PEAK FLOW			739	Jun 11	i160000	Aug 3 1978
INSTANTANEOUS PEAK STAGE			4.08	Jun 11	a45.25	Aug 3 1978
ANNUAL RUNOFF (AC-FT)	122900		51340		306800	
10 PERCENT EXCEEDS	280		103		750	
50 PERCENT EXCEEDS	160		81		193	
90 PERCENT EXCEEDS	70		15		47	

e Estimated
z Period of regulated streamflow.
i From indirect measurement of peak flow.
a From floodmark.



08167700 CANYON LAKE NEAR NEW BRAUNFELS, TX

LOCATION.--Lat 29°52′07", long 98°11′55", Comal County, Hydrologic Unit 12100201, in intake structure of Canyon Dam on Guadalupe River, 12 mi northwest of New Braunfels, and at mile 303.0.

DRAINAGE AREA.--1,432 mi^2.

PERIOD OF RECORD.--Jul 1962 to current year. Prior to Oct 1970, published as "Canyon Reservoir".
Water-quality records.--Chemical data: Oct 1980 to Sep 1982, Oct 1989 to Aug 1995. Biochemical data: Oct 1980 to Sep 1982, Oct 1989 to Aug 1995.

REVISED RECORDS.--WSP 2123: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is sea level (levels by U.S. Army Corps of Engineers). Prior to Sep 24, 1964, nonrecording gage at present site and datum. Satellite telemeter at station.

REMARKS.--The lake is formed by a rolled earthfill dam 6,830 ft long, consisting of the main dam 4,410 ft long, an earthen dike 210 ft long, a 1,260-foot-long uncontrolled broad-crested-type spillway, and a 950-foot concrete and earthen nonoverflow section. Deliberate impoundment began Jun 16, 1964, and main part of dam was completed in Aug 1964. The flood-control outlet works consist of a 10.0-foot-diameter conduit controlled by two 5.7 by 10.0-foot hydraulically operated slide gates. The lake was built for water conservation and flood control. Capacity table beginning Oct 1, 1974, is based on a sedimentation survey of Aug 1972. Small diversions above the lake for irrigation. Conservation pool storage is 385,600 acre-ft. Data regarding the dam are given in the following table:

	Elevation (feet)
Top of dam	974.0
Crest of spillway	943.0
Top of conservation pool	909.5
Lowest gated outlet (invert)	775.0

COOPERATION.--Record of contents furnished by the U.S. Army Corps of Engineers and reviewed by the U.S. Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 732,600 acre-ft, Jun 19, 1987, elevation, 942.68 ft; minimum observed since conservation pool first reached in Apr 1968, 311,200 acre-ft, Nov 24, 1984, elevation, 899.85 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 534,400 acre-ft, Jun 16, elevation, 925.55 ft; minimum contents, 188,600 acre-ft, Sep 14, elevation, 880.10 ft.

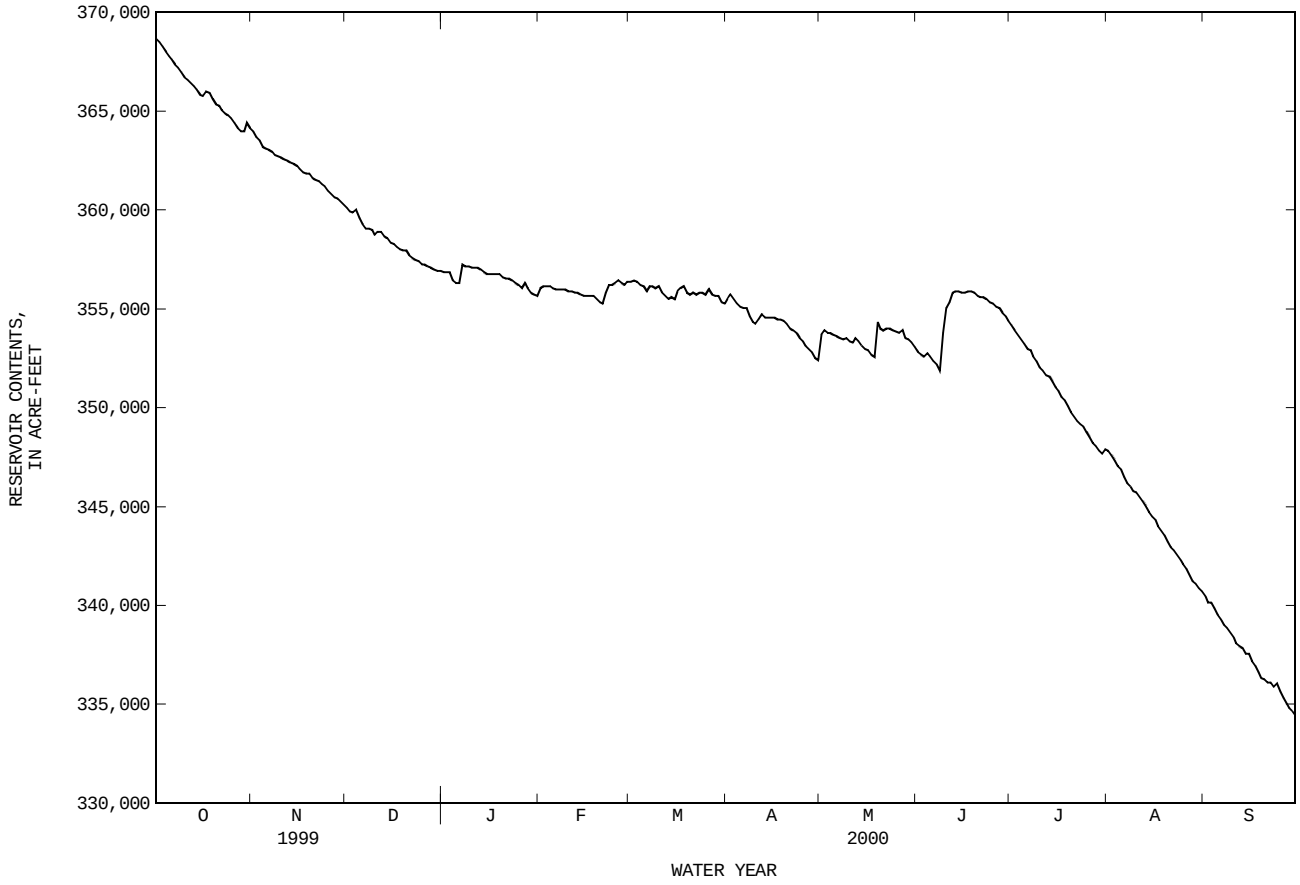
RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	368700	364000	360100	356900	356100	356400	355500	353700	352800	354200	347800	340500
2	368500	363700	359900	356900	356100	356500	355700	353900	352700	353900	347600	340200
3	368300	363500	359900	356900	356100	356400	355500	353800	352600	353700	347400	340200
4	368000	363200	360000	356500	356100	356200	355300	353800	352800	353500	347000	339900
5	367800	363100	359600	356300	356100	356100	355100	353700	352600	353200	346900	339600
6	367600	363000	359300	356300	356000	355900	355000	353600	352400	353000	346500	339300
7	367400	363000	359100	357200	356000	356100	355000	353500	352200	352900	346200	339000
8	367200	362800	359100	357200	356000	356100	354600	353500	351900	352600	346000	338900
9	367000	362700	359000	357200	356000	356100	354300	353500	353800	352400	345800	338600
10	366700	362600	358800	357100	355900	356100	354200	353400	355000	352000	345700	338400
11	366600	362600	358900	357100	355900	355800	354500	353300	355400	351900	345500	338100
12	366400	362500	358900	357100	355800	355700	354700	353500	355800	351700	345300	337900
13	366200	362400	358700	357000	355800	355500	354600	353400	355900	351600	345000	337900
14	366100	362300	358600	356900	355700	355600	354600	353100	355900	351300	344700	337600
15	365800	362200	358400	356800	355700	355500	354600	353000	355800	351000	344500	337600
16	365800	362100	358300	356800	355700	355900	354600	352900	355800	350900	344300	337200
17	366000	361900	358100	356800	355700	356100	354500	352700	355900	350600	344000	337000
18	365900	361900	358000	356800	355700	356100	354500	352600	355900	350400	343800	336600
19	365600	361900	358000	356800	355500	355800	354400	354300	355800	350100	343600	336300
20	365400	361600	358000	356600	355400	355700	354200	354000	355700	349800	343200	336300
21	365300	361500	357700	356500	355300	355800	354000	353900	355600	349500	342900	336100
22	365000	361500	357600	356500	355800	355700	353900	354000	355600	349300	342800	336100
23	364900	361300	357500	356500	356200	355800	353800	354000	355500	349200	342600	335900
24	364800	361200	357400	356300	356200	355800	353500	353900	355400	349100	342300	336000
25	364600	361000	357200	356200	356300	355700	353400	353900	355300	348800	342100	335700
26	364400	360800	357200	356100	356500	356000	353100	353800	355100	348500	341900	335400
27	364200	360700	357200	356300	356300	355700	353000	353900	355000	348200	341600	335100
28	364000	360600	357100	356100	356200	355700	352800	353500	354800	348100	341200	334800
29	364000	360400	357000	355800	356400	355700	352500	353500	354600	347800	341100	334700
30	364400	360300	356900	355700	---	355400	352400	353300	354400	347700	340900	334400
31	364200	---	356900	355700	---	355300	---	353100	---	347900	340700	---
MAX	368700	364000	360100	357200	356500	356500	355700	354300	355900	354200	347800	340500
MIN	364000	360300	356900	355700	355300	355300	352400	352600	351900	347700	340700	334400
(+)	906.81	906.32	905.89	905.74	905.82	905.68	905.32	905.40	905.57	904.74	903.81	902.98
(@)	-4800	-3900	-3400	-1200	+700	-1100	-2900	+700	+1300	-6500	-7200	-6300

CAL YR 1999 MAX 395300 MIN 356900 (@) -28700
WTR YR 2000 MAX 368700 MIN 334400 (@) -34600

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

08167700 CANYON LAKE NEAR NEW BRAUNFELS, TX--Continued



08167800 GUADALUPE RIVER AT SATTLER, TX

LOCATION.--Lat 29°51'32", long 98°10'47", Comal County, Hydrologic Unit 12100202, on right bank 200 ft upstream from Horseshoe Falls, 0.8 mi north of Sattler, 1.8 mi downstream from Canyon Dam, 2.3 mi upstream from Heiser Hollow, 11.2 mi north of New Braunfels, and at mile 301.2.

DRAINAGE AREA.--1,436 mi^2, of which 1,432 mi^2 is above Canyon Dam.

PERIOD OF RECORD.--Mar 1960 to current year.
Water-quality records.--Chemical data: Oct 1980 to Sep 1982, Oct 1989 to Aug 1995. Biochemical data: Oct 1980 to Sep 1982, Oct 1989 to Aug 1995. Water temperature: Jun 1984 to Sep 1987.

REVISED RECORDS.--WSP 2123: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 742.24 ft above sea level (U.S. Army Corps of Engineers bench mark). Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. Since 1960, at least 10% of contributing drainage area has been regulated by Kerrville Dam (capacity 2,499 acre-ft). Since Jul 21, 1962, flow completely regulated by Canyon Lake (station 08167700, conservation pool storage 385,600 acre-ft) 1.8 mi upstream. Small diversions above station for irrigation. No flow Jul 31 to Aug 6, 1962 (result of closure of Canyon Dam). No flow at times. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water-quality data.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in Jul 1869 (stage unknown) has not been exceeded since that date; flood in Jul 1900 (stage unknown) exceeded 39 ft; maximum stage since at least 1904, 39 ft in Jul 1932 and Jun 1935, from information by local residents.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

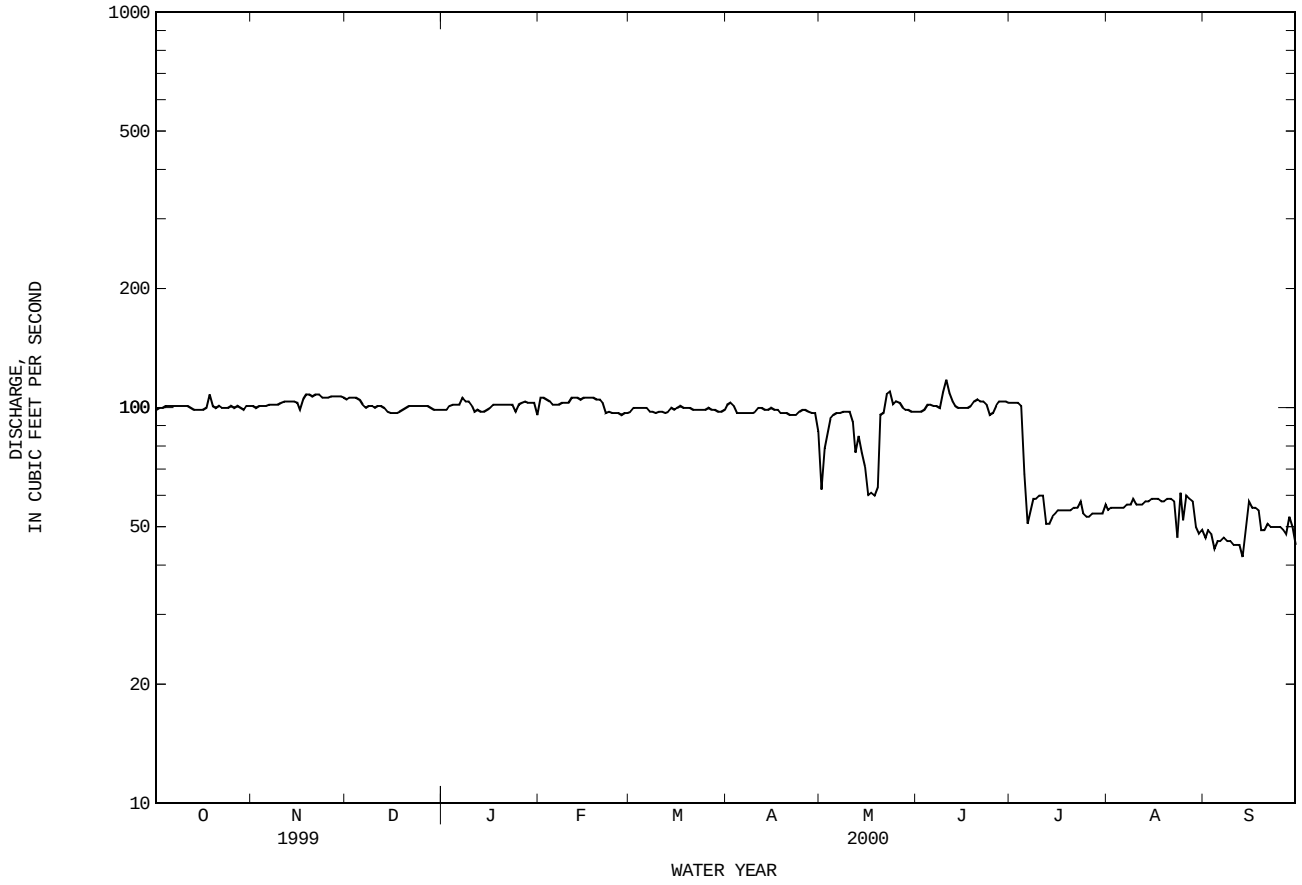
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	99	101	105	99	106	98	102	62	98	103	55	47
2	100	100	106	99	106	100	103	79	98	103	56	49
3	100	101	106	101	105	100	101	87	99	103	56	48
4	101	101	106	102	104	100	97	94	102	101	56	44
5	101	101	105	102	102	100	97	96	102	68	56	46
6	101	102	102	102	102	100	97	97	101	51	56	46
7	101	102	100	106	102	98	97	97	101	55	57	47
8	101	102	101	104	103	98	97	98	100	59	57	46
9	101	102	101	104	103	97	97	98	110	59	59	46
10	101	103	100	101	103	98	98	98	118	60	57	45
11	101	104	101	98	106	98	100	92	109	60	57	45
12	100	104	101	99	106	97	100	77	104	51	57	45
13	99	104	100	98	106	98	99	85	101	51	58	42
14	99	104	98	98	105	100	99	77	100	53	58	49
15	99	103	97	99	106	99	100	71	100	54	59	58
16	99	99	97	100	106	100	99	60	100	55	59	56
17	100	105	97	102	106	101	99	61	100	55	59	56
18	108	108	98	102	106	100	97	60	101	55	58	55
19	101	108	99	102	105	100	97	63	104	55	58	49
20	100	107	100	102	105	100	97	96	105	55	59	49
21	101	108	101	102	103	99	96	97	104	56	59	51
22	100	108	101	102	97	99	96	108	104	56	58	50
23	100	106	101	102	98	99	96	110	102	58	47	50
24	100	106	101	98	97	99	98	102	96	54	61	50
25	101	106	101	102	97	99	99	104	97	53	52	50
26	100	107	101	103	97	100	99	103	101	53	60	49
27	101	107	101	104	96	99	98	100	104	54	59	48
28	100	107	100	103	97	99	97	99	104	54	58	53
29	99	107	99	103	97	98	97	99	104	54	50	50
30	101	106	99	103	---	98	87	98	103	54	48	45
31	101	---	99	96	---	99	---	98	---	57	49	---
TOTAL	3116	3129	3124	3138	2972	3070	2936	2766	3072	1909	1748	1464
MEAN	101	104	101	101	102	99.0	97.9	89.2	102	61.6	56.4	48.8
MAX	108	108	106	106	106	101	103	110	118	103	61	58
MIN	99	99	97	96	96	97	87	60	96	51	47	42
AC-FT	6180	6210	6200	6220	5890	6090	5820	5490	6090	3790	3470	2900

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 2000, BY WATER YEAR (WY)

MEAN	327	357	339	435	427	488	496	475	616	598	457	283
MAX	1463	1512	2121	4437	2089	3949	3705	2318	2783	5309	3854	1306
(WY)	1961	1999	1999	1992	1992	1992	1992	1992	1992	1997	1978	1987
MIN	43.1	66.2	41.4	60.4	13.4	71.7	45.6	47.1	36.1	22.1	7.32	10.5
(WY)	1964	1976	1966	1964	1965	1988	1971	1971	1963	1963	1962	1963

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1960 - 2000	
ANNUAL TOTAL	68904		32444			
ANNUAL MEAN	189		88.6		444	
HIGHEST ANNUAL MEAN					1900	1992
LOWEST ANNUAL MEAN					69.4	1963
HIGHEST DAILY MEAN	597	Jan 1	118	Jun 10	10000	Oct 29 1960
LOWEST DAILY MEAN	84	Sep 9	42	Sep 13	.00	Jul 31 1962
ANNUAL SEVEN-DAY MINIMUM	98	Dec 13	45	Sep 7	.00	Jul 31 1962
INSTANTANEOUS PEAK FLOW			171	Jun 10	20800	Oct 29 1960
INSTANTANEOUS PEAK STAGE			4.71	Jun 10	12.20	Oct 29 1960
ANNUAL RUNOFF (AC-FT)	136700		64350		321800	
10 PERCENT EXCEEDS	355		105		792	
50 PERCENT EXCEEDS	156		99		210	
90 PERCENT EXCEEDS	100		53		69	

08167800 GUADALUPE RIVER AT SATTLER, TX--Continued



08168500 GUADALUPE RIVER ABOVE COMAL RIVER AT NEW BRAUNFELS, TX

LOCATION.--Lat 29°42′53", long 98°06′35", Comal County, Hydrologic Unit 12100202, on right bank at New Braunfels, 1.1 mi upstream from Comal River, 21.9 mi downstream from Canyon Lake, and at mile 281.1.

DRAINAGE AREA.--1,518 mi^2, of which 1,432 mi^2 is above Canyon Dam.

PERIOD OF RECORD.--Dec 1927 to current year.

REVISED RECORDS.--WSP 898: 1935. WSP 1562: 1932. WSP 2123: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 586.65 ft above sea level. Satellite telemeter at station.

REMARKS.--Records good. Since 1956, at least 10% of contributing drainage area has been regulated by Kerrville Dam (capacity 2,499 acre-ft). Since Jul 21, 1962, flow completely regulated by Canyon Lake (station 08167700, conservation pool storage 385,600 acre-ft) 21.9 mi upstream. Small diversions for irrigation above this station. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water-quality data.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--28 years (water years 1928-55) prior to regulation by Kerrville Dam, 344 ft^3/s (249,300 acre-ft/yr).

EXTREMES FOR PERIOD PRIOR TO REGULATION (WATER YEARS 1928-55).--Maximum discharge, 101,000 ft^3/s Jun 15, 1935 (gage height, 32.95 ft); minimum, 2.2 ft^3/s Sep 27-29, 1954.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1845, 38 ft Jul 8, 1869, and in Dec 1913, from information by local residents.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	109	109	118	111	103	100	97	95	89	115	58	41
2	e109	109	115	111	119	100	104	103	91	114	53	41
3	109	109	117	111	120	100	115	92	90	114	51	41
4	109	109	117	109	115	100	100	95	100	111	51	41
5	109	112	115	109	111	101	93	99	108	111	50	41
6	109	111	114	111	111	103	93	97	95	78	49	40
7	109	109	111	125	111	103	93	96	92	67	48	40
8	109	109	113	137	111	103	91	94	92	69	50	40
9	109	106	113	122	111	103	90	93	250	73	52	40
10	109	106	110	117	111	100	91	94	377	71	47	40
11	106	106	113	115	111	100	92	94	419	69	46	40
12	99	109	114	112	106	99	103	84	276	67	46	41
13	98	109	109	112	106	99	96	83	234	57	46	41
14	99	109	108	111	106	103	94	79	209	54	46	41
15	99	109	111	109	106	107	95	73	196	57	46	43
16	98	106	111	111	106	105	94	67	184	57	46	51
17	106	100	111	109	106	150	93	56	171	57	46	48
18	112	110	111	109	106	116	90	55	168	57	46	47
19	114	111	111	109	106	110	89	61	174	57	46	46
20	106	111	115	109	108	106	88	107	160	57	46	43
21	105	115	117	107	109	107	86	108	154	57	46	43
22	106	119	115	106	106	104	86	90	151	57	46	48
23	104	116	114	106	125	100	87	99	145	57	46	43
24	104	111	111	106	104	100	87	89	137	57	45	42
25	104	113	111	102	101	98	88	84	129	57	47	44
26	106	116	111	105	102	98	89	84	123	57	46	43
27	106	115	113	109	99	102	90	91	123	52	46	44
28	107	119	114	109	97	98	89	93	121	52	46	42
29	109	116	110	109	98	97	89	93	122	50	48	44
30	115	117	107	109	---	95	90	91	117	49	44	46
31	111	---	111	109	---	96	---	90	---	50	41	---
TOTAL	3304	3326	3491	3446	3131	3203	2782	2729	4897	2107	1470	1285
MEAN	107	111	113	111	108	103	92.7	88.0	163	68.0	47.4	42.8
MAX	115	119	118	137	125	150	115	108	419	115	58	51
MIN	98	100	107	102	97	95	86	55	89	49	41	40
AC-FT	6550	6600	6920	6840	6210	6350	5520	5410	9710	4180	2920	2550

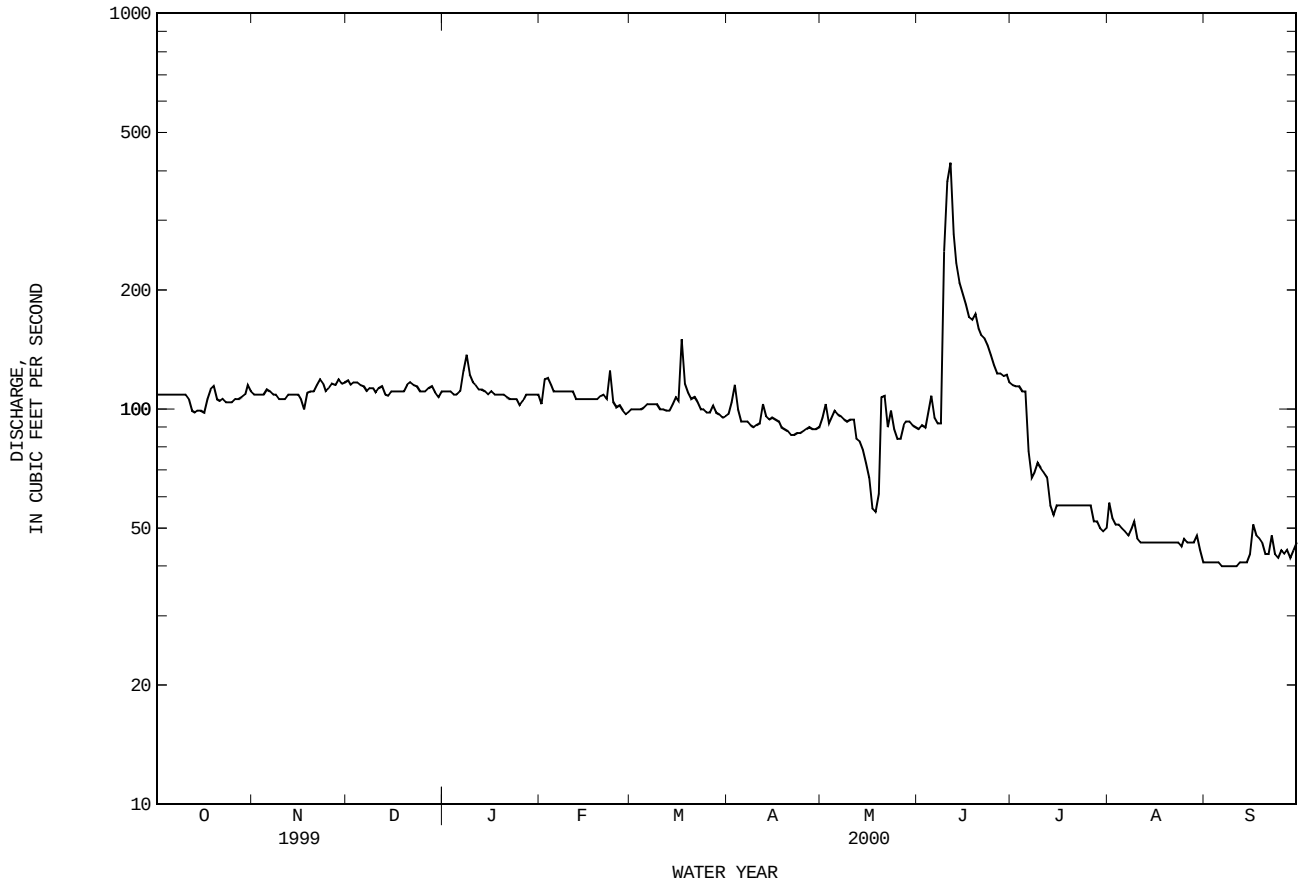
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1956 - 2000z, BY WATER YEAR (WY)

MEAN	479	427	406	503	514	568	592	613	720	627	482	342
MAX	2033	1677	2233	4704	2379	4254	3826	2450	2948	5236	3866	1484
(WY)	1999	1999	1999	1992	1992	1992	1992	1992	1992	1997	1978	1987
MIN	9.99	11.8	21.8	12.3	31.2	19.6	9.35	13.7	.67	.055	6.64	4.87
(WY)	1957	1956	1957	1957	1956	1956	1956	1956	1956	1956	1956	1956

08168500 GUADALUPE RIVER ABOVE COMAL RIVER AT NEW BRAUNFELS, TX--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1956 - 2000z	
ANNUAL TOTAL	86030		35171			
ANNUAL MEAN	236		96.1		523	
HIGHEST ANNUAL MEAN					2057	1992
LOWEST ANNUAL MEAN					13.8	1956
HIGHEST DAILY MEAN	743	Jan 7	419	Jun 11	37400	Oct 17 1998
LOWEST DAILY MEAN	95	Sep 10	40	Sep 6	.00	Jul 8 1956
ANNUAL SEVEN-DAY MINIMUM	101	Sep 17	40	Sep 5	.00	Jul 17 1956
INSTANTANEOUS PEAK FLOW			655	Jun 9	i142000	Oct 17 1998
INSTANTANEOUS PEAK STAGE			2.84	Jun 9	a35.57	Oct 17 1998
ANNUAL RUNOFF (AC-FT)	170600		69760		378700	
10 PERCENT EXCEEDS	403		117		976	
50 PERCENT EXCEEDS	212		103		278	
90 PERCENT EXCEEDS	106		46		74	

e Estimated
z Period of regulated streamflow.
i From indirect measurement of peak flow.
a From floodmark.



08168710 COMAL SPRINGS AT NEW BRAUNFELS, TX

LOCATION.--Lat 29°42’21", long 98°07’20", Comal County, Hydrologic Unit 12100202, on right bank 200 ft upstream from San Antonio Street viaduct in New Braunfels, and 1.1 mi upstream from mouth.

DRAINAGE AREA.--Not applicable. This is a springflow station.

PERIOD OF RECORD.--Oct 1929 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 582.80 ft above sea level.

REMARKS.--Records good. Springflow is equal to flow at Comal River at New Braunfels (station 08169000) except during periods of local runoff. During periods of runoff, springflow is separated from river flow using modified Institute of Hydrology base-flow separation program BFI 4.02. All days with springflow separations, and all days in which river flow were estimated are flagged as estimated springflow days. Comal Springs emerge from the Edwards and associated limestones in the Balcones Fault Zone about 1 mi upstream. Flow is affected at times by cleanup operations by the city of New Braunfels at Landa Park Lake. No flow Jul 13 to Nov 3, 1956.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	286	295	299	302	306	292	285	e255	229	254	199	156
2	286	295	300	303	e306	e294	291	e258	225	255	198	153
3	286	295	300	301	306	297	e290	262	228	252	e195	e150
4	284	296	304	303	312	296	289	e264	e228	249	192	e147
5	285	296	303	301	309	296	287	e267	e228	244	e192	e144
6	283	296	303	298	311	294	284	269	e229	246	e191	e141
7	280	297	302	e304	e307	299	289	265	229	242	191	138
8	281	300	304	310	303	299	283	265	229	242	192	142
9	281	296	303	304	307	299	284	261	e248	238	188	e145
10	280	297	303	306	307	e294	285	258	e253	235	e185	e149
11	278	297	303	304	305	289	284	254	e266	232	182	153
12	278	295	303	305	306	290	e287	252	279	e228	185	155
13	278	297	301	305	307	290	290	252	274	224	e183	156
14	277	297	296	301	306	294	287	254	270	223	181	e161
15	276	298	294	303	309	290	286	253	268	221	181	e165
16	278	296	294	305	303	e292	286	249	266	e218	e177	170
17	281	295	294	304	305	e295	282	246	270	216	e173	173
18	e283	296	295	e301	302	297	281	243	272	e214	169	e176
19	286	296	297	298	301	295	281	e244	e272	213	170	e176
20	286	296	297	299	302	290	279	244	273	e208	e170	177
21	286	299	295	301	300	293	276	248	272	204	171	179
22	288	300	295	e300	301	292	274	246	e269	205	171	181
23	289	298	295	e300	e300	292	274	244	266	204	e169	182
24	292	298	297	299	299	290	270	243	267	e198	168	181
25	292	300	301	e300	301	289	265	243	266	e198	167	e183
26	290	303	303	301	305	289	262	238	264	194	165	185
27	290	303	302	307	301	292	258	236	260	192	e163	185
28	292	303	299	304	304	286	253	240	258	191	e160	182
29	293	302	301	305	e298	285	252	e237	255	192	e158	185
30	293	301	299	305	---	285	251	235	250	193	156	185
31	293	---	302	305	---	283	---	232	---	197	155	---
TOTAL	8831	8933	9284	9384	8829	9058	8345	7757	7663	6822	5497	4955
MEAN	285	298	299	303	304	292	278	250	255	220	177	165
MAX	293	303	304	310	312	299	291	269	279	255	199	185
MIN	276	295	294	298	298	283	251	232	225	191	155	138
AC-FT	17520	17720	18410	18610	17510	17970	16550	15390	15200	13530	10900	9830

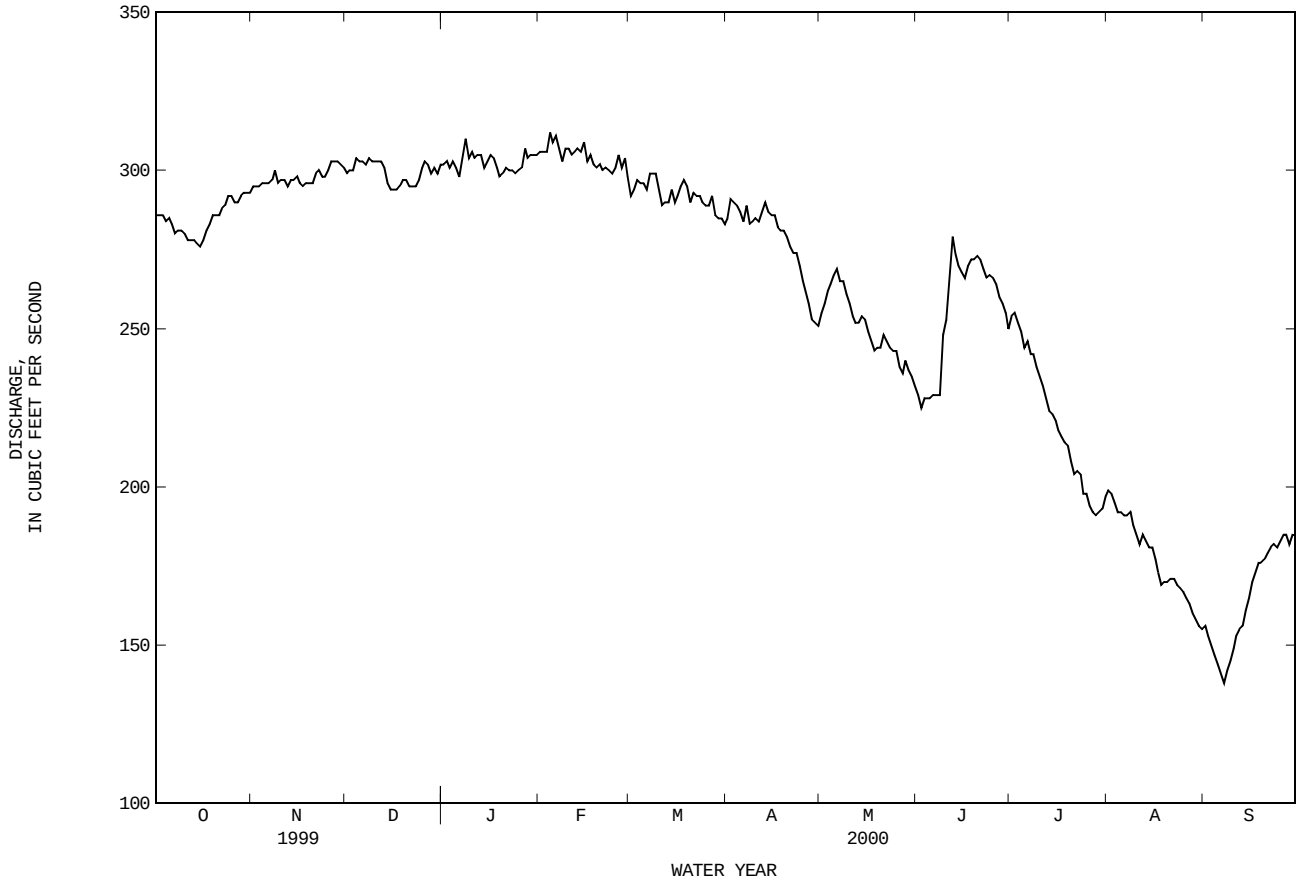
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 2000, BY WATER YEAR (WY)

MEAN	274	285	294	300	301	300	294	292	285	269	255	260
MAX	465	450	437	430	446	477	474	456	481	465	465	427
(WY)	1974	1974	1974	1974	1992	1992	1992	1992	1992	1992	1992	1992
MIN	.000	21.5	35.6	51.1	49.5	65.4	41.5	27.8	3.67	.000	.000	.000
(WY)	1957	1957	1957	1957	1957	1957	1956	1956	1956	1956	1956	1956

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1930 - 2000	
ANNUAL TOTAL	124935		95358			
ANNUAL MEAN	342		261		284	
HIGHEST ANNUAL MEAN					402	1993
LOWEST ANNUAL MEAN					45.5	1956
HIGHEST DAILY MEAN	421	Jan 1	312	Feb 4	534	Oct 14 1973
LOWEST DAILY MEAN	276	Oct 15	138	Sep 7	.00	Jun 13 1956
ANNUAL SEVEN-DAY MINIMUM	278	Oct 10	144	Sep 4	.00	Jun 13 1956
ANNUAL RUNOFF (AC-FT)	247800		189100		205400	
10 PERCENT EXCEEDS	406		303		380	
50 PERCENT EXCEEDS	344		284		301	
90 PERCENT EXCEEDS	292		178		170	

e Estimated

08168710 COMAL SPRINGS AT NEW BRAUNFELS, TX--Continued



08169000 COMAL RIVER AT NEW BRAUNFELS, TX

LOCATION.--Lat 29°42'21", long 98°07'20", Comal County, Hydrologic Unit 12100202, on right bank 200 ft upstream from San Antonio Street viaduct in New Braunfels and 1.1 mi upstream from mouth.

DRAINAGE AREA.--130 mi^2 of contributing surface drainage, however, most of the time flow is solely from Comal Springs.

PERIOD OF RECORD.--1882 to Sep 1932 (discharge measurements and fragmentary daily discharge record), Oct 1932 to current year. Water-quality records.--Chemical data: Apr 1996 to Apr 1998. Biochemical data: Apr 1996 to Apr 1998. Sediment data: Apr 1996 to Apr 1998.

REVISED RECORDS.--WSP 2123: Drainage area.

GAGE.--Water-stage recorder and concrete control since Oct 1, 1955. Datum of gage is 582.80 ft above sea level. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. Since water year 1974 at least 10% of contributing drainage area has been regulated by Landa Park Lake. Entire flow of river is from Comal Springs (station 08168710) except during periods of local runoff. Comal Springs emerge from the Edwards and associated limestones in the Balcones Fault Zone about 1.0 mi upstream. No flow from Comal Springs from Jun 13 to Nov 3, 1956. Flow is affected at times by cleanup operations by the city of New Braunfels at Landa Park Lake and at times by discharge from the flood-detention pools of five floodwater-retarding structures with a combined detention capacity of 17,580 acre-ft. These structures control runoff from 74.6 mi^2 above station. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water-quality data.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--41 years (water years 1933-73), 286 ft^3/s (207,200 acre-ft/yr).

EXTREMES FOR PERIOD PRIOR TO REGULATION.--Maximum discharge, 60,800 ft^3/s May 11, 1972 (gage height, 36.55 ft, from floodmark), from rating curve extended above 13,000 ft^3/s on basis of contracted-opening measurements on Blieders and Dry Comal Creeks and unit rainfall-runoff studies; no flow from Comal Springs from Jun 13 to Nov 3, 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood information begins with flood of Jul 8, 1869, which reached a stage of 36.91 ft, from painted and dated marks in old Remmert Brewery 0.5 mi downstream; the flood of Oct 17, 1870, reached a stage of 37.65 ft at same site (probably some backwater from Guadalupe River).

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	286	295	299	302	306	292	285	267	229	254	199	156
2	286	295	300	303	314	300	291	297	225	255	198	153
3	286	295	300	301	306	297	315	262	228	252	198	158
4	284	296	304	303	312	296	289	280	239	249	192	156
5	285	296	303	301	309	296	287	291	246	244	197	148
6	283	296	303	298	311	294	284	269	234	246	197	144
7	280	297	302	315	311	299	289	265	229	242	191	138
8	281	300	304	310	303	299	283	265	229	242	192	142
9	281	296	303	304	307	299	284	261	314	238	188	147
10	280	297	303	306	307	296	285	258	509	235	189	152
11	278	297	303	304	305	289	284	254	362	232	182	153
12	278	295	303	305	306	290	314	252	279	230	185	155
13	278	297	301	305	307	290	290	252	274	224	185	156
14	277	297	296	301	306	294	287	254	270	223	181	162
15	276	298	294	303	309	290	286	253	268	221	181	168
16	278	296	294	305	303	299	286	249	266	221	178	170
17	281	295	294	304	305	341	282	246	270	216	174	173
18	287	296	295	309	302	297	281	243	272	218	169	180
19	286	296	297	298	301	295	281	253	285	213	170	180
20	286	296	297	299	302	290	279	244	273	210	174	177
21	286	299	295	301	300	293	276	248	272	204	171	179
22	288	300	295	313	301	292	274	246	273	205	171	181
23	289	298	295	306	319	292	274	244	266	204	174	182
24	292	298	297	299	299	290	270	243	267	203	168	181
25	292	300	301	307	301	289	265	243	266	199	167	186
26	290	303	303	301	305	289	262	238	264	194	165	185
27	290	303	302	307	301	292	258	236	260	192	169	185
28	292	303	299	304	304	286	253	240	258	191	165	182
29	293	302	301	305	302	285	252	241	255	192	161	185
30	293	301	299	305	---	285	251	235	250	193	156	185
31	293	---	302	305	---	283	---	232	---	197	155	---
TOTAL	8835	8933	9284	9429	8864	9119	8397	7861	8132	6839	5542	4999
MEAN	285	298	299	304	306	294	280	254	271	221	179	167
MAX	293	303	304	315	319	341	315	297	509	255	199	186
MIN	276	295	294	298	299	283	251	232	225	191	155	138
AC-FT	17520	17720	18410	18700	17580	18090	16660	15590	16130	13570	10990	9920

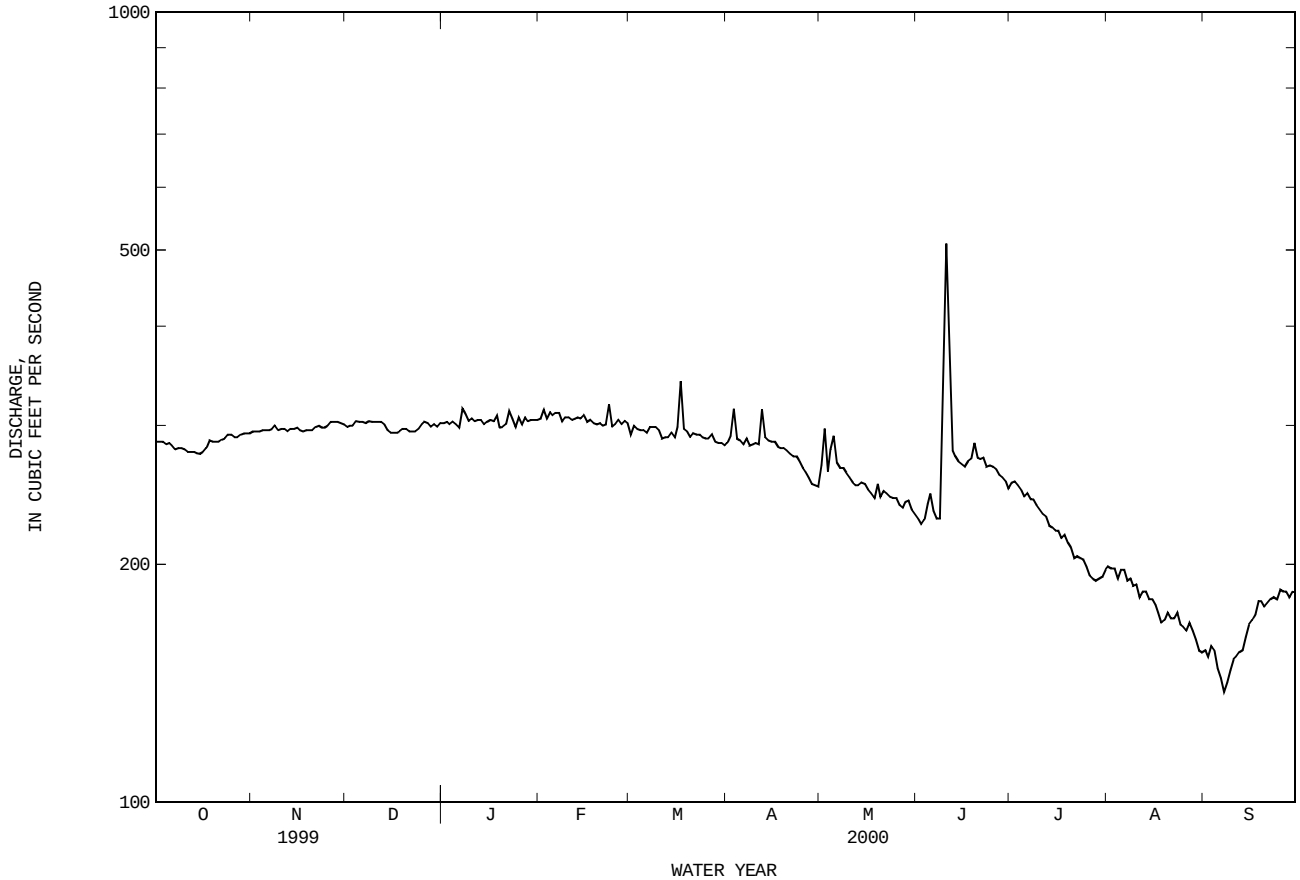
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1974 - 2000z, BY WATER YEAR (WY)

MEAN	340	312	325	326	330	321	319	327	312	280	261	264
MAX	1662	486	437	443	527	536	531	547	520	466	466	428
(WY)	1999	1975	1992	1977	1992	1992	1977	1975	1987	1992	1992	1992
MIN	100	144	166	174	175	199	146	101	78.5	35.4	36.4	43.7
(WY)	1990	1990	1990	1990	1990	1990	1984	1984	1984	1984	1984	1984

08169000 COMAL RIVER AT NEW BRAUNFELS, TX--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1974 - 2000z	
ANNUAL TOTAL	125448		96234			
ANNUAL MEAN	344		263		310	
HIGHEST ANNUAL MEAN					482	1999
LOWEST ANNUAL MEAN					145	1984
HIGHEST DAILY MEAN	540	Jun 21	509	Jun 10	22000	Oct 17 1998
LOWEST DAILY MEAN	276	Oct 15	138	Sep 7	26	Jul 18 1984
ANNUAL SEVEN-DAY MINIMUM	278	Oct 10	146	Sep 5	28	Jul 18 1984
INSTANTANEOUS PEAK FLOW			1020	Jun 10	c73500	Oct 17 1998
INSTANTANEOUS PEAK STAGE			5.56	Jun 10	a39.28	Oct 17 1998
ANNUAL RUNOFF (AC-FT)	248800		190900		224300	
10 PERCENT EXCEEDS	407		305		418	
50 PERCENT EXCEEDS	344		285		305	
90 PERCENT EXCEEDS	292		180		185	

z Period of regulated streamflow.
c From rating curve extended above indirect measurements of 60,800 ft^3/s and 55,800 ft^3/s.
a From floodmark.



08169500 GUADALUPE RIVER AT NEW BRAUNFELS, TX

LOCATION.--Lat 29°41'52", long 98°06'23", Comal County, Hydrologic Unit 12100202, in second floor of abandoned turbine building at Comal Mills, 300 ft. downstream from Missouri Pacific Railroad, 0.4 miles upstream from IH-35, 0.7 mile downstream from mouth of Comal River, 23.7 mi downstream from Canyon Lake, and at mile 279.3.

DRAINAGE AREA.--1,652 mi^2, of which 1,432 mi^2 is above Canyon Dam.

PERIOD OF RECORD.--Jan 1915 to Dec 1927 (daily mean discharge), Apr 1974 to Sep 1999 (annual peak discharge), Oct 1999 to Sep 2000 (daily mean stage).
Water-quality records.--Chemical data: Oct 1982 to Feb 1998.

GAGE.--Water-stage recorder. Datum of gage is 572.55 ft above sea level. Satellite telemeter at station.

REMARKS.--Records good. Since reactivation of gage in 1974, flow completely regulated by Canyon Lake (station 08167700, conservation pool storage 385,600 acre-ft) 21.9 mi upstream. Small diversions for irrigation above this station.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.-- 12 years (water years 1916-27) prior to regulation by Canyon Lake, 751 ft^3/s (544,100 acre-ft/yr).

EXTREMES FOR PERIOD PRIOR TO REGULATION (WATER YEARS 1915-28).-- Maximum discharge, 56,600 ft^3/s Sep 10, 1921 (gage height, 28.60 ft); minimum 270 ft^3/s Jul 20, 1918.

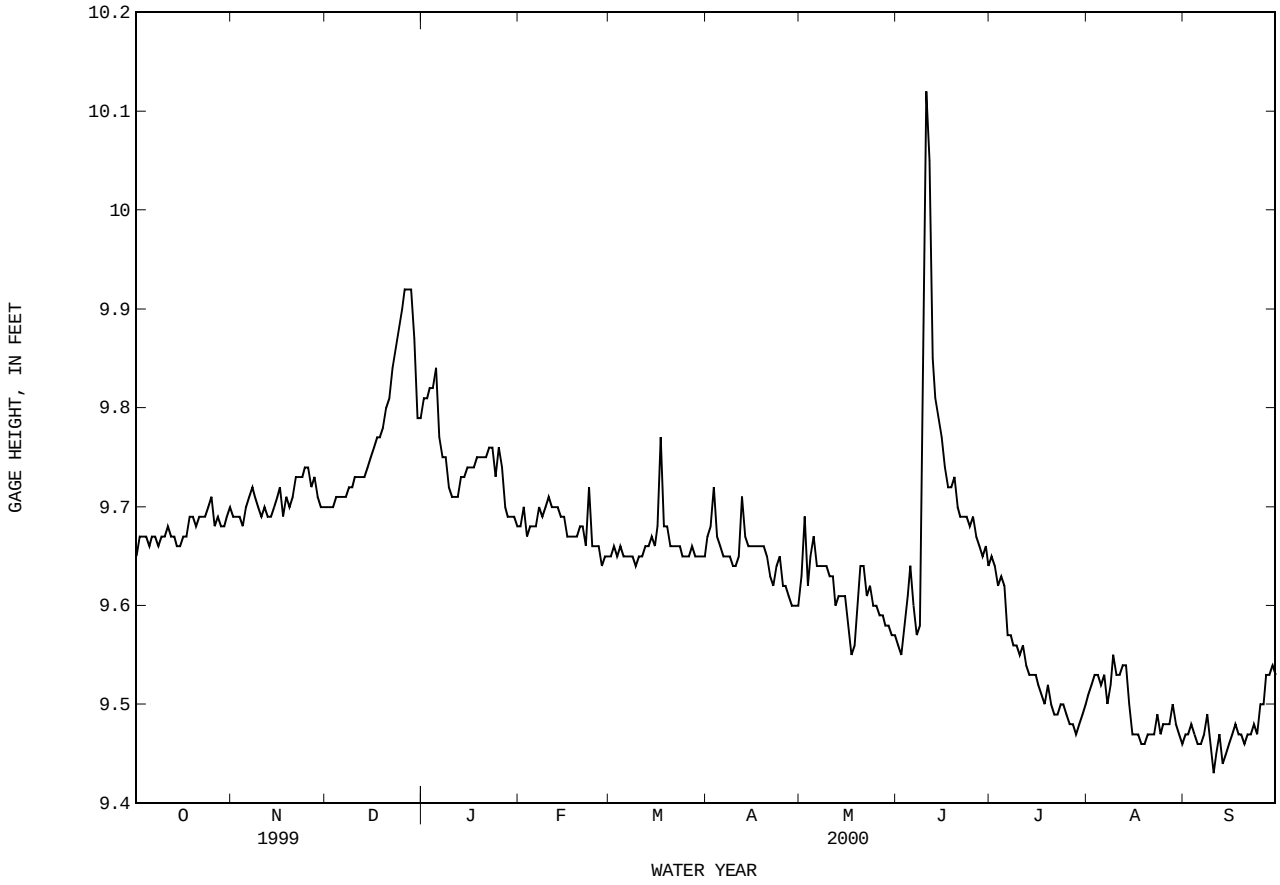
EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1845, 39.5 ft Aug 1869 and in Dec 1913, from information by local residents. Maximum discharge, 101,000 ft^3/s Jun 15, 1935 (gage height, unknown).

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 10.69 ft, Jun 10; minimum gage height, 9.39 ft, Sep 10.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.65	9.69	9.70	9.81	9.68	9.65	9.67	9.63	9.56	9.65	9.51	9.47
2	9.67	9.69	9.70	9.81	9.70	9.66	9.68	9.69	9.55	9.64	9.52	9.47
3	9.67	9.69	9.70	9.82	9.67	9.65	9.72	9.62	9.58	9.62	9.53	9.48
4	9.67	9.68	9.71	9.82	9.68	9.66	9.67	9.65	9.61	9.63	9.53	9.47
5	9.66	9.70	9.71	9.84	9.68	9.65	9.66	9.67	9.64	9.62	9.52	9.46
6	9.67	9.71	9.71	9.77	9.68	9.65	9.65	9.64	9.60	9.57	9.53	9.46
7	9.67	9.72	9.71	9.75	9.70	9.65	9.65	9.64	9.57	9.57	9.50	9.47
8	9.66	9.71	9.72	9.75	9.69	9.65	9.65	9.64	9.58	9.56	9.52	9.49
9	9.67	9.70	9.72	9.72	9.70	9.64	9.64	9.64	9.84	9.56	9.55	9.46
10	9.67	9.69	9.73	9.71	9.71	9.65	9.64	9.63	10.12	9.55	9.53	9.43
11	9.68	9.70	9.73	9.71	9.70	9.65	9.65	9.63	10.05	9.56	9.53	9.45
12	9.67	9.69	9.73	9.71	9.70	9.66	9.71	9.60	9.85	9.54	9.54	9.47
13	9.67	9.69	9.73	9.73	9.70	9.66	9.67	9.61	9.81	9.53	9.54	9.44
14	9.66	9.70	9.74	9.73	9.69	9.67	9.66	9.61	9.79	9.53	9.50	9.45
15	9.66	9.71	9.75	9.74	9.69	9.66	9.66	9.61	9.77	9.53	9.47	9.46
16	9.67	9.72	9.76	9.74	9.67	9.68	9.66	9.58	9.74	9.52	9.47	9.47
17	9.67	9.69	9.77	9.74	9.67	9.77	9.66	9.55	9.72	9.51	9.47	9.48
18	9.69	9.71	9.77	9.75	9.67	9.68	9.66	9.56	9.72	9.50	9.46	9.47
19	9.69	9.70	9.78	9.75	9.67	9.68	9.66	9.60	9.73	9.52	9.46	9.47
20	9.68	9.71	9.80	9.75	9.68	9.66	9.65	9.64	9.70	9.50	9.47	9.46
21	9.69	9.73	9.81	9.75	9.68	9.66	9.63	9.64	9.69	9.49	9.47	9.47
22	9.69	9.73	9.84	9.76	9.66	9.66	9.62	9.61	9.69	9.49	9.47	9.47
23	9.69	9.73	9.86	9.76	9.72	9.66	9.64	9.62	9.69	9.50	9.49	9.48
24	9.70	9.74	9.88	9.73	9.66	9.65	9.65	9.60	9.68	9.50	9.47	9.47
25	9.71	9.74	9.90	9.76	9.66	9.65	9.62	9.60	9.69	9.49	9.48	9.50
26	9.68	9.72	9.92	9.74	9.66	9.65	9.62	9.59	9.67	9.48	9.48	9.50
27	9.69	9.73	9.92	9.70	9.64	9.66	9.61	9.59	9.66	9.48	9.48	9.53
28	9.68	9.71	9.92	9.69	9.65	9.65	9.60	9.58	9.65	9.47	9.50	9.53
29	9.68	9.70	9.87	9.69	9.65	9.65	9.60	9.58	9.66	9.48	9.48	9.54
30	9.69	9.70	9.79	9.69	---	9.65	9.60	9.57	9.64	9.49	9.47	9.53
31	9.70	---	9.79	9.68	---	9.65	---	9.57	---	9.50	9.46	---
MEAN	9.68	9.71	9.78	9.75	9.68	9.66	9.65	9.61	9.71	9.53	9.50	9.48
MAX	9.71	9.74	9.92	9.84	9.72	9.77	9.72	9.69	10.12	9.65	9.55	9.54
MIN	9.65	9.68	9.70	9.68	9.64	9.64	9.60	9.55	9.55	9.47	9.46	9.43

08169500 GUADALUPE RIVER AT NEW BRAUNFELS, TX--Continued



08170000 SAN MARCOS SPRINGS AT SAN MARCOS, TX

LOCATION.--Lat 29°53′20", long 97°56′02", Hays County, Hydrologic Unit 12100203, on left bank at downstream side of bridge on Aquarena Springs Drive (Loop 82), 500 ft downstream from Spring Lake, and 4.2 mi upstream from Blanco River.

DRAINAGE AREA.--Not applicable. This is a springflow station.

PERIOD OF RECORD.--May 1956 to current year. May 1956 to Sep 1988, at site 0.7 mi downstream from bridge on Interstate Highway 35 and 2.1 mi upstream from Blanco River. Oct 1988 to Sep 1994, at site of ground-water well No. LR-67-09-110, 0.2 mi southwest of intersection of FM 2439 and McCarty Lane and 3.7 mi south of San Marcos; water-level data and measurements of springflow were used to compute springflow. Records prior to Oct 1997 published as San Marcos River Springflow at San Marcos.

REVISED RECORDS.--WSP 1923: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 557.67 ft above sea level. May 1956 to Sep 1988, water-stage recorder 0.7 mi downstream from Interstate Highway 35 and 2.1 mi upstream from Blanco River, datum 536.82 ft above sea level. Oct 1988 to Sep 1994, water-stage recorder at ground-water well No. LR-67-09-110, 0.2 mi southwest of intersection of FM 2439 and McCarty Lane and 3.7 mi south of San Marcos, datum 678.50 ft above sea level. Satellite telemeter at station.

REMARKS.--Records good. Springflow is equal to river flow (San Marcos River at San Marcos, station 08170500) except during periods of local runoff. Springflow is separated from runoff using modified Institute of Hydrology base-flow separation program BFI 4.02. The springflow for all days with springflow separations and all days in which the river flow was estimated, are flagged as estimated. San Marcos Springs emerge from the Edwards and associated limestones about 1.1 mi upstream from Interstate Highway 35, in the Balcones Fault Zone.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	125	107	120	111	e116	115	112	e114	116	181	130	117
2	e124	106	120	111	117	116	113	e116	118	e178	e131	117
3	e122	107	120	e110	e115	114	e111	119	116	175	132	115
4	120	108	119	109	114	114	110	120	116	e170	131	114
5	119	108	119	109	114	115	111	121	117	165	130	113
6	119	110	119	109	115	115	112	122	119	164	129	113
7	118	111	119	e110	e115	116	112	123	119	163	129	113
8	117	109	119	111	115	116	110	123	119	164	127	112
9	116	110	118	109	116	118	111	123	e133	161	127	113
10	116	110	117	108	117	117	111	123	e148	158	127	111
11	114	111	118	109	115	115	111	124	e161	158	125	111
12	e114	112	117	109	115	115	e112	124	e173	157	125	111
13	115	111	116	110	115	116	112	123	e186	154	126	111
14	113	112	114	111	114	117	112	123	201	154	125	110
15	113	113	116	111	113	117	112	125	200	e150	123	111
16	e112	113	116	110	113	117	112	125	198	e151	125	110
17	111	113	116	111	115	e115	113	124	196	147	125	109
18	e111	e115	115	111	e114	114	113	124	194	147	124	108
19	111	117	115	110	115	113	114	e123	195	144	124	108
20	111	117	113	110	115	115	116	122	194	142	123	108
21	113	119	113	111	117	114	116	122	193	143	121	109
22	114	119	113	110	118	113	116	122	192	e141	120	109
23	112	118	112	111	e116	113	117	124	192	140	121	109
24	112	118	112	110	115	e113	115	126	190	139	121	110
25	e110	120	111	109	115	e113	114	125	187	140	121	110
26	108	120	111	109	116	112	115	123	184	139	121	110
27	107	120	112	e111	114	112	115	121	184	137	120	109
28	107	120	111	113	115	113	114	120	183	138	119	110
29	108	119	111	113	115	e113	112	120	182	e136	119	111
30	e108	120	110	113	---	113	111	118	182	134	117	111
31	109	---	110	115	---	112	---	117	---	e132	118	---
TOTAL	3529	3413	3572	3424	3339	3551	3385	3779	4988	4702	3856	3333
MEAN	114	114	115	110	115	115	113	122	166	152	124	111
MAX	125	120	120	115	118	118	117	126	201	181	132	117
MIN	107	106	110	108	113	112	110	114	116	132	117	108
AC-FT	7000	6770	7090	6790	6620	7040	6710	7500	9890	9330	7650	6610

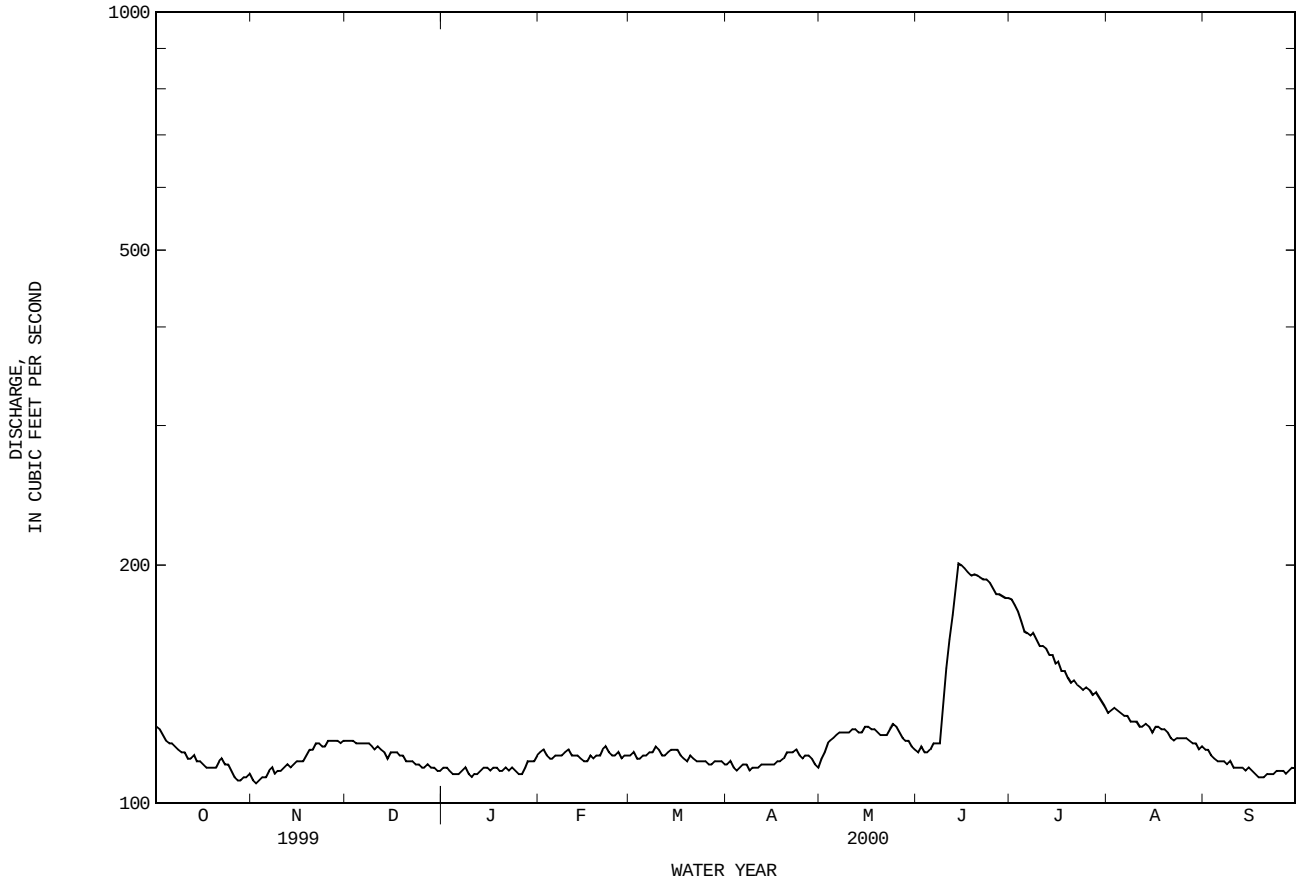
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1956 - 2000, BY WATER YEAR (WY)

MEAN	155	159	163	165	168	170	169	180	189	178	162	154
MAX	275	372	355	382	418	445	427	407	415	381	315	269
(WY)	1999	1999	1999	1992	1992	1992	1992	1992	1992	1992	1992	1987
MIN	64.6	70.3	72.0	74.3	72.4	89.3	98.1	99.3	63.6	54.5	53.5	59.1
(WY)	1957	1957	1957	1957	1957	1964	1964	1984	1956	1956	1956	1956

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1956 - 2000	
ANNUAL TOTAL	65723		44871			
ANNUAL MEAN	180		123		169	
HIGHEST ANNUAL MEAN					331	1992
LOWEST ANNUAL MEAN					92.0	1964
HIGHEST DAILY MEAN	335	Jan 1	201	Jun 14	451	Mar 12 1992
LOWEST DAILY MEAN	106	Nov 2	106	Nov 2	46	Aug 15 1956
ANNUAL SEVEN-DAY MINIMUM	107	Oct 27	107	Oct 27	50	Aug 10 1956
ANNUAL RUNOFF (AC-FT)	130400		89000		122100	
10 PERCENT EXCEEDS	288		149		242	
50 PERCENT EXCEEDS	177		116		157	
90 PERCENT EXCEEDS	112		110		102	

e Estimated

08170000 SAN MARCOS SPRINGS AT SAN MARCOS, TX--Continued



08170500 SAN MARCOS RIVER AT SAN MARCOS, TX

LOCATION.--Lat 29°53′20", long 97°56′02", Hays County, Hydrologic Unit 12100203, on left bank at downstream side of bridge on Aquarena Springs Drive (Loop 82), 500 ft downstream from Spring Lake, and 4.2 mi upstream from Blanco River.

DRAINAGE AREA.--47 mi^2 of contributing surface drainage, however, most of the time flow is solely from San Marcos Springs.

PERIOD OF RECORD.--Jul 1915 to Sep 1921 (daily mean discharges when instantaneous maximum discharge is less than 360 ft^3/s), May to Sep 1956, Oct 1994 to current year. Periodic measurements were made outside period of record since Nov 14, 1894, and were published as miscellaneous measurements.

REVISED RECORDS.--WSP 1923: Drainage area. WDR 1998: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 557.67 ft above sea level. Jul 1915 to Jan 1916, nonrecording gage at site 0.5 mi upstream from Interstate Highway 35, and Mar 1916 to Sep 1921, water-stage recorder about 0.7 mi downstream from Interstate Highway 35; datum relations unknown. May to Sep 1956, water-stage recorder 0.7 mi downstream from Interstate Highway 35 and 2.1 mi upstream from Blanco River, at datum 536.82 ft above sea level. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. No known regulation. Entire flow of river is from San Marcos Springs (station 08170000) except during periods of local runoff. San Marcos Springs emerge from the Edwards and associated limestones about 1.1 mi upstream from Interstate Highway 35, in the Balcones Fault Zone. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water-quality data.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

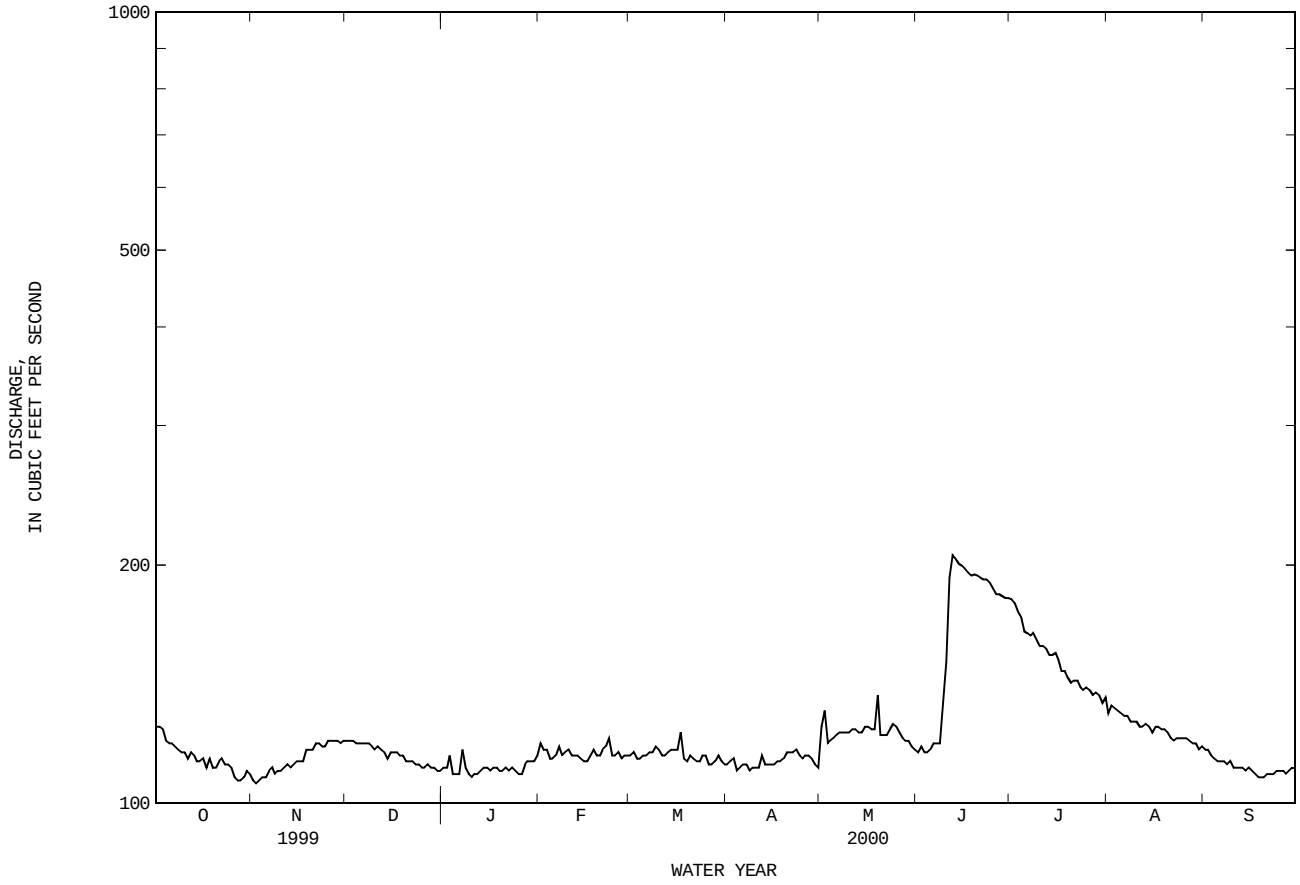
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	125	107	120	111	119	115	112	125	116	181	130	117
2	125	106	120	111	117	116	113	131	118	179	133	117
3	124	107	120	115	117	114	114	119	116	175	132	115
4	120	108	119	109	114	114	110	120	116	172	131	114
5	119	108	119	109	114	115	111	121	117	165	130	113
6	119	110	119	109	115	115	112	122	119	164	129	113
7	118	111	119	117	118	116	112	123	119	163	129	113
8	117	109	119	111	115	116	110	123	119	164	127	112
9	116	110	118	109	116	118	111	123	135	161	127	113
10	116	110	117	108	117	117	111	123	151	158	127	111
11	114	111	118	109	115	115	111	124	193	158	125	111
12	116	112	117	109	115	115	115	124	206	157	125	111
13	115	111	116	110	115	116	112	123	204	154	126	111
14	113	112	114	111	114	117	112	123	201	154	125	110
15	113	113	116	111	113	117	112	125	200	155	123	111
16	114	113	116	110	113	117	112	125	198	152	125	110
17	111	113	116	111	115	123	113	124	196	147	125	109
18	114	117	115	111	117	114	113	124	194	147	124	108
19	111	117	115	110	115	113	114	137	195	144	124	108
20	111	117	113	110	115	115	116	122	194	142	123	108
21	113	119	113	111	117	114	116	122	193	143	121	109
22	114	119	113	110	118	113	116	122	192	143	120	109
23	112	118	112	111	121	113	117	124	192	140	121	109
24	112	118	112	110	115	115	115	126	190	139	121	110
25	111	120	111	109	115	115	114	125	187	140	121	110
26	108	120	111	109	116	112	115	123	184	139	121	110
27	107	120	112	112	114	112	115	121	184	137	120	109
28	107	120	111	113	115	113	114	120	183	138	119	110
29	108	119	111	113	115	115	112	120	182	137	119	111
30	110	120	110	113	---	113	111	118	182	134	117	111
31	109	---	110	115	---	112	---	117	---	136	118	---
TOTAL	3542	3415	3572	3437	3355	3565	3391	3819	5076	4718	3858	3333
MEAN	114	114	115	111	116	115	113	123	169	152	124	111
MAX	125	120	120	117	121	123	117	137	206	181	133	117
MIN	107	106	110	108	113	112	110	117	116	134	117	108
AC-FT	7030	6770	7090	6820	6650	7070	6730	7570	10070	9360	7650	6610

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1995 - 2000, BY WATER YEAR (WY)

MEAN	237	175	168	161	154	155	154	153	188	178	158	155
MAX	729	373	355	312	275	228	206	183	308	307	267	227
(WY)	1999	1999	1999	1999	1999	1999	1998	1997	1997	1997	1997	1997
MIN	107	93.1	91.5	99.0	98.2	108	101	99.6	94.4	84.4	84.2	109
(WY)	1997	1997	1997	1997	1997	1996	1996	1996	1996	1996	1996	1996

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1995 - 2000	
ANNUAL TOTAL	65832		45081			
ANNUAL MEAN	180		123		170	
HIGHEST ANNUAL MEAN					274	1999
LOWEST ANNUAL MEAN					110	1996
HIGHEST DAILY MEAN	335	Jan 1	206	Jun 12	6200	Oct 17 1998
LOWEST DAILY MEAN	106	Nov 2	106	Nov 2	76	Aug 15 1996
ANNUAL SEVEN-DAY MINIMUM	108	Oct 27	108	Oct 27	77	Aug 15 1996
INSTANTANEOUS PEAK FLOW			382	May 19	21500	Oct 17 1998
INSTANTANEOUS PEAK STAGE			6.38	May 19	21.29	Oct 17 1998
INSTANTANEOUS LOW FLOW					71	Nov 18 1996
ANNUAL RUNOFF (AC-FT)	130600		89420		123000	
10 PERCENT EXCEEDS	288		151		251	
50 PERCENT EXCEEDS	177		116		149	
90 PERCENT EXCEEDS	113		110		100	

08170500 SAN MARCOS RIVER AT SAN MARCOS, TX--Continued



08171000 BLANCO RIVER AT WIMBERLEY, TX

LOCATION.--Lat 29°59'39", long 98°05'19", Hays County, Hydrologic Unit 12100203, on left bank at downstream side of highway, near left end of bridge on Ranch Road 12, 0.3 mi southeast of Wimberley, 2,200 ft downstream from Cypress Creek, and at mile 29.0.

DRAINAGE AREA.--355 mi^2.

PERIOD OF RECORD.--Aug 1924 to Sep 1926, Jun 1928 to current year.
Water-quality records.--Chemical data: Apr 1962 to Sep 1979, Feb 1988 to Sep 1993, Apr 1996 to Apr 1998. Biochemical data: Jan 1974 to Sep 1979, Feb 1988 to Sep 1993, Apr 1996 to Apr 1998. Pesticide data: Jan 1974 to Sep 1979, Feb 1988 to Sep 1993, Apr 1996 to Apr 1998. Sediment data: Nov 1965 to Apr 1966, Apr 1996 to Apr 1998. Water temperature: Dec 1976 to Sep 1978.

REVISED RECORDS.--WSP 1562: 1929, 1930-31(M), 1935-36(M), 1938(M), 1941-42(M), 1947(M), 1949(M). WSP 2123: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 797.23 ft above sea level. Aug 6, 1924 to Sep 30, 1926, nonrecording gage at site 1,030 ft upstream at datum 5.00 ft higher. Recording gage from Jun 6, 1928 to Jun 12, 1975, at site 1,000 ft upstream at datum 5.00 ft higher. Satellite telemeter at station.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. No known regulation. There are many small diversions above station. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water-quality data.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in Jul 1869 reached a stage of 25 ft, from information by local residents. Maximum stage since at least 1869, that of May 28, 1929.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,800 ft^3/s:

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)

No peak greater than base discharge.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	21	20	19	25	23	22	65	16	20	20	11
2	20	21	21	19	30	24	27	65	16	20	13	e7.6
3	20	20	22	19	25	24	34	51	15	20	11	e6.4
4	19	22	22	17	23	23	26	44	17	19	11	4.9
5	19	23	19	18	22	22	23	39	22	18	10	e5.9
6	19	22	19	19	21	23	23	36	17	17	10	6.4
7	18	21	19	33	21	24	24	33	15	16	10	7.0
8	18	23	22	35	21	22	22	31	15	16	10	7.6
9	19	21	20	24	21	22	22	29	84	15	11	8.2
10	19	22	20	23	21	21	22	29	234	14	11	8.2
11	19	22	20	23	22	20	24	27	174	14	11	8.5
12	19	21	23	22	22	19	31	26	95	14	11	8.5
13	19	21	23	22	21	20	26	31	70	13	12	8.2
14	19	20	20	21	21	22	24	24	57	13	12	9.0
15	19	21	20	20	20	22	23	22	50	13	12	10
16	19	20	19	21	19	27	24	22	45	11	12	9.0
17	25	20	19	21	20	35	23	21	42	11	12	7.8
18	24	21	19	21	19	26	21	20	41	11	12	8.0
19	23	20	19	21	19	24	21	34	44	11	12	8.2
20	20	18	20	20	18	22	20	49	37	11	11	8.4
21	20	23	21	21	19	23	19	30	34	11	11	10
22	20	22	20	21	22	24	19	25	33	10	e11	12
23	19	22	19	21	50	22	18	22	31	11	11	9.7
24	19	21	19	21	33	22	19	21	26	13	11	8.7
25	19	22	18	20	28	21	18	19	25	12	11	12
26	20	21	18	20	31	22	18	19	26	11	11	11
27	20	22	18	25	25	29	18	18	24	11	12	9.5
28	20	23	19	26	23	25	19	20	23	11	12	9.7
29	20	22	18	22	23	25	18	18	20	10	11	9.3
30	25	21	18	21	---	23	18	17	20	11	11	9.7
31	24	---	19	22	---	21	---	15	---	14	11	---
TOTAL	622	639	613	678	685	722	666	922	1368	422	357	260.4
MEAN	20.1	21.3	19.8	21.9	23.6	23.3	22.2	29.7	45.6	13.6	11.5	8.68
MAX	25	23	23	35	50	35	34	65	234	20	20	12
MIN	18	18	18	17	18	19	18	15	15	10	10	4.9
AC-FT	1230	1270	1220	1340	1360	1430	1320	1830	2710	837	708	517

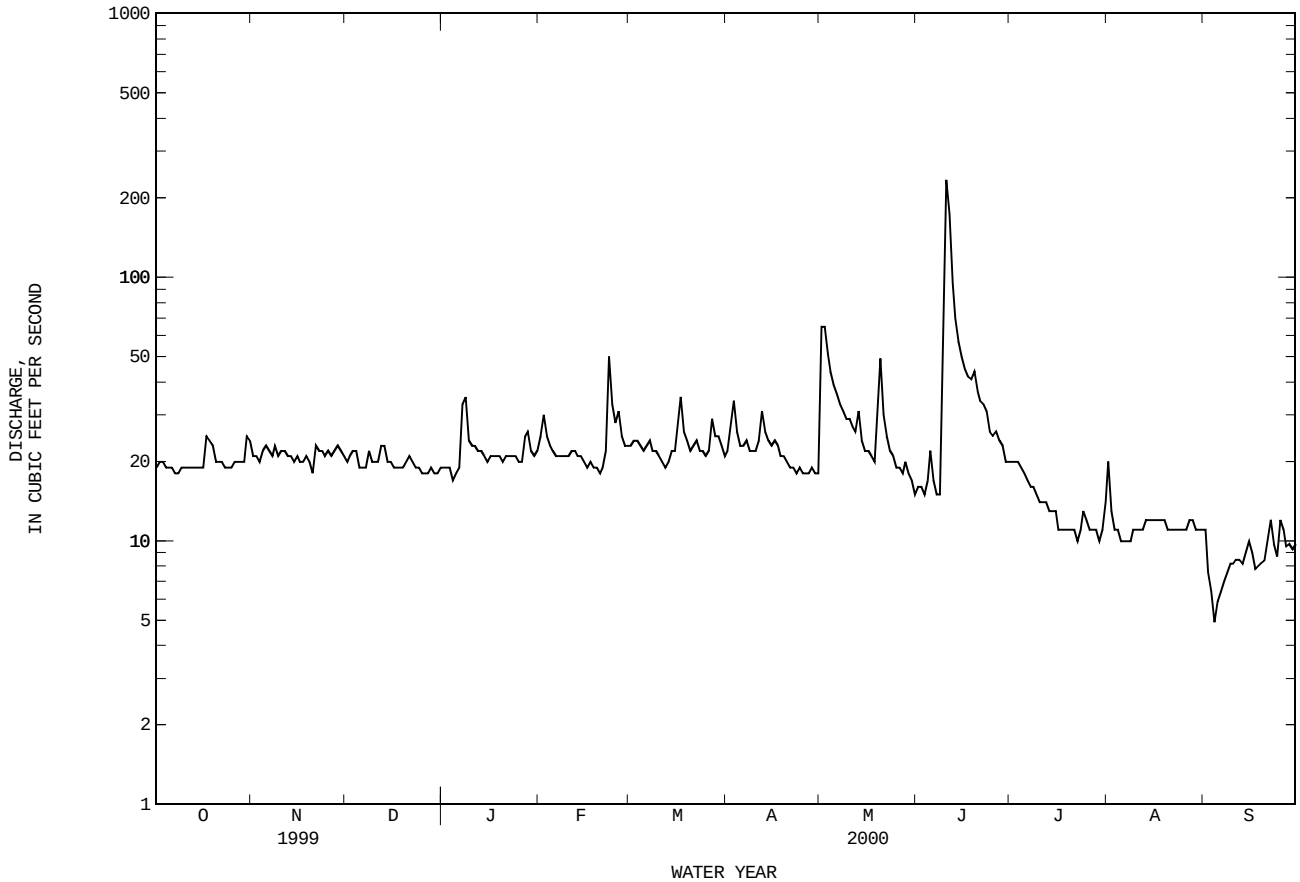
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1924 - 2000h, BY WATER YEAR (WY)

MEAN	115	91.0	118	121	161	152	178	216	230	101	49.3	86.8
MAX	1322	828	1364	1134	1401	977	953	1470	2308	935	201	1413
(WY)	1999	1999	1992	1968	1992	1992	1957	1929	1997	1973	1973	1952
MIN	6.24	7.41	7.87	6.66	8.13	5.93	5.19	12.5	3.44	1.70	2.89	6.93
(WY)	1941	1956	1956	1956	1956	1956	1956	1956	1956	1956	1956	1928

08171000 BLANCO RIVER AT WIMBERLEY, TX--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1924 - 2000h	
ANNUAL TOTAL	19338		7954.4			
ANNUAL MEAN	53.0		21.7		134	
HIGHEST ANNUAL MEAN					566	1992
LOWEST ANNUAL MEAN					6.45	1956
HIGHEST DAILY MEAN	191	Jan 1	234	Jun 10	36900	Sep 11 1952
LOWEST DAILY MEAN	17	Sep 23	4.9	Sep 4	.70	Jul 17 1956
ANNUAL SEVEN-DAY MINIMUM	18	Sep 18	6.5	Sep 2	.79	Aug 12 1956
INSTANTANEOUS PEAK FLOW			368	Jun 10	i113000	May 28 1929
INSTANTANEOUS PEAK STAGE			4.57	Jun 10	a33.30	May 28 1929
ANNUAL RUNOFF (AC-FT)	38360		15780		97400	
10 PERCENT EXCEEDS	93		29		275	
50 PERCENT EXCEEDS	49		20		52	
90 PERCENT EXCEEDS	19		11		12	

e Estimated
h See PERIOD OF RECORD paragraph.
i From indirect measurement of peak flow.
a From floodmark.



08171300 BLANCO RIVER NEAR KYLE, TX

LOCATION.--Lat 29°58′45", long 97°54′35", Hays County, Hydrologic Unit 12100203, on left bank 800 ft downstream from Tarbutton Ranch House (Hatchett Ranch), 2.2 mi southwest of Kyle, 4.2 mi downstream from Halifax Creek, and 6.3 mi upstream from bridge on U.S. Highway 81.

DRAINAGE AREA.--412 mi^2.

PERIOD OF RECORD.--May 1956 to current year.

REVISED RECORDS.--WSP 1923: 1957-58, 1960(M). WSP 2123: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 620.12 ft above sea level (levels by U.S. Army Corps of Engineers). Satellite telemeter at station.

REMARKS.--Records good. No known regulation. Small diversions above station for irrigation. Most of the low flow of the Blanco River enters the Edwards and associated limestones in the Balcones Fault Zone which crosses the basin upstream from this station and below Blanco River at Wimberley (station 08171000). No flow at times. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water-quality data.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1882, about 40 ft in May 1929, from information by local residents (discharge, 139,000 ft^3/s). Flood of Sep 11, 1952, reached a stage of 38.0 ft (discharge, 115,000 ft^3/s).

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,500 ft^3/s:

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)

No peak greater than base discharge.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	1.7	1.6	.03	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	2.2	6.3	.04	.00	18	.00	.00	.00	.00
3	.00	.00	.00	2.4	7.7	.00	.00	20	.00	.00	.00	.00
4	.00	.00	.00	1.3	4.5	.00	.00	8.2	.00	.00	.00	.00
5	.00	.00	.00	.65	1.6	.00	.00	2.8	.00	.00	.00	.00
6	.00	.00	.00	.45	.81	.00	.00	.47	.00	.00	.00	.00
7	.00	.00	.00	3.8	.80	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	29	.73	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	19	.48	.00	.00	.00	52	.00	.00	.00
10	.00	.00	.00	6.8	.04	.00	.00	.00	265	.00	.00	.00
11	.00	.00	.08	3.2	.00	.00	.00	.00	297	.00	.00	.00
12	.00	.00	1.3	2.9	.00	.00	.00	.00	124	.00	.00	.00
13	.00	.00	2.3	2.5	.01	.00	.00	.00	70	.00	.00	.00
14	.00	.00	2.0	1.4	.01	.00	.00	.00	45	.00	.00	.00
15	.00	.00	1.9	.74	.00	.00	.00	.00	32	.00	.00	.00
16	.00	.00	.88	.52	.00	.00	.00	.00	24	.00	.00	.00
17	.00	.00	.65	.52	.00	.00	.00	.00	19	.00	.00	.00
18	.00	.00	1.1	.55	.00	1.1	.00	.00	17	.00	.00	.00
19	.00	.00	1.1	.48	.00	2.7	.00	.00	20	.00	.00	.00
20	.00	.00	1.8	.22	.00	.34	.00	2.8	17	.00	.00	.00
21	.00	.00	3.5	.08	.00	.05	.00	13	9.0	.00	.00	.00
22	.00	.00	3.6	.03	.00	.00	.00	1.4	5.2	.00	.00	.00
23	.00	.00	2.9	.04	.77	.00	.00	.00	3.1	.00	.00	.00
24	.00	.00	2.4	.08	19	.00	.00	.00	1.5	.00	.00	.00
25	.00	.00	2.2	.07	7.6	.00	.00	.00	.23	.00	.00	.00
26	.00	.00	1.7	.03	3.5	.00	.00	.00	.00	.00	.00	.00
27	.00	.00	1.6	.07	1.9	.00	.00	.00	.00	.00	.00	.00
28	.00	.00	1.5	3.0	1.5	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	1.3	4.2	.22	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	1.5	2.4	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	1.5	1.5	---	.00	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	36.81	91.83	59.07	4.26	0.00	66.67	1001.03	0.00	0.00	0.00
MEAN	.000	.000	1.19	2.96	2.04	.14	.000	2.15	33.4	.000	.000	.000
MAX	.00	.00	3.6	29	19	2.7	.00	20	297	.00	.00	.00
MIN	.00	.00	.00	.03	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	73	182	117	8.4	.00	132	1990	.00	.00	.00
CFSM	.00	.00	.00	.01	.00	.00	.00	.01	.08	.00	.00	.00
IN.	.00	.00	.00	.01	.01	.00	.00	.01	.09	.00	.00	.00

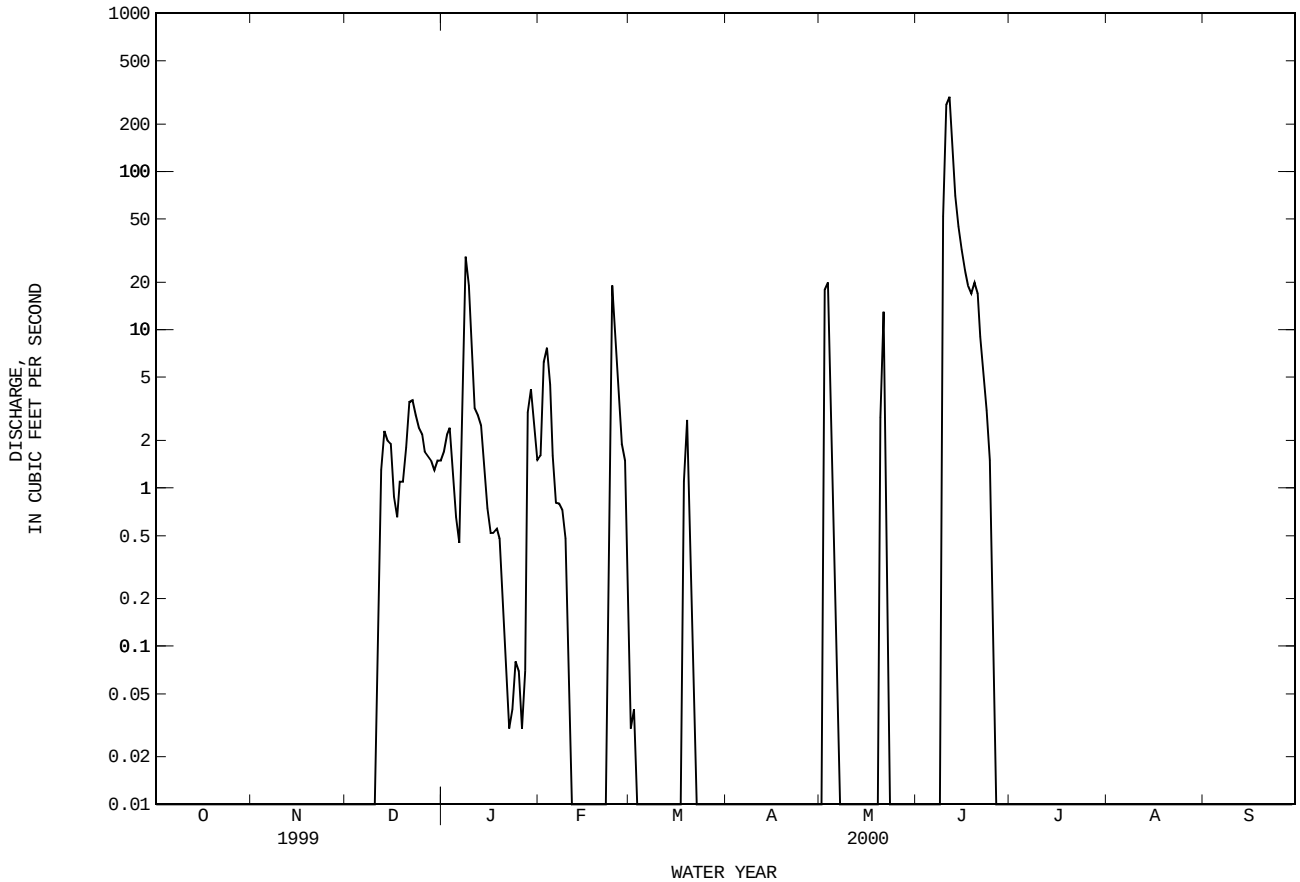
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1956 - 2000, BY WATER YEAR (WY)

MEAN	154	116	153	150	197	173	186	239	314	105	42.8	52.7
MAX	1646	961	1775	1319	1511	1078	906	1148	2459	828	196	348
(WY)	1999	1999	1992	1968	1992	1992	1977	1958	1997	1973	1973	1986
MIN	.000	.000	.000	.000	.000	.14	.000	1.96	.000	.000	.000	.000
(WY)	1964	1964	1964	1957	1990	2000	2000	1964	1956	1956	1956	1956

08171300 BLANCO RIVER NEAR KYLE, TX--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1956 - 2000	
ANNUAL TOTAL	12652.36		1259.67			
ANNUAL MEAN	34.7		3.44		157	
HIGHEST ANNUAL MEAN					625	1992
LOWEST ANNUAL MEAN					3.44	2000
HIGHEST DAILY MEAN	190	Jan 1	297	Jun 11	26000	Oct 17 1998
LOWEST DAILY MEAN	.00	Sep 11	.00	Oct 1	.00	Jun 1 1956
ANNUAL SEVEN-DAY MINIMUM	.00	Sep 11	.00	Oct 1	.00	Jun 1 1956
INSTANTANEOUS PEAK FLOW			463	Jun 11	i105000	Oct 17 1998
INSTANTANEOUS PEAK STAGE			6.73	Jun 11	a36.30	May 2 1958
ANNUAL RUNOFF (AC-FT)	25100		2500		114100	
ANNUAL RUNOFF (CFSM)	.084		.008		.38	
ANNUAL RUNOFF (INCHES)	1.14		.11		5.19	
10 PERCENT EXCEEDS	85		2.8		328	
50 PERCENT EXCEEDS	24		.00		50	
90 PERCENT EXCEEDS	.00		.00		.77	

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



08172000 SAN MARCOS RIVER AT LULING, TX

LOCATION.--Lat 29°39′58", long 97°39′02", Caldwell County line, Hydrologic Unit 12100203, at downstream side of bridge on State Highway 80, 0.9 mi south of U.S. Post Office at Luling, and 9.5 mi upstream from Plum Creek.

DRAINAGE AREA.--838 mi^2.

PERIOD OF RECORD.--Apr 1939 to current year.
Water-quality records.--Chemical data: Feb 1944 to Feb 1959, Sep 1961 to Apr 1966, Nov 1968 to Aug 1999. Pesticide data: Jun 1986 to May 1999. Sediment data: Oct 1960 to Apr 1966.

REVISED RECORDS.--WSP 958: 1940. WSP 1312: 1940(M), 1945(M), 1947(M). WSP 2123: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 322.05 ft above sea level. Prior to Oct 21, 1988, at site 390 ft downstream at same datum. Satellite telemeter at station.

REMARKS.--Records good. Since water year 1984, at least 10% of contributing drainage area has been regulated by upstream reservoirs. Flow is affected at times by discharge from the flood-detention pools of 18 floodwater-retarding structures with a combined detention capacity of 57,375 acre-ft. These structures control runoff from 105 mi^2 in the Town, Sink and York Creeks drainage basins. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water-quality data.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--44 years (water years 1940-83), 370 ft^3/s (268,100 acre-ft/yr).

EXTREMES FOR PERIOD PRIOR TO REGULATION (WATER YEARS 1940-83).--Maximum discharge, 57,000 ft^3/s Sep 12, 1952 (gage height, 34.95 ft); minimum daily, 43 ft^3/s Aug 12, 1951.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1859, 40.4 ft in 1869 or 1870, from information by Texas Department of Transportation. Flood of May 29, 1929, reached a stage of 37.1 ft and is the second highest known.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	124	127	123	121	125	124	112	122	107	151	119	90
2	125	123	122	124	146	124	119	293	105	150	117	89
3	125	122	122	121	147	122	136	355	109	147	110	90
4	127	122	123	119	128	122	143	170	116	145	109	89
5	124	122	121	123	124	119	117	e140	122	144	107	87
6	122	122	120	120	123	123	113	e134	117	142	107	88
7	120	125	121	141	124	123	113	e132	109	141	107	88
8	120	125	124	195	125	123	113	135	122	140	109	88
9	121	123	125	166	124	121	108	132	141	138	110	88
10	123	122	122	131	123	119	109	131	597	137	107	90
11	126	122	120	125	123	119	115	123	834	134	107	90
12	126	119	122	124	123	116	127	122	566	133	107	87
13	125	119	122	125	123	115	139	127	482	129	104	91
14	124	121	120	124	121	124	118	125	317	124	104	96
15	123	118	120	122	120	127	116	119	265	124	105	99
16	121	118	118	125	121	123	110	121	237	126	105	97
17	122	117	119	124	121	344	109	118	245	125	104	91
18	123	117	120	125	121	303	109	115	272	121	103	89
19	135	118	119	123	118	148	109	149	204	121	101	89
20	130	121	123	121	116	125	107	227	205	118	100	89
21	124	121	123	120	119	121	107	164	190	115	101	92
22	124	121	122	121	121	122	106	126	178	115	103	97
23	127	121	122	122	151	119	105	124	169	116	103	95
24	125	120	120	121	165	115	105	118	166	118	101	91
25	125	121	118	120	126	114	105	120	164	115	98	93
26	124	122	118	120	125	114	104	115	162	114	97	91
27	122	121	120	125	124	115	102	113	159	113	97	89
28	121	122	120	e140	119	118	102	110	154	111	95	91
29	119	123	120	e135	122	114	104	107	156	110	96	89
30	123	123	118	e125	---	110	102	107	154	112	94	91
31	132	---	118	120	---	113	---	110	---	112	92	---
TOTAL	3852	3638	3745	3968	3668	4139	3384	4404	6924	3941	3219	2724
MEAN	124	121	121	128	126	134	113	142	231	127	104	90.8
MAX	135	127	125	195	165	344	143	355	834	151	119	99
MIN	119	117	118	119	116	110	102	107	105	110	92	87
AC-FT	7640	7220	7430	7870	7280	8210	6710	8740	13730	7820	6380	5400

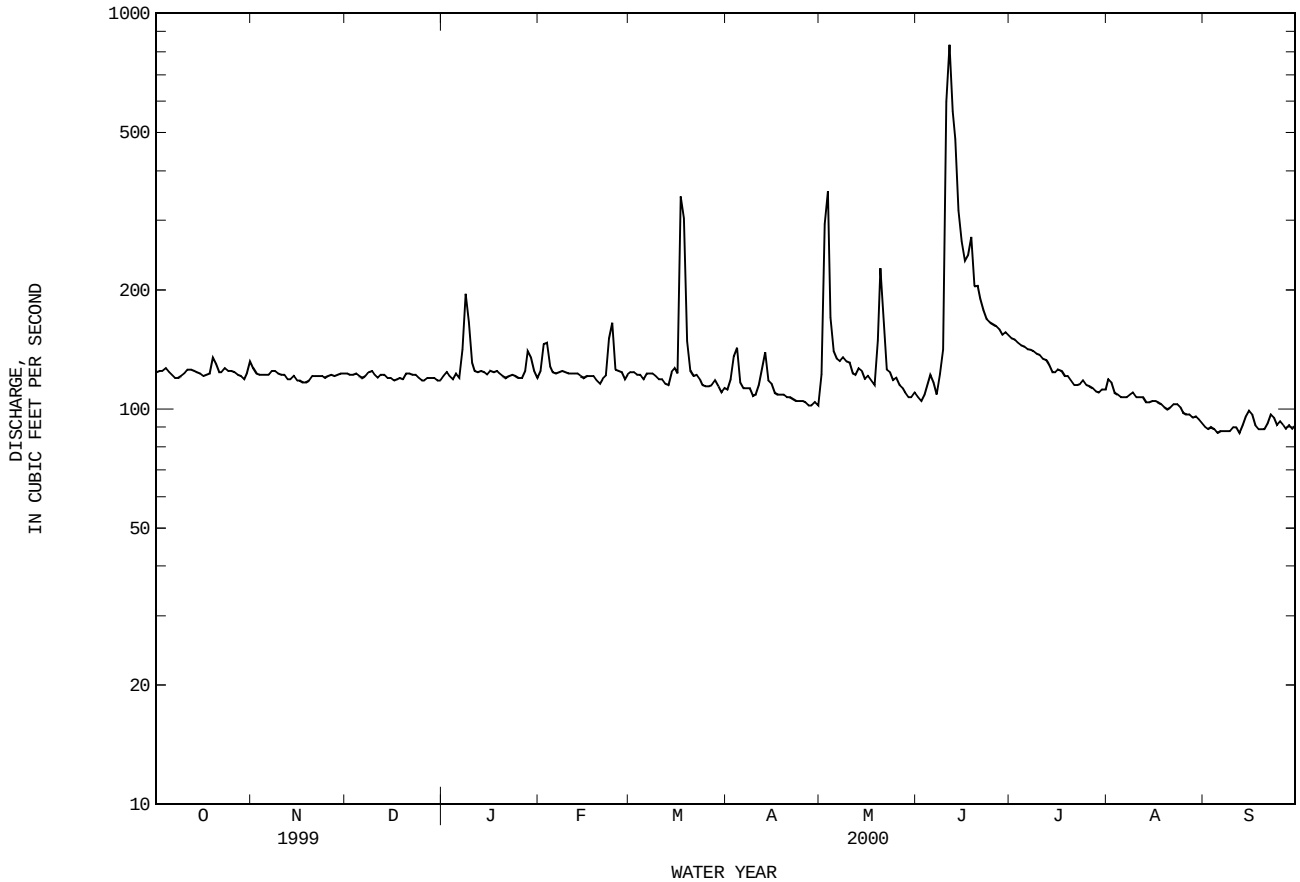
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 2000z, BY WATER YEAR (WY)

MEAN	537	340	542	431	529	469	396	476	910	332	210	225
MAX	5485	1682	3520	1948	3358	2438	1170	1519	4850	884	515	471
(WY)	1999	1999	1992	1992	1992	1992	1992	1992	1987	1997	1992	1986
MIN	80.7	90.4	87.1	91.3	95.8	114	103	84.5	83.7	68.4	63.7	64.4
(WY)	1990	1990	1990	1990	1990	1996	1996	1996	1984	1984	1984	1984

08172000 SAN MARCOS RIVER AT LULING, TX--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1984 - 2000z	
ANNUAL TOTAL	89542		47606			
ANNUAL MEAN	245		130		449	
HIGHEST ANNUAL MEAN					1482	1992
LOWEST ANNUAL MEAN					119	1984
HIGHEST DAILY MEAN	1610	Jun 22	834	Jun 11	90500	Oct 18 1998
LOWEST DAILY MEAN	117	Nov 17	87	Sep 5	56	Sep 1 1984
ANNUAL SEVEN-DAY MINIMUM	118	Nov 13	88	Sep 3	59	Aug 26 1984
INSTANTANEOUS PEAK FLOW			1090	Jun 11	i206000	Oct 18 1998
INSTANTANEOUS PEAK STAGE			10.42	Jun 11	a41.85	Oct 18 1998
ANNUAL RUNOFF (AC-FT)	177600		94430		325400	
10 PERCENT EXCEEDS	414		147		762	
50 PERCENT EXCEEDS	204		121		219	
90 PERCENT EXCEEDS	121		99		98	

e Estimated
z Period of regulated streamflow.
i From indirect measurement of peak flow.
a From floodmark.



08172400 PLUM CREEK AT LOCKHART, TX

LOCATION.--Lat 29°55'22", long 97°40'44", Caldwell County, Hydrologic Unit 12100203, on right bank 548 ft upstream from bridge on U.S. Highway 183, 2.7 mi north of Lockhart, 3.7 mi upstream from Town Creek, 5.0 mi downstream from Brushy Creek, and 30.4 mi upstream from mouth.

DRAINAGE AREA.--112 mi^2.

PERIOD OF RECORD.--Apr 1959 to current year.

REVISED RECORDS.--WSP 2123: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 431.19 ft above sea level. Apr 30, 1959 to Jul 25, 1968, at site 548 ft downstream at present datum. Satellite telemeter at station.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Since water year 1963, at least 10% of contributing drainage area has been regulated by upstream reservoirs. No known diversions above station. Flow is affected at times by discharge from the flood-detention pools of 17 floodwater-retarding structures with a combined capacity of 24,850 acre-ft. These structures control runoff from 67.8 mi^2 above this station. No flow at times. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water-quality data.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--3 years (water years 1960-62), 60.2 ft^3/s (43,610 acre-ft/yr).

EXTREMES FOR PERIOD PRIOR TO REGULATION (WATER YEARS 1960-62).--Maximum discharge, 26,600 ft^3/s Oct 29, 1960 (gage height, 20.62 ft); no flow for several days in each year.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1905, 22 ft in Jun 1936 at present site; flood in 1951 reached a stage of 20 ft at present site, from information by local resident.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.65	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	115	.00	e.38	.00	.00
3	.00	.00	.00	.00	.00	.00	.12	32	.00	e.10	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	13	.00	e.01	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	6.3	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	3.4	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	1.9	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.91	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.34	16	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.12	178	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	92	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	47	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	1.7	.00	35	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.11	.00	19	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	14	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	11	.00	.00	.00
17	.00	.00	.00	.00	.00	.07	.00	.00	8.8	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	7.4	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	6.5	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	12	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	5.9	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	3.5	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	e3.0	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	e2.7	.00	.00	.00
25	.00	.00	e.00	.00	.00	.00	.00	.00	e2.2	.00	.00	.00
26	.00	.00	e.00	.00	.00	.00	.00	.00	e1.9	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	.00	e1.6	.00	.00	.00
28	e.00	.00	.00	.00	.00	.00	.00	.00	e1.4	.00	.00	.00
29	e.00	.00	.00	.00	.00	.00	.00	.00	e1.2	.00	.00	.00
30	e.00	.00	.00	.00	---	.00	.00	.00	e.95	.00	.00	.00
31	e.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	0.00	0.00	0.00	0.07	1.93	172.97	471.05	1.14	0.00	0.00
MEAN	.000	.000	.000	.000	.000	.002	.064	5.58	15.7	.037	.000	.000
MAX	.00	.00	.00	.00	.00	.07	1.7	115	178	.65	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	.1	3.8	343	934	2.3	.00	.00

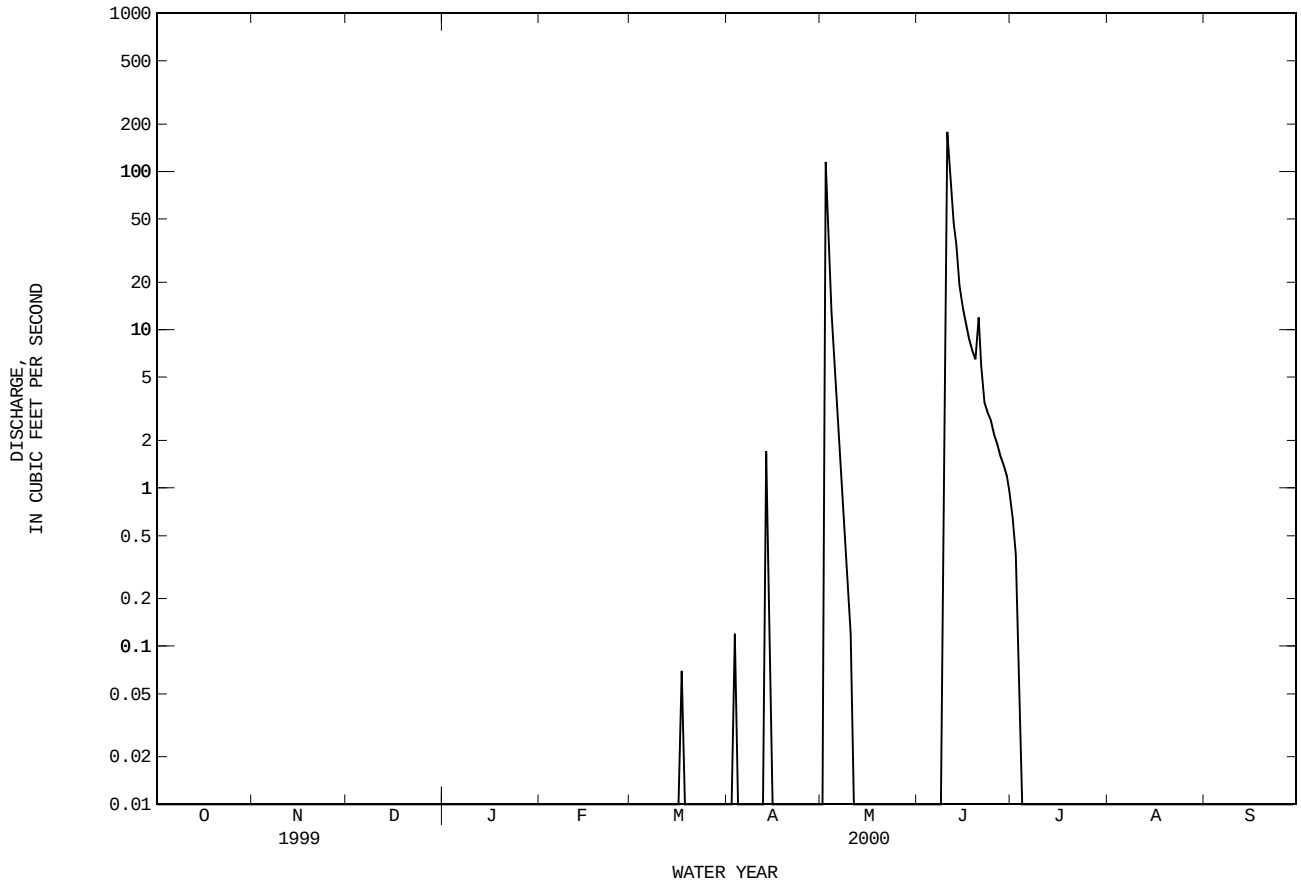
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1963 - 2000z, BY WATER YEAR (WY)

MEAN	63.8	46.8	53.8	43.0	65.3	37.5	40.9	107	103	11.2	3.42	8.25
MAX	1526	590	605	416	815	332	343	595	905	151	118	142
(WY)	1999	1986	1992	1968	1992	1992	1976	1975	1981	1985	1974	1974
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1964	1964	1964	1964	1989	1964	1967	1971	1963	1963	1963	1963

08172400 PLUM CREEK AT LOCKHART, TX--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1963 - 2000z	
ANNUAL TOTAL	1185.91		647.16			
ANNUAL MEAN	3.25		1.77		48.5	
HIGHEST ANNUAL MEAN					238	1992
LOWEST ANNUAL MEAN					.10	1978
HIGHEST DAILY MEAN	100	May 25	178	Jun 10	19400	Oct 18 1998
LOWEST DAILY MEAN	.00	May 7	.00	Oct 1	.00	Oct 11 1962
ANNUAL SEVEN-DAY MINIMUM	.00	Jun 7	.00	Oct 1	.00	Nov 9 1962
INSTANTANEOUS PEAK FLOW			291	May 2	c47200	Oct 18 1998
INSTANTANEOUS PEAK STAGE			7.36	May 2	a23.09	Oct 18 1998
ANNUAL RUNOFF (AC-FT)	2350		1280		35160	
10 PERCENT EXCEEDS	9.5		.10		59	
50 PERCENT EXCEEDS	.00		.00		.24	
90 PERCENT EXCEEDS	.00		.00		.00	

e Estimated
z Period of regulated streamflow.
c From rating curve extended above current meter discharge measurements of 12,900 ft^3/s and 21,300 ft^3/s.
a From floodmark.



08173900 GUADALUPE RIVER AT GONZALES, TX

LOCATION.--Lat 29°29′05", long 97°27′00", Gonzales County, Hydrologic Unit 12100202, in City Park on left bank 0.2 mi upstream from U.S. Highway 183 bridge, and 4.4 mi downstream from San Marcos River.

DRAINAGE AREA.--3,490 mi^2.

PERIOD OF RECORD.--Jul 1915 to Sep 1922, Records published in WSP's 408, 438, 458, 478, 528, and 548 later discredited and not to be used. Oct 1951 to Sep 1952 (discharge measurements only), Mar 1977 to Sep 1996 (peak stage only), Oct 1996 to current year.

Water-quality data.--Chemical data: Apr 1996 to Apr 1998. Biochemical data: Apr 1996 to Apr 1998. Sediment data: Apr 1996 to Apr 1998.

GAGE.--Water-stage recorder. Datum of gage is 231.80 ft above sea level. Jul 1915 to Sep 1922, and Oct 1951 to Sep 1952, 0.2 mi downstream, datum not known. Mar 1977 to Sep 1996, 1.2 mi upstream at Gonzales hydroelectric plant at National Weather Service datum. Gage moved to present site in 1996. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. Since water year 1964, at least 10% of contributing drainage area has been regulated by Canyon Lake (station 08167700, conservation pool storage 385,600 acre-ft) and a series of small power dams. Some water is diverted for irrigation and municipal use (amounts unknown). Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water-quality data.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 29, 1929, reached a stage of 38.3 ft, National Weather Service datum.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	510	591	551	400	607	591	504	467	357	478	275	211
2	453	545	548	500	607	554	500	1070	337	487	264	209
3	396	586	446	605	672	552	607	1340	339	474	250	213
4	519	534	456	688	604	544	734	901	333	388	282	138
5	540	623	631	514	542	529	632	779	795	479	244	272
6	458	1310	480	452	518	396	482	777	519	428	270	126
7	444	1040	562	644	528	563	523	605	523	307	271	206
8	466	442	556	739	564	573	471	552	502	428	418	210
9	495	461	534	864	587	514	404	419	465	466	275	210
10	480	668	472	607	552	513	391	501	1320	376	291	131
11	485	688	430	660	544	519	494	486	4170	356	243	191
12	625	478	625	602	472	477	600	455	4050	314	111	228
13	519	1010	483	530	583	475	518	580	1550	345	119	176
14	401	781	562	564	504	531	553	548	1210	197	210	192
15	517	430	575	516	561	619	573	469	1020	399	233	273
16	446	276	456	504	555	567	484	542	616	432	230	226
17	447	393	498	528	550	944	557	298	756	223	238	169
18	448	334	569	608	552	1250	507	447	888	292	286	325
19	581	265	480	546	532	856	493	339	890	376	244	215
20	595	244	564	517	526	554	416	714	626	222	216	230
21	592	433	542	586	516	675	496	657	649	266	240	252
22	451	380	579	526	451	541	410	603	658	252	273	230
23	537	302	552	525	667	532	434	511	597	241	243	275
24	452	463	529	448	774	553	500	378	577	330	228	254
25	481	418	420	522	635	576	358	325	563	262	242	278
26	628	539	487	533	536	464	478	455	530	265	216	256
27	467	451	508	580	525	473	424	291	663	186	136	334
28	547	528	557	567	522	620	394	353	534	279	290	163
29	470	545	559	556	548	576	420	512	537	271	218	338
30	556	514	542	498	---	488	435	397	390	240	142	187
31	394	---	539	520	---	523	---	375	---	161	312	---
TOTAL	15400	16272	16292	17449	16334	18142	14792	17146	26964	10220	7510	6718
MEAN	497	542	526	563	563	585	493	553	899	330	242	224
MAX	628	1310	631	864	774	1250	734	1340	4170	487	418	338
MIN	394	244	420	400	451	396	358	291	333	161	111	126
AC-FT	30550	32280	32320	34610	32400	35980	29340	34010	53480	20270	14900	13330

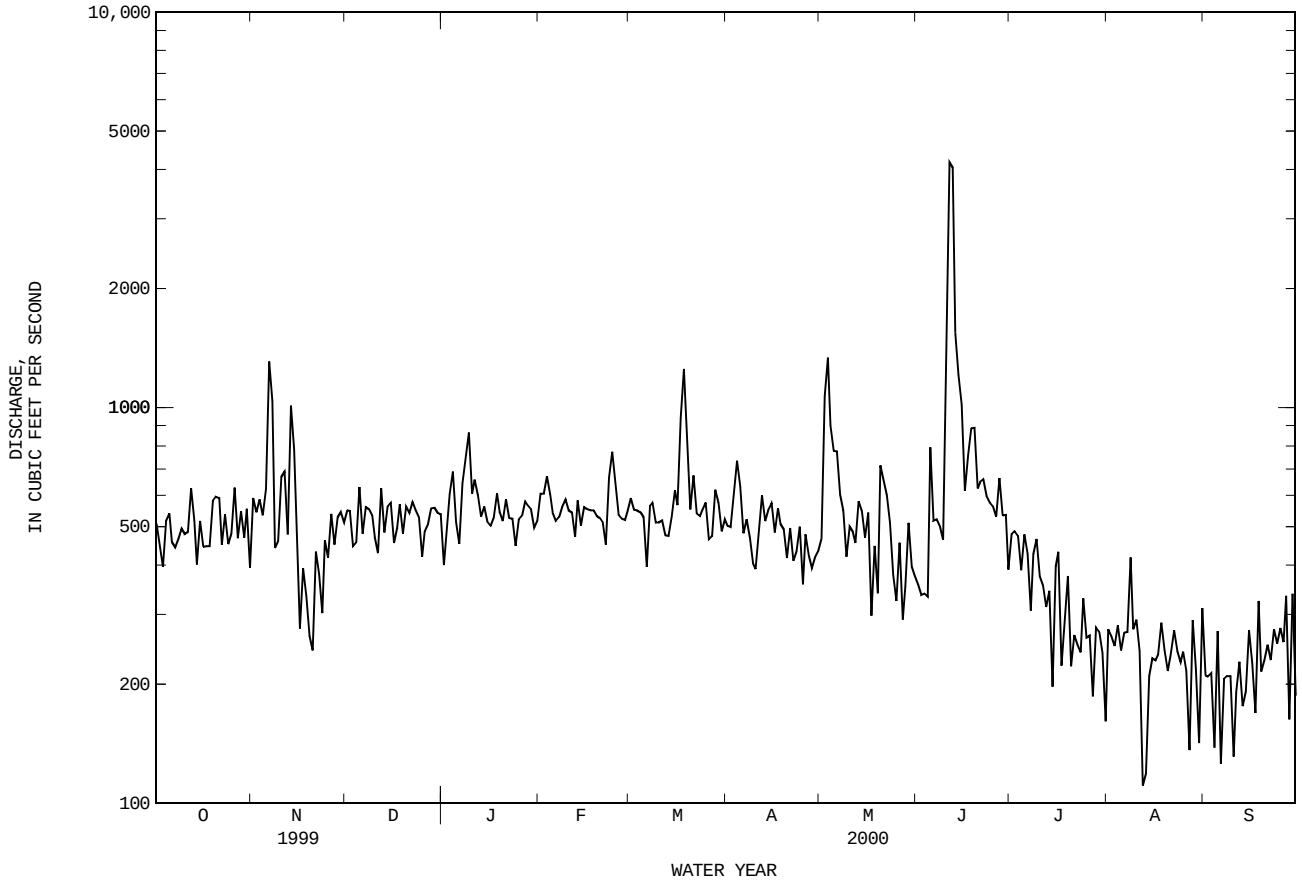
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1997 - 2000, BY WATER YEAR (WY)

MEAN	5190	1701	1548	1049	1226	1586	1650	1182	2100	2003	979	761
MAX	18950	5006	4148	1952	2276	3098	3269	2206	5623	6153	2331	1314
(WY)	1999	1999	1999	1999	1998	1998	1997	1997	1997	1997	1997	1998
MIN	352	430	508	520	563	585	493	553	667	330	242	224
(WY)	1997	1997	1997	1997	2000	2000	2000	2000	1998	2000	2000	2000

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1997 - 2000	
ANNUAL TOTAL	343243		183239			
ANNUAL MEAN	940		501		1754	
HIGHEST ANNUAL MEAN					3182	1999
LOWEST ANNUAL MEAN					501	2000
HIGHEST DAILY MEAN	3790	Jun 26	4170	Jun 11	188000	Oct 19 1998
LOWEST DAILY MEAN	244	Nov 20	111	Aug 12	111	Aug 12 2000
ANNUAL SEVEN-DAY MINIMUM	332	Nov 16	185	Sep 4	185	Sep 4 2000
INSTANTANEOUS PEAK FLOW			4950	Jun 12	i340000	Oct 19 1998
INSTANTANEOUS PEAK STAGE			19.19	Jun 12	a50.44	Oct 19 1998
ANNUAL RUNOFF (AC-FT)	680800		363500		1271000	
10 PERCENT EXCEEDS	1510		657		3970	
50 PERCENT EXCEEDS	865		496		836	
90 PERCENT EXCEEDS	442		236		388	

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

08173900 GUADALUPE RIVER AT GONZALES, TX--Continued



08175000 SANDIES CREEK NEAR WESTHOFF, TX

LOCATION.--Lat 29°12′54", long 97°26′57", De Witt County, Hydrologic Unit 12100202, on left bank 100 ft downstream from bridge on county highway, 1.9 mi upstream from Birds Creek, 2.0 mi northeast of Westhoff, and 20.4 mi upstream from mouth.

DRAINAGE AREA.--549 mi^2.

PERIOD OF RECORD.--Mar 1930 to Nov 1934, Aug 1959 to current year.
Water-quality records.--Chemical data: Apr 1962 to Sep 1999. Sediment data: Nov 1965 to May 1966. Pesticied data: Oct 1992 to Jul 1999.

REVISED RECORDS.--WSP 2123: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 178.27 ft above sea level. Prior to Nov 9, 1934, water-stage recorder at site 150 ft upstream at datum 0.86 ft higher. Aug 10, 1959, to Feb 2, 1960, nonrecording gage at present site and datum. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. No known regulation or diversions. No flow at times. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water-quality data.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since at least 1864, 92,700 ft^3/s Jul 2, 1936 (gage height, 33.1 ft, from floodmarks), on basis of computation of peak flow, at present site and datum. Flood in Oct 1913 reached a stage of 26.0 ft, present site and datum, from information by local residents.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,000 ft^3/s:

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)

No peak greater than base discharge.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.5	2.4	3.2	4.6	10	9.1	7.4	5.4	3.7	8.8	1.7	2.1
2	2.5	2.5	3.1	4.5	9.9	7.9	6.5	39	3.5	5.8	1.6	1.8
3	2.2	2.3	3.0	4.2	10	6.9	9.1	298	3.3	3.9	1.7	1.7
4	2.2	2.2	3.0	4.2	13	6.7	34	314	3.2	3.1	1.9	1.5
5	2.1	2.2	2.9	4.1	14	6.3	27	163	4.4	3.4	2.1	1.4
6	2.3	2.3	2.6	4.4	12	6.1	17	55	93	3.2	2.0	1.2
7	2.3	2.4	3.2	8.4	10	6.6	13	27	118	3.0	2.1	1.4
8	2.2	2.3	3.7	37	8.5	6.3	11	17	50	2.8	2.0	1.8
9	2.2	2.9	3.7	128	7.6	5.9	10	12	39	2.7	2.0	1.7
10	1.8	3.2	3.7	73	7.8	6.1	8.0	9.1	165	3.2	1.9	1.6
11	1.7	3.2	4.1	34	7.5	6.7	6.8	7.2	420	5.3	1.7	1.4
12	1.6	3.2	4.3	20	6.8	20	9.0	6.8	735	4.5	1.2	1.3
13	1.6	3.1	4.1	15	6.7	22	15	9.2	750	4.0	1.1	1.2
14	1.7	2.9	5.1	10	6.7	110	20	186	322	3.7	1.1	1.2
15	1.9	2.8	5.4	8.4	6.3	290	16	178	119	3.4	1.2	1.2
16	2.0	2.8	5.4	7.3	5.8	218	13	75	57	3.2	1.2	1.9
17	1.8	2.6	4.6	6.7	6.2	150	11	31	34	3.0	1.1	2.3
18	1.9	2.8	4.5	6.3	6.1	70	8.9	17	24	2.8	1.1	2.9
19	2.1	2.7	4.1	6.4	5.9	39	7.3	11	19	2.7	1.1	2.9
20	2.3	2.5	4.3	6.1	6.3	42	6.6	32	15	2.7	1.0	2.1
21	2.3	2.7	4.9	6.0	6.3	33	5.7	209	14	2.4	1.0	1.9
22	2.0	3.0	5.4	5.9	6.2	22	5.3	203	13	2.2	1.1	2.1
23	1.9	3.2	7.5	5.8	136	17	5.8	67	11	2.2	1.1	2.4
24	1.8	3.0	6.2	5.4	214	15	4.8	23	9.6	2.4	1.2	2.7
25	2.1	2.9	5.3	5.2	116	14	4.1	14	8.1	2.6	1.3	2.7
26	2.3	2.8	5.8	5.2	47	12	3.9	8.9	10	2.6	1.5	2.6
27	2.3	2.8	5.9	6.5	25	11	3.7	6.3	11	2.8	1.7	2.4
28	2.2	2.7	7.0	7.9	16	9.7	3.5	5.7	7.8	2.4	1.8	2.4
29	2.1	2.6	7.5	8.5	12	8.3	3.3	5.3	6.3	2.1	1.9	2.3
30	2.0	3.0	6.4	12	---	8.5	3.6	4.8	6.2	1.8	1.9	2.3
31	2.2	---	5.3	11	---	7.5	---	4.0	---	1.7	2.0	---
TOTAL	64.1	82.0	145.2	472.0	745.6	1193.6	300.3	2043.7	3075.1	100.4	47.3	58.4
MEAN	2.07	2.73	4.68	15.2	25.7	38.5	10.0	65.9	103	3.24	1.53	1.95
MAX	2.5	3.2	7.5	128	214	290	34	314	750	8.8	2.1	2.9
MIN	1.6	2.2	2.6	4.1	5.8	5.9	3.3	4.0	3.2	1.7	1.0	1.2
AC-FT	127	163	288	936	1480	2370	596	4050	6100	199	94	116
CFSM	.00	.00	.01	.03	.05	.07	.02	.12	.19	.01	.00	.00
IN.	.00	.01	.01	.03	.05	.08	.02	.14	.21	.01	.00	.00

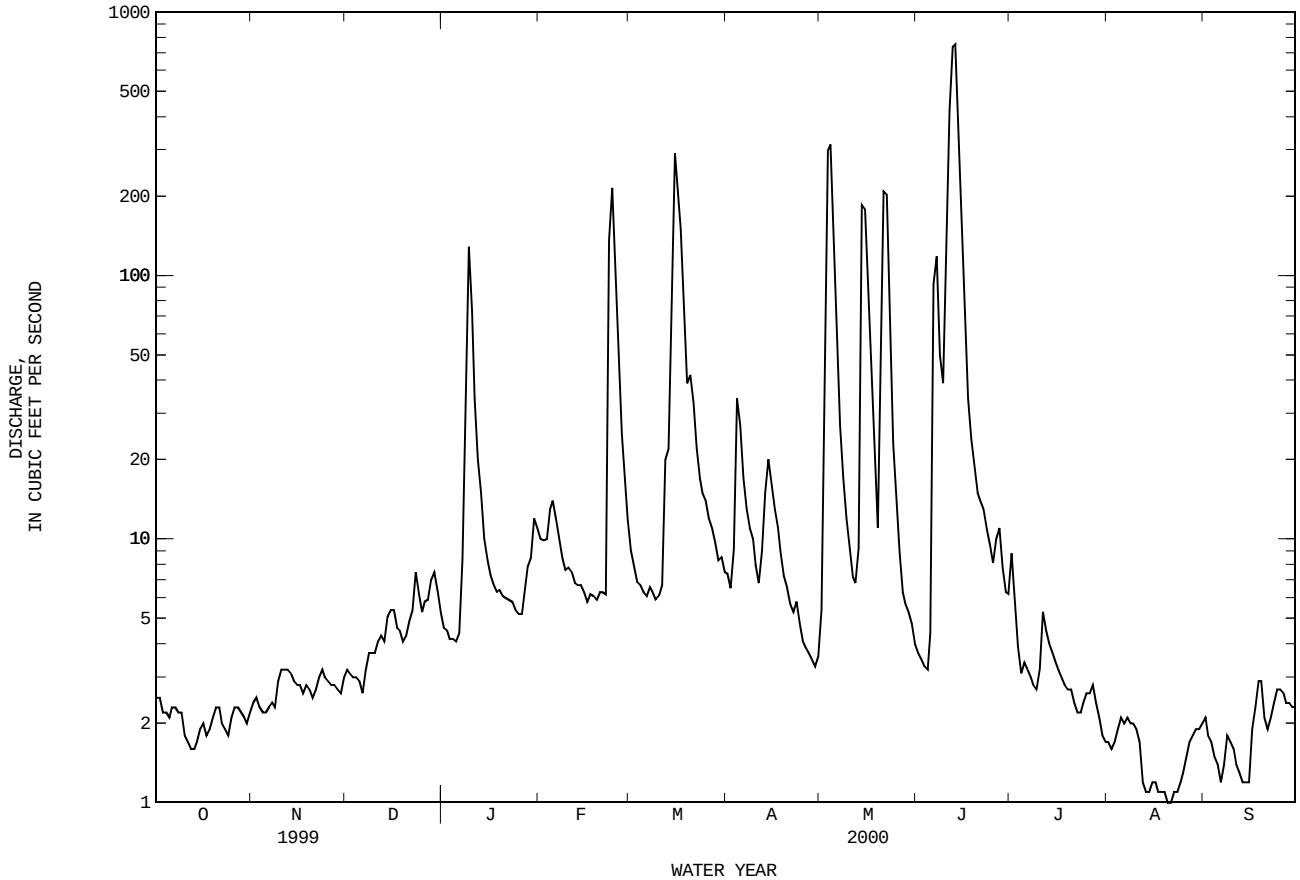
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 2000h, BY WATER YEAR (WY)

MEAN	160	77.8	60.4	116	143	69.8	158	248	283	28.6	26.6	198
MAX	2698	732	969	778	1485	418	1361	2062	2820	139	261	4060
(WY)	1999	1999	1977	1974	1992	1969	1977	1972	1987	1961	1998	1967
MIN	.26	1.19	1.85	4.08	4.05	2.66	3.26	.88	.32	.23	.071	.26
(WY)	1964	1932	1989	1967	1967	1967	1963	1963	1934	1964	1962	1959

08175000 SANDIES CREEK NEAR WESTHOFF, TX--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1930 - 2000h	
ANNUAL TOTAL	16925.0		8327.7			
ANNUAL MEAN	46.4		22.8		132	
HIGHEST ANNUAL MEAN					532	1992
LOWEST ANNUAL MEAN					8.71	1988
HIGHEST DAILY MEAN	2600	Jun 27	750	Jun 13	67900	Sep 22 1967
LOWEST DAILY MEAN	1.6	Oct 12	1.0	Aug 20	.00	Aug 11 1932
ANNUAL SEVEN-DAY MINIMUM	1.8	Oct 10	1.1	Aug 17	.00	Aug 18 1959
INSTANTANEOUS PEAK FLOW			878	Jun 13	79700	Sep 22 1967
INSTANTANEOUS PEAK STAGE			13.14	Jun 13	32.34	Sep 22 1967
ANNUAL RUNOFF (AC-FT)	33570		16520		95950	
ANNUAL RUNOFF (CFSM)	.084		.041		.24	
ANNUAL RUNOFF (INCHES)	1.15		.56		3.28	
10 PERCENT EXCEEDS	37		35		122	
50 PERCENT EXCEEDS	11		4.6		9.0	
90 PERCENT EXCEEDS	2.3		1.7		1.4	

h See PERIOD OF RECORD paragraph.



08175800 GUADALUPE RIVER AT CUERO, TX

LOCATION.--Lat 29°03'57", long 97°19'16", De Witt County, Hydrologic Unit 12100204, on left bank at downstream side of bridge on U.S. Highways 77A, 87, and 183, 2.1 mi upstream from Gohlke Creek, 2.4 mi southwest of Cuero, 4.2 mi downstream from mouth of Sandies Creek, and at river mile 100.6.

DRAINAGE AREA.--4,934 mi^2 of which 1,432 mi^2 is above Canyon Dam.

PERIOD OF RECORD.--Jan 1903 to Dec 1906, Sep 1916 to Apr 1919, Sep 1920 to Nov 1935, and Jan 1964 to current year. Published in WSP 1312 as "near Cuero" Jan 1903 to Dec 1906, and as "below Cuero" Sep 1920 to Apr 1935. Records from 1903 to 1935 not used in statistical computation. Gage-height records collected 7.1 mi upstream from 1941 to 1966 and published in National Weather Service reports.

Water-quality records.--Chemical data: Mar 1968 to Sep 1985.

REVISED RECORDS.--WRD TX-68-1, TX-69-1: Drainage areas at all sites.

GAGE.--Water-stage recorder. Datum of gage is 128.64 ft above sea level. From Dec 26, 1902 to Jun 1903, nonrecording gage at site 7.1 mi upstream at different datum (gage heights adjusted to site 3.3 mi upstream from present site before computation); from Jul 1903 to Dec 1906, nonrecording gage 3.3 mi upstream at different datum; and Aug 19, 1916 to Dec 16, 1935, water-stage recorder at site 5.0 mi downstream at datum 3.19 ft lower. Satellite telemeter at station.

REMARKS.--Records good, except for estimated daily discharges, which are fair. Since water year 1928, at least 10% of contributing drainage area has been regulated by Lake Dunlap and Lake McQueeny (combined capacity 10,950 acre-ft). Additional regulation since Jul 21, 1962, by Canyon Lake (station 08167700, conservation pool storage 385,600 acre-ft) 202.4 mi upstream. Flow below New Braunfels is partly regulated by a series of small power dams, combined capacity of six largest dams 33,550 acre-ft. Flow is affected at times by discharge from the flood-detention pools of 53 floodwater-retarding structures with a combined detention capacity of 87,200 acre-ft. These structures control runoff from 302 mi^2 in the Comal, San Marcos, and Plum Creek drainage basins. Many small diversions above station.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--10 years (water years 1904-06, 1917-18, 1921-27) 1,220 ft^3/s (839,900 acre-ft/ yr).

EXTREMES FOR PERIOD PRIOR TO REGULATION (WATER YEARS 1904-06, 1917-18, 1921-27).--Maximum stage since at least 1900 probably occurred on Mar 1, 1903, at 43.0 ft (at different site and datum), but discharge was not determined.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1900 probably occurred Jul 2, 1936, 44.33 ft, present site and datum, from information by Texas Department of Transportation. Other floods at this station occurred Oct 4, 1913, 37.57 ft, at different site and datum; Dec 6, 1913, 34.57 ft (at different site and datum); Oct 20, 1919, 32.2 ft (site and datum then in use), and Jun 21, 1961, 37.0 ft at present site and datum

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	510	531	558	533	545	541	537	570	465	573	174	277
2	473	503	579	539	591	582	538	780	464	564	183	279
3	495	532	655	517	615	619	572	1950	462	547	320	278
4	492	583	538	516	669	543	659	2600	461	420	321	276
5	474	559	532	648	734	566	666	2090	521	378	318	271
6	508	558	503	611	587	562	716	1090	696	519	317	162
7	526	1060	e511	571	602	515	649	1000	784	540	319	219
8	498	1180	620	749	536	468	559	765	668	464	293	329
9	473	674	629	824	560	625	556	611	900	426	375	339
10	500	472	587	934	618	596	525	674	1520	529	433	305
11	533	545	599	833	648	531	485	562	4580	507	324	364
12	532	714	526	688	572	539	545	524	6630	513	337	218
13	511	559	553	671	514	579	708	550	5650	517	347	135
14	629	788	594	594	636	638	811	695	2830	483	313	137
15	509	917	540	603	609	927	675	973	1770	463	226	175
16	483	556	578	562	541	944	739	753	1340	440	145	271
17	457	493	613	543	617	804	816	586	937	447	146	271
18	475	462	524	526	585	850	653	561	712	449	214	271
19	479	411	532	580	589	1130	707	530	1030	410	284	268
20	496	407	587	554	573	1070	686	1200	1060	372	285	293
21	556	402	537	525	572	781	669	816	756	356	321	307
22	572	383	580	521	563	656	655	930	711	354	311	295
23	567	367	581	519	692	671	645	808	826	355	287	295
24	532	371	653	517	954	573	599	688	718	354	281	295
25	516	372	630	513	912	603	554	571	600	374	285	299
26	495	444	564	515	819	549	560	519	583	374	284	297
27	495	518	506	575	599	582	544	511	602	374	283	297
28	555	613	472	642	618	546	531	515	679	380	285	278
29	531	473	519	635	564	576	561	469	744	386	229	282
30	515	499	636	544	---	658	589	442	609	369	218	288
31	496	---	531	646	---	638	---	461	---	323	282	---
TOTAL	15883	16946	17567	18748	18234	20462	18709	25794	40308	13560	8740	8071
MEAN	512	565	567	605	629	660	624	832	1344	437	282	269
MAX	629	1180	655	934	954	1130	816	2600	6630	573	433	364
MIN	457	367	472	513	514	468	485	442	461	323	145	135
AC-FT	31500	33610	34840	37190	36170	40590	37110	51160	79950	26900	17340	16010

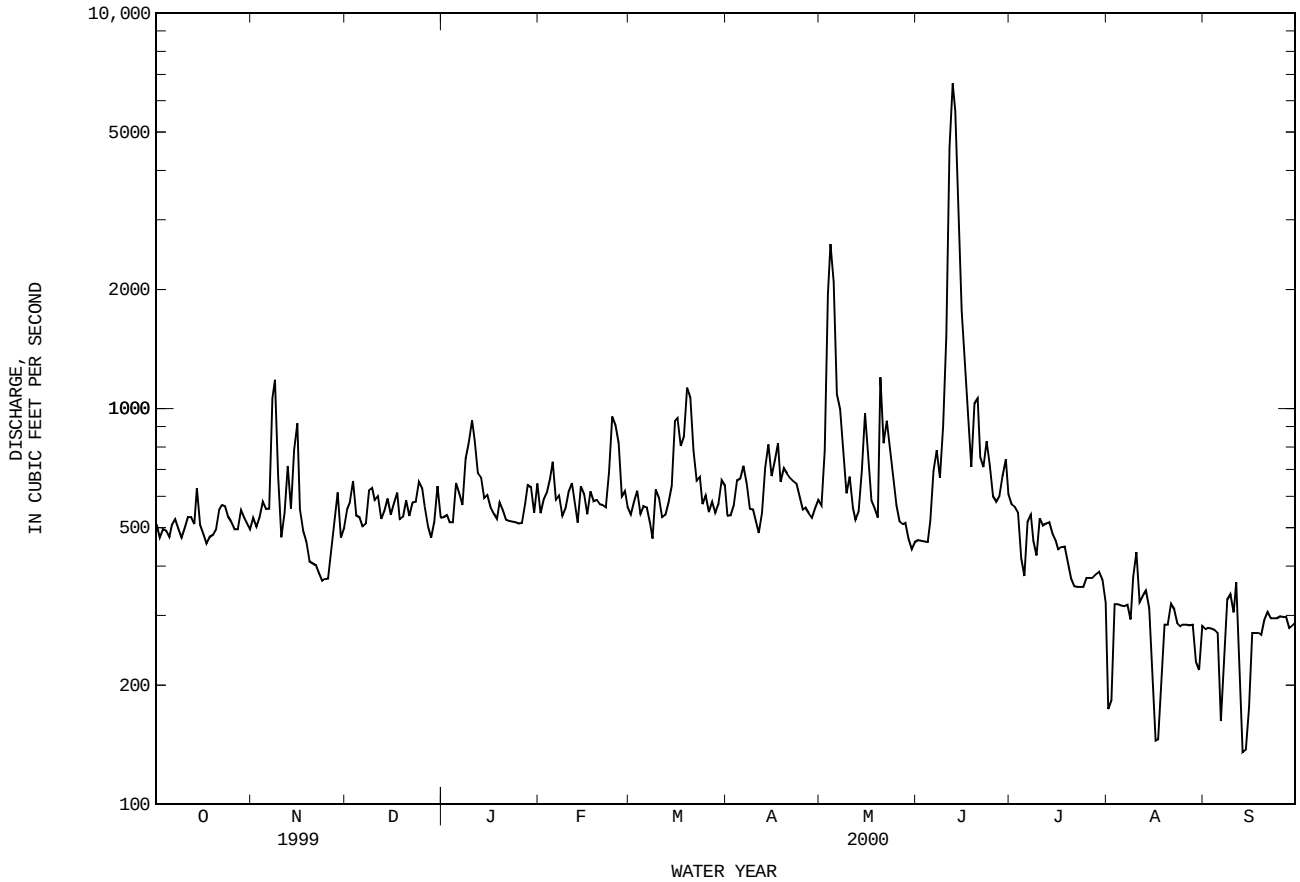
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 2000hz, BY WATER YEAR (WY)

MEAN	2246	1689	1769	1856	2143	1830	2234	3004	3298	1498	1143	1674
MAX	30990	8725	10500	10830	16740	10370	11100	12270	21470	6559	4149	11210
(WY)	1999	1999	1992	1992	1992	1992	1977	1972	1987	1997	1987	1981
MIN	242	411	432	397	403	504	381	309	242	95.7	112	124
(WY)	1990	1990	1990	1990	1990	1967	1971	1984	1984	1984	1984	1984

08175800 GUADALUPE RIVER AT CUERO, TX--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1964 - 2000hz	
ANNUAL TOTAL	418515		223022			
ANNUAL MEAN	1147		609		2060	
HIGHEST ANNUAL MEAN					6885	1992
LOWEST ANNUAL MEAN					435	1984
HIGHEST DAILY MEAN	8370	Jun 27	6630	Jun 12	338000	Oct 20 1998
LOWEST DAILY MEAN	367	Nov 23	135	Sep 13	28	Jul 22 1984
ANNUAL SEVEN-DAY MINIMUM	388	Nov 19	211	Sep 12	45	Jul 18 1984
INSTANTANEOUS PEAK FLOW			6850	Jun 12	i473000	Oct 20 1998
INSTANTANEOUS PEAK STAGE			13.52	Jun 12	a50.35	Oct 20 1998
ANNUAL RUNOFF (AC-FT)	830100		442400		1492000	
10 PERCENT EXCEEDS	1980		812		3690	
50 PERCENT EXCEEDS	1040		543		1030	
90 PERCENT EXCEEDS	499		293		460	

e Estimated
h See PERIOD OF RECORD paragraph.
z Period of regulated streamflow.
i From indirect measurement of peak flow.
a From floodmark.



08176500 GUADALUPE RIVER AT VICTORIA, TX

LOCATION.--Lat 28°47′34", long 97°00′46", Victoria County, Hydrologic Unit 12100204, on left bank near left downstream corner of downstream bridge of two bridges on U.S. Highway 59 in Victoria, 1,200 ft upstream from Southern Pacific Railroad Co. bridge, 15 mi upstream from Coleto Creek, and at mile 50.7.

DRAINAGE AREA.--5,198 mi^2, of which 1,432 mi^2 is above Canyon Dam.

PERIOD OF RECORD.--Nov 1934 to current year. Gage-height records collected in this vicinity since 1904 are contained in reports of the National Weather Service.

Water-quality records.--Chemical data: Aug 1945 to Aug 1994. Biochemical data: Jan 1968 to Aug 1994. Pesticide data: Feb 1974 to Aug 1981. Sediment data: Apr 1959, Aug 1973 to Aug 1994. Specific conductance: Oct 1945 to Sep 1981. Water temperature: Nov 1950 to Sep 1981.

REVISED RECORDS.--WSP 2123: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 29.15 ft above sea level. Nov 1, 1934, to Jul 27, 1992, at site just upstream from pier on left bank of upstream bridge at same datum. Satellite telemeter at station.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Since installation of gage in Nov 1934, at least 10% of contributing drainage area has been regulated by Lake Dunlap and Lake McQueeny (combined capacity of 10,950 acre-ft). Flow is also regulated by Canyon Lake (station 08167700, conservation pool storage 385,600 acre-ft) 252.3 mi upstream. There are many diversions above station. Records provided by the city of Victoria show that during the current year about 6,470 acre-ft of wastewater effluent was released into the river below this station. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water-quality data.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Jun 1, 1929, reached a stage of 30.2 ft, present site and datum, maximum stage since at least 1833, that of Jul 3, 1936.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	520	489	485	532	639	619	649	569	493	609	348	264
2	514	519	552	533	574	592	777	968	492	573	250	273
3	481	495	594	540	618	643	1060	1370	487	558	198	272
4	500	524	635	514	627	647	1000	2130	488	537	269	271
5	492	577	533	511	691	585	769	2320	511	443	324	271
6	478	561	525	657	740	611	774	1640	556	384	317	269
7	503	573	500	869	607	607	770	1060	748	491	313	235
8	527	1090	508	1170	618	563	678	988	845	520	312	177
9	504	1040	529	915	556	507	596	739	1480	454	314	275
10	469	647	617	879	580	653	588	646	2990	409	318	334
11	500	487	586	960	638	636	561	671	3700	496	422	298
12	530	549	600	802	665	565	656	581	5610	479	328	349
13	532	707	523	716	597	578	620	603	5990	477	323	290
14	515	566	560	679	545	716	628	586	4480	484	340	200
15	611	818	578	608	650	1090	675	766	2310	452	320	170
16	514	836	531	617	620	1040	569	967	1640	427	291	165
17	487	570	618	577	561	1050	647	750	1390	410	206	220
18	473	499	615	566	636	819	674	614	867	409	177	271
19	489	475	528	566	603	949	553	596	816	407	176	275
20	482	415	580	635	602	1180	607	893	1040	384	275	275
21	e479	409	595	609	592	1020	590	1320	1050	350	289	283
22	e510	403	542	607	590	800	575	823	742	333	316	320
23	e545	390	585	619	602	728	567	950	732	330	315	307
24	e550	367	588	607	745	703	562	842	856	329	302	302
25	e535	371	661	607	1030	623	524	702	704	328	285	304
26	515	373	631	524	937	641	481	607	616	341	291	302
27	501	422	573	578	820	606	486	554	596	347	292	300
28	494	521	518	612	656	606	479	751	630	346	291	303
29	551	589	495	655	671	584	472	654	669	348	288	294
30	530	469	505	648	---	624	498	537	721	360	279	287
31	508	---	626	583	---	696	---	483	---	347	206	---
TOTAL	15839	16751	17516	20495	19010	22281	19085	27680	44249	13162	8975	8156
MEAN	511	558	565	661	656	719	636	893	1475	425	290	272
MAX	611	1090	661	1170	1030	1180	1060	2320	5990	609	422	349
MIN	469	367	485	511	545	507	472	483	487	328	176	165
AC-FT	31420	33230	34740	40650	37710	44190	37860	54900	87770	26110	17800	16180

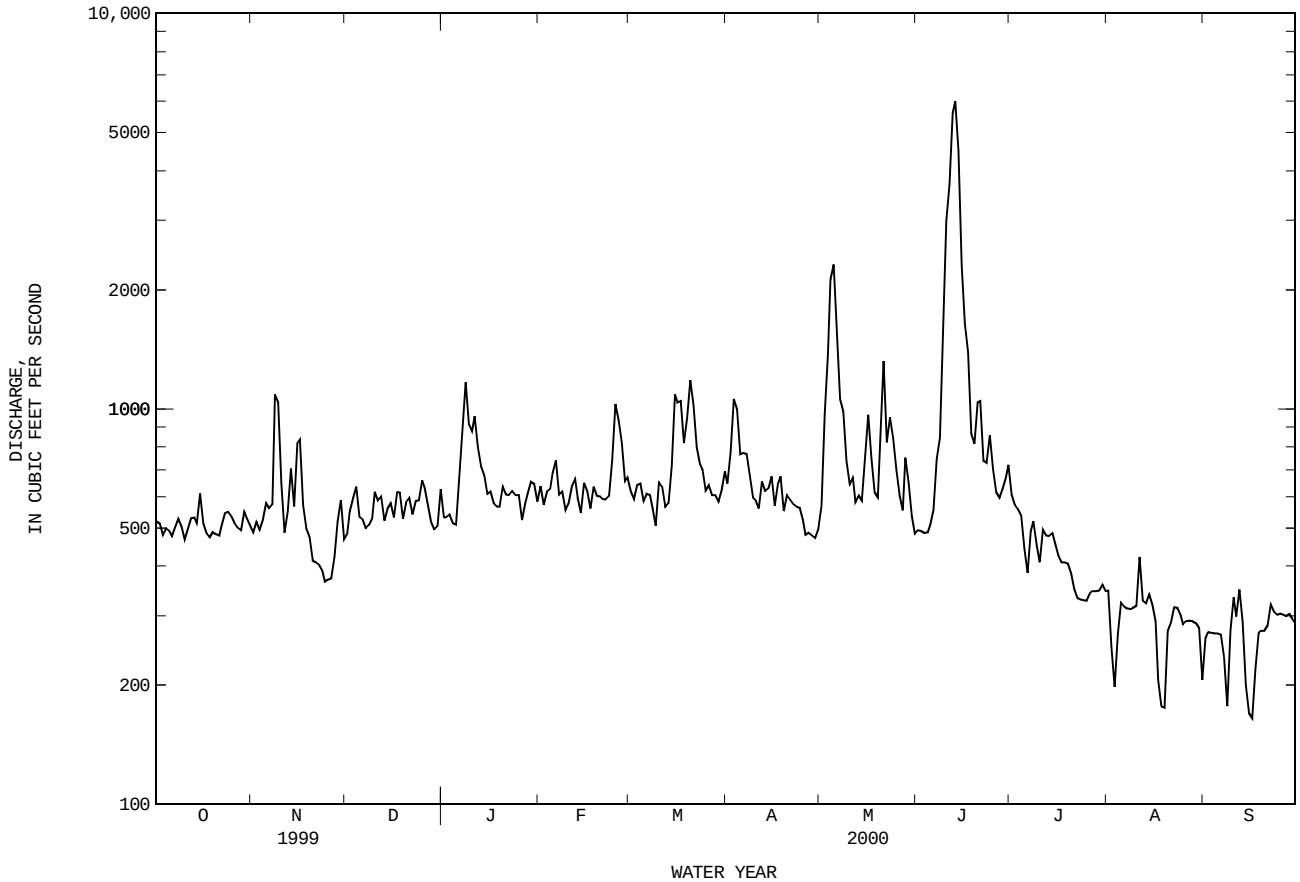
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1935 - 2000, BY WATER YEAR (WY)

MEAN	2090	1654	1581	1684	1957	1722	2110	2868	2878	1757	969	1649
MAX	30420	9440	9753	10650	17250	10600	10320	12990	23750	18430	4473	11340
(WY)	1999	1999	1992	1992	1992	1992	1977	1941	1987	1936	1987	1981
MIN	100	59.6	183	118	255	158	157	224	59.7	53.9	37.6	51.6
(WY)	1956	1957	1956	1957	1956	1956	1956	1956	1956	1956	1956	1956

08176500 GUADALUPE RIVER AT VICTORIA, TX--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1935 - 2000	
ANNUAL TOTAL	425533		233199			
ANNUAL MEAN	1166		637		1893	
HIGHEST ANNUAL MEAN					6993	1992
LOWEST ANNUAL MEAN					132	1956
HIGHEST DAILY MEAN	6990	Jun 28	5990	Jun 13	307000	Oct 20 1998
LOWEST DAILY MEAN	367	Nov 24	165	Sep 16	14	Aug 20 1956
ANNUAL SEVEN-DAY MINIMUM	390	Nov 20	225	Sep 14	22	Sep 29 1956
INSTANTANEOUS PEAK FLOW			6220	Jun 12	i466000	Oct 20 1998
INSTANTANEOUS PEAK STAGE			17.54	Jun 12	a34.04	Oct 20 1998
INSTANTANEOUS LOW FLOW					36	Aug 21 1996
ANNUAL RUNOFF (AC-FT)	844000		462600		1371000	
10 PERCENT EXCEEDS	1990		900		3520	
50 PERCENT EXCEEDS	1120		564		977	
90 PERCENT EXCEEDS	500		297		362	

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



08176550 FIFTEENMILE CREEK NEAR WESER, TX
(Flood-hydrograph partial-record station)

LOCATION.--Lat 28°53’51", long 97°21’17", De Witt County, Hydrologic Unit 12100204, at De Witt-Goliad County line, on right downstream end of bridge on U.S. Highway 183, and 2.4 mi northeast of Weser.

DRAINAGE AREA.--167 mi^2.

PERIOD OF RECORD.--Oct 1984 to Sep 1989 (daily mean discharge), Oct 1989 to current year (peak discharges greater than base discharge).

GAGE.--Water-stage recorder. Datum of gage is 158.40 ft above sea level. Satellite telemeter at station.

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

AVERAGE DISCHARGE.--5 years (water years 1985-89), 18.7 ft^3/s (13,550 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 19,400 ft^3/s Jun 22, 1997 (gage height, 26.68 ft), from rating curve extended above 2,840 ft^3/s; minimum daily, no flow for several days in 1989.

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

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
No peak greater than base discharge.							

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08176900 COLETO CREEK AT ARNOLD ROAD CROSSING NEAR SCHROEDER, TX

LOCATION.--Lat 28°51'41", long 97°13'34", Goliad County, Hydrologic Unit 12100204, on right bank at downstream side of Arnold Road Crossing, 0.7 mi downstream from confluence of Twelvemile and Fifteenmile Creeks, 3.2 mi north of Schroeder, 12.8 mi upstream from Coleto Creek Reservoir, and 26.0 mi upstream from mouth.

DRAINAGE AREA.--357 mi^2.

PERIOD OF RECORD.--Oct 1978 to current year. Records equivalent for Jan 1930 to Dec 1933 and Oct 1952 to Sep 1979, published as "near Schroeder" (station 08177000).

GAGE.--Water-stage recorder. Datum of gage is 100.43 ft above sea level. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. No known regulation or diversions. No flow at times. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water-quality data.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharges since at least 1872 at site 3.5 mi downstream, 122,000 ft^3/s Sep 21, 1967 (slope-area measurement of peak flow), 63,700 ft^3/s Oct 16, 1946, and 46,700 ft^3/s in Oct 1925, from information by local resident.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 4,000 ft^3/s:

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)

No peak greater than base discharge.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.5	1.5	2.2	3.1	5.8	5.2	4.8	3.0	7.2	.99	.00	.00
2	1.4	1.5	2.1	3.0	6.1	5.2	5.3	50	5.8	.87	.00	.00
3	1.3	1.5	2.2	3.0	6.4	5.2	6.8	110	4.8	.77	.00	.00
4	1.2	1.5	2.2	3.1	6.3	5.1	6.7	79	4.0	.69	.00	.00
5	1.2	1.6	2.2	3.0	6.2	5.0	7.1	39	4.3	.57	.00	.00
6	1.1	1.6	2.2	3.1	6.1	5.0	6.4	21	93	.53	.00	.00
7	1.0	1.6	2.2	10	6.1	5.0	5.6	13	58	.45	.00	.00
8	1.0	1.6	2.4	80	6.1	4.9	5.1	9.6	25	.39	.00	.00
9	1.0	1.6	2.4	57	6.0	4.8	4.7	7.4	18	.33	.00	.00
10	1.0	1.6	2.4	26	6.0	4.8	4.2	6.2	114	.29	.00	.00
11	1.0	1.6	2.5	14	6.0	4.9	4.2	5.5	463	.20	.00	.00
12	.98	1.5	2.6	9.8	5.9	4.7	5.8	4.9	282	.16	.00	.00
13	.99	1.6	2.6	7.9	5.9	4.6	5.3	5.5	79	.13	.00	.00
14	1.0	1.6	2.6	6.9	5.8	8.1	4.9	4.9	33	.11	.00	.00
15	1.0	1.6	2.7	6.4	5.8	30	4.7	5.1	19	.08	.00	.00
16	1.0	1.6	2.7	6.1	5.8	27	4.4	4.7	12	.06	.00	.00
17	1.0	1.6	2.9	5.8	5.8	15	4.2	4.2	8.3	.03	.00	.00
18	1.4	1.7	2.9	5.5	5.8	38	4.1	3.7	6.3	.01	.00	.00
19	1.7	1.8	3.0	5.3	5.7	36	3.9	3.5	5.1	.00	.00	.00
20	1.8	1.8	3.2	5.3	5.5	19	3.7	4.8	4.2	.00	.00	.00
21	1.7	1.8	3.3	5.2	5.5	14	3.6	101	3.5	.00	.00	.00
22	1.7	1.8	3.3	5.2	5.5	11	3.3	64	2.9	.00	.00	.00
23	1.6	1.9	3.3	5.2	5.7	9.1	3.3	30	2.5	.00	.00	.00
24	1.5	1.9	3.3	5.1	5.8	7.8	3.1	17	2.1	.00	.00	.00
25	1.5	2.0	3.3	5.1	5.6	7.1	2.9	11	1.9	.00	.00	.00
26	1.5	2.0	3.3	5.0	5.6	6.5	2.9	7.8	1.7	.00	.00	.00
27	1.5	2.0	3.3	6.1	5.4	6.1	2.7	6.2	1.6	.00	.00	.00
28	1.5	2.2	3.3	6.5	5.3	5.8	2.6	11	1.5	.00	.00	.00
29	1.5	2.2	3.2	6.1	5.2	5.3	2.7	16	1.3	.00	.00	.00
30	1.5	2.2	3.2	6.1	---	5.1	2.6	18	1.2	.00	.00	.00
31	1.5	---	3.1	6.0	---	4.9	---	11	---	.00	.00	---
TOTAL	40.57	52.0	86.1	325.9	168.7	320.2	131.6	678.0	1266.2	6.66	0.00	0.00
MEAN	1.31	1.73	2.78	10.5	5.82	10.3	4.39	21.9	42.2	.21	.000	.000
MAX	1.8	2.2	3.3	80	6.4	38	7.1	110	463	.99	.00	.00
MIN	.98	1.5	2.1	3.0	5.2	4.6	2.6	3.0	1.2	.00	.00	.00
AC-FT	80	103	171	646	335	635	261	1340	2510	13	.00	.00

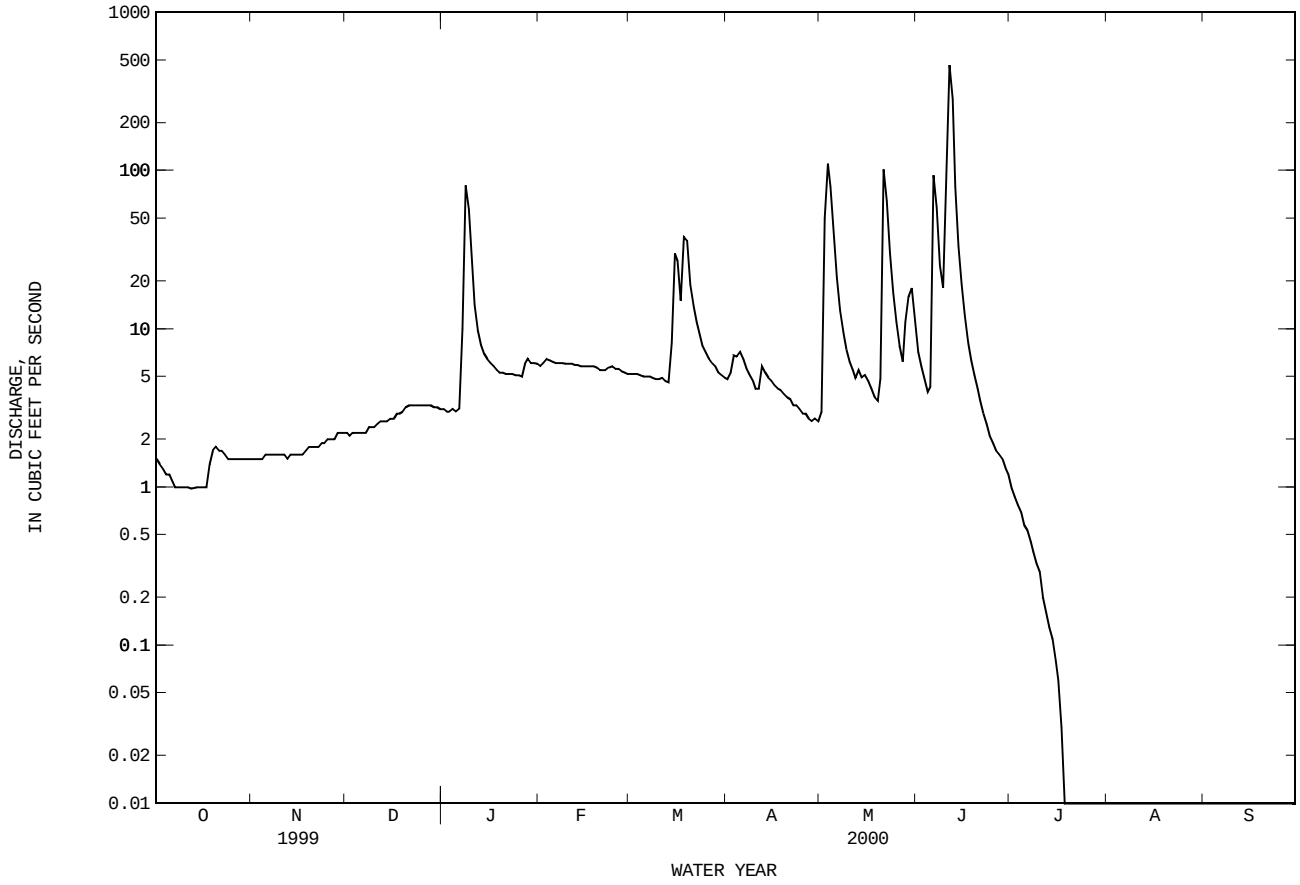
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1979 - 2000, BY WATER YEAR (WY)

MEAN	116	66.1	39.8	53.0	69.6	57.5	132	117	176	25.9	23.0	64.5
MAX	895	651	301	400	486	265	1021	608	1191	114	309	920
(WY)	1999	1999	1987	1979	1992	1997	1997	1979	1997	1990	1981	1998
MIN	.046	.049	.94	2.62	2.71	2.78	1.56	.29	.73	.14	.000	.000
(WY)	1989	1990	1990	1990	1996	1996	1996	1996	1990	1989	1996	1989

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1979 - 2000	
ANNUAL TOTAL	6220.47		3075.93			
ANNUAL MEAN	17.0		8.40		78.0	
HIGHEST ANNUAL MEAN					222	1997
LOWEST ANNUAL MEAN					2.47	1989
HIGHEST DAILY MEAN	360	Jun 26	463	Jun 11	24600	Jun 22 1997
LOWEST DAILY MEAN	.98	Oct 12	.00	Jul 19	.00	Aug 20 1989
ANNUAL SEVEN-DAY MINIMUM	1.0	Oct 7	.00	Jul 19	.00	Aug 20 1989
INSTANTANEOUS PEAK FLOW			687	Jun 11	c44500	Jun 22 1997
INSTANTANEOUS PEAK STAGE			8.32	Jun 11	31.17	Jun 22 1997
ANNUAL RUNOFF (AC-FT)	12340		6100		56540	
10 PERCENT EXCEEDS	30		11		63	
50 PERCENT EXCEEDS	12		2.9		11	
90 PERCENT EXCEEDS	1.5		.00		.88	

c From rating curve extended above measurement of 26,600 ft^3/s.

08176900 COLETO CREEK AT ARNOLD ROAD CROSSING NEAR SCHROEDER, TX--Continued



08177300 PERDIDO CREEK AT FARM ROAD 622 NEAR FANNIN, TX
(Flood-hydrograph partial-record station)

LOCATION.--Lat 28°45′05", long 97°19′01", Goliad County, Hydrologic Unit 12100204, at right downstream end of bridge on Farm Road 622, 1.2 mi downstream from Farmer Creek, 3.1 mi upstream from Kilgore Creek, and 6.1 mi northwest of Fannin.

DRAINAGE AREA.--28.0 mi^2.

PERIOD OF RECORD.--Jun 1978 to Sep 1991 (daily mean discharge), Oct 1991 to current year (peak discharges greater than base discharge).

GAGE.--Water-stage recorder. Datum of gage is 134.66 ft above sea level. Satellite telemeter at station.

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

AVERAGE DISCHARGE.--13 years (water years 1979-91), 5.05 ft^3/s (2.45 in/yr), 3,660 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 26,500 ft^3/s Apr 4, 1997 (gage height, 17.89 ft), from rating curve extended above 22,700 ft^3/s; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Apr 20, 1976, reached a stage of 26.28 ft, and flood of Sep 15, 16, 1967, reached a stage of 26.08 ft, from information by the Texas Department of Transportation.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 400 ft^3/s:

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
May 2	1130	679	7.22	No other peak greater than base discharge.			

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08177400 COLETO CREEK RESERVOIR NEAR VICTORIA, TX

LOCATION.--Lat 28°43'51", long 97°09'53", Victoria County, Hydrologic Unit 12100204, on right bank 175 ft upstream from right end of spillway of dam on Coleto Creek, 1.6 mi upstream from U.S. Highway 59, 11.6 mi west of Victoria, and 12.8 mi upstream from mouth.

DRAINAGE AREA.--494 mi^2.

PERIOD OF RECORD.--Feb 1980 to current year.

GAGE.--Water-stage recorder. Datum of gage sea level. Satellite telemeter at station.
Supplementary gage.--Water-stage recorder 2.7 mi upstream at Turkey Creek Arm near Schroeder, locally known as Dike No. 2, at datum 90.00 ft above sea level.
Supplementary gage.--Water-stage recorder 2.8 mi upstream at Sulphur Creek Arm near Fannin, locally known as Dike No. 1, at datum 90.00 ft above sea level.
Operation of supplementary gages was taken over by Guadalupe-Blanco River Authority on Jul 1, 1999.

REMARKS.--Records fair. The reservoir system consists of the main reservoir, Turkey Creek Arm, and Sulphur Creek Arm. Figures shown below are the combined contents of the three reservoirs. As of Jul 1999, unit values for Turkey Creek Arm and Sulphur Creek Arm are furnished by the Guadalupe-Blanco River Authority. Cooling water is diverted from the main reservoir through the Central Power and Light coal-fired generating plant, through a canal to the Sulphur Creek Arm, and then through a canal to Turkey Creek Arm, where it is released back into the main reservoir. The system was built for the Guadalupe-Blanco River Authority, and storage began in Feb 1980. Conservation pool storage is 35,080 acre-ft.

The main reservoir is formed by a compacted earthfill dam 20,800 ft long, including a 2,000-foot uncontrolled spillway and a 403-foot wide concrete outlet structure with seven 40- x 28-foot spillway gates. Low-flow releases are made through the dam by a controlled 8-inch pipe. Turkey Creek Arm is formed by a compacted earthfill dam 2,250 ft long, including a 186-ft wide concrete outlet structure with two 40- x 11-foot spillway gates. Sulphur Creek Arm is formed by a compacted earthfill dam 1,030 ft long, including a 186-foot wide concrete outlet structure with two 40- by 11-foot spillway gates. Data regarding the dams are given in the following table:

	Coleto Creek Reservoir Elevation (feet)	Turkey Creek Arm Elevation (feet)	Sulphur Creek Arm Elevation (feet)
Top of dam.....	119.0	97.0	97.0
Emergency spillway.....	107.3	--	--
Top of spillway gates.....	99.4	92.9	92.9
Crest of spillway.....	71.0	81.9	81.9

COOPERATION.--Elevations and capacity tables were provided by Forrest and Cotton Engineers, Consulting Engineers for the Guadalupe-Blanco River Authority. Since Jul 1, 1999, record of contents at supplementary gages furnished by GBRA.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 40,630 acre-ft, Oct 18, 1998; minimum since reservoir was first filled in May 1980, 22,790 acre-ft, Aug 20, 21, 1996.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 32,310 acre-ft, Jun 11, 13, elevation, 98.38 ft; minimum contents, 23,310 acre-ft, Dec 28, 29, 30, elevation, 94.70 ft.

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

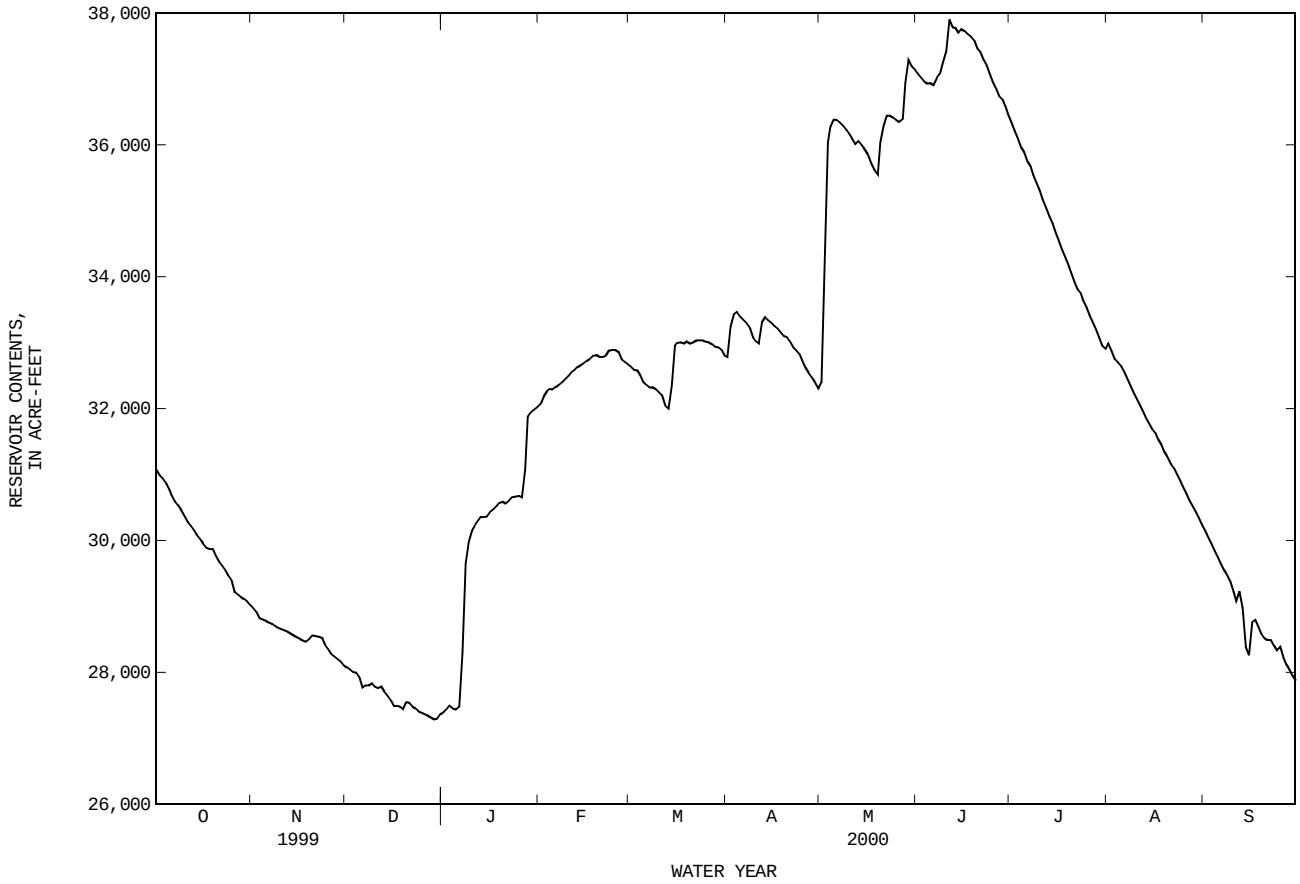
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	31080	e28980	28070	27390	32070	32640	e32780	32410	37080	36340	32990	30140
2	30990	e28920	28040	27440	32180	32590	33250	34020	37020	36210	32880	30060
3	30940	e28820	28010	27490	32260	32580	33430	36040	36960	36100	32760	29960
4	30870	e28800	28000	e27450	e32300	32500	33460	36280	36930	35960	32710	29850
5	30770	e28780	27930	e27430	e32290	32400	33400	36390	36940	35880	32650	29750
6	30680	28750	27760	27470	e32330	32360	33350	36380	36910	35750	32560	29650
7	30590	28730	27800	28290	e32360	32320	33300	36340	37010	35670	32450	29550
8	30530	28710	27800	29650	e32400	32330	33230	36290	37080	35540	32350	29470
9	30450	28680	27830	29990	e32440	32300	33090	36230	37260	35430	32260	29380
10	30370	28660	27780	30150	e32490	32250	33030	36160	37430	35310	32160	29220
11	30280	28640	27760	30220	e32550	32200	32990	36080	37900	35160	32070	29080
12	30220	28620	27780	30290	e32590	32050	33310	e36010	37790	35050	31970	29230
13	30150	28590	27700	30360	e32630	32000	33390	e36060	37780	34920	e31860	28980
14	30080	28560	27650	30360	e32660	32340	33340	e36000	37700	34810	e31770	28380
15	30030	28530	27580	30370	32690	32950	33300	e35920	37760	34670	31690	28260
16	29950	28510	27490	30430	32730	33000	33250	35840	37730	34570	31630	28750
17	29890	28480	27490	30470	32760	e33010	33210	35720	37680	34440	31530	28790
18	29870	28460	27480	30520	32800	e32990	33160	35620	37640	34320	31450	28690
19	29870	28500	27440	30570	32810	e33020	33110	35550	37580	34200	31340	28590
20	29760	28560	27550	30590	32780	e32990	33090	36050	37460	34070	31260	28520
21	29680	28550	27540	30560	32780	33010	33020	36290	37420	33930	31160	28490
22	29630	28540	27480	30600	32800	33040	32930	36450	37300	33810	31090	28490
23	29560	28520	27450	30660	32880	33040	32880	36450	37210	33760	31000	28400
24	29470	28420	27400	30670	32890	33040	32820	e36420	37080	33640	30900	28330
25	29400	28360	27380	30680	32890	33020	32710	e36380	36950	33540	30810	28380
26	29220	28280	27360	30660	32860	33010	32620	e36350	36850	33420	e30720	28220
27	e29180	28240	27350	31080	32750	32980	32540	e36390	36740	33310	30610	28120
28	e29140	28200	27320	31870	32710	32940	32470	e36940	36690	33200	30520	28040
29	e29110	28160	27290	31940	32680	e32930	32400	e37290	36570	33080	30430	e27950
30	e29080	28100	27300	31980	---	e32890	32310	e37190	36460	32950	30340	27870
31	e29030	---	27360	32020	---	e32800	---	37150	---	32910	30230	---

08177400 COLETO CREEK RESERVOIR NEAR VICTORIA, TX--Continued

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MAX	31080	28980	28070	32020	32890	33040	33460	37290	37900	36340	32990	30140
MIN	29030	28100	27290	27390	32070	32000	32310	32410	36460	32910	30230	27870
(+)	95.92	95.11	94.74	96.41	96.61	96.72	96.65	98.20	97.82	96.72	95.83	94.99
(@)	-2150	-930	-740	+4660	+660	+120	-490	+4840	-690	-3550	-2680	-2360

CAL YR 1999 MAX 38050 MIN 27290 (@) -9910
WTR YR 2000 MAX 37900 MIN 27290 (@) -3310

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



08177500 COLETO CREEK NEAR VICTORIA, TX

LOCATION.--Lat 28°43'51", long 97°08'18", Victoria County, Hydrologic Unit 12100204, on left bank at downstream side of westbound bridge on U.S. Highway 59, 1.6 mi downstream from Coleto Creek dam, 9.0 mi southwest of Victoria, and 11.2 mi upstream from mouth.

DRAINAGE AREA.--514 mi^2.

PERIOD OF RECORD.--Jun 1939 to Sep 1954, Jun 1978 to current year.

REVISED RECORDS.--WSP 1562: 1939-40. WSP 1732: 1941.

GAGE.--Water-stage recorder. Datum of gage is 44.18 ft above sea level. Prior to Jan 17, 1955, at datum 5.0 ft higher. Satellite telemeter at station.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Since Feb 21, 1980 at least 10% of contributing drainage area has been regulated by Coleto Creek Reservoir (station 08177400, conservation pool storage 35,084 acre-ft), 1.6 mi upstream. Beginning on Mar 6, 1980, water diverted from the Guadalupe River basin to the Coleto Creek basin upstream from Coleto Creek Reservoir. There are no other large diversions above station. No flow at times. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water-quality data.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--16 years (water years 1940-54, 1979-80) prior to regulation by Coleto Creek Reservoir, 92.7 ft^3/s (67,160 acre-ft/yr).

EXTREMES FOR PERIOD PRIOR TO REGULATION (WATER YEARS 1940-54, 1979-80).--Maximum discharge, 89,000 ft^3/s Oct 16, 1946 (gage height, 36.64 ft, present datum, from floodmark), on basis of slope-area measurement of peak flow; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since at least 1875, 236,000 ft^3/s Sep 22, 1967 (gage height, 42.0 ft, from floodmark), present site and datum, on basis of slope-area measurement of peak flow. Flood of Apr 20, 1976, reached a stage of 37.85 ft, at site 0.2 mi upstream at present datum. Flood of Jul 1, 1936, reached a stage of 32.2 ft, present site and datum, from information by railroad company.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.8	5.1	e3.4	e2.3	2.9	3.7	17	15	11	9.6	7.7	1.5
2	4.9	5.0	e3.3	e2.3	3.1	5.0	20	38	13	9.3	6.7	1.5
3	4.9	5.2	e3.1	e2.3	3.0	5.3	23	23	12	9.3	6.2	1.5
4	7.1	5.3	e2.9	e2.3	2.8	5.7	18	16	11	9.2	6.0	1.5
5	4.9	5.3	e2.7	e2.3	2.6	5.0	17	14	11	9.3	6.0	1.5
6	4.5	5.4	e2.5	2.3	2.8	5.4	17	14	11	9.4	5.6	1.5
7	4.6	5.4	e3.6	10	7.7	6.4	17	14	11	9.4	5.4	3.3
8	4.7	5.4	e3.3	13	5.3	7.1	16	17	12	9.4	5.2	3.1
9	4.7	5.5	e3.0	10	3.0	7.3	17	14	12	9.3	5.0	2.0
10	4.8	5.8	e2.5	5.5	2.7	13	17	13	15	9.3	4.7	1.7
11	4.8	5.8	e2.5	3.2	2.5	16	17	13	314	9.3	4.5	1.6
12	4.8	6.0	e2.6	3.0	2.6	16	30	13	363	9.1	4.3	1.6
13	4.8	6.0	e2.6	2.9	2.6	16	21	14	103	9.0	4.1	1.6
14	4.8	6.0	e2.5	3.0	2.8	20	18	13	22	9.0	3.9	1.6
15	4.8	6.1	e2.5	3.1	2.8	19	17	13	9.9	9.1	4.0	1.7
16	4.7	e6.7	e2.4	3.3	2.9	17	17	12	9.3	9.0	3.8	1.6
17	4.6	e6.3	e2.4	3.5	3.0	16	17	12	9.1	9.0	3.5	1.6
18	5.2	e6.0	e2.4	3.6	3.1	16	16	12	8.8	9.1	3.3	1.6
19	4.9	e5.5	e2.4	3.5	3.2	16	16	12	11	9.0	3.2	1.6
20	4.5	e5.5	e2.4	2.9	3.3	16	16	13	9.9	9.0	3.1	1.6
21	4.5	e5.5	e2.4	2.8	3.3	17	16	12	9.6	9.0	2.8	1.7
22	4.5	e4.5	e2.4	2.9	3.4	17	16	11	9.7	8.8	2.7	1.8
23	4.6	e4.5	e2.4	2.8	3.4	17	15	14	9.9	8.5	2.6	1.7
24	4.6	e5.1	e2.4	2.7	3.2	17	15	11	9.8	8.4	2.5	1.7
25	4.6	e5.0	e2.4	2.7	3.3	17	15	11	9.8	8.1	2.4	2.1
26	4.8	e4.8	e2.4	2.7	3.2	17	15	11	12	7.9	2.3	1.8
27	4.8	e4.7	e2.3	6.0	3.2	17	15	11	11	7.8	2.2	1.8
28	5.0	e4.6	e2.3	9.2	3.3	17	15	18	10	7.6	2.1	1.8
29	5.2	e4.5	e2.3	4.2	3.4	17	15	12	10	7.3	2.0	1.9
30	5.1	e4.6	e2.3	3.4	---	16	14	11	12	7.1	1.8	1.9
31	5.1	---	e2.3	3.0	---	16	---	11	---	7.4	1.6	---
TOTAL	150.6	161.1	80.9	126.7	94.4	416.9	515	438	1082.8	272.0	121.2	53.4
MEAN	4.86	5.37	2.61	4.09	3.26	13.4	17.2	14.1	36.1	8.77	3.91	1.78
MAX	7.1	6.7	3.6	13	7.7	20	30	38	363	9.6	7.7	3.3
MIN	4.5	4.5	2.3	2.3	2.5	3.7	14	11	8.8	7.1	1.6	1.5
AC-FT	299	320	160	251	187	827	1020	869	2150	540	240	106

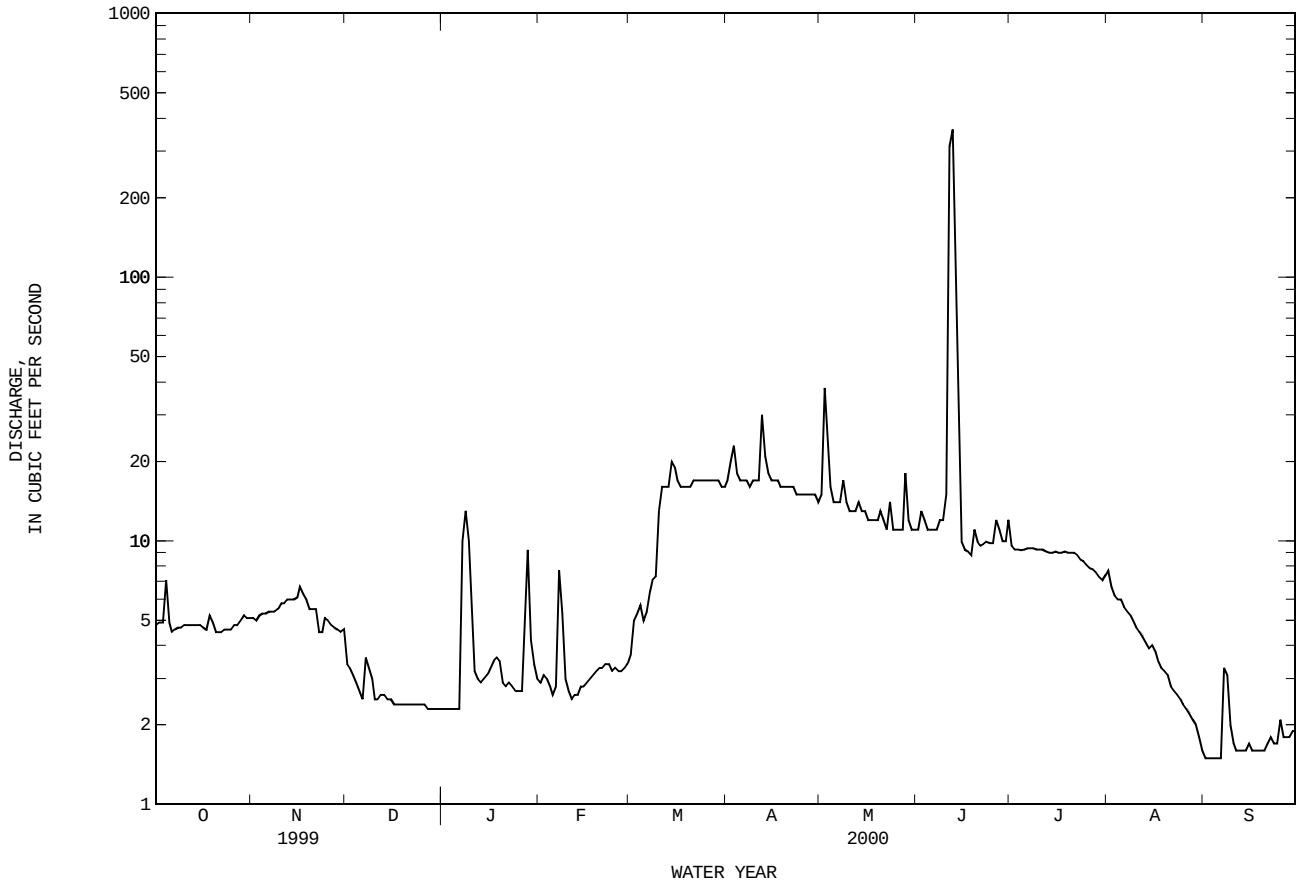
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1981 - 2000z, BY WATER YEAR (WY)

MEAN	204	90.9	46.3	35.5	111	95.8	202	140	262	54.5	9.22	65.3
MAX	1313	949	434	347	961	545	1817	940	1426	397	89.3	990
(WY)	1999	1999	1992	1992	1992	1997	1997	1993	1993	1990	1981	1998
MIN	1.61	1.90	2.01	1.93	1.98	2.05	2.07	2.09	1.82	1.31	1.06	1.56
(WY)	1996	1997	1997	1996	1996	1996	1996	1996	1990	1996	1989	1989

08177500 COLETO CREEK NEAR VICTORIA, TX--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1981 - 2000z		
ANNUAL TOTAL	4592.0		3513.0				
ANNUAL MEAN	12.6		9.60		109		
HIGHEST ANNUAL MEAN					302		1997
LOWEST ANNUAL MEAN					1.98		1996
HIGHEST DAILY MEAN	718	Jun 26	363	Jun 12	27500	Apr 4	1997
LOWEST DAILY MEAN	2.3	Dec 27	1.5	Sep 1	.00	May 6	1981
ANNUAL SEVEN-DAY MINIMUM	2.3	Dec 25	1.5	Aug 31	.66	Mar 3	1994
INSTANTANEOUS PEAK FLOW			504	Jun 12	c50100	Apr 4	1997
INSTANTANEOUS PEAK STAGE			6.75	Jun 12	a32.05	Apr 4	1997
ANNUAL RUNOFF (AC-FT)	9110		6970		79120		
10 PERCENT EXCEEDS	8.2		16		26		
50 PERCENT EXCEEDS	5.0		5.3		5.0		
90 PERCENT EXCEEDS	3.1		2.3		2.1		

e Estimated
z Period of regulated streamflow.
c From rating curve extended above measurements of 32,200 ft^3/s and 36,300 ft^3/s.
a From Floodmark.



08177520 GUADALUPE RIVER NEAR BLOOMINGTON, TX

LOCATION.--Lat 28°39′43", long 96°57′55", Victoria County, Hydrologic Unit 12100204, on left bank at Dupont pump station, 1.8 mi upstream from Dalton Bridge, about 10.5 mi west of Bloomington, and at mile 28.2.

DRAINAGE AREA.--5,816 mi^2.

PERIOD OF RECORD.--Feb 1999 to current year.

GAGE.--Water-stage recorder. Datum of gage not determined. Satellite telemeter at station.

REMARKS.--Records fair except those estimated daily gage heights, which are poor. Since installation of gage in Jan 1999, at least 10% of contributing drainage area has been regulated by Lake Dunlap and Lake McQueeny (combined capacity of 10,950 acre-ft). Flow is also regulated by Canyon Lake (station 08167700, conservation pool storage 385,600 acre-ft). There are many diversions above station.

EXTREMES OUTSIDE PERIOD OF RECORD.-- Flood of Oct 20, 1998 reached a stage of 33.92 ft., from National Weather Service floodmark.

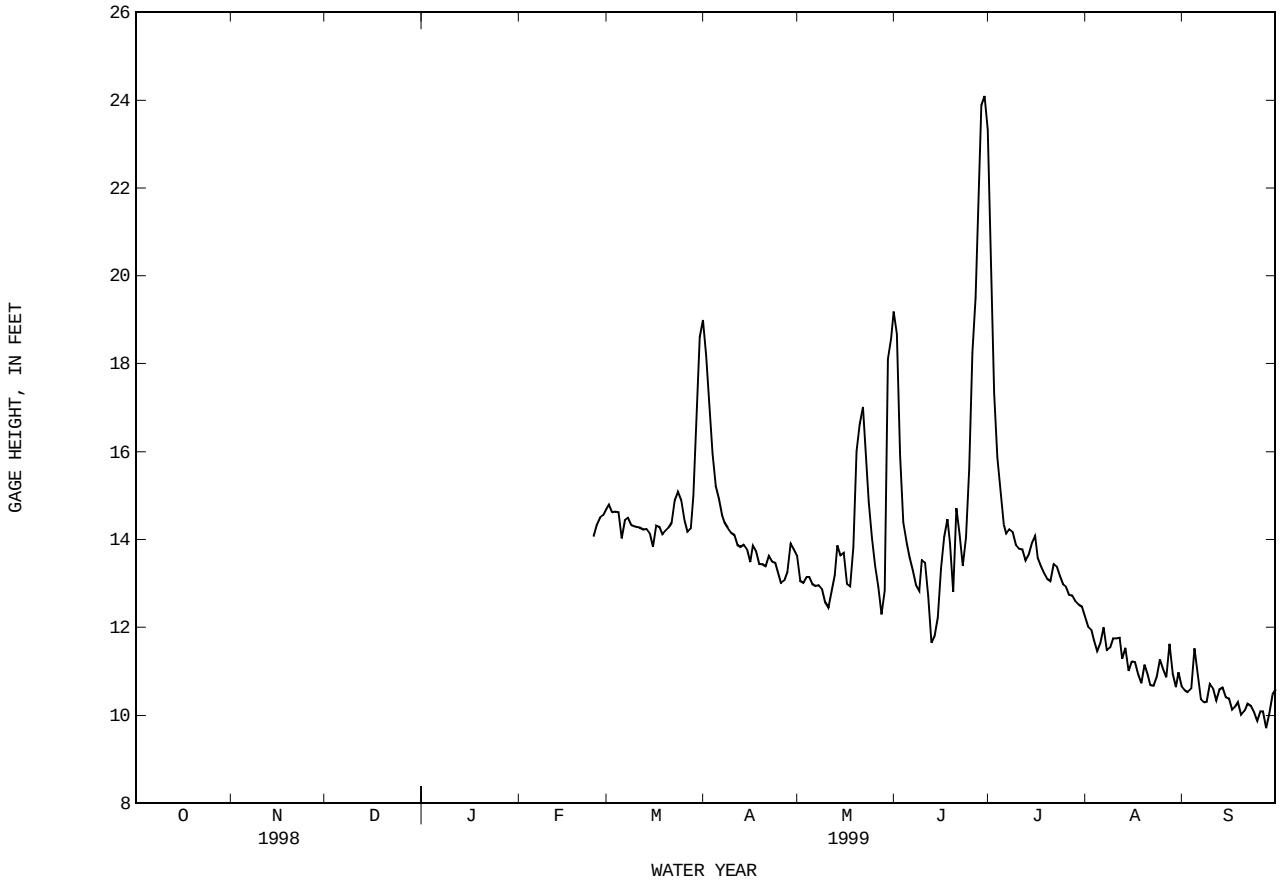
EXTREMES FOR WATER YEAR 1999.--Maximum gage height, 24.16 ft, Jun 29; minimum gage height, 9.52 ft, Sep 27.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 23.11 ft, Jun 14; minimum gage height, 8.52 ft, on several days.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	14.80	18.18	13.07	18.68	20.60	12.02	10.57
2	---	---	---	---	---	14.63	17.16	13.02	15.93	17.32	11.94	10.53
3	---	---	---	---	---	14.64	15.95	13.16	14.40	15.87	11.72	10.61
4	---	---	---	---	---	14.63	15.22	13.15	13.95	15.10	11.46	11.53
5	---	---	---	---	---	14.03	14.93	13.00	13.59	14.35	11.66	10.98
6	---	---	---	---	---	14.44	14.55	12.95	13.30	14.13	12.00	10.37
7	---	---	---	---	---	14.49	14.38	12.96	12.97	14.24	11.48	10.30
8	---	---	---	---	---	14.33	14.26	12.88	12.83	14.18	11.54	10.32
9	---	---	---	---	---	14.30	14.16	12.57	13.53	13.88	11.76	10.72
10	---	---	---	---	---	14.29	14.11	12.45	13.47	13.80	11.75	10.62
11	---	---	---	---	---	14.27	13.89	12.82	12.70	13.78	11.77	10.35
12	---	---	---	---	---	14.24	13.84	13.20	11.66	13.53	11.29	10.59
13	---	---	---	---	---	14.25	13.89	13.87	11.81	13.67	11.54	10.63
14	---	---	---	---	---	14.14	13.78	13.63	12.24	13.93	11.02	10.41
15	---	---	---	---	---	13.84	13.49	13.69	13.34	14.09	11.23	10.39
16	---	---	---	---	---	14.32	13.87	12.99	14.07	13.59	11.22	10.13
17	---	---	---	---	---	14.29	13.74	12.94	14.47	13.40	10.94	10.19
18	---	---	---	---	---	14.11	13.44	13.83	13.92	13.24	10.73	10.30
19	---	---	---	---	---	14.19	13.44	16.01	12.81	13.11	11.16	10.01
20	---	---	---	---	---	14.26	13.40	16.64	14.71	13.07	10.93	10.10
21	---	---	---	---	---	14.38	13.64	17.01	14.12	13.44	10.70	10.27
22	---	---	---	---	---	14.90	13.51	16.07	13.41	13.39	10.68	10.22
23	---	---	---	---	---	15.10	13.48	14.86	14.05	13.17	10.88	10.08
24	---	---	---	---	14.08	14.90	13.21	14.04	15.60	12.98	11.27	9.88
25	---	---	---	---	14.33	14.45	13.01	13.40	18.26	12.94	11.06	10.09
26	---	---	---	---	14.50	14.17	13.07	12.92	19.51	12.74	10.87	10.10
27	---	---	---	---	14.56	14.25	13.27	12.30	21.59	12.73	11.62	9.71
28	---	---	---	---	14.70	14.99	13.92	12.83	23.89	12.60	10.96	10.05
29	---	---	---	---	---	16.57	13.78	18.11	24.09	12.53	10.65	10.47
30	---	---	---	---	---	18.62	13.63	18.57	23.33	12.48	10.98	10.59
31	---	---	---	---	---	19.00	---	19.19	---	12.25	10.66	---
MEAN	---	---	---	---	---	14.77	14.14	14.13	15.41	13.88	11.27	10.37
MAX	---	---	---	---	---	19.00	18.18	19.19	24.09	20.60	12.02	11.53
MIN	---	---	---	---	---	13.84	13.01	12.30	11.66	12.25	10.65	9.71

08177520 GUADALUPE RIVER NEAR BLOOMINGTON, TX--Continued

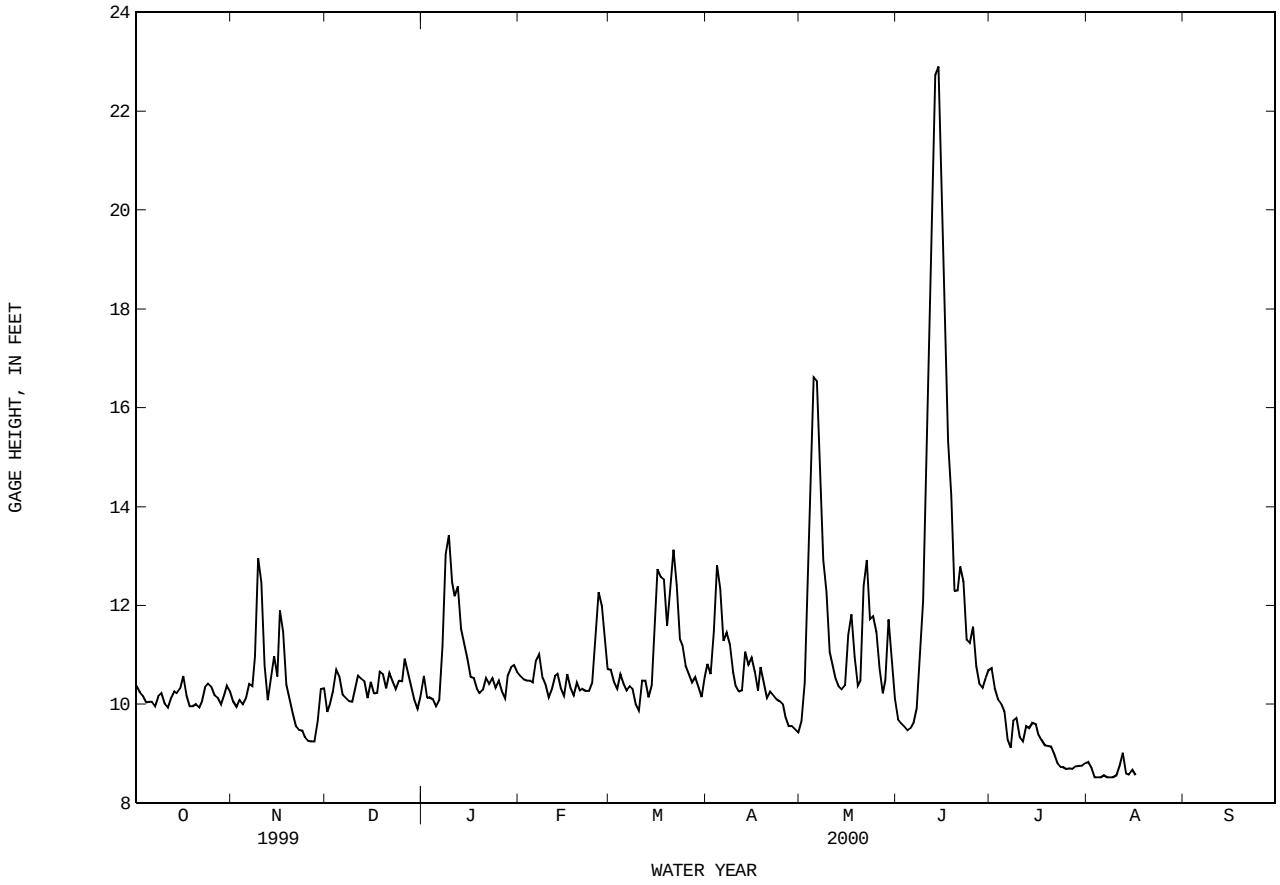


08177520 GUADALUPE RIVER NEAR BLOOMINGTON, TX--Continued

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10.38	10.06	9.85	10.57	10.58	10.71	10.82	9.67	9.70	10.73	8.84	---
2	10.25	9.95	10.00	10.14	10.51	10.46	10.62	10.43	9.62	10.33	8.72	---
3	10.17	10.09	10.28	10.15	10.48	10.31	11.47	13.55	9.55	10.11	8.53	---
4	10.05	10.01	10.70	10.11	10.49	10.61	12.81	15.00	9.47	10.02	8.53	---
5	10.06	10.13	10.56	9.96	10.45	10.42	12.34	16.62	9.51	9.86	8.53	---
6	10.06	10.42	10.20	10.09	10.88	10.28	11.29	16.55	9.63	9.29	8.57	---
7	9.96	10.37	10.14	11.17	11.01	10.37	11.46	14.42	9.93	9.13	8.53	---
8	10.16	10.96	10.07	13.04	10.56	10.31	11.22	12.92	11.03	9.67	8.53	---
9	10.23	12.96	10.06	13.43	10.41	10.01	10.66	12.27	12.09	9.72	8.53	---
10	10.02	12.47	10.30	12.48	10.15	9.88	10.38	11.07	15.29	9.35	8.57	---
11	9.94	10.79	10.59	12.19	10.31	10.48	10.26	10.78	18.29	9.26	8.76	---
12	10.14	10.08	10.52	12.39	10.57	10.48	10.29	10.54	21.13	9.56	9.02	---
13	10.27	10.55	10.47	11.53	10.62	10.15	11.07	10.37	22.74	9.52	8.61	---
14	10.23	10.97	10.13	11.24	10.33	10.39	10.81	10.30	22.91	9.63	8.58	---
15	10.32	10.56	10.46	10.93	10.17	11.49	10.95	10.38	20.67	9.61	8.67	---
16	10.57	11.89	10.23	10.56	10.61	12.74	10.66	11.41	17.42	9.40	8.57	---
17	10.18	11.47	10.24	10.54	10.34	12.58	10.28	11.82	15.33	9.28	---	---
18	9.96	10.41	10.66	10.31	10.19	12.53	10.75	10.96	14.23	9.17	---	---
19	9.96	10.12	10.61	10.23	10.45	11.58	10.46	10.38	12.30	9.16	---	---
20	10.01	9.83	10.33	10.29	10.28	12.39	10.13	10.49	12.31	9.15	---	---
21	9.94	9.57	10.64	10.53	10.31	13.12	10.27	12.39	12.79	9.00	---	---
22	10.06	9.49	10.47	10.42	10.28	12.42	10.19	12.92	12.49	8.81	---	---
23	10.34	9.47	10.31	10.54	10.28	11.32	10.11	11.71	11.31	8.73	---	---
24	10.42	9.35	10.48	10.34	10.44	11.20	10.07	11.78	11.25	8.73	---	---
25	10.35	9.27	10.47	10.49	11.38	10.78	10.01	11.47	11.57	8.70	---	---
26	10.19	9.25	10.92	10.27	12.27	10.62	9.75	10.72	10.78	8.71	---	---
27	10.14	9.25	10.65	10.12	12.00	10.45	9.56	10.23	10.42	8.70	---	---
28	10.00	9.65	10.37	10.59	11.30	10.55	9.57	10.50	10.34	8.75	---	---
29	10.20	10.31	10.10	10.74	10.72	10.35	9.50	11.71	10.55	8.76	---	---
30	10.38	10.33	9.91	10.79	---	10.15	9.44	10.97	10.69	8.76	---	---
31	10.26	---	10.19	10.65	---	10.57	---	10.11	---	8.82	---	---
MEAN	10.17	10.33	10.35	10.87	10.63	10.96	10.57	11.76	13.18	9.30	---	---
MAX	10.57	12.96	10.92	13.43	12.27	13.12	12.81	16.62	22.91	10.73	---	---
MIN	9.94	9.25	9.85	9.96	10.15	9.88	9.44	9.67	9.47	8.70	---	---

08177520 GUADALUPE RIVER NEAR BLOOMINGTON, TX--Continued



08177700 OLMOS CREEK AT DRESDEN DRIVE, SAN ANTONIO, TX
(Flood-hydrograph partial-record station)

LOCATION.--Lat 29°29′56", long 98°30′36", Bexar County, Hydrologic Unit 12100301, on right bank 30 ft downstream from low-water bridge on Dresden Drive at San Antonio, 0.15 mi west of intersection of Blanco Road and Dresden Drive, and 4.0 mi upstream from Olmos Dam.

DRAINAGE AREA.--21.2 mi^2.

PERIOD OF RECORD.--Jun 1968 to Sep 1981 (daily mean discharge), Oct 1982 to current year (peak discharges greater than base discharge).

Water-quality records.--Chemical data: Nov 1968 to Apr 1995, Oct 1997 to Jun 1999. Biochemical data: Nov 1968 to Apr 1995, Oct 1997 to Jun 1999. Pesticide data: Nov 1968 to Apr 1995, Oct 1997 to Jun 1999. Sediment data: Oct 1972 to Sep 1973.

GAGE.--Water-stage recorder. Datum of gage is 720.00 ft above sea level. Satellite telemeter at station.

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

AVERAGE DISCHARGE.--14 years (water years 1968-81), 4.34 ft^3/s (2.78 in/yr), 3,140 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 19,700 ft^3/s Apr 5, 1991 (gage height, 14.38 ft, from floodmark); maximum gage height, 14.82 ft (from floodmark) Sep 13, 1978 (at datum then in use); no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Floods in Sep and Nov 1947 reached a stage of 8.5 ft, from information by local resident. Maximum stage since 1935, that of Sep 13, 1978.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 700 ft^3/s:

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb 23	0115	2,030	6.17	Jun 10	1515	2,130	6.27
May 19	1830	1,960	6.11	Jun 12	1400	1,440	5.64

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08178000 SAN ANTONIO RIVER AT SAN ANTONIO, TX

LOCATION.--Lat 29°24′34", long 98°29′41", Bexar County, Hydrologic Unit 12100301, on right bank 50 ft downstream from South Alamo Street Bridge in San Antonio, 2.1 mi upstream from San Pedro Creek, and 230.6 mi upstream from mouth.

DRAINAGE AREA.--41.8 mi^2. Flow of river comes from intermittent spring flow and from artesian wells; drainage area of streams not applicable.

PERIOD OF RECORD.--Dec 1895 to Jun 1906 (periodic discharge measurements only), Jan 1915 to Nov 1929, Feb 1939 to Sep 1997 (daily mean discharge), Oct 1997 to Sep 1999 (annual peak discharge), Oct 1999 to Sep 2000 (daily mean stage). (Ground-water discharge into river is discussed by Petit and George, Texas Board of Water Engineers Bulletin 5608, vol. 1 (1956, p. 45).)
Water-quality records.--Chemical data: Dec 1991 to Aug 1992, Jan 1996 to Aug 1996. Biochemical data: Dec 1991 to Aug 1992, Jan 1996 to Aug 1996. Pesticide data: Dec 1991 to Aug 1992, Jan 1996 to Aug 1996.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 605.26 ft above sea level. Jan 26, 1915, to Feb 27, 1916, nonrecording gage at site 1.3 mi upstream at different datum. Feb 28, 1916, to Apr 7, 1920, nonrecording gage at site 1.1 mi upstream at different datum. Apr 8, 1920, to Nov 16, 1929, Feb 15, 1939, to Apr 25, 1967, water-stage recorder in vicinity of South Alamo Street Bridge at 7.00-foot higher datum. Apr 25, 1967, to May 13, 1969, water-stage recorder at site 307 ft downstream at same datum. May 14, 1969, to Apr 26, 2000, site on left bank, 193 ft downstream from South Alamo Street bridge.

REMARKS.--Records good. Flood flow is regulated by Olmos flood-control reservoir (conservation pool storage 14,240 acre-ft), about 8.5 mi upstream. Olmos Dam was completed in 1926 and rebuilt in 1980. Springs emerge intermittently from the Edwards and associated limestones along the Balcones Fault Zone upstream from station. No flow at times due to regulation.

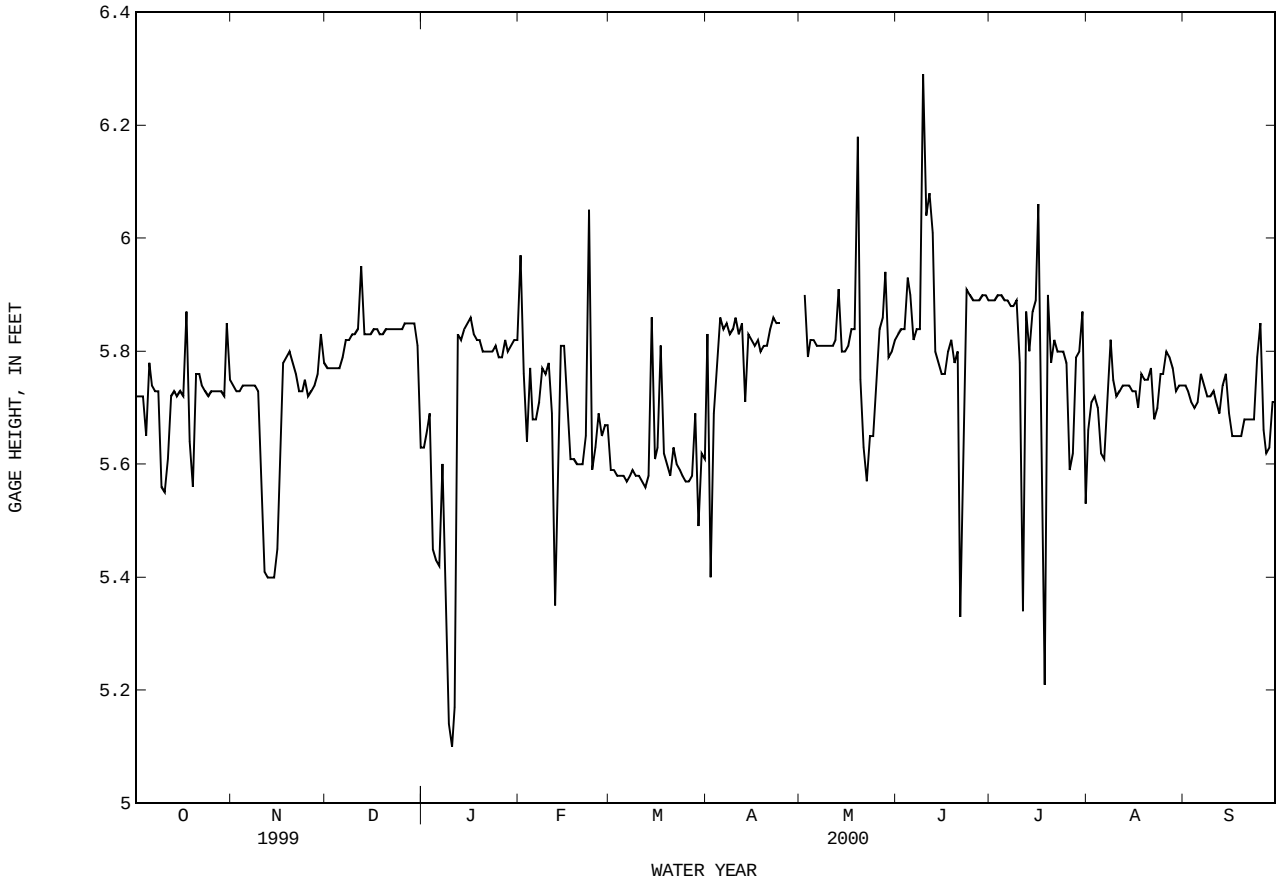
EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Jul 5, 1819, equaled or exceeded that of Sep 10, 1921.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 12.11 ft, Jun 10; minimum gage height, 3.25 ft, Jun 21.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.72	5.74	5.77	5.63	5.97	5.59	5.83	---	5.83	5.89	5.66	5.74
2	5.72	5.73	5.77	5.66	5.76	5.59	5.40	5.90	5.84	5.89	5.71	5.73
3	5.72	5.73	5.77	5.69	5.64	5.58	5.69	5.79	5.84	5.90	5.72	5.71
4	5.65	5.74	5.77	5.45	5.77	5.58	5.78	5.82	5.93	5.90	5.70	5.70
5	5.78	5.74	5.77	5.43	5.68	5.58	5.86	5.82	5.90	5.89	5.62	5.71
6	5.74	5.74	5.79	5.42	5.68	5.57	5.84	5.81	5.82	5.89	5.61	5.76
7	5.73	5.74	5.82	5.60	5.71	5.58	5.85	5.81	5.84	5.88	5.71	5.74
8	5.73	5.74	5.82	5.32	5.77	5.59	5.83	5.81	5.84	5.88	5.82	5.72
9	5.56	5.73	5.83	5.14	5.76	5.58	5.84	5.81	6.29	5.89	5.75	5.72
10	5.55	5.60	5.83	5.10	5.78	5.58	5.86	5.81	6.04	5.78	5.72	5.73
11	5.61	5.41	5.84	5.17	5.69	5.57	5.83	5.81	6.08	5.34	5.73	5.71
12	5.72	5.40	5.95	5.83	5.35	5.56	5.85	5.82	6.01	5.87	5.74	5.69
13	5.73	5.40	5.83	5.82	5.50	5.58	5.71	5.91	5.80	5.80	5.74	5.74
14	5.72	5.40	5.83	5.84	5.81	5.86	5.83	5.80	5.78	5.87	5.74	5.76
15	5.73	5.45	5.83	5.85	5.81	5.61	5.82	5.80	5.76	5.89	5.73	5.69
16	5.72	5.60	5.84	5.86	5.71	5.63	5.81	5.81	5.76	6.06	5.73	5.65
17	5.87	5.78	5.84	5.83	5.61	5.81	5.82	5.84	5.80	5.62	5.70	5.65
18	5.64	5.79	5.83	5.82	5.61	5.62	5.80	5.84	5.82	5.21	5.76	5.65
19	5.56	5.80	5.83	5.82	5.60	5.60	5.81	6.18	5.78	5.90	5.75	5.65
20	5.76	5.78	5.84	5.80	5.60	5.58	5.81	5.75	5.80	5.78	5.75	5.68
21	5.76	5.76	5.84	5.80	5.60	5.63	5.84	5.63	5.33	5.82	5.77	5.68
22	5.74	5.73	5.84	5.80	5.65	5.60	5.86	5.57	5.65	5.80	5.68	5.68
23	5.73	5.73	5.84	5.80	6.05	5.59	5.85	5.65	5.91	5.80	5.70	5.68
24	5.72	5.75	5.84	5.81	5.59	5.58	5.85	5.65	5.90	5.80	5.76	5.79
25	5.73	5.72	5.84	5.79	5.63	5.57	---	5.74	5.89	5.78	5.76	5.85
26	5.73	5.73	5.85	5.79	5.69	5.57	---	5.84	5.89	5.59	5.80	5.66
27	5.73	5.74	5.85	5.82	5.65	5.58	---	5.86	5.89	5.62	5.79	5.62
28	5.73	5.76	5.85	5.80	5.67	5.69	---	5.94	5.90	5.79	5.77	5.63
29	5.72	5.83	5.85	5.81	5.67	5.49	---	5.79	5.90	5.80	5.73	5.71
30	5.85	5.78	5.81	5.82	---	5.62	---	5.80	5.89	5.87	5.74	5.71
31	5.75	---	5.63	5.82	---	5.61	---	5.82	---	5.53	5.74	---
MEAN	5.71	5.69	5.82	5.68	5.69	5.61	---	---	5.86	5.78	5.73	5.70
MAX	5.87	5.83	5.95	5.86	6.05	5.86	---	---	6.29	6.06	5.82	5.85
MIN	5.55	5.40	5.63	5.10	5.35	5.49	---	---	5.33	5.21	5.61	5.62

08178000 SAN ANTONIO RIVER AT SAN ANTONIO, TX--Continued



08178050 SAN ANTONIO RIVER AT MITCHELL ST., SAN ANTONIO, TX

LOCATION.--Lat 29°23′34", long 98°29′40", Bexar County, Hydrologic Unit 12100301, on left bank 15 ft upstream from Mitchell Street Bridge in San Antonio, 0.2 mi upstream from San Pedro Creek, and 228.7 mi upstream from mouth.

DRAINAGE AREA.--42.4 mi^2. At low-flow, flow of river comes from intermittent spring flow and from artesian wells.

PERIOD OF RECORD.--Oct 1992 to current year.
Water-quality records.--Chemical data: Dec 1991 to Jun 1999. Biochemical data: Dec 1991 to Jun 1999. Pesticide data: Dec 1991 to Jun 1999.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 585.07 ft above sea level. Satellite telemeter at station.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Since installation of gage in Oct 1992, at least 10% of contributing drainage area has been regulated by Olmos Reservoir (station 08177800, conservation pool storage, 14,240 acre-ft), about 10.6 mi upstream. Springs emerge intermittently from the Edwards and associated limestones along the Balcones Fault Zone upstream from station. Ground-water discharge into river is discussed by Petit and George, Texas Board of Water Engineers Bulletin 5608, vol. 1 (1956, p. 45). No flow at times due to regulation. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water-quality data.

EXTREMES OUTSIDE PERIOD OF RECORD.--From San Fernando Cathedral archives and old spanish records, flood of Jul 5, 1819, equaled or exceeded that of Sep 10, 1921.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.4	13	10	16	103	29	103	335	17	19	e45	17
2	12	11	11	24	268	30	57	92	17	19	e13	16
3	12	12	11	93	15	31	175	16	17	21	e13	14
4	18	14	10	19	20	32	19	15	106	20	e13	14
5	6.7	13	9.9	18	12	32	17	15	35	19	e13	15
6	9.9	13	11	19	12	29	14	13	15	20	e12	16
7	10	12	15	231	8.0	20	16	13	18	17	e11	17
8	16	13	15	58	11	16	13	13	18	17	14	17
9	13	12	15	8.2	16	14	14	14	555	18	16	17
10	11	15	15	3.1	16	14	17	14	703	18	11	18
11	5.5	9.2	16	1.4	22	13	16	14	805	16	14	20
12	8.8	8.9	47	9.2	17	12	70	13	540	16	15	26
13	11	8.4	17	12	12	17	16	139	90	18	14	26
14	11	8.4	16	13	16	88	16	14	35	15	14	80
15	11	9.6	15	15	16	21	15	14	31	18	14	38
16	10	9.4	15	16	23	19	15	14	31	18	14	13
17	119	12	16	16	15	72	16	17	53	69	14	13
18	64	12	16	18	17	18	14	17	68	1.2	14	14
19	10	12	16	16	16	16	14	312	44	12	15	13
20	11	12	17	17	16	15	14	220	51	16	14	15
21	12	12	17	16	16	19	13	17	22	15	24	15
22	12	8.9	17	16	14	16	13	17	17	e9.0	17	15
23	11	8.3	17	16	336	15	13	19	20	e9.0	14	15
24	12	9.8	17	16	14	14	13	19	21	e9.0	14	51
25	13	12	17	13	12	13	12	16	20	e9.0	16	133
26	12	9.2	18	13	18	13	12	18	21	e10	17	18
27	12	9.3	18	18	14	13	14	19	20	e12	16	17
28	12	9.5	18	13	15	115	12	50	21	e10	18	13
29	12	8.9	17	15	28	11	12	19	23	e11	16	16
30	33	9.5	20	16	---	13	12	18	19	e100	17	16
31	16	---	17	20	---	14	---	17	---	e75	17	---
TOTAL	536.3	327.3	506.9	794.9	1118.0	794	777	1543	3453	656.2	489	728
MEAN	17.3	10.9	16.4	25.6	38.6	25.6	25.9	49.8	115	21.2	15.8	24.3
MAX	119	15	47	231	336	115	175	335	805	100	45	133
MIN	5.5	8.3	9.9	1.4	8.0	11	12	13	15	1.2	11	13
AC-FT	1060	649	1010	1580	2220	1570	1540	3060	6850	1300	970	1440

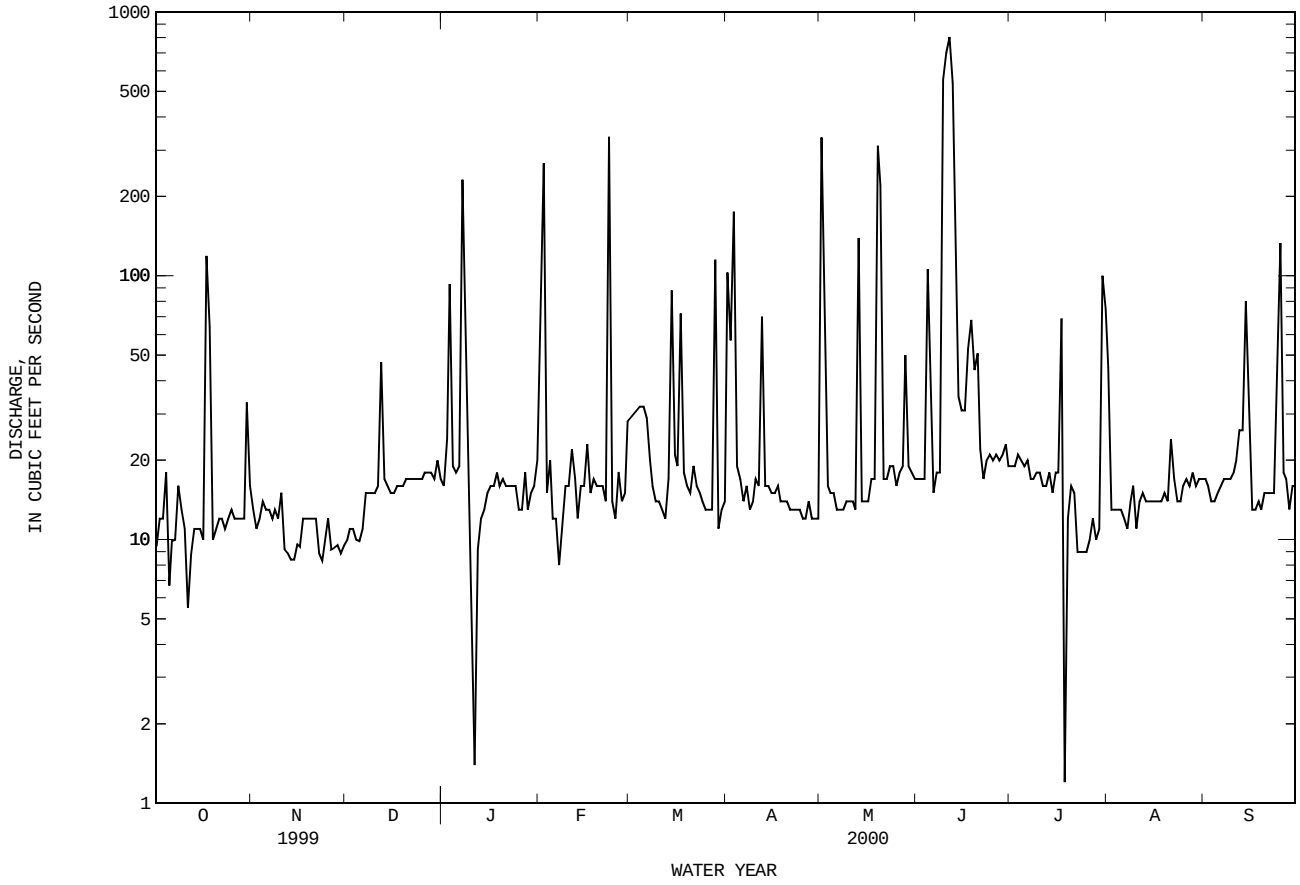
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1993 - 2000, BY WATER YEAR (WY)

MEAN	86.1	69.3	67.7	62.7	64.4	69.5	54.7	97.1	83.9	31.4	30.4	32.2
MAX	229	203	209	185	209	172	149	369	228	115	103	58.5
(WY)	1999	1993	1993	1993	1993	1993	1993	1993	1993	1993	1998	1994
MIN	4.96	10.9	13.5	6.41	19.0	12.8	14.0	8.96	12.0	9.04	5.82	12.5
(WY)	1997	2000	1997	1997	1996	1996	1996	1998	1998	1998	1997	1999

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1993 - 2000	
ANNUAL TOTAL	17564.6		11723.6			
ANNUAL MEAN	48.1		32.0		62.5	
HIGHEST ANNUAL MEAN					172	1993
LOWEST ANNUAL MEAN					16.4	1996
HIGHEST DAILY MEAN	717	Jun 21	805	Jun 11	2750	Oct 17 1998
LOWEST DAILY MEAN	2.4	Jun 14	1.2	Jul 18	.61	Nov 8 1997
ANNUAL SEVEN-DAY MINIMUM	7.7	Aug 13	8.8	Jan 9	3.0	Jan 1 1997
INSTANTANEOUS PEAK FLOW			3060	Mar 28	i14300	Oct 17 1998
INSTANTANEOUS PEAK STAGE			5.75	Jun 10	a12.94	Oct 17 1998
ANNUAL RUNOFF (AC-FT)	34840		23250		45250	
10 PERCENT EXCEEDS	94		48		161	
50 PERCENT EXCEEDS	29		16		19	
90 PERCENT EXCEEDS	9.5		10		6.8	

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

08178050 SAN ANTONIO RIVER AT MITCHELL ST., SAN ANTONIO, TX--Continued



08178565 SAN ANTONIO RIVER AT LOOP 410 AT SAN ANTONIO, TX

LOCATION.--Lat 29°19'19", long 98°27'00", Bexar County, Hydrologic Unit 12100301, on right bank between westbound bridges on Interstate Highway 410 in San Antonio, 4.5 mi upstream from Salado Creek, and 222.3 mi upstream from mouth.

DRAINAGE AREA.--125 mi^2. At low-flow, flow of river comes from intermittent springflow and from artesian wells.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Oct 1986 to current year.

GAGE.--Water-stage recorder. Datum of gage is 488.11 ft above sea level. Dec 20, 1986, to Aug 15, 1989, at site 0.2 mi downstream at Camino Coahuilteca crossing at same datum. Satellite telemeter at station.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Since installation of gage in water year 1987, at least 10% of contributing drainage area has been regulated by Olmos Reservoir (station 08177800, conservation pool storage 14,240 acre-ft). Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water-quality data.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	42	20	13	27	117	35	33	562	16	37	21	14
2	26	18	15	28	440	34	394	198	16	37	14	18
3	19	17	16	65	43	36	348	64	15	39	12	14
4	20	19	16	22	24	35	31	39	134	37	14	15
5	7.1	17	13	23	21	33	22	72	61	36	14	12
6	14	17	15	24	21	31	22	40	16	34	13	13
7	13	17	e20	288	17	28	19	35	15	34	12	13
8	13	18	e20	126	17	23	19	28	14	32	11	13
9	20	16	e20	20	20	23	19	28	613	35	17	13
10	13	19	e20	9.3	23	23	21	27	1390	35	13	17
11	13	15	e20	6.5	29	20	27	26	678	35	16	16
12	8.1	14	e70	7.7	24	20	121	25	542	32	15	15
13	13	12	29	22	21	25	32	240	152	35	15	272
14	13	11	25	18	18	182	23	33	74	28	13	88
15	13	12	22	21	21	60	22	21	61	35	14	82
16	14	14	23	21	27	27	22	17	58	30	13	12
17	210	13	22	20	20	190	21	17	77	63	14	9.5
18	70	14	22	22	20	33	20	16	82	9.5	12	10
19	37	17	20	23	17	23	19	610	99	1.8	15	11
20	20	17	22	23	17	21	18	415	56	11	14	11
21	18	16	23	20	17	32	17	28	73	11	20	12
22	18	14	24	22	20	28	18	20	32	9.2	37	12
23	17	14	23	22	366	24	18	19	44	8.9	16	11
24	16	11	22	21	36	23	17	17	42	9.0	16	24
25	16	18	22	20	24	22	16	15	42	9.2	13	241
26	17	13	23	19	35	23	16	15	42	14	14	e40
27	17	13	25	25	26	18	14	16	45	12	16	e20
28	18	13	26	21	24	174	17	127	49	10	13	e18
29	18	13	25	17	30	110	16	23	43	12	13	e16
30	49	14	26	18	---	23	16	17	38	190	15	e18
31	36	---	28	20	---	17	---	19	---	89	13	---
TOTAL	838.2	456	710	1041.5	1535	1396	1418	2829	4619	1010.6	468	1080.5
MEAN	27.0	15.2	22.9	33.6	52.9	45.0	47.3	91.3	154	32.6	15.1	36.0
MAX	210	20	70	288	440	190	394	610	1390	190	37	272
MIN	7.1	11	13	6.5	17	17	14	15	14	1.8	11	9.5
AC-FT	1660	904	1410	2070	3040	2770	2810	5610	9160	2000	928	2140

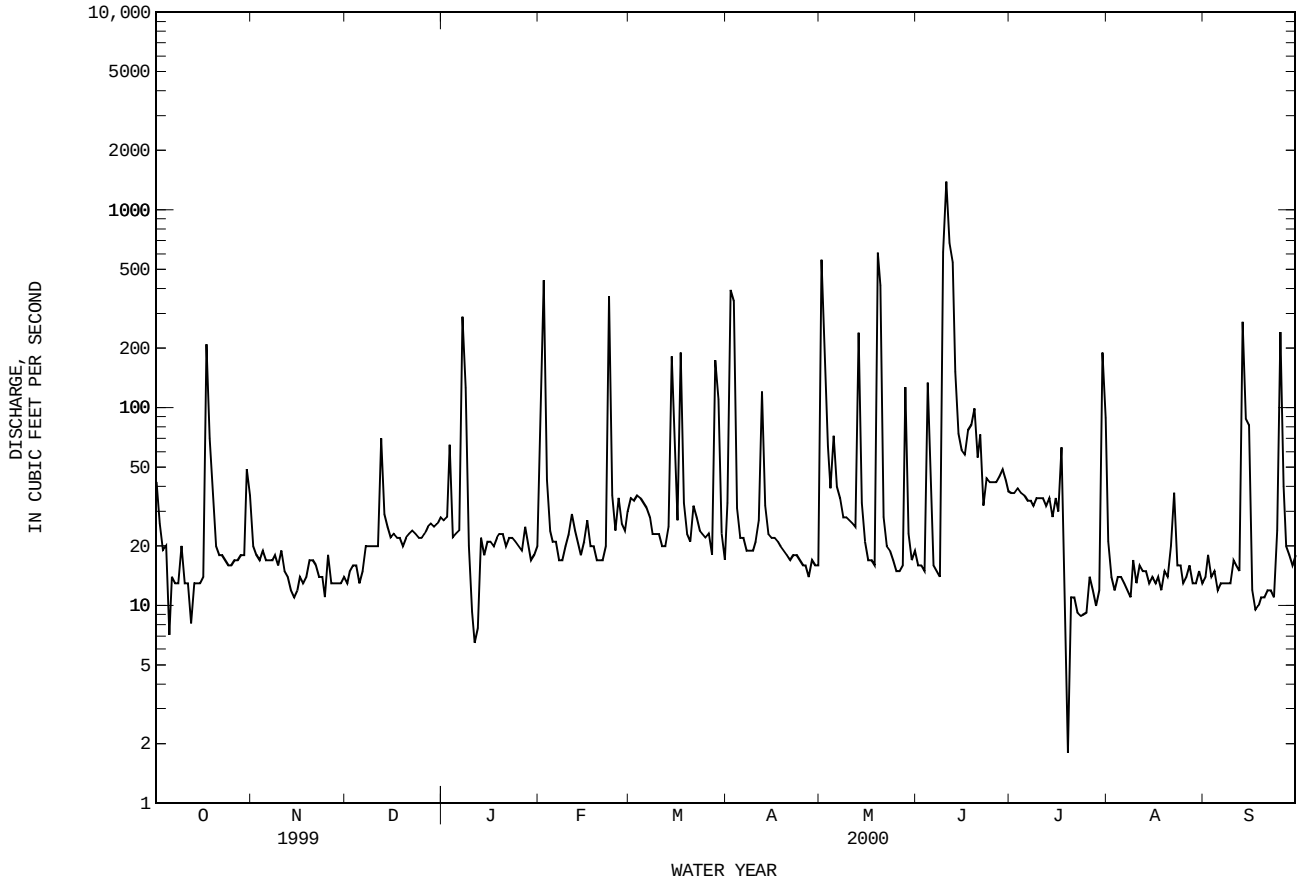
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 2000, BY WATER YEAR (WY)

MEAN	161	90.9	136	105	133	123	118	220	186	127	72.5	82.5
MAX	1041	294	479	263	483	420	345	937	622	692	263	262
(WY)	1999	1993	1992	1993	1992	1992	1992	1992	1987	1990	1992	1992
MIN	10.5	15.2	19.6	12.2	29.3	18.2	25.8	12.5	15.6	12.0	15.1	25.6
(WY)	1997	2000	1991	1997	1996	1996	1996	1998	1998	1998	2000	1989

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1987 - 2000	
ANNUAL TOTAL	26165.3		17401.8			
ANNUAL MEAN	71.7		47.5		130	
HIGHEST ANNUAL MEAN					353	1992
LOWEST ANNUAL MEAN					30.6	1996
HIGHEST DAILY MEAN	918	Jun 20	1390	Jun 10	16900	Oct 17 1998
LOWEST DAILY MEAN	7.1	Oct 5	1.8	Jul 19	1.8	Jul 19 2000
ANNUAL SEVEN-DAY MINIMUM	12	Oct 10	8.6	Jul 19	4.8	Jul 16 1996
INSTANTANEOUS PEAK FLOW			5220	Jun 10	i79400	Oct 17 1998
INSTANTANEOUS PEAK STAGE			15.99	Jun 10	a32.57	Oct 17 1998
ANNUAL RUNOFF (AC-FT)	51900		34520		93860	
10 PERCENT EXCEEDS	135		72		260	
50 PERCENT EXCEEDS	43		20		39	
90 PERCENT EXCEEDS	16		13		13	

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

08178565 SAN ANTONIO RIVER AT LOOP 410 AT SAN ANTONIO, TX--Continued



08178565 SAN ANTONIO RIVER AT LOOP 410 AT SAN ANTONIO, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--
CHEMICAL DATA: Dec 1986 to Sep 30, 2000 (discontinued).
BIOCHEMICAL DATA: Mar 1987 to Sep 1998.
PESTICIDE DATA: Dec 1992 to Sep 1998.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Dec 1986 to Aug 1988, Mar 1993 to Sep 30 2000 (discontinued).
pH: Dec 1986 to Aug 1988, Mar 1993 to Sep 25, 2000 (discontinued).
WATER TEMPERATURE: Dec 1986 to Aug 1988, Mar 1993 to Sep 25, 2000 (discontinued).
DISSOLVED OXYGEN: Dec 1986 to Aug 1988, Mar 1993 to Sep 25, 2000 (discontinued).

INSTRUMENTATION.--Water-quality monitor Dec 1986 to Aug 1988, Mar 1993 to Sep 30, 2000 (discontinued).

REMARKS.--Records fair. Interruptions in the record were caused by malfunctions of the instrument. Mean monthly and annual concentrations and loads for selected chemical constituents have been computed for previous years using the daily (or continuous) records of specific conductance and regression relationships between each chemical constituent and specific conductance. 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, 1,870 microsiemens, Aug 20, 1996; minimum, 102 microsiemens, Oct 17, 1998.
pH: Maximum, 9.2 units, May 27, 1996, Sep 5, 2000; minimum, 7.0 units, Jun 30, Jul 1, 1995.
WATER TEMPERATURE: Maximum, 36.7°C, Jul 19, 2000; minimum, 2.0°C, Jan 14, 1997.
DISSOLVED OXYGEN: Maximum, 20.1 mg/L, Feb 3, 1996; minimum, 0.5 mg/L, May 21, Jul 21, 1988.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 1,010 microsiemens, Jul 17; minimum, 107 microsiemens, Jun 10.
pH: Maximum, 9.2 units, Sep 5; minimum, 7.2 units, Mar 17, 18.
WATER TEMPERATURE: Maximum, 36.7°C, Jul 19; minimum, 6.2°C, Jan 30.
DISSOLVED OXYGEN: Maximum, 19.4 mg/L, Sep 18; minimum, 1.6 mg/L, Jul 19.

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	581	500	557	530	477	504	587	552	577	611	374	506
2	567	506	545	543	482	514	608	563	583	563	374	499
3	571	519	535	589	508	527	601	561	583	607	516	555
4	576	474	548	586	501	540	602	564	583	578	538	565
5	622	565	585	579	540	560	587	551	575	606	542	573
6	630	519	570	590	536	574	601	530	576	603	537	576
7	589	529	555	596	555	579	584	553	572	697	239	509
8	601	534	563	606	538	576	599	568	584	388	320	346
9	587	538	560	595	545	574	617	567	597	399	355	383
10	600	544	568	601	550	573	597	552	575	431	374	416
11	595	532	564	612	573	588	618	566	589	456	408	432
12	591	548	572	602	549	588	980	538	654	497	437	464
13	585	552	567	619	572	588	546	497	528	540	436	492
14	592	532	574	622	567	590	554	519	537	607	521	555
15	637	555	578	613	581	597	561	520	547	571	530	555
16	592	550	572	602	555	588	597	558	570	577	523	557
17	593	355	472	630	537	602	622	572	598	567	510	542
18	498	418	451	611	568	594	637	577	618	600	465	535
19	498	379	421	610	531	584	641	576	615	615	487	540
20	418	360	385	601	522	564	627	602	615	559	501	537
21	475	407	436	570	465	518	675	598	632	559	516	545
22	500	417	473	583	492	540	626	580	611	564	507	547
23	513	425	481	569	491	532	635	587	622	580	520	558
24	537	471	504	584	518	555	642	593	622	590	494	554
25	547	487	516	587	536	565	651	560	607	579	520	557
26	561	505	530	628	548	583	624	536	587	584	534	570
27	561	471	536	595	324	524	610	466	556	656	565	593
28	571	515	540	584	380	498	599	444	566	659	624	646
29	571	525	546	611	532	579	597	519	571	700	623	652
30	852	538	582	596	535	577	592	363	540	662	606	647
31	549	486	515	---	---	---	595	387	524	675	625	649
MONTH	852	355	529	630	324	562	980	363	584	700	239	537

08178565 SAN ANTONIO RIVER AT LOOP 410 AT SAN ANTONIO, TX--Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	793	360	612	473	437	454	475	320	446	588	187	396
2	390	292	350	467	436	455	342	159	284	440	260	352
3	458	389	426	499	427	451	378	172	299	368	268	322
4	474	413	450	514	435	468	416	378	397	398	368	383
5	492	411	461	462	432	448	438	388	418	634	394	453
6	503	423	462	453	438	447	446	393	427	458	418	438
7	522	433	474	483	453	462	464	396	441	470	420	450
8	533	433	495	508	466	490	489	420	462	515	417	475
9	548	421	513	541	508	523	500	404	461	524	437	498
10	567	430	528	569	536	556	500	421	473	530	454	498
11	571	398	504	578	539	560	546	445	487	534	436	494
12	543	398	493	574	527	554	975	340	436	542	427	491
13	526	364	458	581	539	564	425	386	398	625	262	320
14	525	370	467	936	304	500	468	425	444	326	303	314
15	567	410	486	415	364	393	515	462	484	348	309	334
16	515	418	474	467	375	426	531	481	515	423	333	367
17	536	493	516	564	179	296	548	504	532	475	400	438
18	539	492	524	357	268	316	561	515	541	477	405	447
19	557	517	535	397	343	372	555	501	535	457	139	386
20	549	516	535	421	375	400	563	503	541	266	158	240
21	553	506	543	452	387	428	569	518	549	349	266	301
22	568	540	557	486	344	426	582	521	559	421	348	378
23	568	281	399	420	337	387	577	518	553	---	---	e420
24	421	383	396	423	332	379	569	485	546	---	---	e453
25	469	376	400	429	330	378	557	391	503	483	418	460
26	464	393	425	428	330	388	491	346	435	489	425	459
27	433	395	420	439	322	388	474	402	439	484	436	465
28	428	369	412	435	259	379	499	416	471	542	324	383
29	441	400	425	375	318	355	520	459	495	411	380	394
30	---	---	---	427	366	396	558	495	534	453	408	431
31	---	---	---	456	370	435	---	---	---	486	427	461
MONTH	793	281	474	936	179	435	975	159	470	---	---	410

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	495	439	473	715	669	696	506	446	471	988	767	823
2	534	473	507	740	693	719	580	503	539	991	815	898
3	552	506	533	761	708	738	602	534	577	875	780	834
4	576	370	526	760	716	743	607	535	575	847	756	810
5	393	321	364	768	719	749	610	538	581	829	741	795
6	445	393	426	782	713	755	636	583	608	826	756	799
7	458	412	439	793	722	764	666	598	632	842	771	811
8	478	426	455	807	699	772	676	621	647	839	782	816
9	510	162	390	806	723	772	683	625	659	859	795	832
10	249	107	193	807	731	773	706	613	671	867	802	839
11	211	148	178	810	717	775	730	651	696	861	794	835
12	246	138	190	817	721	778	728	630	688	866	788	835
13	306	209	260	822	729	784	690	597	652	876	313	398
14	401	306	361	831	749	797	683	576	649	615	410	436
15	448	397	418	822	729	784	709	646	680	637	489	602
16	490	448	462	808	726	776	739	656	703	621	595	610
17	580	490	523	1010	785	891	741	686	716	642	608	630
18	625	456	544	992	561	842	778	693	741	663	615	645
19	615	436	494	964	415	763	854	746	800	687	637	667
20	524	449	472	866	701	772	818	748	791	688	628	664
21	599	524	568	774	696	735	816	758	791	748	684	713
22	623	533	585	767	676	729	928	742	818	739	632	683
23	609	518	568	755	666	716	742	617	678	687	638	668
24	620	559	581	747	651	707	703	633	661	868	525	678
25	653	599	628	732	636	692	692	623	671	566	309	487
26	664	593	635	714	633	680	712	650	690	---	---	e585
27	657	599	634	701	623	669	749	683	722	---	---	e635
28	677	620	651	712	638	679	769	675	737	---	---	e670
29	683	642	666	719	632	679	781	722	757	---	---	e690
30	700	652	683	714	376	620	820	720	776	---	---	e710
31	---	---	---	446	390	430	842	750	814	---	---	---
MONTH	700	107	480	1010	376	735	928	446	684	---	---	703

e Estimated

08178565 SAN ANTONIO RIVER AT LOOP 410 AT SAN ANTONIO, TX--Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	8.1	7.7	8.4	8.0	8.3	7.9	8.3	7.9	---	---	8.5	7.8
2	8.2	7.8	8.4	7.9	8.3	7.9	8.3	7.8	---	---	8.4	7.8
3	8.2	7.9	8.4	8.0	8.2	7.8	8.2	7.9	---	---	8.4	7.8
4	8.3	7.8	8.4	8.0	8.3	7.8	8.3	8.0	---	---	8.5	7.9
5	8.2	7.9	8.3	8.0	8.3	7.9	8.4	8.1	---	---	8.4	7.9
6	8.2	7.9	8.3	8.0	8.3	7.9	8.4	8.1	---	---	8.3	7.9
7	8.3	8.0	8.2	8.0	8.3	7.9	8.2	7.9	---	---	8.4	7.9
8	8.3	8.0	8.2	7.9	8.3	7.9	8.0	7.8	---	---	8.3	7.8
9	8.3	8.0	8.2	7.9	8.2	7.8	8.0	7.7	---	---	8.2	7.8
10	8.4	8.0	8.2	7.9	8.2	7.9	8.0	7.7	---	---	8.2	7.8
11	8.4	8.0	8.2	7.9	8.1	7.9	8.1	7.7	---	---	8.4	7.9
12	8.4	8.0	8.2	7.9	8.0	7.7	8.0	7.5	---	---	8.4	7.9
13	8.4	8.0	8.2	7.9	7.9	7.7	7.9	7.3	---	---	8.3	7.9
14	8.4	8.0	8.2	7.9	8.0	7.8	8.1	7.3	---	---	8.0	7.7
15	8.4	8.0	8.3	7.9	8.2	7.9	8.4	7.5	---	---	8.0	7.7
16	8.4	8.0	8.3	7.9	8.2	7.9	8.3	7.6	---	---	8.3	7.7
17	8.2	7.8	8.3	7.9	8.2	8.0	8.5	7.7	---	---	7.9	7.2
18	8.2	8.0	8.3	7.9	8.2	8.0	---	---	---	---	7.6	7.2
19	8.1	7.9	8.2	7.8	8.2	8.0	---	---	---	---	8.0	7.4
20	8.3	7.9	8.2	7.9	8.2	8.0	---	---	---	---	8.1	7.5
21	8.3	7.9	8.2	7.9	8.3	8.0	---	---	---	---	8.1	7.6
22	8.5	7.9	8.2	7.9	8.3	8.0	---	---	---	---	8.3	7.7
23	8.6	8.0	8.2	7.8	8.3	8.0	---	---	8.6	8.1	8.3	7.6
24	8.6	8.1	8.2	7.9	8.3	7.9	---	---	8.2	7.9	8.3	7.6
25	8.6	8.1	8.3	8.0	8.3	7.9	---	---	8.2	7.7	8.3	7.6
26	8.6	8.1	8.3	8.0	8.3	7.9	---	---	8.1	7.7	8.3	7.6
27	8.6	8.1	8.3	8.0	8.3	7.9	---	---	8.4	7.7	8.3	7.6
28	8.5	8.1	8.3	8.0	8.3	7.9	---	---	8.5	7.7	8.3	7.6
29	8.5	8.0	8.3	8.0	8.3	7.9	---	---	8.4	7.7	8.0	7.6
30	8.5	8.1	8.3	7.9	8.3	7.9	---	---	---	---	8.3	7.6
31	8.3	8.0	---	---	8.3	7.9	---	---	---	---	8.2	7.6
MONTH	8.6	7.7	8.4	7.8	8.3	7.7	---	---	---	---	8.5	7.2

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	8.0	7.6	7.9	7.7	8.6	7.6	8.3	7.6	8.6	7.6	8.9	8.0
2	8.0	7.6	7.7	7.5	8.6	7.6	8.3	7.6	8.6	7.6	8.4	7.8
3	7.8	7.6	7.7	7.5	8.5	7.6	8.3	7.6	8.8	7.6	9.0	7.8
4	7.8	7.6	7.7	7.5	8.5	7.5	8.3	7.7	8.8	7.6	9.1	7.9
5	7.9	7.6	8.0	7.5	8.0	7.4	8.3	7.7	8.9	7.7	9.2	7.9
6	8.1	7.6	8.2	7.6	8.4	7.5	8.3	7.7	8.9	7.7	9.1	8.0
7	8.3	7.7	8.4	7.6	8.6	7.6	8.3	7.7	8.9	7.7	9.0	8.0
8	8.5	7.7	8.5	7.6	8.6	7.6	8.4	7.7	8.9	7.7	9.0	8.0
9	8.7	7.7	8.4	7.6	8.0	7.6	8.4	7.7	8.9	7.7	9.0	8.0
10	8.5	7.7	8.4	7.6	8.2	7.5	8.4	7.7	9.1	7.7	9.0	8.0
11	8.5	7.7	8.3	7.6	7.8	7.6	8.4	7.7	9.0	7.8	9.0	8.1
12	7.9	7.7	8.2	7.5	7.8	7.5	8.5	7.7	9.0	7.8	9.1	8.1
13	8.5	7.6	8.0	7.5	7.6	7.5	8.4	7.8	9.0	7.7	8.7	7.8
14	8.5	7.7	8.4	7.6	7.8	7.6	8.5	7.8	9.0	7.8	8.3	7.8
15	8.5	7.7	8.5	7.6	7.9	7.6	8.5	7.7	8.9	7.8	8.3	7.9
16	8.4	7.7	8.6	7.6	8.2	7.7	8.4	7.7	8.9	7.8	8.7	7.9
17	8.5	7.6	8.5	7.7	8.3	7.7	8.4	7.8	8.8	7.8	8.9	7.9
18	8.4	7.7	8.5	7.7	8.5	7.7	8.6	7.8	8.9	7.8	9.0	8.0
19	8.4	7.7	8.7	7.6	8.4	7.6	8.9	7.7	8.8	7.8	9.1	8.0
20	8.4	7.7	7.9	7.5	8.6	7.5	8.7	7.8	8.8	7.8	9.0	8.0
21	8.4	7.7	7.8	7.5	8.5	7.7	8.8	7.8	8.8	7.8	9.0	8.0
22	8.4	7.7	8.2	7.5	8.5	7.6	8.7	7.7	8.7	7.9	9.0	8.0
23	8.3	7.7	8.4	7.6	8.5	7.5	8.7	7.7	8.8	7.7	9.0	8.0
24	8.4	7.7	---	---	8.5	7.5	8.8	7.8	8.8	7.8	8.9	8.0
25	8.4	7.8	8.6	7.6	8.5	7.6	8.8	7.7	8.8	7.8	8.8	8.0
26	8.3	7.8	8.6	7.6	8.5	7.6	8.8	7.7	8.8	7.8	---	---
27	8.4	7.8	8.6	7.6	8.4	7.6	8.8	7.7	8.9	7.8	---	---
28	8.3	7.7	8.1	7.4	8.4	7.6	8.8	7.7	8.8	7.9	---	---
29	8.3	7.7	8.5	7.5	8.3	7.6	8.8	7.7	8.8	7.9	---	---
30	8.3	7.7	8.6	7.5	8.3	7.6	8.8	7.7	8.9	7.9	---	---
31	---	---	8.6	7.6	---	---	8.1	7.4	8.9	8.0	---	---
MONTH	8.7	7.6	---	---	8.6	7.4	8.9	7.4	9.1	7.6	---	---

08178565 SAN ANTONIO RIVER AT LOOP 410 AT SAN ANTONIO, TX--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	25.8	20.1	22.6	22.9	17.3	20.0	19.1	14.2	16.6	18.3	12.9	15.3
2	28.1	21.0	24.1	20.2	16.5	18.5	20.0	16.2	18.1	18.9	16.3	17.3
3	29.3	24.2	26.2	19.5	14.0	16.7	21.3	16.1	18.7	18.5	13.4	16.7
4	28.8	23.9	26.1	21.0	14.7	17.8	21.1	15.8	19.2	14.3	10.0	12.0
5	30.1	22.5	25.9	22.0	16.9	19.4	16.9	12.9	14.7	13.6	8.2	10.7
6	29.4	23.2	25.9	22.6	18.5	20.5	15.7	10.2	12.9	15.0	9.3	12.1
7	28.3	21.9	25.0	24.0	19.4	21.2	15.9	10.7	13.5	14.7	13.1	13.7
8	28.8	22.6	25.3	23.4	18.1	20.4	18.5	14.6	16.4	17.3	14.5	15.6
9	28.5	23.6	25.7	23.4	17.6	20.3	18.4	15.4	17.5	18.6	12.9	15.4
10	27.8	22.1	24.9	22.8	18.5	20.7	17.2	12.5	14.9	17.9	11.2	14.4
11	28.2	23.0	25.4	24.1	19.7	21.7	17.8	14.6	15.8	18.5	11.8	14.7
12	29.3	23.0	25.7	23.5	19.4	21.2	17.8	15.1	16.6	19.5	15.8	17.5
13	27.7	22.9	25.4	23.7	17.9	20.6	16.9	12.9	14.7	20.3	16.4	17.9
14	28.4	23.4	25.9	22.9	17.5	20.1	16.5	11.0	13.5	17.5	13.9	15.7
15	28.5	24.5	26.1	22.9	17.2	19.9	14.9	10.2	12.4	19.3	14.5	16.7
16	28.9	24.4	26.2	22.6	17.2	19.8	14.5	9.4	11.7	19.6	15.1	17.3
17	26.2	20.7	23.4	21.5	17.2	19.3	15.7	9.3	12.2	21.0	16.6	18.6
18	20.7	17.3	18.6	22.7	18.1	20.1	15.6	10.9	12.9	22.2	16.4	18.9
19	19.3	16.6	17.6	23.3	20.2	21.2	15.2	10.1	12.6	22.3	16.6	19.1
20	21.1	14.8	17.7	22.4	18.3	20.2	13.2	10.7	12.0	19.4	15.2	17.4
21	21.9	15.4	18.6	23.0	19.2	20.7	11.5	9.3	10.5	17.1	13.6	15.3
22	22.9	16.3	19.5	23.2	20.1	21.4	12.0	8.6	10.1	18.3	15.5	16.6
23	23.0	17.5	20.0	22.7	18.8	20.9	11.6	10.2	10.8	20.7	15.1	17.3
24	22.7	16.9	19.6	18.8	14.5	15.9	13.9	10.4	12.0	19.2	14.2	16.4
25	22.5	16.6	19.6	17.7	13.7	15.3	14.1	11.7	12.6	19.0	13.4	15.7
26	23.4	17.3	20.2	16.6	11.0	13.9	14.4	11.6	13.0	14.8	12.4	13.0
27	23.2	17.5	20.2	18.0	11.6	14.7	17.1	13.3	14.6	12.7	10.4	12.0
28	23.9	19.0	21.3	19.3	13.2	16.1	16.5	11.3	13.7	10.4	8.7	9.7
29	24.6	20.2	22.1	19.4	14.3	16.8	17.1	11.4	14.0	10.0	7.7	8.5
30	22.3	20.0	21.3	19.4	15.4	17.0	16.7	11.8	14.2	9.9	6.2	8.1
31	22.0	18.4	20.0	---	---	---	17.5	12.2	14.6	10.5	8.4	9.4
MONTH	30.1	14.8	22.8	24.1	11.0	19.1	21.3	8.6	14.1	22.3	6.2	14.8

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	13.0	9.9	11.1	23.0	19.9	21.2	23.1	20.8	21.7	24.8	20.3	22.8
2	12.6	11.2	11.7	24.4	20.3	21.9	20.8	19.1	19.9	23.3	21.4	22.5
3	16.9	11.5	13.6	23.9	19.5	21.5	22.5	16.9	19.5	27.9	21.8	24.4
4	16.8	11.4	13.6	23.0	17.4	19.7	25.2	18.0	21.0	28.9	23.3	25.4
5	16.4	11.1	13.3	19.3	17.6	18.5	25.3	17.1	20.9	29.0	24.9	26.3
6	15.2	10.3	12.8	21.3	18.5	19.7	27.2	18.9	22.5	30.8	24.3	26.9
7	19.2	13.1	15.4	23.7	19.5	21.2	28.9	21.1	24.3	31.5	24.7	27.6
8	19.9	12.3	16.0	23.8	20.5	21.5	25.0	18.2	21.7	32.1	25.2	28.0
9	20.8	15.0	17.3	26.4	20.1	22.7	24.9	16.7	20.5	29.2	25.4	26.9
10	22.1	16.3	18.8	24.4	21.8	22.9	22.8	19.2	20.6	31.9	25.8	28.1
11	22.3	17.2	19.6	22.7	16.3	19.4	24.5	20.6	21.9	32.7	25.6	28.5
12	19.5	17.1	18.4	22.6	14.6	18.3	22.1	20.0	20.9	33.4	26.1	29.0
13	23.1	18.1	20.0	21.3	16.0	18.6	25.5	19.6	22.0	28.8	24.3	25.7
14	22.7	15.3	18.7	18.6	17.6	18.1	25.7	20.5	22.3	27.1	22.7	24.5
15	23.7	18.1	20.5	23.7	17.3	19.9	25.8	20.6	22.8	29.7	22.4	25.7
16	23.2	20.2	21.4	26.1	17.7	21.1	28.6	21.8	24.7	32.5	24.3	27.7
17	24.0	20.6	22.0	19.2	7.1	13.2	28.2	23.2	25.4	30.3	24.5	27.1
18	25.9	20.6	22.6	17.9	12.3	14.8	27.3	23.8	25.2	30.1	25.4	27.4
19	20.6	16.9	18.3	21.3	14.4	17.4	29.8	23.3	26.2	32.0	24.1	27.5
20	18.9	16.2	17.4	22.5	14.5	18.1	29.6	24.1	26.2	25.3	23.9	24.4
21	20.2	16.2	17.9	23.6	18.6	20.5	29.7	20.9	25.0	30.8	24.0	26.8
22	20.3	17.7	18.7	25.1	21.0	22.7	27.8	21.3	24.2	33.6	25.0	28.8
23	21.0	17.8	19.5	24.9	21.5	22.6	30.8	23.1	26.3	34.5	26.5	30.0
24	23.8	20.2	21.4	27.3	22.3	24.3	30.9	21.7	26.0	---	---	---
25	25.1	19.6	21.8	28.3	22.1	24.9	30.2	22.7	26.1	33.0	27.8	30.0
26	23.5	18.5	21.3	28.8	23.5	25.6	30.5	22.4	26.2	31.1	27.3	29.1
27	22.9	16.2	19.2	29.0	23.5	25.9	31.3	22.7	26.5	32.6	27.1	29.4
28	22.7	15.3	18.7	29.8	17.0	25.0	30.7	24.8	26.9	29.5	25.5	27.7
29	22.3	18.7	20.0	27.8	18.1	23.8	29.5	24.6	26.5	33.9	27.3	30.1
30	---	---	---	27.6	21.2	23.9	28.1	24.2	25.6	34.7	28.0	30.8
31	---	---	---	23.7	19.8	21.6	---	---	---	33.4	27.6	30.0
MONTH	25.9	9.9	18.0	29.8	7.1	21.0	31.3	16.7	23.6	---	---	---

08178565 SAN ANTONIO RIVER AT LOOP 410 AT SAN ANTONIO, TX--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	33.4	27.0	29.5	34.5	28.3	30.8	33.0	26.6	29.4	34.1	27.5	30.4
2	33.8	26.8	29.7	33.6	27.4	30.0	34.2	26.6	30.2	34.7	28.0	31.1
3	32.8	27.3	29.4	33.6	27.3	29.8	35.3	27.0	30.5	34.9	27.7	30.9
4	32.9	27.0	28.8	33.3	27.0	29.6	33.0	27.4	30.1	35.4	27.2	31.0
5	29.5	26.7	27.5	34.2	27.0	30.1	33.7	27.5	30.3	35.8	27.6	31.4
6	32.0	24.7	27.9	34.2	27.2	30.3	33.5	27.6	30.1	34.0	28.1	30.5
7	32.0	25.4	28.1	34.4	28.0	30.8	33.9	27.6	30.2	33.3	26.1	29.3
8	31.3	24.7	27.6	35.5	27.8	31.1	34.1	27.7	30.2	32.3	26.5	29.1
9	27.9	25.2	26.4	34.2	27.6	30.5	33.4	27.9	30.1	33.5	27.0	29.6
10	26.1	24.6	25.3	33.8	27.9	30.4	35.6	27.4	30.7	34.4	27.2	30.3
11	27.0	24.4	25.4	34.6	27.3	30.3	34.8	26.7	30.5	34.2	27.6	30.5
12	26.9	25.5	26.2	35.2	27.4	30.8	34.8	27.2	30.7	35.0	28.2	30.7
13	28.9	25.4	26.8	35.5	27.1	31.1	34.9	27.5	31.0	30.9	26.9	28.5
14	30.3	26.4	27.8	36.0	27.6	31.5	34.6	27.7	30.7	31.4	26.6	28.6
15	31.3	26.5	28.4	35.5	27.9	31.6	31.5	28.1	29.7	30.6	27.2	28.5
16	31.3	26.5	28.5	34.7	27.7	31.0	34.6	27.3	30.4	31.9	26.3	28.4
17	31.9	27.2	29.0	33.5	28.1	30.5	35.0	27.8	30.9	30.6	23.1	26.6
18	31.7	28.1	29.3	36.2	26.7	30.9	34.6	26.8	30.4	31.0	22.4	26.4
19	31.5	27.5	29.2	36.7	26.2	31.0	34.5	26.8	30.3	31.4	23.6	27.0
20	32.6	27.0	29.3	34.4	27.8	30.8	34.4	27.2	30.3	31.4	24.4	27.7
21	32.9	27.8	29.8	35.0	26.8	30.6	34.3	27.4	30.1	31.7	26.7	28.7
22	34.5	27.0	29.9	35.6	27.1	30.9	32.9	28.2	30.0	32.5	26.9	29.0
23	33.7	27.4	29.8	36.1	27.5	31.2	33.8	26.6	29.9	32.9	27.2	29.3
24	33.0	26.8	29.4	36.0	27.2	31.3	35.3	27.4	30.8	32.7	25.2	28.9
25	33.6	27.2	29.9	35.6	27.9	31.4	35.0	27.7	30.8	26.3	22.7	24.6
26	34.0	27.3	30.1	34.5	28.4	31.0	34.3	27.6	30.5	---	---	---
27	35.0	28.0	30.9	34.8	28.1	30.8	34.2	27.6	30.3	---	---	---
28	34.9	28.1	31.0	34.8	27.2	30.5	33.8	27.8	30.2	---	---	---
29	35.1	28.1	31.2	34.9	26.8	30.4	33.9	27.9	30.1	---	---	---
30	35.0	27.9	31.0	34.7	27.5	29.9	34.4	27.3	30.4	---	---	---
31	---	---	---	31.6	27.6	28.9	34.6	27.0	30.5	---	---	---
MONTH	35.1	24.4	28.8	36.7	26.2	30.6	35.6	26.6	30.3	---	---	---

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	8.2	4.8	5.9	---	---	---	10.6	6.2	8.1	13.6	7.0	9.1
2	8.0	4.8	6.8	7.5	2.8	5.7	11.1	6.1	7.9	13.3	6.1	8.7
3	10.2	5.5	7.3	8.9	4.5	6.9	11.8	6.4	8.0	10.1	6.8	8.3
4	10.0	4.7	7.6	9.9	5.7	7.4	11.2	5.3	7.8	10.8	7.8	9.1
5	14.2	6.7	9.8	9.8	5.8	7.4	11.0	6.3	8.6	11.1	7.6	9.3
6	12.9	6.1	8.9	9.6	5.8	7.3	11.5	6.9	9.1	11.4	7.8	9.3
7	14.0	7.4	9.7	10.6	5.8	7.6	12.5	7.1	9.8	9.0	7.0	8.2
8	14.4	7.5	9.8	10.8	5.9	7.8	12.1	6.9	9.2	9.0	6.5	7.7
9	13.8	7.5	10.0	11.1	6.1	8.0	9.9	6.4	8.2	8.5	6.6	7.7
10	14.2	7.8	10.2	10.8	6.3	8.0	11.9	7.1	9.4	9.6	6.8	8.3
11	14.6	7.6	10.3	11.4	6.2	8.0	10.7	6.8	8.5	10.6	7.4	9.0
12	15.7	7.2	10.1	11.9	6.4	8.3	9.4	7.1	8.0	10.2	6.5	8.2
13	13.9	7.3	9.8	12.0	6.3	8.5	8.2	6.0	7.3	9.7	4.3	6.9
14	14.0	7.2	9.7	11.4	5.8	8.2	9.0	6.1	7.8	11.7	4.3	8.1
15	13.5	7.0	9.1	11.8	5.8	8.5	9.8	7.3	8.8	13.1	5.8	8.8
16	13.3	6.6	9.0	11.1	5.8	8.1	10.0	7.4	9.2	14.0	6.0	9.0
17	8.8	6.0	7.7	10.4	5.4	7.7	10.1	7.6	9.3	14.7	5.9	8.9
18	10.0	6.5	8.3	10.9	5.5	7.9	10.7	7.5	9.4	17.0	5.9	9.5
19	9.7	8.0	8.8	10.3	4.8	7.3	10.8	7.5	9.4	17.4	6.2	9.8
20	9.4	6.7	8.2	10.3	5.0	7.6	10.0	7.3	8.8	16.0	6.1	9.6
21	11.0	7.6	8.7	9.2	5.2	7.2	11.2	8.1	10.1	14.7	6.8	9.5
22	11.4	6.8	8.8	9.0	5.2	7.0	11.8	8.8	10.5	14.1	6.7	9.3
23	11.2	7.3	8.8	10.2	5.3	7.6	11.4	8.1	10.1	14.5	6.6	9.3
24	11.1	7.2	8.7	9.7	5.2	7.8	12.6	8.1	10.2	13.1	6.5	8.9
25	10.8	7.0	8.4	9.7	5.9	8.6	13.1	7.9	10.2	12.1	6.0	8.3
26	10.0	6.7	7.8	10.2	6.4	9.0	12.7	7.7	9.9	8.5	5.2	6.8
27	9.0	6.0	7.2	11.9	6.8	9.6	13.4	7.3	9.8	7.9	5.4	6.7
28	8.2	5.5	6.6	12.3	7.1	9.7	13.3	7.6	9.9	8.5	5.2	7.1
29	9.9	3.9	6.0	12.6	7.1	9.7	13.7	7.5	10.0	8.4	5.2	7.2
30	---	---	---	13.5	7.2	9.2	13.4	7.3	9.8	8.3	5.0	7.0
31	---	---	---	---	---	---	13.5	7.4	9.8	8.1	5.4	7.0
MONTH	---	---	---	---	---	---	13.7	5.3	9.1	17.4	4.3	8.4

08178565 SAN ANTONIO RIVER AT LOOP 410 AT SAN ANTONIO, TX--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	7.9	5.3	6.7	9.5	3.2	6.4	8.9	3.5	6.4	8.2	3.3	6.5
2	8.1	5.1	6.7	9.1	3.3	6.1	9.3	3.7	6.2	8.2	4.4	6.5
3	6.6	5.1	5.9	8.0	3.3	6.2	10.3	3.4	6.4	6.9	4.8	5.9
4	6.7	4.6	5.8	8.6	3.7	6.6	6.6	3.4	5.2	6.2	3.3	5.2
5	7.0	5.1	6.1	7.3	3.9	6.3	6.6	3.6	5.8	6.9	4.6	5.6
6	7.1	4.9	6.0	7.8	4.0	6.7	10.2	4.5	7.4	9.4	4.5	6.5
7	7.2	4.7	6.0	8.8	3.9	6.5	13.3	4.5	8.3	12.7	4.8	7.9
8	7.6	4.4	5.9	9.8	3.4	6.6	17.1	5.7	10.8	14.6	4.3	8.6
9	8.2	4.0	5.7	10.0	3.4	6.7	18.4	4.9	11.1	13.5	4.2	7.6
10	---	---	---	9.2	3.2	6.3	18.8	4.8	9.7	13.6	4.2	8.1
11	---	---	---	9.8	4.0	7.5	17.0	4.9	10.3	13.7	3.7	7.9
12	---	---	---	10.1	4.4	8.0	9.3	5.0	7.8	13.3	4.1	7.6
13	---	---	---	9.0	4.1	7.2	11.3	6.3	8.8	7.2	4.7	6.2
14	---	---	---	9.0	4.2	6.5	12.7	5.0	8.1	9.7	5.0	7.1
15	---	---	---	7.9	3.7	6.1	12.0	5.3	8.2	11.5	5.1	8.0
16	---	---	---	8.1	3.3	6.1	13.1	5.5	8.4	13.3	4.6	8.1
17	7.6	2.0	4.5	10.2	4.5	7.7	12.3	5.1	7.9	13.0	4.0	7.7
18	6.7	1.4	4.5	10.2	4.6	7.5	11.6	4.2	6.9	12.1	3.6	7.2
19	6.8	2.0	4.8	8.7	4.3	7.4	12.1	4.6	7.5	13.7	3.7	7.5
20	7.1	2.2	5.2	8.7	4.3	7.5	12.6	4.2	7.7	7.9	5.6	7.0
21	7.4	1.5	5.3	8.6	2.9	6.4	13.1	5.0	8.1	6.8	4.8	6.1
22	9.3	1.5	4.7	11.4	3.0	7.3	12.8	4.7	7.9	8.1	4.6	6.2
23	8.8	1.3	4.3	11.7	3.1	7.5	12.7	4.6	7.7	11.5	4.6	7.5
24	---	---	---	11.9	2.9	7.9	12.3	4.7	7.5	---	---	---
25	6.8	2.2	5.3	14.0	3.3	8.2	12.1	4.2	7.4	13.2	3.5	7.5
26	6.6	2.1	4.9	12.3	2.5	7.3	11.3	4.7	7.2	13.2	3.2	6.8
27	7.7	2.4	5.9	12.2	2.6	7.5	11.9	4.4	7.3	13.3	3.2	7.6
28	9.6	3.1	6.3	11.0	3.9	7.4	11.1	4.3	6.8	6.9	4.0	6.1
29	9.3	2.7	6.4	9.5	3.9	6.5	9.9	4.0	6.3	10.3	4.1	6.8
30	---	---	---	10.4	2.6	7.2	10.0	3.9	6.2	12.2	3.7	7.1
31	---	---	---	10.1	3.1	7.3	---	---	---	12.7	3.8	7.4
MONTH	---	---	---	14.0	2.5	7.0	18.8	3.4	7.7	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	11.4	4.0	6.9	11.8	3.4	6.9	10.8	2.9	5.5	14.7	3.3	7.9
2	11.4	3.7	6.7	11.4	3.4	6.9	12.4	2.4	6.0	---	---	---
3	11.6	3.8	6.7	10.1	3.4	6.0	16.0	2.2	6.9	---	---	---
4	11.4	4.6	6.8	10.0	3.2	6.0	15.4	2.1	6.6	---	---	---
5	7.4	5.2	6.3	11.5	4.3	7.3	14.3	3.1	7.2	---	---	---
6	9.9	4.4	7.0	11.1	3.4	6.4	14.9	2.4	7.4	18.7	3.5	9.0
7	12.7	4.4	7.8	12.2	4.3	7.6	16.0	2.0	8.0	18.5	3.8	9.4
8	13.0	4.4	7.9	12.3	3.3	7.0	17.0	2.4	7.6	18.9	4.3	9.4
9	8.1	4.5	6.5	12.9	3.8	7.5	15.7	3.7	8.0	19.1	4.3	9.1
10	8.6	7.4	8.1	12.7	3.8	7.5	17.2	3.2	9.0	18.4	4.2	9.2
11	8.7	8.3	8.5	13.8	4.3	8.0	16.8	3.5	8.7	18.3	4.2	9.0
12	8.4	7.7	8.1	14.6	4.2	8.2	16.3	3.9	8.5	18.7	4.3	9.2
13	8.4	6.2	7.4	14.7	3.4	7.8	15.9	3.9	8.4	7.3	4.4	5.5
14	7.4	5.7	6.6	15.3	3.4	7.9	17.8	3.5	8.9	8.4	4.3	5.8
15	7.5	6.0	6.8	13.3	3.5	7.2	18.5	3.6	9.2	8.6	4.8	6.5
16	8.2	4.7	5.7	13.6	3.2	7.0	18.3	4.4	9.6	12.6	4.6	7.5
17	10.5	4.7	7.0	10.3	3.0	6.7	17.4	2.9	9.0	16.1	4.6	8.8
18	11.9	5.9	8.0	17.2	2.4	8.6	18.1	3.6	9.6	19.4	4.7	9.9
19	11.1	5.2	8.2	15.9	1.6	8.2	17.6	3.0	9.4	---	---	---
20	13.5	3.6	7.8	15.1	1.8	7.4	17.6	3.2	9.3	---	---	---
21	13.1	3.4	8.4	16.0	2.6	7.7	18.3	4.0	9.7	18.3	4.0	8.9
22	13.5	2.8	7.0	15.3	2.4	7.8	12.2	5.1	8.1	17.5	4.0	7.6
23	7.6	2.7	4.6	15.2	2.1	6.9	14.7	4.1	8.3	15.9	4.0	7.7
24	12.1	2.2	6.1	14.9	2.4	7.3	16.9	2.7	8.8	15.4	4.0	7.5
25	13.8	3.6	7.9	14.7	2.4	7.1	16.3	3.2	8.6	8.9	5.8	6.9
26	13.8	3.5	7.7	13.4	2.7	7.0	17.2	3.6	8.9	---	---	---
27	10.8	2.7	5.8	12.9	2.5	6.5	16.5	3.5	9.0	---	---	---
28	10.5	2.8	5.8	13.1	2.4	6.4	15.6	4.0	9.0	---	---	---
29	11.2	3.3	6.7	12.9	2.7	6.6	15.5	4.2	8.9	---	---	---
30	11.4	3.3	6.6	15.9	2.8	6.1	15.9	4.3	9.0	---	---	---
31	---	---	---	5.8	2.8	4.2	15.6	4.3	8.6	---	---	---
MONTH	13.8	2.2	7.0	17.2	1.6	7.1	18.5	2.0	8.4	---	---	---

08178585 SALADO CREEK AT WILDERNESS ROAD AT SAN ANTONIO, TX

LOCATION.--Lat 29°37′50", long 98°33′45", Bexar County, Hydrologic Unit 12100301, on right bank, upstream side of Wilderness Road, within Camp Bullis Military Reservation, 3.1 mi upstream of State Highway 1604.

DRAINAGE AREA.--23.0 mi^2. Since installation of the gage in Oct 1997, the upper 17.0 mi^2 of drainage area is above Salado Creek flood control structures #1 and #2 and contributes runoff only during larger storm events.

PERIOD OF RECORD.--Oct 1997 to current year.
Water-quality records.--Chemical data: Feb 1998 to Sep 1999. Biochemical data: Feb 1998 to Sep 1999. Pesticide data: Feb 1998 to Sep 1999.

GAGE.--Water-stage recorder. Datum of gage is 1,030 ft above sea level, from topographic map. Satellite telemeter at station.

REMARKS.--Records good. No known diversions. Since installation of gage in Oct 1997, at least 10% of contributing drainage area has been regulated by Salado Creek flood control structures #1 and #2 (capacity 4,190 and 2,290 acre-ft), 3.1 mi upstream. No flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 21 ft^3/s, Sep 14, gage height, 2.01 ft; minimum discharge, 0.00 ft^3/s, on many days, gage height, 0.48 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

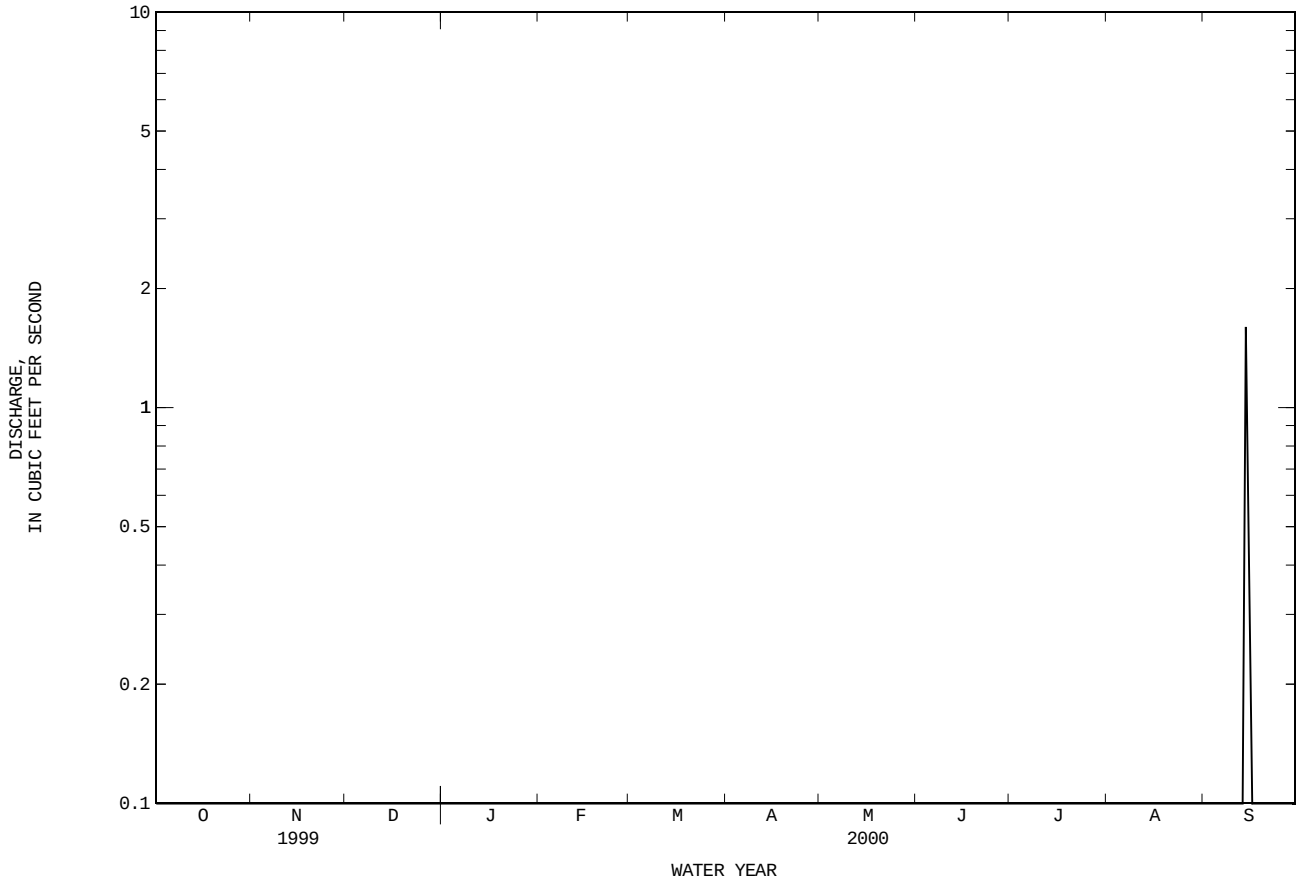
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.6
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.21
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
MEAN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.060
MAX	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.6
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	3.6

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1998 - 2000, BY WATER YEAR (WY)

MEAN	58.0	5.48	.004	.10	.15	.89	.046	.002	.001	.003	.000	.020
MAX	116	11.0	.011	.30	.45	2.66	.14	.006	.002	.010	.000	.060
(WY)	1999	1999	1999	1998	1998	1998	1998	1998	1999	1999	1998	2000
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	2000	2000	1998	1999	1999	1999	1999	1999	1998	1998	1998	1998

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1998 - 2000	
ANNUAL TOTAL	0.36		1.81			
ANNUAL MEAN	.001		.005		3.90	
HIGHEST ANNUAL MEAN					10.7	1999
LOWEST ANNUAL MEAN					.005	2000
HIGHEST DAILY MEAN	.06	Jun 22	1.6	Sep 14	653	Oct 18 1998
LOWEST DAILY MEAN	.00	Jan 1	.00	Oct 1	.00	Dec 1 1997
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 1	.00	Oct 1	.00	Dec 1 1997
INSTANTANEOUS PEAK FLOW					5000	Oct 18 1998
INSTANTANEOUS PEAK STAGE					13.55	Oct 18 1998
ANNUAL RUNOFF (AC-FT)	.7		3.6		2820	
10 PERCENT EXCEEDS	.00		.00		.25	
50 PERCENT EXCEEDS	.00		.00		.00	
90 PERCENT EXCEEDS	.00		.00		.00	

08178585 SALADO CREEK AT WILDERNESS ROAD AT SAN ANTONIO, TX--Continued



08178700 SALADO CREEK (UPPER STATION) AT SAN ANTONIO, TX

LOCATION.--Lat 29°30'57", long 98°25'51", Bexar County, Hydrologic Unit 12100301, on right bank at downstream side of eastbound bridge on Interstate Highway 410 in San Antonio, 1.0 mi west of Northeast School, 1.1 mi upstream from Perrin-Beitel Creek, and 2.7 mi east of San Antonio International Airport.

DRAINAGE AREA.--137 mi^2.

PERIOD OF RECORD.--Sep 1960 to current year.
Water-quality records.--Chemical data: Nov 1968 to May 1999. Biochemical data: Nov 1968 to May 1999. Bacteria data: May 1976 to May 1999. Pesticide data: Nov 1971 to Sep 1973.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 684.60 ft above sea level. Satellite telemeter at station.

REMARKS.--No estimated daily discharges, Records good. Some diversions for irrigation upstream from gage. Since water year 1973, at least 10% of contributing drainage area has been affected at times by discharge from the flood-detention pools of eleven floodwater-retarding structures with a combined detention capacity of 26,770 acre-ft. These structures control runoff from 74.6 mi^2 above this station. No flow at times.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--12 years (water years 1961-72), 7.21 ft^3/s (5,220 acre-ft/yr).

EXTREMES FOR PERIOD PRIOR TO REGULATION (WATER YEARS 1961-72).--Maximum discharge, 24,900 ft^3/s May 12, 1972 (gage height, 15.22 ft), from rating curve extended above 8,000 ft^3/s on basis of slope-area measurement of peak flow; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1853, 23 to 24 ft in Oct 1913. Flood in Sep 1921 reached a stage of 18 ft, and flood of Sep 27, 1946, reached a stage of 18.2 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.04	.00	.28	.00	.16	9.4	.00	.00	.00	.00
2	.00	.01	.04	.00	9.7	.00	.21	5.2	.00	.00	.00	.00
3	.00	.00	.04	.00	.55	.00	8.2	.75	.00	.00	.00	.00
4	.00	.00	.00	.00	.08	.00	.47	.18	3.3	.00	.00	.00
5	.00	.01	.00	.00	.02	.00	.09	.11	5.5	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.02	.02	.44	.00	.00	.00
7	.00	.00	.00	.38	.00	.00	.01	.00	.08	.00	.00	.00
8	.00	.00	.00	7.3	.00	.00	.00	.00	1.0	.00	.00	.00
9	.00	.00	.00	.23	.00	.00	.00	.00	56	.00	.00	.00
10	.00	.01	.00	.05	.00	.00	.00	.00	206	.00	.00	.00
11	.00	.00	.00	.01	.00	.00	.01	.00	124	.00	.00	.00
12	.00	.00	.03	.01	.00	.00	.53	.11	60	.00	.00	.10
13	.00	.00	.00	.00	.00	.00	.28	.57	28	.00	.00	.03
14	.00	.00	.00	.00	.00	.10	.07	.23	1.6	.00	.00	2.2
15	.00	.00	.00	.00	.00	.00	.00	.05	.32	.00	.00	2.2
16	.00	.00	.00	.00	.00	.00	.00	.01	.16	.00	.00	.05
17	.28	.00	.00	.00	.00	.07	.01	.00	.25	.00	.00	.00
18	.02	.00	.00	.00	.00	.00	.01	.00	.62	.00	.00	.00
19	.01	.00	.00	.00	.00	.00	.01	.37	13	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	16	1.3	.00	.00	.00
21	.00	.00	.02	.00	.00	.04	.00	1.2	.16	.00	.09	.00
22	.00	.00	.01	.00	.07	.01	.00	.11	.10	.00	.00	.00
23	.00	.00	.00	.00	9.8	.00	.00	.02	.07	.00	.00	.00
24	.00	.01	.00	.00	.70	.00	.00	.01	.05	.00	.00	.43
25	.00	.00	.00	.00	.09	.00	.00	.00	.05	.00	.00	.18
26	.00	.02	.00	.00	.06	.00	.00	.00	.03	.00	.00	.15
27	.00	.02	.00	.08	.00	.00	.00	.04	.02	.00	.00	.04
28	.00	.02	.00	.01	.00	.01	.00	.05	.01	.00	.00	.00
29	.00	.04	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
30	.06	.04	.00	.00	---	.00	.00	.00	.00	.02	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	0.37	0.18	0.18	8.07	21.35	0.23	10.08	34.43	502.06	0.02	0.09	5.38
MEAN	.012	.006	.006	.26	.74	.007	.34	1.11	16.7	.001	.003	.18
MAX	.28	.04	.04	7.3	9.8	.10	8.2	16	206	.02	.09	2.2
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.7	.4	.4	16	42	.5	20	68	996	.04	.2	11

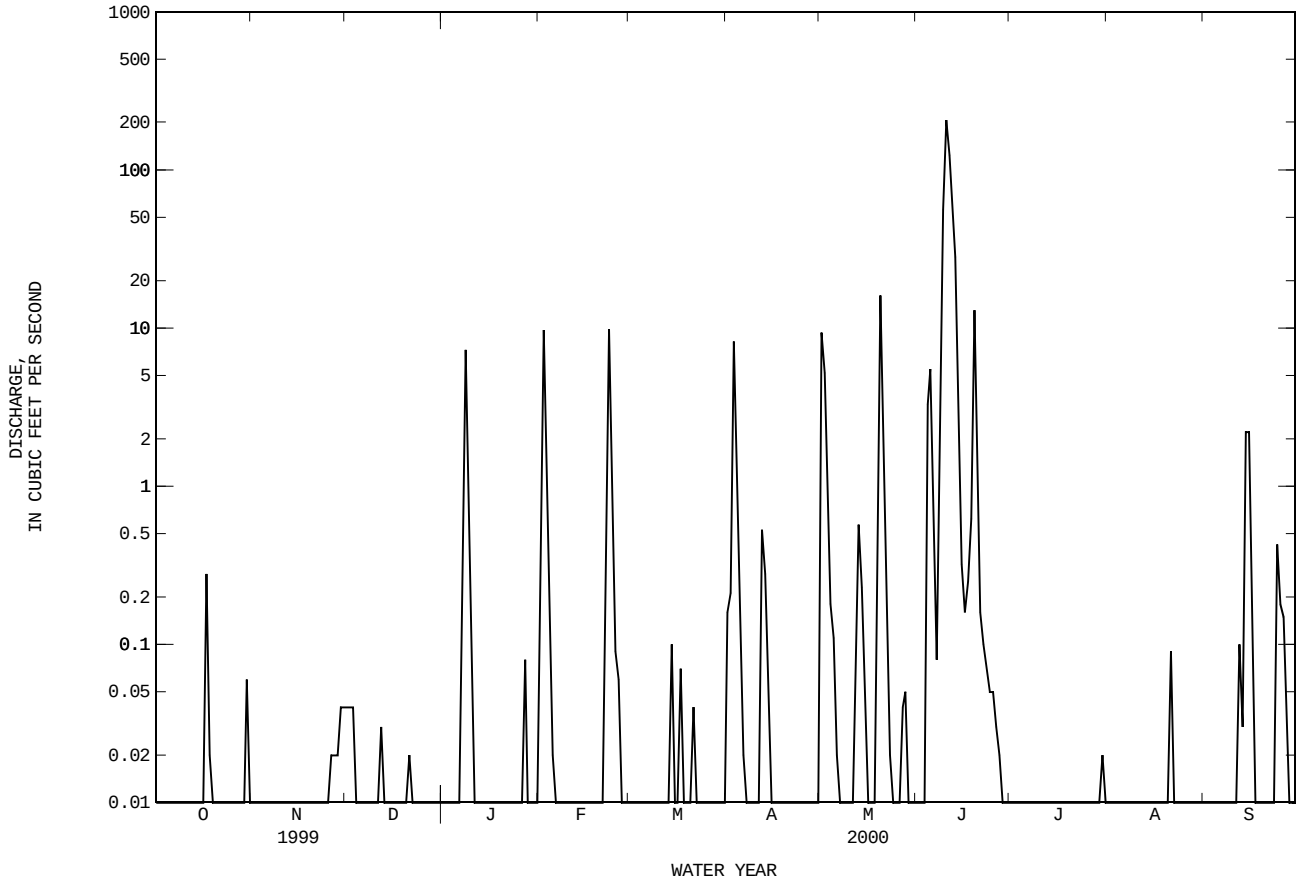
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1973 - 2000z, BY WATER YEAR (WY)

MEAN	35.1	6.51	8.25	4.09	6.78	7.12	12.4	35.5	26.9	11.1	3.06	15.2
MAX	771	74.7	155	38.8	71.0	93.7	116	576	151	153	36.6	187
(WY)	1999	1978	1992	1992	1992	1992	1991	1993	1987	1973	1974	1973
MIN	.001	.006	.006	.000	.013	.007	.000	.006	.006	.000	.000	.011
(WY)	1992	2000	1996	1996	1996	2000	1984	1998	1984	1984	1986	1999

08178700 SALADO CREEK (UPPER STATION) AT SAN ANTONIO, TX--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1973 - 2000z	
ANNUAL TOTAL	329.45		582.44			
ANNUAL MEAN	.90		1.59		14.4	
HIGHEST ANNUAL MEAN					66.9	1999
LOWEST ANNUAL MEAN					.52	1984
HIGHEST DAILY MEAN	82	Mar 28	206	Jun 10	11600	Oct 17 1998
LOWEST DAILY MEAN	.00	Feb 14	.00	Oct 1	.00	May 30 1973
ANNUAL SEVEN-DAY MINIMUM	.00	Feb 16	.00	Oct 1	.00	Mar 12 1976
INSTANTANEOUS PEAK FLOW			588	Jun 10	i64400	Oct 17 1998
INSTANTANEOUS PEAK STAGE			4.98	Jun 10	a22.40	Oct 17 1998
ANNUAL RUNOFF (AC-FT)	653		1160		10420	
10 PERCENT EXCEEDS	.19		.26		9.7	
50 PERCENT EXCEEDS	.01		.00		.64	
90 PERCENT EXCEEDS	.00		.00		.00	

z Period of regulated flow.
i From indirect measurement of peak flow.
a From floodmark.



08178800 SALADO CREEK (LOWER STATION) AT SAN ANTONIO, TX

LOCATION.--Lat 29°21′25", long 98°24′45", Bexar County, Hydrologic Unit 12100301, on right bank at upstream side of bridge on Loop 13 at San Antonio, 1.4 mi east of Brooks Air Force Base, and 3.3 mi upstream from Rosillo Creek.

DRAINAGE AREA.--189 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Sep 1960 to current year.

GAGE.--Water-stage recorder. Datum of gage is 526.95 ft above sea level. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records fair. Since water year 1973, at least 10% of contributing drainage area has been regulated by eleven Natural Resource Conservation Service floodwater-retarding structures (combined capacity of 26,770 acre-ft). Several small diversions above station. Most of low flow comes from artesian wells and springs within the city of San Antonio.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--12 years (water years 1961-72) prior to regulation by Soil Conservation Service flood retarding structures, 30.6 ft^3/s (22,170 acre-ft/yr).

EXTREMES FOR PERIOD PRIOR TO REGULATION (WATER YEARS 1961-72).--Maximum discharge, 7,120 ft^3/s May 12, 1972 (gage height, 24.53 ft); no flow Aug 13, 1967.

EXTREMES OUTSIDE PERIOD OF RECORD.--Floods of Sep 27, 1946, and Aug 15, 1960, were about equal magnitude. Flood of Aug 15, 1960, reached a stage of 26.8 ft, from floodmarks. Maximum stage since at least 1941, that of Sep 27, 1973.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.9	3.7	5.1	5.9	8.9	3.5	5.9	157	2.5	2.1	4.9	.24
2	2.2	2.4	4.8	5.9	162	3.3	148	110	2.1	2.5	1.5	.24
3	1.7	2.2	5.0	5.8	46	2.8	204	56	1.2	1.5	1.5	.24
4	2.0	3.1	4.0	5.0	10	2.8	47	17	8.9	2.2	.80	.24
5	2.4	3.1	5.0	4.6	6.0	2.8	14	18	54	2.2	.30	.24
6	2.3	2.5	5.1	5.1	4.7	2.9	8.5	18	24	1.1	.30	.24
7	2.3	2.5	5.2	21	4.4	3.1	7.4	8.1	8.0	.83	.33	.24
8	2.0	3.4	4.8	141	3.8	2.4	7.8	5.0	4.4	.71	.62	.24
9	1.7	3.3	4.8	32	3.5	3.0	5.6	4.7	144	.89	.34	.24
10	1.7	2.6	6.0	8.5	3.1	2.8	5.4	4.4	643	1.7	.35	.24
11	1.2	3.4	6.2	5.2	2.7	3.3	5.3	3.7	546	1.3	.29	.24
12	1.8	3.5	6.7	4.3	3.1	3.0	28	2.7	275	.33	.24	.24
13	1.2	3.7	8.2	3.9	2.9	3.7	35	35	254	.24	.31	4.2
14	1.6	3.9	7.7	3.4	2.8	22	12	22	40	.96	.36	3.0
15	1.7	3.7	7.7	3.1	2.7	35	8.1	8.4	15	1.0	.24	49
16	.75	3.6	7.1	3.0	2.8	7.9	7.5	4.5	9.8	.32	.27	12
17	4.4	3.4	6.5	3.0	2.8	71	5.8	3.1	15	.80	.24	3.7
18	8.6	3.7	5.7	2.9	2.4	19	3.9	2.6	18	.22	.24	2.4
19	20	5.2	6.5	2.9	2.2	7.5	4.3	22	32	.63	.24	1.7
20	5.5	5.1	6.5	2.9	2.3	5.2	2.8	142	23	.21	.24	.91
21	3.4	4.4	6.8	2.5	2.1	4.4	3.2	27	10	.41	.24	.60
22	2.8	4.0	6.9	2.5	2.8	4.2	2.9	11	6.4	.23	.24	.52
23	2.3	3.3	6.9	2.5	169	3.9	2.8	5.9	5.0	.24	.28	.43
24	2.2	3.6	6.9	2.4	41	3.0	2.8	4.4	4.1	.35	.29	.64
25	2.1	4.3	6.9	2.4	9.9	2.4	2.2	4.7	4.0	.22	.33	22
26	2.0	4.0	6.6	2.5	5.5	2.6	2.7	4.1	4.1	.29	.27	15
27	1.3	4.2	6.3	2.7	5.0	2.1	1.9	3.1	3.8	.55	.81	4.6
28	1.6	5.1	6.2	3.7	3.7	22	1.9	16	3.2	.49	.36	2.5
29	1.9	6.3	6.2	3.2	3.5	69	3.1	8.0	2.8	.21	.30	.76
30	2.6	5.5	6.1	3.0	---	6.0	3.6	4.0	3.2	2.4	.24	1.2
31	4.2	---	5.1	3.0	---	3.2	---	2.9	---	19	.39	---
TOTAL	93.35	112.7	189.5	299.8	521.6	329.8	593.4	735.3	2166.5	46.13	17.36	128.04
MEAN	3.01	3.76	6.11	9.67	18.0	10.6	19.8	23.7	72.2	1.49	.56	4.27
MAX	20	6.3	8.2	141	169	71	204	157	643	19	4.9	49
MIN	.75	2.2	4.0	2.4	2.1	2.1	1.9	2.6	1.2	.21	.24	.24
AC-FT	185	224	376	595	1030	654	1180	1460	4300	91	34	254

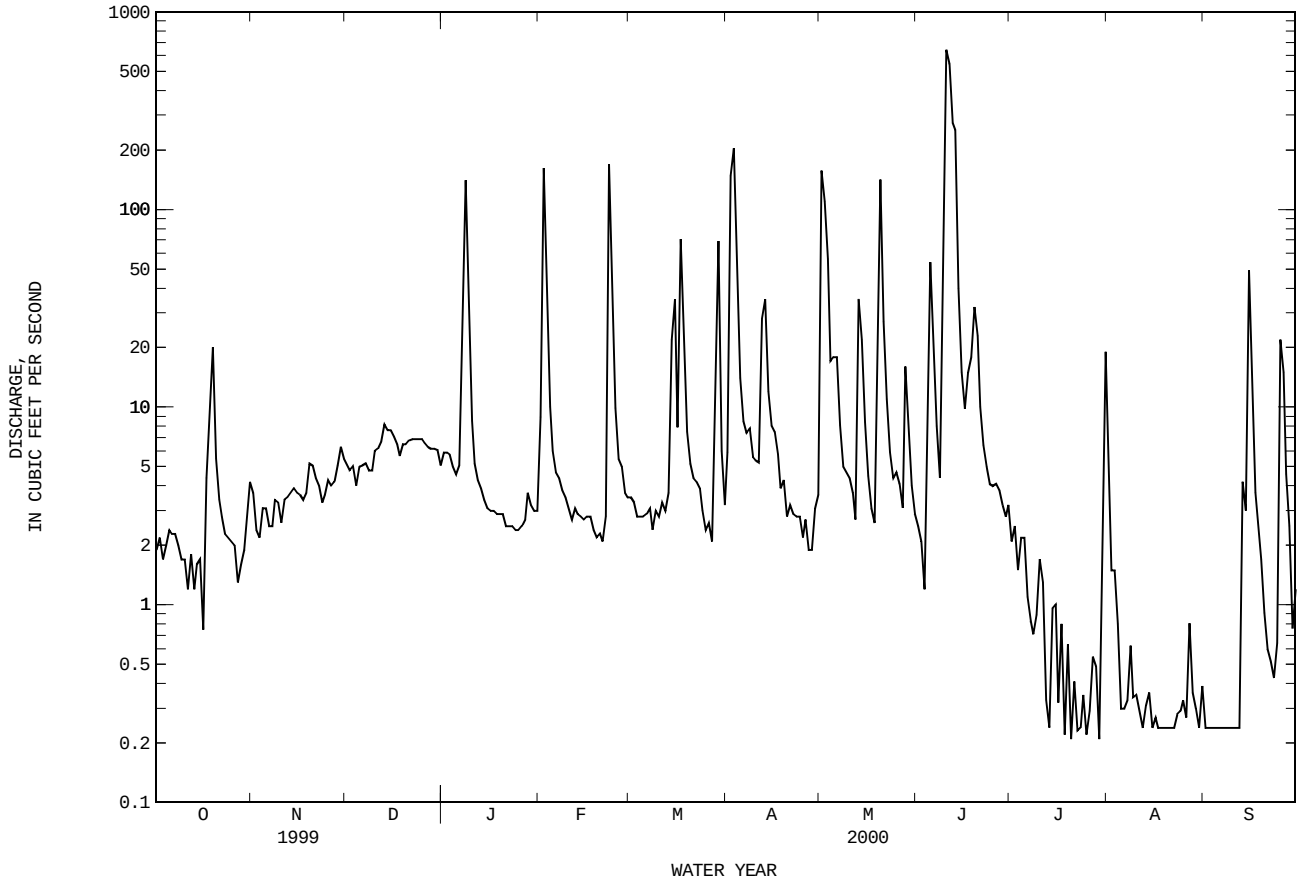
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1973 - 2000z, BY WATER YEAR (WY)

MEAN	82.2	40.0	45.3	36.1	44.3	39.9	50.2	79.8	87.0	40.5	28.5	49.3
MAX	1161	146	376	136	285	206	188	337	349	234	176	400
(WY)	1999	1978	1992	1992	1992	1992	1977	1993	1987	1973	1974	1973
MIN	2.86	3.76	6.11	3.88	5.27	7.70	7.80	3.88	1.66	.55	.56	2.32
(WY)	1997	2000	2000	1997	1996	1996	1984	1998	1998	1998	2000	1999

08178800 SALADO CREEK (LOWER STATION) AT SAN ANTONIO, TX--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1973 - 2000z	
ANNUAL TOTAL	6438.70		5233.48			
ANNUAL MEAN	17.6		14.3		51.9	
HIGHEST ANNUAL MEAN					149	1992
LOWEST ANNUAL MEAN					9.96	1996
HIGHEST DAILY MEAN	810	Mar 28	643	Jun 10	16900	Oct 18 1998
LOWEST DAILY MEAN	.75	Oct 16	.21	Jul 20	.02	Jul 29 1998
ANNUAL SEVEN-DAY MINIMUM	1.0	Sep 21	.24	Sep 1	.03	Jul 29 1998
INSTANTANEOUS PEAK FLOW			700	Jun 10	i47800	Oct 17 1998
INSTANTANEOUS PEAK STAGE			10.30	Jun 10	a34.07	Oct 17 1998
ANNUAL RUNOFF (AC-FT)	12770		10380		37630	
10 PERCENT EXCEEDS	20		21		64	
50 PERCENT EXCEEDS	6.5		3.3		22	
90 PERCENT EXCEEDS	2.2		.30		5.3	

z Period of regulated streamflow.
i From indirect measurement of peak flow.
a From floodmark.



08178800 SALADO CREEK (LOWER STATION) AT SAN ANTONIO, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--
CHEMICAL DATA: Nov 1968 to Jul 10, 2000.
BIOCHEMICAL DATA: Nov 1968 to Sep 1998.
BIOLOGICAL DATA: May 1989 to Sep 1995.
PESTICIDE DATA: Nov 1968 to Sep 1998.
SEDIMENT DATA: Oct 1968 to Sep 1973, Apr 1996 to Sep 1997.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Jan 1987 to Jul 10, 2000. (discontinued).
pH: Jan 1987 to Jul 10, 2000. (discontinued).
WATER TEMPERATURE: Jan 1987 to Jul 10, 2000. (discontinued).
DISSOLVED OXYGEN: Jan 1987 to Jul 10, 2000. (discontinued).

INSTRUMENTATION.--Water-quality monitor since Jan 1987.

REMARKS.--Records fair. Interruptions in the record were caused by malfunction of the instrument.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 1,290 microsiemens, Aug 23, 1994; minimum, 39 microsiemens, Nov 9, 1990.
pH: Maximum, 9.0 units, Apr 26, 27, 1997; minimum, 7.0 units, Aug 24, 1999.
WATER TEMPERATURE: Maximum, 31.0°C, Jul 17-20, 1988, Jul 30, 1993, Jul 17, 19, 1996; minimum, 0.0°C, Dec 24, 1989.
DISSOLVED OXYGEN: Maximum, 16.7 mg/L, Jan 27, 1988, Mar 11, 1996; minimum, 0.6 mg/L, Jul 27, 1996.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 1,160 microsiemens, Jul 1; minimum, 159 microsiemens, Mar 28.
pH: Maximum, 8.4 units, Jun 21; minimum, 7.1 units, May 13.
WATER TEMPERATURE: Maximum, 28.6°C, Jun 27, 30, Jul 6; minimum, 7.0°C, Jan 30.
DISSOLVED OXYGEN: Maximum, 12.7 mg/L, Jan 6; minimum, 1.7 mg/L, May 28.

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	929	913	920	822	760	810	898	879	885	862	840	850
2	922	823	886	762	732	745	905	882	893	858	844	850
3	835	810	819	778	757	770	917	905	913	861	847	854
4	873	835	851	776	751	764	932	912	927	863	845	855
5	887	863	873	809	776	795	951	929	942	863	845	854
6	886	869	876	832	808	823	942	932	936	871	854	862
7	883	871	877	855	830	843	938	926	933	866	334	767
8	886	867	875	865	854	860	935	927	931	666	378	489
9	883	868	876	870	856	864	949	933	943	445	377	406
10	888	868	876	887	862	875	1010	944	965	431	384	405
11	887	877	881	916	884	901	962	923	935	484	429	455
12	888	819	857	911	882	903	940	924	930	534	483	506
13	886	859	869	900	867	893	960	916	930	572	533	558
14	897	886	894	899	893	896	919	886	908	590	571	581
15	---	---	e919	904	893	899	886	852	863	611	585	596
16	---	---	e866	904	893	900	865	847	857	633	611	622
17	---	---	e814	904	893	899	863	854	858	660	632	648
18	---	---	e761	935	894	921	875	862	868	666	653	659
19	733	684	708	940	917	927	885	872	877	671	660	665
20	707	682	689	922	908	917	889	877	882	680	669	673
21	768	707	735	909	852	870	949	885	902	692	679	686
22	799	768	781	882	856	870	899	864	874	705	686	697
23	832	799	819	900	881	890	875	860	867	721	696	708
24	837	821	828	944	900	920	862	850	855	732	720	725
25	831	818	823	939	928	933	858	847	852	730	718	724
26	977	820	888	963	936	950	858	843	850	734	723	729
27	853	822	834	956	940	953	857	842	849	750	723	737
28	836	820	828	957	947	953	862	834	847	849	741	767
29	839	822	831	956	929	942	852	836	844	742	719	732
30	829	787	820	931	898	919	853	840	848	720	682	694
31	879	759	804	---	---	---	858	841	850	713	689	700
MONTH	---	---	838	963	732	880	1010	834	891	871	334	679

08178800 SALADO CREEK (LOWER STATION) AT SAN ANTONIO, TX--Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	736	600	718	624	562	595	651	421	639	907	200	504
2	600	325	433	648	624	638	524	186	314	413	276	354
3	389	358	375	679	648	665	361	230	284	319	270	288
4	379	357	365	697	677	690	335	255	310	395	319	357
5	422	379	400	711	696	705	397	334	365	517	395	445
6	469	422	444	752	711	740	471	397	436	441	382	401
7	505	469	487	772	752	764	533	471	499	476	424	451
8	529	504	516	786	770	777	556	530	537	531	476	504
9	538	527	532	779	766	772	593	556	582	600	531	568
10	568	538	554	797	776	786	593	562	575	635	600	622
11	670	568	601	805	797	802	676	593	641	688	635	660
12	662	609	618	819	803	810	862	478	642	726	687	703
13	640	617	627	826	760	803	517	472	489	802	320	532
14	689	639	660	852	321	702	515	467	481	508	401	472
15	711	686	695	642	507	586	593	478	539	558	508	541
16	727	703	714	704	579	654	655	591	624	564	556	559
17	739	727	734	673	263	424	654	573	605	578	564	570
18	750	734	742	557	441	503	698	627	668	624	578	603
19	773	749	759	604	557	582	738	698	720	659	188	574
20	780	771	776	604	587	594	769	738	755	481	229	328
21	791	770	779	783	595	622	806	769	790	394	355	382
22	815	786	796	796	661	684	810	794	801	416	369	387
23	816	331	500	699	683	687	835	804	819	503	416	457
24	422	344	392	719	698	709	850	831	841	561	503	531
25	423	384	402	739	719	728	853	828	837	619	561	590
26	498	423	452	755	739	746	869	844	855	666	619	642
27	509	491	499	775	755	764	869	854	863	693	666	683
28	537	507	527	800	159	712	868	861	866	742	472	637
29	562	528	538	631	271	457	910	867	886	562	469	485
30	---	---	---	569	499	530	919	907	912	524	477	494
31	---	---	---	632	569	597	---	---	---	560	524	551
MONTH	816	325	574	852	159	672	919	186	639	907	188	512

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	627	604	612	1160	916	1020	---	---	---	---	---	---
2	657	626	641	974	924	949	---	---	---	---	---	---
3	686	656	668	924	888	900	---	---	---	---	---	---
4	772	267	661	915	865	885	---	---	---	---	---	---
5	679	372	472	910	851	872	---	---	---	---	---	---
6	505	431	463	851	819	833	---	---	---	---	---	---
7	571	477	530	830	820	825	---	---	---	---	---	---
8	621	571	598	829	761	819	---	---	---	---	---	---
9	656	162	518	---	---	---	---	---	---	---	---	---
10	267	161	192	---	---	---	---	---	---	---	---	---
11	284	162	207	---	---	---	---	---	---	---	---	---
12	---	---	e180	---	---	---	---	---	---	---	---	---
13	---	---	e210	---	---	---	---	---	---	---	---	---
14	---	---	e260	---	---	---	---	---	---	---	---	---
15	---	---	e320	---	---	---	---	---	---	---	---	---
16	---	---	e380	---	---	---	---	---	---	---	---	---
17	---	---	e450	---	---	---	---	---	---	---	---	---
18	---	---	e450	---	---	---	---	---	---	---	---	---
19	---	---	e500	---	---	---	---	---	---	---	---	---
20	---	---	e600	---	---	---	---	---	---	---	---	---
21	696	677	e689	---	---	---	---	---	---	---	---	---
22	728	696	712	---	---	---	---	---	---	---	---	---
23	781	726	749	---	---	---	---	---	---	---	---	---
24	824	781	800	---	---	---	---	---	---	---	---	---
25	850	824	838	---	---	---	---	---	---	---	---	---
26	871	850	861	---	---	---	---	---	---	---	---	---
27	890	871	883	---	---	---	---	---	---	---	---	---
28	904	890	898	---	---	---	---	---	---	---	---	---
29	954	903	931	---	---	---	---	---	---	---	---	---
30	945	915	932	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	---	---	574	---	---	---	---	---	---	---	---	---

e Estimated

08178800 SALADO CREEK (LOWER STATION) AT SAN ANTONIO, TX--Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

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

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

08178800 SALADO CREEK (LOWER STATION) AT SAN ANTONIO, TX--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	21.5	20.3	20.7	18.5	17.2	17.7	15.3	13.5	14.4	13.6	11.1	12.3
2	22.5	20.5	21.1	17.8	16.8	17.2	16.6	14.6	15.5	15.4	13.1	14.1
3	23.4	22.3	22.7	16.8	14.5	15.1	17.5	15.5	16.4	15.4	14.5	15.0
4	24.0	23.3	23.6	15.8	13.5	14.6	17.8	17.0	17.4	14.7	12.2	12.9
5	24.0	23.0	23.5	17.2	15.0	15.9	17.5	14.7	15.8	12.2	9.1	10.0
6	23.6	22.8	23.1	17.9	16.7	17.2	14.7	11.5	12.4	11.3	8.8	9.7
7	22.9	21.9	22.2	18.2	17.6	17.9	12.3	10.2	11.2	13.2	11.2	11.7
8	22.5	21.8	22.1	18.1	16.7	17.5	14.5	12.1	12.9	13.8	12.2	13.0
9	22.6	22.1	22.3	17.8	16.4	17.1	15.5	14.5	15.1	13.7	11.9	12.8
10	22.3	21.9	22.1	17.9	17.0	17.3	14.9	13.0	13.7	13.4	11.6	12.4
11	22.8	21.8	22.2	19.0	17.6	18.2	14.7	12.8	13.5	12.9	11.8	12.4
12	22.5	21.9	22.2	18.9	17.9	18.4	14.9	14.5	14.7	15.0	12.6	14.1
13	22.7	22.1	22.3	18.7	17.4	18.0	14.6	12.3	13.4	16.4	14.9	15.6
14	22.3	21.9	22.2	18.1	16.5	17.2	12.7	11.3	11.9	15.7	15.0	15.4
15	---	---	---	17.5	16.2	16.8	11.7	10.3	11.1	16.1	14.5	15.2
16	---	---	---	17.2	15.9	16.5	10.7	9.4	9.9	16.6	15.2	15.9
17	---	---	---	17.1	15.9	16.4	10.8	8.6	9.6	17.7	15.9	16.7
18	---	---	---	18.0	16.4	17.0	11.4	9.4	10.2	18.0	16.3	17.1
19	17.9	17.1	17.6	19.1	17.5	18.2	11.3	9.2	10.3	17.8	16.0	16.9
20	17.6	16.0	16.7	18.9	18.1	18.4	10.9	10.3	10.6	17.0	15.6	16.4
21	17.0	15.9	16.4	19.1	17.4	18.2	10.5	9.3	9.8	15.6	13.9	14.5
22	17.1	15.4	16.2	20.0	18.6	19.1	9.6	8.4	9.0	16.0	14.6	15.2
23	17.6	15.9	16.7	20.0	19.1	19.5	10.3	9.2	9.7	16.6	15.1	15.8
24	17.3	15.9	16.6	19.1	16.0	17.4	11.2	9.8	10.4	16.1	14.8	15.4
25	16.9	15.3	16.2	16.0	14.3	15.0	12.1	11.0	11.5	15.0	13.0	13.9
26	17.4	15.7	16.6	14.3	12.2	12.8	12.3	11.0	11.6	14.1	12.2	12.8
27	17.3	16.0	16.6	13.4	11.8	12.6	13.7	12.0	12.7	12.2	10.8	11.4
28	18.6	17.1	17.5	14.3	12.1	13.1	13.2	11.8	12.5	10.8	9.1	9.9
29	20.1	18.3	19.0	15.1	13.0	14.0	12.9	10.6	11.8	9.1	8.2	8.6
30	20.1	19.1	19.8	15.6	14.0	14.8	13.0	10.8	11.9	8.2	7.0	7.5
31	19.1	17.6	18.0	---	---	---	12.9	11.0	12.0	9.3	7.8	8.4
MONTH	---	---	---	20.0	11.8	16.6	17.8	8.4	12.4	18.0	7.0	13.3

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	11.3	9.3	10.0	20.5	19.1	19.8	20.1	19.7	19.9	24.2	18.8	21.6
2	12.3	10.0	10.7	21.6	20.4	20.8	19.9	19.0	19.4	21.4	20.0	20.8
3	12.6	10.4	11.3	21.2	20.2	20.8	19.0	16.7	18.1	21.8	20.0	20.8
4	12.5	11.2	11.8	20.2	18.4	19.0	18.3	16.5	17.5	23.0	21.4	21.9
5	12.0	10.6	11.3	18.4	17.6	17.9	18.7	16.0	17.1	24.1	22.5	23.2
6	11.4	10.3	10.8	19.3	18.0	18.6	19.7	17.1	18.3	25.1	23.0	23.7
7	13.8	11.4	12.5	20.6	19.1	19.8	21.2	19.7	20.3	25.1	23.8	24.5
8	14.9	13.2	13.8	20.8	20.2	20.5	21.3	18.9	20.2	25.4	24.9	25.2
9	16.2	13.7	15.0	21.6	19.7	20.6	18.9	17.4	18.1	25.3	24.9	25.2
10	17.5	15.6	16.5	22.1	21.1	21.6	19.0	18.4	18.8	25.8	24.7	25.2
11	18.5	16.4	17.4	21.8	18.5	19.9	20.0	18.9	19.4	26.6	25.4	26.0
12	17.9	17.1	17.5	18.5	15.9	16.8	20.4	19.5	20.0	27.1	26.0	26.5
13	19.3	16.9	17.9	19.5	16.2	17.3	20.3	18.8	19.4	27.0	23.9	25.2
14	18.3	16.9	17.5	19.6	17.1	18.2	20.1	19.0	19.5	24.6	23.2	23.7
15	19.4	17.1	18.2	19.0	17.1	17.9	20.7	19.6	20.1	24.0	22.5	23.2
16	20.6	19.0	19.8	19.8	17.5	18.6	22.2	20.7	21.3	25.4	24.0	24.6
17	21.5	20.1	20.7	19.3	14.1	15.4	22.8	22.2	22.5	25.8	25.2	25.5
18	22.2	21.0	21.5	16.3	14.8	15.3	23.0	22.5	22.7	26.0	25.1	25.6
19	21.6	18.0	19.3	17.2	15.5	16.4	23.8	22.5	23.0	26.6	24.1	25.8
20	18.0	16.5	16.9	17.2	15.1	16.3	24.3	23.4	23.7	25.5	24.3	24.9
21	17.9	16.5	17.0	19.2	17.2	18.1	23.5	21.7	22.4	26.2	23.9	24.8
22	18.7	17.5	18.0	21.0	19.2	20.3	22.2	20.6	21.3	26.6	24.3	25.4
23	19.1	17.4	18.4	21.3	20.9	21.0	23.5	21.5	22.3	26.9	25.9	26.4
24	20.2	18.5	19.2	22.6	20.8	21.6	23.3	22.1	22.7	27.8	26.8	27.2
25	21.4	19.4	20.2	23.1	22.1	22.5	23.2	22.2	22.6	28.1	27.3	27.7
26	21.4	19.8	20.7	23.3	22.5	22.9	22.9	22.0	22.4	27.6	27.3	27.5
27	19.8	17.2	18.3	23.8	22.5	23.1	23.9	22.4	23.0	27.7	26.9	27.3
28	18.2	16.0	17.2	23.8	15.4	22.1	24.4	23.1	23.6	27.3	25.0	26.3
29	19.2	17.8	18.6	22.9	17.2	21.4	24.2	23.3	23.7	27.6	25.9	26.6
30	---	---	---	22.4	20.7	21.4	24.3	24.0	24.1	28.0	27.3	27.6
31	---	---	---	21.2	19.9	20.5	---	---	---	27.8	27.1	27.3
MONTH	22.2	9.3	16.5	23.8	14.1	19.6	24.4	16.0	20.9	28.1	18.8	25.1

08178800 SALADO CREEK (LOWER STATION) AT SAN ANTONIO, TX--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	27.6	26.9	27.2	28.5	27.8	28.1	---	---	---	---	---	---
2	27.7	26.8	27.3	28.4	27.7	28.1	---	---	---	---	---	---
3	27.9	27.0	27.4	28.4	27.8	28.1	---	---	---	---	---	---
4	27.6	26.5	27.1	28.3	27.7	28.0	---	---	---	---	---	---
5	26.5	25.3	26.1	28.1	27.5	27.8	---	---	---	---	---	---
6	27.0	25.2	26.0	28.6	27.4	27.9	---	---	---	---	---	---
7	26.7	24.6	25.4	28.3	27.3	27.8	---	---	---	---	---	---
8	25.5	24.6	24.9	28.5	27.5	28.0	---	---	---	---	---	---
9	25.6	24.2	25.0	28.4	27.3	27.8	---	---	---	---	---	---
10	25.1	24.1	24.6	28.5	27.6	28.0	---	---	---	---	---	---
11	25.4	24.1	24.6	---	---	---	---	---	---	---	---	---
12	25.7	23.5	24.9	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	28.3	27.8	28.0	---	---	---	---	---	---	---	---	---
24	28.1	27.5	27.8	---	---	---	---	---	---	---	---	---
25	28.4	27.3	27.8	---	---	---	---	---	---	---	---	---
26	28.4	27.6	28.0	---	---	---	---	---	---	---	---	---
27	28.6	27.5	28.1	---	---	---	---	---	---	---	---	---
28	28.5	27.6	28.1	---	---	---	---	---	---	---	---	---
29	28.3	27.2	27.9	---	---	---	---	---	---	---	---	---
30	28.6	27.2	27.9	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	6.0	4.7	5.3	8.4	6.5	7.3	9.9	7.0	8.4	11.1	8.0	9.6
2	6.4	5.2	5.8	8.0	6.2	6.9	9.7	6.7	8.2	10.1	7.6	8.9
3	6.3	4.9	5.3	8.3	5.6	6.7	9.3	6.2	7.6	10.3	6.9	8.5
4	5.9	4.8	5.2	9.0	6.4	7.7	7.9	5.6	6.5	10.8	6.6	8.6
5	6.1	4.6	5.4	8.4	6.2	7.4	8.7	5.0	6.5	12.3	7.7	9.6
6	6.3	4.4	5.4	7.7	5.7	6.7	10.2	6.5	8.0	12.7	8.8	10.6
7	6.4	4.7	5.6	7.4	5.1	6.1	11.2	7.7	9.1	11.8	8.3	9.3
8	6.6	5.3	6.0	7.5	5.1	6.3	10.4	7.8	9.1	8.4	7.5	8.0
9	6.5	5.6	6.1	7.7	5.3	6.4	10.0	6.7	8.0	8.4	7.5	8.1
10	6.4	5.3	5.8	7.4	5.2	6.1	10.0	6.2	7.9	7.8	7.2	7.5
11	6.5	5.2	5.6	7.6	5.1	6.3	8.9	7.0	8.0	8.0	7.1	7.5
12	6.3	5.2	5.7	7.0	4.9	6.0	8.4	6.4	7.4	7.6	6.6	7.0
13	6.7	5.6	6.1	7.4	4.9	6.0	9.8	7.1	8.2	7.1	6.1	6.5
14	6.0	5.3	5.8	7.6	5.2	6.3	10.4	8.4	9.1	7.4	6.2	6.6
15	---	---	---	7.8	5.3	6.5	10.9	8.6	9.7	7.5	6.5	6.8
16	---	---	---	8.0	5.4	6.6	11.5	9.4	10.2	7.4	6.3	6.7
17	---	---	---	7.8	5.4	6.5	11.8	9.7	10.5	7.5	6.2	6.7
18	---	---	---	7.7	5.4	6.6	12.0	8.9	10.3	7.6	5.9	6.5
19	7.6	7.6	7.4	7.4	5.5	6.4	11.8	9.2	10.3	7.7	5.9	6.6
20	8.2	6.6	7.3	7.7	5.7	6.4	10.6	8.9	9.8	8.2	5.9	6.9
21	8.3	7.2	7.6	7.3	5.4	6.3	11.4	8.5	9.7	8.5	6.4	7.3
22	8.4	7.3	7.7	6.8	4.7	5.7	12.6	9.8	11.0	8.4	6.3	7.5
23	8.5	6.8	7.6	6.3	4.2	5.0	12.0	10.2	11.1	8.8	6.4	7.4
24	8.6	6.9	7.8	6.2	4.0	5.0	12.5	9.6	10.9	8.9	6.5	7.4
25	8.9	6.9	7.9	8.1	5.0	6.2	12.3	9.7	10.8	9.5	6.5	8.0
26	8.8	7.0	8.0	9.2	6.3	7.5	12.2	9.2	10.6	9.0	7.0	7.9
27	8.6	6.7	7.7	9.8	7.0	8.2	12.5	8.9	10.6	9.0	7.0	7.9
28	8.5	6.5	7.7	9.9	7.4	8.5	11.7	8.8	10.0	10.4	7.9	8.8
29	8.2	6.0	7.2	9.8	8.2	8.6	11.9	8.3	9.9	11.6	8.9	10.0
30	7.7	5.7	6.7	9.7	7.7	8.4	12.0	8.4	10.0	12.5	10.0	11.0
31	7.9	4.9	6.4	---	---	---	12.1	8.0	10.0	11.9	10.4	11.0
MONTH	---	---	---	9.9	4.0	6.7	12.6	5.0	9.3	12.7	5.9	8.1

08178800 SALADO CREEK (LOWER STATION) AT SAN ANTONIO, TX--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	11.3	8.1	9.7	---	---	---	7.5	5.2	5.5	7.4	3.4	5.1
2	---	---	---	---	---	---	9.5	6.6	7.9	5.9	5.3	5.6
3	---	---	---	---	---	---	10.0	8.3	8.8	5.6	5.0	5.4
4	---	---	---	---	---	---	9.2	8.4	8.8	5.0	4.5	4.8
5	---	---	---	---	---	---	8.4	7.7	8.2	5.1	4.2	4.6
6	---	---	---	---	---	---	7.8	7.0	7.4	5.0	4.4	4.7
7	---	---	---	---	---	---	7.0	6.1	6.5	4.4	3.7	4.1
8	---	---	---	---	---	---	7.0	5.8	6.4	3.8	3.3	3.7
9	---	---	---	9.2	7.8	8.4	7.1	6.5	6.9	3.4	3.2	3.3
10	---	---	---	8.5	7.1	7.6	7.0	6.1	6.5	3.6	3.2	3.5
11	---	---	---	9.3	6.9	7.9	6.4	6.1	6.2	3.6	3.2	3.4
12	---	---	---	10.6	8.3	9.2	7.5	5.7	6.7	3.4	2.7	3.1
13	---	---	---	10.1	9.1	9.5	7.3	6.8	7.1	5.0	2.7	4.1
14	---	---	---	10.2	7.7	8.9	6.9	6.1	6.3	4.2	4.0	4.1
15	---	---	---	9.7	8.0	9.0	6.3	5.9	6.2	4.2	3.7	4.0
16	9.0	6.9	8.1	9.2	7.6	8.3	6.3	5.8	6.1	4.2	3.5	3.8
17	8.6	6.5	7.4	---	---	---	6.3	5.1	5.6	3.5	3.0	3.2
18	7.6	6.0	6.8	---	---	---	5.3	4.4	4.7	3.2	2.6	2.9
19	8.7	5.4	6.8	---	---	---	5.1	4.6	4.8	5.7	2.6	3.3
20	8.9	7.1	7.8	---	---	---	4.8	3.9	4.3	5.4	4.2	4.6
21	9.2	6.8	8.3	---	---	---	5.0	3.7	4.2	4.5	4.2	4.4
22	8.7	7.0	7.6	---	---	---	5.0	4.3	4.6	4.2	3.8	3.9
23	8.2	7.0	7.6	---	---	---	4.9	4.1	4.6	3.8	3.3	3.5
24	---	---	---	---	---	---	4.7	3.9	4.4	3.4	3.1	3.2
25	---	---	---	---	---	---	4.6	3.7	4.2	3.3	2.9	3.0
26	---	---	---	---	---	---	4.7	3.5	4.2	3.5	2.9	3.2
27	---	---	---	---	---	---	4.5	3.4	4.1	3.1	2.7	2.9
28	---	---	---	---	---	---	4.0	3.3	3.8	4.4	1.7	3.6
29	---	---	---	---	---	---	3.5	3.0	3.3	4.0	3.3	3.5
30	---	---	---	5.7	5.2	5.6	3.7	2.9	3.4	3.3	3.0	3.1
31	---	---	---	5.7	5.3	5.5	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	10.0	2.9	5.7	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	3.9	3.2	3.4	4.7	3.7	4.2	---	---	---	---	---	---
2	4.3	3.3	3.8	4.6	3.3	4.2	---	---	---	---	---	---
3	3.7	2.7	3.2	4.6	3.8	4.1	---	---	---	---	---	---
4	5.8	2.5	3.5	4.5	3.8	4.1	---	---	---	---	---	---
5	5.8	5.0	5.3	4.7	3.8	4.3	---	---	---	---	---	---
6	5.0	4.4	4.8	4.7	3.8	4.3	---	---	---	---	---	---
7	5.0	4.3	4.7	4.1	3.3	3.7	---	---	---	---	---	---
8	5.0	4.3	4.5	3.9	3.1	3.5	---	---	---	---	---	---
9	6.5	4.1	4.8	3.9	2.9	3.4	---	---	---	---	---	---
10	6.2	4.1	4.9	4.1	3.5	3.8	---	---	---	---	---	---
11	5.9	5.3	5.6	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	4.5	4.1	4.3	---	---	---	---	---	---	---	---	---
24	4.3	4.1	4.2	---	---	---	---	---	---	---	---	---
25	4.2	3.9	4.1	---	---	---	---	---	---	---	---	---
26	4.3	3.9	4.1	---	---	---	---	---	---	---	---	---
27	4.4	4.1	4.2	---	---	---	---	---	---	---	---	---
28	4.3	3.9	4.0	---	---	---	---	---	---	---	---	---
29	4.8	3.4	4.1	---	---	---	---	---	---	---	---	---
30	4.8	4.2	4.6	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

08178880 MEDINA RIVER AT BANDERA, TX

LOCATION.--Lat 29°43'25", long 99°04'11", Bandera County, Hydrologic Unit 12100302, on left bank, 40 ft downstream from centerline of State Highway 173 at Bandera, 1.9 mi upstream from Bandera Creek, and 5.6 mi downstream from Indian Creek.

DRAINAGE AREA.--427 mi^2.

PERIOD OF RECORD.--Oct 1982 to current year.
Water-quality records.--Chemical data: Jan 1983 to Sep 1993. Biochemical data: Jan 1983 to Sep 1993. Pesticide data: Jan 1983 to Sep 1993.

GAGE.--Water-stage recorder. Datum of gage is 1,189.46 ft above sea level. Satellite telemeter at station.

REMARKS.--Records good except those for estimated daily discharges, which are fair. No known regulation. There are several small diversions upstream from station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1880, 46.62 ft Aug 2, 1978.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,400 ft^3/s:

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)

No peak greater than base discharge.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25	27	31	36	27	27	19	17	10	17	4.9	.90
2	25	27	32	37	32	26	20	28	11	16	6.6	.91
3	24	25	32	38	30	26	21	23	15	15	4.8	.76
4	24	25	32	36	32	25	21	25	12	14	4.8	.57
5	23	26	31	36	30	25	20	25	11	13	4.8	.52
6	23	27	30	36	28	25	19	23	11	12	4.9	.45
7	23	26	31	41	28	25	18	21	9.6	11	5.1	.39
8	22	25	32	41	27	25	17	19	9.8	11	3.2	.35
9	21	26	32	39	26	25	16	17	14	10	3.1	.35
10	21	26	31	39	26	25	16	17	36	9.4	2.8	.33
11	21	26	32	38	26	24	16	16	52	8.8	2.7	.33
12	22	26	42	38	25	23	19	15	40	8.7	2.4	.45
13	20	26	36	33	25	22	23	18	38	9.3	2.1	1.2
14	21	27	37	24	24	22	25	15	35	7.7	1.9	1.6
15	25	26	39	24	24	23	24	13	30	6.3	1.8	1.7
16	25	26	38	24	25	22	22	13	27	5.1	1.8	1.5
17	43	26	37	24	25	23	20	12	25	4.9	1.7	1.3
18	37	27	36	24	25	23	20	12	25	4.9	1.6	1.3
19	37	27	36	24	24	23	19	12	39	4.9	1.5	1.2
20	38	27	37	23	24	23	18	13	68	4.9	1.4	1.2
21	36	27	37	20	24	23	16	13	54	4.9	1.3	1.1
22	34	28	36	e22	24	23	16	12	46	4.9	1.3	1.2
23	33	29	37	e24	31	27	15	10	38	4.8	1.3	1.0
24	32	28	36	25	28	28	14	9.8	33	4.9	1.4	1.1
25	31	28	36	25	31	33	13	9.6	29	4.9	1.4	2.8
26	28	29	37	25	30	30	13	9.5	26	4.8	1.5	4.3
27	29	29	36	26	28	24	13	9.9	24	4.8	1.4	3.1
28	28	31	35	26	27	22	13	12	22	4.9	1.3	2.6
29	28	32	35	26	28	21	12	12	20	4.9	1.2	2.1
30	33	30	35	26	---	20	12	10	19	4.8	1.1	1.8
31	31	---	36	26	---	19	---	9.8	---	4.8	1.0	---
TOTAL	863	815	1080	926	784	752	530	471.6	829.4	247.3	78.1	38.41
MEAN	27.8	27.2	34.8	29.9	27.0	24.3	17.7	15.2	27.6	7.98	2.52	1.28
MAX	43	32	42	41	32	33	25	28	68	17	6.6	4.3
MIN	20	25	30	20	24	19	12	9.5	9.6	4.8	1.0	.33
AC-FT	1710	1620	2140	1840	1560	1490	1050	935	1650	491	155	76

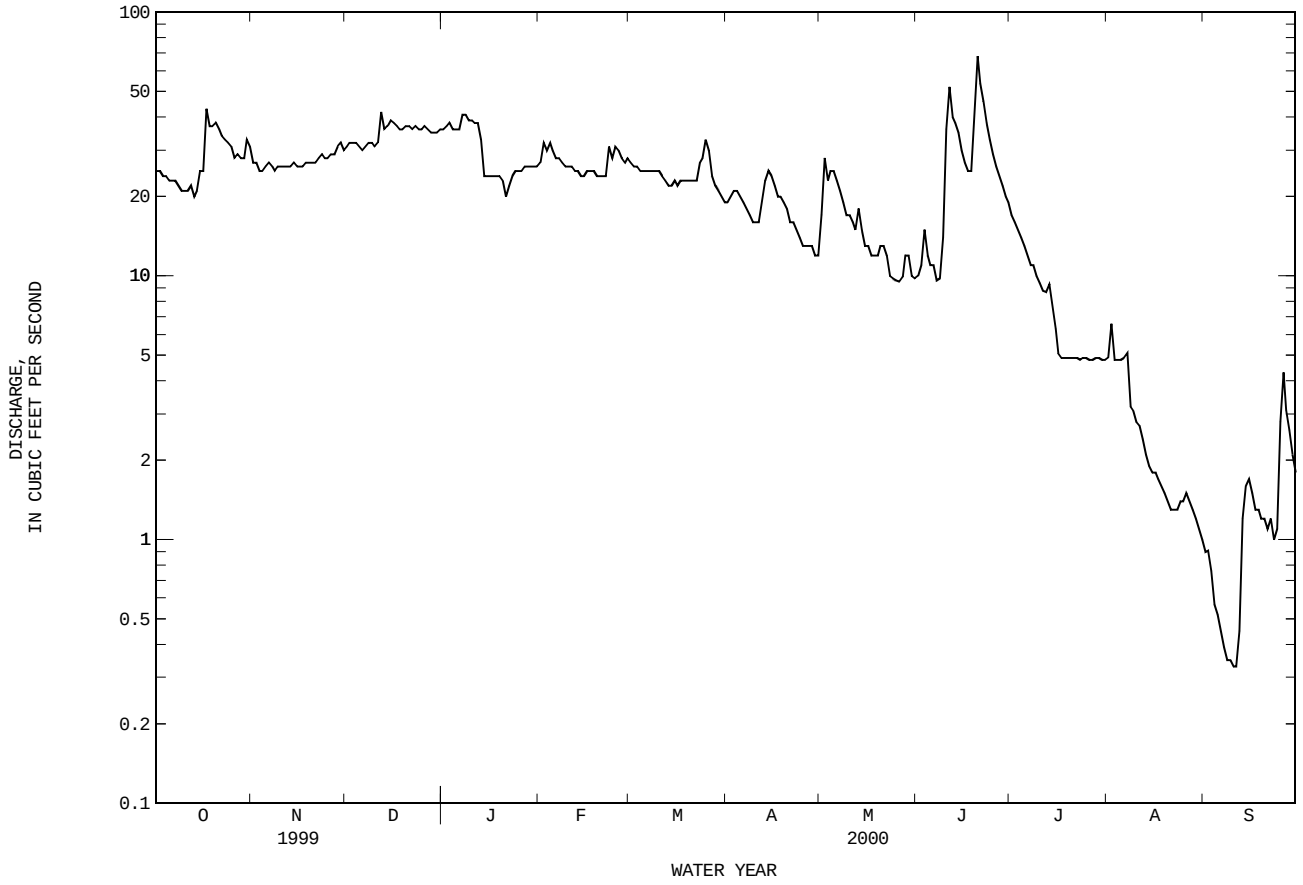
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 2000, BY WATER YEAR (WY)

MEAN	102	93.6	159	127	132	158	125	161	329	124	58.7	67.3
MAX	630	373	1278	638	922	985	547	696	2785	440	221	249
(WY)	1987	1987	1992	1992	1992	1992	1992	1987	1987	1988	1998	1986
MIN	25.7	27.2	27.0	28.4	27.0	24.3	17.7	14.6	8.77	2.36	2.00	1.28
(WY)	1985	2000	1994	1990	2000	2000	2000	1996	1996	1996	1996	2000

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1983 - 2000	
ANNUAL TOTAL	27137		7414.81			
ANNUAL MEAN	74.3		20.3		136	
HIGHEST ANNUAL MEAN					560	1987
LOWEST ANNUAL MEAN					20.3	2000
HIGHEST DAILY MEAN	1050	Jul 11	68	Jun 20	16800	Jun 22 1997
LOWEST DAILY MEAN	20	Oct 13	.33	Sep 10	.00	Aug 4 1996
ANNUAL SEVEN-DAY MINIMUM	21	Oct 8	.38	Sep 6	.00	Aug 4 1996
INSTANTANEOUS PEAK FLOW			156	Jun 10	c55800	Jun 3 1987
INSTANTANEOUS PEAK STAGE			4.87	Jun 10	24.90	Jun 3 1987
INSTANTANEOUS LOW FLOW					.00	Aug 4 1996
ANNUAL RUNOFF (AC-FT)	53830		14710		98680	
10 PERCENT EXCEEDS	108		36		253	
50 PERCENT EXCEEDS	69		23		60	
90 PERCENT EXCEEDS	27		1.6		18	

e Estimated
c From rating curve extended above current-meter discharge measurement of 27,000 ft^3/s.

08178880 MEDINA RIVER AT BANDERA, TX--Continued



08179500 MEDINA LAKE NEAR SAN ANTONIO, TX

LOCATION.--Lat 29°32′24", long 98°56′01", Medina County, Hydrologic Unit 12100302, at gate-operating platform, 576 ft from the left end of Medina Dam on Medina River, 4.2 mi upstream from Medina diversion dam, 13 mi north of Castroville, 28 mi west of San Antonio, and 70.4 mi from mouth.

DRAINAGE AREA.--634 mi^2.

PERIOD OF RECORD.--May 1913 to Sep 1994, Aug 1997 to current year. Prior to Oct 1965, end of month contents only from records provided by Bexar Medina Atascosa Water Improvement District No. 1.
Water-quality records.--Chemical data: Oct 1969 to Sep 1984.

REVISED RECORDS.--WSP 1923: 1953(M), Drainage area.

GAGE.--Water stage recorder. Datum of the gage is sea level. Prior to Oct 1999, datum of gage was 7.81 ft lower. Satellite telemeter at station.

REMARKS.--Records fair. The lake is formed by a gravity-type concrete dam, 1580 ft long. The dam was completed and storage began May 7, 1913. The uncontrolled spillway is a cut through natural rock 880 ft long, with a 3-foot wide cutoff wall, located near right end of dam. The dam and lake are owned and operated by Bexar-Medina-Atascosa Counties Water Control and Improvement District No. 1. Water is released downstream to Medina Diversion Reservoir where it is diverted into Medina Canal by the Water District. Capacity table based on survey made by the Texas Water Development Board, Jul 1995. Conservation pool storage is 254,843 acre-ft. Data regarding the dam are given in the following table:

	Elevation (feet)
Top of dam	1,076.2
Crest of spillways	1,064.2
Water-supply outlet pipe (invert)	958.7
Lowest gated outlet (invert)	912.2

EXTREMES (AT 0800 HOURS) FOR PERIOD OF RECORD.--Maximum contents, 289,900 acre-ft May 29, 1987, elevation, 1070.4 ft; minimum contents, 780 acre-feet Apr 11, 1948, elevation, 936.2 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 226,600 acre-ft, Oct 1, elevation, 1,067.20 ft; minimum contents, 105,300 acre-ft, Sep 30, elevation, 1,040.00 ft.

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

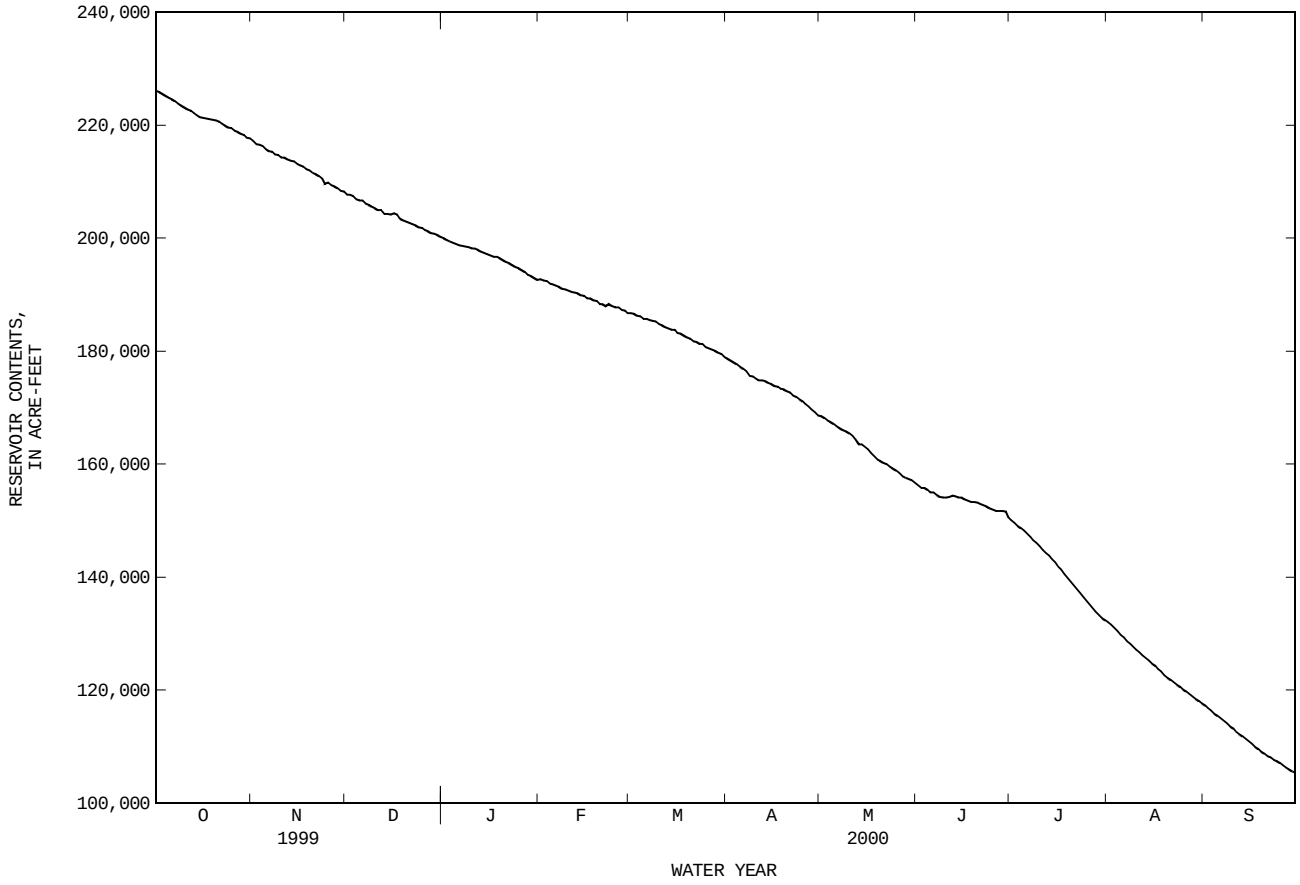
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	226100	217300	207800	e200000	e192800	186800	178700	168500	156300	150100	132100	117300
2	225900	e216700	207800	e199700	e192600	186700	178400	168200	155900	149600	131600	116900
3	225500	216600	207500	e199500	e192400	186300	178100	167800	155800	149100	131000	116400
4	225200	216400	207000	e199200	e192000	186200	177700	167500	155500	148700	130500	115900
5	224900	215800	206700	e199000	e191900	185800	177300	167200	155100	148200	129800	115500
6	224600	215400	206700	e198800	e191600	185800	176900	166700	155000	147700	129300	115100
7	224300	215300	206200	e198700	e191400	185500	176500	166400	154600	147100	128700	114600
8	223800	214900	e205900	198600	e191100	185400	175700	166100	154300	146500	128200	114200
9	223500	214800	e205600	198500	e191000	185300	175600	165800	154100	146100	127700	113600
10	223200	214300	e205400	198200	e190800	184800	175200	165500	154100	145500	127200	113200
11	222800	214300	e205000	198200	190500	184600	174900	165000	154300	144900	126700	112700
12	222600	214000	e205000	198000	190400	184300	174900	164500	154500	144300	126200	112200
13	222100	213800	e204400	197700	190300	184100	174800	163500	154400	143800	125700	111900
14	221800	213600	e204400	e197400	189900	183800	174400	163600	154200	143100	125300	111400
15	221500	213200	e204200	e197200	189800	183800	174200	163100	154100	142600	124700	111000
16	e221300	213000	e204500	e197000	189400	183300	173900	162600	153800	141900	124300	110500
17	e221200	212700	e204200	e196800	189400	183100	173800	162000	153600	141300	123800	110000
18	e221100	212300	e203500	e196700	189100	182800	173400	161400	153400	140600	123300	109600
19	e221000	212100	e203200	e196500	188900	182500	173300	160800	153400	139900	122700	109200
20	220900	211600	e203000	e196200	188400	182200	173000	160600	153200	139200	122200	108800
21	220700	211400	e202800	e195900	188400	181800	172700	160300	153000	138500	121800	108400
22	220300	211000	e202500	e195600	188000	181700	172200	160000	152800	137800	121400	108100
23	220000	210600	e202300	e195300	188400	181400	171900	159600	152600	137200	121000	107700
24	219700	209700	e202000	e194900	188000	181300	171500	159200	152200	136600	120600	107500
25	219500	209900	e201800	e194700	187800	180800	171100	158900	152000	135900	120200	107100
26	219100	209500	e201500	e194400	187800	180600	170700	158500	e151800	135200	119800	106700
27	218900	209200	e201300	e194000	187400	180300	170200	157900	e151800	134500	119400	106300
28	218500	208900	e201000	e193600	187200	180100	169700	157700	e151800	133900	118900	106000
29	218300	208400	200800	e193300	186800	179800	169200	157400	151700	133300	118500	105700
30	217800	208300	200600	e193000	---	179500	168600	157200	150600	132700	118100	105400
31	217700	---	200300	e192700	---	179000	---	156800	---	132400	117700	---
MAX	226100	217300	207800	200000	192800	186800	178700	168500	156300	150100	132100	117300
MIN	217700	208300	200300	192700	186800	179000	168600	156800	150600	132400	117700	105400
(+)	1057.8	1056.1	1054.6	1054.1	1052.0	1050.4	1048.3	1045.8	1044.4	1040.0	1036.0	1032.4
(@)	-9400	-9400	-8000	-7600	-5900	-7800	-10400	-11800	-6200	-18200	-14700	-12300

CAL YR 1999 MAX 255400 MIN 200300 (@) -55100
WTR YR 2000 MAX 226100 MIN 105400 (@)-121700

e Estimated

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

08179500 MEDINA LAKE NEAR SAN ANTONIO, TX--Continued



08180640 MEDINA RIVER AT LA COSTE, TX

LOCATION.--Lat 29°19′26", long 98°48′46", Medina County, Hydrologic Unit 12100302, at downstream side of bridge on Farm Road 471, 1.0 mi north of La Coste, 5.0 mi upstream from Sherer Creek, and 27.4 mi upstream from mouth.

DRAINAGE AREA.--805 mi^2, of which 634 mi^2 is above dam forming Medina Lake.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Dec 1986 to Sep 2000 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is 667.15 ft above sea level. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records fair. Since installation of gage in water year 1987, at least 10% of contributing drainage area has been regulated by Medina Lake (station 08179500, conservation pool storage 254,843 acre-ft) and by Medina Diversion Lake. A large part of the streamflow is lost into the Edwards and associated limestones where the Balcones Fault crosses the basin between the upstream end of Medina Lake and about 5 mi downstream from Medina Dam, or 0.9 mi downstream from the diversion dam. There are several small diversions below Medina Diversion Dam. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water-quality data.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

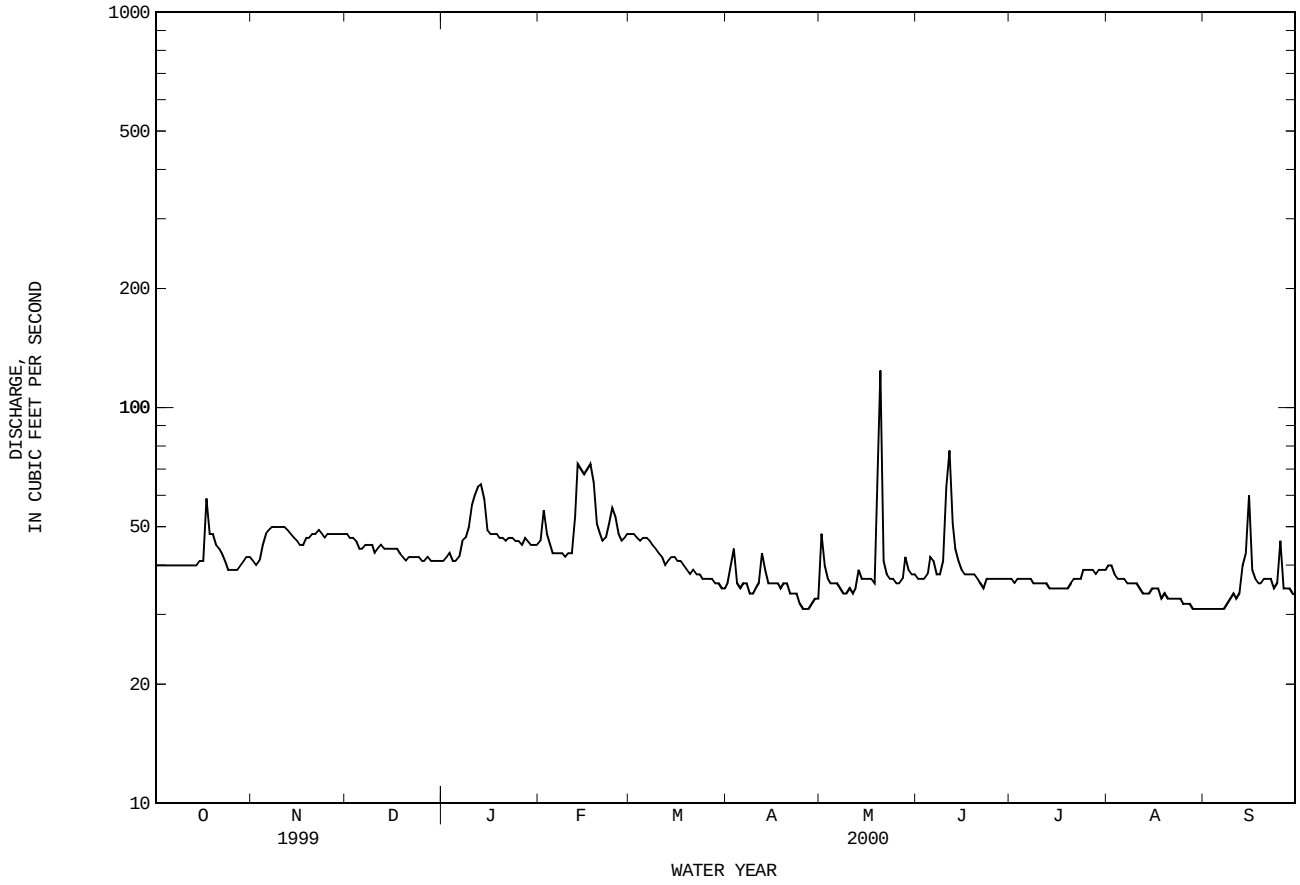
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	40	41	48	41	46	48	36	48	37	37	40	31
2	40	40	47	42	55	48	40	40	37	36	40	31
3	40	41	47	43	48	47	44	37	37	37	38	31
4	40	45	46	41	45	46	36	36	38	37	37	31
5	40	48	44	41	43	47	35	36	42	37	37	31
6	40	49	44	42	43	47	36	36	41	37	37	31
7	40	50	45	46	43	46	36	35	38	37	36	31
8	40	50	45	47	43	45	34	34	38	36	36	32
9	40	50	45	50	42	44	34	34	41	36	36	33
10	40	50	43	57	43	43	35	35	63	36	36	34
11	40	50	44	60	43	42	36	34	78	36	35	33
12	40	49	45	63	53	40	43	35	51	36	34	34
13	40	48	44	64	72	41	39	39	44	35	34	40
14	40	47	44	59	70	42	36	37	41	35	34	43
15	41	46	44	49	68	42	36	37	39	35	35	60
16	41	45	44	48	70	41	36	37	38	35	35	39
17	59	45	44	48	72	41	36	37	38	35	35	37
18	48	47	43	48	65	40	35	36	38	35	33	36
19	48	47	42	47	51	39	36	66	38	35	34	36
20	45	48	41	47	48	38	36	124	37	36	33	37
21	44	48	42	46	46	39	34	41	36	37	33	37
22	43	49	42	47	47	38	34	38	35	37	33	37
23	41	48	42	47	51	38	34	37	37	37	33	35
24	39	47	42	46	56	37	32	37	37	39	33	36
25	39	48	41	46	53	37	31	36	37	39	32	46
26	39	48	41	45	48	37	31	36	37	39	32	35
27	39	48	42	47	46	37	31	37	37	39	32	35
28	40	48	41	46	47	36	32	42	37	38	31	35
29	41	48	41	45	48	36	33	39	37	39	31	34
30	42	48	41	45	---	35	33	38	37	39	31	34
31	42	---	41	45	---	35	---	38	---	39	31	---
TOTAL	1291	1416	1345	1488	1505	1272	1060	1272	1221	1141	1067	1075
MEAN	41.6	47.2	43.4	48.0	51.9	41.0	35.3	41.0	40.7	36.8	34.4	35.8
MAX	59	50	48	64	72	48	44	124	78	39	40	60
MIN	39	40	41	41	42	35	31	34	35	35	31	31
AC-FT	2560	2810	2670	2950	2990	2520	2100	2520	2420	2260	2120	2130

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 2000, BY WATER YEAR (WY)

MEAN	68.1	87.2	88.9	138	233	231	139	232	611	145	62.6	48.6
MAX	361	515	319	647	2256	1943	1052	1335	4718	702	213	125
(WY)	1999	1999	1992	1992	1992	1992	1992	1992	1987	1987	1987	1987
MIN	23.5	21.4	21.6	20.5	24.9	24.3	26.4	25.5	17.7	22.7	21.9	18.8
(WY)	1992	1990	1990	1997	1991	1990	1996	1990	1990	1989	1989	1989

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1987 - 2000	
ANNUAL TOTAL	23253		15153			
ANNUAL MEAN	63.7		41.4		130	
HIGHEST ANNUAL MEAN					836	1992
LOWEST ANNUAL MEAN					29.1	1989
HIGHEST DAILY MEAN	196	Jan 1	124	May 20	18900	May 30 1987
LOWEST DAILY MEAN	39	Sep 29	31	Apr 25	12	Dec 12 1989
ANNUAL SEVEN-DAY MINIMUM	40	Sep 29	31	Aug 28	13	Dec 9 1989
INSTANTANEOUS PEAK FLOW			549	May 20	24600	May 30 1987
INSTANTANEOUS PEAK STAGE			8.27	May 20	24.05	May 30 1987
ANNUAL RUNOFF (AC-FT)	46120		30060		94330	
10 PERCENT EXCEEDS	100		48		280	
50 PERCENT EXCEEDS	53		40		42	
90 PERCENT EXCEEDS	41		34		25	

08180640 MEDINA RIVER AT LA COSTE, TX--Continued



08180640 MEDINA RIVER AT LA COSTE, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--
CHEMICAL DATA: Jan 1987 to Sep 1995, Apr 1996 to current year.
BIOCHEMICAL DATA: Feb 1987 to Aug 1995, Apr 1996 to Aug 23, 2000 (discontinued).
PESTICIDE DATA: Apr 1971 to Sep 1981, Apr 1996 to Aug 23, 2000 (discontinued).
SEDIMENT DATA: Apr 1996 to Aug 23, 2000 (discontinued).

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Jan 1987 to Sep 1995, Mar 1996 to current year.
pH: Jan 1987 to Sep 1995, Mar 1996 to current year.
WATER TEMPERATURE: Jan 1987 to Sep 1995, Mar 1996 to current year.
DISSOLVED OXYGEN: Jan 1987 to Sep 1995, Mar 1996 to current year.

INSTRUMENTATION.--Water-quality monitor Jan 1987 to Sep 30, 1995, Mar 1996 to current year.

REMARKS.--Records fair. Interruptions in the record were caused by malfunction of the instrument. Mean monthly and annual concentrations and loads for selected chemical constituents have been computed for previous years using the daily (or continuous) records of specific conductance and regression relationships between each chemical constituent and specific conductance. 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, 720 microsiemens, Sep 3, 4, 1987; minimum, 135 microsiemens, May 6, 1993.
pH: Maximum, 8.7 units, Jun 20, 1989; minimum, 6.8 units, Aug 4, 5, 1989.
WATER TEMPERATURE: Maximum, 30.5°C, Jun 24, 26, 27, 1990; minimum, 2.5°C, Dec 24, 1989.
DISSOLVED OXYGEN: Maximum, 13.6 mg/L, Jan 18, 2000; minimum, 3.7 mg/L, May 23, 1992.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 535 microsiemens, Nov 21; minimum, 313 microsiemens, May 20.
pH: Maximum, 8.2 units, Mar 12, 13, Sep 28, 29, 30; minimum, 7.3 units, May 21, 22, 23.
WATER TEMPERATURE: Maximum, 29.1°C, Jul 13, 14; minimum, 9.8°C, Dec 22.
DISSOLVED OXYGEN: Maximum, 13.6 mg/L, Jan 18; minimum, 4.3 mg/L, Sep 24.

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

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	TUR-BID-ITY (NTU) (00076)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	E. COLI WATER WHOLE TOTAL UREASE (COL / 100 ML) (31633)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)
DEC												
14...	0900	44	548	7.9	12.0	1.8	9.4	89	65	100	80	<1.0
MAR												
22...	0930	39	517	7.3	19.0	2.5	8.4	92	K68	100	K43	4.1
AUG												
23...	1100	34	466	7.5	27.0	<.50	5.9	73	200	170	41	<1.0

DATE	URANIUM NATURAL DIS-SOLVED (UG/L AS U) (22703)	ANTI-MONY, DIS-SOLVED (UG/L AS SB) (01095)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)	NICKEL, DIS-SOLVED (UG/L AS NI) (01065)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)	COBALT, DIS-SOLVED (UG/L AS CO) (01035)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030)	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)
DEC												
14...	1.0	<1.0	3.1	<1.0	<1.0	1.2	<1.0	<1.0	<1.0	<1.0	<.80	<1.0
MAR												
22...	<1.0	<1.0	5.5	<1.0	<1.0	1.3	<1.0	1.5	<1.0	<1.0	<1.0	<1.0
AUG												
23...	<1.0	<1.0	<1.0	<1.0	1.7	1.5	<1.0	<1.0	<1.0	<1.0	<.80	<1.0

DATE	BERYL-LIUM, DIS-SOLVED (UG/L AS BE) (01010)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	BORON, DIS-SOLVED (UG/L AS B) (01020)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	CAR-BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)
DEC												
14...	<1.0	43	<2	16	<2	1.7	<10	110	.19	12	0	257
MAR												
22...	<1.0	41	<2	16	<2	1.8	<10	106	.22	9.6	0	226
AUG												
23...	<1.0	36	<2	16	<2	1.9	<10	89	.23	11	0	219

08180640 MEDINA RIVER AT LA COSTE, TX--Continued

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

DATE	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	LITHIUM DIS-SOLVED (UG/L AS LI) (01130)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	STRON-TIUM, DIS-SOLVED (UG/L AS SR) (01080)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	VANA-DIUM, DIS-SOLVED (UG/L AS V) (01085)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)
DEC												
14...	211	44	7	326	17	14	564	73	<10	E.005	<.020	3.64
MAR												
22...	185	46	7	296	15	13	546	67	<10	<.008	.040	2.83
AUG												
23...	179	46	5	281	11	12	547	65	<10	.020	<.020	1.41

DATE	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	2,6-DI-ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	ACETO-CHLOR, WATER FLTRD REC (UG/L) (49260)	ALA-CHLOR, WATER, DISS, REC, (UG/L) (46342)	ATRA-ZINE, WATER, DISS, REC (UG/L) (39632)	METHYL AZIN-PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)	BEN-FLUR-ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)	BUTYL-ATE, WATER, DISS, REC (UG/L) (04028)
DEC												
14...	<.010	.21	.19	E.003	<.010	<.0030	<.0020	<.020	.017	<.0150	<.0020	<.0020
MAR												
22...	.066	.13	.15	.009	<.010	<.0030	<.0020	<.002	.013	<.0010	<.0020	<.0020
AUG												
23...	<.010	.23	.17	E.004	<.010	<.0030	<.0020	<.002	.010	<.0010	<.0020	<.0020

DATE	CAR-BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBO-FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	CHLOR-PYRIFOS DIS-SOLVED (UG/L) (38933)	CYANA-ZINE, WATER, DISS, REC (UG/L) (04041)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	DEETHYL ATRA-ZINE, WATER, DISS, REC (UG/L) (04040)	DI-AZINON, DIS-SOLVED (UG/L) (39572)	DI-ELDRIN DIS-SOLVED (UG/L) (39381)	DISUL-FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	ETHAL-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)	ETHO-PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)
DEC												
14...	<.0030	<.0030	<.0040	<.0040	<.0020	E.0442	<.002	<.001	<.0170	<.0020	<.0040	<.0030
MAR												
22...	<.0030	<.0030	<.0040	<.0040	<.0020	E.0354	<.002	<.001	<.0170	<.0020	<.0040	<.0030
AUG												
23...	<.0030	<.0030	<.0040	<.0040	<.0020	E.0234	.007	<.001	<.0170	<.0100	<.0040	<.0030

DATE	FONOFOS WATER DISS REC (UG/L) (04095)	LINDANE DIS-SOLVED (UG/L) (39341)	LIN-URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA-THION, DIS-SOLVED (UG/L) (39532)	METO-LACHLOR WATER DISSOLV (UG/L) (39415)	METRI-BUZIN SENCOR WATER DISSOLV (UG/L) (82630)	MOL-INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPROP-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	PARA-THION, DIS-SOLVED (UG/L) (39542)	METHYL PARA-THION WAT FLT 0.7 U GF, REC (UG/L) (82667)	PEB-ULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	PENDI-METH-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)
DEC												
14...	<.0030	<.004	<.0020	<.005	<.002	<.015	<.0040	<.0030	<.004	<.0060	<.0040	<.0040
MAR												
22...	<.0030	<.004	<.0020	.010	.005	<.004	<.0040	<.0030	<.004	<.0060	<.0040	<.0040
AUG												
23...	<.0030	<.004	<.0020	<.005	<.002	<.004	<.0040	<.0030	<.004	<.0060	<.0040	<.0040

DATE	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PRO-METON, WATER, DISS, REC (UG/L) (04037)	PROP-CHLOR, WATER, DISS, REC (UG/L) (04024)	PRO-PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	PRO-PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	PRON-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	SI-MAZINE, WATER, DISS, REC (UG/L) (04035)	TEBU-THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER-BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TER-BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	THIO-BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL-LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)
DEC												
14...	<.0020	<.0180	<.0070	<.0040	<.0130	<.0030	<.0050	<.0100	<.0070	<.0130	<.0020	<.0010
MAR												
22...	<.0020	<.0180	<.0070	<.0040	<.0130	<.0030	<.0050	<.0100	<.0070	<.0130	<.0020	<.0010
AUG												
23...	<.0020	<.0180	<.0070	<.0040	<.0130	<.0030	<.0050	<.0100	<.0070	<.0130	<.0020	<.0010

08180640 MEDINA RIVER AT LA COSTE, TX--Continued

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

DATE	TRI-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)	ALPHA BHC DIS-SOLVED (UG/L) (34253)	HCH ALPHA D6 SRG WAT FLT 0.7 U GF, REC PERCENT (91065)	P,P' DDE DISSOLV (UG/L) (34653)	PER-METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	DIAZ-INON D10 SRG WAT FLT 0.7 U GF, REC PERCENT (91063)	2,4,5-T DIS-SOLVED (UG/L) (39742)	2,4-D, DIS-SOLVED (UG/L) (39732)	2,4-DB WATER, FLTRD, GF 0.7U REC (UG/L) (38746)	SILVEX, DIS-SOLVED (UG/L) (39762)	3HYDRXY CARBO-FURAN WAT,FLT GF 0.7U REC (UG/L) (49308)	DNOC WAT,FLT GF 0.7U REC (UG/L) (49299)
DEC												
14...	<.0020	<.0020	105	<.0060	<.0050	118	<.0400	<.110	<.100	<.0600	<.110	<.420
MAR												
22...	<.0020	<.0020	71.9	<.0060	<.0050	91.8	<.0400	<.130	<.100	<.0600	<.110	<.420
AUG												
23...	<.0020	<.0020	116	<.0060	<.0050	121	<.0400	<.110	<.100	<.0600	<.110	<.420

DATE	ACIFL-UORFEN WATER, FLTRD, GF 0.7U REC (UG/L) (49315)	ALDI-CARB, WATER, FLTRD, GF 0.7U REC (UG/L) (49312)	ALDI-CARB SULFONE WAT,FLT GF 0.7U REC (UG/L) (49313)	ALDICA-RB SUL-FOXIDE, WAT,FLT GF 0.7U REC (UG/L) (49314)	BDMC, SURROG, WATER, UNFLTRD REC PERCENT (99835)	BENTA-ZON, WATER, FLTRD, GF 0.7U REC (UG/L) (38711)	BRO-MACIL, WATER, DISS, REC (UG/L) (04029)	BRO-MOXYNIL WATER, FLTRD, GF 0.7U REC (UG/L) (49311)	CAR-BARYL, WATER, FLTRD, GF 0.7U REC (UG/L) (49310)	CARBO-FURAN, WATER, FLTRD, GF 0.7U REC (UG/L) (49309)	CHLORO-THALO-NIL, WAT,FLT GF 0.7U REC (UG/L) (49306)	CLOPYR-ALID, WATER, FLTRD, GF 0.7U REC (UG/L) (49305)
DEC												
14...	<.0900	<1.57	<.100	<.0210	76.4	<.0350	<.0600	<.0400	<.0700	<.290	<.480	<.230
MAR												
22...	<.0900	<.940	<.100	<.0210	77.9	<.0350	<.0600	<.0400	<.0700	<.290	<.480	<.230
AUG												
23...	<.0900	<.490	<.100	<.0210	74.2	<.0350	<.0600	<.0400	<.0700	<.290	<.480	<.230

DATE	DACTHAL MONO-ACID, WAT,FLT GF 0.7U REC (UG/L) (49304)	DICAMBA WATER, FLTRD, GF 0.7U REC (UG/L) (38442)	DICHLO-BENIL, WATER, FLTRD, GF 0.7U REC (UG/L) (49303)	DICHLOR PROP, WATER, FLTRD, GF 0.7U REC (UG/L) (49302)	DINOSEB WATER, FLTRD, GF 0.7U REC (UG/L) (49301)	DIURON, WATER, FLTRD, GF 0.7U REC (UG/L) (49300)	FEN-URON, WATER, FLTRD, GF 0.7U REC (UG/L) (49297)	FLUO-METURON WATER, FLTRD, GF 0.7U REC (UG/L) (38811)	LINURON WATER, FLTRD, GF 0.7U REC (UG/L) (38478)	MCPA, WATER, FLTRD, GF 0.7U REC (UG/L) (38482)	MCPB, WATER, FLTRD, GF 0.7U REC (UG/L) (38487)	METHIO-CARB, WATER, FLTRD, GF 0.7U REC (UG/L) (38501)
DEC												
14...	<.0390	<.0430	<.0700	<.0320	<.0600	<.0600	<.0700	<.0600	<.0900	<.170	<.130	<.0260
MAR												
22...	<.0390	<.0430	<.0700	<.0320	<.0600	<.0600	<.0700	<.0600	<.0900	<.170	<.130	<.0260
AUG												
23...	<.0390	<.0430	<.0700	<.0320	<.0600	<.0600	<.0700	<.0600	<.0900	<.170	<.130	<.0260

DATE	METH-OMYL, WATER, FLTRD, GF 0.7U REC (UG/L) (49296)	NEB-URON, WATER, FLTRD, GF 0.7U REC (UG/L) (49294)	NORFLUR AZON, WATER, FLTRD, GF 0.7U REC (UG/L) (49293)	ORY-ZALIN, WATER, FLTRD, GF 0.7U REC (UG/L) (49292)	OXAMYL, WATER, FLTRD, GF 0.7U REC (UG/L) (38866)	PIC-LORAM, WATER, FLTRD, GF 0.7U REC (UG/L) (49291)	PRO-PHAM, WATER, FLTRD, GF 0.7U REC (UG/L) (49236)	PRO-POXUR, WATER, FLTRD, GF 0.7U REC (UG/L) (38538)	TRI-CLOPYR, WATER, FLTRD, GF 0.7U REC (UG/L) (49235)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155)	SEDI-MENT, SUS-PENDED (MG/L) (80154)
DEC											
14...	<.0170	<.0700	<.0420	<.310	<.0990	<.0500	<.0350	<.0800	<.250	--	--
MAR											
22...	<.0170	<.0700	<.0420	<.310	<.0180	<.0500	<.0350	<.0800	<.250	--	--
AUG											
23...	<.0170	<.0700	<.0420	<.310	<.0180	<.0500	<.0350	<.0800	<.250	2.2	24

08180640 MEDINA RIVER AT LA COSTE, TX--Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	518	513	516	530	525	527	526	524	526	508	505	507
2	519	512	516	531	526	529	527	524	526	508	506	507
3	519	514	517	531	528	529	528	524	527	507	505	506
4	518	511	516	530	526	528	530	526	528	524	502	514
5	519	509	514	529	526	528	529	526	528	523	519	521
6	515	509	512	529	526	528	528	505	519	522	519	520
7	515	509	513	529	526	527	505	499	501	521	515	518
8	515	510	513	526	523	525	503	501	502	518	513	516
9	515	510	513	525	522	523	505	502	503	516	503	510
10	516	509	513	523	519	520	505	502	503	512	509	511
11	515	509	513	519	515	517	506	504	505	510	508	509
12	515	508	513	516	513	514	506	505	506	510	508	509
13	515	510	513	515	512	514	509	506	507	508	501	505
14	516	510	513	516	512	514	512	508	510	501	493	496
15	515	510	513	518	514	516	512	508	510	493	491	492
16	515	510	513	519	515	517	509	505	507	492	490	491
17	514	485	496	520	517	519	507	504	506	491	489	490
18	498	433	477	523	519	521	508	505	506	491	487	489
19	503	449	489	525	521	523	508	505	507	494	488	490
20	502	490	496	527	523	525	507	504	506	498	493	495
21	510	498	505	535	526	527	507	503	505	504	496	499
22	511	506	509	532	527	530	505	502	504	508	503	505
23	512	507	510	532	530	531	505	503	504	509	504	507
24	513	509	512	531	529	530	506	504	505	509	505	507
25	514	509	512	530	527	529	507	504	506	508	504	506
26	516	512	514	528	525	526	508	505	507	509	505	507
27	518	514	516	527	524	526	510	508	509	509	505	507
28	521	517	519	527	524	526	510	508	509	506	504	505
29	525	519	522	527	525	526	510	507	509	506	502	505
30	533	522	525	527	525	526	510	506	508	508	504	506
31	528	522	525	---	---	---	509	506	508	508	505	507
MONTH	533	433	511	535	512	524	530	499	510	524	487	505

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	508	502	506	466	462	464	492	478	489	495	460	477
2	502	496	498	465	461	463	489	472	485	483	462	477
3	500	483	494	468	463	465	478	467	474	485	449	464
4	507	484	497	470	464	467	481	464	477	488	482	485
5	507	503	505	470	464	467	486	457	469	484	479	482
6	510	503	506	472	467	469	488	484	486	486	480	483
7	513	509	511	478	468	473	488	483	486	489	484	486
8	514	481	498	480	476	478	489	484	487	490	485	488
9	483	480	482	481	476	479	491	486	488	492	488	490
10	483	480	482	483	477	480	491	488	489	493	490	492
11	484	480	482	483	478	481	492	489	491	493	489	491
12	484	465	482	483	477	480	492	485	488	493	483	489
13	479	475	477	483	477	480	488	485	487	488	479	484
14	507	470	474	484	478	482	491	476	482	482	478	480
15	472	465	470	486	481	483	493	490	491	483	473	478
16	465	395	446	487	483	485	494	488	491	486	480	484
17	452	442	447	486	479	482	493	488	490	487	472	481
18	443	441	442	485	480	482	493	491	492	476	469	473
19	445	441	443	487	480	484	494	490	492	476	359	463
20	447	443	445	487	482	485	494	488	492	423	313	379
21	476	445	447	489	483	486	493	487	490	412	365	392
22	452	447	449	489	484	487	494	489	492	365	336	353
23	452	449	451	490	485	488	496	491	493	362	332	339
24	457	452	454	491	485	488	496	491	494	436	362	395
25	465	457	462	491	486	489	496	489	493	464	435	449
26	---	---	---	493	487	490	496	490	493	472	464	467
27	---	---	---	493	487	491	497	491	494	473	469	472
28	471	463	466	494	487	491	496	491	494	470	466	468
29	468	463	466	493	487	490	497	491	494	472	463	469
30	---	---	---	493	486	489	496	492	494	475	460	465
31	---	---	---	492	486	489	---	---	---	475	469	473
MONTH	---	---	---	494	461	481	497	457	489	495	313	460

08180640 MEDINA RIVER AT LA COSTE, TX--Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	476	470	474	489	484	487	475	469	472	486	470	478
2	477	471	475	489	484	486	478	471	475	475	469	472
3	478	472	476	489	484	486	477	469	473	474	468	471
4	482	477	479	488	481	485	477	470	474	473	469	471
5	483	479	481	487	482	485	477	471	475	473	469	471
6	485	479	482	487	482	485	478	471	475	474	469	472
7	485	479	482	487	482	485	478	472	475	476	471	473
8	486	479	483	487	482	485	479	473	477	476	471	473
9	487	479	483	488	483	485	480	474	478	475	472	474
10	483	454	473	488	452	471	479	474	477	477	473	475
11	463	396	437	473	454	462	478	472	476	477	472	475
12	464	421	454	476	469	473	479	473	476	476	452	472
13	445	430	434	476	469	473	478	471	475	461	451	456
14	453	436	442	475	468	472	478	469	474	473	454	463
15	462	453	455	475	467	472	477	470	473	470	457	467
16	485	462	473	475	467	471	477	472	475	457	419	438
17	487	482	485	474	467	471	479	473	477	455	438	448
18	486	481	484	475	467	472	480	474	478	438	411	421
19	485	474	480	475	468	472	480	473	477	436	413	421
20	488	482	484	475	469	473	479	473	476	460	436	447
21	491	485	488	476	469	473	480	474	477	474	460	467
22	494	490	492	476	469	473	480	475	478	480	474	477
23	496	491	494	475	468	472	481	477	479	480	476	478
24	495	491	494	475	468	472	482	477	480	481	460	477
25	496	488	492	475	468	472	482	477	480	472	455	464
26	493	488	491	475	468	472	483	478	481	473	436	462
27	493	487	491	474	467	471	483	478	481	477	436	461
28	493	486	489	474	467	471	484	479	481	478	470	474
29	492	485	488	475	468	472	484	480	482	470	466	468
30	490	484	487	474	468	472	485	481	483	475	466	470
31	---	---	---	475	469	472	485	480	483	---	---	---
MONTH	496	396	477	489	452	476	485	469	477	486	411	465

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

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

08180640 MEDINA RIVER AT LA COSTE, TX--Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

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

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	22.1	21.1	21.6	18.3	17.3	17.8	15.3	14.7	15.0	13.1	12.0	12.5
2	22.6	21.1	21.8	18.0	16.9	17.5	15.8	15.0	15.4	13.9	12.7	13.4
3	23.6	22.0	22.9	16.9	15.9	16.3	16.0	15.4	15.7	14.0	13.2	13.6
4	23.7	22.9	23.2	16.4	15.4	15.9	17.0	15.9	16.5	13.2	11.7	12.6
5	23.4	22.6	22.9	17.2	16.0	16.7	15.9	14.3	15.3	11.7	10.6	11.0
6	23.3	22.2	22.7	17.9	16.9	17.5	14.3	12.9	13.7	11.4	10.0	10.8
7	22.7	21.9	22.2	18.0	17.4	17.7	13.5	12.6	13.0	12.5	11.3	12.1
8	22.9	21.7	22.2	17.5	17.0	17.3	15.4	13.2	14.5	13.1	12.3	12.7
9	22.9	21.9	22.3	17.3	17.0	17.1	16.1	15.2	15.7	13.0	12.3	12.6
10	22.7	21.7	22.2	17.6	17.0	17.4	15.2	13.6	14.2	12.6	12.2	12.4
11	22.6	21.6	22.1	18.1	17.3	17.8	14.2	13.4	13.9	12.7	12.2	12.4
12	22.6	21.6	22.0	18.4	17.9	18.1	14.9	14.1	14.5	13.6	12.7	13.4
13	22.4	21.7	22.0	18.5	17.9	18.1	14.1	13.0	13.6	14.0	13.2	13.7
14	22.6	21.6	22.1	18.2	17.5	17.8	13.0	12.2	12.6	14.1	13.6	13.9
15	23.1	22.1	22.6	18.1	17.3	17.7	12.6	11.6	12.2	14.6	13.9	14.3
16	23.4	22.5	22.9	18.0	17.2	17.5	11.9	11.0	11.5	15.1	14.4	14.8
17	23.1	21.2	22.2	17.9	17.1	17.5	11.6	10.7	11.1	16.2	15.1	15.7
18	21.2	19.0	20.0	18.2	17.3	17.7	12.0	10.9	11.5	16.5	15.8	16.1
19	19.0	18.1	18.5	18.6	17.8	18.3	11.8	10.8	11.2	16.6	15.9	16.2
20	18.3	17.6	17.9	18.2	17.6	18.0	11.6	10.8	11.3	16.4	15.5	16.1
21	18.2	17.4	17.8	18.5	17.5	18.1	10.8	10.2	10.6	15.5	14.9	15.1
22	18.2	17.3	17.7	18.9	16.8	18.6	10.3	9.8	10.1	15.8	15.0	15.4
23	18.5	17.4	17.8	19.2	18.3	18.9	10.6	10.1	10.4	16.2	15.3	15.7
24	18.2	17.2	17.6	18.3	16.5	17.4	11.2	10.5	10.8	15.9	14.9	15.5
25	17.7	16.7	17.2	16.5	15.5	16.1	11.8	11.1	11.4	15.2	14.4	14.8
26	18.1	16.6	17.1	15.5	14.5	15.0	11.9	11.3	11.6	14.4	13.1	13.9
27	17.9	16.7	17.3	15.1	14.3	14.7	12.9	11.7	12.3	13.4	12.7	13.1
28	18.5	17.2	17.8	15.5	14.4	14.8	12.6	11.9	12.3	12.7	11.5	12.2
29	19.1	18.0	18.5	15.6	14.8	15.2	12.8	11.5	12.2	11.5	10.7	11.3
30	19.3	18.4	18.9	15.7	14.9	15.3	12.8	11.8	12.3	10.7	9.9	10.2
31	18.4	17.7	18.0	---	---	---	13.1	12.0	12.5	10.7	9.9	10.4
MONTH	23.7	16.6	20.4	19.2	14.3	17.1	17.0	9.8	12.9	16.6	9.9	13.5

08180640 MEDINA RIVER AT LA COSTE, TX--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	11.3	10.6	11.0	19.5	18.8	19.3	21.6	21.0	21.3	24.0	22.4	23.1
2	11.1	10.9	11.0	20.3	19.4	19.8	21.1	19.9	20.6	23.0	22.3	22.7
3	12.0	10.9	11.4	20.2	19.3	19.9	20.4	19.4	19.8	23.1	21.6	22.3
4	12.4	11.5	11.9	19.3	18.3	18.9	19.8	18.6	19.2	23.8	22.5	23.1
5	12.3	11.3	11.7	18.6	18.1	18.3	19.6	17.7	18.6	24.2	23.1	23.6
6	11.7	10.9	11.3	19.1	18.2	18.8	20.4	18.3	19.3	24.9	23.4	24.1
7	13.2	11.3	12.3	20.3	19.0	19.7	21.2	19.3	20.2	25.4	24.0	24.6
8	13.7	12.4	13.0	20.3	19.7	20.1	20.7	19.4	20.1	25.8	24.4	25.0
9	14.9	12.9	13.9	20.7	19.5	20.0	19.6	18.1	19.0	25.2	24.6	24.9
10	15.4	14.2	14.8	20.7	20.1	20.5	19.4	18.4	18.9	25.6	24.5	25.0
11	16.4	15.0	15.7	20.2	18.7	19.6	20.1	19.0	19.5	26.2	24.9	25.5
12	16.3	15.7	16.0	18.7	17.4	18.0	20.1	19.5	19.8	26.8	25.4	26.0
13	17.4	16.1	16.8	18.2	17.0	17.6	20.3	19.2	19.6	26.2	25.0	25.6
14	17.6	16.1	16.9	18.2	17.5	17.9	20.5	19.3	19.8	25.0	24.1	24.4
15	18.5	17.0	17.7	18.8	17.3	18.0	20.7	19.6	20.1	24.5	23.5	24.0
16	19.0	18.2	18.7	19.4	17.9	18.5	21.6	20.2	20.9	25.5	23.9	24.6
17	19.6	18.8	19.2	18.3	16.4	17.6	21.9	21.0	21.4	25.7	24.4	25.0
18	20.3	19.2	19.7	17.2	16.0	16.5	22.2	21.2	21.6	25.6	24.6	25.1
19	19.8	18.0	18.8	17.9	16.5	17.2	22.8	21.5	22.2	25.9	24.3	25.2
20	18.1	17.5	17.8	17.8	16.2	17.0	23.3	22.3	22.7	24.6	23.6	23.9
21	18.3	17.4	17.8	19.0	17.0	18.0	22.7	21.3	22.0	24.4	23.5	23.8
22	18.6	18.2	18.4	19.9	18.6	19.3	22.3	20.8	21.6	25.1	23.6	24.3
23	20.0	18.4	18.8	19.9	19.5	19.6	23.3	21.4	22.3	25.9	24.2	25.0
24	19.5	18.8	19.2	20.6	19.4	20.0	23.4	21.8	22.6	26.7	25.0	25.8
25	20.2	19.3	19.8	21.4	20.2	20.7	23.3	21.8	22.6	27.3	25.9	26.5
26	---	---	---	22.1	20.9	21.5	23.5	21.9	22.7	27.0	26.2	26.6
27	---	---	---	22.7	21.4	22.0	23.8	22.2	22.9	27.2	26.2	26.7
28	18.3	17.5	17.8	23.3	21.9	22.5	24.1	22.8	23.4	26.7	25.9	26.3
29	19.0	17.7	18.6	23.9	22.5	23.1	24.3	23.1	23.7	27.0	25.8	26.3
30	---	---	---	23.1	22.0	22.5	24.4	23.4	23.9	27.4	26.0	26.6
31	---	---	---	22.0	21.1	21.6	---	---	---	27.5	26.3	26.8
MONTH	---	---	---	23.9	16.0	19.5	24.4	17.7	21.1	27.5	21.6	24.9

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	27.5	26.3	26.8	28.5	27.2	27.8	27.4	26.5	26.9	28.3	27.0	27.7
2	27.6	26.4	26.9	28.4	27.2	27.7	27.6	26.4	27.0	28.5	27.1	27.8
3	27.4	26.6	26.9	28.3	27.1	27.7	27.9	26.6	27.2	28.6	27.3	28.0
4	27.4	26.4	26.8	28.3	27.1	27.6	28.0	26.8	27.3	28.5	27.1	27.8
5	26.5	26.0	26.3	28.1	26.8	27.4	27.8	26.7	27.2	28.6	27.0	27.8
6	26.5	25.5	26.0	28.2	26.8	27.5	28.1	26.7	27.3	28.5	27.2	27.8
7	26.3	25.2	25.6	28.4	27.0	27.7	28.4	27.0	27.6	27.8	26.5	27.1
8	25.9	24.7	25.3	28.5	27.1	27.8	28.5	27.2	27.7	27.4	26.3	26.9
9	25.9	25.0	25.4	28.4	27.1	27.7	28.3	27.1	27.6	27.2	26.0	26.6
10	25.4	24.9	25.1	28.5	27.1	27.8	28.3	27.2	27.7	27.4	26.2	26.8
11	25.1	24.7	24.9	28.7	27.2	27.9	28.4	26.9	27.6	27.9	26.5	27.2
12	25.2	24.9	25.0	29.0	27.5	28.2	28.4	26.9	27.6	28.2	26.8	27.4
13	25.6	24.9	25.2	29.1	27.6	28.3	28.6	27.1	27.8	27.4	26.5	26.9
14	26.0	25.1	25.5	29.1	27.5	28.3	28.5	27.2	27.9	27.5	26.6	27.0
15	26.2	25.4	25.7	29.0	27.4	28.2	27.9	27.2	27.6	27.2	26.7	26.9
16	26.6	25.5	26.0	29.0	27.5	28.2	28.1	27.0	27.5	26.9	26.0	26.5
17	27.3	25.9	26.5	29.0	27.5	28.2	28.4	27.1	27.6	26.0	24.7	25.4
18	27.0	26.2	26.6	28.9	27.5	28.1	28.3	26.9	27.6	25.0	23.7	24.3
19	26.9	25.9	26.3	28.9	27.5	28.2	28.1	26.7	27.4	24.9	23.4	24.1
20	27.3	26.3	26.7	28.8	27.5	28.1	28.1	26.7	27.4	25.4	23.9	24.6
21	27.7	26.4	26.9	28.7	27.3	28.0	28.2	26.9	27.5	26.0	24.7	25.3
22	27.7	26.5	27.1	28.6	27.2	27.9	27.9	26.8	27.3	26.4	25.2	25.8
23	27.8	26.6	27.2	28.6	27.2	27.9	27.8	26.5	27.2	27.1	25.8	26.4
24	27.7	26.6	27.1	28.5	27.1	27.8	27.9	26.6	27.2	27.2	25.9	26.5
25	28.0	26.6	27.2	28.7	27.4	28.0	28.3	26.7	27.5	25.9	23.8	24.8
26	28.0	26.8	27.4	28.7	27.5	28.0	28.2	26.9	27.6	23.8	22.2	22.9
27	28.3	26.9	27.6	28.8	27.6	28.1	28.2	27.0	27.6	22.4	21.2	21.8
28	28.3	27.0	27.6	28.6	27.4	28.0	28.3	27.1	27.7	22.3	20.8	21.6
29	28.4	27.0	27.6	28.4	27.2	27.8	28.4	27.2	27.8	22.1	20.6	21.3
30	28.3	26.9	27.6	28.3	27.1	27.6	28.4	27.2	27.8	21.9	20.4	21.1
31	---	---	---	27.9	27.0	27.3	28.3	26.9	27.7	---	---	---
MONTH	28.4	24.7	26.4	29.1	26.8	27.9	28.6	26.4	27.5	28.6	20.4	25.7

08180640 MEDINA RIVER AT LA COSTE, TX--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	7.9	7.6	7.7	7.2	6.4	7.0	---	---	---	---	---	---
2	---	---	---	7.3	7.0	7.1	---	---	---	---	---	---
3	---	---	---	7.5	7.2	7.3	---	---	---	---	---	---
4	---	---	---	7.5	7.3	7.4	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	9.4	8.9	9.1
6	---	---	---	---	---	---	---	---	---	9.1	8.8	8.9
7	7.8	7.6	7.6	---	---	---	8.4	7.8	8.3	8.9	8.5	8.8
8	7.7	7.4	7.5	---	---	---	8.3	7.0	7.7	8.7	8.5	8.6
9	7.5	7.3	7.4	---	---	---	7.6	7.1	7.4	8.6	8.4	8.5
10	7.5	7.3	7.4	---	---	---	7.4	7.2	7.3	8.7	8.1	8.6
11	7.6	7.4	7.5	---	---	---	7.4	7.1	7.3	9.0	8.4	8.8
12	7.6	7.3	7.4	---	---	---	7.4	6.8	7.2	9.1	8.4	8.8
13	7.5	7.2	7.3	---	---	---	9.3	7.1	8.6	9.2	8.5	9.0
14	7.4	6.8	7.2	---	---	---	9.6	9.3	9.4	9.7	9.1	9.5
15	7.1	6.9	7.0	---	---	---	9.7	8.8	9.4	9.9	9.4	9.7
16	7.0	6.5	6.9	---	---	---	9.0	7.1	7.8	10.1	9.1	9.7
17	6.8	6.5	6.7	---	---	---	7.3	7.1	7.2	11.2	9.5	10.4
18	6.8	6.3	6.6	---	---	---	7.1	6.7	7.0	13.6	11.2	12.8
19	7.4	6.6	7.1	---	---	---	6.8	6.6	6.8	13.3	12.8	13.1
20	7.5	7.4	7.5	---	---	---	6.7	6.3	6.5	13.1	12.5	12.9
21	7.7	7.4	7.6	---	---	---	6.6	6.1	6.4	13.0	11.6	12.8
22	7.8	7.6	7.7	---	---	---	6.6	6.2	6.4	12.7	11.1	12.2
23	7.8	7.6	7.7	---	---	---	6.7	6.2	6.4	11.5	7.6	9.2
24	7.9	7.5	7.7	---	---	---	7.3	6.2	6.7	8.1	7.6	7.9
25	8.0	7.3	7.7	---	---	---	7.4	6.7	6.9	8.1	7.5	7.8
26	8.0	6.5	7.7	---	---	---	8.7	6.8	7.7	7.6	6.9	7.4
27	7.9	7.6	7.7	---	---	---	10.3	8.7	9.9	7.7	7.4	7.6
28	7.7	7.2	7.5	---	---	---	10.1	9.8	9.9	7.6	7.0	7.5
29	7.5	6.8	7.3	---	---	---	---	---	---	7.5	7.0	7.3
30	7.2	6.7	6.9	---	---	---	---	---	---	7.5	7.0	7.4
31	7.1	6.7	6.9	---	---	---	---	---	---	7.5	7.0	7.4
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	8.4	7.2	7.6	---	---	---	---	---	---	---	---	---
2	8.2	7.2	8.0	---	---	---	---	---	---	---	---	---
3	8.6	7.7	8.3	---	---	---	---	---	---	---	---	---
4	8.9	8.1	8.7	---	---	---	---	---	---	---	---	---
5	8.9	8.3	8.7	---	---	---	---	---	---	---	---	---
6	9.0	8.7	8.9	---	---	---	---	---	---	---	---	---
7	9.9	8.8	9.4	---	---	---	---	---	---	---	---	---
8	11.2	9.5	10.1	6.7	5.3	6.3	---	---	---	---	---	---
9	11.2	10.3	10.9	6.5	5.0	6.0	---	---	---	---	---	---
10	10.7	9.6	10.4	6.2	4.8	5.8	---	---	---	---	---	---
11	---	---	---	6.1	4.9	5.7	---	---	---	---	---	---
12	---	---	---	6.5	4.9	6.0	---	---	---	---	---	---
13	---	---	---	6.7	5.3	6.1	---	---	---	---	---	---
14	---	---	---	6.6	5.1	6.1	---	---	---	---	---	---
15	---	---	---	7.5	5.4	6.7	---	---	---	---	---	---
16	---	---	---	7.8	4.9	7.2	---	---	---	---	---	---
17	---	---	---	7.7	6.8	7.3	---	---	---	---	---	---
18	---	---	---	7.5	6.9	7.2	---	---	---	10.8	7.8	9.4
19	---	---	---	7.5	6.5	7.1	---	---	---	10.0	7.7	8.7
20	---	---	---	7.3	5.0	6.7	---	---	---	9.8	7.7	8.6
21	---	---	---	---	---	---	---	---	---	8.7	7.1	7.9
22	---	---	---	---	---	---	---	---	---	8.4	6.7	7.4
23	---	---	---	---	---	---	---	---	---	7.5	6.2	6.8
24	---	---	---	---	---	---	---	---	---	6.9	5.4	6.2
25	---	---	---	---	---	---	---	---	---	6.7	5.1	5.8
26	---	---	---	---	---	---	---	---	---	6.3	5.1	5.7
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

08180640 MEDINA RIVER AT LA COSTE, TX--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	---	---	---	---	---	---	6.9	6.2	6.4	---	---	---
2	---	---	---	---	---	---	6.8	6.2	6.4	6.6	5.3	6.0
3	---	---	---	---	---	---	6.8	6.2	6.4	6.6	5.3	5.9
4	---	---	---	---	---	---	6.8	6.1	6.4	6.5	5.8	6.0
5	---	---	---	---	---	---	6.7	5.9	6.2	6.4	5.8	6.0
6	---	---	---	---	---	---	6.7	5.9	6.2	6.5	5.7	6.0
7	---	---	---	---	---	---	6.6	5.9	6.1	6.4	5.8	6.0
8	---	---	---	---	---	---	6.4	5.7	6.0	6.4	5.7	6.0
9	---	---	---	---	---	---	6.4	5.7	5.9	6.4	5.7	6.0
10	---	---	---	---	---	---	6.2	5.6	5.8	6.3	5.7	5.9
11	---	---	---	---	---	---	6.3	5.6	5.8	6.2	5.6	5.8
12	---	---	---	7.1	6.3	6.6	6.4	5.5	5.9	6.1	5.5	5.8
13	---	---	---	7.2	6.2	6.6	6.2	5.4	5.7	5.8	5.0	5.4
14	---	---	---	7.1	6.1	6.6	6.0	5.2	5.5	5.6	4.9	5.2
15	---	---	---	7.1	5.8	6.4	6.1	5.0	5.4	5.4	5.0	5.1
16	---	---	---	6.9	6.0	6.4	6.2	5.1	5.6	5.4	4.7	5.0
17	---	---	---	6.9	6.0	6.3	6.2	5.3	5.7	5.8	5.3	5.5
18	---	---	---	7.0	6.1	6.4	6.2	5.3	5.7	6.0	5.5	5.7
19	---	---	---	6.9	6.1	6.4	6.1	5.3	5.6	6.1	5.6	5.8
20	---	---	---	6.8	6.0	6.3	5.9	5.1	5.4	6.0	5.4	5.7
21	---	---	---	6.6	5.9	6.2	5.9	5.0	5.3	5.8	5.3	5.6
22	---	---	---	---	---	---	5.8	4.9	5.3	5.7	4.5	5.1
23	---	---	---	---	---	---	5.9	5.1	5.4	5.7	4.4	5.2
24	---	---	---	---	---	---	5.7	5.0	5.3	5.5	4.3	5.0
25	---	---	---	---	---	---	5.9	5.2	5.4	5.6	5.2	5.4
26	---	---	---	---	---	---	5.8	5.1	5.4	5.7	4.9	5.4
27	---	---	---	---	---	---	5.8	5.2	5.4	5.8	4.9	5.4
28	---	---	---	---	---	---	---	---	---	5.8	5.0	5.3
29	---	---	---	7.1	6.3	6.6	---	---	---	6.0	5.3	5.7
30	---	---	---	7.1	6.3	6.6	---	---	---	6.1	5.7	5.8
31	---	---	---	7.0	6.4	6.5	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

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08180700 MEDINA RIVER NEAR MACDONA, TX

LOCATION.--Lat 29°20′05", long 98°41′22", Bexar County, Hydrologic Unit 12100302, at downstream side of Loop 1604 bridge, 0.1 mi downstream from Polecat Creek, 0.7 mi north of Macdona, 2.2 mi downstream from Potranca Creek, and 21.2 mi upstream from mouth.

DRAINAGE AREA.--885 mi^2, of which 634 mi^2 is above dam forming Medina Lake.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Jan 1981 to Sep 1995, May 1997 to current year.

GAGE.--Water-stage recorder. Datum of gage is 589.86 ft above sea level. Satellite telemeter at station.

REMARKS.--Records fair. Since installation of gage in water year 1981, at least 10% of contributing drainage area has been regulated by Medina Lake (station 08179500, conservation pool storage 254,843 acre-ft) and by Medina Diversion Lake. A large part of the streamflow is lost into the Edwards and associated limestones where the Balcones Fault crosses the basin between the upstream end of Medina Lake and about 5 mi downstream from Medina Dam, or 0.9 mi downstream from the diversion dam. There are several small diversions below Medina Diversion Dam. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water-quality data.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	52	43	55	48	55	54	38	51	45	45	41	33
2	53	42	55	49	74	54	67	57	44	44	41	32
3	53	41	56	49	65	53	137	46	44	44	41	32
4	52	44	55	48	56	52	62	42	44	44	44	32
5	51	48	53	47	53	52	50	41	45	44	42	32
6	51	51	53	50	53	51	49	41	46	44	41	30
7	51	52	54	57	52	51	48	40	45	44	40	32
8	51	52	54	61	51	50	46	40	43	45	40	32
9	51	53	54	55	50	48	45	39	53	44	41	34
10	52	53	53	61	50	49	46	40	101	43	40	35
11	51	54	53	67	50	46	47	39	e202	42	39	35
12	51	54	53	69	51	44	59	39	e110	41	37	39
13	52	53	53	74	74	44	57	43	80	40	36	62
14	52	52	52	72	80	47	50	41	65	40	34	72
15	52	51	53	63	80	47	48	39	60	39	35	92
16	53	49	54	58	80	45	47	40	57	39	35	60
17	82	49	55	57	81	48	46	40	54	38	36	53
18	59	50	55	56	81	46	46	40	53	38	35	49
19	53	51	54	56	66	42	46	42	54	38	34	45
20	50	52	53	55	59	41	45	247	51	38	33	43
21	48	53	53	55	56	41	43	99	49	38	34	42
22	47	53	52	55	55	41	42	58	47	38	35	42
23	46	53	51	55	58	41	41	49	46	38	33	41
24	44	52	50	54	63	42	39	47	47	39	35	40
25	43	53	49	53	63	41	38	46	47	40	35	53
26	42	54	48	53	59	40	37	45	46	41	34	43
27	42	54	48	55	54	40	37	45	46	40	34	40
28	42	55	48	56	53	39	37	51	46	40	34	39
29	42	55	48	55	53	39	37	49	46	40	34	38
30	44	55	48	54	---	38	36	47	46	40	33	38
31	44	---	49	53	---	37	---	46	---	41	33	---
TOTAL	1556	1531	1621	1750	1775	1403	1466	1629	1762	1269	1139	1290
MEAN	50.2	51.0	52.3	56.5	61.2	45.3	48.9	52.5	58.7	40.9	36.7	43.0
MAX	82	55	56	74	81	54	137	247	202	45	44	92
MIN	42	41	48	47	50	37	36	39	43	38	33	30
AC-FT	3090	3040	3220	3470	3520	2780	2910	3230	3490	2520	2260	2560

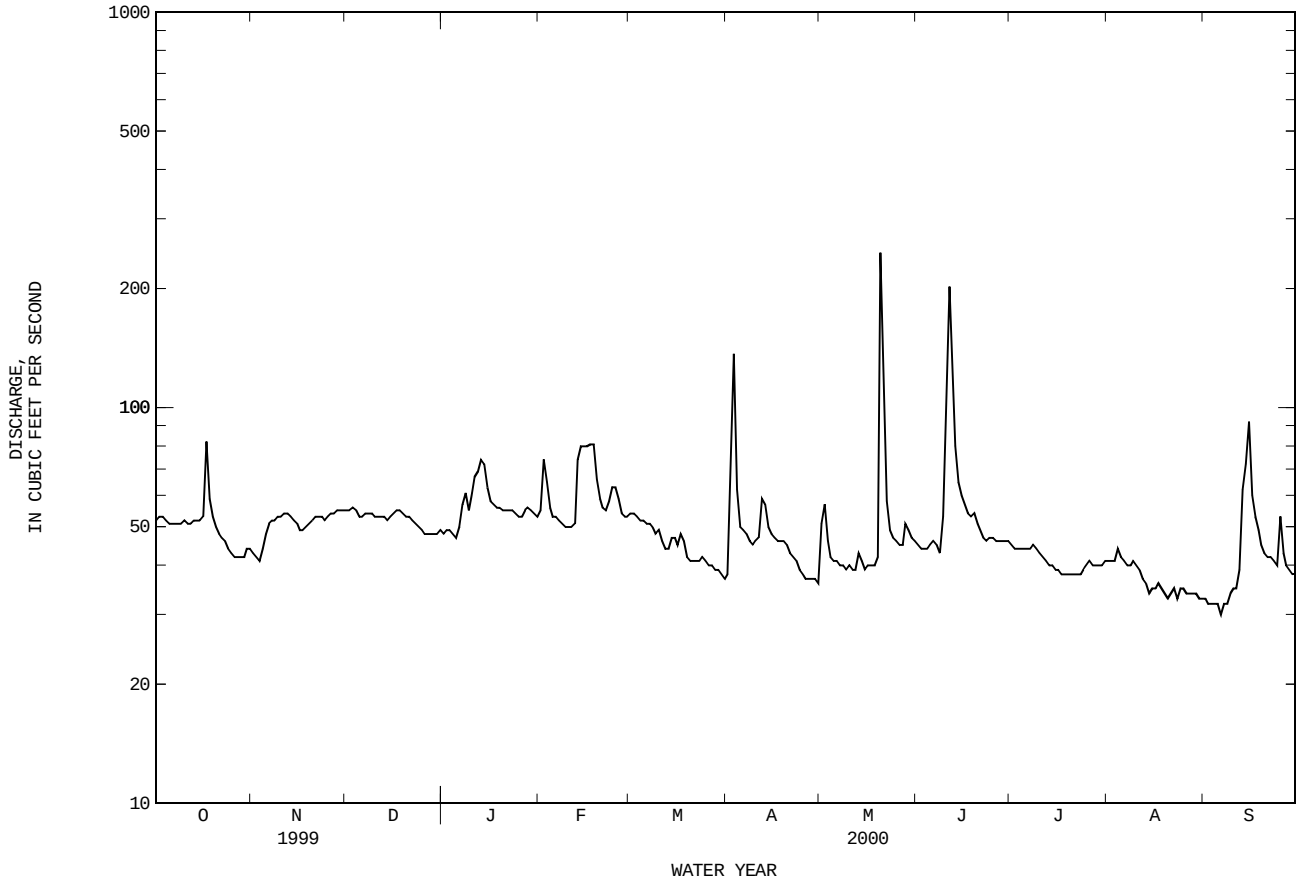
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1981 - 2000h, BY WATER YEAR (WY)

MEAN	128	96.2	116	137	211	213	146	241	665	176	73.1	59.3
MAX	575	511	432	698	2333	2097	1302	1636	5726	765	280	165
(WY)	1999	1999	1992	1992	1992	1992	1992	1992	1987	1987	1992	1992
MIN	32.3	25.7	18.0	22.1	34.2	39.0	34.1	29.6	25.1	27.4	25.1	27.8
(WY)	1992	1985	1985	1985	1985	1990	1986	1989	1990	1989	1989	1989

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1981 - 2000h	
ANNUAL TOTAL	29827		18191			
ANNUAL MEAN	81.7		49.7		175	
HIGHEST ANNUAL MEAN					954	1992
LOWEST ANNUAL MEAN					38.1	1989
HIGHEST DAILY MEAN	214	Jan 1	247	May 20	22300	Jun 5 1987
LOWEST DAILY MEAN	41	Nov 3	30	Sep 6	14	Jan 11 1985
ANNUAL SEVEN-DAY MINIMUM	43	Oct 28	32	Sep 2	16	Jan 7 1985
INSTANTANEOUS PEAK FLOW			435	May 20	c36800	May 30 1987
INSTANTANEOUS PEAK STAGE			5.61	May 20	20.58	May 30 1987
ANNUAL RUNOFF (AC-FT)	59160		36080		126800	
10 PERCENT EXCEEDS	129		59		279	
50 PERCENT EXCEEDS	74		48		53	
90 PERCENT EXCEEDS	51		37		33	

e Estimated
h See PERIOD OF RECORD paragraph.
c From rating curve extended above measurment of 24,400 ft^3/s.

08180700 MEDINA RIVER NEAR MACDONA, TX--Continued



08180700 MEDINA RIVER NEAR MACDONA, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--
CHEMICAL DATA: Jul 1998 to Sep 2000 (discontinued).
BIOCHEMICAL DATA: Jul 1998 to Sep 2000 (discontinued).
PESTICIDE DATA: Jul 1998 to Sep 2000 (discontinued).
SEDIMENT DATA: Jul 1998 to Sep 2000 (discontinued).

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

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	TUR-BID-ITY (NTU) (00076)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	E. COLI WATER WHOLE TOTAL UREASE (COL / 100 ML) (31633)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)
DEC												
14...	1100	52	645	7.9	13.0	2.4	9.0	87	120	49	88	<1.0
MAR												
23...	0930	41	633	7.6	19.5	1.5	7.5	83	K120	260	K20	<1.0
AUG												
24...	0900	35	580	7.8	27.5	32	5.7	71	210	250	50	<1.0
SEP												
13...	1030	72	561	8.0	27.0	.70	7.0	90	970	520	--	<1.0

DATE	URANIUM NATURAL DIS-SOLVED (UG/L AS U) (22703)	ANTI-MONY, DIS-SOLVED (UG/L AS SB) (01095)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)	NICKEL, DIS-SOLVED (UG/L AS NI) (01065)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)	COBALT, DIS-SOLVED (UG/L AS CO) (01035)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030)	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)
DEC												
14...	1.1	<1.0	8.8	<1.0	<1.0	1.2	<1.0	3.4	<1.0	<1.0	<.80	<1.0
MAR												
23...	1.1	<1.0	2.1	<1.0	2.7	1.4	<1.0	4.1	<1.0	<1.0	<1.0	<1.0
AUG												
24...	<1.0	<1.0	1.4	<1.0	1.3	1.6	<1.0	1.4	<1.0	<1.0	<.80	<1.0
SEP												
13...	<1.0	<1.0	2.2	<1.0	<1.0	1.6	<1.0	1.0	1.1	<1.0	<.80	<1.0

DATE	BERYL-LIUM, DIS-SOLVED (UG/L AS BE) (01010)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	BORON, DIS-SOLVED (UG/L AS B) (01020)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	CAR-BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)
DEC												
14...	<1.0	53	E1	18	<2	2.0	<10	156	.20	13	0	276
MAR												
23...	<1.0	52	<2	17	<2	2.3	<10	156	.23	11	0	249
AUG												
24...	<1.0	48	<2	17	<2	2.6	<10	130	.22	13	0	236
SEP												
13...	<1.0	47	2	17	<2	3.4	<10	124	.23	13	0	206

DATE	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	LITHIUM DIS-SOLVED (UG/L AS LI) (01130)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	STRON-TIUM, DIS-SOLVED (UG/L AS SR) (01080)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	VANA-DIUM, DIS-SOLVED (UG/L AS V) (01085)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)
DEC												
14...	226	51	10	382	26	25	626	81	<10	.014	<.020	5.31
MAR												
23...	204	55	9	373	27	27	620	76	<10	.010	.034	5.05
AUG												
24...	193	54	9	354	23	23	604	69	E5	.044	<.020	4.62
SEP												
13...	169	58	7	338	20	21	613	70	<10	.072	<.020	6.65

08180700 MEDINA RIVER NEAR MACDONA, TX--Continued

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

DATE	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	2,6-DI-ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	ACETO-CHLOR, WATER FLTRD REC (UG/L) (49260)	ALA-CHLOR, WATER, DISS, REC, (UG/L) (46342)	ATRA-ZINE, WATER, DISS, REC (UG/L) (39632)	METHYL AZIN-PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)	BEN-FLUR-ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)	BUTYL-ATE, WATER, DISS, REC (UG/L) (04028)
DEC												
14...	<.010	.12	.15	.010	.011	<.0030	<.0020	<.005	.014	<.0010	<.0020	<.0020
MAR												
23...	.092	.21	.24	.030	<.010	<.0030	<.0020	<.002	.013	<.0010	<.0020	<.0020
AUG												
24...	.010	.34	.19	.014	.061	<.0030	<.0020	<.002	.013	<.0010	<.0020	<.0020
SEP												
13...	.012	.58	.36	.025	.331	<.0030	<.0020	<.002	.008	<.0010	<.0020	<.0020

DATE	CAR-BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBO-FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	CHLOR-PYRIFOS DIS-SOLVED (UG/L) (38933)	CYANA-ZINE, WATER, DISS, REC (UG/L) (04041)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	DEETHYL ATRA-ZINE, WATER, DISS, REC (UG/L) (04040)	DI-AZINON, DIS-SOLVED (UG/L) (39572)	DI-ELDRIN DIS-SOLVED (UG/L) (39381)	DISUL-FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	ETHAL-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)	ETHO-PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)
DEC												
14...	<.0030	<.0030	<.0040	<.0040	<.0020	E.0656	<.002	<.001	<.0170	<.0020	<.0040	<.0030
MAR												
23...	<.0030	<.0030	<.0040	<.0040	<.0020	E.0617	.007	<.001	<.0170	<.0020	<.0040	<.0030
AUG												
24...	<.0030	<.0030	<.0040	<.0040	<.0020	E.0586	.008	<.001	<.0170	<.0020	<.0040	<.0030
SEP												
13...	<.0030	<.0030	<.0040	<.0040	<.0020	E.0441	.020	<.001	<.0170	<.0020	<.0040	<.0030

DATE	FONOFOS WATER DISS REC (UG/L) (04095)	LINDANE DIS-SOLVED (UG/L) (39341)	LIN-URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA-THION, DIS-SOLVED (UG/L) (39532)	METO-LACHLOR WATER DISSOLV (UG/L) (39415)	METRI-BUZIN SENCOR WATER DISSOLV (UG/L) (82630)	MOL-INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPROP-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	PARA-THION, DIS-SOLVED (UG/L) (39542)	METHYL PARA-THION WAT FLT 0.7 U GF, REC (UG/L) (82667)	PEB-ULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	PENDI-METH-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)
DEC												
14...	<.0030	<.004	<.0020	<.005	<.002	<.004	<.0040	<.0030	<.004	<.0060	<.0040	<.0040
MAR												
23...	<.0030	<.004	<.0020	<.005	.008	<.004	<.0100	<.0030	<.004	<.0060	<.0040	<.0040
AUG												
24...	<.0030	<.004	<.0020	.007	.082	<.004	<.0040	<.0030	<.004	<.0060	<.0040	<.0040
SEP												
13...	<.0030	<.004	<.0020	.014	.191	<.004	<.0040	<.0030	<.004	<.0060	<.0040	<.0040

DATE	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PRO-METON, WATER, DISS, REC (UG/L) (04037)	PROP-CHLOR, WATER, DISS, REC (UG/L) (04024)	PRO-PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	PRO-PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	PRON-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	SI-MAZINE, WATER, DISS, REC (UG/L) (04035)	TEBU-THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER-BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TER-BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	THIO-BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL-LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)
DEC												
14...	<.0020	E.0038	<.0070	<.0040	<.0130	<.0030	<.0050	<.0100	<.0070	<.0130	<.0020	<.0010
MAR												
23...	<.0020	<.0180	<.0070	<.0040	<.0130	<.0030	<.0050	<.0100	<.0070	<.0130	<.0020	<.0010
AUG												
24...	<.0020	<.0180	<.0070	<.0040	<.0130	<.0030	<.0050	<.0100	<.0070	<.0130	<.0020	<.0010
SEP												
13...	<.0020	<.0180	<.0070	<.0040	<.0130	<.0030	<.0050	<.0100	<.0070	<.0130	<.0020	<.0010

DATE	TRI-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)	ALPHA BHC DIS-SOLVED (UG/L) (34253)	HCH ALPHA D6 SRG WAT FLT 0.7 U GF, REC PERCENT (91065)	P,P' DDE DISSOLV (UG/L) (34653)	PER-METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	DIAZ-INON D10 SRG WAT FLT 0.7 U GF, REC PERCENT (91063)	2,4,5-T DIS-SOLVED (UG/L) (39742)	2,4-D, DIS-SOLVED (UG/L) (39732)	2,4-DB WATER, FLTRD, GF 0.7U REC (UG/L) (38746)	SILVEX, DIS-SOLVED (UG/L) (39762)	3HYDRXY CARBO-FURAN WAT,FLT GF 0.7U REC (UG/L) (49308)	DNOC WAT,FLT GF 0.7U REC (UG/L) (49299)
DEC												
14...	<.0020	<.0020	104	<.0060	<.0050	112	<.0400	<.110	<.100	<.0600	<.110	<.420
MAR												
23...	<.0020	<.0020	76.3	<.0060	<.0050	95.3	<.0400	<.150	<.100	<.0600	<.110	<.420
AUG												
24...	<.0020	<.0020	111	<.0060	<.0050	119	<.0400	<.110	<.100	<.0600	<.110	<.420
SEP												
13...	<.0020	<.0020	128	<.0060	<.0050	133	<.0400	<.110	<.100	<.0600	<.110	<.420

08180700 MEDINA RIVER NEAR MACDONA, TX--Continued

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

DATE	ACIFL-UORFEN WATER, FLTRD, GF 0.7U REC (UG/L) (49315)	ALDI-CARB, WATER, FLTRD, GF 0.7U REC (UG/L) (49312)	ALDI-CARB SULFONE WAT,FLT GF 0.7U REC (UG/L) (49313)	ALDICA-RB SUL-FOXIDE, WAT,FLT GF 0.7U REC (UG/L) (49314)	BDMC, SURROG, WATER, UNFLTRD REC PERCENT (99835)	BENTA-ZON, WATER, FLTRD, GF 0.7U REC (UG/L) (38711)	BRO-MACIL, WATER, DISS, REC (UG/L) (04029)	BRO-MOXYNIL WATER, FLTRD, GF 0.7U REC (UG/L) (49311)	CAR-BARYL, WATER, FLTRD, GF 0.7U REC (UG/L) (49310)	CARBO-FURAN, WATER, FLTRD, GF 0.7U REC (UG/L) (49309)	CHLORO-THALO-NIL, WAT,FLT GF 0.7U REC (UG/L) (49306)	CLOPYR-ALID, WATER, FLTRD, GF 0.7U REC (UG/L) (49305)
DEC												
14...	<.0900	<4.99	<.100	<.0210	78.8	<.0350	<.0600	<.0400	<.0700	<.290	<.480	<.230
MAR												
23...	<.0900	<.330	<.100	<.0210	75.7	<.0350	<.0600	<.0400	<.0700	<.290	<.480	<.230
AUG												
24...	<.0900	<.690	<.100	<.0210	74.4	<.0350	<.110	<.0400	<.0700	<.290	<.480	<.230
SEP												
13...	<.0900	<.500	<.100	<.0210	82.9	<.0350	<.460	<.0400	<.0700	<.290	<.480	<.230

DATE	DACTHAL MONO-ACID, WAT,FLT GF 0.7U REC (UG/L) (49304)	DICAMBA WATER, FLTRD, GF 0.7U REC (UG/L) (38442)	DICHLO-BENIL, WATER, FLTRD, GF 0.7U REC (UG/L) (49303)	DICHLOR PROP, WATER, FLTRD, GF 0.7U REC (UG/L) (49302)	DINOSEB WATER, FLTRD, GF 0.7U REC (UG/L) (49301)	DIURON, WATER, FLTRD, GF 0.7U REC (UG/L) (49300)	FEN-URON, WATER, FLTRD, GF 0.7U REC (UG/L) (49297)	FLUO-METURON WATER, FLTRD, GF 0.7U REC (UG/L) (38811)	LINURON WATER, FLTRD, GF 0.7U REC (UG/L) (38478)	MCPA, WATER, FLTRD, GF 0.7U REC (UG/L) (38482)	MCPB, WATER, FLTRD, GF 0.7U REC (UG/L) (38487)	METHIO-CARB, WATER, FLTRD, GF 0.7U REC (UG/L) (38501)
DEC												
14...	<.0390	<.0430	<.0700	<.0320	<.0600	.150	<.0700	<.0600	<.0900	<.170	<.130	<.0260
MAR												
23...	<.0390	<.0430	<.0700	<.0320	<.0600	.146	<.330	<.0600	<.0900	<.170	<.130	<.0260
AUG												
24...	<.0390	<.0430	<.0700	<.0320	<.0600	1.15	<.0700	<.0600	<.0900	<.170	<.130	<.0260
SEP												
13...	<.0390	<.0430	<.0700	<.120	<.0600	2.97	<.0700	<.0600	<.0900	<.170	<.130	<.0260

DATE	METH-OMYL, WATER, FLTRD, GF 0.7U REC (UG/L) (49296)	NEB-URON, WATER, FLTRD, GF 0.7U REC (UG/L) (49294)	NORFLUR AZON, WATER, FLTRD, GF 0.7U REC (UG/L) (49293)	ORY-ZALIN, WATER, FLTRD, GF 0.7U REC (UG/L) (49292)	OXAMYL, WATER, FLTRD, GF 0.7U REC (UG/L) (38866)	PIC-LORAM, WATER, FLTRD, GF 0.7U REC (UG/L) (49291)	PRO-PHAM, WATER, FLTRD, GF 0.7U REC (UG/L) (49236)	PRO-POXUR, WATER, FLTRD, GF 0.7U REC (UG/L) (38538)	TRI-CLOPYR, WATER, FLTRD, GF 0.7U REC (UG/L) (49235)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155)	SEDI-MENT, SUS-PENDED (MG/L) (80154)
DEC											
14...	<.0170	<.0700	<.0420	<.310	<.0180	<.0500	<.0350	<.0800	<.250	--	--
MAR											
23...	<.0170	<.0700	<.0420	<.310	<.0180	<.0500	<.0350	<.0800	<.250	--	--
AUG											
24...	<.0170	<.0700	<.0420	<.310	<.0180	<.0500	<.0350	<.0800	<.250	3.4	36
SEP											
13...	<.110	<.0700	<.0420	<.340	<.0180	<.0500	<.0350	<.0800	<.250	6.0	31

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08180800 MEDINA RIVER NEAR SOMERSET, TX

LOCATION.--Lat 29°15′43", long 98°34′52", Bexar County, Hydrologic Unit 12100302, on left bank at downstream side of downstream bridge on State Highway 16, 2.0 mi upstream from Elm Creek, 5.0 mi downstream from Medio Creek, 5.2 mi northeast of Somerset, and 14.0 mi upstream from mouth.

DRAINAGE AREA.--967 mi^2, of which 634 mi^2 is above dam forming Medina Lake.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Oct 1970 to Sep 1995, Sep 1997 to current year.

GAGE.--Water-stage recorder. Datum of gage is 493.56 ft above sea level. Prior to Jun 16, 1993, at site 300 ft upstream at same datum. Satellite telemeter at station.

REMARKS.--Records fair. Since installation of gage in water year 1971, at least 10% of contributing drainage area has been regulated by Medina Lake (station 08179500, conservation pool storage 254,843 acre-ft) and by Medina Diversion Lake. A large part of the streamflow is lost into the Edwards and associated limestones where the Balcones Fault crosses the basin between the upstream end of Medina Lake and about 5 mi downstream from Medina Dam,or 0.9 mi downstream from the diversion dam. There are several small diversions below Medina Diversion Dam. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water-quality data.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	44	53	61	54	60	66	51	60	51	47	41	28
2	46	52	58	56	88	66	96	75	49	46	43	27
3	48	51	57	54	93	64	136	71	48	46	43	28
4	e48	51	58	61	75	64	111	59	49	45	43	30
5	e48	54	61	71	67	64	73	54	52	45	42	30
6	e47	55	60	61	65	65	64	51	53	45	41	29
7	47	55	64	63	63	66	59	49	51	43	41	27
8	47	56	63	76	58	62	57	47	50	43	39	27
9	47	57	62	73	61	64	55	47	57	43	39	28
10	47	58	61	69	64	65	54	48	126	42	39	30
11	47	58	61	72	63	60	56	47	325	43	36	30
12	46	58	60	75	62	59	62	45	153	43	34	31
13	47	58	62	77	67	58	69	51	116	42	34	50
14	47	60	61	79	85	62	64	50	91	42	33	60
15	47	62	59	77	84	62	60	47	74	42	36	49
16	48	60	60	69	86	58	60	46	70	41	37	58
17	66	59	63	68	86	57	57	46	65	40	38	44
18	86	59	64	68	88	62	53	44	63	38	37	40
19	68	61	62	66	82	59	53	43	63	40	34	38
20	63	60	61	63	74	57	53	142	62	40	34	35
21	60	60	61	63	70	57	49	151	59	40	34	32
22	57	60	60	63	67	58	48	84	57	39	35	34
23	56	61	58	64	68	56	46	63	54	39	37	34
24	54	61	60	64	69	57	44	55	53	39	36	36
25	53	61	59	63	74	56	46	53	52	39	36	48
26	52	61	58	58	73	56	50	52	52	40	35	52
27	52	59	57	59	68	55	46	52	52	39	33	41
28	52	61	50	55	65	53	41	55	52	39	32	37
29	52	63	49	54	66	51	43	57	50	38	32	37
30	53	61	51	58	---	50	46	55	48	40	32	37
31	53	---	51	56	---	50	---	51	---	40	30	---
TOTAL	1628	1745	1832	2009	2091	1839	1802	1850	2197	1288	1136	1107
MEAN	52.5	58.2	59.1	64.8	72.1	59.3	60.1	59.7	73.2	41.5	36.6	36.9
MAX	86	63	64	79	93	66	136	151	325	47	43	60
MIN	44	51	49	54	58	50	41	43	48	38	30	27
AC-FT	3230	3460	3630	3980	4150	3650	3570	3670	4360	2550	2250	2200

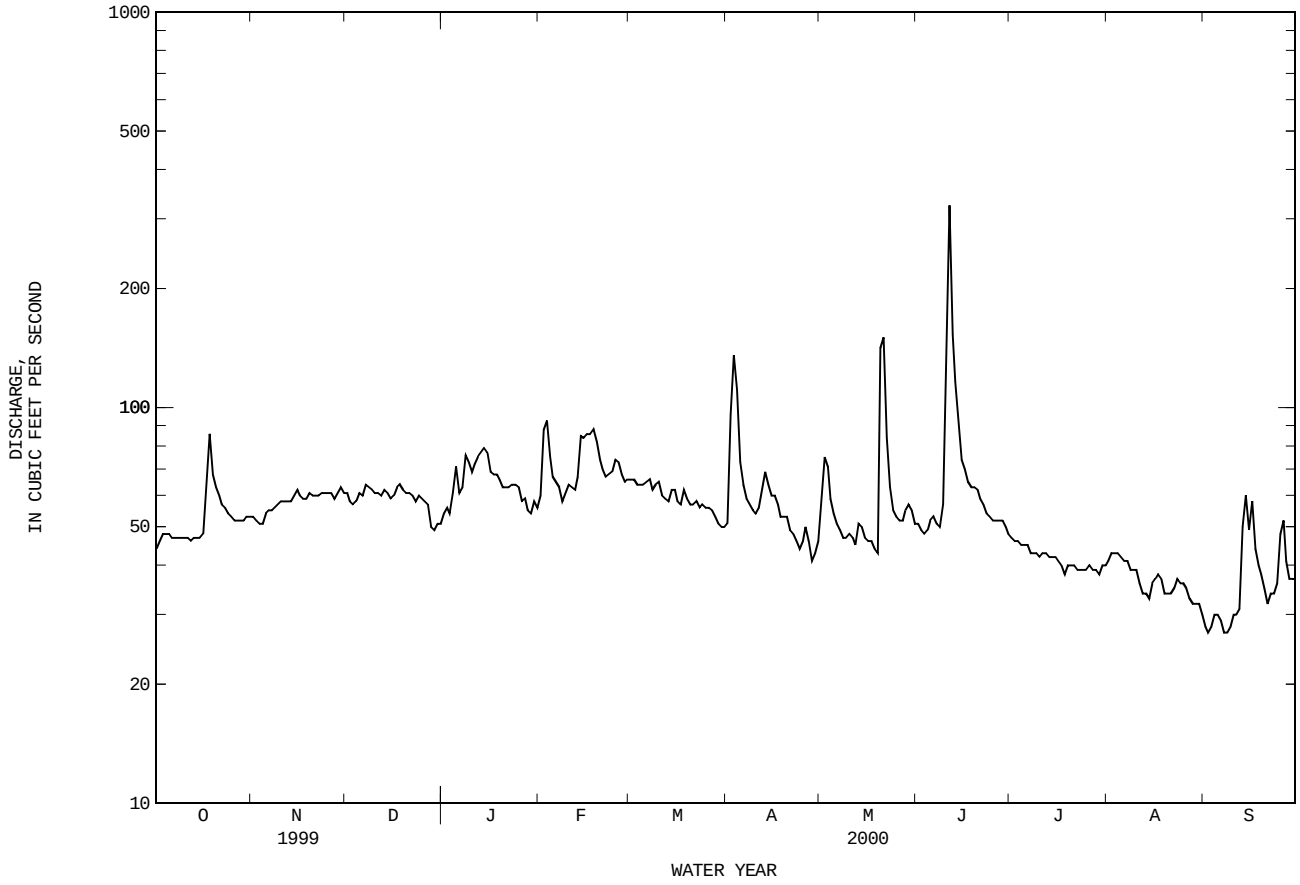
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1971 - 2000h, BY WATER YEAR (WY)

MEAN	211	166	151	166	251	227	201	279	597	272	162	130
MAX	1284	648	549	751	2449	2326	1480	1663	6432	2875	1222	868
(WY)	1974	1977	1977	1992	1992	1992	1992	1992	1987	1973	1978	1973
MIN	41.2	40.2	33.5	37.2	33.4	34.4	35.6	31.1	27.4	22.3	24.5	22.7
(WY)	1989	1985	1985	1985	1971	1971	1971	1971	1990	1984	1984	1984

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1971 - 2000h	
ANNUAL TOTAL	34058		20524			
ANNUAL MEAN	93.3		56.1		231	
HIGHEST ANNUAL MEAN					1033	1992
LOWEST ANNUAL MEAN					40.0	1984
HIGHEST DAILY MEAN	234	Jun 22	325	Jun 11	24800	Jul 17 1973
LOWEST DAILY MEAN	44	Sep 30	27	Sep 2	16	Sep 19 1984
ANNUAL SEVEN-DAY MINIMUM	46	Sep 27	28	Sep 2	19	Sep 17 1984
INSTANTANEOUS PEAK FLOW			453	Jun 11	c30500	Jul 17 1973
INSTANTANEOUS PEAK STAGE			7.84	Jun 11	29.39	Jul 17 1973
ANNUAL RUNOFF (AC-FT)	67550		40710		167300	
10 PERCENT EXCEEDS	155		70		468	
50 PERCENT EXCEEDS	81		55		76	
90 PERCENT EXCEEDS	52		37		41	

e Estimated
h See PERIOD OF RECORD paragraph.
c From rating curve extended above current meter measurement of 30,100 ft^3/s.

08180800 MEDINA RIVER NEAR SOMERSET, TX--Continued



08180800 MEDINA RIVER NEAR SOMERSET, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--
CHEMICAL DATA: Jul 1998 to Aug 2000 (discontinued).
BIOCHEMICAL DATA: Jul 1998 Aug 2000 (discontinued).
PESTICIDE DATA: Jul 1998 to Aug 2000 (discontinued).
SEDIMENT DATA: Jul 1998 to Aug 2000 (discontinued).

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

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	TUR-BID-ITY (NTU) (00076)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	E. COLI WATER WHOLE TOTAL UREASE (COL / 100 ML) (31633)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)
DEC												
15...	0920	62	781	8.0	12.0	3.5	9.2	85	150	110	110	<1.0
MAR												
22...	1115	57	751	7.7	20.5	26	8.0	90	120	600	K15	<1.0
AUG												
24...	1300	36	743	8.0	27.0	27	7.5	93	210	230	21	<1.0

DATE	URANIUM NATURAL DIS-SOLVED (UG/L AS U) (22703)	ANTI-MONY, DIS-SOLVED (UG/L AS SB) (01095)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)	NICKEL, DIS-SOLVED (UG/L AS NI) (01065)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)	COBALT, DIS-SOLVED (UG/L AS CO) (01035)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030)	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)
DEC												
15...	1.3	<1.0	2.3	<1.0	1.3	2.2	<1.0	2.5	<1.0	<1.0	<.80	<1.0
MAR												
22...	1.2	<1.0	3.1	<1.0	4.0	2.0	<1.0	3.1	<1.0	<1.0	<1.0	<1.0
AUG												
24...	1.1	<1.0	1.4	<1.0	1.8	2.9	<1.0	1.9	1.1	<1.0	E.62	<1.0

DATE	BERYL-LIUM, DIS-SOLVED (UG/L AS BE) (01010)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	BORON, DIS-SOLVED (UG/L AS B) (01020)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	CAR-BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)
DEC												
15...	<1.0	58	<2	21	<2	3.1	<10	227	.23	13	0	295
MAR												
22...	<1.0	56	<2	20	<2	3.3	<10	212	.29	12	0	275
AUG												
24...	<1.0	56	<2	20	E1	3.8	<10	233	.35	13	0	262

DATE	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	LITHIUM DIS-SOLVED (UG/L AS LI) (01130)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	STRON-TIUM, DIS-SOLVED (UG/L AS SR) (01080)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	VANA-DIUM, DIS-SOLVED (UG/L AS V) (01085)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)
DEC												
15...	242	72	12	467	44	51	724	88	12	.122	<.020	4.47
MAR												
22...	225	75	11	447	41	48	718	82	<10	.111	.068	4.13
AUG												
24...	215	83	16	460	43	53	789	80	<10	.167	<.020	3.41

DATE	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	2,6-DI-ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	ACETO-CHLOR, WATER FLTRD REC (UG/L) (49260)	ALA-CHLOR, WATER, DISS, REC, (UG/L) (46342)	ATRA-ZINE, WATER, DISS, REC (UG/L) (39632)	METHYL AZIN-PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)	BEN-FLUR-ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)	BUTYL-ATE, WATER, DISS, REC (UG/L) (04028)
DEC												
15...	.091	.17	.17	.106	<.010	<.0030	<.0020	<.002	.010	<.0010	<.0020	<.0020
MAR												
22...	.250	.19	.34	.134	<.010	<.0030	<.0020	<.002	.016	<.0010	<.0020	<.0020
AUG												
24...	.110	.32	.19	.133	<.010	<.0030	<.0020	<.002	.016	<.0010	<.0020	<.0020

08180800 MEDINA RIVER NEAR SOMERSET, TX--Continued

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

DATE	CARBARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBOFURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	CHLORPYRIFOS DISSOLVED (UG/L) (38933)	CYANAZINE, WATER, DISS, REC (UG/L) (04041)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	DEETHYL ATRAZINE, WATER, DISS, REC (UG/L) (04040)	DIAZINON, DISSOLVED (UG/L) (39572)	DIELDRIN DISSOLVED (UG/L) (39381)	DISULFOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	ETHALFLURALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)	ETHOPROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)
DEC												
15...	<.0030	<.0030	<.0040	<.0040	<.0020	E.0557	<.002	<.001	<.0170	<.0020	<.0040	<.0030
MAR												
22...	<.0030	<.0030	<.0040	<.0040	<.0020	E.0368	<.002	<.001	<.0170	<.0020	<.0040	<.0030
AUG												
24...	<.0030	<.0030	<.0040	<.0040	<.0020	E.0500	E.004	<.001	<.0170	<.0020	<.0040	<.0030

DATE	FONOFOS WATER DISS REC (UG/L) (04095)	LINDANE DISSOLVED (UG/L) (39341)	LINURON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALATHION, DISSOLVED (UG/L) (39532)	METOLACHLOR WATER DISSOLV (UG/L) (39415)	METRIBUZIN SENCOR WATER DISSOLV (UG/L) (82630)	MOLINATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPROPAMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	PARATHION, DISSOLVED (UG/L) (39542)	METHYL PARATHION WAT FLT 0.7 U GF, REC (UG/L) (82667)	PEBULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	PENDIMETHALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)
DEC												
15...	<.0030	<.004	<.0020	<.005	<.002	<.004	<.0040	<.0030	<.004	<.0060	<.0040	<.0040
MAR												
22...	<.0030	<.004	<.0020	<.005	.018	<.004	<.0100	<.0030	<.004	<.0060	<.0040	<.0040
AUG												
24...	<.0030	<.004	<.0020	<.005	.033	<.004	<.0040	<.0030	<.004	<.0060	<.0040	<.0040

DATE	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PROMETON, WATER, DISS, REC (UG/L) (04037)	PROPCHLOR, WATER, DISS, REC (UG/L) (04024)	PROPANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	PROPARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	PRONAMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	SIMAZINE, WATER, DISS, REC (UG/L) (04035)	TEBUTHIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TERBACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TERBUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	THIOBENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIALLATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)
DEC												
15...	<.0020	E.0034	<.0070	<.0040	<.0130	<.0030	<.0050	<.0100	<.0070	<.0130	<.0020	<.0010
MAR												
22...	<.0020	<.0180	<.0070	<.0040	<.0130	<.0030	<.0050	<.0100	<.0070	<.0130	<.0020	<.0010
AUG												
24...	<.0020	E.0041	<.0070	<.0040	<.0130	<.0030	<.0050	<.0100	<.0070	<.0130	<.0020	<.0010

DATE	TRIFLURALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)	ALPHA BHC DISSOLVED (UG/L) (34253)	HCH ALPHA D6 SRG WAT FLT 0.7 U GF, REC PERCENT (91065)	P,P' DDE DISSOLV (UG/L) (34653)	PERMETHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	DIAZINON D10 SRG WAT FLT 0.7 U GF, REC PERCENT (91063)	2,4,5-T DISSOLVED (UG/L) (39742)	2,4-D, DISSOLVED (UG/L) (39732)	2,4-DB WATER, FLTRD, GF 0.7U REC (UG/L) (38746)	SILVEX, DISSOLVED (UG/L) (39762)	3HYDRXY CARBOFURAN WAT,FLT GF 0.7U REC (UG/L) (49308)	DNOC WAT,FLT GF 0.7U REC (UG/L) (49299)
DEC												
15...	<.0020	<.0020	77.0	<.0060	<.0050	83.1	<.0400	<.110	<.100	<.0600	<.110	<.420
MAR												
22...	<.0020	<.0020	73.2	<.0060	<.0050	95.3	<.0400	<.120	<.100	<.0600	<.110	<.420
AUG												
24...	<.0020	<.0020	117	<.0060	<.0050	113	<.0400	<.110	<.100	<.0600	<.200	<.420

DATE	ACIFLUORFEN WATER, FLTRD, GF 0.7U REC (UG/L) (49315)	ALDICARB, WATER, FLTRD, GF 0.7U REC (UG/L) (49312)	ALDICARB SULFONE WAT,FLT GF 0.7U REC (UG/L) (49313)	ALDICARB SULFOXIDE, WAT,FLT GF 0.7U REC (UG/L) (49314)	BDMC, SURROG, WATER, UNFLTRD REC PERCENT (99835)	BENTAZON, WATER, FLTRD, GF 0.7U REC (UG/L) (38711)	BROMACIL, WATER, DISS, REC (UG/L) (04029)	BROMOXYNIL WATER, FLTRD, GF 0.7U REC (UG/L) (49311)	CARBARYL, WATER, FLTRD, GF 0.7U REC (UG/L) (49310)	CARBOFURAN, WATER, FLTRD, GF 0.7U REC (UG/L) (49309)	CHLOROTHALONIL, WAT,FLT GF 0.7U REC (UG/L) (49306)	CLOPYRALID, WATER, FLTRD, GF 0.7U REC (UG/L) (49305)
DEC												
15...	<.0900	<1.17	<.100	<.0210	65.9	<.0350	<.0600	<.0400	<.0700	<.290	<.480	<.230
MAR												
22...	<.0900	<.210	<.100	<.0210	78.9	<.0350	<.120	<.0400	<.0700	<.290	<.480	<.560
AUG												
24...	<.0900	<.460	<.100	<.0210	78.9	<.0350	<.0600	<.0400	<.0700	<.290	<.480	<.230

08180800 MEDINA RIVER NEAR SOMERSET, TX--Continued

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

DATE	DACTHAL MONO-ACID, WAT,FLT GF 0.7U REC (UG/L) (49304)	DICAMBA WATER, FLTRD, GF 0.7U REC (UG/L) (38442)	DICHLO-BENIL, WATER, FLTRD, GF 0.7U REC (UG/L) (49303)	DICHLOR PROP, WATER, FLTRD, GF 0.7U REC (UG/L) (49302)	DINOSEB WATER, FLTRD, GF 0.7U REC (UG/L) (49301)	DIURON, WATER, FLTRD, GF 0.7U REC (UG/L) (49300)	FEN-URON, WATER, FLTRD, GF 0.7U REC (UG/L) (49297)	FLUO-METURON WATER, FLTRD, GF 0.7U REC (UG/L) (38811)	LINURON WATER, FLTRD, GF 0.7U REC (UG/L) (38478)	MCPA, WATER, FLTRD, GF 0.7U REC (UG/L) (38482)	MCPB, WATER, FLTRD, GF 0.7U REC (UG/L) (38487)	METHIO-CARB, WATER, FLTRD, GF 0.7U REC (UG/L) (38501)
DEC												
15...	<.0390	<.0430	<.0700	<.0320	<.0600	.0961	<.0700	<.0600	<.0900	<.170	<.130	<.0260
MAR												
22...	<.0390	<.0430	<.0700	<.0320	<.0600	.192	<.190	<.0600	<.0900	<.170	<.130	<.0260
AUG												
24...	<.0390	<.0430	<.0700	<.0320	<.0600	.504	<.270	<.0600	<.0900	<.170	<.130	<.0260

DATE	METH-OMYL, WATER, FLTRD, GF 0.7U REC (UG/L) (49296)	NEB-URON, WATER, FLTRD, GF 0.7U REC (UG/L) (49294)	NORFLUR AZON, WATER, FLTRD, GF 0.7U REC (UG/L) (49293)	ORY-ZALIN, WATER, FLTRD, GF 0.7U REC (UG/L) (49292)	OXAMYL, WATER, FLTRD, GF 0.7U REC (UG/L) (38866)	PIC-LORAM, WATER, FLTRD, GF 0.7U REC (UG/L) (49291)	PRO-PHAM, WATER, FLTRD, GF 0.7U REC (UG/L) (49236)	PRO-POXUR, WATER, FLTRD, GF 0.7U REC (UG/L) (38538)	TRI-CLOPYR, WATER, FLTRD, GF 0.7U REC (UG/L) (49235)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155)	SEDI-MENT, SUS-PENDED (MG/L) (80154)
DEC											
15...	<.0170	<.0700	<.0420	<.310	<.0880	<.0500	<.0350	<.0800	<.250	--	--
MAR											
22...	<.0170	<.0700	<.0420	<.310	<.0180	<.120	<.0350	<.0800	<.250	--	--
AUG											
24...	<.100	<.0700	<.0420	<.310	<.0180	<.0500	<.0350	<.0800	<.250	3.3	34

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08181400 HELOTES CREEK AT HELOTES, TX

LOCATION.--Lat 29°34′42", long 98°41′29", Bexar County, Hydrologic Unit 12100302, 42 ft to left and 44 ft downstream from centerline of bridge on State Highway 16, 0.1 mi northwest of Helotes, and 8.6 mi upstream from mouth.

DRAINAGE AREA.--15.0 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Jun 1968 to current year.

REVISED RECORDS.--WRD TX-73-1: 1972(M).

GAGE.--Water-stage recorder. Datum of gage is 1,014.82 ft above sea level. Satellite telemeter at station.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. No known regulation. An undetermined amount of flow is diverted for domestic use above station, and some streamflow enters the Edwards and associated limestones through the Balcones Fault Zone in the vicinity of the gage. No flow at times. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water-quality data.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1923, 13.7 ft in 1927, from information by local resident.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 140 ft^3/s:

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)

No peak greater than base discharge.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.03	.00	.74	.05	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.05	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.04	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.29	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.04	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.03	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.55	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.01	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.02	.24	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	.03	.00	.00	.00	.03
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.5
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	7.7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	2.7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	.30	.00	.00	.00	.00	.00	.00	.04	.00	.00	.00	.00
20	.01	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	e.02	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	e.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	e.00	.00	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
30	.19	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	10.90	0.00	0.00	0.33	0.05	0.00	0.83	0.14	0.83	0.00	0.00	1.53
MEAN	.35	.000	.000	.011	.002	.000	.028	.005	.028	.000	.000	.051
MAX	7.7	.00	.00	.29	.03	.00	.74	.05	.55	.00	.00	1.5
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	22	.00	.00	.7	.1	.00	1.6	.3	1.6	.00	.00	3.0
CFSM	.02	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
IN.	.03	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00

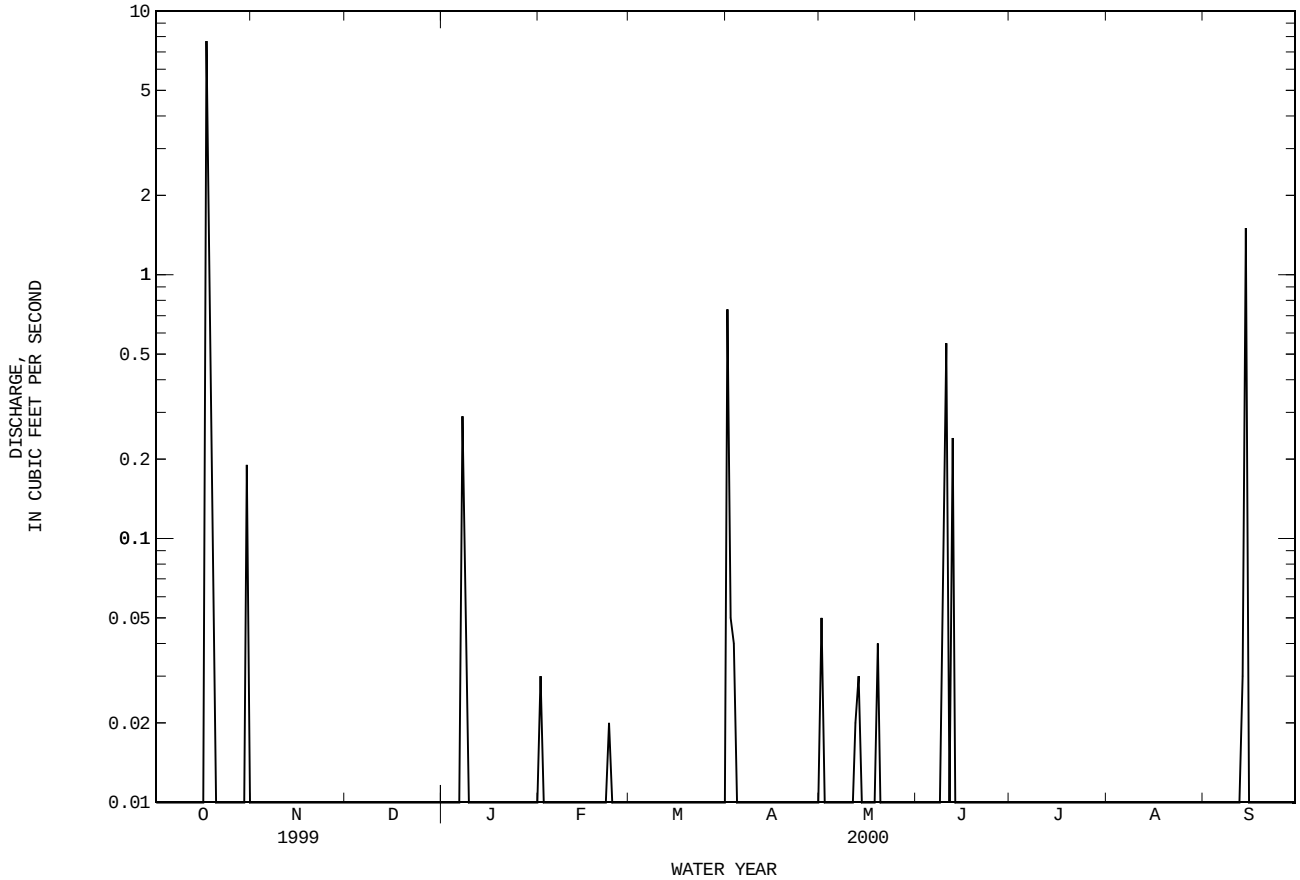
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 2000, BY WATER YEAR (WY)

MEAN	7.17	2.40	3.75	1.79	3.52	3.67	3.17	6.92	15.0	3.80	.85	1.63
MAX	93.6	18.6	79.0	31.0	66.3	32.3	40.0	66.6	142	84.4	13.5	36.1
(WY)	1999	1999	1992	1992	1992	1985	1973	1992	1987	1973	1971	1973
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1979	1971	1971	1969	1971	1971	1983	1989	1980	1969	1968	1969

08181400 HELOTES CREEK AT HELOTES, TX--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1968 - 2000	
ANNUAL TOTAL	87.29		14.61			
ANNUAL MEAN	.24		.040		4.52	
HIGHEST ANNUAL MEAN					28.3	1992
LOWEST ANNUAL MEAN					.003	1984
HIGHEST DAILY MEAN	14	Jun 20	7.7	Oct 17	1350	Oct 18 1998
LOWEST DAILY MEAN	.00	Jan 1	.00	Oct 1	.00	Jun 30 1968
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 1	.00	Oct 1	.00	Jul 4 1968
INSTANTANEOUS PEAK FLOW			51	Oct 17	c12600	Oct 18 1998
INSTANTANEOUS PEAK STAGE			2.10	Oct 17	a15.21	Oct 18 1998
ANNUAL RUNOFF (AC-FT)	173		29		3280	
ANNUAL RUNOFF (CFSM)	.016		.003		.30	
ANNUAL RUNOFF (INCHES)	.22		.04		4.10	
10 PERCENT EXCEEDS	.00		.00		6.5	
50 PERCENT EXCEEDS	.00		.00		.00	
90 PERCENT EXCEEDS	.00		.00		.00	

e Estimated
c From rating curve extended above discharge measurement of 4,960 ft^3/s.
a From floodmark.



08181400 HELOTES CREEK AT HELOTES, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--
CHEMICAL DATA: May 1969 to current year.
BIOCHEMICAL DATA: May 1969 to current year.
PESTICIDE DATA: May 1969 to Jun 1981, Oct 1984 to current year.
SEDIMENT DATA: Oct 1968 to Sep 1973.

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

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L) (00340)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L) (00310)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
JUN 10...	1745	5.1	101	7.5	23.5	7.0	85	22	2.3	20000	>10000

DATE	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	SODIUM PERCENT (00932)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	CAR-BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)
JUN 10...	39	0	14	.85	.46	.0	2	2.0	0	48	39

DATE	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L) (00530)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, TOTAL (MG/L AS N) (00600)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N) (00607)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)
JUN 10...	.96	.65	62	43	31	.069	.087	.58	.43	.18	.27

DATE	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	CYANIDE TOTAL (MG/L AS CN) (00720)	PHENOLS TOTAL (UG/L) (32730)	OIL AND GREASE, TOTAL RECOV. GRAVI-METRIC (MG/L) (00556)	ARSENIC TOTAL (UG/L AS AS) (01002)	BERYL-LIUM, TOTAL RECOV-ERABLE (UG/L AS BE) (01012)	CADMIUM WATER UNFLTRD TOTAL (UG/L AS CD) (01027)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR) (01034)
JUN 10...	.52	.108	.071	7.2	.011	7	<1	<1	<5.0	<1	1

DATE	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU) (01042)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB) (01051)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG) (71900)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI) (01067)	SELE-NIUM, TOTAL (UG/L AS SE) (01147)	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG) (01077)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN) (01092)	ALDRIN, TOTAL (UG/L) (39330)	ENDO-SULFAN-I WATER WHOLE REC (UG/L) (34361)	ALPHA BHC TOTAL (UG/L) (39337)	AROCLOR 1221 PCB TOTAL (UG/L) (39488)
JUN 10...	2	6	<.30	<2	<1	<1	<31	<.040	<.100	<.030	<1.00

DATE	AROCLOR 1232 PCB TOTAL (UG/L) (39492)	AROCLOR 1248 PCB TOTAL (UG/L) (39500)	AROCLOR 1254 PCB TOTAL (UG/L) (39504)	AROCLOR 1260 PCB TOTAL (UG/L) (39508)	ENDO-SULFAN II TOTAL (UG/L) (34356)	BETA BENZENE HEXA-CHLOR-IDE TOTAL (UG/L) (39338)	CHLOR-DANE, TECH-NICAL TOTAL (UG/L) (39350)	CHLOR-DANE CIS WATER WHOLE TOTAL (UG/L) (39062)	DELTA BENZENE HEXA-CHLOR-IDE TOTAL (UG/L) (34259)	DI-ELDRIN TOTAL (UG/L) (39380)	ENDO-SULFAN SULFATE TOTAL (UG/L) (34351)
JUN 10...	<.100	<.100	<.100	<.100	<.040	<.030	<.100	<.100	<.090	<.020	<.600

08181400 HELOTES CREEK AT HELOTES, TX--Continued

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

DATE	ENDRIN ALDE- HYDE TOTAL (UG/L) (34366)	ENDRIN WATER UNFLTRD REC (UG/L) (39390)	HEPTA- CHLOR, TOTAL (UG/L) (39410)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L) (39420)	LINDANE TOTAL (UG/L) (39340)	P,P' DDD, TOTAL (UG/L) (39310)	P,P' DDE, TOTAL (UG/L) (39320)	P,P' DDT, TOTAL (UG/L) (39300)	TOX- APHENE, TOTAL (UG/L) (39400)	CHLOR- DANE TRANS WATER WHOLE TOTAL (UG/L) (39065)
JUN										
10...	<.200	<.060	<.030	<.800	<.030	<.100	<.040	<.100	<2.00	<.100

08181440 INGRAM ROAD OUTFALL AT LEON CREEK TRIB. AT SAN ANTONIO, TX

LOCATION.--Lat 29°26′25", long 98°39′26", Bexar County, Hydrologic Unit 12100302, 445 ft south of the intersection of Ingram Road and Richland Hills Drive on the east side of the northbound lane of Ingram Road.

DRAINAGE AREA.-- 0.02 mi^2.

PERIOD OF RECORD.--
CHEMICAL DATA: Dec 1993 to current year.
BIOCHEMICAL DATA: Dec 1993 to current year.
PESTICIDE DATA: Dec 1993 to current year.

INSTRUMENTATION.--Discharge-activated automatic sampler.

REMARKS.--Water-quality samples and associated discharge data were collected for selected storm events from storm sewer systems draining urban basins. This study is to fulfill requirements (by EPA) for the Texas Department of Transportation's National Pollution Discharge Elimination System (NPDES) storm-water discharge permit.

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

DATE	TIME	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	STORM WATER FLOW (MGD) (81395)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L) (00340)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L) (00310)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	FECAL STREP, KF STRP MF, WATER (COL/ 100 ML) (31673)	PRECIP-ITATION TOTAL INCHES/ STORM (82381)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)
OCT											
17...	0002	--	--	--	--	34	--	8000	1900	--	--
OCT											
17-17	0020	77	7.7	22.1	1.2	--	<6.7	--	--	1.2	25
FEB											
23-23	0006	44	6.3	18.5	3.6	--	--	--	--	.58	15
23...	0010	--	--	--	--	37	--	3100	3000	--	--
MAY											
19...	1650	--	--	--	--	37	--	K7000	5400	--	--
MAY											
19-19	1907	145	6.1	25.5	1.3	--	E3.8	--	--	1.2	18
SEP											
12...	2112	--	--	--	--	31	--	6800	3500	--	--
SEP											
12-12	2113	96	8.4	--	2.5	--	5.1	--	--	2.7	18

DATE	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	SODIUM PERCENT (00932)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L) (00530)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)
OCT											
17...	--	--	--	--	--	--	--	--	--	--	--
OCT											
17-17	9.51	.30	.8	.1	6	1.2	2.7	.8	40	43	.422
FEB											
23-23	5.79	.14	.9	.1	11	.8	1.9	.9	16	87	.183
23...	--	--	--	--	--	--	--	--	--	--	--
MAY											
19...	--	--	--	--	--	--	--	--	--	--	--
MAY											
19-19	6.75	.19	.8	.1	9	1.0	1.2	.9	28	193	.187
SEP											
12...	--	--	--	--	--	--	--	--	--	--	--
SEP											
12-12	6.87	.25	.3	.0	3	1.6	.8	.4	31	416	.112

DATE	NITRO-GEN, TOTAL (MG/L AS N) (00600)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	CYANIDE TOTAL (MG/L AS CN) (00720)	PHENOLS TOTAL (UG/L) (32730)	OIL AND GREASE, TOTAL RECOV. GRAVI-METRIC (MG/L) (00556)	ANTI-MONY UNFLTRD TOT REC EPA-CON TRACT (UG/L) (99897)	ARSENIC TOTAL (UG/L AS AS) (01002)	BERYL-LIUM, TOTAL RECOV-ERABLE (UG/L AS BE) (01012)
OCT											
17...	--	--	--	--	12	<.01	<4	3	<10	--	--
OCT											
17-17	1.4	1.0	.194	.100	--	--	--	--	--	<1	<5
FEB											
23-23	1.3	1.2	.213	E.048	--	--	--	--	--	<1	<5
23...	--	--	--	--	10	<.01	<4	<1	<20	--	--
MAY											
19...	--	--	--	--	10	<.01	6	E4	<10	--	--
MAY											
19-19	1.5	1.3	.336	.074	--	--	--	--	--	1	<5
SEP											
12...	--	--	--	--	17	<.01	<4	<1	<10	--	--
SEP											
12-12	2.4	2.3	.551	.120	--	--	--	--	--	2	<5

08181440 INGRAM ROAD OUTFALL AT LEON CREEK TRIB. AT SAN ANTONIO, TX--Continued

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

DATE	CADMIUM WATER UNFLTRD TOTAL (UG/L AS CD) (01027)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR) (01034)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU) (01042)	CYANIDE UNFLTRD TOT REC EPA-CON-TRACT (MG/L) (99896)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB) (01051)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG) (71900)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI) (01067)	SELE-NIUM, TOTAL (UG/L AS SE) (01147)	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG) (01077)	SILVER UNFLTRD TOT REC EPA-CON-TRACT (UG/L) (99895)	THAL-LIUM, TOTAL (UG/L AS TL) (01059)
OCT											
17...	--	--	--	<10	--	--	--	--	--	<1	<10.0
OCT											
17-17	.2	2	5	--	5	<.3	E2	<1	<1	--	--
FEB											
23-23	.3	5	9	--	14	<.3	4	<1	<1	--	--
23...	--	--	--	<10	--	--	--	--	--	<2	<20.0
MAY											
19...	--	--	--	<10	--	--	--	--	--	<1	<5.0
MAY											
19-19	.2	4	8	--	12	<.3	4	<1	<1	--	--
SEP											
12...	--	--	--	<10	--	--	--	--	--	<1	<5.0
SEP											
12-12	.3	6	8	--	11	<.3	5	<1	<1	--	--

DATE	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN) (01092)	BENZENE TOTAL (UG/L) (34030)	ALDRIN, TOTAL (UG/L) (39330)	ENDO-SULFAN-I WATER WHOLE REC (UG/L) (34361)	ALPHA BHC TOTAL (UG/L) (39337)	AROCLOR 1016 PCB TOTAL (UG/L) (34671)	AROCLOR 1221 PCB TOTAL (UG/L) (39488)	AROCLOR 1232 PCB TOTAL (UG/L) (39492)	AROCLOR 1242 PCB TOTAL (UG/L) (39496)	AROCLOR 1248 PCB TOTAL (UG/L) (39500)
OCT										
17...	--	<1.00	--	--	--	--	--	--	--	--
OCT										
17-17	80	--	<.040	<.1	<.03	<.1	<1	<.1	<.1	<.1
FEB										
23-23	150	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--
MAY										
19...	--	<.20	--	--	--	--	--	--	--	--
MAY										
19-19	114	--	<.040	<.1	<.03	--	<1	<.1	--	<.1
SEP										
12...	--	--	--	--	--	--	--	--	--	--
SEP										
12-12	51	--	--	--	--	--	--	--	--	--

DATE	AROCLOR 1254 PCB TOTAL (UG/L) (39504)	AROCLOR 1260 PCB TOTAL (UG/L) (39508)	ENDO-SULFAN II TOTAL (UG/L) (34356)	BETA BENZENE HEXA-CHLOR-IDE TOTAL (UG/L) (39338)	CHLOR-DANE, TECH-NICAL TOTAL (UG/L) (39350)	CHLOR-DANE CIS WATER WHOLE TOTAL (UG/L) (39062)	DELTA BENZENE HEXA-CHLOR-IDE TOTAL (UG/L) (34259)	DI-AZINON, TOTAL (UG/L) (39570)	DI-ELDRIN TOTAL (UG/L) (39380)	ENDO-SULFAN SULFATE TOTAL (UG/L) (34351)
OCT										
17...	--	--	--	--	--	--	--	--	--	--
OCT										
17-17	<.1	<.1	<.04	<.03	<.1	<.1	<.09	<.05	<.020	<.6
FEB										
23-23	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--
MAY										
19...	--	--	--	--	--	--	--	--	--	--
MAY										
19-19	<.1	<.1	<.04	<.03	<.1	<.1	<.09	<.05	<.020	<.6
SEP										
12...	--	--	--	--	--	--	--	--	--	--
SEP										
12-12	--	--	--	--	--	--	--	--	--	--

08181440 INGRAM ROAD OUTFALL AT LEON CREEK TRIB. AT SAN ANTONIO, TX--Continued

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

DATE	ENDRIN ALDE-HYDE TOTAL (UG/L) (34366)	ENDRIN WATER UNFLTRD REC (UG/L) (39390)	HEPTA-CHLOR, TOTAL (UG/L) (39410)	HEPTA-CHLOR EPOXIDE TOTAL (UG/L) (39420)	LINDANE TOTAL (UG/L) (39340)	P,P' DDD, TOTAL (UG/L) (39310)	P,P' DDE, TOTAL (UG/L) (39320)	P,P' DDT, TOTAL (UG/L) (39300)	TOX-APHENE, TOTAL (UG/L) (39400)	CHLOR-DANE TRANS WATER WHOLE TOTAL (UG/L) (39065)
OCT										
17...	--	--	--	--	--	--	--	--	--	--
OCT										
17-17	<.2	<.060	<.030	<.800	<.030	<.1	<.04	<.1	<2	<.1
FEB										
23-23	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--
MAY										
19...	--	--	--	--	--	--	--	--	--	--
MAY										
19-19	<.2	<.060	<.030	<.800	<.030	<.1	<.04	<.1	<2	<.1
SEP										
12...	--	--	--	--	--	--	--	--	--	--
SEP										
12-12	--	--	--	--	--	--	--	--	--	--

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08181480 LEON CREEK AT INTERSTATE HIGHWAY 35 AT SAN ANTONIO, TX

LOCATION.--Lat 29°19′47", long 98°35′02", Bexar County, Hydrologic Unit 12100302, on left bank between bridges on Interstate Highway 35 in San Antonio, 1.7 mi northeast of the intersection of Interstate Highway 35 and Loop 410, and 11.8 mi upstream from mouth.

DRAINAGE AREA.--219 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Oct 1984 to current year.

GAGE.--Water-stage recorder. Datum of gage is 573.49 ft above sea level. Satellite telemeter at station.

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

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 750 ft^3/s:

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jun 10	2130	1,130	8.99	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.5	3.7	3.2	3.1	14	4.0	6.7	54	2.3	2.5	2.7	2.0
2	2.5	3.3	3.2	3.0	67	4.2	59	23	2.6	2.3	2.6	2.0
3	2.4	3.5	3.3	2.9	17	3.7	38	9.3	2.6	2.2	2.6	2.0
4	2.4	3.5	3.2	2.7	7.9	3.6	15	5.2	2.7	2.1	2.5	1.9
5	2.4	3.3	2.9	2.7	6.2	3.5	10	5.0	3.0	1.9	2.4	1.9
6	2.3	3.4	2.6	2.7	5.8	3.5	9.2	4.5	3.1	2.1	2.4	1.8
7	2.3	3.5	2.6	35	5.6	3.5	8.6	4.2	2.9	2.0	2.3	1.8
8	2.3	3.4	2.9	26	5.7	3.5	7.8	4.0	3.0	2.0	2.3	1.7
9	2.3	3.2	2.9	5.5	6.3	3.5	7.4	3.9	39	1.9	2.4	1.9
10	2.2	3.4	2.8	4.6	6.3	3.4	7.3	3.9	283	2.0	2.3	1.9
11	2.2	3.1	2.7	4.8	5.5	3.4	7.5	4.0	199	1.7	2.3	1.8
12	2.2	3.0	3.7	4.6	4.9	3.4	21	3.7	60	1.8	2.3	2.0
13	2.3	3.1	3.2	4.7	4.9	3.4	9.0	15	24	1.7	2.2	39
14	2.3	3.0	3.1	4.5	5.1	21	7.3	4.2	14	2.0	2.3	32
15	2.5	3.0	3.0	4.6	5.3	11	6.9	3.6	8.0	1.7	2.7	15
16	2.4	3.2	3.1	4.6	5.5	3.8	6.6	3.5	5.8	1.6	2.4	4.4
17	36	3.4	2.6	4.6	5.2	48	6.5	3.3	3.9	1.5	2.3	6.0
18	12	3.5	2.5	6.3	5.0	12	6.4	3.4	3.7	1.5	2.5	3.8
19	8.2	2.9	2.6	6.2	4.9	4.9	6.1	27	6.7	1.6	2.5	3.2
20	4.6	2.2	2.7	4.4	4.1	4.8	5.9	92	3.4	1.6	2.4	3.1
21	4.4	2.9	2.9	4.2	4.2	5.0	6.0	6.6	3.1	1.6	2.4	3.0
22	4.3	3.0	2.8	4.4	4.4	4.7	5.6	3.6	2.9	1.7	2.6	2.9
23	4.4	3.0	2.8	4.2	24	4.6	5.2	3.2	2.8	1.7	2.5	2.9
24	4.6	3.0	2.8	4.3	7.0	4.6	5.0	3.2	2.6	1.6	2.2	5.3
25	4.5	3.5	2.5	4.2	4.8	4.5	5.1	2.9	2.6	1.5	2.3	35
26	3.7	3.1	2.6	4.4	4.7	4.5	5.0	2.7	2.5	1.6	2.4	3.3
27	3.3	3.0	2.7	8.1	5.1	4.4	4.8	2.6	2.5	1.8	2.5	2.6
28	3.3	3.0	2.9	11	3.5	4.5	4.7	6.9	2.4	2.0	2.3	2.6
29	3.4	3.1	2.8	4.4	3.6	8.6	4.6	2.8	2.4	2.0	2.4	2.7
30	3.6	3.3	2.9	4.3	---	4.4	4.5	2.4	2.4	27	2.3	2.5
31	4.1	---	3.2	4.3	---	4.2	---	2.4	---	11	2.3	---
TOTAL	141.9	95.5	89.7	195.3	253.5	206.1	302.7	316.0	698.9	91.2	74.6	192.0
MEAN	4.58	3.18	2.89	6.30	8.74	6.65	10.1	10.2	23.3	2.94	2.41	6.40
MAX	36	3.7	3.7	35	67	48	59	92	283	27	2.7	39
MIN	2.2	2.2	2.5	2.7	3.5	3.4	4.5	2.4	2.3	1.5	2.2	1.7
AC-FT	281	189	178	387	503	409	600	627	1390	181	148	381

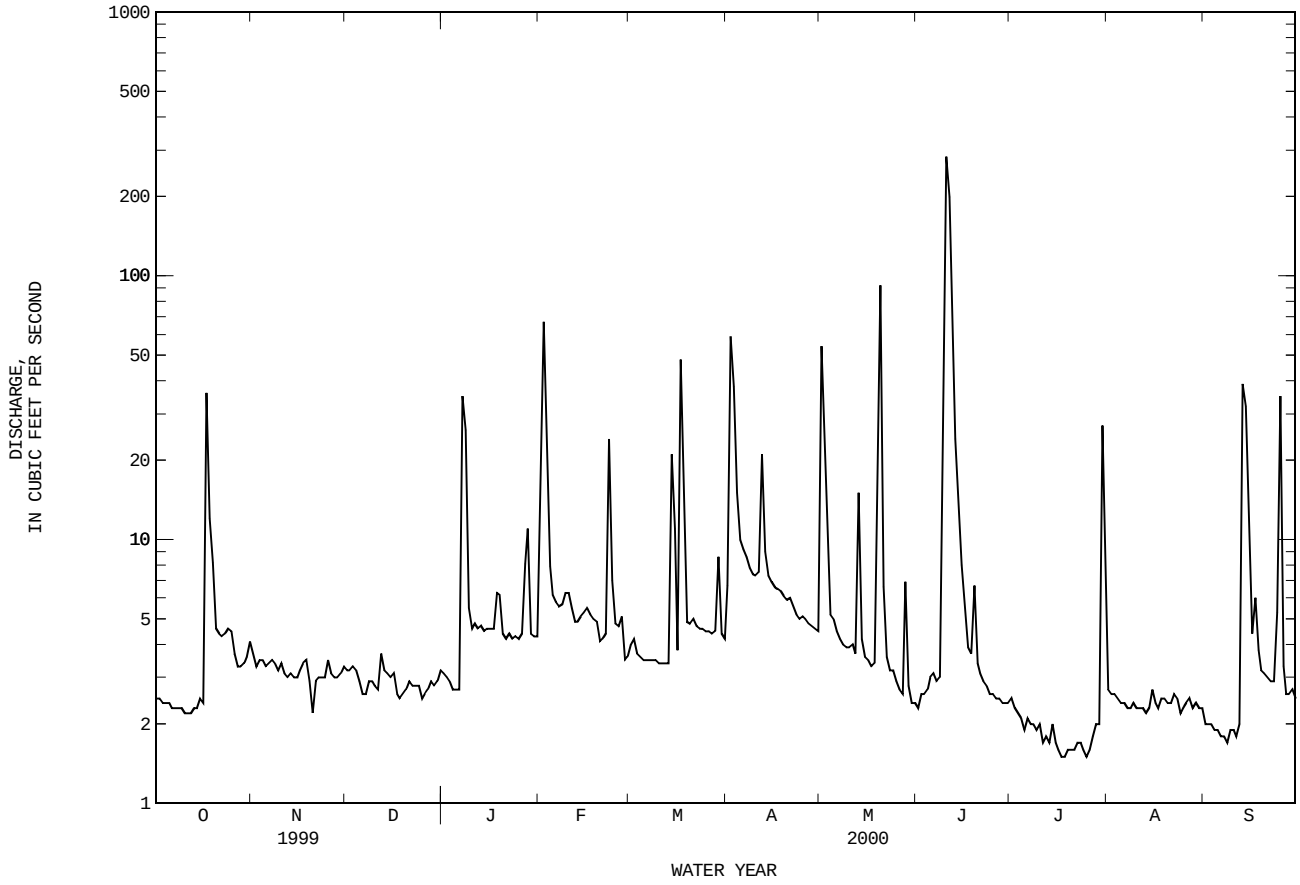
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1985 - 2000, BY WATER YEAR (WY)

MEAN	79.1	12.3	45.7	18.5	37.5	28.6	20.4	61.8	138	19.9	11.6	13.0
MAX	942	40.3	575	116	355	192	82.6	356	824	144	69.6	38.3
(WY)	1999	1999	1992	1992	1992	1992	1991	1992	1987	1990	1998	1988
MIN	2.80	3.18	2.89	3.76	5.93	5.11	3.69	2.14	2.72	2.56	1.94	1.97
(WY)	1997	2000	2000	1997	1989	1996	1995	1996	1996	1989	1989	1989

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1985 - 2000	
ANNUAL TOTAL	4567.6		2657.4			
ANNUAL MEAN	12.5		7.26		40.5	
HIGHEST ANNUAL MEAN					156	1992
LOWEST ANNUAL MEAN					6.22	1996
HIGHEST DAILY MEAN	356	Jun 22	283	Jun 10	19800	Oct 18 1998
LOWEST DAILY MEAN	2.2	Oct 10	1.5	Jul 17	.52	Sep 15 1997
ANNUAL SEVEN-DAY MINIMUM	2.3	Oct 6	1.6	Jul 15	.78	Aug 1 1996
INSTANTANEOUS PEAK FLOW			1130	Jun 10	i93300	Oct 17 1998
INSTANTANEOUS PEAK STAGE			8.99	Jun 10	a29.31	Oct 17 1998
ANNUAL RUNOFF (AC-FT)	9060		5270		29350	
10 PERCENT EXCEEDS	15		9.2		35	
50 PERCENT EXCEEDS	7.2		3.3		7.5	
90 PERCENT EXCEEDS	2.4		2.1		2.7	

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

08181480 LEON CREEK AT INTERSTATE HIGHWAY 35 AT SAN ANTONIO, TX--Continued



08181480 LEON CREEK AT INTERSTATE HIGHWAY 35 AT SAN ANTONIO, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--
CHEMICAL DATA: Jul 1984 to Sep 30, 2000 (discontinued).
BIOCHEMICAL DATA: Jul 1984 to Oct 1997.
PESTICIDE DATA: Aug 1995 to Oct 1997.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Sep 1984 to Sep 30, 2000. (discontinued).
pH: Apr 1989 to Sep 30, 2000. (discontinued).
WATER TEMPERATURE: Sep 1984 to Sep 30, 2000. (discontinued).
DISSOLVED OXYGEN: Apr 1989 to Sep 30, 2000. (discontinued).

INSTRUMENTATION.--Water-quality monitor since Sep 1984. (discontinued).

REMARKS.--Records fair. Interruptions in the record were caused by malfunctions of the instrument. Mean monthly and annual concentrations and loads for selected chemical constituents have been computed for previous years using the daily (or continuous) records of specific conductance and regression relationships between each chemical constituent and specific conductance. 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, 1,260 microsiemens, Nov 19, 1988, Jun 29, 1995; minimum, 39 microsiemens, Jan 18, 1991.
pH: Maximum, 8.5 units, Mar 29, 1990, Oct 6, 17, 1998; minimum, 6.7 units, Jun 30, 1991.
WATER TEMPERATURE: Maximum, 32.5°C, Jul 16, 17, 1989; minimum, 4.0°C, Dec 24, 1989.
DISSOLVED OXYGEN: Maximum, 19.8 mg/L, Oct 13, 14, 1989; minimum, 0.3 mg/L, Aug 1, 2000.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 1,020 microsiemens, Feb 10; minimum, 69 microsiemens, Jul 30.
pH: Maximum, 8.1 units, Sep 24; minimum, units, Mar 16, 18, 19, 20, Aug 3.
WATER TEMPERATURE: Maximum, 31.3°C, Sep 5; minimum, 6.2°C, Mar 17.
DISSOLVED OXYGEN: Maximum, 14.4 mg/L, Mar 17; minimum, 0.3 mg/L, Aug 1.

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	713	706	709	609	586	603	810	790	799	751	722	733
2	706	694	703	586	580	582	808	795	801	791	751	776
3	694	684	689	597	581	589	825	794	807	798	766	787
4	702	686	692	581	567	574	835	794	818	766	723	751
5	725	701	711	586	570	580	833	802	815	723	700	710
6	727	723	725	595	586	592	825	790	806	727	693	708
7	727	717	723	603	595	599	810	782	795	757	180	644
8	732	723	726	613	603	610	846	803	825	557	180	475
9	738	730	733	629	612	621	851	834	845	486	433	457
10	743	736	739	650	629	641	834	806	823	538	479	504
11	743	732	737	654	647	651	814	802	808	587	538	566
12	737	725	731	655	651	653	818	770	798	653	587	624
13	728	715	721	659	652	656	771	742	753	694	653	677
14	715	701	708	660	654	657	756	733	743	696	679	688
15	707	702	704	---	---	e652	745	643	697	721	696	708
16	705	692	698	---	---	e650	659	630	643	737	715	724
17	693	204	494	---	---	e680	688	627	664	752	736	744
18	553	501	538	723	695	710	697	676	684	798	740	761
19	533	392	476	737	719	728	700	668	681	858	793	816
20	503	399	456	740	725	732	692	677	687	809	753	785
21	514	485	506	785	728	753	687	672	678	800	758	773
22	485	428	449	788	760	773	721	675	692	816	773	799
23	499	444	475	798	776	787	739	721	732	813	787	802
24	552	499	525	776	744	757	757	733	745	787	754	765
25	596	552	574	751	731	740	780	755	768	770	747	757
26	619	596	611	736	717	726	796	770	782	757	715	735
27	621	618	619	746	712	727	803	783	791	763	714	732
28	623	617	621	761	731	743	783	728	760	744	652	672
29	627	619	624	760	740	749	738	710	726	683	641	660
30	622	615	619	804	751	777	740	714	726	686	653	672
31	624	601	613	---	---	---	737	717	727	672	653	657
MONTH	743	204	634	---	---	676	851	627	755	858	180	699

08181480 LEON CREEK AT INTERSTATE HIGHWAY 35 AT SAN ANTONIO, TX--Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	694	639	677	660	636	647	642	135	618	718	126	460
2	639	218	357	660	638	647	624	164	414	493	346	452
3	408	335	372	641	616	628	472	214	329	349	288	313
4	466	407	440	688	633	653	373	316	337	424	349	393
5	516	463	487	704	688	698	421	373	395	472	421	448
6	559	510	532	699	680	690	475	421	447	537	472	501
7	628	550	582	680	658	670	522	472	493	592	536	563
8	747	628	692	673	656	668	537	509	523	633	589	609
9	958	747	822	684	652	668	597	536	558	655	625	636
10	1020	958	995	682	665	672	652	597	630	666	650	656
11	995	895	961	665	633	645	705	652	676	666	641	652
12	895	866	879	639	614	627	707	406	593	674	645	657
13	867	849	856	636	621	628	541	315	380	660	398	544
14	858	802	835	629	336	564	593	380	493	460	391	439
15	802	733	768	466	330	404	668	593	634	391	349	368
16	733	699	708	471	326	385	704	668	682	488	379	426
17	706	696	701	602	106	333	711	693	700	568	487	523
18	706	690	696	330	283	305	708	696	702	619	568	593
19	699	683	690	415	330	372	730	700	713	672	236	619
20	701	688	696	507	415	453	749	721	731	287	98	244
21	702	687	693	616	507	549	728	700	713	313	263	292
22	780	702	738	687	616	654	716	693	705	358	309	333
23	779	496	675	673	629	648	736	702	714	409	357	380
24	632	438	507	687	628	653	734	698	713	496	409	455
25	614	482	556	703	677	688	733	695	712	501	484	494
26	645	614	636	820	703	752	748	698	719	550	501	522
27	654	639	646	899	820	865	757	723	737	579	550	563
28	667	646	655	895	860	880	746	727	735	609	480	580
29	669	660	664	860	695	752	729	709	718	505	417	463
30	---	---	---	698	662	685	724	705	714	549	503	523
31	---	---	---	662	630	644	---	---	---	533	479	503
MONTH	1020	218	673	899	106	617	757	135	608	718	98	490

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	511	468	485	675	657	664	331	281	301	681	672	678
2	578	511	540	684	659	669	378	310	345	673	659	668
3	612	576	591	685	661	671	469	372	405	665	637	656
4	633	609	618	683	661	670	567	468	515	650	605	629
5	643	621	629	681	656	666	663	567	613	620	566	599
6	663	621	639	667	644	657	705	652	676	588	548	574
7	653	631	642	656	639	646	723	693	705	587	542	571
8	655	632	642	689	646	664	722	684	705	572	528	558
9	649	118	555	695	656	676	724	703	710	600	545	582
10	372	117	278	701	677	686	717	691	703	641	580	614
11	244	127	193	706	677	689	716	686	696	680	615	660
12	307	244	283	719	682	697	695	667	683	702	99	669
13	394	276	355	715	686	699	689	665	675	722	79	460
14	442	389	410	711	684	695	690	643	672	478	293	395
15	500	442	470	700	673	686	675	665	670	459	310	430
16	534	500	513	705	675	686	668	649	657	450	437	442
17	573	534	553	703	676	686	660	648	654	457	434	442
18	590	571	579	701	677	686	665	650	658	485	457	475
19	606	577	592	705	677	688	666	653	660	494	484	488
20	600	559	577	702	677	687	664	655	660	511	493	499
21	628	577	606	705	675	687	661	650	656	515	501	510
22	634	613	623	706	675	688	660	631	654	540	508	524
23	645	619	630	710	681	692	655	630	647	557	529	547
24	651	632	639	707	681	692	639	625	633	578	99	543
25	659	637	645	709	683	693	637	626	632	592	158	273
26	659	640	648	715	685	696	651	631	640	390	225	335
27	655	640	646	712	682	697	668	651	662	459	386	427
28	659	635	645	711	685	695	669	665	667	514	447	490
29	666	638	650	711	683	694	672	665	668	541	508	531
30	673	645	656	705	69	577	681	670	676	541	532	536
31	---	---	---	379	279	316	685	679	682	---	---	---
MONTH	673	117	551	719	69	668	724	281	632	722	79	527

e Estimated

08181480 LEON CREEK AT INTERSTATE HIGHWAY 35 AT SAN ANTONIO, TX--Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

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

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

08181480 LEON CREEK AT INTERSTATE HIGHWAY 35 AT SAN ANTONIO, TX--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	23.3	21.1	22.0	19.7	17.9	18.7	16.1	14.9	15.5	14.5	12.9	13.6
2	23.8	21.4	22.4	18.8	17.3	18.3	17.4	15.9	16.6	16.0	14.5	15.3
3	25.2	22.9	23.8	17.3	15.7	16.3	18.3	16.5	17.4	16.2	14.5	15.5
4	25.1	23.5	24.2	17.1	15.3	16.1	19.0	17.2	18.4	14.5	12.3	13.6
5	25.1	23.1	24.0	18.5	16.8	17.5	17.2	14.7	16.2	12.3	11.0	11.5
6	25.0	22.8	23.8	19.3	17.8	18.5	14.7	12.9	13.7	12.7	10.9	11.7
7	24.3	22.2	23.2	20.3	18.6	19.3	13.7	12.1	12.8	14.2	12.7	13.4
8	24.2	22.2	23.1	19.4	18.1	18.7	16.2	13.6	15.0	14.6	13.0	13.8
9	24.3	22.4	23.2	19.2	17.6	18.3	17.0	15.7	16.4	14.8	13.0	14.0
10	24.0	22.1	23.0	19.3	18.0	18.6	15.7	14.0	14.7	14.4	12.7	13.6
11	24.2	22.0	23.0	20.2	18.6	19.3	15.7	14.0	14.7	14.3	12.8	13.6
12	24.1	22.2	23.0	20.2	19.1	19.6	16.0	15.0	15.7	16.0	14.2	15.1
13	23.9	22.1	22.9	20.0	18.4	19.1	15.0	13.5	14.2	16.8	15.3	15.9
14	24.2	22.2	23.0	19.4	17.8	18.5	13.9	12.4	13.1	16.2	15.1	15.7
15	24.5	22.9	23.6	---	---	---	13.3	11.8	12.6	16.8	15.3	16.0
16	25.1	23.5	24.2	---	---	---	12.2	10.8	11.5	17.3	16.0	16.7
17	24.5	21.7	23.0	---	---	---	12.3	10.6	11.3	18.5	17.0	17.7
18	21.7	18.6	20.1	19.1	17.6	18.3	12.9	11.5	12.1	20.3	17.1	18.2
19	18.6	17.3	17.8	20.0	18.7	19.3	12.8	11.2	12.0	19.0	17.0	18.0
20	18.1	16.4	17.2	19.7	18.6	19.1	12.5	11.6	12.2	18.5	16.3	17.3
21	18.1	16.3	17.1	19.9	18.2	19.0	11.6	10.6	11.2	16.3	15.1	15.7
22	18.3	16.3	17.3	20.6	19.3	19.9	11.1	10.2	10.6	17.1	16.0	16.5
23	18.9	17.0	17.8	20.9	19.5	20.3	11.7	11.0	11.4	18.1	16.1	16.9
24	18.7	16.9	17.7	19.5	16.6	18.0	12.6	11.5	12.0	17.1	15.7	16.4
25	18.3	16.7	17.4	16.6	15.2	15.9	13.3	12.5	12.8	16.3	14.6	15.4
26	18.9	16.9	17.7	15.2	14.0	14.5	13.5	12.5	13.0	15.1	13.3	14.1
27	19.0	17.3	18.1	15.0	13.3	14.0	15.0	13.4	14.1	14.2	12.7	13.6
28	19.8	18.2	18.8	15.6	13.9	14.6	14.3	13.2	13.8	12.9	11.9	12.4
29	20.8	19.2	19.9	16.1	14.6	15.3	13.9	12.5	13.2	11.9	10.1	11.0
30	20.8	19.5	20.3	16.4	15.2	15.7	14.0	12.6	13.3	10.1	9.1	9.7
31	19.5	17.9	18.7	---	---	---	14.2	12.8	13.5	11.1	10.0	10.5
MONTH	25.2	16.3	21.0	---	---	---	19.0	10.2	13.7	20.3	9.1	14.6

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	12.5	11.1	11.6	21.1	19.9	20.4	21.6	19.4	21.2	24.9	17.8	22.1
2	12.7	10.2	11.3	22.3	20.3	21.2	21.3	19.7	20.4	22.2	21.2	21.7
3	13.6	11.2	12.3	21.9	20.6	21.3	19.7	17.6	18.9	22.8	20.8	21.7
4	14.2	12.2	13.2	20.6	18.7	19.8	19.6	17.3	18.5	24.2	22.5	23.1
5	13.5	11.9	12.7	19.6	18.6	19.0	20.2	17.4	18.7	24.9	23.4	23.9
6	13.1	11.5	12.4	20.2	18.9	19.5	21.3	18.4	19.7	26.4	23.9	24.8
7	15.7	13.1	14.3	21.8	19.9	20.6	22.8	20.4	21.3	27.0	24.7	25.6
8	16.4	14.3	15.4	21.6	20.6	21.1	22.2	20.0	21.1	27.6	25.2	26.0
9	17.4	15.6	16.4	22.7	20.4	21.3	21.1	18.5	19.7	26.1	25.2	25.5
10	18.7	16.6	17.6	22.3	21.7	21.9	20.2	19.5	19.8	27.0	24.9	25.7
11	19.5	17.7	18.6	21.7	19.0	20.3	21.1	19.8	20.3	27.7	25.4	26.4
12	19.2	18.0	18.4	19.5	17.3	18.4	20.8	20.2	20.5	28.5	26.1	27.1
13	20.8	18.2	19.2	18.8	17.4	18.1	20.9	19.1	20.1	27.2	25.2	25.8
14	19.8	17.6	18.9	18.8	17.9	18.3	21.6	19.9	20.5	25.3	23.8	24.4
15	20.8	18.6	19.6	20.0	17.5	18.7	21.6	20.3	20.9	24.8	23.0	23.8
16	21.3	20.1	20.6	21.3	18.3	19.6	23.4	21.1	22.0	26.9	23.7	25.0
17	22.1	20.7	21.4	20.2	6.2	13.2	23.3	22.1	22.7	26.7	24.8	25.7
18	23.1	21.4	22.0	13.1	10.7	11.9	23.3	22.3	22.7	26.7	25.2	25.8
19	21.8	18.6	20.0	15.8	12.8	14.1	24.8	22.4	23.4	27.2	24.9	26.2
20	18.6	17.8	18.2	17.1	14.2	15.6	25.7	23.4	24.3	24.9	23.0	23.4
21	19.4	17.8	18.4	19.3	17.0	17.9	24.5	22.0	23.2	25.3	23.0	23.9
22	19.6	18.7	19.1	21.3	19.2	20.1	23.7	21.4	22.6	26.7	24.1	25.2
23	21.3	19.0	20.1	21.5	20.5	20.9	25.4	22.3	23.4	28.1	25.2	26.3
24	22.2	20.5	21.2	22.9	20.8	21.7	25.6	22.5	23.8	28.5	26.0	27.1
25	22.4	20.6	21.5	23.5	21.8	22.6	25.5	22.5	23.8	29.0	27.0	27.7
26	22.5	21.0	21.8	24.1	22.5	23.2	25.7	22.6	23.8	28.0	27.0	27.5
27	21.0	18.3	19.6	24.8	22.7	23.6	26.0	23.1	24.3	29.0	26.9	27.7
28	19.8	17.3	18.7	25.1	23.0	23.9	26.1	24.0	24.8	27.9	26.3	26.8
29	20.4	19.0	19.6	25.4	23.3	24.2	25.6	23.9	24.7	28.2	25.8	26.7
30	---	---	---	24.4	22.3	23.3	25.6	24.1	24.7	29.2	26.4	27.5
31	---	---	---	22.7	21.3	21.9	---	---	---	29.8	26.8	27.7
MONTH	23.1	10.2	17.7	25.4	6.2	19.9	26.1	17.3	21.9	29.8	17.8	25.4

08181480 LEON CREEK AT INTERSTATE HIGHWAY 35 AT SAN ANTONIO, TX--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	29.0	26.7	27.7	29.9	27.7	28.5	27.9	26.1	26.9	30.0	27.7	28.9
2	29.4	26.8	27.8	29.8	27.6	28.5	29.5	26.2	27.5	30.8	27.9	29.2
3	28.7	27.1	27.8	29.9	27.5	28.4	30.1	26.9	28.1	30.9	28.0	29.3
4	28.5	26.8	27.4	30.1	27.6	28.5	29.9	27.4	28.4	31.2	27.7	29.3
5	27.7	26.1	26.7	30.1	27.3	28.4	29.8	27.4	28.4	31.3	27.7	29.3
6	28.3	25.3	26.5	30.0	27.2	28.4	30.2	27.5	28.6	30.8	27.7	29.0
7	27.7	25.4	26.3	30.4	27.5	28.6	30.0	27.8	28.7	30.3	26.9	28.3
8	26.9	24.8	25.8	30.8	27.5	28.8	30.6	27.9	28.8	29.2	26.9	27.8
9	26.5	24.9	25.4	29.9	27.5	28.5	30.1	27.8	28.7	29.5	26.9	28.0
10	25.5	24.0	25.0	29.9	27.5	28.5	30.6	27.7	28.9	29.5	27.2	28.3
11	25.6	24.0	24.6	30.7	27.5	28.8	30.7	27.7	28.8	30.1	27.5	28.6
12	25.8	25.2	25.4	30.9	27.7	29.0	30.3	27.3	28.6	30.6	26.4	28.9
13	26.8	25.2	25.9	31.1	27.7	29.1	30.3	27.6	28.8	29.0	25.4	27.9
14	27.1	25.8	26.4	30.8	27.5	28.9	31.0	27.8	28.9	28.3	26.8	27.5
15	27.4	26.1	26.7	30.8	27.3	28.8	29.1	27.6	28.2	28.0	26.6	27.2
16	27.9	26.2	26.9	30.9	27.5	28.9	30.2	27.0	28.3	28.6	26.5	27.3
17	28.4	26.6	27.4	30.5	27.6	28.9	30.9	27.7	28.9	27.0	24.8	25.9
18	27.8	26.9	27.4	30.3	27.5	28.8	30.8	27.7	28.9	26.2	23.7	24.8
19	28.2	26.2	27.1	30.6	27.7	28.9	30.4	27.6	28.8	26.7	23.8	25.0
20	28.5	27.0	27.7	30.5	27.8	28.9	30.2	27.7	28.7	27.2	24.4	25.5
21	28.9	27.2	27.9	30.5	27.5	28.8	30.0	27.9	28.8	28.7	25.7	26.7
22	28.9	27.3	28.0	30.5	27.5	28.8	30.2	27.5	28.4	28.8	26.1	27.1
23	29.4	27.3	28.1	30.4	27.6	28.7	30.1	27.1	28.3	29.4	27.0	27.9
24	28.9	27.3	27.9	30.2	27.4	28.6	30.5	27.1	28.5	30.1	22.8	28.1
25	29.4	27.3	28.1	30.4	27.7	28.8	30.5	27.6	28.8	26.9	22.3	23.7
26	29.3	27.5	28.2	30.5	27.9	28.9	30.4	27.8	28.9	23.3	20.8	21.9
27	29.7	27.4	28.3	30.6	28.1	29.0	30.4	27.7	28.7	23.4	20.1	21.4
28	29.7	27.5	28.4	30.3	27.9	28.9	30.3	28.1	29.0	23.5	20.0	21.3
29	29.7	27.2	28.2	30.2	27.6	28.7	30.2	28.3	29.0	23.1	19.8	21.2
30	29.8	27.2	28.2	29.5	22.7	27.7	30.4	28.0	29.0	23.2	19.9	21.1
31	---	---	---	27.6	26.3	26.7	30.4	27.7	28.9	---	---	---
MONTH	29.8	24.0	27.1	31.1	22.7	28.6	31.0	26.1	28.6	31.3	19.8	26.5

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	7.4	5.8	6.4	---	---	---	8.7	7.3	7.9	9.5	7.9	8.9
2	8.7	5.4	6.7	---	---	---	8.7	6.8	7.7	8.8	7.6	8.3
3	8.1	5.5	6.4	---	---	---	8.4	6.2	7.1	9.0	7.5	8.0
4	8.0	5.0	6.1	---	---	---	7.6	5.3	6.4	9.6	7.6	8.7
5	7.6	4.7	6.0	---	---	---	7.7	5.7	6.6	10.3	8.3	9.5
6	---	---	---	---	---	---	8.9	6.5	7.8	10.6	9.5	10.1
7	---	---	---	---	---	---	9.6	7.8	8.7	10.0	6.9	8.8
8	---	---	---	---	---	---	9.1	7.6	8.5	8.3	6.4	7.5
9	---	---	---	---	---	---	9.5	6.9	8.0	7.3	6.0	6.6
10	---	---	---	---	---	---	8.7	7.1	7.8	7.7	5.8	6.8
11	---	---	---	---	---	---	7.8	6.3	7.1	8.0	6.4	7.4
12	---	---	---	---	---	---	6.9	5.7	6.4	8.0	5.9	6.9
13	---	---	---	---	---	---	8.2	6.2	7.0	8.3	6.0	7.1
14	---	---	---	---	---	---	9.0	6.8	7.8	8.7	6.7	7.7
15	---	---	---	---	---	---	9.0	7.4	8.1	9.3	7.4	8.3
16	---	---	---	---	---	---	9.8	7.3	8.5	9.4	7.2	8.3
17	---	---	---	8.4	6.1	7.0	10.0	8.6	9.1	9.3	7.5	8.2
18	---	---	---	8.1	5.7	6.8	9.8	8.7	9.2	8.3	6.5	7.5
19	---	---	---	7.1	5.5	6.2	9.9	8.6	9.2	8.7	6.6	7.5
20	---	---	---	8.2	4.2	5.7	---	---	---	7.6	6.6	7.0
21	---	---	---	7.2	4.0	5.5	---	---	---	8.2	6.7	7.3
22	---	---	---	6.5	4.7	5.5	---	---	---	7.7	6.5	7.2
23	---	---	---	6.6	4.5	5.1	10.2	8.9	9.7	8.5	7.0	7.5
24	---	---	---	5.0	4.3	4.7	10.5	9.1	9.7	8.7	7.0	7.8
25	---	---	---	7.0	4.4	5.8	10.8	9.5	10.2	9.9	7.8	8.7
26	---	---	---	8.0	6.4	7.1	10.2	9.0	9.7	9.7	8.1	9.0
27	---	---	---	8.8	7.3	7.9	10.5	8.9	9.5	10.0	8.6	9.2
28	---	---	---	8.9	7.3	8.0	9.8	8.3	9.0	11.1	9.9	10.7
29	---	---	---	8.8	7.0	7.8	9.6	8.0	8.8	10.8	10.6	10.7
30	---	---	---	8.6	7.1	7.7	9.5	8.4	8.9	12.5	10.7	11.5
31	---	---	---	---	---	---	9.8	8.0	9.1	12.4	11.1	11.7
MONTH	---	---	---	---	---	---	---	---	---	12.5	5.8	8.4

08181480 LEON CREEK AT INTERSTATE HIGHWAY 35 AT SAN ANTONIO, TX--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	12.7	11.0	11.6	8.6	7.9	8.4	9.4	2.7	3.8	8.2	3.9	5.8
2	12.7	10.7	11.9	9.0	6.7	7.9	7.0	5.0	6.1	6.0	3.8	5.0
3	11.6	10.7	11.2	8.8	6.5	7.6	7.4	5.6	6.7	5.7	4.3	5.1
4	11.3	9.9	10.5	8.5	6.4	7.6	7.2	6.0	6.4	5.2	3.7	4.2
5	12.5	10.1	11.0	8.2	6.3	7.0	7.2	5.1	6.0	5.3	3.4	4.1
6	13.4	10.6	11.8	7.0	5.9	6.6	7.0	4.8	5.6	6.1	3.3	4.4
7	---	---	---	7.4	5.7	6.6	6.7	4.3	5.3	6.2	3.2	4.4
8	---	---	---	6.9	5.3	6.2	7.4	4.7	5.6	6.4	3.0	4.4
9	---	---	---	7.5	5.3	6.5	8.4	4.6	6.1	4.6	2.8	3.6
10	---	---	---	6.7	5.2	5.8	6.5	4.9	5.7	6.7	2.8	4.3
11	---	---	---	7.6	5.2	6.3	---	---	---	6.9	3.2	4.7
12	---	---	---	9.1	6.3	7.6	---	---	---	7.3	3.0	4.7
13	---	---	---	8.6	7.0	7.7	---	---	---	5.5	2.3	4.2
14	---	---	---	7.9	5.7	6.8	---	---	---	4.6	2.4	3.3
15	---	---	---	5.8	5.0	5.5	---	---	---	4.1	2.0	3.1
16	---	---	---	6.6	4.1	5.3	7.2	5.0	5.8	5.2	2.7	3.6
17	---	---	---	14.4	5.3	9.4	6.5	4.8	5.5	5.5	2.9	4.0
18	---	---	---	10.1	7.6	8.9	6.1	4.7	5.3	5.4	3.2	4.0
19	---	---	---	7.9	6.8	7.2	7.2	4.5	5.5	5.4	3.2	4.2
20	---	---	---	7.9	5.8	6.7	7.5	4.4	5.5	5.9	4.3	4.8
21	---	---	---	6.9	5.0	6.0	7.6	4.3	5.5	4.3	3.6	4.1
22	---	---	---	6.8	4.2	5.4	7.9	4.6	5.8	4.4	3.3	3.7
23	---	---	---	5.9	3.6	4.6	8.6	4.4	6.0	4.3	3.1	3.6
24	---	---	---	7.3	4.7	5.9	8.5	4.1	5.9	5.0	3.2	3.8
25	---	---	---	7.3	4.0	5.2	8.8	4.5	6.0	4.8	3.2	3.8
26	---	---	---	5.2	2.7	3.8	8.8	4.4	5.9	4.4	2.8	3.4
27	---	---	---	5.6	1.9	3.4	9.4	4.4	6.0	5.3	2.9	3.8
28	---	---	---	6.5	3.2	4.5	8.8	4.3	6.0	5.6	3.3	4.6
29	---	---	---	7.0	4.1	5.4	8.1	4.1	5.5	4.7	3.0	3.6
30	---	---	---	6.6	3.6	4.8	7.2	3.8	5.1	4.9	2.8	3.5
31	---	---	---	4.6	3.5	4.0	---	---	---	4.7	2.5	3.4
MONTH	---	---	---	14.4	1.9	6.3	---	---	---	8.2	2.0	4.1

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	4.6	2.1	3.2	5.9	3.5	4.5	2.1	.3	1.1	6.9	3.0	4.6
2	5.7	2.2	3.4	5.8	3.7	4.5	2.9	.6	1.7	6.6	3.0	4.9
3	4.7	2.7	3.6	6.2	3.7	4.5	3.6	.8	2.1	---	---	---
4	5.6	2.6	3.6	6.4	3.7	4.6	4.6	.8	2.3	---	---	---
5	5.9	3.1	4.0	6.4	3.6	4.7	5.2	1.0	2.6	---	---	---
6	6.3	3.5	4.6	6.4	3.7	4.4	5.8	1.4	3.1	---	---	---
7	6.6	3.6	4.8	---	---	---	6.1	2.0	3.6	---	---	---
8	6.7	3.1	4.7	---	---	---	5.4	2.0	3.4	---	---	---
9	7.5	3.7	5.0	5.1	2.4	3.6	6.5	1.6	3.5	---	---	---
10	7.2	5.5	6.2	5.8	2.4	3.8	7.3	2.3	4.3	---	---	---
11	6.9	6.2	6.6	6.7	2.8	4.3	7.1	2.7	4.7	---	---	---
12	6.4	5.3	5.9	7.0	3.0	4.7	7.8	2.6	4.8	---	---	---
13	5.4	4.9	5.2	7.4	3.1	4.9	7.3	2.8	5.1	7.3	2.1	3.4
14	5.1	4.6	4.9	7.5	3.5	5.1	7.6	2.8	5.1	3.3	2.1	2.7
15	4.9	4.4	4.6	7.9	3.4	5.2	7.1	2.8	5.1	2.9	1.5	2.4
16	4.8	4.2	4.5	7.9	3.5	5.4	8.0	3.5	5.3	2.5	1.0	1.7
17	5.0	4.0	4.4	7.7	3.5	5.5	8.0	3.7	5.7	2.9	1.8	2.3
18	5.6	3.0	4.3	7.7	3.4	5.5	7.9	3.4	5.5	3.2	1.7	2.4
19	6.2	5.1	5.6	8.2	3.5	5.7	8.3	3.2	5.5	3.0	1.5	2.1
20	6.0	4.4	5.1	7.6	3.5	5.5	7.8	3.6	5.7	3.1	.9	1.9
21	6.8	4.4	5.4	7.5	3.2	5.2	7.8	3.7	5.8	3.3	1.3	2.2
22	6.9	4.8	5.7	6.9	3.1	4.8	7.2	3.0	5.1	3.4	.7	1.8
23	7.1	4.8	5.8	6.7	3.0	4.6	7.7	2.7	4.9	4.0	1.2	2.2
24	7.0	4.7	5.7	6.0	2.8	4.4	6.9	2.7	4.9	4.5	1.0	2.5
25	7.2	4.6	5.8	6.2	2.7	4.4	6.3	3.0	4.8	4.2	2.5	3.3
26	7.3	4.6	5.8	6.2	2.6	4.4	6.5	2.7	4.7	3.2	1.7	2.3
27	6.4	4.8	5.4	6.1	2.5	4.3	6.6	2.6	4.3	4.0	1.5	2.6
28	6.0	3.8	4.7	6.0	2.6	4.1	5.7	2.7	4.4	4.2	1.4	2.6
29	5.8	3.6	4.5	5.9	2.5	4.1	5.4	2.4	4.0	4.1	1.9	2.8
30	5.7	3.6	4.5	8.6	2.3	4.2	6.0	2.4	4.1	4.4	1.6	2.8
31	---	---	---	4.9	.5	2.0	6.1	2.8	4.6	---	---	---
MONTH	7.5	2.1	4.9	---	---	---	8.3	.3	4.3	---	---	---

08181500 MEDINA RIVER AT SAN ANTONIO, TX

LOCATION.--Lat 29°15'14", long 98°28'20", Bexar County, Hydrologic Unit 12100302, near right bank at upstream side of pier of upstream bridge of two bridges on U.S. Highway 281 in San Antonio, and 6.8 mi upstream from mouth.

DRAINAGE AREA.--1,317 mi^2, of which 634 mi^2 is above dam forming Medina Lake.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Oct 1929 to Dec 1930, Jul 1939 to current year. Oct 1929 to Dec 1930, records below about 50 ft^3/s in connection with seepage investigation, published as "at Losoya". Published as "near San Antonio" Jul 1939 to Sep 1970.

REVISED RECORDS.--WSP 1562: 1957. WSP 1923: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 439.03 ft above sea level (levels by U.S. Army Corps of Engineers). Oct 1929 to Dec 1930, nonrecording gage at Losoya 1.5 mi downstream at different datum. Jul 27, 1939, to Sep 30, 1987, at site near left bank at downstream side of pier of upstream bridge of two bridges at same datum. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records fair. Since installation of gage in water year 1939, at least 10% of contributing drainage area has been regulated by Medina Lake (station 08179500, conservation pool storage 254,843 acre-ft) 60 mi upstream and by diversion dam reservoir, capacity 4,500 acre-ft. Streamflow is lost into the Edwards and associated limestones in the Balcones Fault Zone that cross the basin between the upstream end of Medina Lake and about 5 mi downstream from Medina Dam, or 0.9 mi downstream from the diversion dam. Several small diversions below diversion dam reservoir. Records furnished by the city of San Antonio show that during the current year, wastewater effluent in the amount of 5,200 acre-ft from Mitchell Lake and 40,920 acre-ft from the Leon Creek plant was discharged into the Medina River above this station. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water-quality data.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage, 55 ft, prior to construction of Medina Dam in 1913, from information by Texas Department of Transportation.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	100	118	130	145	151	143	102	172	138	115	114	94
2	103	112	130	137	249	144	195	185	131	109	106	89
3	103	110	132	134	212	143	266	180	128	101	85	88
4	111	112	131	137	177	139	241	152	120	88	84	89
5	106	120	134	158	156	138	175	139	131	98	80	83
6	103	133	138	147	147	142	152	131	128	87	78	66
7	104	132	140	155	145	139	143	124	125	86	80	57
8	105	136	141	204	134	139	139	137	118	90	79	59
9	106	135	134	164	136	131	138	134	129	103	90	68
10	102	130	136	155	144	138	139	127	394	104	111	68
11	110	128	129	150	143	134	131	111	862	101	102	69
12	112	130	150	155	140	131	149	116	366	85	92	65
13	111	137	157	154	140	134	164	148	276	96	90	149
14	112	137	142	152	155	139	144	145	212	110	94	161
15	116	138	129	152	156	166	127	132	184	109	93	167
16	113	135	130	147	158	136	122	124	172	104	97	148
17	139	138	137	146	157	139	125	120	159	106	87	129
18	184	135	141	147	151	148	128	116	151	102	73	117
19	156	137	144	148	151	130	127	127	152	105	75	99
20	138	132	154	146	144	126	124	348	149	105	79	86
21	127	128	164	145	142	124	121	314	142	108	77	73
22	125	130	165	142	141	127	116	195	135	110	77	86
23	121	128	159	145	152	127	119	158	131	108	81	96
24	112	129	161	146	154	133	114	141	125	103	79	108
25	120	122	153	148	147	126	124	132	121	86	77	161
26	117	113	154	143	145	122	117	133	122	84	75	148
27	113	118	156	138	141	123	101	137	124	81	70	126
28	115	124	152	146	143	111	88	143	122	73	83	113
29	106	132	150	145	140	115	86	155	120	73	102	115
30	103	130	150	147	---	105	88	152	121	76	103	107
31	108	---	152	153	---	102	---	141	---	148	97	---
TOTAL	3601	3839	4475	4631	4451	4094	4105	4769	5488	3054	2710	3084
MEAN	116	128	144	149	153	132	137	154	183	98.5	87.4	103
MAX	184	138	165	204	249	166	266	348	862	148	114	167
MIN	100	110	129	134	134	102	86	111	118	73	70	57
AC-FT	7140	7610	8880	9190	8830	8120	8140	9460	10890	6060	5380	6120

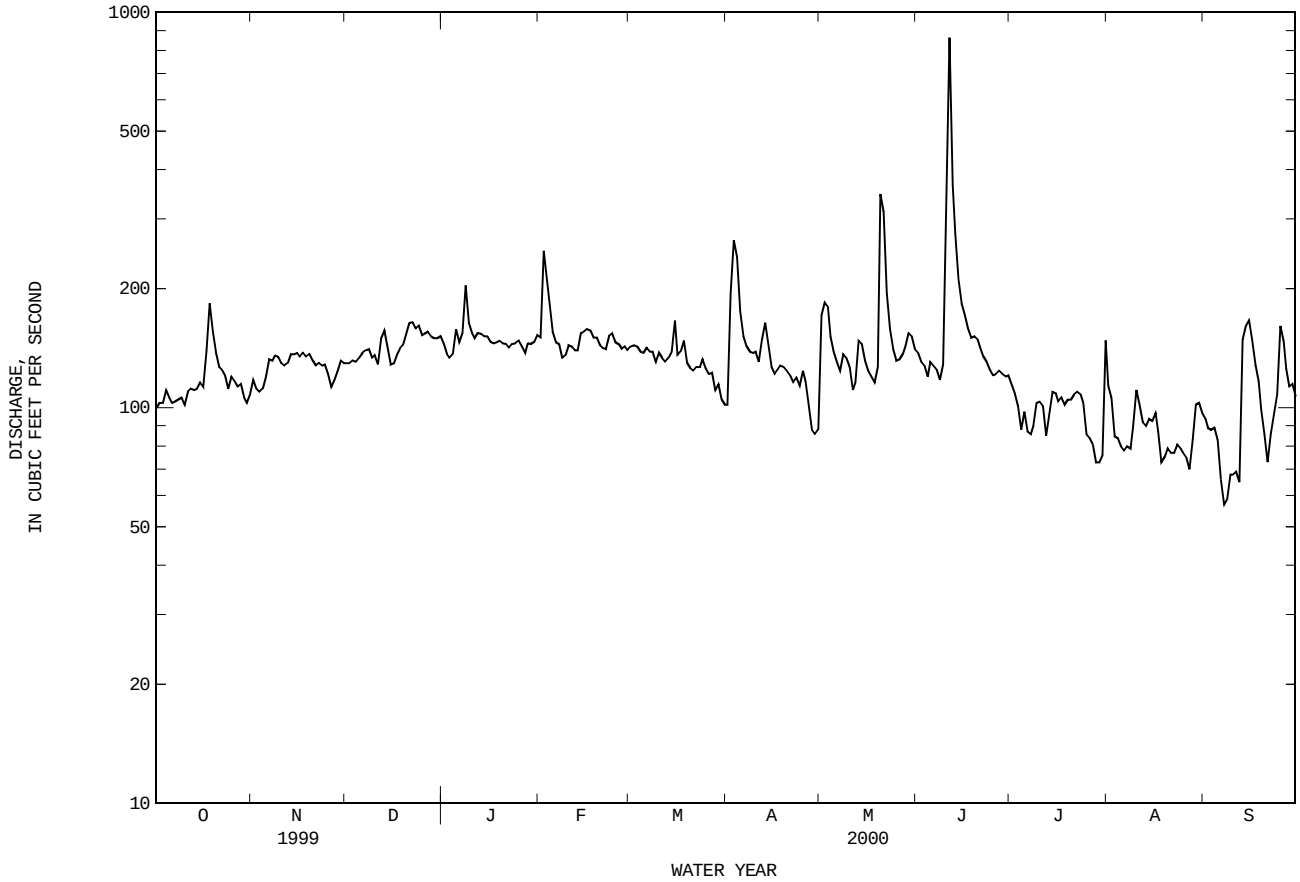
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 2000h, BY WATER YEAR (WY)

MEAN	227	159	153	167	222	180	190	262	401	204	150	181
MAX	2151	835	961	979	2923	2558	1620	2018	7006	3261	1175	1427
(WY)	1999	1977	1992	1968	1992	1992	1992	1992	1987	1973	1978	1973
MIN	7.60	8.50	12.7	5.58	12.7	9.77	6.63	8.71	6.52	6.13	6.40	8.24
(WY)	1956	1956	1955	1957	1953	1956	1956	1953	1956	1954	1952	1954

08181500 MEDINA RIVER AT SAN ANTONIO, TX--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1939 - 2000h	
ANNUAL TOTAL	61549		48301			
ANNUAL MEAN	169		132		208	
HIGHEST ANNUAL MEAN					1218	1992
LOWEST ANNUAL MEAN					14.3	1956
HIGHEST DAILY MEAN	602	Jun 22	862	Jun 11	31300	Oct 18 1998
LOWEST DAILY MEAN	95	Sep 17	57	Sep 7	3.3	Apr 18 1956
ANNUAL SEVEN-DAY MINIMUM	102	Sep 13	65	Sep 6	4.0	Jan 21 1957
INSTANTANEOUS PEAK FLOW			1270	Jun 11	42400	Oct 18 1998
INSTANTANEOUS PEAK STAGE			12.81	Jun 11	49.47	Oct 18 1998
ANNUAL RUNOFF (AC-FT)	122100		95810		150600	
10 PERCENT EXCEEDS	245		157		362	
50 PERCENT EXCEEDS	154		130		96	
90 PERCENT EXCEEDS	109		86		19	

h See PERIOD OF RECORD paragraph.



08181500 MEDINA RIVER AT SAN ANTONIO, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--
CHEMICAL DATA: Jun 1965 to Sep 30, 2000 (discontinued).
BIOCHEMICAL DATA: Jun 1965 to Mar 1998.
PESTICIDE DATA: Apr 1971 to Sep 1981; Dec 1992 to Mar 1998.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Jan 1987 to Sep 30, 2000. (discontinued).
pH: Jan 1987 to Sep 30, 2000 (discontinued).
WATER TEMPERATURE: Jan 1987 to Sep 30, 2000. (discontinued).
DISSOLVED OXYGEN: Jan 1987 to Sep 30, 2000. (discontinued).

INSTRUMENTATION.--Water-quality monitor since Jan 1987. (discontinued).

REMARKS.--Records fair. Interruptions in the record were caused by malfunction of the instrument. Mean monthly and annual concentrations and loads for selected chemical constituents have been computed for previous years using the daily (or continuous) records of specific conductance and regression relationships between each chemical constituent and specific conductance. 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, 1,190 microsiemens, Oct 16, 1996; minimum, 30 microsiemens, Jul 16, 1990.
pH: Maximum, 8.8 units, Dec 4, 5, 1988, Mar 22, 1989; minimum, 7.0 units, Apr 1-3, 1989, Mar 5, 6, 1990.
WATER TEMPERATURE: Maximum, 32.0°C, Jun 11, 1989; minimum, 9.0°C, Jan 11, 1988, Dec 23, 1989.
DISSOLVED OXYGEN: Maximum, 14.3 mg/L, Feb 18, 1997; minimum, 1.4 mg/L, Sep 25, 2000.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 1,040 microsiemens, Oct 18; minimum, 336 microsiemens, Jun 11.
pH: Maximum, 8.6 units, Aug 19; minimum, 7.4 units, Feb 26, Mar 1, 2, 7, 8.
WATER TEMPERATURE: Maximum, 31.1°C, Jul 19; minimum, 12.7°C, Jan 30.
DISSOLVED OXYGEN: Maximum, 11.1 mg/L, Dec 17; minimum, 1.4 mg/L, Sep 25.

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	993	949	973	973	912	946	978	920	948	966	894	927
2	1000	957	978	964	906	938	962	914	940	920	889	903
3	1020	945	988	971	907	944	967	925	946	939	869	909
4	996	941	966	972	909	948	964	924	946	951	888	926
5	1000	939	974	974	912	948	962	907	937	947	886	915
6	1020	962	989	969	928	952	962	902	929	948	889	917
7	1010	959	982	980	916	950	982	902	943	955	900	928
8	1000	966	988	984	920	950	994	946	973	974	752	860
9	988	942	971	962	914	944	988	928	962	878	803	841
10	1000	933	970	984	919	952	968	910	946	870	809	838
11	987	920	955	950	913	932	977	891	944	862	819	845
12	997	942	969	973	888	946	983	916	956	879	834	855
13	1010	948	977	953	914	940	977	918	945	885	826	856
14	1000	946	979	960	905	933	971	911	944	859	802	840
15	1020	978	1000	962	899	931	966	897	940	871	811	846
16	994	951	977	957	909	935	952	899	931	885	805	852
17	1030	920	960	968	917	946	943	891	926	865	796	837
18	1040	874	940	978	921	951	936	881	920	860	804	834
19	890	824	858	956	913	933	929	866	906	864	822	843
20	911	835	891	955	913	938	916	871	900	867	829	850
21	937	889	911	970	898	940	923	891	908	898	838	866
22	940	895	919	960	894	927	948	904	927	878	834	861
23	933	901	919	955	908	932	942	892	921	873	814	850
24	948	855	915	958	905	933	939	890	915	888	843	867
25	958	898	924	972	889	939	925	868	897	881	841	861
26	967	901	943	939	868	911	900	857	881	894	846	871
27	984	930	957	940	876	917	918	872	892	948	846	885
28	986	940	961	958	873	928	929	878	904	929	854	894
29	965	924	946	954	889	920	950	889	923	877	844	863
30	978	909	951	964	898	940	942	899	922	900	842	872
31	964	898	942	---	---	---	941	902	925	876	825	852
MONTH	1040	824	954	984	868	938	994	857	929	974	752	870

08181500 MEDINA RIVER AT SAN ANTONIO, TX--Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	870	802	835	931	884	913	904	841	881	915	773	886
2	850	671	772	937	882	910	912	726	842	826	720	791
3	740	692	717	928	878	908	797	649	722	814	751	782
4	795	738	770	921	868	902	772	725	748	857	799	836
5	830	793	813	918	852	891	828	772	806	903	857	884
6	861	800	832	923	855	887	856	816	840	905	866	887
7	861	805	830	907	859	884	876	813	848	914	862	889
8	867	816	849	906	853	886	896	824	856	904	849	876
9	877	833	858	---	---	e926	903	841	878	917	851	883
10	883	833	861	---	---	e915	893	833	863	897	837	866
11	893	849	870	---	---	e914	885	832	857	872	818	846
12	895	845	874	---	---	e910	875	816	844	876	827	855
13	903	841	877	---	---	e925	846	783	817	859	818	845
14	884	826	853	---	---	e917	837	792	815	874	819	850
15	868	816	846	---	---	e928	874	816	847	866	823	845
16	868	819	844	---	---	e922	888	821	862	885	843	866
17	859	811	842	908	827	880	895	833	866	903	854	878
18	864	800	838	864	791	824	916	864	893	901	852	875
19	851	789	829	867	819	851	934	890	912	907	747	868
20	862	798	838	902	847	873	950	904	927	796	568	648
21	871	810	845	907	856	881	945	909	928	692	576	656
22	896	837	863	912	864	887	939	881	916	761	692	734
23	910	842	891	897	850	876	942	895	919	815	761	795
24	914	845	887	910	852	888	945	902	919	855	799	822
25	902	848	877	885	831	865	953	896	922	864	822	847
26	897	836	875	896	835	872	929	859	898	879	835	860
27	894	834	868	897	836	869	921	868	899	879	838	865
28	885	837	865	890	834	868	917	864	900	855	791	830
29	928	864	903	937	857	899	930	869	907	824	768	800
30	---	---	---	921	850	896	928	870	908	867	779	825
31	---	---	---	923	848	894	---	---	---	869	785	831
MONTH	928	671	846	---	---	892	953	649	868	917	568	833

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	877	815	854	941	892	917	902	829	867	904	859	880
2	887	827	858	938	882	911	923	839	885	885	848	870
3	884	825	854	930	870	901	905	833	875	911	848	877
4	875	830	861	906	834	880	905	824	872	916	863	889
5	899	835	869	916	866	891	900	809	867	928	852	893
6	905	849	877	911	833	878	885	813	861	915	838	872
7	918	863	896	906	842	883	893	821	865	899	848	871
8	945	871	911	901	845	881	894	807	861	896	784	864
9	937	855	900	919	865	895	898	835	876	885	816	851
10	922	377	687	921	851	893	921	854	895	896	839	874
11	547	336	453	939	889	916	923	873	901	888	825	862
12	609	547	572	921	832	891	921	871	901	944	842	890
13	677	602	628	914	821	890	939	867	912	1010	879	934
14	739	677	709	945	889	913	927	852	885	955	773	829
15	811	732	768	942	893	919	955	859	902	803	737	767
16	852	793	828	966	889	932	931	857	888	802	734	770
17	871	813	843	948	887	917	916	856	887	814	759	791
18	873	813	849	972	912	939	903	787	861	822	749	775
19	887	818	857	960	899	932	890	798	847	801	753	777
20	921	847	885	1010	931	969	897	814	871	841	757	801
21	918	854	886	961	907	939	898	819	858	846	779	814
22	916	869	891	962	895	929	908	826	868	831	793	813
23	936	878	905	951	879	920	891	814	855	826	764	795
24	920	874	900	939	879	908	891	822	855	828	765	801
25	933	878	906	958	870	909	897	815	864	833	737	799
26	935	874	903	932	867	905	883	808	856	796	726	764
27	942	894	916	949	883	917	900	785	852	814	733	769
28	946	892	919	931	854	897	867	795	840	827	762	792
29	946	896	921	916	835	887	899	821	867	844	793	818
30	945	889	920	915	796	870	896	841	866	872	818	846
31	---	---	---	1020	825	915	896	834	867	---	---	---
MONTH	946	336	834	1020	796	908	955	785	872	1010	726	832

e Estimated

08181500 MEDINA RIVER AT SAN ANTONIO, TX--Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	8.0	7.9	8.1	7.8	8.0	7.9	8.1	7.8	8.3	8.1	7.6	7.4
2	8.0	7.9	8.2	8.0	7.9	7.8	8.1	7.8	8.3	8.1	7.8	7.4
3	7.9	7.8	8.2	8.1	7.9	7.8	8.2	7.7	8.3	8.1	7.9	7.7
4	7.9	7.8	8.2	8.0	7.8	7.8	8.1	7.8	8.3	8.2	7.9	7.7
5	8.0	7.9	8.2	7.9	8.0	7.8	8.3	7.9	8.2	8.0	7.9	7.6
6	7.9	7.8	8.1	7.9	8.1	7.9	8.3	7.9	8.2	8.0	7.6	7.5
7	8.0	7.8	8.1	7.9	8.1	7.8	8.1	7.8	8.1	7.9	7.6	7.4
8	8.0	7.9	8.0	7.8	7.8	7.7	8.3	7.8	8.1	8.0	7.5	7.4
9	8.0	7.9	8.1	7.9	7.8	7.7	8.3	7.9	8.2	8.0	---	---
10	8.0	7.8	8.1	7.9	8.0	7.7	8.2	7.8	8.1	8.0	---	---
11	8.0	7.8	8.1	7.9	8.0	7.7	8.3	8.1	8.0	7.9	---	---
12	7.9	7.8	8.1	7.8	7.9	7.7	8.3	8.1	8.1	7.9	---	---
13	7.9	7.8	8.1	7.8	7.9	7.7	---	---	8.1	7.9	---	---
14	7.9	7.8	8.0	7.8	8.1	7.8	---	---	8.1	7.9	---	---
15	7.8	7.7	7.9	7.8	8.2	8.1	---	---	8.1	7.9	---	---
16	7.9	7.7	8.0	7.8	8.3	8.1	---	---	---	---	---	---
17	7.9	7.7	7.9	7.8	8.3	8.2	---	---	---	---	7.9	7.7
18	8.0	7.8	8.0	7.8	8.3	8.2	---	---	---	---	7.9	7.8
19	8.1	7.9	7.9	7.8	8.4	8.1	8.2	7.9	---	---	7.9	7.8
20	8.1	8.0	8.0	7.8	8.3	8.1	8.2	8.0	8.1	7.9	7.9	7.7
21	8.1	7.9	8.0	7.8	8.3	8.1	8.2	7.9	8.1	7.8	7.9	7.7
22	8.1	7.9	7.8	7.7	8.3	8.1	8.2	7.9	7.9	7.7	7.9	7.7
23	8.1	8.0	7.8	7.8	8.2	8.0	8.2	7.9	7.8	7.5	7.8	7.6
24	8.2	7.9	8.0	7.8	8.2	8.0	8.2	7.9	7.7	7.6	7.7	7.5
25	8.0	7.9	8.0	7.8	8.2	8.0	8.2	7.9	7.7	7.6	7.9	7.6
26	8.1	7.8	8.2	7.9	8.3	8.1	8.2	8.0	7.7	7.4	8.0	7.6
27	8.0	7.8	8.1	7.9	8.2	8.0	8.2	8.0	7.9	7.5	7.9	7.7
28	8.0	7.9	8.1	7.8	8.2	8.0	8.3	8.1	7.9	7.6	8.0	7.8
29	8.0	7.8	8.0	7.8	8.3	8.0	8.4	8.2	7.7	7.5	8.0	7.9
30	8.1	7.8	7.9	7.8	8.2	7.9	8.3	8.1	---	---	8.1	8.0
31	8.1	7.9	---	---	8.2	7.9	8.3	8.0	---	---	8.1	8.0
MONTH	8.2	7.7	8.2	7.7	8.4	7.7	---	---	---	---	---	---

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	8.1	8.0	8.1	7.9	7.8	7.7	8.1	7.9	8.3	8.1	8.3	8.3
2	8.0	7.9	8.0	7.8	7.8	7.8	8.1	7.9	8.2	8.1	8.4	8.3
3	7.9	7.8	8.0	7.9	7.9	7.8	8.2	8.0	8.3	8.1	8.3	8.2
4	8.0	7.8	8.1	8.0	7.9	7.8	8.2	8.0	8.4	8.2	8.4	8.3
5	8.0	7.9	8.1	8.0	7.9	7.8	8.1	8.0	8.4	8.2	8.3	8.0
6	8.0	7.9	8.0	7.9	7.9	7.8	8.2	8.1	8.5	8.2	8.3	8.1
7	7.9	7.9	8.0	7.8	7.9	7.8	8.1	8.0	8.4	8.2	8.4	8.2
8	8.0	7.9	8.0	7.8	8.0	7.9	8.1	8.0	8.3	8.2	8.5	8.3
9	8.0	7.9	8.0	7.9	7.9	7.8	8.1	7.9	8.3	8.1	8.4	8.3
10	8.0	7.9	8.1	7.9	8.0	7.8	8.1	8.0	8.3	8.1	8.3	8.2
11	8.0	8.0	8.1	8.0	7.9	7.7	8.0	7.8	8.3	8.2	8.3	8.2
12	8.0	7.9	8.1	8.0	7.9	7.8	8.0	7.9	8.5	8.3	8.3	8.1
13	8.1	7.9	8.1	7.9	7.9	7.8	8.1	8.0	8.5	8.3	8.3	7.8
14	8.1	8.0	8.1	7.9	7.8	7.8	8.0	7.9	8.4	8.2	8.2	7.9
15	8.1	8.0	8.1	7.9	8.0	7.8	8.1	8.0	8.3	8.2	8.1	8.0
16	8.1	8.0	8.1	7.9	7.9	7.8	8.1	7.9	8.4	8.2	8.2	8.1
17	8.0	7.9	8.1	8.0	7.9	7.8	8.0	7.9	8.4	8.3	8.3	8.1
18	8.0	7.9	8.1	8.0	8.0	7.8	8.0	7.8	8.5	8.4	8.2	8.1
19	8.0	7.9	8.1	8.0	7.9	7.8	7.9	7.7	8.6	8.5	8.2	8.1
20	8.0	7.9	8.1	7.8	7.9	7.7	7.9	7.6	8.5	8.3	8.3	8.1
21	8.1	7.9	8.0	7.8	8.0	7.8	7.8	7.6	8.4	8.3	8.2	8.0
22	8.1	7.9	8.0	7.9	8.0	7.9	7.9	7.8	8.4	8.2	8.2	8.1
23	8.1	7.9	8.0	7.7	8.0	7.9	7.9	7.7	8.4	8.3	8.1	8.0
24	8.1	7.9	7.7	7.7	8.1	7.9	7.9	7.8	8.4	8.3	8.1	7.9
25	8.0	7.8	7.7	7.7	8.1	7.9	8.0	7.9	8.5	8.4	8.1	8.0
26	8.0	7.8	7.7	7.7	8.1	7.9	8.1	7.9	8.5	8.4	8.2	8.1
27	8.1	8.0	7.8	7.7	8.0	7.9	8.1	8.0	8.5	8.2	8.3	8.1
28	8.1	8.0	7.8	7.7	8.0	7.9	8.1	7.9	8.3	8.1	8.3	8.1
29	8.1	7.9	7.8	7.7	8.0	7.9	8.1	7.9	8.1	8.0	8.4	8.2
30	8.1	7.9	7.8	7.7	8.1	7.9	8.4	8.0	8.2	8.0	8.4	8.2
31	---	---	7.8	7.7	---	---	8.2	7.9	8.3	8.2	---	---
MONTH	8.1	7.8	8.1	7.7	8.1	7.7	8.4	7.6	8.6	8.0	8.5	7.8

08181500 MEDINA RIVER AT SAN ANTONIO, TX--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	25.5	23.9	24.5	21.6	20.4	21.1	19.9	18.2	19.0	18.7	16.6	17.3
2	26.2	24.1	24.9	21.3	19.5	20.5	20.9	19.4	20.0	19.7	17.9	18.7
3	26.9	25.7	26.1	19.6	17.9	18.8	21.5	20.1	20.7	19.7	17.0	18.7
4	26.9	25.8	26.3	20.2	18.1	19.0	21.4	20.4	21.1	18.6	15.8	17.0
5	26.6	25.3	25.8	22.0	19.6	20.5	20.9	17.9	19.1	16.0	13.7	15.1
6	26.5	25.3	25.8	22.7	21.2	21.7	18.9	16.2	17.3	17.0	14.9	15.7
7	26.0	24.7	25.3	22.7	21.5	22.1	18.1	16.0	17.0	17.6	15.8	17.0
8	26.3	24.8	25.4	22.4	21.0	21.7	20.0	18.1	18.8	18.4	15.5	16.3
9	26.2	24.9	25.5	22.1	20.9	21.4	19.7	18.6	19.3	18.0	16.0	16.7
10	25.9	24.4	25.0	22.3	21.0	21.6	18.9	16.4	17.7	17.8	16.0	16.8
11	25.8	24.6	25.1	23.0	21.2	21.7	20.1	16.1	17.5	17.8	16.1	16.8
12	26.1	24.9	25.3	22.7	20.8	22.0	20.1	18.0	19.2	19.2	17.3	18.3
13	26.0	25.0	25.4	22.6	21.1	21.7	19.3	16.8	17.8	19.5	18.5	18.9
14	26.4	25.2	25.6	22.3	20.5	21.3	17.4	15.3	16.5	19.0	17.2	18.1
15	26.5	25.6	25.9	21.8	20.2	20.9	16.4	14.1	15.4	19.4	17.5	18.1
16	26.9	25.7	26.1	21.6	20.0	20.7	15.3	13.1	14.4	20.0	18.1	18.7
17	26.7	23.7	25.2	22.2	20.3	21.1	15.5	13.2	14.3	20.6	19.1	19.6
18	23.7	20.8	21.8	22.4	21.1	21.6	16.0	13.3	14.6	20.7	19.4	20.0
19	21.2	20.0	20.8	23.0	21.9	22.4	16.0	12.9	14.3	20.6	19.4	19.8
20	20.6	19.7	20.2	22.6	21.2	21.9	16.0	13.3	15.0	20.2	18.5	19.2
21	20.7	19.8	20.2	22.9	21.3	21.9	15.8	14.0	15.1	18.9	17.3	18.2
22	21.9	20.1	20.8	23.3	22.2	22.7	16.0	13.8	14.8	20.0	18.5	18.8
23	22.1	20.4	21.0	23.3	22.0	22.7	16.6	14.3	15.4	20.0	18.5	19.1
24	22.0	19.0	20.6	22.0	19.3	20.5	17.5	15.1	16.0	19.9	18.0	18.7
25	21.9	20.2	21.0	20.0	17.5	18.9	17.5	15.4	16.4	18.6	17.1	17.8
26	22.1	20.5	21.3	19.0	15.8	17.2	17.7	15.4	16.2	17.9	15.7	16.9
27	22.5	20.9	21.5	19.5	16.4	17.5	18.3	16.7	17.5	16.8	15.3	16.3
28	23.2	21.8	22.3	20.1	16.9	18.6	18.3	16.0	17.1	16.1	14.1	15.2
29	23.6	21.9	22.5	20.1	18.4	19.3	17.9	16.3	17.0	15.3	13.3	14.2
30	23.5	21.3	22.5	19.6	18.5	19.2	18.3	16.4	17.2	15.2	12.7	13.9
31	22.1	19.8	20.8	---	---	---	18.2	16.2	17.2	15.2	13.2	14.5
MONTH	26.9	19.0	23.6	23.3	15.8	20.7	21.5	12.9	17.1	20.7	12.7	17.4

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	15.7	14.2	15.2	22.5	21.5	21.9	23.2	22.1	22.5	25.8	23.6	24.5
2	15.8	12.9	14.2	23.3	21.9	22.4	23.1	20.2	21.7	24.3	23.1	23.6
3	15.7	13.5	14.3	22.9	21.9	22.4	21.3	20.0	20.6	25.0	23.0	23.8
4	16.0	14.7	15.2	21.9	20.1	21.0	21.2	19.3	20.2	25.8	24.3	24.9
5	16.1	14.3	15.0	21.3	20.0	20.5	22.1	19.6	20.7	26.4	25.0	25.5
6	16.8	14.2	15.0	21.8	20.9	21.2	23.4	20.7	21.7	27.3	25.4	26.2
7	17.9	16.1	16.8	22.8	21.2	21.9	24.5	22.2	23.0	27.6	25.8	26.7
8	18.5	16.6	17.3	22.7	22.0	22.3	24.0	21.6	22.5	27.8	26.2	26.8
9	19.5	17.8	18.3	---	---	---	22.3	20.2	21.2	27.0	26.1	26.5
10	20.6	19.0	19.5	---	---	---	21.9	21.0	21.4	27.5	26.2	26.7
11	21.0	19.5	20.1	---	---	---	22.4	21.1	21.7	28.3	26.3	27.1
12	20.4	19.1	19.7	---	---	---	22.6	21.4	21.9	28.9	26.8	27.7
13	21.3	20.0	20.5	---	---	---	22.8	21.1	21.7	27.9	26.2	26.8
14	20.9	19.1	19.9	---	---	---	22.9	21.3	21.9	26.4	25.1	25.5
15	21.8	19.8	20.6	---	---	---	23.4	21.8	22.3	26.5	24.7	25.5
16	22.3	21.2	21.6	---	---	---	24.4	22.6	23.3	28.1	25.6	26.6
17	22.6	21.7	22.0	21.8	18.2	19.6	24.7	23.5	23.9	27.8	26.1	26.9
18	23.2	22.1	22.5	19.7	17.7	18.2	25.0	24.1	24.4	27.8	26.5	27.1
19	22.4	19.9	20.7	20.0	18.5	19.3	26.3	24.3	25.1	28.3	26.0	27.3
20	20.3	19.2	19.6	20.4	18.5	19.4	26.4	25.0	25.5	26.1	23.7	24.6
21	21.1	19.5	20.1	21.9	20.0	20.7	25.4	23.3	24.4	26.3	23.7	25.0
22	21.3	20.3	20.8	23.2	21.8	22.3	24.7	22.8	23.7	27.5	25.2	26.2
23	22.8	20.8	21.6	22.8	22.0	22.4	26.3	23.4	24.9	28.6	26.3	27.2
24	22.7	21.6	22.0	24.5	22.5	23.3	26.2	23.8	24.9	29.3	26.9	28.0
25	23.1	21.9	22.4	24.5	23.1	23.7	25.9	23.9	24.9	29.0	27.6	28.3
26	22.9	21.9	22.5	24.7	23.5	24.0	25.8	24.0	24.9	28.5	27.6	28.1
27	21.9	19.7	20.6	25.2	23.9	24.5	26.4	24.1	25.1	28.9	27.5	28.1
28	21.2	19.2	20.1	25.3	23.9	24.5	26.1	25.0	25.5	28.3	26.7	27.6
29	22.0	20.7	21.1	26.0	24.6	25.2	26.3	25.0	25.6	28.8	26.9	27.8
30	---	---	---	24.7	23.2	23.9	26.1	25.1	25.6	29.3	27.2	28.2
31	---	---	---	23.6	22.2	22.7	---	---	---	29.2	27.4	28.2
MONTH	23.2	12.9	19.3	---	---	---	26.4	19.3	23.2	29.3	23.0	26.5

08181500 MEDINA RIVER AT SAN ANTONIO, TX--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	29.3	27.4	28.2	30.3	28.3	29.2	29.2	27.7	28.5	30.5	28.7	29.5
2	29.1	27.4	28.2	29.8	28.1	28.9	29.7	27.7	28.7	30.9	28.7	29.8
3	29.1	27.6	28.3	30.0	28.0	28.9	29.9	27.8	28.8	30.7	28.8	29.8
4	28.6	27.3	28.0	29.9	27.9	28.9	29.8	28.1	29.0	30.6	28.5	29.6
5	27.8	26.9	27.3	29.8	27.6	28.7	29.8	28.1	29.0	30.5	28.5	29.6
6	28.4	26.3	27.3	29.7	27.6	28.7	30.0	28.2	29.1	30.0	28.4	29.2
7	28.2	26.3	27.2	29.9	27.9	28.9	30.3	28.4	29.4	30.1	27.4	28.3
8	27.5	25.9	26.6	30.5	28.0	29.2	30.1	27.9	29.2	29.2	27.5	28.2
9	27.1	26.3	26.6	30.0	28.1	29.0	30.4	28.4	29.3	29.6	27.7	28.5
10	26.6	24.7	25.7	30.1	28.2	29.1	30.6	28.7	29.5	29.4	28.1	28.6
11	25.7	24.5	25.0	30.6	28.3	29.4	30.7	28.3	29.5	30.1	28.3	29.2
12	26.4	25.4	25.8	30.7	28.3	29.5	30.6	28.2	29.4	30.4	28.6	29.3
13	27.2	25.8	26.4	30.8	28.2	29.5	30.5	28.3	29.4	29.9	28.2	29.0
14	27.8	26.5	27.0	30.9	28.4	29.6	30.4	28.5	29.4	29.0	27.9	28.4
15	28.5	26.9	27.5	30.9	28.3	29.5	29.6	28.6	29.0	29.1	28.0	28.5
16	28.8	27.0	27.8	30.8	28.4	29.6	30.2	28.2	29.1	28.7	27.6	28.2
17	29.4	27.3	28.1	30.7	28.4	29.5	30.4	28.6	29.5	28.0	26.0	27.0
18	28.5	27.6	28.0	30.8	28.3	29.5	30.0	28.1	29.1	27.1	25.5	26.3
19	29.2	27.2	28.1	31.1	28.6	29.7	29.6	27.9	28.9	27.5	25.6	26.4
20	29.2	27.5	28.3	30.9	28.6	29.7	29.9	28.0	29.0	27.8	26.2	26.9
21	29.5	27.6	28.5	30.9	28.4	29.6	29.9	28.2	29.1	28.3	27.2	27.6
22	29.4	27.7	28.6	30.7	28.4	29.5	29.4	28.1	28.7	29.5	27.4	28.3
23	30.1	27.9	28.9	30.8	28.5	29.6	29.5	27.6	28.5	29.4	28.3	28.8
24	29.7	27.7	28.7	30.8	28.3	29.5	29.8	27.9	28.8	29.4	28.2	28.9
25	30.0	27.7	28.8	30.6	28.5	29.6	29.9	28.2	29.0	28.2	25.1	26.5
26	29.7	27.9	28.7	30.3	28.5	29.5	30.1	28.1	29.1	25.1	23.6	24.3
27	30.1	28.0	28.9	30.4	28.6	29.6	30.0	28.2	29.0	24.7	23.2	23.9
28	30.0	28.0	28.9	30.3	28.3	29.4	30.4	28.5	29.4	25.0	23.3	23.8
29	30.1	27.9	28.9	30.9	27.2	29.0	30.4	28.8	29.6	25.1	23.5	24.0
30	30.2	27.9	29.0	30.3	26.7	28.9	30.9	28.8	29.7	25.1	23.2	24.0
31	---	---	---	29.4	28.3	28.9	30.8	28.6	29.6	---	---	---
MONTH	30.2	24.5	27.8	31.1	26.7	29.3	30.9	27.6	29.1	30.9	23.2	27.7

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	---	---	---	8.5	6.5	7.5	8.2	7.3	7.9	8.6	5.9	7.3
2	---	---	---	9.3	7.2	8.2	8.4	4.9	6.9	8.2	6.3	7.2
3	---	---	---	10.1	8.2	8.9	6.7	3.9	5.3	8.1	5.8	6.8
4	7.4	6.8	7.1	9.8	7.7	8.7	5.9	3.8	5.0	8.3	6.1	7.0
5	8.0	6.9	7.3	9.5	7.3	8.3	8.2	4.9	6.8	9.7	7.0	8.0
6	7.7	7.0	7.3	8.4	6.7	7.5	9.4	7.4	8.5	8.9	6.5	7.4
7	7.5	6.8	7.1	8.7	6.5	7.5	8.9	6.4	7.7	---	---	---
8	7.7	6.8	7.1	8.4	6.2	7.0	8.1	6.1	7.2	---	---	---
9	7.6	6.6	7.1	8.7	7.1	8.0	7.9	6.6	7.2	---	---	---
10	7.8	6.6	7.3	9.0	7.2	7.8	8.9	6.9	7.6	---	---	---
11	8.4	7.1	7.7	8.2	6.4	7.3	8.8	6.8	7.7	---	---	---
12	7.9	7.0	7.3	7.8	5.7	6.7	7.2	5.9	6.3	---	---	---
13	7.7	6.3	7.1	8.8	6.6	7.5	7.4	6.1	6.6	---	---	---
14	7.6	6.1	6.8	8.7	6.5	7.5	8.3	6.5	7.2	---	---	---
15	---	---	---	8.0	5.8	6.8	9.2	7.3	8.0	---	---	---
16	---	---	---	8.5	6.3	7.2	10.7	7.8	8.8	---	---	---
17	---	---	---	8.2	6.1	7.2	11.1	8.5	9.6	---	---	---
18	---	---	---	8.3	6.3	7.0	10.4	8.0	9.3	---	---	---
19	9.0	8.0	8.4	7.2	6.1	6.7	10.8	8.0	9.5	---	---	---
20	9.0	7.6	8.5	8.3	6.3	7.2	9.6	7.9	8.4	---	---	---
21	8.4	7.1	7.8	7.9	6.2	7.2	9.9	7.8	8.7	---	---	---
22	8.6	6.6	7.4	7.1	5.6	6.1	10.9	8.7	9.5	---	---	---
23	9.7	8.5	9.1	6.4	5.4	5.9	9.8	7.7	8.9	---	---	---
24	10.1	8.6	9.1	8.1	6.3	7.2	8.9	7.1	8.3	5.7	4.6	5.1
25	9.0	6.7	8.0	7.5	5.4	6.4	9.9	8.3	9.0	6.1	4.9	5.4
26	7.8	5.6	6.7	9.3	5.8	7.5	10.4	8.3	9.3	6.1	5.3	5.6
27	7.2	5.5	6.4	8.3	5.9	7.2	9.4	7.8	8.7	6.2	5.4	5.8
28	7.1	6.1	6.5	8.0	5.6	6.7	9.5	7.5	8.4	7.3	6.0	6.5
29	7.7	5.6	6.7	8.0	5.1	6.9	9.5	7.6	8.4	7.9	6.5	7.0
30	7.7	6.1	6.8	7.3	5.1	6.3	9.4	6.9	8.2	7.5	6.2	6.7
31	8.8	6.9	7.7	---	---	---	9.1	7.1	7.8	7.2	5.8	6.5
MONTH	---	---	---	10.1	5.1	7.3	11.1	3.8	8.0	---	---	---

08181500 MEDINA RIVER AT SAN ANTONIO, TX--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	5.8	5.2	5.5	6.2	5.0	5.4	4.2	3.6	3.9	4.9	4.2	4.5
2	5.7	5.0	5.4	6.0	4.7	5.3	4.2	3.3	3.7	5.0	4.3	4.6
3	5.8	5.0	5.4	6.0	4.6	5.2	4.5	3.3	3.9	4.4	3.8	4.1
4	6.1	5.0	5.6	5.7	4.6	5.1	4.8	3.4	4.2	4.9	3.9	4.3
5	6.2	5.5	5.8	5.2	4.1	4.7	5.1	4.2	4.5	4.8	3.4	4.0
6	6.4	5.6	6.0	5.5	4.5	4.9	4.8	3.8	4.4	4.3	3.2	3.8
7	6.4	5.7	5.9	5.3	4.4	4.8	4.6	3.6	4.1	4.2	3.7	3.9
8	6.4	5.6	6.0	5.6	4.4	4.9	---	---	---	5.1	3.9	4.4
9	6.0	4.9	5.7	5.5	4.2	4.8	---	---	---	5.0	4.2	4.6
10	6.4	5.6	5.9	5.2	4.3	4.7	---	---	---	5.0	3.9	4.2
11	6.2	5.3	5.9	4.7	3.8	4.2	---	---	---	4.3	3.6	3.9
12	6.2	5.9	6.0	5.5	4.0	4.6	---	---	---	4.1	3.2	3.7
13	6.3	5.9	6.1	5.0	4.3	4.5	5.1	3.7	4.3	4.0	3.2	3.6
14	6.4	5.8	6.0	5.4	3.9	4.6	4.4	3.9	4.2	4.2	3.3	3.9
15	6.2	5.3	5.8	5.1	4.1	4.5	4.6	3.4	3.8	4.2	3.7	4.0
16	5.5	4.8	5.3	---	---	---	4.9	3.9	4.4	4.2	3.3	3.8
17	5.1	4.3	4.7	---	---	---	4.9	4.2	4.5	4.0	2.8	3.4
18	5.3	3.8	4.6	---	---	---	5.2	4.3	4.7	4.2	2.7	3.4
19	5.3	4.1	4.8	---	---	---	5.2	4.4	4.8	4.2	2.8	3.6
20	5.3	4.2	4.8	---	---	---	5.2	4.2	4.6	4.4	3.0	4.0
21	5.5	4.6	5.0	---	---	---	4.7	4.2	4.4	4.0	2.4	3.3
22	5.6	4.6	5.1	---	---	---	4.6	3.7	4.2	4.2	2.9	3.5
23	5.7	4.6	5.3	---	---	---	5.0	4.0	4.4	4.2	3.1	3.7
24	6.0	5.0	5.4	---	---	---	4.9	3.9	4.4	3.7	2.4	3.1
25	5.9	4.7	5.3	---	---	---	5.1	4.0	4.5	3.7	1.4	2.5
26	5.6	4.8	5.2	---	---	---	5.1	4.2	4.6	4.2	3.0	3.5
27	5.5	4.3	5.0	---	---	---	4.5	3.8	4.2	4.5	2.9	3.9
28	5.7	4.6	5.0	---	---	---	4.3	3.1	3.8	4.9	2.8	4.0
29	6.2	4.6	5.3	---	---	---	3.7	2.8	3.3	5.2	3.9	4.7
30	6.1	5.0	5.4	5.2	2.9	4.0	4.2	2.9	3.6	5.5	4.4	5.0
31	---	---	---	4.5	3.8	4.2	4.7	4.0	4.3	---	---	---
MONTH	6.4	3.8	5.4	---	---	---	---	---	---	5.5	1.4	3.9

08181800 SAN ANTONIO RIVER NEAR ELMENDORF, TX

LOCATION.--Lat 29°13'19", long 98°21'20", Bexar County, Hydrologic Unit 12100301, at downstream side of bridge on Farm Road 1604, 2.7 mi southwest of Elmendorf, 3.3 mi downstream from Braunig Plant Lake, and 203.0 mi upstream from mouth.

DRAINAGE AREA.--1,743 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Sep 1962 to current year.

GAGE.--Water-stage recorder. Datum of gage is 380.00 ft above sea level. Sep 12, 1962 to Dec 19, 1980, at site 2.5 mi upstream at different datum; Dec 19, 1980 to Dec 23, 1986, at current site and datum; Dec 24, 1986 to Jun 15, 1993, at site 2.8 mi upstream at different datum. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records fair. Since installation of gage in water year 1962, at least 10% of contributing drainage area has been regulated by Medina Lake (station 08179500, conservaiton pool storage 254,843 acre-ft) and by Olmos flood-control reservoir (combined capacity, 269,500 acre-ft). Additional regulation since 1973 by eleven Soil Conservation Service floodwater-retarding structures (combined capacity of 26,770 acre-ft). Storage began in Medina Lake in 1913, and Olmos Dam was completed in 1926. Water is diverted above station from Medina River for irrigation in the vicinity of Devine and Lytle, with some water diverted for irrigation near San Antonio. During the current year, the city of San Antonio discharged 135,200 acre-ft of wastewater effluent into the San Antonio River above the station from their Leon Creek, Salado Creek, Dos Rios and Mitchell plants. The San Antonio City Public Service Board pumped 5,796 acre-ft into Braunig Lake and 20,380 acre-ft into Calaveras Lake upstream from this station and released 120 acre-ft from Braunig Lake and made no releases from Calaveras Lake upstream from this station. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water-quality data.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1900, 61 ft in 1946. Second highest stage was 53 ft in 1913, from information by local residents at site and datum in use prior to Dec 19, 1980.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

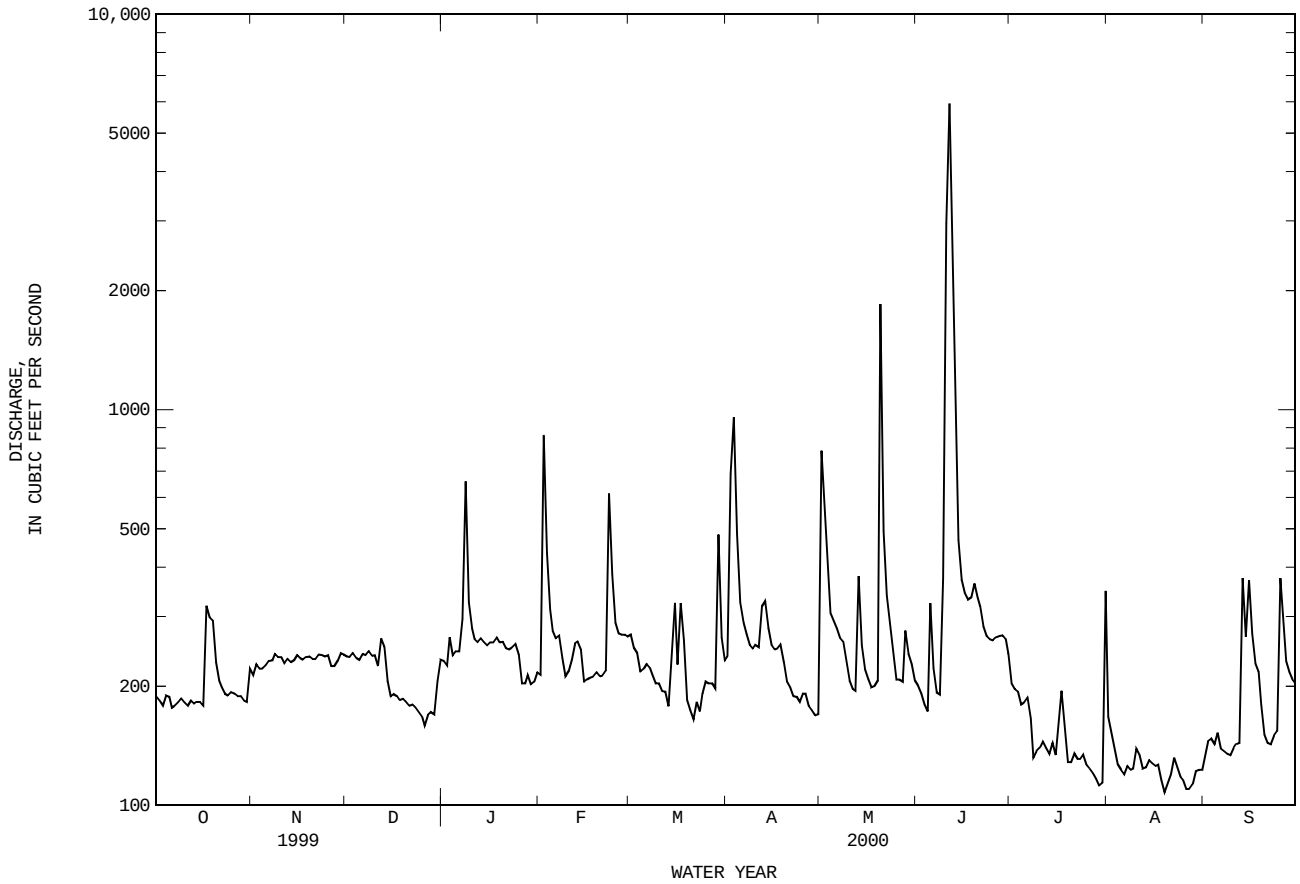
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	188	214	238	232	214	270	237	787	201	204	168	135
2	184	228	237	226	861	250	688	607	192	197	152	145
3	179	222	243	266	435	243	958	438	180	194	138	147
4	190	222	236	239	313	218	485	307	173	180	127	143
5	188	226	234	245	276	221	326	294	325	182	123	153
6	177	232	242	245	264	228	291	281	222	187	120	139
7	179	233	240	296	268	223	271	265	193	166	126	137
8	182	242	245	658	236	214	255	260	191	132	123	135
9	186	237	239	326	212	204	249	232	374	137	124	134
10	182	237	240	281	219	204	255	207	2960	140	139	140
11	179	229	225	263	234	195	252	197	5940	145	134	143
12	184	235	264	259	257	194	318	195	2150	140	124	144
13	181	230	252	264	260	178	328	379	1130	135	125	376
14	183	233	207	259	248	245	282	254	467	144	130	266
15	183	240	188	254	205	325	255	221	372	134	128	371
16	179	236	191	259	208	227	248	209	344	161	126	271
17	320	234	189	259	211	324	250	199	332	195	127	229
18	299	237	185	265	212	261	255	201	336	161	116	218
19	294	238	186	259	217	185	231	207	364	129	108	180
20	230	235	183	260	212	174	206	1850	336	129	114	151
21	207	235	179	250	213	165	199	493	318	135	120	144
22	199	241	180	248	219	183	189	339	284	131	132	143
23	192	240	177	251	615	173	188	286	268	131	125	150
24	190	238	172	256	384	192	183	246	263	134	118	154
25	193	240	168	241	290	206	192	208	261	127	116	375
26	192	225	159	204	272	204	192	208	266	124	110	283
27	189	225	169	204	270	204	179	206	268	121	110	232
28	189	232	172	214	270	198	174	277	269	117	113	218
29	184	243	170	202	267	483	169	242	263	112	122	208
30	183	241	206	205	---	265	170	228	242	114	123	203
31	222	---	234	217	---	232	---	207	---	348	123	---
TOTAL	6207	7000	6450	8107	8362	7088	8475	10530	19484	4786	3884	5867
MEAN	200	233	208	262	288	229	282	340	649	154	125	196
MAX	320	243	264	658	861	483	958	1850	5940	348	168	376
MIN	177	214	159	202	205	165	169	195	173	112	108	134
AC-FT	12310	13880	12790	16080	16590	14060	16810	20890	38650	9490	7700	11640

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 2000, BY WATER YEAR (WY)

MEAN	581	447	452	487	556	491	508	733	967	491	390	461
MAX	4507	1255	2176	2191	3803	3031	1997	3293	8527	3764	1760	2761
(WY)	1999	1977	1992	1968	1992	1992	1992	1992	1987	1973	1978	1973
MIN	127	153	160	168	146	143	150	130	88.6	81.9	52.8	120
(WY)	1997	1967	1971	1967	1967	1971	1967	1967	1967	1964	1963	1989

08181800 SAN ANTONIO RIVER NEAR ELMENDORF, TX--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1962 - 2000	
ANNUAL TOTAL	118454		96240			
ANNUAL MEAN	325		263		546	
HIGHEST ANNUAL MEAN					1784	1992
LOWEST ANNUAL MEAN					166	1963
HIGHEST DAILY MEAN	2630	Mar 28	5940	Jun 11	59100	Oct 18 1998
LOWEST DAILY MEAN	121	Aug 21	108	Aug 19	25	Aug 26 1963
ANNUAL SEVEN-DAY MINIMUM	133	Aug 12	116	Aug 24	42	Aug 21 1963
INSTANTANEOUS PEAK FLOW			7500	Jun 11	75100	Oct 18 1998
INSTANTANEOUS PEAK STAGE			36.12	Jun 11	64.22	Oct 18 1998
ANNUAL RUNOFF (AC-FT)	235000		190900		395900	
10 PERCENT EXCEEDS	505		325		966	
50 PERCENT EXCEEDS	272		217		312	
90 PERCENT EXCEEDS	167		132		146	



08181800 SAN ANTONIO RIVER NEAR ELMENDORF, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--
CHEMICAL DATA: Sep 1964 to current year.
BIOCHEMICAL DATA: Jan 1968 to current year.
PESTICIDE DATA: Jan 1968 to Sep 1981; Dec 1992 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Oct 1966 to current year.
pH: Jun 1984 to current year.
WATER TEMPERATURE: Oct 1966 to current year.
DISSOLVED OXYGEN: Jun 1984 to current year.

INSTRUMENTATION.--Water-quality monitor since Jun 1984.

REMARKS.--Records good. Interruptions in the record were caused by malfunctions of the instrument. Mean monthly and annual concentrations and loads for selected chemical constituents have been computed for previous years using the daily (or continuous) records of specific conductance and regression relationships between each chemical constituent and specific conductance. 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, 1,240 microsiemens, Jan 29, 1973, Aug 8, 1975; minimum, 102 microsiemens, Oct 17, 1999.
pH: Maximum, 9.0 units, Jun 16, 17, 1993; minimum, 7.0 units, Oct 25 and 28, 1988, Jan 11, 1989.
WATER TEMPERATURE: Maximum, 33.5°C, Jun 19, 20, Sep 2, 1996; minimum daily, 5.5°C, Jan 10, 1973.
DISSOLVED OXYGEN: Maximum, 13.2 mg/L, Feb 4, 1996; minimum, 0.0 mg/L, Mar 2, Apr 14, 15, 1985.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 1,050 microsiemens, Sep 13; minimum, 153 microsiemens, Jun 10.
pH: Maximum, 8.5 units, Aug 27, 28; minimum, 7.3 units, May 1, Sep 13.
WATER TEMPERATURE: Maximum, 33.2°C, May 24; minimum, 12.8°C, Feb 2.
DISSOLVED OXYGEN: Maximum, 10.2 mg/L, Jan 5; minimum, 2.1 mg/L, Jul 31.

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

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	OXYGEN, DIS-SOLVED (MG/L) (00300)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)
OCT											
14...	0800	193	999	8.0	26.2	6.3	280	100	80	18	84
NOV											
23...	0815	249	991	8.1	23.9	6.3	290	120	85	18	79
DEC											
27...	0830	180	943	8.2	18.4	8.8	280	110	82	19	78
JAN											
20...	0845	264	961	7.4	20.2	8.6	270	43	81	18	85
FEB											
22...	0915	226	940	8.0	21.0	7.7	270	62	80	17	76
MAR											
24...	0845	177	960	7.8	23.7	6.1	280	69	82	17	81
APR											
24...	0800	190	990	8.0	23.3	6.4	280	67	81	18	80
MAY											
19...	0900	205	967	8.1	26.9	6.3	270	63	80	18	84
JUN											
27...	1100	265	881	8.0	29.1	5.3	260	74	78	17	74
AUG											
07...	0915	135	925	8.2	28.7	5.6	280	82	81	18	81
28...	0930	125	934	8.1	29.0	5.9	260	80	76	17	84
SEP											
13...	1015	685	980	8.1	29.6	5.3	260	70	73	17	84

08181800 SAN ANTONIO RIVER NEAR ELMENDORF, TX--Continued

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

DATE	SODIUM AD-SORP-TION RATIO (00931)	SODIUM PERCENT (00932)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY WAT DIS FIX END FIELD CAC03 (MG/L) (39036)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)
OCT											
14...	2	39	11	170	66	110	.61	15	596	554	13.2
NOV											
23...	2	37	8.9	170	69	110	.80	14	586	543	12.7
DEC											
27...	2	37	7.9	170	70	96	.69	12	564	519	11.2
JAN											
20...	2	39	9.4	230	74	100	.74	13	590	576	11.2
FEB											
22...	2	37	8.2	210	74	99	.60	13	570	539	9.97
MAR											
24...	2	38	9.8	210	79	100	.69	14	573	556	9.60
APR											
24...	2	38	11	210	77	110	1.2	13	580	567	10.3
MAY											
19...	2	39	8.9	210	71	110	.73	14	580	563	10.6
JUN											
27...	2	37	9.3	190	73	99	.57	13	563	536	12.4
AUG											
07...	2	38	9.4	190	67	99	.58	16	567	545	12.1
28...	2	40	10	180	66	110	.59	15	563	544	13.0
SEP											
13...	2	40	11	180	69	120	.43	12	530	518	4.84

DATE	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, TOTAL (MG/L AS N) (00600)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N) (00607)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)
OCT											
14...	.055	13.3	.053	14	.59	.60	.65	.65	2.23	2.28	1.80
NOV											
23...	.037	12.7	.062	14	.80	.61	.67	.86	1.62	1.53	1.27
DEC											
27...	.012	11.2	<.020	12	--	--	.51	.62	.936	.011	.815
JAN											
20...	.207	11.4	.165	12	.78	.62	.79	.95	--	.705	.623
FEB											
22...	.050	10.0	.055	12	2.1	.52	.57	2.2	.443	.536	.469
MAR											
24...	.116	9.72	.078	10	.64	.69	.77	.71	.732	.724	.699
APR											
24...	.057	10.4	.053	11	.75	.55	.60	.80	1.25	1.15	1.11
MAY											
19...	.121	10.8	.253	12	.86	.67	.93	1.1	1.41	1.36	1.18
JUN											
27...	.054	12.5	.035	13	.77	.63	.67	.80	1.25	1.28	1.13
AUG											
07...	.029	12.2	.039	13	.76	.59	.63	.80	1.34	1.29	1.18
28...	.020	13.0	.042	14	.80	.78	.82	.84	1.37	1.42	1.14
SEP											
13...	.033	4.88	.097	7.6	2.6	.60	.70	2.7	1.38	.474	.426

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

DATE	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4) (00660)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	2,6-DI-ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	ACETO-CHLOR, WATER FLTRD REC (UG/L) (49260)	ALA-CHLOR, WATER, DISS, REC, (UG/L) (46342)	ALPHA BHC DIS-SOLVED (UG/L) (34253)	ATRA-ZINE, WATER, DISS, REC (UG/L) (39632)	METHYL AZIN-PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)
OCT											
14...	5.5	17	32	E9.8	2.5	<.0030	<.0020	<.002	<.0020	.013	<.0010
NOV											
23...	3.9	25	37	12	3.6	<.0030	<.0020	<.002	<.0020	.012	<.0010
DEC											
27...	2.5	31	64	11	4.8	<.0030	<.0020	<.002	<.0020	.008	<.0010
JAN											
20...	1.9	24	33	17	5.3	<.0030	<.0020	<.002	<.0020	.012	<.0010
FEB											
22...	1.4	20	32	14	6.7	<.0030	<.0020	<.002	<.0020	.025	<.0010
MAR											
24...	2.1	14	29	19	6.0	<.0030	<.0020	<.002	<.0020	.103	<.0010
APR											
24...	3.4	16	31	12	4.3	<.0030	<.0020	<.002	<.0020	.088	<.0010
MAY											
19...	3.6	16	29	15	4.0	<.0030	<.0020	<.002	<.0020	.037	<.0010
JUN											
27...	3.5	22	31	E5.0	4.9	<.0030	<.0020	<.002	<.0020	.024	<.0010
AUG											
07...	3.6	14	39	E7.4	4.2	<.0030	<.0020	<.002	<.0020	.013	<.0010
28...	3.5	9.8	29	16	4.1	<.0030	<.0020	<.002	<.0020	.009	<.0010
SEP											
13...	1.3	1660	899	13	E1.9	<.0030	<.0020	<.002	<.0020	.008	<.0010

DATE	BEN-FLUR-ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)	BUTYL-ATE, WATER, DISS, REC (UG/L) (04028)	CAR-BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBO-FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	CHLOR-PYRIFOS DIS-SOLVED (UG/L) (38933)	PER-METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	CYANA-ZINE, WATER, DISS, REC (UG/L) (04041)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	DEETHYL ATRA-ZINE, WATER, DISS, REC (UG/L) (04040)	DI-AZINON, DIS-SOLVED (UG/L) (39572)	DI-ELDRIN DIS-SOLVED (UG/L) (39381)
OCT											
14...	<.0020	<.0020	<.0030	<.0030	<.0040	<.0050	<.0040	<.0020	E.0139	<.002	<.001
NOV											
23...	<.0020	<.0020	<.0030	<.0030	<.0040	<.0050	<.0040	<.0020	E.0147	<.002	<.001
DEC											
27...	<.0020	<.0020	<.0030	<.0030	<.0040	<.0050	<.0040	<.0020	E.0206	E.003	<.001
JAN											
20...	<.0020	<.0020	<.0075	<.0030	<.0040	<.0050	<.0040	<.0020	E.0126	.010	<.001
FEB											
22...	<.0020	<.0020	<.0030	<.0030	<.0040	<.0050	<.0040	<.0020	E.0201	.008	<.001
MAR											
24...	<.0020	<.0020	<.0030	<.0030	<.0040	<.0050	<.0040	<.0020	E.0158	.029	<.001
APR											
24...	<.0020	<.0020	E.0112	<.0030	<.0040	<.0050	<.0040	<.0020	E.0219	.009	<.001
MAY											
19...	<.0020	<.0020	<.0030	<.0030	<.0040	<.0050	<.0040	<.0020	E.0134	.008	<.001
JUN											
27...	<.0020	<.0020	<.0030	<.0030	<.0040	<.0050	<.0040	<.0050	E.0121	.006	<.001
AUG											
07...	<.0020	<.0020	E.0059	<.0100	<.0040	<.0050	<.0040	<.0020	E.0143	<.002	<.001
28...	<.0020	<.0020	<.0030	<.0030	<.0040	<.0050	<.0040	<.0020	E.0132	<.020	<.001
SEP											
13...	<.0020	<.0020	E.0077	<.0030	<.0040	<.0050	<.0040	<.0020	E.0069	.014	<.001

08181800 SAN ANTONIO RIVER NEAR ELMENDORF, TX--Continued

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

DATE	DISUL-FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	ETHAL-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)	ETHO-PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	FONOFOS WATER DISS REC (UG/L) (04095)	LINDANE DIS-SOLVED (UG/L) (39341)	LIN-URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA-THION, DIS-SOLVED (UG/L) (39532)	METO-LACHLOR WATER DISSOLV (UG/L) (39415)	METRI-BUZIN SENCOR WATER DISSOLV (UG/L) (82630)
OCT										
14...	<.0170	<.0020	<.0040	<.0030	<.0030	.024	<.0020	<.005	<.002	<.004
NOV										
23...	<.0170	<.0020	<.0040	<.0030	<.0030	<.020	<.0020	<.005	<.002	<.004
DEC										
27...	<.0170	<.0020	<.0040	<.0030	<.0030	.015	<.0020	<.005	<.002	<.004
JAN										
20...	<.0170	<.0020	<.0040	<.0030	<.0030	.018	<.0020	<.005	<.002	<.004
FEB										
22...	<.0170	<.0020	<.0040	<.0030	<.0030	.025	<.0020	<.005	<.002	<.004
MAR										
24...	<.0170	<.0020	<.0040	<.0030	<.0030	.005	<.0020	<.005	.009	<.004
APR										
24...	<.0170	<.0020	<.0040	<.0030	<.0030	.005	<.0020	<.005	.008	<.004
MAY										
19...	<.0170	<.0020	<.0040	<.0030	<.0030	<.004	<.0020	<.005	<.002	<.004
JUN										
27...	<.0170	<.0100	<.0040	<.0030	<.0030	.006	<.0020	<.005	.005	<.004
AUG										
07...	<.0170	<.0050	<.0040	<.0030	<.0030	.015	<.0020	<.005	.008	<.004
28...	<.0170	<.0020	<.0040	<.0030	<.0030	.009	<.0020	<.005	.009	<.004
SEP										
13...	<.0170	<.0020	<.0040	<.0030	<.0030	<.004	<.0020	<.005	<.002	<.004

DATE	MOL-INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPROP-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	P,P' DDE DISSOLV (UG/L) (34653)	PARA-THION, DIS-SOLVED (UG/L) (39542)	METHYL PARA-THION WAT FLT 0.7 U GF, REC (UG/L) (82667)	PEB-ULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	PENDI-METH-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PRO-METON, WATER, DISS, REC (UG/L) (04037)	PROP-CHLOR, WATER, DISS, REC (UG/L) (04024)
OCT										
14...	<.0040	<.0030	<.0060	<.004	<.0060	<.0040	<.0040	<.0020	<.0180	<.0070
NOV										
23...	<.0040	<.0030	<.0060	<.004	<.0060	<.0040	<.0040	<.0020	E.0078	<.0070
DEC										
27...	<.0200	<.0030	<.0060	<.004	<.0060	<.0040	<.0040	<.0020	E.0092	<.0070
JAN										
20...	<.0125	<.0030	<.0060	<.004	<.0060	<.0040	<.0040	<.0020	E.0103	<.0070
FEB										
22...	<.0150	<.0030	<.0060	<.004	<.0060	<.0040	<.0040	<.0020	E.0105	<.0070
MAR										
24...	<.0040	<.0030	<.0060	<.004	<.0060	<.0040	<.0040	<.0020	E.0118	<.0070
APR										
24...	<.0040	<.0030	<.0060	<.004	<.0060	<.0040	<.0040	<.0020	E.0097	<.0070
MAY										
19...	<.0040	<.0030	<.0060	<.004	<.0060	<.0040	<.0040	<.0020	E.0118	<.0070
JUN										
27...	<.0040	<.0030	<.0060	<.004	<.0060	<.0040	<.0040	<.0020	E.0129	<.0070
AUG										
07...	<.0500	<.0030	<.0060	<.004	<.0060	<.0040	<.0040	<.0020	E.0126	<.0070
28...	<.0040	<.0030	E.0028	<.004	<.0060	<.0040	<.0040	<.0020	E.0096	<.0070
SEP										
13...	<.0040	<.0030	<.0060	<.004	<.0060	<.0040	<.0040	<.0020	E.0085	<.0070

08181800 SAN ANTONIO RIVER NEAR ELMENDORF, TX--Continued

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

DATE	PRO-PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	PRO-PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	PRON-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	SI-MAZINE, WATER, DISS, REC (UG/L) (04035)	TEBU-THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER-BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TER-BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	THIO-BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL-LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)
OCT										
14...	<.0040	<.0130	<.0030	<.0080	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020
NOV										
23...	<.0040	<.0130	<.0030	.0079	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020
DEC										
27...	<.0040	<.0130	<.0030	.0062	E.0096	<.0070	<.0130	<.0020	<.0010	<.0020
JAN										
20...	<.0040	<.0130	<.0030	.0272	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020
FEB										
22...	<.0040	<.0130	<.0030	.0063	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020
MAR										
24...	<.0040	<.0130	<.0030	<.0050	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020
APR										
24...	<.0040	<.0130	.0074	<.0050	.0449	<.0300	<.0130	<.0020	<.0010	<.0020
MAY										
19...	<.0040	<.0130	<.0030	<.0050	.0508	<.0070	<.0130	<.0020	<.0010	<.0020
JUN										
27...	<.0040	<.0130	<.0030	E.0040	.0278	<.0070	<.0130	<.0020	<.0010	<.0020
AUG										
07...	<.0040	<.0130	<.0030	<.0050	.0262	<.0070	<.0130	<.0020	<.0010	<.0020
28...	<.0040	<.0130	<.0030	<.0050	<.0100	<.0200	<.0130	<.0020	<.0010	<.0020
SEP										
13...	<.0040	<.0130	<.0030	<.0050	.0389	<.0070	<.0130	<.0020	<.0010	<.0020

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	1010	955	986	935	904	922	1000	954	987	997	977	989
2	973	944	960	950	928	941	1030	989	1010	1000	958	984
3	969	950	963	973	947	965	1030	995	1010	982	911	965
4	993	933	966	998	968	987	1020	993	1010	970	885	923
5	964	934	950	998	976	991	1020	983	1010	1000	964	989
6	990	945	966	999	962	987	1010	959	986	1020	986	1000
7	1010	970	990	991	961	979	994	961	975	1010	799	986
8	1010	971	991	994	948	975	1010	970	994	808	494	670
9	1010	992	1000	991	951	971	1020	992	1010	834	773	795
10	1000	955	987	994	968	981	1020	980	1000	880	833	844
11	995	953	977	1020	979	1000	1020	975	998	911	878	895
12	983	950	964	1000	970	987	1010	957	990	953	911	934
13	1010	954	985	1020	980	998	1010	889	932	987	953	967
14	1030	988	1010	1020	978	999	962	938	949	989	933	964
15	1020	981	1000	1000	953	982	988	949	973	961	939	952
16	1010	986	999	993	953	974	1000	966	989	966	925	948
17	1010	618	901	1010	971	988	1010	979	1000	970	915	947
18	891	627	786	1020	982	1000	1010	963	995	954	908	936
19	885	765	813	1030	978	1010	994	956	981	963	920	942
20	872	833	843	1010	970	992	993	937	967	960	933	947
21	923	872	906	998	966	983	969	942	961	975	918	955
22	952	910	933	1010	953	986	991	965	979	979	944	959
23	944	914	931	995	955	977	1010	976	992	973	934	956
24	946	921	936	1010	966	986	1000	967	989	968	909	942
25	953	901	935	1010	968	991	990	963	978	961	932	944
26	953	909	935	1010	949	989	984	940	968	973	938	956
27	969	935	953	977	934	964	960	932	948	989	955	970
28	986	948	968	975	937	961	973	934	958	994	946	973
29	988	961	973	989	937	966	1000	961	983	977	938	960
30	986	957	976	981	943	961	999	974	989	959	933	947
31	991	877	930	---	---	---	1000	976	993	961	913	937
MONTH	1030	618	949	1030	904	980	1030	889	984	1020	494	938

08181800 SAN ANTONIO RIVER NEAR ELMENDORF, TX--Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	941	905	921	1020	927	953	970	933	952	986	322	734
2	943	421	645	965	934	948	974	327	657	694	514	616
3	689	637	660	963	922	941	649	356	503	721	561	650
4	819	682	743	953	920	933	707	525	612	---	---	---
5	866	814	827	964	921	940	847	683	756	---	---	---
6	887	851	865	952	892	918	915	836	861	---	---	---
7	899	848	874	944	906	925	935	894	908	---	---	---
8	899	875	887	963	929	943	948	903	926	942	911	929
9	930	899	916	981	950	967	944	901	926	949	919	934
10	954	900	927	1000	971	986	948	899	926	979	937	963
11	937	905	922	1010	969	989	944	898	921	986	947	972
12	942	910	923	990	956	975	951	766	897	983	945	971
13	932	898	916	992	946	969	853	765	804	962	569	766
14	936	889	914	1000	818	951	889	836	861	865	672	798
15	935	896	914	872	699	792	905	867	881	875	822	850
16	946	909	926	934	872	897	921	891	907	881	852	862
17	952	911	928	946	560	801	929	882	907	920	881	907
18	955	922	938	791	568	714	937	901	912	941	892	921
19	966	908	936	876	781	812	977	937	959	936	882	918
20	949	901	927	901	864	877	977	965	971	908	252	436
21	947	887	920	934	895	910	997	976	986	676	544	606
22	945	906	927	959	912	944	1020	983	999	---	---	---
23	983	525	740	961	936	947	1010	968	995	---	---	---
24	813	698	744	978	940	967	994	957	977	---	---	---
25	922	809	851	974	936	958	984	951	968	892	847	874
26	944	906	922	972	901	932	1020	961	991	918	881	898
27	951	885	914	937	860	899	1020	984	1010	920	888	903
28	930	893	913	905	879	891	1020	986	1010	904	701	837
29	949	908	927	915	434	643	1020	993	1010	807	746	769
30	---	---	---	874	682	784	1020	982	1000	848	804	814
31	---	---	---	934	868	891	---	---	---	872	840	853
MONTH	983	421	875	1020	434	903	1020	327	900	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	899	851	880	955	916	929	919	778	871	1010	967	983
2	909	867	892	948	912	930	974	894	948	1000	970	985
3	911	862	893	944	899	921	993	938	971	993	976	987
4	897	862	884	953	899	931	984	939	962	986	958	975
5	927	638	728	951	897	933	987	945	967	1000	934	974
6	841	714	778	959	895	931	981	941	964	1020	947	987
7	865	828	844	962	919	945	953	907	937	1020	988	1010
8	946	864	881	979	905	942	970	900	944	1030	1000	1020
9	915	430	835	973	893	942	985	931	959	1000	980	993
10	430	153	278	964	917	940	976	940	961	1000	973	990
11	351	154	269	977	913	949	995	941	966	982	935	963
12	469	315	398	1000	953	987	988	957	973	964	924	950
13	530	320	445	1000	958	990	976	958	968	1050	547	792
14	660	468	581	998	958	978	968	930	952	978	744	887
15	762	650	691	998	954	976	988	913	957	950	668	806
16	805	736	756	991	954	973	1020	951	987	953	777	861
17	837	783	799	991	951	969	1020	960	985	902	887	897
18	837	769	791	951	918	935	1030	978	1000	936	891	912
19	808	744	776	1020	943	986	1020	971	988	963	890	933
20	823	772	790	1020	967	990	1000	962	973	974	935	955
21	838	812	825	1040	989	1010	963	917	948	993	949	972
22	857	823	836	1020	988	1000	1020	906	963	994	973	986
23	898	857	871	1010	973	996	972	924	946	983	948	966
24	912	870	889	997	941	970	990	941	963	976	905	962
25	898	874	886	996	927	964	985	954	968	1040	581	779
26	896	865	880	1020	946	980	991	941	965	889	715	815
27	897	869	884	1000	970	988	990	949	966	902	860	883
28	928	897	914	1010	961	984	964	922	950	942	895	920
29	941	903	922	1000	962	984	980	908	950	975	924	952
30	937	911	922	1000	950	978	1000	957	982	982	930	957
31	---	---	---	1040	604	732	998	963	980	---	---	---
MONTH	946	153	767	1040	604	957	1030	778	962	1050	547	935

08181800 SAN ANTONIO RIVER NEAR ELMENDORF, TX--Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

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

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

08181800 SAN ANTONIO RIVER NEAR ELMENDORF, TX--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	26.5	24.6	25.6	22.7	21.7	22.3	20.8	19.8	20.3	19.0	18.3	18.7
2	27.1	24.9	26.1	22.9	21.0	22.1	21.5	20.6	21.1	20.5	19.0	20.1
3	28.4	26.8	27.4	21.2	20.0	20.6	22.4	21.2	21.8	20.7	18.9	20.0
4	28.3	26.9	27.5	21.8	20.1	21.0	22.9	21.3	22.3	18.9	16.2	17.5
5	27.9	26.4	27.2	22.9	21.6	22.3	21.3	18.6	20.1	16.8	15.8	16.2
6	27.8	26.1	26.9	23.4	22.4	22.9	19.1	17.4	18.1	18.1	16.3	16.8
7	27.3	25.5	26.5	23.9	22.8	23.4	19.2	17.8	18.3	18.6	16.0	18.0
8	27.5	25.7	26.6	23.3	22.5	22.9	21.2	19.2	20.1	17.1	15.2	16.2
9	27.7	26.2	27.0	23.2	22.2	22.7	21.6	20.1	21.1	17.9	16.1	16.9
10	27.0	25.7	26.4	23.4	22.5	22.9	20.3	18.5	19.2	18.4	16.5	17.4
11	27.1	25.7	26.3	24.1	22.9	23.5	20.1	19.1	19.6	19.4	17.6	18.2
12	27.3	25.9	26.6	23.9	23.0	23.4	21.2	19.2	20.2	20.4	19.4	19.9
13	27.2	25.9	26.6	23.4	22.5	23.0	19.8	17.9	18.5	20.9	20.3	20.6
14	27.5	26.2	26.8	22.8	22.0	22.4	18.5	17.4	17.9	20.8	19.2	19.8
15	27.8	26.6	27.1	22.7	21.8	22.2	18.2	16.3	17.3	20.1	19.1	19.6
16	28.1	26.8	27.4	22.5	21.6	22.1	16.9	15.7	16.4	20.4	19.6	20.0
17	27.5	23.6	26.1	22.9	22.1	22.5	17.3	16.0	16.6	21.3	20.2	20.7
18	23.6	21.9	22.6	23.3	22.3	22.8	17.8	16.1	17.2	21.6	20.7	21.2
19	22.2	20.3	21.0	24.1	23.3	23.6	17.2	16.1	16.7	21.6	20.7	21.2
20	21.8	20.3	21.0	23.9	22.5	23.1	18.0	15.2	16.7	21.6	19.5	20.2
21	22.2	21.0	21.6	23.4	22.7	23.1	16.5	14.9	15.8	19.6	18.2	19.0
22	22.8	21.4	22.1	23.9	23.2	23.7	16.3	15.5	15.8	20.4	19.4	19.8
23	23.0	21.9	22.4	24.2	22.7	23.7	17.1	15.9	16.5	20.6	19.9	20.4
24	22.7	21.7	22.2	22.9	19.8	21.3	17.5	16.4	17.2	20.7	19.3	19.8
25	22.7	21.6	22.1	20.5	19.1	19.9	18.4	16.7	17.7	19.7	18.7	19.0
26	23.4	22.0	22.6	19.7	18.2	19.0	17.8	16.7	17.3	19.0	16.6	17.7
27	23.6	22.2	22.9	19.6	18.3	19.1	18.9	17.0	18.3	17.6	16.0	16.9
28	24.1	22.9	23.5	20.4	18.7	19.8	18.6	17.3	18.0	16.5	14.7	15.7
29	24.9	23.7	24.2	20.9	19.8	20.5	18.5	17.4	17.9	15.6	14.3	14.9
30	24.7	22.8	24.0	21.1	20.0	20.7	18.7	17.8	18.3	15.3	14.2	14.6
31	23.2	22.0	22.4	---	---	---	19.0	18.0	18.5	16.5	14.8	15.6
MONTH	28.4	20.3	24.8	24.2	18.2	22.1	22.9	14.9	18.4	21.6	14.2	18.5

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	16.9	15.7	16.5	23.2	22.4	22.8	23.7	23.2	23.4	26.4	21.1	24.0
2	16.7	12.8	14.1	23.8	22.7	23.2	23.8	20.7	21.8	23.4	22.3	23.0
3	16.2	13.8	14.7	23.7	22.9	23.3	21.0	18.2	19.9	25.3	22.8	23.8
4	16.9	15.2	15.9	22.9	21.0	21.9	21.6	19.5	20.5	27.2	22.6	24.9
5	16.9	15.6	16.2	21.8	20.9	21.2	22.8	19.8	21.2	28.5	22.8	25.1
6	17.4	15.7	16.3	22.4	21.3	21.8	24.2	21.5	22.7	30.1	23.1	26.0
7	19.3	17.4	18.1	23.4	22.3	22.8	25.6	23.1	24.1	30.7	22.4	26.4
8	19.4	18.2	18.9	23.3	22.8	23.0	25.5	22.7	23.6	28.7	27.0	27.8
9	20.5	19.1	19.8	24.8	22.8	23.7	23.0	21.3	22.3	28.1	27.0	27.3
10	21.3	20.1	20.7	24.5	24.0	24.2	22.8	22.1	22.4	28.6	26.8	27.6
11	22.1	20.6	21.4	24.3	21.6	22.5	23.9	22.7	23.2	29.3	27.2	28.2
12	22.1	20.4	20.9	21.7	20.2	21.1	23.9	22.6	23.2	29.6	27.7	28.6
13	22.3	20.7	21.5	21.4	20.4	21.0	24.1	22.1	22.9	29.1	26.6	27.2
14	21.8	20.5	21.2	21.6	19.7	21.1	23.9	22.4	23.0	26.7	25.5	26.1
15	22.5	21.2	21.8	21.9	19.4	20.5	24.2	22.9	23.5	27.1	25.3	26.2
16	23.0	22.3	22.7	23.3	20.8	22.0	25.8	23.8	24.6	28.8	26.2	27.4
17	23.6	22.8	23.2	22.8	16.3	20.1	25.6	24.6	25.2	28.6	26.9	27.8
18	24.1	23.2	23.5	19.1	16.0	17.6	25.6	24.9	25.2	28.7	27.2	27.9
19	23.4	20.4	21.3	20.9	18.7	19.7	27.1	24.9	25.9	29.3	27.4	28.3
20	20.5	19.8	20.1	21.5	19.4	20.5	27.2	25.9	26.4	28.2	24.2	25.1
21	21.2	20.2	20.6	23.2	21.4	22.1	26.6	24.3	25.5	26.9	24.7	25.6
22	21.8	21.2	21.4	24.4	23.1	23.6	25.7	23.9	24.8	28.7	25.6	26.8
23	21.9	19.5	21.0	24.2	23.4	23.7	27.4	24.7	25.9	30.0	23.4	26.8
24	22.7	21.0	21.8	25.5	23.7	24.6	27.3	24.7	26.1	33.2	24.0	28.3
25	23.6	22.0	22.7	25.7	24.3	25.0	27.1	24.8	26.0	30.4	28.8	29.5
26	23.6	22.5	23.2	26.2	24.8	25.4	27.4	24.9	26.2	29.7	28.6	29.1
27	22.5	20.7	21.5	26.4	24.9	25.6	27.9	25.1	26.5	29.9	28.3	29.0
28	21.8	20.0	21.0	26.9	25.0	25.9	27.5	26.1	26.8	29.4	27.7	28.5
29	22.5	21.6	21.9	26.2	21.1	23.8	27.9	26.1	26.9	30.3	27.9	29.0
30	---	---	---	25.1	23.3	24.3	27.2	26.1	26.6	30.7	28.5	29.6
31	---	---	---	24.6	23.0	23.5	---	---	---	30.5	28.5	29.5
MONTH	24.1	12.8	20.1	26.9	16.0	22.6	27.9	18.2	24.2	33.2	21.1	27.1

08181800 SAN ANTONIO RIVER NEAR ELMENDORF, TX--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	30.5	28.3	29.4	31.7	29.4	30.5	30.2	28.3	29.3	31.6	29.3	30.6
2	30.6	28.3	29.4	31.2	29.2	30.2	31.6	28.5	29.9	32.0	29.5	30.8
3	30.2	28.7	29.4	31.4	29.0	30.2	32.1	29.0	30.5	32.1	29.5	30.8
4	30.0	28.4	29.1	31.4	28.9	30.2	31.6	29.2	30.4	32.1	29.4	30.7
5	29.0	27.7	28.3	31.4	28.8	30.2	31.9	29.1	30.4	32.0	29.4	30.8
6	29.2	26.9	28.1	31.4	28.8	30.2	32.4	29.2	30.6	31.7	29.6	30.6
7	29.3	27.4	28.3	31.9	29.1	30.4	32.3	29.3	30.7	30.6	28.4	29.6
8	28.8	27.0	27.7	32.6	29.3	30.5	31.6	29.4	30.5	30.7	28.5	29.7
9	28.1	25.9	27.4	31.8	29.2	30.4	32.0	29.1	30.3	30.9	28.6	29.8
10	25.9	24.7	25.3	31.8	29.2	30.4	32.2	29.3	30.5	31.3	29.0	30.2
11	26.2	24.6	25.0	32.1	29.2	30.5	32.2	29.0	30.5	31.8	29.3	30.5
12	26.7	25.8	26.2	32.7	29.4	30.9	32.3	29.2	30.7	32.1	29.6	30.7
13	27.6	26.3	26.8	32.7	29.3	31.0	32.1	29.3	30.7	30.8	28.6	29.5
14	28.6	26.9	27.6	32.6	29.4	31.0	31.8	29.4	30.6	29.9	28.9	29.4
15	29.4	27.2	28.2	32.7	29.3	31.0	30.6	29.2	29.9	29.7	28.5	29.2
16	29.6	27.7	28.7	32.2	29.5	30.9	31.9	28.7	30.0	29.6	28.2	29.0
17	30.3	28.2	29.1	31.6	29.4	30.6	32.5	29.2	30.7	29.0	26.9	27.9
18	29.7	28.5	29.1	32.3	29.4	30.6	32.4	29.2	30.7	27.9	26.1	27.2
19	30.4	28.0	29.1	32.7	29.4	30.9	32.0	28.9	30.5	28.9	26.7	27.8
20	30.4	28.3	29.4	32.6	29.4	31.0	32.1	29.0	30.5	29.4	27.3	28.3
21	30.4	28.5	29.5	32.4	29.2	30.8	31.8	29.2	30.4	30.1	28.4	29.0
22	30.8	28.7	29.7	32.5	29.4	30.9	30.8	28.9	29.8	30.7	28.6	29.5
23	31.1	28.8	29.9	32.7	29.5	31.0	31.9	28.6	30.0	30.8	29.1	29.9
24	30.7	28.7	29.8	32.4	29.3	30.9	32.2	29.0	30.5	31.2	29.1	30.0
25	31.1	28.8	29.9	32.6	29.5	31.0	31.8	29.4	30.6	29.1	25.7	26.8
26	30.9	29.1	29.9	32.4	29.7	31.0	32.1	29.2	30.6	25.9	24.4	25.2
27	31.3	29.0	30.1	32.6	29.7	31.0	32.3	29.2	30.6	25.7	24.0	24.9
28	31.2	29.2	30.2	32.3	29.3	30.7	32.2	29.3	30.7	25.9	24.3	25.2
29	31.5	29.2	30.3	32.3	28.9	30.5	32.0	29.3	30.6	26.0	24.2	25.2
30	31.6	29.2	30.4	32.5	29.3	30.7	32.3	29.3	30.7	26.2	24.2	25.3
31	---	---	---	30.8	28.5	29.3	32.3	29.2	30.7	---	---	---
MONTH	31.6	24.6	28.7	32.7	28.5	30.6	32.5	28.3	30.4	32.1	24.0	28.8
YEAR	33.2	12.8	24.7									

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	8.1	6.6	7.1	8.4	7.5	8.0	8.7	7.9	8.3	9.3	8.4	8.9
2	8.0	6.7	7.1	8.1	7.5	7.8	8.4	7.7	8.0	9.0	7.4	8.2
3	7.9	6.5	7.0	8.5	7.7	8.1	8.9	7.6	8.2	9.3	7.9	8.5
4	7.8	6.4	7.0	8.5	7.9	8.1	8.5	7.8	8.1	10.1	9.0	9.4
5	7.9	6.6	7.2	8.2	7.5	7.9	9.1	7.6	8.4	10.2	8.9	9.5
6	8.0	6.8	7.3	8.2	7.4	7.8	9.2	8.2	8.8	9.5	8.4	9.1
7	8.1	7.0	7.4	8.2	7.6	8.0	9.7	8.2	8.7	9.3	7.7	8.3
8	7.7	6.5	7.1	8.2	7.5	7.9	9.5	7.9	8.3	9.4	8.9	9.2
9	7.6	6.4	6.9	8.2	7.5	7.8	8.4	7.5	7.9	9.1	8.4	8.7
10	7.9	6.6	7.2	8.0	7.4	7.7	8.9	7.8	8.3	8.8	8.2	8.5
11	8.2	6.6	7.2	8.0	7.1	7.5	8.6	8.0	8.3	8.6	7.9	8.3
12	8.1	6.6	7.2	7.7	6.8	7.3	8.8	7.7	8.1	8.2	7.5	7.8
13	7.4	6.6	6.9	8.1	7.1	7.5	9.0	8.0	8.5	8.4	7.6	8.0
14	7.3	6.4	6.7	7.6	6.9	7.2	9.2	7.9	8.5	8.5	7.8	8.2
15	7.5	6.4	6.8	8.2	6.8	7.2	9.6	8.3	9.1	8.2	7.8	8.0
16	7.3	6.5	6.8	7.5	6.8	7.1	9.9	9.0	9.4	8.2	7.7	7.9
17	7.0	3.3	6.1	7.4	6.8	7.0	9.6	9.0	9.3	8.1	7.5	7.8
18	7.3	4.2	6.7	7.3	6.7	7.0	9.8	8.7	9.3	8.2	7.6	7.8
19	7.9	7.2	7.5	7.3	6.6	6.9	9.9	8.8	9.4	8.0	7.3	7.7
20	8.0	7.1	7.6	7.5	6.7	7.1	9.7	8.6	9.0	8.1	7.2	7.7
21	7.9	7.2	7.5	7.4	6.8	7.1	9.9	8.7	9.3	8.4	7.6	8.0
22	7.6	7.1	7.3	7.3	6.7	6.9	9.8	8.9	9.4	8.2	7.7	7.9
23	8.0	7.1	7.5	7.8	6.6	7.1	9.6	8.8	9.2	8.2	7.4	7.8
24	8.2	7.4	7.8	8.0	7.1	7.5	9.6	8.7	9.1	8.4	7.4	7.8
25	8.2	7.5	7.9	8.4	7.5	8.0	9.6	8.6	9.1	8.4	7.5	7.9
26	8.1	7.3	7.7	8.6	7.9	8.2	9.7	8.6	9.2	8.2	7.6	7.9
27	8.0	7.3	7.6	8.6	7.9	8.2	10.0	8.7	9.3	8.5	7.8	8.2
28	7.9	7.2	7.5	8.6	7.6	8.1	9.9	8.6	9.1	9.0	8.2	8.6
29	7.9	7.1	7.4	8.7	7.7	8.2	9.7	8.7	9.2	9.2	8.5	8.9
30	7.9	7.2	7.5	8.8	7.7	8.3	9.7	8.8	9.2	9.6	8.7	9.1
31	8.2	7.4	7.8	---	---	---	9.7	8.6	9.2	9.2	8.6	8.8
MONTH	8.2	3.3	7.2	8.8	6.6	7.6	10.0	7.5	8.8	10.2	7.2	8.3

08181800 SAN ANTONIO RIVER NEAR ELMENDORF, TX--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	8.8	8.3	8.5	---	---	---	7.2	6.8	7.0	7.0	5.1	6.1
2	9.7	8.5	9.3	7.7	7.3	7.4	7.4	5.9	7.0	6.8	5.9	6.4
3	9.3	8.7	9.2	7.9	7.3	7.6	8.0	7.4	7.7	6.9	6.4	6.7
4	8.8	8.3	8.7	8.4	7.5	7.8	8.3	7.9	8.1	---	---	---
5	8.5	8.0	8.3	8.0	7.5	7.8	8.2	7.9	8.1	---	---	---
6	8.4	7.9	8.1	8.0	7.5	7.7	8.0	7.6	7.9	---	---	---
7	8.1	7.3	7.8	7.7	7.1	7.4	7.7	7.4	7.6	---	---	---
8	8.7	7.1	7.7	7.3	6.9	7.0	8.0	7.4	7.7	---	---	---
9	8.3	6.9	7.5	7.3	6.7	7.0	8.3	7.5	8.0	6.5	6.0	6.3
10	8.4	6.9	7.8	7.0	6.5	6.7	8.0	7.3	7.7	6.7	6.1	6.3
11	8.3	6.9	7.8	7.7	6.7	7.1	7.9	7.5	7.7	6.9	6.1	6.4
12	8.1	7.5	7.8	8.0	7.1	7.5	7.8	7.3	7.7	6.9	6.1	6.4
13	8.2	7.4	7.7	7.9	7.3	7.5	7.6	7.1	7.3	6.6	5.6	6.1
14	8.4	7.3	7.8	7.7	6.7	7.3	7.4	7.1	7.2	7.0	6.2	6.6
15	8.2	7.3	7.7	7.3	6.0	6.4	7.2	6.9	7.0	7.2	6.6	6.8
16	7.9	7.1	7.5	6.7	6.1	6.4	7.1	6.7	6.9	7.2	6.6	6.9
17	7.7	7.0	7.4	10.1	6.2	7.0	7.1	6.6	6.9	7.0	6.4	6.6
18	7.5	6.8	7.1	8.2	7.3	7.7	7.1	6.8	6.9	7.1	6.5	6.8
19	8.0	7.0	7.4	7.5	6.8	7.2	6.8	6.5	6.6	7.0	6.3	6.6
20	8.3	7.5	7.8	7.8	7.0	7.3	7.0	6.3	6.6	6.5	3.5	5.7
21	8.2	7.5	7.8	7.3	6.3	6.8	7.2	6.4	6.8	6.5	5.9	6.2
22	7.9	7.2	7.5	6.9	6.1	6.4	7.5	6.7	7.0	6.9	6.3	6.5
23	7.4	6.2	6.8	6.9	5.9	6.3	7.3	6.6	6.9	---	---	---
24	---	---	---	6.7	6.0	6.3	7.5	6.4	6.8	---	---	---
25	---	---	---	7.0	5.6	6.3	7.5	6.4	6.9	---	---	---
26	---	---	---	6.9	6.1	6.5	7.3	6.3	6.7	6.4	6.0	6.2
27	---	---	---	7.2	6.3	6.7	7.5	6.0	6.6	6.5	6.0	6.2
28	---	---	---	7.1	6.2	6.6	7.6	6.0	6.6	6.8	6.1	6.4
29	---	---	---	6.8	5.2	6.3	7.6	6.1	6.7	6.5	6.0	6.2
30	---	---	---	7.0	6.2	6.6	7.1	5.9	6.4	6.3	5.8	6.1
31	---	---	---	7.1	6.3	6.7	---	---	---	6.1	5.4	5.8
MONTH	---	---	---	---	---	---	8.3	5.9	7.2	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	6.6	5.7	6.0	6.6	5.3	5.9	5.1	4.2	4.8	6.9	5.4	5.9
2	6.5	5.6	6.0	6.8	5.5	6.1	5.4	4.8	5.1	7.0	5.6	6.1
3	6.5	5.4	6.0	7.5	5.8	6.7	5.5	4.6	5.1	6.9	5.6	6.0
4	7.0	5.7	6.2	7.8	6.1	6.8	5.9	4.7	5.2	6.8	5.5	6.0
5	6.7	5.7	6.2	8.1	6.1	6.9	5.9	4.8	5.4	6.9	5.5	6.0
6	6.8	6.1	6.4	7.7	6.0	6.8	6.3	5.2	5.6	6.9	5.5	6.0
7	6.7	5.7	6.2	6.9	5.7	6.3	7.0	4.9	6.0	6.9	5.6	6.1
8	6.6	5.8	6.2	7.5	5.4	6.2	6.8	5.5	6.0	6.8	5.5	6.0
9	6.6	5.4	6.0	7.3	5.5	6.0	6.8	5.5	6.0	7.0	5.7	6.2
10	6.9	5.3	6.3	7.2	5.1	6.1	7.0	5.6	6.1	7.1	5.8	6.2
11	6.9	5.5	6.3	7.3	5.8	6.4	7.1	5.7	6.2	7.1	5.8	6.2
12	7.2	6.7	6.9	7.5	5.7	6.4	7.3	5.7	6.3	7.2	5.8	6.3
13	7.0	6.7	6.9	8.2	5.4	6.5	7.3	5.7	6.2	6.3	2.9	5.3
14	7.0	6.5	6.8	7.7	5.7	6.4	7.2	5.7	6.2	6.6	6.0	6.3
15	6.9	6.4	6.7	7.4	5.6	6.2	6.7	5.6	6.0	6.8	6.0	6.4
16	7.1	6.0	6.7	7.1	5.6	6.2	6.9	5.4	5.9	7.1	6.5	6.7
17	7.1	6.1	6.6	---	---	---	7.1	5.3	5.9	7.3	6.8	7.1
18	6.8	6.0	6.4	---	---	---	7.3	5.4	6.0	7.3	6.7	7.0
19	6.9	6.0	6.5	6.2	5.1	5.5	7.5	5.4	6.1	6.9	6.5	6.7
20	7.0	5.9	6.4	6.3	5.0	5.6	7.8	5.6	6.3	7.0	6.4	6.6
21	7.4	5.7	6.5	6.6	5.2	5.7	7.5	5.6	6.2	7.0	6.2	6.5
22	6.8	6.1	6.5	6.8	5.1	5.6	6.4	5.5	5.8	7.0	6.2	6.5
23	6.5	5.6	6.1	6.7	5.1	5.7	7.2	5.6	6.1	7.0	6.2	6.5
24	6.5	5.6	6.0	6.8	5.1	5.7	7.3	5.5	6.1	7.0	6.2	6.6
25	6.5	5.5	6.0	6.4	5.0	5.5	7.1	5.5	6.1	6.7	5.3	6.1
26	6.3	5.5	5.9	6.5	4.9	5.6	7.4	5.5	6.1	7.0	6.6	6.8
27	6.3	5.5	5.9	6.6	5.2	5.6	7.5	5.6	6.2	7.4	6.8	7.0
28	6.0	5.0	5.5	6.5	5.0	5.5	7.5	5.4	6.2	7.3	6.9	7.1
29	6.0	4.7	5.2	6.6	5.0	5.5	7.1	5.5	6.0	7.4	7.0	7.2
30	6.2	4.7	5.4	6.6	4.7	5.4	6.9	5.3	5.8	7.6	6.9	7.2
31	---	---	---	5.9	2.1	3.8	7.1	5.3	5.9	---	---	---
MONTH	7.4	4.7	6.2	---	---	---	7.8	4.2	5.9	7.6	2.9	6.4

08183500 SAN ANTONIO RIVER NEAR FALLS CITY, TX

LOCATION.--Lat 28°57′05", long 98°03′50", Karnes County, Hydrologic Unit 12100303, on left bank 23 ft downstream from bridge on Farm Road 791, 0.9 mi upstream from Scared Dog Creek, 3.6 mi southwest of Falls City, and 150.5 mi upstream from mouth.

DRAINAGE AREA.--2,113 mi^2.

PERIOD OF RECORD.--Apr 1925 to current year.
Water-quality records.--Chemical data: Apr 1959. Biochemical data: May 1965 to Sep 1981, Oct 1986 to Aug 1995. Sediment data: Jan 1966 to Sep 1975, Jan 1987 to Sep 1996. Specific conductance: Jan 1987 to Sep 1996. pH: Jan 1987 to Sep 1996. Water temperature: Jan 1987 to Sep 1996. Dissolved oxygen: Jan 1987 to Sep 1996.

REVISED RECORDS.--WSP 1732: 1947(M). WSP 1923: Drainage area. WDR TX-87-3: 1983-84.

GAGE.--Water-stage recorder. Datum of gage is 285.49 ft above sea level. Satellite telemeter at station.

REMARKS.--Records good. Since installation of gage in Apr 1925, at least 10% of contributing drainage area has been regulated by Medina Lake (station 08179500, conservation pool storage 254,843 acre-ft) and Olmos flood-control reservoir (combined capacity of 269,500 acre-ft). Storage began in Medina Lake in 1913 and Olmos Dam was completed in 1926. Additional regulation by Calaveras Lake on Calaveras Creek and by Brauning Lake. Flow from Brauning Lake enters the San Antonio River above the station near Elmendorf, and flow from Calaveras Creek enters the San Antonio River some distance downstream from the station near Elmendorf. Records provided by the San Antonio City Public Service Board show that during the current year, 13,080 acre-ft of water was released into Calaveras Creek from Calaveras Lake and that 771 acre-ft was released from Brauning Lake. Flow is also regulated by eleven Natural Resources Conservation Service floodwater-retarding structures (combined capacity of 26,770 acre-ft). Floodwater-retarding structures were completed in 1972. Some diversions for municipal uses and irrigation above station (amount unknown). Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water-quality data.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in Oct 1913 reached a stage of 28.4 ft, from floodmark, from information by local residents. Maximum stage since at least 1875, that of Sep 29, 1946.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	176	197	261	248	217	296	280	184	228	258	229	96
2	179	200	259	274	229	293	262	529	207	218	204	96
3	189	215	256	259	716	296	621	945	206	195	129	114
4	183	225	259	267	698	256	1030	655	187	183	116	129
5	174	217	264	298	395	250	795	406	180	178	103	125
6	186	223	256	269	317	234	435	330	303	165	98	121
7	175	231	251	292	305	235	344	321	281	165	92	128
8	168	239	262	300	295	237	307	303	202	167	84	119
9	171	237	263	728	289	230	295	284	218	136	87	118
10	177	244	268	496	233	219	286	277	423	115	85	120
11	177	241	263	331	226	208	285	218	e1240	118	89	118
12	170	243	260	304	232	205	292	200	3470	124	102	120
13	174	246	252	295	276	204	312	229	3020	124	100	128
14	172	245	301	291	288	210	420	340	1460	118	93	221
15	173	247	247	294	286	191	348	382	702	119	93	358
16	176	248	212	289	230	410	304	256	484	127	96	349
17	176	255	194	289	211	340	284	230	410	121	95	331
18	197	252	199	291	217	285	277	206	378	146	94	262
19	391	252	200	294	211	408	281	203	393	175	95	228
20	317	255	197	292	224	248	274	209	401	127	89	219
21	270	258	196	290	220	194	225	1360	398	108	84	164
22	223	255	189	291	213	182	208	854	357	110	102	145
23	204	253	190	278	218	181	199	468	329	117	110	140
24	197	258	193	285	520	182	194	351	293	110	116	143
25	190	257	189	280	590	173	186	301	287	104	106	159
26	182	255	184	279	347	212	183	227	276	109	97	268
27	183	253	174	238	309	215	190	208	267	104	95	368
28	183	239	169	216	304	211	182	215	270	100	89	287
29	182	244	179	217	292	211	169	241	269	100	85	236
30	181	252	180	220	---	459	164	303	264	100	86	225
31	176	---	188	211	---	369	---	248	---	93	95	---
TOTAL	6072	7236	6955	9206	9108	7844	9632	11483	17403	4234	3238	5635
MEAN	196	241	224	297	314	253	321	370	580	137	104	188
MAX	391	258	301	728	716	459	1030	1360	3470	258	229	368
MIN	168	197	169	211	211	173	164	184	180	93	84	96
AC-FT	12040	14350	13800	18260	18070	15560	19110	22780	34520	8400	6420	11180

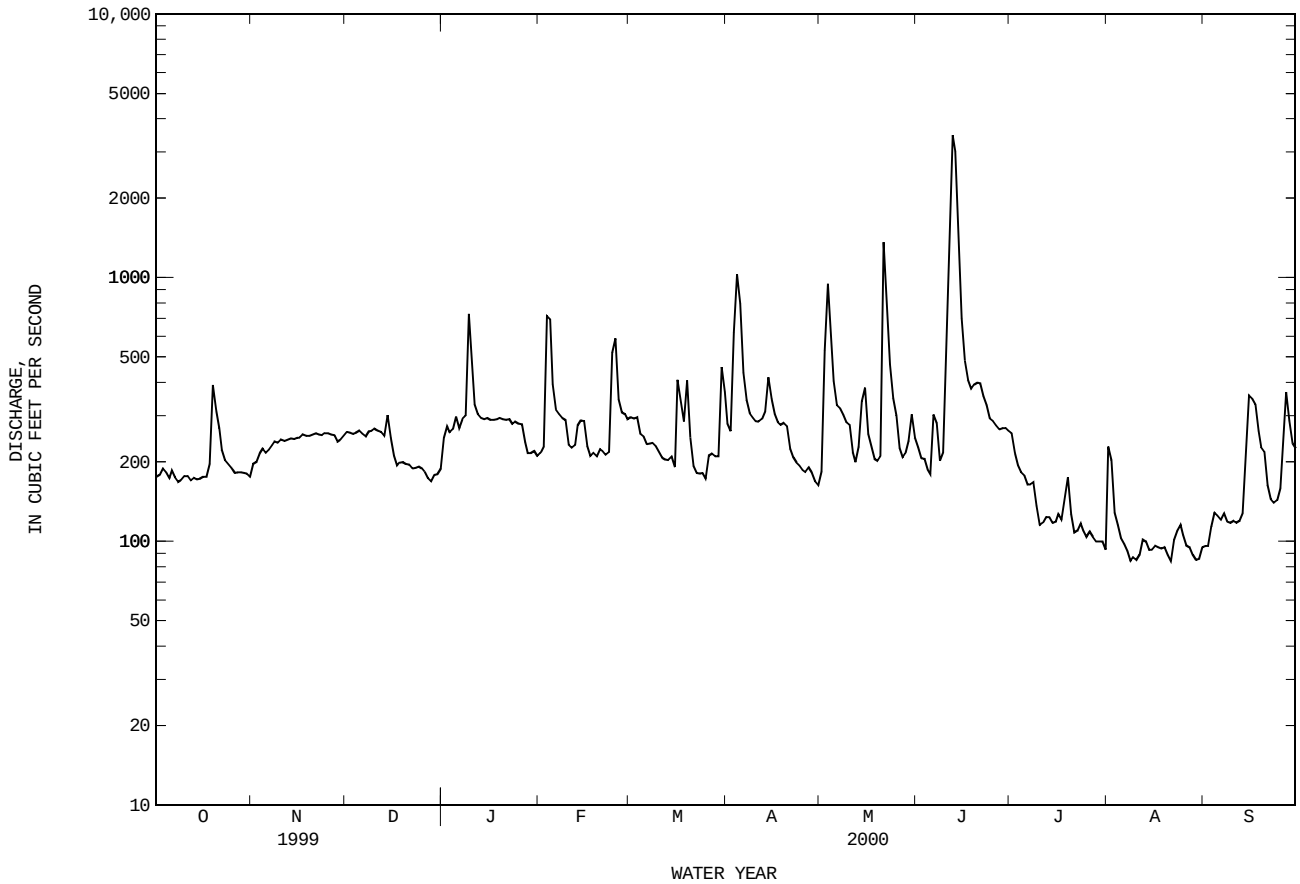
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1925 - 2000, BY WATER YEAR (WY)

MEAN	491	379	373	404	460	391	459	620	751	414	292	471
MAX	5718	1592	2668	2705	4803	3536	2615	4303	10120	3662	1564	4100
(WY)	1999	1977	1992	1968	1992	1992	1992	1992	1987	1973	1978	1946
MIN	57.5	67.3	70.6	89.0	94.9	75.6	61.2	84.7	38.0	55.3	40.4	57.7
(WY)	1956	1956	1955	1957	1956	1956	1956	1956	1956	1954	1954	1930

08183500 SAN ANTONIO RIVER NEAR FALLS CITY, TX--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1925 - 2000	
ANNUAL TOTAL	128866		98046			
ANNUAL MEAN	353		268		460	
HIGHEST ANNUAL MEAN					2253	1992
LOWEST ANNUAL MEAN					92.0	1956
HIGHEST DAILY MEAN	2080	Mar 29	3470	Jun 12	63600	Oct 20 1998
LOWEST DAILY MEAN	136	Sep 7	84	Aug 8	19	Jun 27 1956
ANNUAL SEVEN-DAY MINIMUM	147	Aug 14	91	Aug 6	23	Jun 8 1956
INSTANTANEOUS PEAK FLOW			3870	Jun 12	c70000	Oct 20 1998
INSTANTANEOUS PEAK STAGE			6.16	Jun 12	33.80	Sep 29 1946
ANNUAL RUNOFF (AC-FT)	255600		194500		333500	
10 PERCENT EXCEEDS	574		372		823	
50 PERCENT EXCEEDS	307		226		248	
90 PERCENT EXCEEDS	174		110		92	

e Estimated
c From rating curve extended above measurement of 36,500 ft^3/s.



08183850 CIBOLO CREEK AT INTERSTATE HIGHWAY 10 ABOVE BOERNE, TX

LOCATION.--Lat 29°48′52", long 98°45′12", Kendall County, Hydrologic Unit 12100304, on right bank between westbound Interstate Highway 10 bridge and frontage road bridge, 600 ft downstream from Ranger Creek, 0.7 mi downstream from Boerne Lake, and 1.9 mi northwest of Boerne.

DRAINAGE AREA.--29.0 mi^2.

PERIOD OF RECORD.--Oct 1995 to Apr 1996 (discharge measurements only), May 1996 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,428.50 ft above sea level. Satellite telemeter at station.

REMARKS.--Records good. No known diversion above station. Since installation of gage in Oct 1995, flow regulated by Boerne City Lake (storage 4,043 acre-ft). No flow at times. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water-quality data.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.28	.31	.20	.18	.34	.30	.09	.61	.93	.76	.55	.02
2	.27	.27	.19	.20	.49	.35	.10	1.1	.99	.82	.58	.01
3	.49	.27	.17	.10	.22	.21	.24	.33	.61	.66	.67	.02
4	.47	.33	.11	.01	.20	.20	.10	.20	.78	.59	.42	.00
5	.45	.38	.10	.01	.17	.20	.12	.17	1.1	.19	.44	.01
6	.35	.34	.06	.00	.16	.23	.17	.28	.89	.18	.34	.01
7	.24	.35	.11	.03	.22	.27	.11	.35	.90	.21	.31	.01
8	.23	.36	.13	.10	.20	.21	.09	.39	.69	.09	.62	.01
9	.21	.37	.09	.03	.22	.21	.05	.39	1.4	.19	.42	.00
10	.25	.44	.10	.00	.22	.21	.26	.53	4.8	.19	.43	.00
11	.32	.46	.13	.03	.24	.17	.34	.56	4.1	.50	1.4	.00
12	.46	.40	.14	.08	.45	.12	.48	.59	2.2	1.1	.32	.09
13	.43	.38	.10	.07	.48	.11	.31	.45	1.5	1.2	.23	.01
14	.43	.38	.06	.03	.43	.15	.29	.58	1.7	1.3	.73	.07
15	.44	.25	.01	.19	.72	.22	.27	.73	2.4	1.1	.10	.03
16	.40	.17	.01	.25	.79	.25	.21	1.0	2.2	.72	.09	.03
17	.56	.19	.01	.25	.97	.56	.24	1.0	2.4	.80	.13	.04
18	.49	.24	.01	.20	.89	.15	.39	.95	2.9	.61	.17	.07
19	.42	.23	.02	.13	.67	.10	.54	2.9	2.5	.63	.14	.08
20	.46	.26	.01	.12	.67	.07	.37	1.1	2.2	.74	.16	.10
21	.45	.27	.00	.12	.69	.25	.33	.83	1.6	1.0	.10	.15
22	.47	.34	.01	.18	1.2	.22	.39	.80	1.3	1.1	.16	.18
23	.43	.30	.00	.18	1.1	.15	.28	.99	1.2	1.3	.14	.20
24	.48	.31	.01	.14	.42	.10	.28	1.4	.88	.85	.04	.20
25	.48	.30	.02	.11	.32	.20	.29	1.7	.55	.99	.01	.03
26	.49	.29	.01	.11	.28	.18	.21	1.4	.71	1.7	.01	.06
27	.35	.28	.07	.31	.20	.14	.34	1.3	.93	1.6	.00	.05
28	.36	.31	.11	.11	.28	.12	.22	1.6	.68	1.8	.02	.05
29	.37	.26	.13	.09	.37	.18	.38	1.3	.84	1.8	.00	.07
30	.46	.21	.19	.11	---	.11	.25	.94	.79	.66	.00	.06
31	.30	---	.19	.16	---	.07	---	.88	---	.85	.00	---
TOTAL	12.29	9.25	2.50	3.63	13.61	6.01	7.74	27.35	46.67	26.23	8.73	1.66
MEAN	.40	.31	.081	.12	.47	.19	.26	.88	1.56	.85	.28	.055
MAX	.56	.46	.20	.31	1.2	.56	.54	2.9	4.8	1.8	1.4	.20
MIN	.21	.17	.00	.00	.16	.07	.05	.17	.55	.09	.00	.00
AC-FT	24	18	5.0	7.2	27	12	15	54	93	52	17	3.3

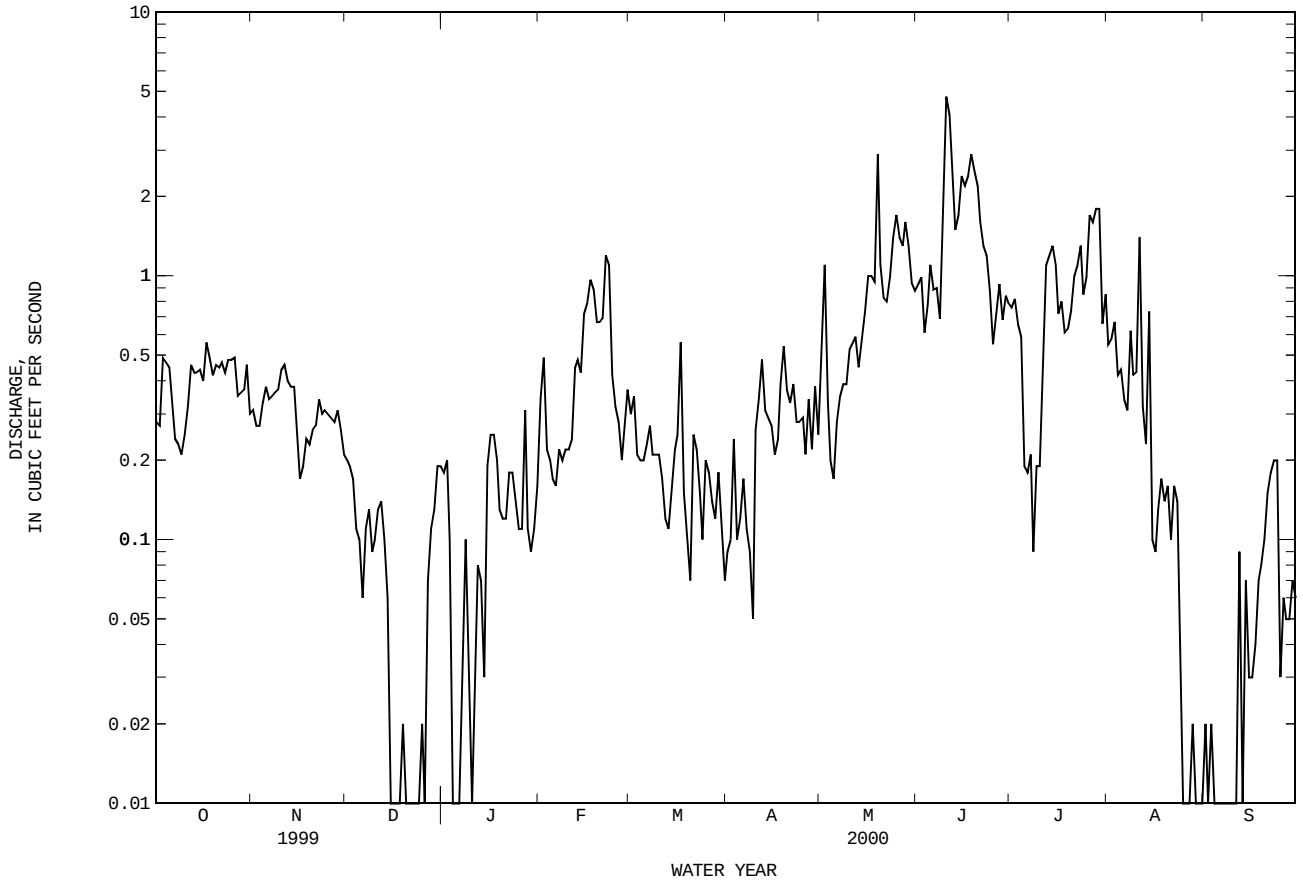
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 2000, BY WATER YEAR (WY)

MEAN	6.07	12.9	5.59	3.98	7.96	22.6	19.6	8.27	65.1	11.7	3.80	1.78
MAX	20.3	49.0	16.8	10.1	20.9	73.8	56.8	22.5	313	38.5	9.12	5.55
(WY)	1999	1999	1999	1999	1998	1998	1997	1997	1997	1997	1998	1998
MIN	.24	.30	.081	.12	.47	.19	.26	.88	.48	.066	.25	.055
(WY)	1997	1997	2000	2000	2000	2000	2000	2000	1996	1996	1996	2000

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1996 - 2000	
ANNUAL TOTAL	1894.01		165.67			
ANNUAL MEAN	5.19		.45		15.7	
HIGHEST ANNUAL MEAN					37.6	1997
LOWEST ANNUAL MEAN					.45	2000
HIGHEST DAILY MEAN	168	Jul 11	4.8	Jun 10	4940	Jun 22 1997
LOWEST DAILY MEAN	.00	Dec 21	.00	Dec 21	.00	Jul 23 1996
ANNUAL SEVEN-DAY MINIMUM	.01	Dec 17	.01	Aug 25	.00	Aug 3 1996
INSTANTANEOUS PEAK FLOW			33	Jun 10	i20100	Jun 22 1997
INSTANTANEOUS PEAK STAGE			1.53	Jun 10	a20.82	Jun 22 1997
ANNUAL RUNOFF (AC-FT)	3760		329		11380	
10 PERCENT EXCEEDS	10		1.1		25	
50 PERCENT EXCEEDS	2.6		.27		1.7	
90 PERCENT EXCEEDS	.23		.03		.12	

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

08183850 CIBOLO CREEK AT INTERSTATE HIGHWAY 10 ABOVE BOERNE, TX--Continued



08185000 CIBOLO CREEK AT SELMA, TX

LOCATION.--Lat 29°35′38", long 98°18′39", Bexar-Guadalupe County line, Hydrologic Unit 12100304, on right bank 0.6 mi downstream from Missouri-Kansas-Texas Railroad Co. bridge and 0.9 mi upstream from bridge on Interstate Highway 35 at Selma.

DRAINAGE AREA.--274 mi^2.

PERIOD OF RECORD.--Mar 1946 to current year.

REVISED RECORDS.--Figures for the annual peak discharge for water year 1960 in WSP 1813 are in error and should be disregarded; the correct date and magnitude are in WSP 1712. WSP 1923: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 728.34 ft above sea level. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. One known diversion above station. Since water year 1980, at least 10% of contributing drainage area has been regulated by Boerne City Lake (storage 4,043 acre-ft). Considerable flow of Cibolo Creek enters the Edwards and associated limestones in the Balcones Fault Zone that crosses basin between this station and the Cibolo Creek at Interstate Highway 10 above Boerne (station 08183850). No flow at times. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water-quality data.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--33 years (water years 1947-79), 15.3 ft^3/s (11,080 acre-ft/yr).

EXTREMES FOR PERIOD PRIOR TO REGULATION (WATER YEARS 1947-79).--Maximum discharge, 65,000 ft^3/s Jul 16, 1973 (gage height, 26.2 ft, from floodmark), from rating curve extended above 16,000 ft^3/s on basis of field estimate of 54,000 ft^3/s and contracted-opening measurement of 65,000 ft^3/s; no flow most of time.

EXTREMES OUTSIDE PERIOD OF RECORD.--A stage of 26 ft occurred in 1889, from information by local residents. Maximum stage since at least 1869, that of Oct 17, 1998.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	6.9	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	7.7	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	2.7	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	2.5	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	19.80	0.00	0.00	0.00
MEAN	.000	.000	.000	.000	.000	.000	.000	.000	.66	.000	.000	.000
MAX	.00	.00	.00	.00	.00	.00	.00	.00	7.7	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	.00	.00	.00	39	.00	.00	.00

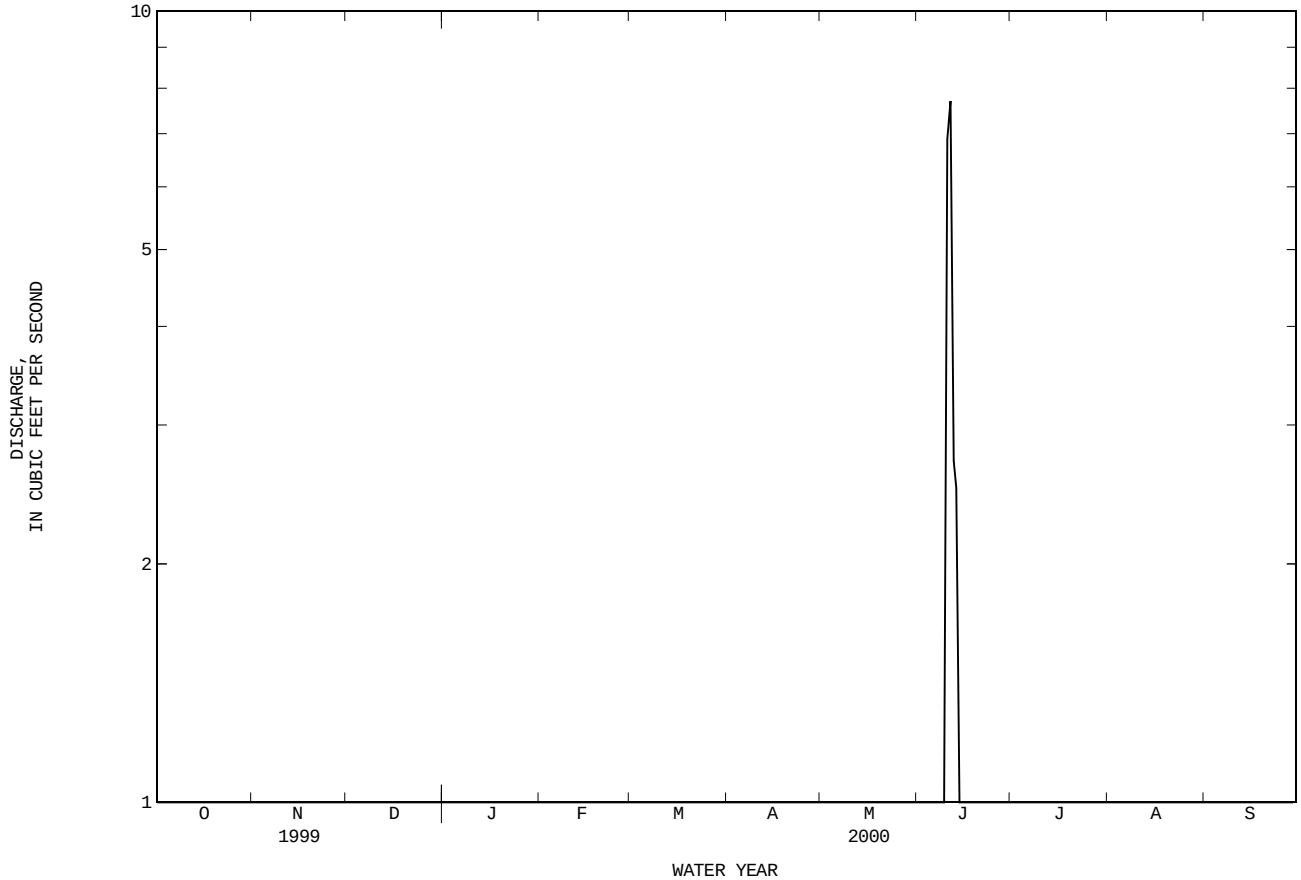
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 2000z, BY WATER YEAR (WY)

MEAN	82.5	.65	59.4	3.69	31.6	31.4	3.94	31.3	174	3.67	.072	.020
MAX	1722	6.35	1143	76.9	646	483	75.5	494	1567	44.7	1.52	.35
(WY)	1999	1982	1992	1992	1992	1992	1991	1992	1997	1985	1997	1996
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1980	1980	1980	1980	1980	1980	1980	1980	1980	1980	1980	1981

08185000 CIBOLO CREEK AT SELMA, TX--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1980 - 2000z	
ANNUAL TOTAL			19.80			
ANNUAL MEAN			.054		35.1	
HIGHEST ANNUAL MEAN					257	1992
LOWEST ANNUAL MEAN					.000	1984
HIGHEST DAILY MEAN			7.7	Jun 11	e32000	Oct 17 1998
LOWEST DAILY MEAN	.00	Jan 1	.00	Oct 1	.00	Oct 1 1979
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 1	.00	Oct 1	.00	Oct 1 1979
INSTANTANEOUS PEAK FLOW			52	Jun 10	c98100	Oct 17 1998
INSTANTANEOUS PEAK STAGE			3.52	Jun 10	a35.37	Oct 17 1998
ANNUAL RUNOFF (AC-FT)			39		25430	
10 PERCENT EXCEEDS	.00		.00		.00	
50 PERCENT EXCEEDS	.00		.00		.00	
90 PERCENT EXCEEDS	.00		.00		.00	

e Estimated.
c From rating curve extended above indirect measurement of 69,600 ft^3/s.
a From floodmark.
z Period of regulated streamflow.



08186000 CIBOLO CREEK NEAR FALLS CITY, TX

LOCATION.--Lat 29°00'50", long 97°55'48", Karnes County, Hydrologic Unit 12100304, at right downstream abutment of bridge on State Highway 123, 5.7 mi northeast of Falls City, and 10.4 mi upstream from mouth.

DRAINAGE AREA.--827 mi^2.

PERIOD OF RECORD.--Oct 1930 to current year. Monthly discharge only for some periods, published in WSP 1312.
Water-quality records.--Chemical data: Oct 1961 to Sep 1996. Biochemical data: Dec 1969 to Sep 1996. Sediment data: 1960, Nov 1965 to May 1975. Specific conductance: Oct 1968 to Sep 1991. Water temperature: Oct 1968 to Sep 1991.

REVISED RECORDS.--WSP 733: 1931. WSP 1058: 1935. WSP 1562: 1931(M), 1933. WSP 1923: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 264.28 ft above sea level. Nov 4, 1930 to Aug 4, 1940, water-stage recorder at site 1,600 ft upstream at datum 0.56 ft higher. Aug 5 to Sep 13, 1940, nonrecording gage at site 150 ft to the left at same datum. Sep 14, 1940 to Mar 15, 1990, water-stage recorder at site 150 ft to the left at same datum. Mar 16, 1990 to Jul 15, 1993, water-stage recorder at site 50 ft downstream at same datum. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. Flow is affected at times by discharge from the flood-detention pools of ten floodwater-retarding structures with a combined detention capacity of 16,620 acre-ft. These structures control runoff from 62.9 mi^2. There are several diversions for irrigation above station. Much of the base flow is effluent from the Carrizo Sands in the vicinity of Sutherland Springs. No flow at times. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water-quality data.

EXTREMES OUTSIDE PERIOD OF RECORD.--A stage of 35 ft occurred in Oct 1913 (discharge, about 35,000 ft^3/s). Maximum stage since at least 1890, that of Oct 19, 1998.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,600 ft^3/s:

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)

No peak greater than base discharge.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	20	22	27	27	34	26	34	20	28	12	8.3
2	17	21	22	27	30	33	28	66	20	27	12	8.7
3	18	21	23	27	34	32	46	125	22	26	12	8.6
4	17	20	23	26	41	30	87	83	23	26	12	8.8
5	17	20	23	25	47	29	102	58	22	25	12	7.9
6	18	21	22	25	38	29	63	45	22	25	11	7.7
7	19	21	22	31	36	29	55	40	22	24	12	7.1
8	20	21	23	37	33	29	45	39	23	24	11	7.3
9	19	20	24	63	32	29	38	41	26	23	11	8.4
10	18	20	24	48	32	28	33	36	69	21	11	8.5
11	17	20	24	44	32	28	31	32	265	20	11	8.9
12	15	21	26	37	30	26	34	29	698	20	10	8.8
13	15	22	26	35	29	25	88	39	228	20	9.8	7.9
14	14	22	24	31	29	32	65	38	181	19	11	7.6
15	14	28	24	30	28	42	53	29	136	18	11	12
16	14	23	25	30	29	35	42	27	105	17	11	10
17	15	22	25	28	29	55	38	27	92	17	11	12
18	17	22	25	27	29	66	35	26	116	17	11	10
19	18	24	25	27	28	77	33	25	407	17	11	9.9
20	19	22	27	27	25	54	31	26	191	17	9.3	10
21	20	22	28	26	25	44	28	182	112	18	9.5	10
22	21	22	27	27	26	43	27	73	76	16	9.8	9.6
23	21	22	27	27	28	38	26	37	58	16	10	9.5
24	21	21	27	26	44	34	24	28	48	16	9.9	9.6
25	19	22	26	26	62	32	23	25	41	16	9.6	14
26	18	22	27	25	53	31	22	23	37	14	9.7	14
27	17	22	26	27	44	30	22	22	35	13	9.5	12
28	19	23	27	28	39	29	22	23	33	13	11	14
29	21	24	26	28	35	29	26	22	31	12	12	14
30	21	23	27	27	---	27	25	21	29	12	9.7	13
31	20	---	27	27	---	26	---	21	---	14	8.8	---
TOTAL	556	654	774	946	994	1105	1218	1342	3188	591	331.6	298.1
MEAN	17.9	21.8	25.0	30.5	34.3	35.6	40.6	43.3	106	19.1	10.7	9.94
MAX	21	28	28	63	62	77	102	182	698	28	12	14
MIN	14	20	22	25	25	25	22	21	20	12	8.8	7.1
AC-FT	1100	1300	1540	1880	1970	2190	2420	2660	6320	1170	658	591

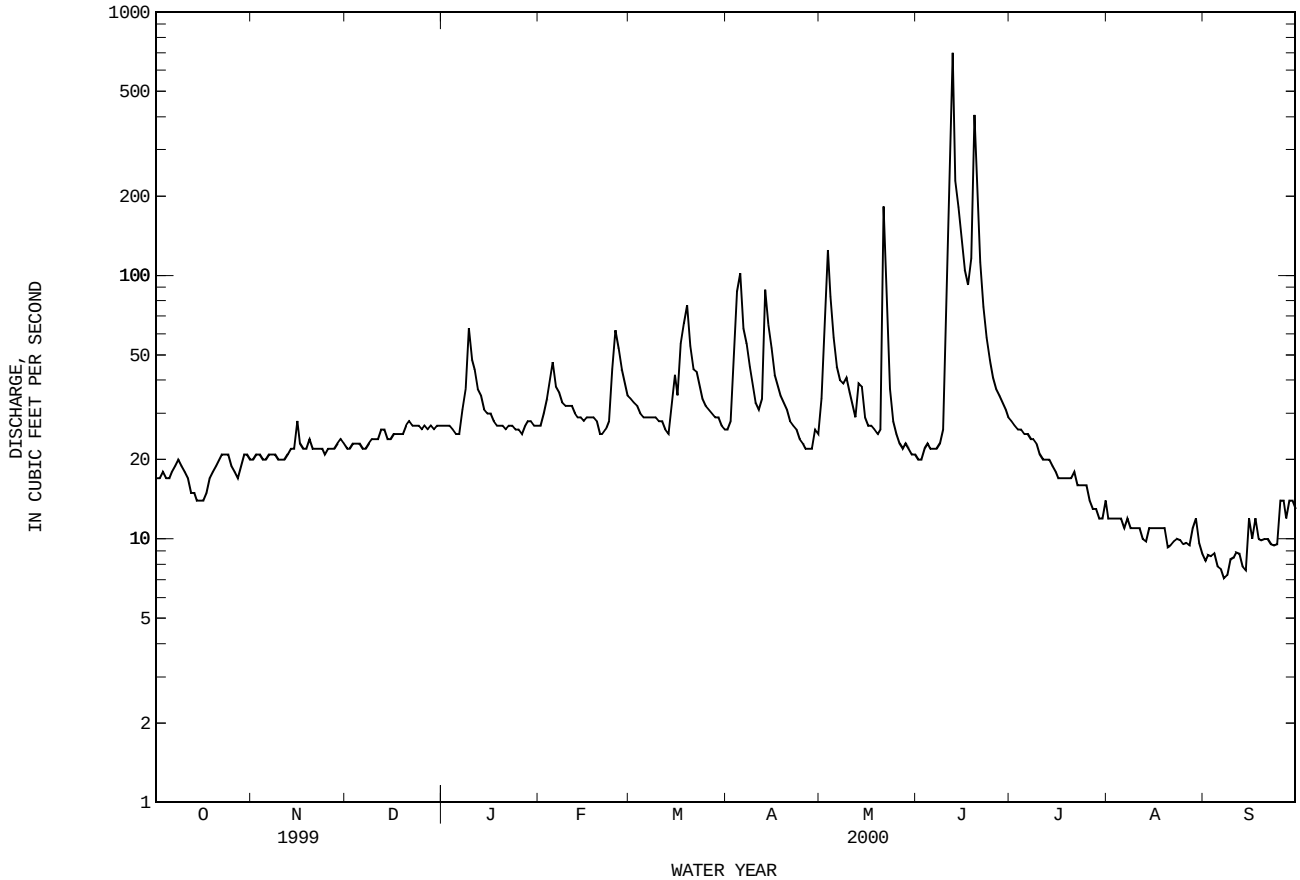
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 2000h, BY WATER YEAR (WY)

MEAN	146	85.8	99.0	93.2	112	69.0	159	239	259	96.2	53.1	150
MAX	3246	565	2156	1627	1756	860	1492	2230	2821	1357	909	1579
(WY)	1999	1941	1992	1968	1992	1992	1977	1972	1987	1942	1946	1973
MIN	8.49	8.08	9.99	10.3	9.64	7.04	5.23	4.59	1.74	1.96	2.40	5.41
(WY)	1932	1932	1955	1956	1956	1956	1971	1971	1967	1971	1956	1984

08186000 CIBOLO CREEK NEAR FALLS CITY, TX--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1931 - 2000h	
ANNUAL TOTAL	20007		11997.7			
ANNUAL MEAN	54.8		32.8		130	
HIGHEST ANNUAL MEAN					717	1992
LOWEST ANNUAL MEAN					10.4	1956
HIGHEST DAILY MEAN	3120	Jun 26	698	Jun 12	45000	Oct 19 1998
LOWEST DAILY MEAN	14	Sep 23	7.1	Sep 7	.00	Jul 30 1956
ANNUAL SEVEN-DAY MINIMUM	15	Sep 21	8.0	Sep 4	.00	Aug 4 1956
INSTANTANEOUS PEAK FLOW			1080	Jun 12	c51200	Oct 19 1998
INSTANTANEOUS PEAK STAGE			6.74	Jun 12	a39.84	Oct 19 1998
ANNUAL RUNOFF (AC-FT)	39680		23800		94120	
10 PERCENT EXCEEDS	63		47		123	
50 PERCENT EXCEEDS	39		25		27	
90 PERCENT EXCEEDS	18		11		9.8	

h See PERIOD OF RECORD paragraph.
a From floodmark.
c From rating curve extended above measurements of 27,800 ft^3/s and 31,400 ft^3/s.



08188500 SAN ANTONIO RIVER AT GOLIAD, TX

LOCATION.--Lat 28°38′58", long 97°23′04", Goliad County, Hydrologic Unit 12100303, on right downstream bank 300 ft below bridge on U.S. Highway 183, 1.2 mi southeast of courthouse in Goliad, 11.7 mi upstream from Manahuilla Creek, and 66.5 mi upstream from mouth.

DRAINAGE AREA.--3,921 mi^2.

PERIOD OF RECORD.--Jun 1924 to Mar 1929, Feb 1939 to current year.
Water-quality records.--Chemical data: Dec 1941 to Dec 1942, Nov 1944 to Sep 1946, Sep 1958 to Sep 1996. Biochemical data: Jan 1968 to Sep 1996. Pesticide data: Jan 1968 to May 1982. Sediment data: Apr 1959, Oct 1974 to Aug 1994.

REVISED RECORDS.--WSP 1923: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 91.08 ft above sea level. Prior to Mar 31, 1929, nonrecording gage at Texas and New Orleans Railroad Co. bridge 1.1 mi upstream at same datum. Satellite telemeter at station.

REMARKS.--Records good, except those for estimated daily discharges, which are fair. There are many diversions and regulations above station. Flow is affected at times by discharge from the flood-detention pools of 36 floodwater-retarding structures, with a combined detention capacity of 66,730 acre-ft. These structures control runoff from 213 mi^2 in the drainage area above this station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Floods in Oct 1913 and Jun 15, 1935, reached about the same stage as flood in 1942. Maximum stage since about 1800 occurred in 1869 and was several feet higher than flood of Sep 23, 1967. Maximum stage since 1869, that of Sep 23, 1967. Flood of Jul 9, 1942, reached a stage of 44.9 ft.

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

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)

No peak greater than base discharge.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	218	224	288	244	305	394	506	242	362	351	130	e115
2	214	217	297	246	302	379	455	369	316	343	128	e109
3	210	225	307	291	313	377	374	852	296	331	220	e110
4	210	245	308	320	327	373	380	874	278	294	257	e125
5	221	250	305	311	814	371	774	983	342	266	184	e127
6	218	267	305	315	692	338	1100	714	412	250	160	149
7	208	263	310	408	501	329	787	514	284	241	147	153
8	216	264	306	429	429	313	540	441	364	227	136	147
9	214	270	303	394	400	315	458	418	365	225	134	155
10	205	277	310	418	385	319	410	396	338	226	123	151
11	204	275	311	755	375	310	388	377	500	203	118	148
12	206	284	319	560	329	293	388	361	1830	174	120	e152
13	210	284	318	433	317	280	379	337	3270	168	117	e148
14	205	282	314	390	319	296	385	312	3700	170	127	e150
15	203	281	306	368	351	310	463	332	2550	173	132	e160
16	206	283	349	363	364	327	522	447	1280	168	131	e275
17	203	287	319	367	362	299	455	449	806	159	127	e400
18	212	289	283	361	321	492	401	337	648	167	127	e390
19	215	295	263	360	297	453	373	320	576	163	128	e375
20	239	294	267	358	296	431	363	414	727	178	125	295
21	405	294	270	359	291	510	361	377	711	213	126	261
22	363	295	269	357	300	367	352	568	612	186	123	251
23	320	299	265	357	303	303	311	1370	538	153	116	210
24	275	297	259	356	299	284	288	818	480	146	116	181
25	251	298	253	347	301	271	275	547	438	154	120	185
26	241	304	256	347	632	272	265	445	402	152	130	179
27	232	302	254	370	630	263	258	386	388	145	140	187
28	226	300	247	399	455	289	250	422	373	137	128	292
29	223	300	242	333	404	298	256	330	359	137	121	394
30	222	289	231	304	---	292	253	296	356	130	123	317
31	223	---	237	302	---	289	---	312	---	129	e122	---
TOTAL	7218	8334	8871	11522	11414	10437	12770	15360	23901	6159	4236	6291
MEAN	233	278	286	372	394	337	426	495	797	199	137	210
MAX	405	304	349	755	814	510	1100	1370	3700	351	257	400
MIN	203	217	231	244	291	263	250	242	278	129	116	109
AC-FT	14320	16530	17600	22850	22640	20700	25330	30470	47410	12220	8400	12480

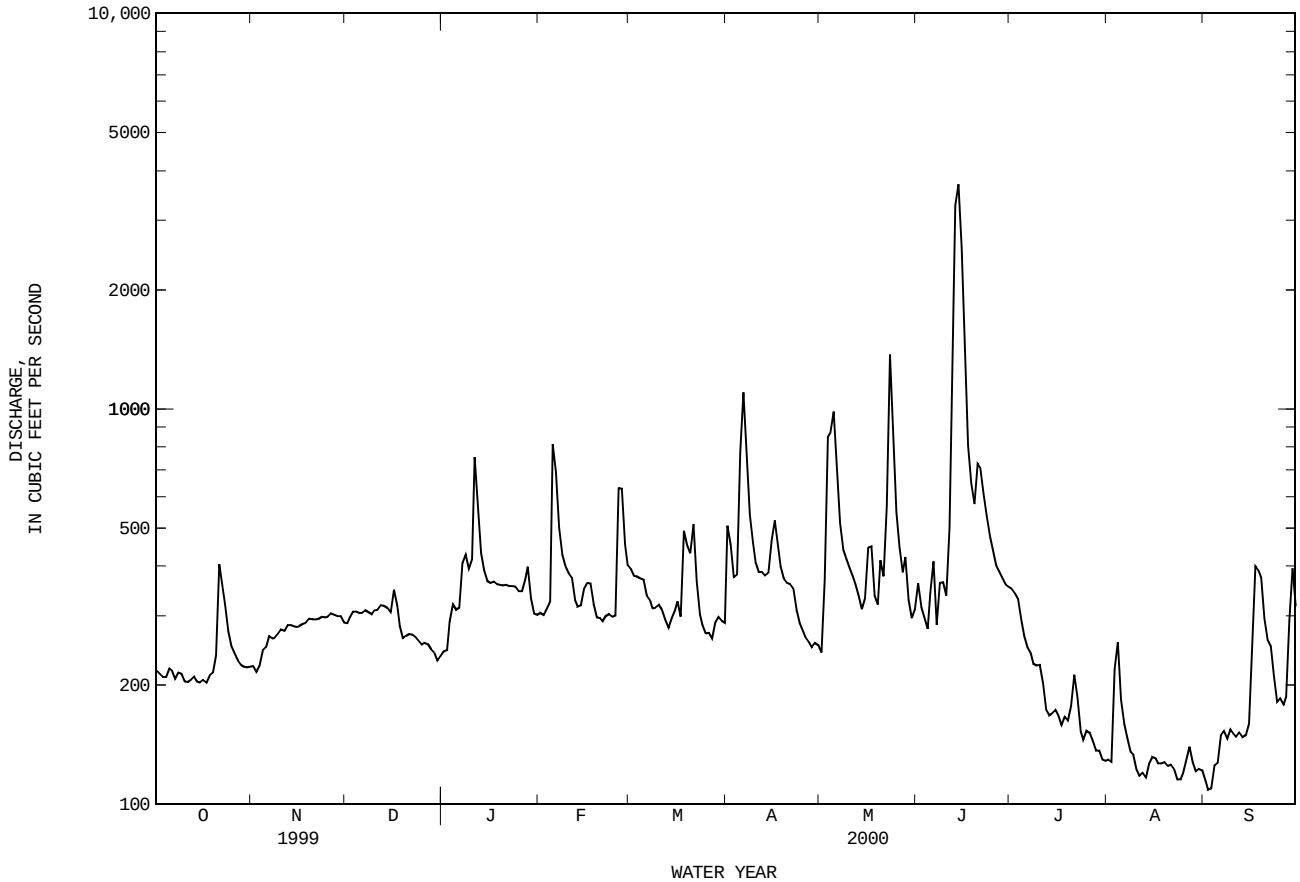
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1924 - 2000h, BY WATER YEAR (WY)

MEAN	845	601	532	568	686	528	751	1047	1172	594	390	889
MAX	7543	2574	4628	4309	7682	4379	4488	6169	15370	4723	1736	12050
(WY)	1999	1941	1992	1968	1992	1992	1992	1992	1987	1973	1978	1967
MIN	75.1	76.2	86.5	104	107	83.9	86.8	137	26.2	52.4	47.9	66.8
(WY)	1956	1956	1955	1956	1956	1956	1956	1971	1956	1956	1963	1954

08188500 SAN ANTONIO RIVER AT GOLIAD, TX--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1924 - 2000h	
ANNUAL TOTAL	177317		126513			
ANNUAL MEAN	486		346		724	
HIGHEST ANNUAL MEAN					3289	1992
LOWEST ANNUAL MEAN					98.2	1956
HIGHEST DAILY MEAN	5130	Jun 27	3700	Jun 14	121000	Sep 23 1967
LOWEST DAILY MEAN	191	Sep 19	109	Sep 2	2.1	Jun 14 1956
ANNUAL SEVEN-DAY MINIMUM	203	Sep 16	118	Aug 29	5.0	Jun 12 1956
INSTANTANEOUS PEAK FLOW			4070	Jun 14	i138000	Sep 23 1967
INSTANTANEOUS PEAK STAGE			16.82	Jun 14	a53.70	Sep 23 1967
ANNUAL RUNOFF (AC-FT)	351700		250900		524200	
10 PERCENT EXCEEDS	730		494		1200	
50 PERCENT EXCEEDS	443		299		330	
90 PERCENT EXCEEDS	214		146		120	

e Estimated
h See PERIOD OF RECORD paragraph.
i From indirect measurement of peak flow.
a From floodmark.



08188600 GBRA CALHOUN CANAL PUMP STATION NEAR LONG MOTT, TX

LOCATION.--Lat 28°30′00", long 96°46′43", Calhoun County, Hydrologic Unit 12100403, at raw water pump station on Goff Bayou, 0.6 mi upstream from State Highway 185, and 1.3 mi northwest of Long Mott.

PERIOD OF RECORD.--Mar 1968 to Feb 1970 (monthly discharge only), Mar 1970 to current year.

GAGE.--Totalizing flow meters on rated pumps. Mar 1968 to Mar 6, 1981, Parshall flume and deflection-vane recorder. Mar 7, 1981 to Oct 5, 1989, water-stage and velocity recorders with duplex water-stage recorder. Oct 6, 1989 to Jun 30, 1992, nonrecording gage. All at former site 0.5 mi downstream. Satellite telemeter at station.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow is diverted from Guadalupe River 550 ft upstream from Guadalupe River near Tivoli (station 08188800), and then through a system of canals, Hog Bayou, and Goff Bayou, a distance of 8.2 mi to the pumping station on Goff Bayou.

COOPERATION.--Log of pumping station on Goff Bayou provided by the Guadalupe-Blanco River Authority.

AVERAGE DISCHARGE.--31 years (water years 1969-2000), 87.4 ft^3/s (63,320 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 311 ft^3/s Jul 7, 1968; no flow at times in 1968-74 and 1977-2000.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	112	56	50	69	50	49	70	72	92	129	60	121
2	82	59	51	57	50	49	43	55	93	123	57	139
3	85	75	58	79	50	49	26	63	83	132	61	139
4	85	75	61	93	50	49	49	88	87	134	56	146
5	78	75	45	93	50	49	47	100	91	121	61	129
6	92	58	59	92	50	33	48	96	135	121	48	122
7	90	67	60	86	59	25	56	106	151	121	49	143
8	72	66	66	82	36	40	54	91	125	113	51	95
9	80	76	58	25	35	58	54	151	97	97	72	75
10	102	91	51	.00	26	50	65	140	81	97	73	75
11	87	98	46	.13	45	67	80	151	74	98	60	75
12	64	108	57	.00	45	72	38	139	82	97	49	75
13	61	124	47	.00	45	50	22	106	89	98	65	97
14	60	122	47	.00	30	40	22	97	89	99	73	85
15	52	116	59	.00	22	e25	22	110	114	97	73	88
16	40	117	68	.00	41	e33	22	73	94	74	73	73
17	52	104	53	62	24	35	51	68	89	75	73	60
18	53	109	45	136	33	25	72	79	89	85	64	50
19	60	96	47	102	25	e25	73	85	86	59	63	64
20	59	107	59	91	35	e37	76	84	120	74	62	74
21	71	109	46	78	26	e35	70	76	124	101	69	69
22	50	96	47	89	58	25	69	71	131	112	96	54
23	51	88	47	71	51	48	83	84	110	99	119	59
24	51	63	49	73	62	68	87	84	74	99	119	63
25	50	62	47	81	50	72	101	111	75	112	111	71
26	70	50	47	78	36	74	105	100	99	116	94	65
27	73	66	63	76	25	82	87	98	144	111	96	75
28	50	62	72	63	46	68	96	85	136	99	104	75
29	51	65	69	50	62	68	75	89	137	92	119	57
30	51	55	69	50	---	100	72	90	134	77	111	49
31	50	---	69	50	---	106	---	91	---	64	98	---
TOTAL	2084	2515	1712	1826.13	1217	1606	1835	2933	3125	3126	2379	2562
MEAN	67.2	83.8	55.2	58.9	42.0	51.8	61.2	94.6	104	101	76.7	85.4
MAX	112	124	72	136	62	106	105	151	151	134	119	146
MIN	40	50	45	.00	22	25	22	55	74	59	48	49
AC-FT	4130	4990	3400	3620	2410	3190	3640	5820	6200	6200	4720	5080

e Estimated

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08188800 GUADALUPE RIVER NEAR TIVOLI, TX

LOCATION.--Lat 28°30'20", long 96°53'04", Calhoun-Refugio County line, Hydrologic Unit 12100204, on right bank at diversion and saltwater barrier, one orifice located upstream and one downstream, 550 ft downstream from Calhoun County Irrigation Canal intake, 0.4 mi downstream from San Antonio River, 3.5 mi north of Tivoli, and at mile 10.2.

DRAINAGE AREA.--10,128 mi^2.

PERIOD OF RECORD.--Sep 1965 to current year (daily maximum stage).
Water-quality records.--Chemical data: Aug 1965 to Aug 1999. Biochemical data: Jan1968 to Sep 1996. Pesticide data: Oct 1970 to Aug 1999. Specific conductance: Aug 1965 to Oct 1982. Water temperature: Aug 1965 to Oct 1982.

REVISED RECORDS.--WRD TX-68-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 0.04 ft above sea level. Satellite telemeter at station.

REMARKS.--Records fair. Since installation of gage in Sep 1965, at least 10% of contributing drainage area has been regulated by Canyon Lake (station 08167700) and Medina Lake (station 08179500) combined storage 640,443 acre-ft. Some regulation by power plants. Many small diversions above station.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height (upstream from barrier), 14.8 ft Oct 21, 1998. Maximum gage height (downstream from barrier), 14.7 ft Oct 21, 1998. Maximum stage since at least 1936, that of Oct 21, 1998.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in Jul 1936 reached a stage of 11 ft, present site and datum. Levees along the Navigation Canal from San Antonio Bay to Victoria were built in 1961, thus decreasing the flood plain.

EXTREMES FOR CURRENT YEAR.--Maximum gage height (upstream from barrier), 7.9 ft Jun 15-17. Maximum gage height (downstream from barrier), 7.9 ft Jun 16.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MAXIMUM VALUES

DAY	UP	DOWN	UP	DOWN	UP	DOWN	UP	DOWN	UP	DOWN	UP	DOWN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	3.0	3.0	2.4	2.3	2.6	2.6	2.0	2.0	2.7	2.7	3.4	3.3
2	3.0	3.0	2.1	2.0	3.0	3.1	2.3	2.3	2.8	2.8	3.4	3.3
3	3.2	3.2	2.1	2.1	3.3	3.3	2.3	2.3	2.7	2.6	3.2	3.1
4	3.2	3.1	2.6	2.3	3.3	3.3	1.9	1.9	2.5	2.5	---	---
5	3.2	3.2	2.4	2.4	3.0	3.0	1.6	1.6	2.2	2.2	2.9	2.8
6	3.2	3.2	2.4	2.4	2.4	2.4	2.0	2.0	2.9	2.8	3.0	3.0
7	3.2	3.2	2.4	2.4	2.3	2.3	3.1	3.1	3.7	3.7	3.4	3.3
8	3.3	3.3	2.7	2.7	2.7	2.7	3.8	3.8	3.6	3.5	3.2	3.2
9	3.2	3.2	3.5	3.5	2.9	2.9	4.2	4.2	2.9	2.8	2.9	3.0
10	3.0	3.0	3.5	3.5	2.5	2.5	4.0	4.0	2.7	2.7	3.1	3.0
11	2.7	2.6	3.3	3.3	2.8	2.8	3.5	3.5	2.6	2.6	3.1	3.0
12	2.8	2.7	2.7	2.7	2.9	2.9	3.9	3.8	2.7	2.6	2.6	2.5
13	2.9	2.8	2.7	2.7	2.4	2.4	3.9	3.9	2.7	2.7	2.7	2.6
14	3.0	2.9	2.9	2.9	2.2	2.2	3.5	3.5	2.7	2.6	3.3	3.2
15	3.0	3.0	2.7	2.7	2.0	2.0	3.3	3.3	2.7	2.6	3.6	3.6
16	3.1	3.1	3.0	3.0	2.1	2.1	3.3	3.2	2.7	2.7	4.2	4.1
17	3.0	2.9	3.1	3.1	2.3	2.3	2.9	2.9	3.1	3.0	4.1	4.0
18	2.4	2.3	2.9	2.9	2.5	2.4	2.7	2.7	3.1	3.0	4.0	3.9
19	2.1	2.0	2.8	2.8	2.6	2.5	2.5	2.6	---	---	3.9	3.8
20	2.2	2.2	2.5	2.5	2.5	2.5	---	---	---	---	4.2	4.1
21	2.4	2.3	2.6	2.5	2.5	2.5	2.7	2.7	2.8	2.8	4.7	4.6
22	2.5	2.4	2.7	2.7	2.5	2.5	2.9	2.9	3.1	3.0	4.6	4.5
23	2.6	2.5	2.7	2.7	2.4	2.4	2.9	2.8	3.2	3.2	4.7	4.5
24	2.6	2.5	---	---	2.4	2.3	2.5	2.5	3.3	3.2	3.9	3.8
25	2.7	2.6	2.0	2.0	2.3	2.2	2.4	2.3	3.6	3.5	3.5	3.5
26	2.6	2.5	2.2	2.2	2.3	2.3	2.6	2.6	3.9	3.8	---	---
27	2.5	2.4	2.1	2.1	2.2	2.2	3.0	3.0	3.6	3.5	---	---
28	2.5	2.5	2.1	2.2	2.0	2.0	2.5	2.5	4.0	3.9	2.8	2.8
29	2.7	2.6	2.3	2.3	1.8	1.7	2.5	2.5	4.0	3.9	2.9	2.9
30	2.8	2.8	2.5	2.4	1.7	1.7	2.5	2.5	---	---	2.8	2.7
31	2.5	2.5	---	---	1.7	1.7	2.5	2.5	---	---	3.0	3.0
MAX	3.3	3.3	---	---	3.3	3.3	---	---	---	---	---	---
MIN	2.1	2.0	---	---	1.7	1.7	---	---	---	---	---	---

08188800 GUADALUPE RIVER NEAR TIVOLI, TX--Continued

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAY	UP	DOWN	UP	DOWN	UP	DOWN	UP	DOWN	UP	DOWN	UP	DOWN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	3.3	3.2	3.3	3.3	2.7	2.7	3.1	3.1	4.2	2.3	3.8	1.6
2	3.3	3.3	3.6	3.6	2.8	2.8	3.1	3.1	3.7	2.2	3.7	1.5
3	3.5	3.5	4.4	4.3	2.9	2.9	3.1	3.1	4.2	2.4	3.7	1.4
4	3.8	3.8	5.5	5.4	2.9	2.9	3.0	3.0	4.2	2.4	3.6	1.2
5	3.8	3.8	6.3	6.2	2.6	2.6	2.8	2.8	3.7	2.1	3.7	1.5
6	3.7	3.6	6.8	6.7	2.3	2.3	2.8	2.7	3.7	2.2	3.5	1.9
7	4.7	4.7	6.8	6.8	2.6	2.6	2.5	2.5	3.6	2.2	3.4	2.4
8	4.8	4.8	6.4	6.3	3.2	3.2	2.4	2.4	4.2	2.5	4.0	2.5
9	4.2	4.2	5.5	5.4	3.9	3.9	2.4	2.4	4.1	2.3	3.6	2.7
10	3.5	3.5	4.8	4.7	5.3	5.3	2.4	2.4	3.9	2.3	4.0	2.7
11	3.5	3.5	4.0	4.0	5.8	5.7	2.4	2.4	3.6	2.2	3.6	2.5
12	3.2	3.2	3.9	3.9	6.5	6.4	2.3	2.3	3.5	2.2	3.5	2.4
13	3.3	3.3	3.3	3.3	7.4	7.4	2.3	2.3	4.1	2.3	4.0	2.5
14	3.3	3.3	3.1	3.1	7.8	7.7	2.2	2.2	4.1	2.6	3.6	2.5
15	3.5	3.4	3.1	3.1	7.9	7.8	2.1	2.1	3.5	2.5	4.1	2.1
16	3.5	3.5	3.8	3.7	7.9	7.9	1.9	1.9	4.0	2.2	4.0	2.1
17	3.1	3.1	4.1	4.1	7.9	7.8	1.9	1.9	3.5	2.0	4.0	2.3
18	3.3	3.2	4.2	4.1	7.8	7.7	2.0	2.0	4.1	1.7	3.9	2.4
19	3.4	3.4	4.0	4.0	7.4	7.3	2.0	2.0	4.0	1.5	4.1	2.8
20	3.2	3.2	3.7	3.6	6.8	6.7	4.1	2.0	3.8	1.6	3.6	2.8
21	2.7	2.7	4.5	4.5	6.3	6.2	4.1	1.8	3.4	1.7	3.5	2.9
22	3.0	3.0	4.6	4.5	6.0	6.0	3.8	2.0	3.4	1.7	3.4	2.9
23	3.0	3.0	4.1	4.0	5.8	5.8	3.8	2.2	---	3.7	3.4	2.9
24	2.9	2.9	5.2	5.2	5.1	5.0	3.6	2.0	4.0	2.1	4.0	2.9
25	2.6	2.6	5.3	5.3	4.6	4.5	4.2	2.3	3.5	2.0	3.9	2.4
26	2.6	2.6	4.9	4.9	4.2	4.2	3.5	2.2	4.0	2.2	---	---
27	2.6	2.6	4.2	4.2	3.4	3.4	4.2	2.7	---	2.3	---	---
28	2.6	2.5	3.7	3.6	3.0	2.9	3.7	2.3	---	---	---	1.9
29	2.5	2.5	3.7	3.7	3.0	2.9	3.5	2.5	3.4	2.2	3.8	2.1
30	3.0	3.0	3.7	3.7	3.0	3.0	4.2	2.3	4.0	2.1	3.5	2.4
31	---	---	3.2	3.1	---	---	3.6	2.3	3.8	1.7	---	---
MAX	4.8	4.8	6.8	6.8	7.9	7.9	4.2	3.1	---	---	---	---
MIN	2.5	2.5	3.2	3.1	2.3	2.3	1.9	1.8	---	---	---	---

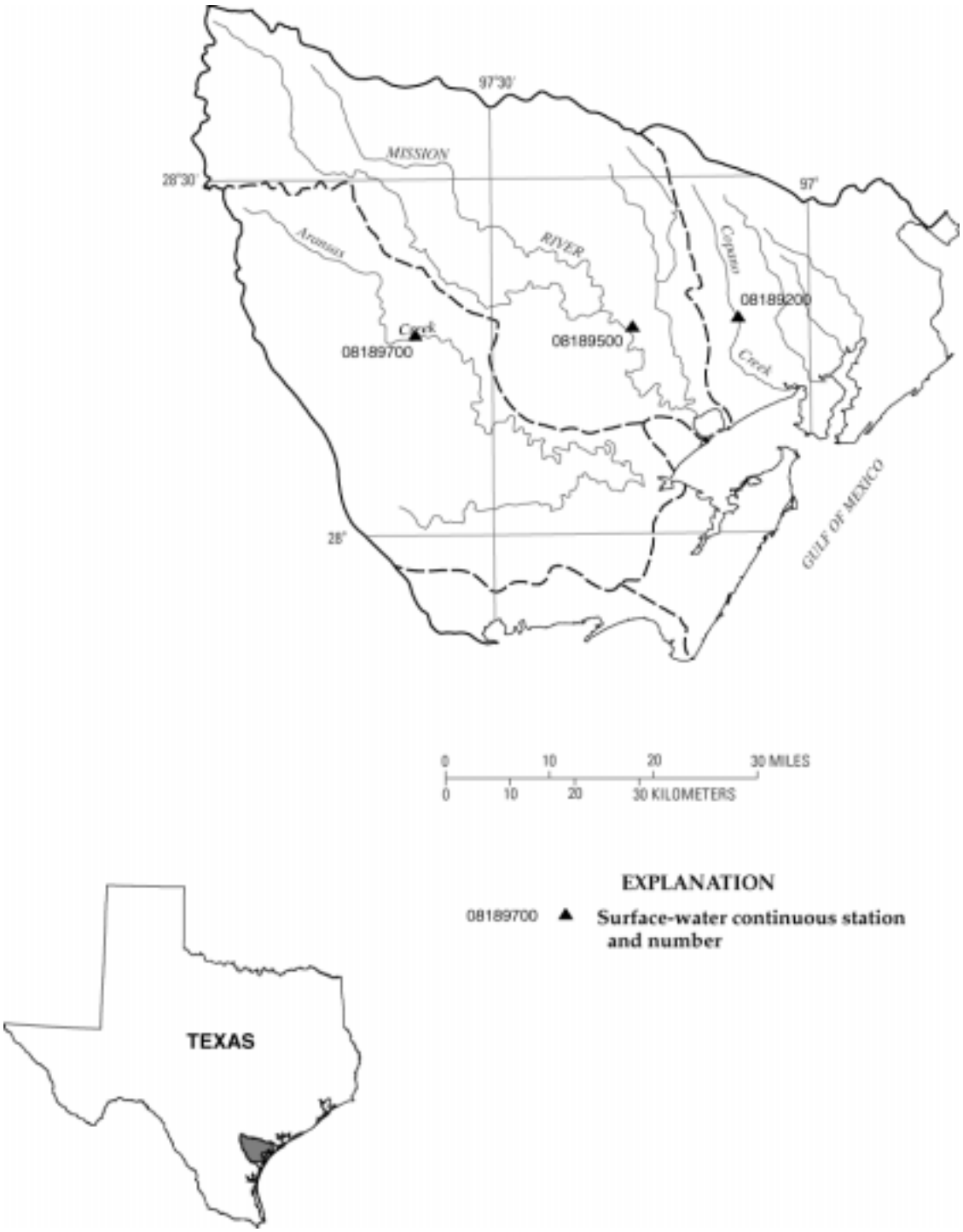


Figure 6.--Map showing location of gaging stations in the Copano, Mission and Aransas River Basins

08189200 Copano Creek near Refugio, TX 200
08189500 Mission River at Refugio, TX 202
08189700 Aransas River near Skidmore, TX 204

08189200 COPANO CREEK NEAR REFUGIO, TX

LOCATION.--Lat 28°18′12", long 97°06′44", Refugio County, Hydrologic Unit 12100405, on right bank at downstream end of bridge on Farm Road 774, 3.6 mi upstream from Alameda Creek, 8.1 mi east of Refugio, and 11.9 mi upstream from mouth.

DRAINAGE AREA.--87.8 mi^2.

PERIOD OF RECORD.--Jun 1970 to current year.
Water-quality records.--Chemical data: Jul 1970 to Dec 1988. Biochemical data: Jul 1970 to Dec 1988. Pesticide data: Jul 1970 to Jul 1981.

GAGE.--Water-stage recorder. Datum of gage is 17.25 ft above sea level. 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. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water-quality data.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1921, 22 ft in Sep 1967, from information by local residents.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 500 ft^3/s:

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)

No peak greater than base discharge.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e.40	.00	.00	.00	.00	.00	.00	.00	e.00	.00	.00	.00
2	e.25	.00	.00	.00	.00	.00	.00	.00	e.00	.00	.04	.00
3	e.10	.00	.00	.00	.00	.00	.49	.00	e.00	.00	.54	.00
4	.00	.00	.00	.00	.00	.00	.46	.00	e.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.17	.00	e.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.04	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	4.9	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	2.4	.00	.00	e.00	.00	.00
14	.00	.00	.00	.00	.00	148	.74	.00	.00	e.00	.00	.00
15	.00	.00	.00	.00	.00	302	.20	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	103	.01	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	26	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	16	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	22	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	14	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	5.7	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	2.4	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	1.5	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.95	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.58	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.35	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.22	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.14	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	.00	.16	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.05	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	0.75	0.00	0.00	0.00	0.00	643.05	9.41	0.00	0.00	0.00	0.58	0.00
MEAN	.024	.000	.000	.000	.000	20.7	.31	.000	.000	.000	.019	.000
MAX	.40	.00	.00	.00	.00	302	4.9	.00	.00	.00	.54	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	1.5	.00	.00	.00	.00	1280	19	.00	.00	.00	1.2	.00

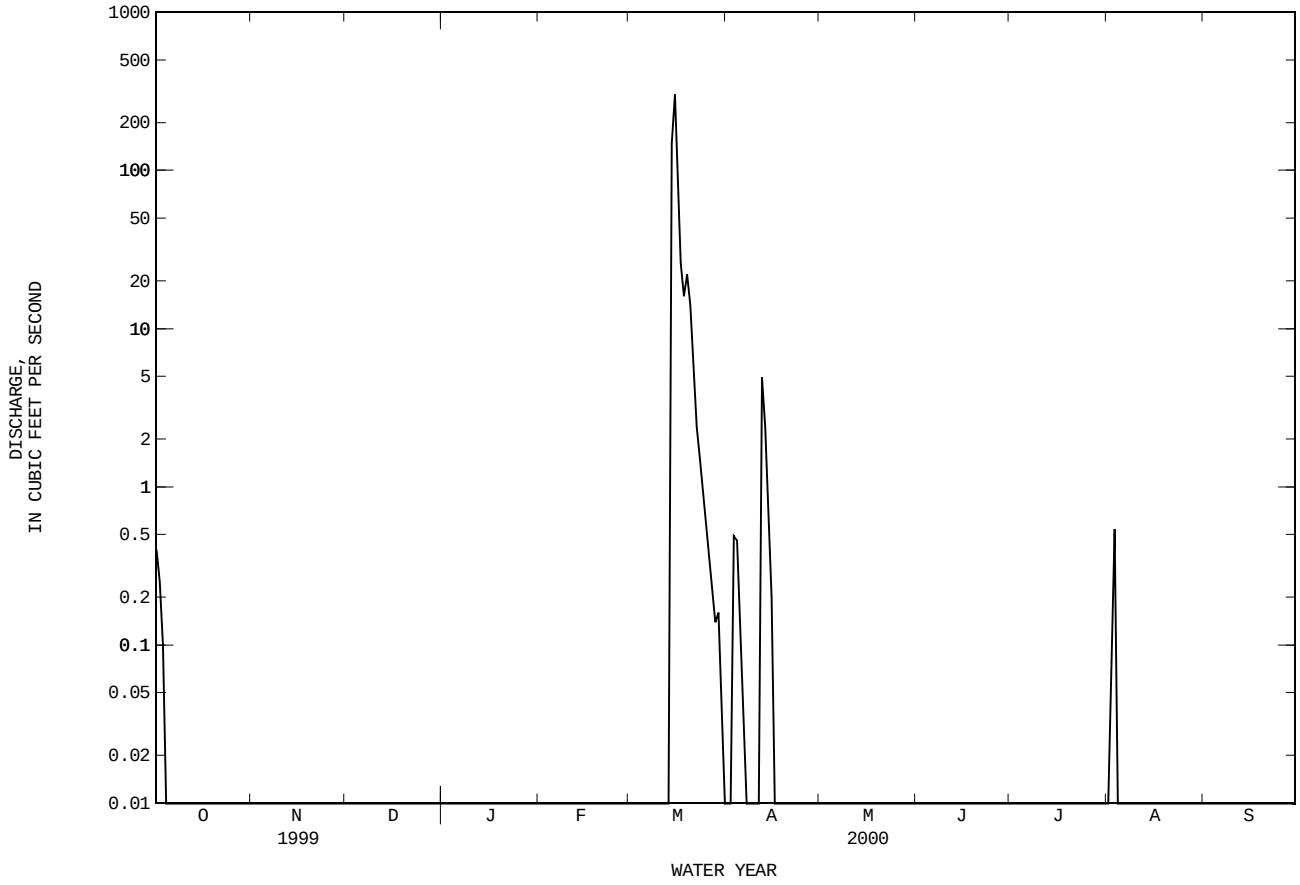
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1970 - 2000, BY WATER YEAR (WY)

MEAN	73.4	46.4	21.7	22.7	37.5	37.9	27.5	59.3	64.9	39.8	3.18	86.9
MAX	551	589	240	189	459	524	229	508	499	416	29.9	1028
(WY)	1984	1982	1992	1979	1992	1997	1992	1981	1981	1990	1998	1971
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1978	1989	1971	1983	1971	1971	1971	1971	1971	1971	1974	1977

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1970 - 2000	
ANNUAL TOTAL	1709.11		653.79			
ANNUAL MEAN	4.68		1.79		43.5	
HIGHEST ANNUAL MEAN					138	1992
LOWEST ANNUAL MEAN					.52	1989
HIGHEST DAILY MEAN	157	Feb 18	302	Mar 15	5960	Sep 12 1971
LOWEST DAILY MEAN	.00	Feb 4	.00	Oct 4	.00	Aug 14 1970
ANNUAL SEVEN-DAY MINIMUM	.00	Feb 4	.00	Oct 4	.00	Aug 14 1970
INSTANTANEOUS PEAK FLOW			376	Mar 14	6300	Sep 12 1971
INSTANTANEOUS PEAK STAGE			8.30	Mar 14	21.00	Sep 12 1971
ANNUAL RUNOFF (AC-FT)	3390		1300		31500	
10 PERCENT EXCEEDS	8.2		.00		62	
50 PERCENT EXCEEDS	.02		.00		.05	
90 PERCENT EXCEEDS	.00		.00		.00	

e Estimated

08189200 COPANO CREEK NEAR REFUGIO, TX--Continued



08189500 MISSION RIVER AT REFUGIO, TX

LOCATION.--Lat 28°17′30", long 97°16′44", Refugio County, Hydrologic Unit 12100406, on left bank at upstream side of upstream bridge of two bridges on U.S. Highway 77, 560 ft upstream from Missouri Pacific Railroad Co. bridge, and 0.2 mi southwest of Refugio.

DRAINAGE AREA.--690 mi^2.

PERIOD OF RECORD.--Jul 1939 to current year.
Water-quality records.--Chemical data: Sep 1961 to Aug 1993. Biochemical data: Jan 1968 to Aug 1993. Pesticide data: Oct 1970 to Apr 1979. Sediment data: Jan 1978 to Aug 1993. Specific conductance: Oct 1961 to Sep 1981. Water temperature: Oct 1961 to Sep 1981.

REVISED RECORDS.--WSP 1923: Drainage area. WDR TX-71-1: 1967

GAGE.--Water-stage recorder. Datum of gage is 1.00 ft above sea level. Prior to Nov 25, 1958, nonrecording gage at site 59 ft downstream at same datum; Nov 26, 1958, to Apr 18, 1963, nonrecording gage at present site and datum. Satellite telemeter at station.

REMARKS.--Records good except those for estimated daily discharges, which are fair. No known regulation. There are several small diversions above station. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water-quality data.

EXTREMES OUTSIDE PERIOD OF RECORD.--Floods in Aug 1914 and May 17, 1938, reached a stage of 32.3 ft, from information by local residents. Maximum stage since about 1899, that of Sep 12, 1971.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,000 ft^3/s:

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)

No peak greater than base discharge.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	5.3	4.3	4.1	7.4	4.9	16	6.2	27	1.1	2.2	.33
2	7.9	5.7	4.3	4.1	8.9	4.9	17	7.5	18	.93	.91	.32
3	6.7	5.8	4.3	4.2	8.3	4.9	21	8.9	13	.88	.77	.29
4	6.7	5.7	4.4	4.0	7.4	4.9	20	7.2	9.8	.78	1.1	.29
5	6.7	5.6	4.3	4.3	7.3	4.9	18	6.6	8.5	.77	1.2	.26
6	6.4	5.5	4.2	4.6	7.1	4.9	16	6.3	7.3	.80	.84	.24
7	6.1	5.7	4.3	5.6	6.7	5.2	16	5.9	6.5	.78	.57	.27
8	6.0	5.7	4.3	69	6.6	4.9	15	5.5	6.6	.77	.45	.29
9	5.7	5.7	4.5	170	6.6	3.8	14	5.3	5.7	.77	.41	.28
10	5.7	5.7	4.3	75	6.4	3.8	13	5.3	6.8	.77	.36	.27
11	5.7	5.5	4.4	37	6.3	3.7	13	5.2	7.0	.70	.33	.27
12	4.7	5.3	4.6	24	6.1	3.6	19	4.9	27	.64	.27	.36
13	6.6	5.3	4.6	19	6.1	3.6	81	6.7	59	.61	.26	.30
14	6.1	5.3	4.7	15	5.7	124	117	5.5	33	.57	.25	.31
15	5.9	5.3	4.6	14	4.9	432	56	5.3	21	.59	.30	.30
16	5.7	5.3	4.5	12	4.9	290	29	5.1	15	.53	.34	.29
17	5.7	5.0	4.5	11	5.0	125	20	5.5	12	.48	.39	.25
18	6.5	4.9	4.6	11	5.1	113	15	4.2	9.2	.46	.34	.24
19	6.9	4.9	4.6	10	5.1	143	12	4.1	e7.3	.45	.26	.24
20	6.1	4.9	11	9.9	4.8	96	11	6.5	e6.0	.36	.24	.24
21	5.6	4.9	5.4	9.4	4.6	59	9.2	4.4	5.1	.28	.23	.24
22	5.3	4.7	4.7	9.0	4.6	41	8.1	4.2	4.5	.27	.21	.23
23	5.1	4.6	4.4	8.8	4.9	33	7.6	7.7	4.0	.29	.21	.21
24	4.8	4.7	4.3	8.2	5.1	28	7.0	10	3.2	.36	.24	.18
25	4.6	5.4	4.1	7.8	5.0	25	6.7	7.9	1.7	.45	.28	.32
26	4.6	4.8	4.1	7.6	5.0	23	6.1	6.5	1.6	.40	.33	.25
27	4.6	4.6	4.1	9.2	4.9	22	5.7	5.4	1.4	.37	.42	.27
28	4.7	4.6	4.1	8.7	4.9	20	5.4	8.4	1.3	.36	.46	.31
29	4.9	4.8	4.0	8.0	4.9	20	6.1	17	1.2	.30	.39	.34
30	5.2	4.7	4.0	7.7	---	19	6.5	95	1.2	.28	.37	.39
31	5.3	---	4.1	7.6	---	17	---	57	---	3.9	.36	---
TOTAL	183.5	155.9	142.6	599.8	170.6	1688.0	607.4	341.2	330.9	21.00	15.29	8.38
MEAN	5.92	5.20	4.60	19.3	5.88	54.5	20.2	11.0	11.0	.68	.49	.28
MAX	11	5.8	11	170	8.9	432	117	95	59	3.9	2.2	.39
MIN	4.6	4.6	4.0	4.0	4.6	3.6	5.4	4.1	1.2	.27	.21	.18
AC-FT	364	309	283	1190	338	3350	1200	677	656	42	30	17
CFSM	.01	.01	.01	.03	.01	.08	.03	.02	.02	.00	.00	.00
IN.	.01	.01	.01	.03	.01	.09	.03	.02	.02	.00	.00	.00

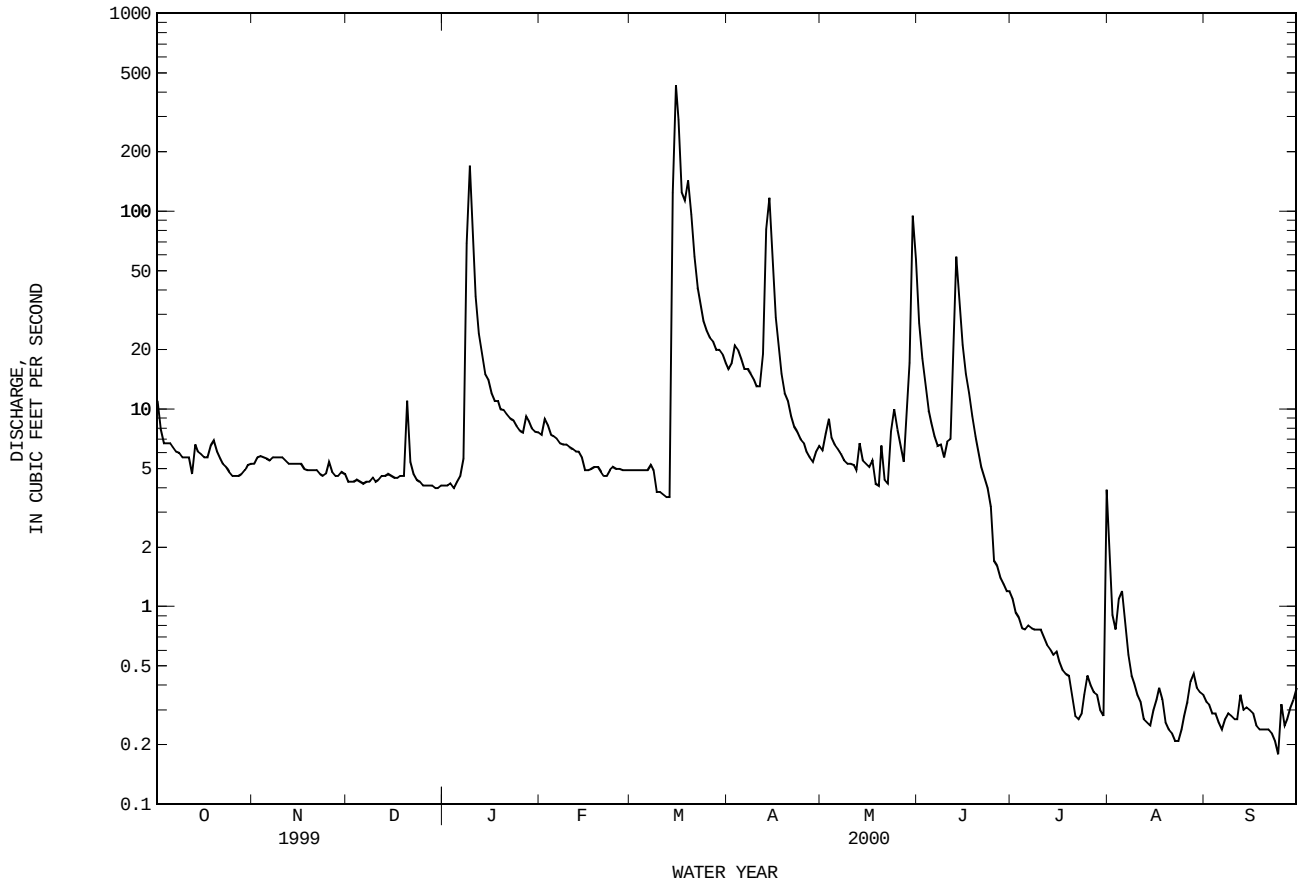
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 2000, BY WATER YEAR (WY)

MEAN	193	70.7	59.7	45.8	105	59.4	101	181	177	132	60.2	258
MAX	1882	1380	849	417	1178	595	851	1387	1848	2135	1076	5349
(WY)	1974	1982	1992	1992	1958	1997	1992	1972	1973	1990	1942	1967
MIN	.051	.63	.62	.66	.66	2.20	1.90	.46	.65	.40	.096	.027
(WY)	1990	1990	1990	1990	1990	1989	1940	1989	1990	1989	1989	1989

08189500 MISSION RIVER AT REFUGIO, TX--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1939 - 2000	
ANNUAL TOTAL	10262.4		4264.57			
ANNUAL MEAN	28.1		11.7		120	
HIGHEST ANNUAL MEAN					459	1967
LOWEST ANNUAL MEAN					1.74	1989
HIGHEST DAILY MEAN	519	Feb 17	432	Mar 15	67200	Sep 12 1971
LOWEST DAILY MEAN	4.0	Dec 29	.18	Sep 24	.00	Sep 1 1989
ANNUAL SEVEN-DAY MINIMUM	4.1	Dec 25	.23	Sep 18	.00	Aug 30 1989
INSTANTANEOUS PEAK FLOW			451	Mar 15	c79000	Sep 12 1971
INSTANTANEOUS PEAK STAGE			10.67	Mar 15	38.25	Sep 12 1971
ANNUAL RUNOFF (AC-FT)	20360		8460		87220	
ANNUAL RUNOFF (CFSM)	.041		.017		.17	
ANNUAL RUNOFF (INCHES)	.55		.23		2.37	
10 PERCENT EXCEEDS	45		19		94	
50 PERCENT EXCEEDS	16		5.0		11	
90 PERCENT EXCEEDS	4.7		.30		2.2	

e Estimated
c From rating curve extended above current-meter discharge measurements of 76,000 ft^3/s and 77,200 ft^3/s.



08189700 ARANSAS RIVER NEAR SKIDMORE, TX

LOCATION.--Lat 28°16′56", long 97°37′14", Bee County, Hydrologic Unit 12100407, on right bank 160 ft downstream from centerline of county road bridge, 3.8 mi downstream from confluence of West Aransas and Poesta Creeks, and 4.4 mi northeast of Skidmore.

DRAINAGE AREA.--247 mi^2.

PERIOD OF RECORD.--Mar 1964 to current year.
Water-quality records.--Chemical data: Oct 1965 to Sep 1966. Sediment data: Feb 1966 to Sep 1975.

GAGE.--Water-stage recorder. Datum of gage is 72.37 ft above sea level. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records fair. The city of Beeville discharges wastewater effluent into the river via Poesta Creek 3.8 mi upstream. No known regulation or diversions. No flow at times. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water-quality data.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Sep 1954 reached a stage of 33 ft (discharge, 19,600 ft^3/s), from information by local resident. Maximum stage since at least 1914, that of Sep 22, 1967.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 500 ft^3/s:

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar 14	2230	1,940	14.21	Mar 18	2130	1,090	11.28

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.9	3.5	3.8	4.5	3.5	3.2	5.3	3.6	3.6	1.9	1.9	.70
2	3.5	2.6	4.3	4.4	4.3	3.2	5.3	4.4	2.9	1.9	2.0	.70
3	3.4	2.9	4.6	4.1	4.5	3.2	5.4	12	2.9	1.8	2.1	.69
4	3.4	3.4	4.6	3.8	4.9	3.0	5.1	9.5	2.8	1.9	2.0	.61
5	3.2	3.4	4.2	3.5	5.2	3.0	6.1	5.6	35	1.8	1.9	.61
6	3.2	3.6	3.7	3.5	5.8	3.0	5.5	4.7	38	1.8	1.9	.61
7	3.1	4.1	3.3	4.1	4.6	3.2	5.0	4.3	11	1.8	1.9	.61
8	3.1	4.0	3.6	19	4.0	3.3	5.0	4.2	5.8	1.8	1.8	.61
9	3.1	3.6	4.0	13	4.0	3.3	5.1	3.7	5.0	1.8	1.8	.61
10	2.9	3.8	3.9	6.1	3.8	3.1	5.2	3.7	7.7	1.8	1.8	.61
11	2.9	3.8	4.2	4.8	3.8	2.8	5.1	3.6	30	1.8	1.6	.61
12	2.8	3.5	4.4	4.3	3.7	2.5	6.6	3.5	22	1.7	1.5	.61
13	2.8	3.2	4.2	4.0	3.6	2.5	6.5	4.2	8.4	1.7	1.5	.61
14	3.1	3.4	4.2	3.5	3.5	521	6.2	13	5.4	1.6	1.4	.55
15	3.2	3.5	4.3	3.2	3.4	687	5.8	6.8	4.1	1.5	1.4	e.70
16	3.2	3.6	4.1	3.1	3.2	77	5.9	4.2	3.5	1.5	1.4	e.79
17	3.2	3.6	3.9	3.2	3.1	23	4.9	3.5	3.2	1.5	1.3	e.99
18	3.6	3.5	3.9	3.3	3.3	322	4.5	3.5	3.2	1.5	1.3	e.99
19	4.2	3.6	3.9	3.0	3.3	411	4.5	3.2	3.5	1.5	1.3	e1.1
20	8.7	4.2	4.2	3.1	3.2	51	4.7	3.8	3.6	1.6	1.2	e1.2
21	6.8	4.3	4.0	3.0	3.1	20	4.5	4.0	3.9	1.5	1.2	e1.3
22	5.4	4.1	4.3	3.0	3.3	13	4.0	3.6	3.3	1.5	1.2	e1.4
23	4.5	3.8	4.9	3.2	3.3	10	3.8	3.5	2.6	1.6	1.1	e1.3
24	4.0	3.5	4.0	2.9	3.5	8.2	3.7	3.2	2.2	1.7	1.1	e1.1
25	3.7	3.4	3.8	2.8	3.4	7.4	3.4	3.0	2.0	1.7	1.1	e1.0
26	3.5	3.6	3.8	2.9	3.5	6.9	3.1	2.9	1.8	1.8	.99	e.89
27	3.6	3.5	3.6	3.5	3.3	6.4	3.3	2.7	1.8	1.8	.99	1.1
28	3.6	3.4	3.6	4.0	3.1	5.8	3.4	3.4	1.8	1.9	.93	1.4
29	2.5	3.5	3.5	4.3	3.1	5.7	3.6	17	2.0	1.9	.79	1.4
30	3.1	3.5	3.7	4.1	---	5.7	3.6	7.2	2.0	1.8	.79	1.7
31	3.8	---	3.7	3.6	---	5.8	---	4.7	---	1.9	.78	---
TOTAL	115.0	107.4	124.2	138.8	108.3	2226.2	144.1	160.2	225.0	53.3	43.97	27.10
MEAN	3.71	3.58	4.01	4.48	3.73	71.8	4.80	5.17	7.50	1.72	1.42	.90
MAX	8.7	4.3	4.9	19	5.8	687	6.6	17	38	1.9	2.1	1.7
MIN	2.5	2.6	3.3	2.8	3.1	2.5	3.1	2.7	1.8	1.5	.78	.55
AC-FT	228	213	246	275	215	4420	286	318	446	106	87	54

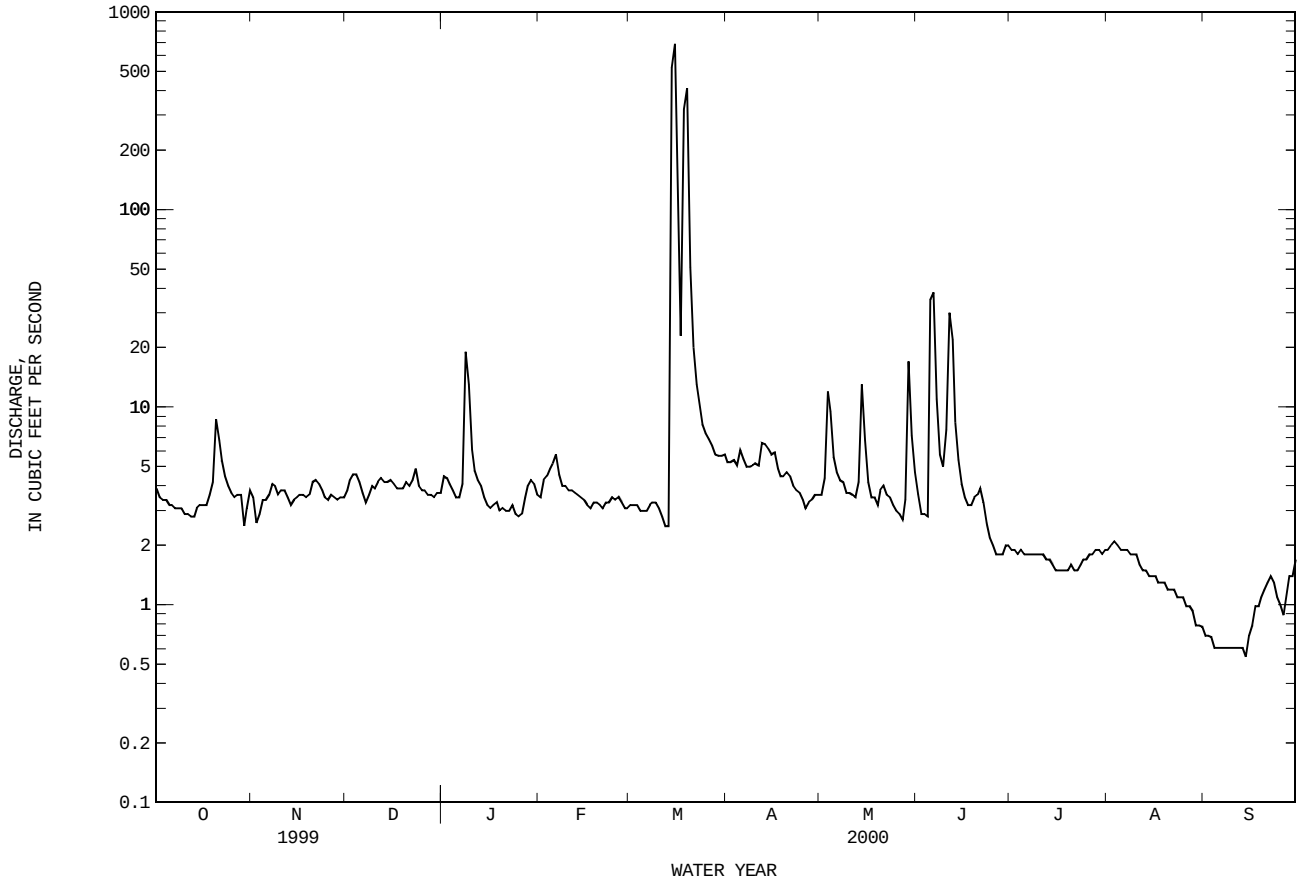
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 2000, BY WATER YEAR (WY)

MEAN	42.6	10.3	17.9	7.62	14.5	15.6	29.8	53.1	48.4	27.1	14.0	129
MAX	346	105	327	38.9	119	117	255	349	512	451	176	2356
(WY)	1998	1999	1992	1992	1969	1992	1992	1972	1973	1990	1980	1967
MIN	.000	.17	.72	1.05	1.10	.55	.31	1.04	.026	.031	.000	.000
(WY)	1990	1965	1965	1971	1967	1966	1967	1989	1967	1986	1965	1965

08189700 ARANSAS RIVER NEAR SKIDMORE, TX--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1964 - 2000	
ANNUAL TOTAL	6479.1		3473.57			
ANNUAL MEAN	17.8		9.49		34.7	
HIGHEST ANNUAL MEAN					199	1967
LOWEST ANNUAL MEAN					3.15	1986
HIGHEST DAILY MEAN	1560	Apr 27	687	Mar 15	49300	Sep 22 1967
LOWEST DAILY MEAN	2.0	Aug 21	.55	Sep 14	.00	Jun 24 1964
ANNUAL SEVEN-DAY MINIMUM	2.1	Aug 16	.60	Sep 8	.00	Aug 16 1964
INSTANTANEOUS PEAK FLOW			1940	Mar 14	i82800	Sep 22 1967
INSTANTANEOUS PEAK STAGE			14.21	Mar 14	a42.22	Sep 22 1967
ANNUAL RUNOFF (AC-FT)	12850		6890		25120	
10 PERCENT EXCEEDS	9.0		6.0		15	
50 PERCENT EXCEEDS	4.9		3.5		4.0	
90 PERCENT EXCEEDS	2.8		1.3		.67	

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



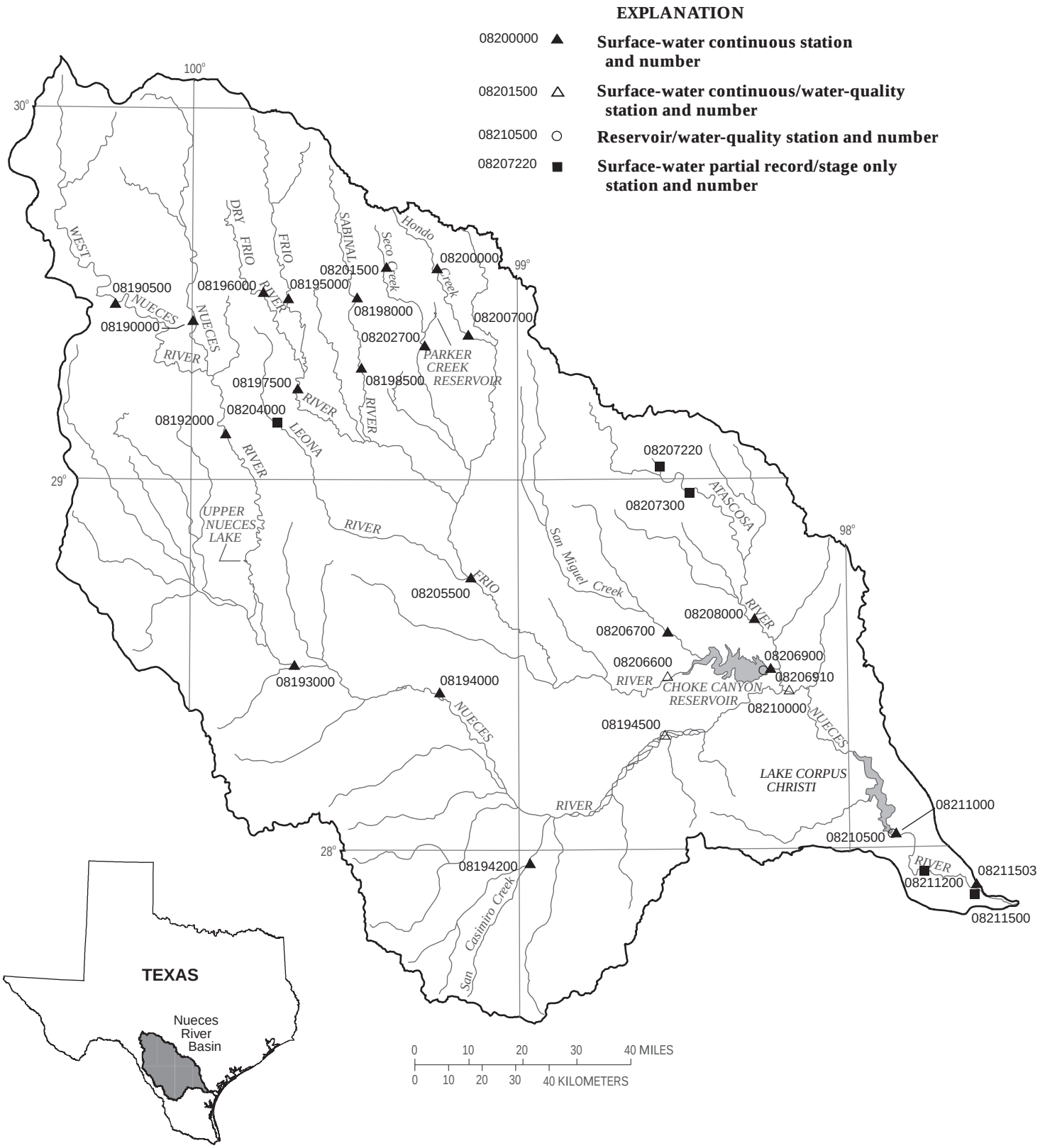


Figure 7.--Map showing location of gaging stations in the Nueces River Basin

08190000 Nueces River at Laguna, TX 208
08190500 West Nueces River near Brackettville, TX 210
08192000 Nueces River below Uvalde, TX 212
08193000 Nueces River near Asherton, TX 214
08194000 Nueces River at Cotulla, TX 216
08194200 San Casimiro near Freer, TX 218
08194500 Nueces River near Tilden, TX 220
08195000 Frio River at Concan, TX 224
08196000 Dry Frio River near Reagan Wells, TX 226
08197500 Frio River below Dry Frio River near Uvalde, TX 228
08198000 Sabinal River near Sabinal, TX 230
08198500 Sabinal River at Sabinal, TX 232
08200000 Hondo Creek near Tarpley, TX 234
08200700 Hondo Creek at King Waterhole near Hondo, TX 236
08201500 Seco Creek at Miller Ranch near Utopia, TX 238
08202700 Seco Creek at Rowe Ranch near D’Hanis, TX 240
08204000 Leona River Springflow near Uvalde, TX 381
08205500 Frio River near Derby, TX 242
08206600 Frio River at Tilden, TX 244
08206700 San Miguel Creek near Tilden, TX 250
08206900 Choke Canyon Reservoir near Three Rivers, TX 252
08206910 Choke Canyon Reservoir (Outlet Works Channel) near Three Rivers, TX 276
08207220 Rutledge Hollow at 7th Street, Poteet, TX 383
08207300 Atascosa River at U.S. Highway 281, Pleasanton, TX 383
08208000 Atascosa River at Whitsett, TX 278
08210000 Nueces River near Three Rivers, TX 280
08210500 Lake Corpus Christi near Mathis, TX 286
08211000 Nueces River near Mathis, TX 304
08211200 Nueces River at Bluntzer, TX 306
08211500 Nueces River at Calallen, TX 308
08211503 Rincon Bayou Channel near Calallen, TX 310

08190000 NUECES RIVER AT LAGUNA, TX

LOCATION.--Lat 29°25′42", long 99°59′49", Uvalde County, Hydrologic Unit 12110101, on right bank 0.5 mi downstream from Sycamore Creek, 1.0 mi northeast of Laguna, and at mile 370.8.

DRAINAGE AREA.--737 mi^2.

PERIOD OF RECORD.--Oct 1923 to current year.
Water-quality records.--Chemical data: May 1949 to Jun 1952, Sep 1964 to Sep 1993. Biochemical data: Feb 1970 to Sep 1993. Pesticide data: Feb 1970 to Sep 1993. Sediment data: Jan 1966.

REVISED RECORDS.--WSP 1562: 1930, 1931(M), 1932, 1939. WDR TX-83-3: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,119.72 ft above sea level. Prior to Jan 26, 1925, nonrecording gage at site 2 mi downstream at different datum. Satellite telemeter at station.

REMARKS.--Records good. No known regulation. There are many small diversions above station for irrigation. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water-quality data.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in Jun 1913 reached a stage of about 29 ft (discharge, 210,000 ft^3/s); flood of Sep 21, 1923, reached a stage of about 26.5 ft (discharge, 160,000 ft^3/s); from information by local residents. Maximum stage since at least 1866, that of Sep 24, 1955.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 700 ft^3/s:

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jun 10	2400	769	5.00	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	66	83	76	70	71	74	68	59	55	71	33	20
2	66	81	76	70	81	74	70	51	55	69	30	20
3	66	80	76	70	82	73	69	49	63	67	30	20
4	66	80	75	68	78	71	68	51	56	65	29	19
5	64	80	72	68	75	69	68	52	55	62	30	19
6	65	80	72	68	74	68	68	51	57	61	29	19
7	65	80	72	68	74	68	66	49	55	58	29	19
8	64	80	72	68	73	68	64	47	53	53	29	20
9	63	80	72	68	72	68	66	47	55	48	28	20
10	62	80	72	68	72	68	64	46	95	47	28	19
11	62	80	72	68	72	68	64	45	311	46	27	19
12	62	80	72	68	72	68	79	44	151	44	27	18
13	62	80	72	68	71	70	72	47	125	e42	27	19
14	62	78	71	68	70	70	71	42	108	e41	26	19
15	62	78	70	70	70	70	70	42	97	e39	25	20
16	62	78	70	70	70	70	70	40	90	e38	25	19
17	77	78	70	70	70	70	67	39	84	e37	25	18
18	87	76	70	70	70	70	65	39	134	e35	25	18
19	84	76	70	70	70	71	64	39	194	35	23	18
20	83	76	70	70	69	70	62	39	161	34	23	19
21	83	76	70	69	68	68	60	39	130	34	23	19
22	83	76	70	66	72	68	59	39	114	33	22	19
23	83	76	70	66	80	70	58	59	105	34	23	18
24	83	76	70	66	76	70	56	64	98	34	23	24
25	84	76	70	66	74	70	54	64	91	33	23	31
26	84	76	70	66	74	71	52	62	87	34	23	23
27	83	76	70	67	74	71	52	63	84	33	22	22
28	82	76	70	68	74	70	51	67	80	31	22	22
29	80	76	70	68	74	69	49	60	76	30	22	22
30	80	76	70	68	---	68	48	61	74	31	21	22
31	82	---	70	68	---	68	---	58	---	36	20	---
TOTAL	2257	2344	2212	2116	2122	2161	1894	1554	2993	1355	792	604
MEAN	72.8	78.1	71.4	68.3	73.2	69.7	63.1	50.1	99.8	43.7	25.5	20.1
MAX	87	83	76	70	82	74	79	67	311	71	33	31
MIN	62	76	70	66	68	68	48	39	53	30	20	18
AC-FT	4480	4650	4390	4200	4210	4290	3760	3080	5940	2690	1570	1200
CFSM	.10	.11	.10	.09	.10	.09	.09	.07	.14	.06	.03	.03
IN.	.11	.12	.11	.11	.11	.11	.10	.08	.15	.07	.04	.03

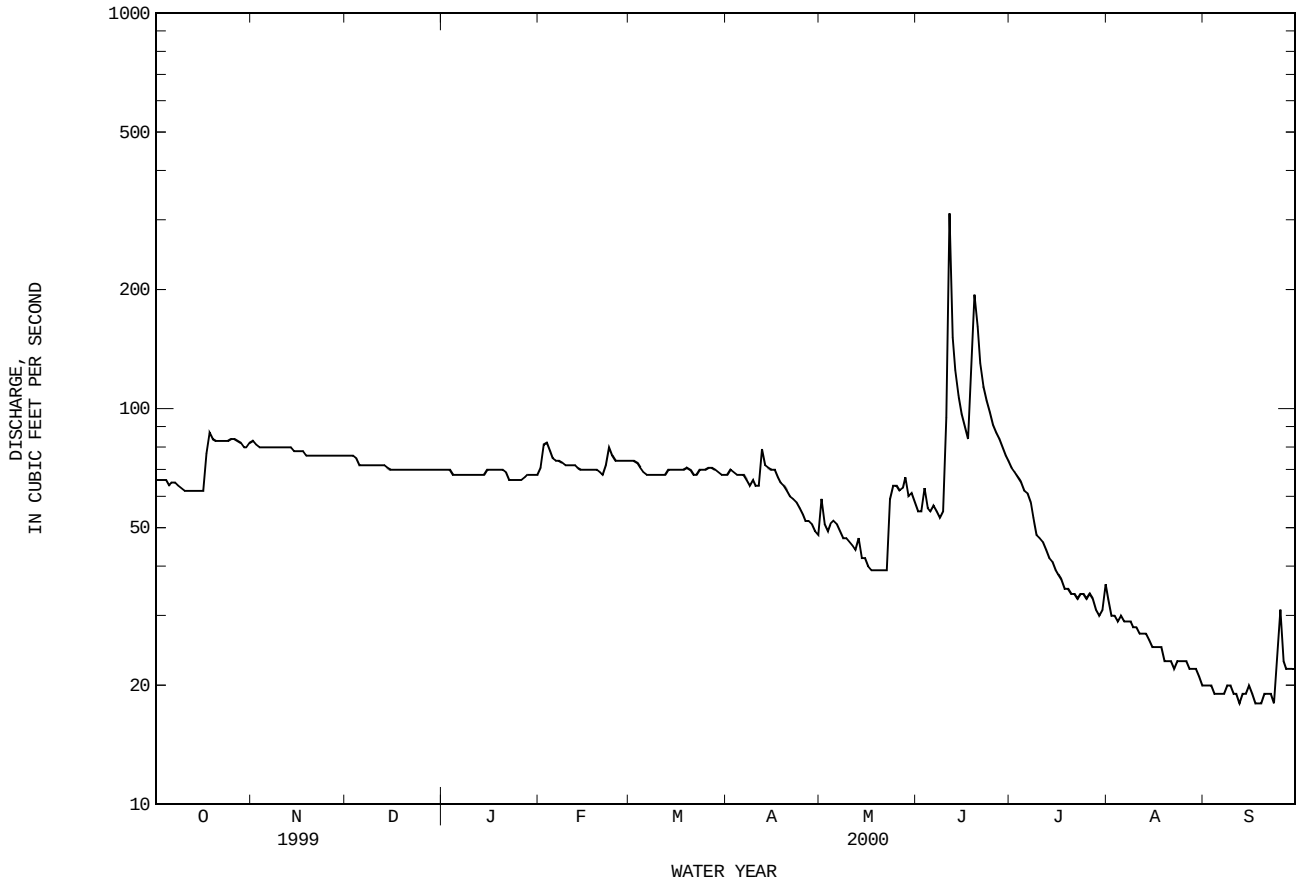
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1924 - 2000, BY WATER YEAR (WY)

MEAN	228	125	118	106	116	107	112	155	267	161	160	244
MAX	2030	544	894	610	1160	867	766	868	5407	1580	2500	2668
(WY)	1974	1924	1992	1992	1949	1992	1977	1935	1935	1939	1971	1955
MIN	7.39	5.42	5.58	5.46	5.10	7.04	23.7	18.2	12.2	8.11	6.99	8.60
(WY)	1953	1957	1957	1957	1957	1957	1935	1953	1953	1953	1953	1956

08190000 NUECES RIVER AT LAGUNA, TX--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1924 - 2000	
ANNUAL TOTAL	58364		22404			
ANNUAL MEAN	160		61.2		158	
HIGHEST ANNUAL MEAN					611	1935
LOWEST ANNUAL MEAN					23.1	1953
HIGHEST DAILY MEAN	1700	Jun 21	311	Jun 11	107000	Jun 14 1935
LOWEST DAILY MEAN	62	Oct 10	18	Sep 12	3.0	Feb 27 1957
ANNUAL SEVEN-DAY MINIMUM	62	Oct 10	18	Sep 17	3.2	Mar 10 1957
INSTANTANEOUS PEAK FLOW			769	Jun 11	i307000	Sep 24 1955
INSTANTANEOUS PEAK STAGE			5.01	Jun 11	a32.70	Sep 24 1955
ANNUAL RUNOFF (AC-FT)	115800		44440		114700	
ANNUAL RUNOFF (CFSM)	.22		.083		.21	
ANNUAL RUNOFF (INCHES)	2.95		1.13		2.92	
10 PERCENT EXCEEDS	253		80		240	
50 PERCENT EXCEEDS	138		68		76	
90 PERCENT EXCEEDS	70		23		24	

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



08190500 WEST NUECES RIVER NEAR BRACKETTVILLE, TX

LOCATION.--Lat 29°28′21", long 100°14′10", Kinney County, Hydrologic Unit 12110102, at Wilson Ranch on Farm Road 3199, 1.3 mi upstream from Miguel Canyon, 16.0 mi northeast of Brackettville, and 40.2 mi upstream from mouth.

DRAINAGE AREA.--694 mi^2.

PERIOD OF RECORD.--Sep 1939 to Sep 1950, Apr 1956 to current year.

REVISED RECORDS.--WSP 1312: 1949(M). WDR TX-83-3: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,326.79 ft above sea level. Prior to Mar 14, 1940, nonrecording gage at same site and datum. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. A large part of the low flow enters the Edwards and associated limestones in the Balcones Fault Zone above station. No known regulation or diversions. No flow at times. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water-quality data.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1879, about 40 ft Jun 14, 1935 (discharge, 550,000 ft^3/s, based on slope-area measurements of 580,000 ft^3/s at site 33 mi upstream from gage, and 536,000 ft^3/s at site 24 mi downstream from gage, present site and datum), from gage-height relation of 1935 and 1955 flood peaks at site 0.6 mi upstream. Flood in 1900 reached a stage about 34 ft, and flood of Sep 24, 1955, reached a stage of 27.1 ft, from floodmark at present site (discharge, 150,000 ft^3/s, by slope-area measurement).

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

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)

No peak greater than base discharge.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.66	.58	.42	.33	.32	.19	.13	.22	.00	.36	.11	.00
2	.65	.56	.39	.29	.84	.20	.15	.11	.00	.33	.12	.00
3	.59	.59	.36	.25	.44	.17	.12	.06	.00	.35	.09	.00
4	.59	.59	.34	.32	.35	.15	.09	.06	.00	.32	.08	.00
5	.59	.59	.41	.25	.36	.15	.07	.06	.00	.28	.07	.00
6	.57	.59	.39	.18	.33	.19	.07	.04	.00	.26	.08	.00
7	.55	.59	.39	.15	.33	.20	.07	.02	.00	.27	.07	.00
8	.55	.52	.50	.15	.31	.31	.07	.00	.00	.26	.06	.00
9	.52	.52	.35	.20	.28	.19	.06	.01	.00	.21	.06	.00
10	.52	.52	.38	.35	.28	.19	.07	.01	.44	.18	.05	.00
11	.52	.52	.46	.53	.28	.17	.10	.00	1.0	.17	.04	.00
12	.55	.52	.42	.59	.28	.15	.38	.00	3.6	.17	.03	.00
13	.57	.52	.41	.55	.26	.15	.19	.02	2.8	.15	.03	.00
14	.53	.52	.43	.52	.23	.19	.14	.00	2.0	.12	.02	.04
15	.53	.48	.42	.52	.26	.19	.12	.00	1.5	.12	.02	.21
16	.55	.45	.45	.39	.26	.18	.12	.00	1.2	.10	.03	.26
17	.98	.41	.39	.34	.28	.14	.15	.00	.87	.08	.02	.43
18	.76	.39	.36	.28	.26	.18	.15	.00	1.3	.07	.00	.40
19	.59	.39	.38	.28	.23	.17	.12	.00	1.4	.06	.00	.31
20	.59	.39	.36	.37	.21	.18	.11	.00	2.4	.06	.00	.22
21	.59	.41	.33	.28	.20	.19	.09	.00	2.0	.05	.00	.19
22	.59	.45	.33	.33	.29	.20	.07	.00	1.4	.04	.00	.15
23	.59	.42	.33	.36	.41	.21	.06	.00	1.0	.04	.00	.12
24	.57	.44	.33	.36	.29	.20	.05	.00	.73	.07	.00	1.1
25	.53	.41	.29	.32	.28	.20	.05	.00	.63	.07	.00	.97
26	.56	.39	.28	.30	.20	.19	.03	.00	.51	.04	.00	2.6
27	.54	.39	.29	.37	.17	.19	.03	.02	.45	.03	.00	2.7
28	.57	.39	.43	.28	.18	.21	.03	.13	.41	.03	.00	1.7
29	.57	.39	.44	.28	.19	.15	.03	.04	.44	.05	.00	1.1
30	.54	.43	.39	.28	---	.12	.02	.00	.38	.06	.00	.87
31	.50	---	.36	.28	---	.12	---	.00	---	.08	.00	---
TOTAL	18.11	14.36	11.81	10.28	8.60	5.62	2.94	0.80	26.46	4.48	0.98	13.37
MEAN	.58	.48	.38	.33	.30	.18	.098	.026	.88	.14	.032	.45
MAX	.98	.59	.50	.59	.84	.31	.38	.22	3.6	.36	.12	2.7
MIN	.50	.39	.28	.15	.17	.12	.02	.00	.00	.03	.00	.00
AC-FT	36	28	23	20	17	11	5.8	1.6	52	8.9	1.9	27

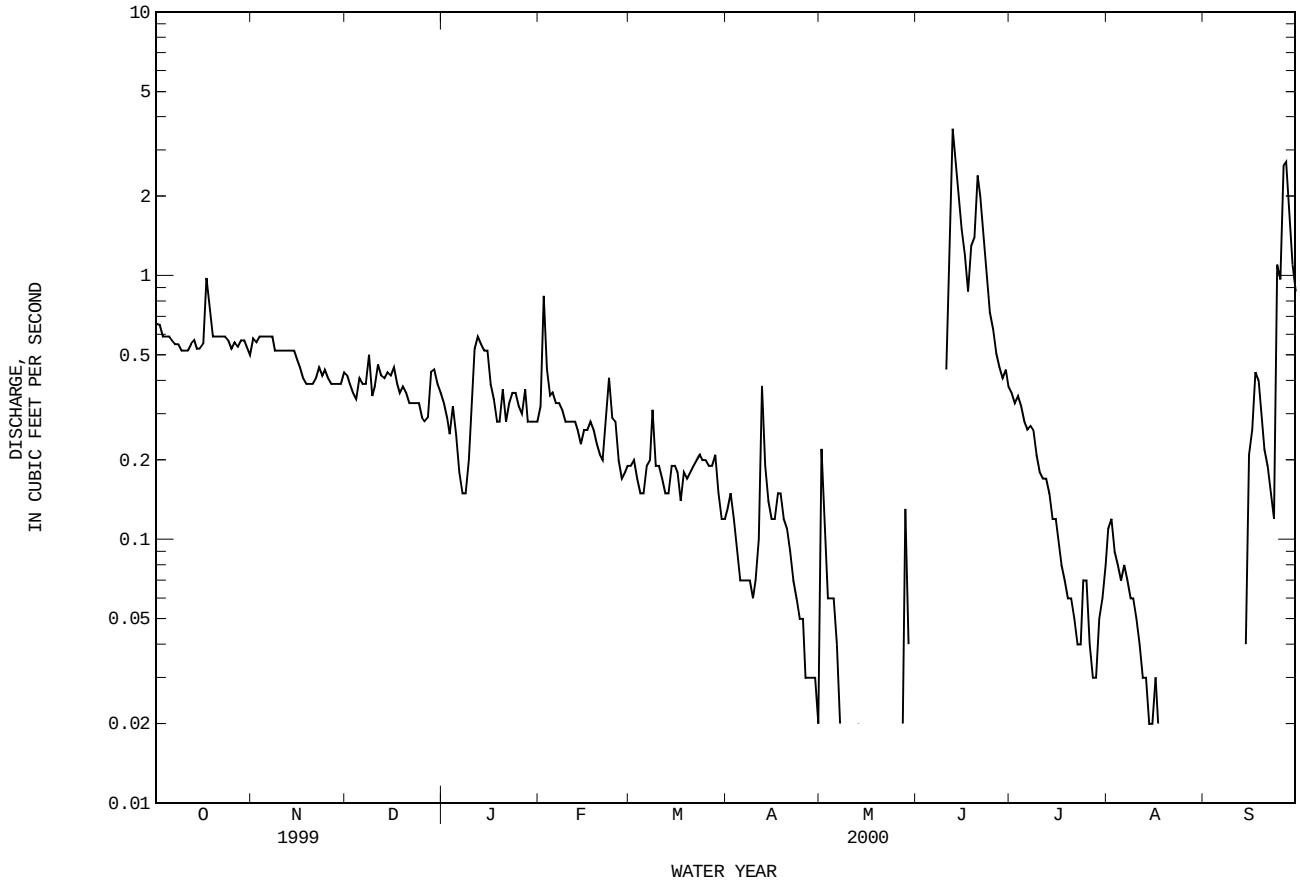
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 2000h, BY WATER YEAR (WY)

MEAN	79.5	5.33	4.85	2.40	20.5	3.63	9.48	11.9	103	45.5	62.7	69.6
MAX	1145	76.5	164	68.4	978	60.2	238	266	1880	737	1308	2180
(WY)	1997	1959	1985	1985	1949	1979	1990	1957	1958	1976	1971	1964
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1941	1941	1940	1940	1940	1940	1942	1942	1942	1941	1940	1940

08190500 WEST NUECES RIVER NEAR BRACKETTVILLE, TX--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1939 - 2000h	
ANNUAL TOTAL	765.62		117.81			
ANNUAL MEAN	2.10		.32		35.3	
HIGHEST ANNUAL MEAN					237	1958
LOWEST ANNUAL MEAN					.000	1962
HIGHEST DAILY MEAN	12	Apr 28	3.6	Jun 12	42500	Sep 20 1964
LOWEST DAILY MEAN	.28	Dec 26	.00	May 8	.00	Sep 28 1939
ANNUAL SEVEN-DAY MINIMUM	.31	Dec 21	.00	May 14	.00	Sep 28 1939
INSTANTANEOUS PEAK FLOW			5.5	Jun 12	246000	Sep 20 1964
INSTANTANEOUS PEAK STAGE			1.51	Jun 12	31.30	Sep 20 1964
ANNUAL RUNOFF (AC-FT)	1520		234		25600	
10 PERCENT EXCEEDS	4.4		.59		8.3	
50 PERCENT EXCEEDS	1.2		.23		.04	
90 PERCENT EXCEEDS	.43		.00		.00	

h See PERIOD OF RECORD paragraph.



08192000 NUECES RIVER BELOW UVALDE, TX

LOCATION.--Lat 29°07′25", long 99°53′40", Uvalde County, Hydrologic Unit 12110103, on right bank at McDaniel Ranch, 5.7 mi upstream from bridge on U.S. Highway 83, 8.8 mi southwest of Uvalde, 18.2 mi downstream from West Nueces River, and at mile 338.7.

DRAINAGE AREA.--1,861 mi^2.

PERIOD OF RECORD.--Apr 1939 to current year.

REVISED RECORDS.--WSP 1732: 1956(M). WDR TX-83-3: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 796.12 ft above sea level. Satellite telemeter at station.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Part of the flow of the Nueces River and its headwater tributaries enters the Edwards and associated limestones in the Balcones Fault Zone that crosses the basin between Nueces River at Laguna (station 08190000) and this station. No known regulation. There are many small diversions above station for irrigation. No flow at times. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water-quality data.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1836, 40.4 ft Jun 14, 1935, from floodmark (discharge at former site, 616,000 ft^3/s, by slope-area measurement). Large floods also occurred in 1901 and 1913, stages unknown.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 250 ft^3/s:

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)

No peak greater than base discharge.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e51	e38	e31	e29	e27	26	23	20	15	12	8.9	7.1
2	e49	e39	e31	e29	e27	26	22	19	15	12	8.9	7.0
3	e49	e40	e31	e29	e27	25	22	19	15	12	8.8	7.0
4	e46	e40	e30	28	e27	25	23	18	15	12	8.8	6.9
5	e46	40	e29	e28	e27	26	23	18	14	12	8.8	6.8
6	e44	e40	29	e28	e27	26	23	18	14	12	8.8	6.7
7	e44	e39	e29	e28	e27	26	22	17	14	12	8.8	6.6
8	e43	e38	e30	e28	e27	25	22	17	14	12	8.8	6.9
9	e43	e38	e29	e28	e27	25	22	17	14	12	8.7	7.0
10	e41	e38	e29	e28	e27	25	22	17	18	12	8.7	7.0
11	e41	e37	e30	e28	e27	24	22	17	20	11	8.4	7.0
12	40	e37	e29	e28	e27	24	25	16	17	11	8.3	7.1
13	e38	e37	e29	e28	e27	25	23	19	15	11	8.4	6.9
14	e38	e37	e29	e28	e27	25	22	16	15	11	8.4	7.0
15	e38	e36	e29	e28	e27	25	22	16	15	10	8.4	6.6
16	e40	e36	e29	e27	e27	24	21	16	15	10	8.6	6.7
17	e43	e36	e29	e28	27	24	21	16	14	10	8.4	6.6
18	e38	e36	e29	e27	26	24	21	15	17	10	8.0	6.6
19	e38	e35	e29	e27	26	23	21	15	17	10	7.8	6.7
20	e38	e34	e29	e27	26	24	20	15	15	9.4	7.9	6.9
21	e38	e34	e28	e27	26	24	20	15	15	9.3	7.9	7.0
22	e40	e34	e28	e27	26	25	20	15	14	9.3	7.9	7.0
23	e38	e33	e28	e27	27	24	19	15	14	9.3	7.8	7.0
24	e38	e33	e28	e27	27	24	18	14	14	9.2	7.8	7.6
25	e38	e33	e29	e27	26	24	18	14	14	9.1	7.8	7.8
26	e38	e32	e29	e27	25	23	18	14	13	9.1	7.8	6.9
27	e38	e31	e29	e27	25	23	18	15	13	9.0	7.8	7.1
28	e40	e32	e29	e27	26	23	18	19	13	8.9	7.7	7.1
29	e40	e32	e29	e27	26	22	18	16	12	8.8	7.6	6.8
30	e40	e32	e29	e27	---	22	18	15	12	8.8	7.6	6.8
31	e40	---	e29	e27	---	23	---	15	---	8.8	7.5	---
TOTAL	1276	1077	904	856	771	754	627	508	442	323.0	255.8	208.2
MEAN	41.2	35.9	29.2	27.6	26.6	24.3	20.9	16.4	14.7	10.4	8.25	6.94
MAX	51	40	31	29	27	26	25	20	20	12	8.9	7.8
MIN	38	31	28	27	25	22	18	14	12	8.8	7.5	6.6
AC-FT	2530	2140	1790	1700	1530	1500	1240	1010	877	641	507	413

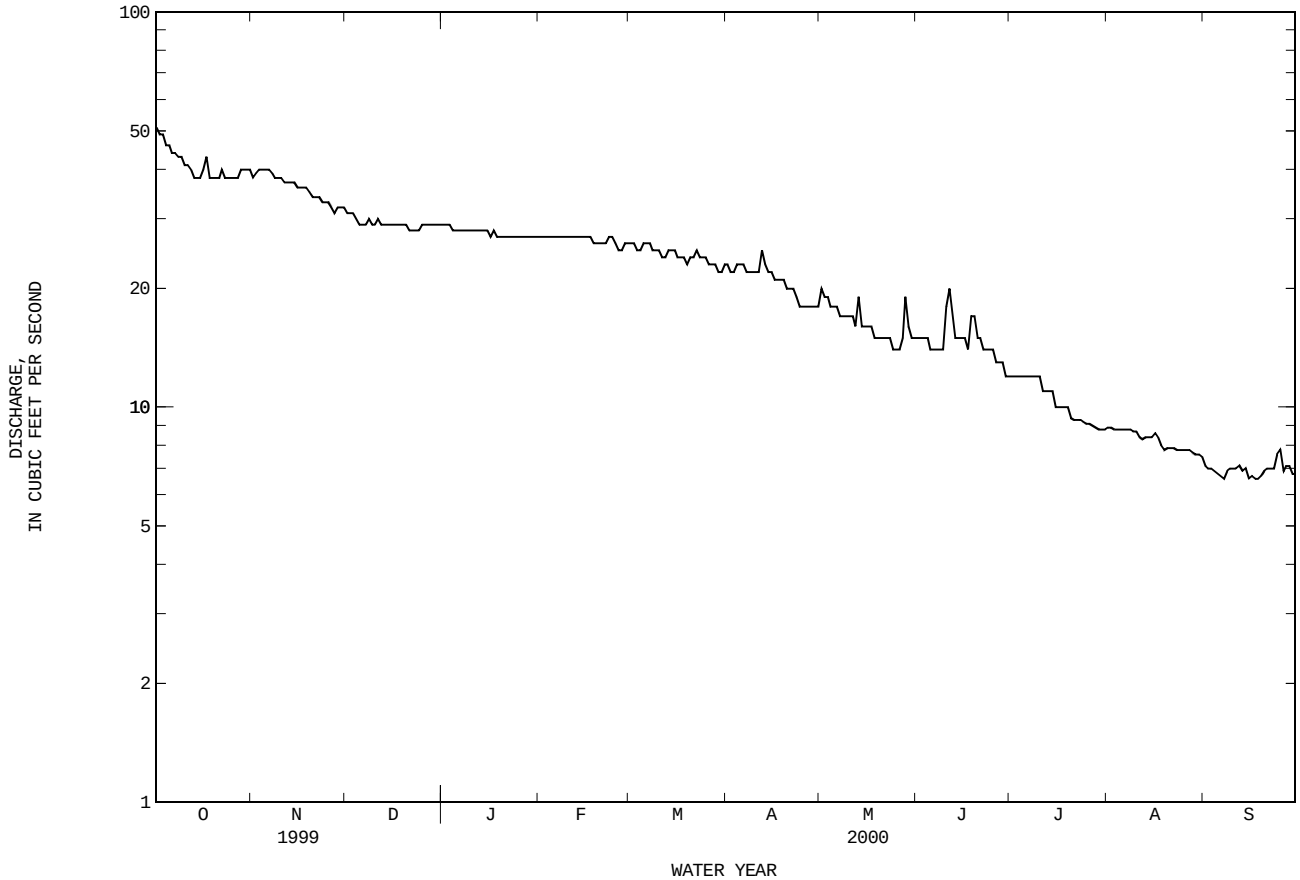
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 2000, BY WATER YEAR (WY)

MEAN	269	89.2	80.6	70.4	95.5	62.2	74.9	99.7	266	139	212	223
MAX	3153	383	811	656	2487	909	785	972	3496	1525	4057	3081
(WY)	1974	1999	1992	1985	1949	1992	1977	1987	1958	1976	1998	1964
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1953	1953	1952	1952	1952	1952	1952	1953	1953	1951	1951	1951

08192000 NUECES RIVER BELOW UVALDE, TX--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1939 - 2000	
ANNUAL TOTAL	48275		8002.0			
ANNUAL MEAN	132		21.9		140	
HIGHEST ANNUAL MEAN					678	1997
LOWEST ANNUAL MEAN					3.63	1956
HIGHEST DAILY MEAN	1360	Jun 22	51	Oct 1	51600	Oct 29 1996
LOWEST DAILY MEAN	28	Dec 21	6.6	Sep 7	.00	May 10 1951
ANNUAL SEVEN-DAY MINIMUM	28	Dec 18	6.7	Sep 13	.00	Jun 18 1951
INSTANTANEOUS PEAK FLOW			51	Oct 1	i201000	Oct 28 1996
INSTANTANEOUS PEAK STAGE			3.04	Oct 17	a24.88	Oct 28 1996
ANNUAL RUNOFF (AC-FT)	95750		15870		101400	
10 PERCENT EXCEEDS	243		38		199	
50 PERCENT EXCEEDS	114		23		27	
90 PERCENT EXCEEDS	33		7.8		3.1	

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



08193000 NUECES RIVER NEAR ASHERTON, TX

LOCATION.--Lat 28°30′00", long 99°40′54", Dimmit County, Hydrologic Unit 12110103, on right bank 28 ft downstream from bridge on Farm Road 190, 0.1 mi downstream from El Moro Creek, 5.8 mi northeast of Asherton, and at mile 266.0.

DRAINAGE AREA.--4,082 mi^2.

PERIOD OF RECORD.--Oct 1939 to current year.

REVISED RECORDS.--WSP 1118: 1944.

GAGE.--Water-stage recorder. Datum of gage is 470.92 ft above sea level. Prior to Feb 2, 1940, nonrecording gage at same site and datum. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. Part of the flow of the Nueces River and its headwater tributaries enters the Edwards and associated limestones in the Balcones Fault Zone that crosses the basin between Nueces River at Laguna (station 08190000) and Nueces River below Uvalde (station 08192000). Some loss of flow into various permeable formations occurs downstream from the Balcones Fault Zone. Since Mar 1948, at least 10% of contributing drainage area has been regulated by Upper Nueces Reservoir (conservation pool storage, 7,590 acre-ft), 13 mi upstream. There are many small diversions above station for irrigation. No flow at times. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water-quality data.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--8 years (water years 1940-48), 140 ft^3/s (101,700 acre-ft/yr).

EXTREMES FOR PERIOD PRIOR TO REGULATION (WATER YEARS 1940-48).--Maximum discharge, 24,000 ft^3/s Sep 2, 1944 (gage height 30.40, corrected); no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1900, 33 ft Jun 17, 1935; flood of Jun 30, 1913, reached about same stage, from information by local residents.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.6	15	11	6.4	.85	11	1.1	.00	.00	.00	.00	.00
2	2.3	15	15	5.2	2.1	10	1.4	.00	.00	.00	.00	.00
3	1.2	14	14	4.6	7.7	9.7	.96	.00	.00	.00	.00	.00
4	.71	12	12	3.6	50	9.0	.75	.00	.00	.00	.00	.00
5	.70	11	9.5	2.5	38	7.5	.82	.00	.00	.00	.00	.00
6	1.2	8.7	8.7	1.8	27	6.6	.68	.00	.00	.00	.00	.00
7	2.7	8.0	8.8	1.7	23	5.5	.55	.00	.00	.00	.00	.00
8	3.3	8.9	9.6	1.7	22	4.3	.55	.00	.00	.00	.00	.00
9	3.2	11	10	1.5	20	3.6	.55	.00	.00	.00	.00	.00
10	3.1	10	10	1.1	19	3.3	.55	.00	.00	.00	.00	.00
11	2.4	8.6	9.2	.84	19	2.8	.48	.00	.00	.00	.00	.00
12	2.2	7.7	8.6	.84	17	2.3	.50	.00	.00	.00	.00	.00
13	2.2	7.7	7.1	.84	14	1.9	.53	.00	.00	.00	.00	.00
14	1.6	8.1	5.8	.84	13	3.2	.31	.00	.00	.00	.00	.00
15	.75	9.1	5.1	.84	13	3.5	.24	.00	.00	.00	.00	.00
16	.29	11	4.2	.88	16	2.7	.24	.00	.00	.00	.00	.00
17	34	12	3.6	1.5	17	1.8	.24	.00	.00	.00	.00	.00
18	70	10	3.3	1.9	17	1.2	.18	.00	2.1	.00	.00	.00
19	64	8.0	2.6	2.1	16	.84	.11	.00	1.2	.00	.00	.00
20	55	6.4	2.1	1.9	15	.50	.06	.00	.43	.00	.00	.00
21	42	5.6	1.4	1.6	15	.43	.03	.00	.14	.00	.00	.00
22	34	4.9	.94	1.5	15	.43	.02	.00	.06	.00	.00	.00
23	29	4.2	.75	1.2	15	.51	.02	.00	.03	.00	.00	.00
24	23	3.9	.70	.98	14	.79	.01	.00	.02	.00	.00	.00
25	21	3.9	.90	.84	16	.99	.00	.00	.01	.00	.00	.00
26	20	3.8	1.9	.84	17	1.2	.00	.00	.00	.00	.00	.00
27	18	3.6	5.7	.84	16	1.2	.00	.00	.00	.00	.00	.00
28	17	3.7	9.6	.98	14	1.2	.00	.00	.00	.00	.00	.00
29	17	4.6	9.6	.85	12	1.1	.00	.00	.00	.00	.00	.00
30	15	7.3	9.0	.84	---	1.0	.00	.00	.00	.00	.00	.00
31	15	---	7.7	.84	---	1.0	---	.00	---	.00	.00	---
TOTAL	505.45	247.7	208.39	53.89	500.65	101.09	10.88	0.00	3.99	0.00	0.00	0.00
MEAN	16.3	8.26	6.72	1.74	17.3	3.26	.36	.000	.13	.000	.000	.000
MAX	70	15	15	6.4	50	11	1.4	.00	2.1	.00	.00	.00
MIN	.29	3.6	.70	.84	.85	.43	.00	.00	.00	.00	.00	.00
AC-FT	1000	491	413	107	993	201	22	.00	7.9	.00	.00	.00

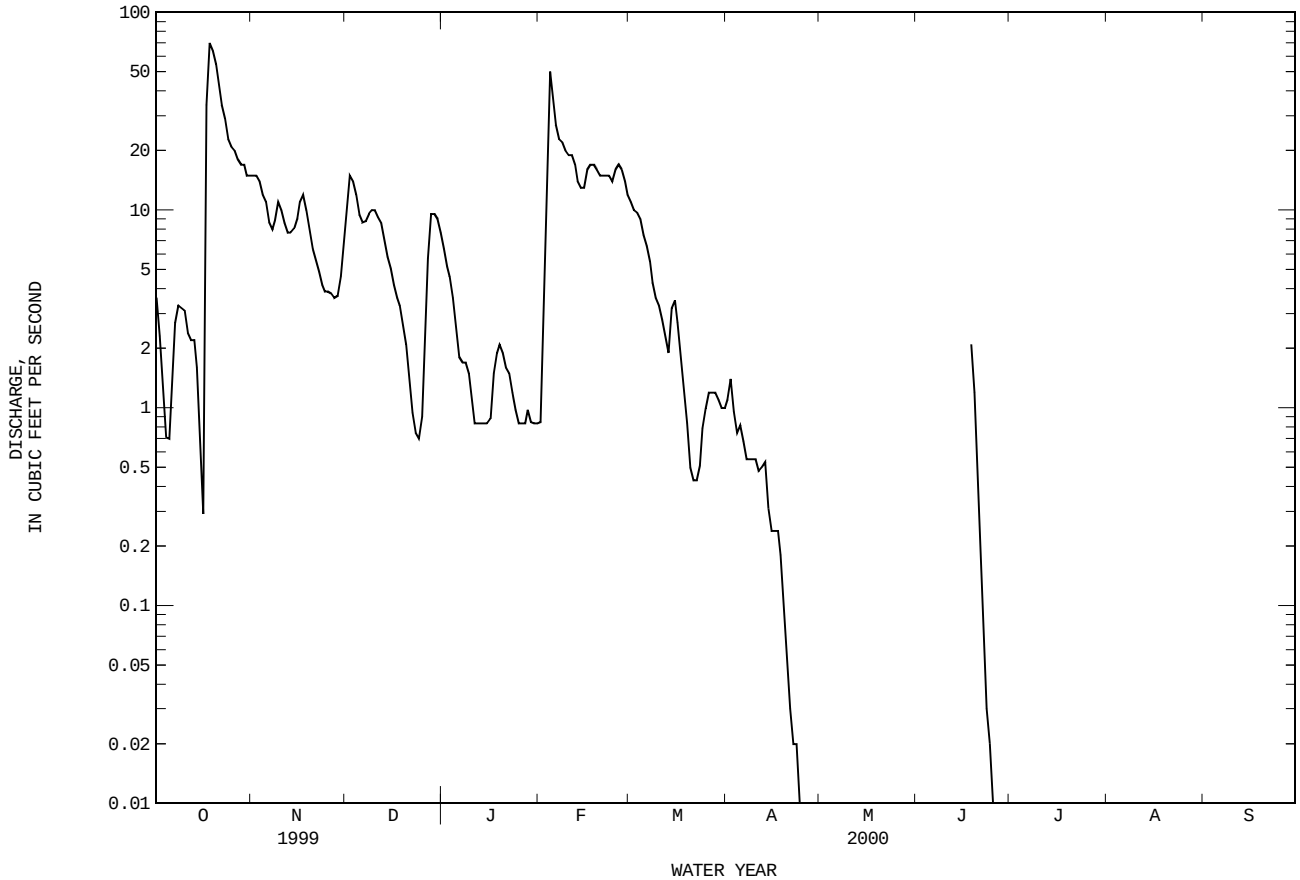
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1949 - 2000z, BY WATER YEAR (WY)

MEAN	371	105	59.0	64.5	79.6	77.9	95.0	229	448	216	243	281
MAX	3254	831	537	724	1498	1347	1256	1738	4349	1845	5246	3674
(WY)	1960	1997	1992	1985	1949	1949	1957	1957	1987	1971	1971	1964
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1953	1951	1949	1949	1950	1950	1950	1956	1953	1951	1951	1952

08193000 NUECES RIVER NEAR ASHERTON, TX--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1949 - 2000z		
ANNUAL TOTAL	59263.54		1632.04				
ANNUAL MEAN	162		4.46		189		
HIGHEST ANNUAL MEAN					700		1971
LOWEST ANNUAL MEAN					.003		1989
HIGHEST DAILY MEAN	3490	Jun 25	70	Oct 18	24800	Oct 6	1959
LOWEST DAILY MEAN	.29	Oct 16	.00	Apr 25	.00	Oct 1	1948
ANNUAL SEVEN-DAY MINIMUM	1.2	Dec 20	.00	Apr 25	.00	Oct 1	1948
INSTANTANEOUS PEAK FLOW			93	Oct 17	28500	Oct 6	1959
INSTANTANEOUS PEAK STAGE			3.27	Oct 17	30.88	Oct 6	1959
ANNUAL RUNOFF (AC-FT)	117500		3240		137300		
10 PERCENT EXCEEDS	292		15		287		
50 PERCENT EXCEEDS	70		.70		.27		
90 PERCENT EXCEEDS	4.9		.00		.00		

z Period of regulated streamflow.



08194000 NUECES RIVER AT COTULLA, TX

LOCATION.--Lat 28°25'34", long 99°14'23", La Salle County, Hydrologic Unit 12110105, on left bank at downstream side of bridge on U.S. Highway 81, 0.4 mi upstream from Missouri Pacific Railroad Co. bridge, 0.8 mi southwest of Cotulla, 1.0 mi upstream from Lind Dam, and at mile 216.9.

DRAINAGE AREA.--5,171 mi^2.

PERIOD OF RECORD.--Nov 1923 to Sep 1926 (monthly discharge only), Oct 1926 to current year. Gage-height records collected in this vicinity in 1914-17 and since 1922 are contained in reports of the National Weather Service.

REVISED RECORDS.--Figures of daily discharge for Oct 31, 1923, to Sep 30, 1926, published in WSP 588, 608, and 628, have been found to be unreliable and should not be used. WSP 1732: 1957(M). WDR TX-83-3: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 368.08 ft above sea level. From Oct 31, 1923, to Aug 3, 1924, nonrecording gage at approximate site of present gage at datum 7.28 ft higher. Aug 4, 1924, to Nov 19, 1934, nonrecording gage at site 5,000 ft downstream at datum 8.42 ft higher. From Nov 20, 1934, to Jul 14, 1938, water-stage recorder, and Jul 15, 1938, to Apr 30, 1963, nonrecording gage, at present site and datum. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. Part of the flow of the Nueces River and its headwater tributaries enters the Edwards and associated limestones in the Balcones Fault Zone that crosses the basin between Nueces River at Laguna (station 08190000) and Nueces River below Uvalde (station 08192000). Some loss of flow into various permeable formations occurs downstream from the Balcones Fault Zone. Since Mar 1948, at least 10% of contributing drainage area has been regulated by Upper Nueces Reservoir (conservation pool storage 7,590 acre-ft). There are many small diversions above station for irrigation. No flow at times. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water-quality data.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--22 years (water years 1927-48), 315 ft^3/s (228,000 acre-ft/yr).

EXTREMES FOR PERIOD PRIOR TO REGULATION (WATER YEARS 1927-48).--Maximum discharge 82,600 ft^3/s Jun 13, 1935 (gage height 32.4 ft from flood marks), by slope-area method; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Jun 19, 1899, reached a stage of 29.7 ft, from information by local residents. Maximum stage since at least 1879, that of Jun 18, 1935.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	19	7.3	1.9	.37	11	.00	.00	.00	.00	.00	.00
2	12	18	6.5	1.8	.80	11	.00	.00	.00	.00	.00	.00
3	11	18	6.1	1.6	.79	11	.00	.00	.00	.00	.00	.00
4	9.9	17	5.0	1.3	.56	9.6	.00	.00	.00	.00	.00	.00
5	10	16	4.1	1.1	.44	6.9	.00	.00	.00	.00	.00	.00
6	9.3	16	3.4	1.0	.40	6.3	.00	.00	.00	.00	.00	.00
7	7.6	16	3.8	1.3	.40	5.3	.00	.00	.00	.00	.00	.00
8	5.8	16	12	2.0	.90	4.8	.00	.00	.00	.00	.00	.00
9	4.4	14	14	3.0	22	4.3	.00	.00	.00	.00	.00	.00
10	3.3	13	12	3.4	24	3.8	.00	.00	.00	.00	.00	.00
11	2.5	12	11	3.1	22	3.1	.00	.00	.00	.00	.00	.00
12	1.9	9.7	9.8	2.8	21	2.7	.00	.00	.00	.00	.00	.00
13	1.6	8.9	8.8	2.5	20	2.4	.00	.00	.00	.00	.00	.00
14	1.2	8.6	8.9	2.3	20	3.9	.00	.00	.00	.00	.00	.00
15	.96	9.3	9.9	1.9	19	2.7	.00	.00	.00	.00	.00	.00
16	.73	10	11	1.8	18	2.0	.00	.00	.00	.00	.00	.00
17	28	9.7	11	1.8	16	1.8	.00	.00	.00	.00	.00	.00
18	61	8.9	9.7	1.8	15	1.6	.00	.00	.00	.00	.00	.00
19	23	8.7	9.3	1.8	14	1.2	.00	.00	.00	.00	.00	.00
20	33	8.9	10	1.8	15	.98	.00	.00	.00	.00	.00	.00
21	74	9.2	10	1.6	18	.80	.00	.00	.00	.00	.00	.00
22	71	11	7.5	1.5	16	.54	.00	.00	.00	.00	.00	.00
23	62	12	5.5	1.5	15	.42	.00	.00	.00	.00	.00	.00
24	53	13	4.7	1.2	14	.35	.00	.00	.00	.00	.00	.00
25	46	12	4.2	.92	14	.27	.00	.00	.00	.00	.00	.00
26	39	11	3.8	.55	14	.22	.00	.00	.00	.00	.00	.00
27	32	10	3.4	.47	15	.16	.00	.00	.00	.00	.00	.00
28	28	9.2	2.9	.40	13	.09	.00	.00	.00	.00	.00	.00
29	26	8.2	2.4	.40	11	.03	.00	.00	.00	.00	.00	.00
30	24	7.9	2.2	.37	---	.01	.00	.00	.00	.00	.00	.00
31	21	---	2.0	.32	---	.00	---	.00	---	.00	.00	---
TOTAL	716.19	361.2	222.2	49.23	360.66	99.27	0.00	0.00	0.00	0.00	0.00	0.00
MEAN	23.1	12.0	7.17	1.59	12.4	3.20	.000	.000	.000	.000	.000	.000
MAX	74	19	14	3.4	24	11	.00	.00	.00	.00	.00	.00
MIN	.73	7.9	2.0	.32	.37	.00	.00	.00	.00	.00	.00	.00
AC-FT	1420	716	441	98	715	197	.00	.00	.00	.00	.00	.00

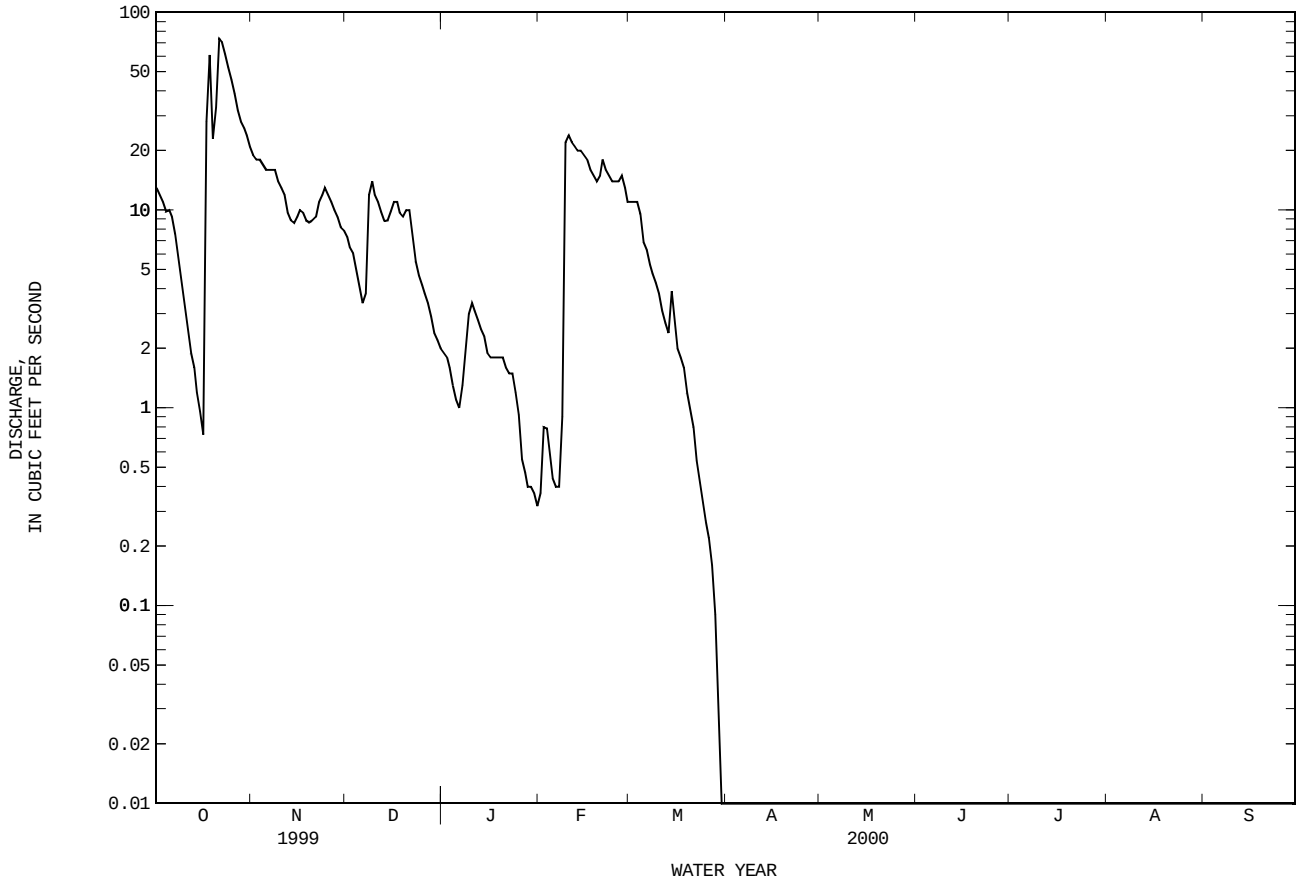
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1949 - 2000z, BY WATER YEAR (WY)

MEAN	480	143	61.8	69.6	54.1	98.0	110	250	533	289	286	366
MAX	3906	1098	414	761	619	2351	1444	1873	5280	3922	6412	5417
(WY)	1960	1977	1970	1985	1992	1949	1957	1957	1987	1971	1971	1964
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1953	1951	1949	1949	1951	1950	1950	1956	1953	1951	1951	1951

08194000 NUECES RIVER AT COTULLA, TX--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1949 - 2000z	
ANNUAL TOTAL	84204.59		1808.75			
ANNUAL MEAN	231		4.94		229	
HIGHEST ANNUAL MEAN					1003	1971
LOWEST ANNUAL MEAN					2.24	1989
HIGHEST DAILY MEAN	11400	Aug 27	74	Oct 21	37400	Sep 18 1964
LOWEST DAILY MEAN	.73	Oct 16	.00	Mar 31	.00	Oct 8 1948
ANNUAL SEVEN-DAY MINIMUM	1.7	Oct 10	.00	Mar 31	.00	Oct 8 1948
INSTANTANEOUS PEAK FLOW			86	Oct 18	46000	Sep 17 1964
INSTANTANEOUS PEAK STAGE			8.24	Oct 18	27.75	Sep 17 1964
ANNUAL RUNOFF (AC-FT)	167000		3590		166000	
10 PERCENT EXCEEDS	306		15		362	
50 PERCENT EXCEEDS	74		.00		.60	
90 PERCENT EXCEEDS	9.1		.00		.00	

z Period of regulated streamflow.



08194200 SAN CASIMIRO CREEK NEAR FREER, TX

LOCATION.--Lat 27°57′53", long 98°58′00", Webb County, Hydrologic Unit 12110105, at downstream side of bridge on State Highway 44, 11.4 mi upstream from mouth, and 22 mi northwest of Freer.

DRAINAGE AREA.--469 mi^2.

PERIOD OF RECORD.--Jan 1962 to current year.

GAGE.--Water-stage recorder. Datum of gage is 298.00 ft above sea level, from Texas Department of Transportation datum. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records poor. No known regulation or diversions. No flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1946, that of Oct 17, 1971. The next highest stage, 26 ft (discharge 65,200 ft^3/s), occurred in 1954, from information by Texas Department of Transportation.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 500 ft^3/s:

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jun 9	0145	1,140	16.78	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

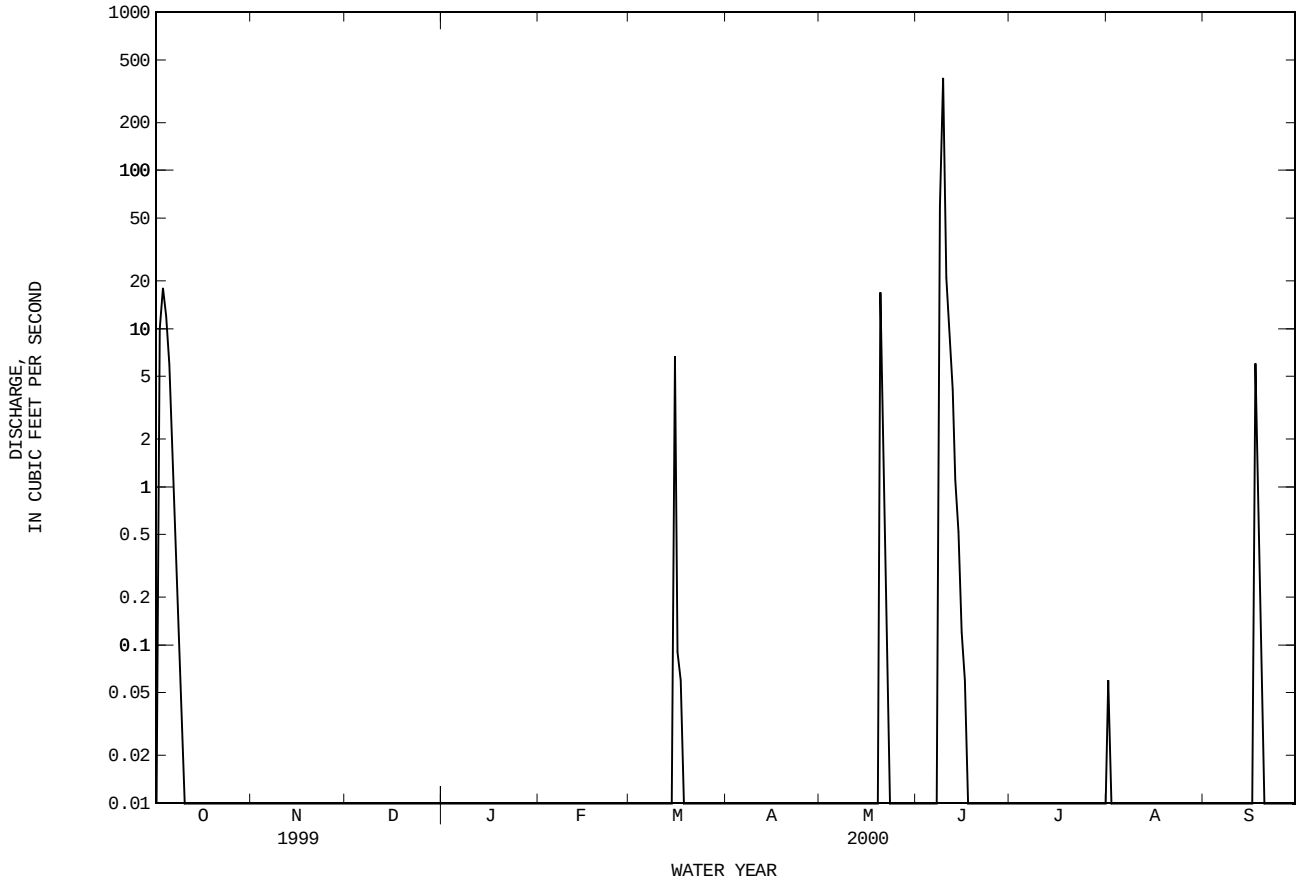
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.06	.00
2	10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
4	12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	5.9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
6	2.7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.72	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.18	.00	.00	.00	.00	.00	.00	.00	59	.00	.00	.00
9	.06	.00	.00	.00	.00	.00	.00	.00	386	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	21	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	8.6	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	4.1	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	1.1	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.52	.00	.00	.00
15	.00	.00	.00	.00	.00	6.7	.00	.00	.12	.00	.00	.00
16	.00	.00	.00	.00	.00	.09	.00	.00	.06	.00	.00	.00
17	.00	.00	.00	.00	.00	.06	.00	.00	.00	.00	.00	6.0
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.58
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.07
20	.00	.00	.00	.00	.00	.00	.00	17	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	1.8	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	.11	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	49.56	0.00	0.00	0.00	0.00	6.85	0.00	18.91	480.50	0.00	0.06	6.65
MEAN	1.60	.000	.000	.000	.000	.22	.000	.61	16.0	.000	.002	.22
MAX	18	.00	.00	.00	.00	6.7	.00	17	386	.00	.06	6.0
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	98	.00	.00	.00	.00	14	.00	38	953	.00	.1	13

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 2000, BY WATER YEAR (WY)

MEAN	120	17.3	7.90	2.01	2.17	8.45	18.3	112	77.3	15.2	33.9	133
MAX	3021	288	247	40.2	19.5	145	297	747	606	365	398	2367
(WY)	1972	1986	1977	1977	1973	1985	1985	1981	1981	1976	1999	1967
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1964	1965	1965	1962	1962	1962	1965	1962	1965	1965	1963	1965

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1962 - 2000	
ANNUAL TOTAL	13768.80		562.53			
ANNUAL MEAN	37.7		1.54		46.6	
HIGHEST ANNUAL MEAN					323	1972
LOWEST ANNUAL MEAN					1.54	2000
HIGHEST DAILY MEAN	5720	Aug 26	386	Jun 9	36600	Oct 17 1971
LOWEST DAILY MEAN	.00	Jan 1	.00	Oct 1	.00	Jan 1 1962
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 1	.00	Oct 10	.00	Jan 1 1962
INSTANTANEOUS PEAK FLOW			1140	Jun 9	82000	Oct 17 1971
INSTANTANEOUS PEAK STAGE			16.78	Jun 9	26.87	Oct 17 1971
ANNUAL RUNOFF (AC-FT)	27310		1120		33750	
10 PERCENT EXCEEDS	2.7		.00		15	
50 PERCENT EXCEEDS	.00		.00		.00	
90 PERCENT EXCEEDS	.00		.00		.00	

08194200 SAN CASIMIRO CREEK NEAR FREER, TX--Continued



08194500 NUECES RIVER NEAR TILDEN, TX

LOCATION.--Lat 28°18′31", long 98°33′25", McMullen County, Hydrologic Unit 12110105, on right bank at downstream side of bridge on State Highway 16, 1.8 mi upstream from Kings Branch, 10.5 mi south of Tilden, and at mile 135.4.

DRAINAGE AREA.--8,093 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Nov 1942 to current year.

REVISED RECORDS.--WSP 1512: 1947. WSP 1732: 1951(M). WDR TX-83-3: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 183.5 ft above sea level. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. Part of the flow of the Nueces River and its headwater tributaries enters the Edwards and associated limestones in the Balcones Fault Zone that crosses the basin between Nueces River at Laguna (station 08190000) and Nueces River below Uvalde (station 08192000). Some loss of flow into various permeable formations occurs downstream from the Balcones Fault Zone. Since Mar 1948, at least 10% of contributing drainage area has been regulated by Upper Nueces Reservoir (conservation pool storage 7,590 acre-ft). There are many small diversions above station for irrigation. No flow at times. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water-quality data.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--6 years (water years 1943-48), 510 ft^3/s (369,500 acre-ft/yr).

EXTREMES FOR PERIOD PRIOR TO REGULATION (WATER YEARS 1943-48).--Maximum discharge 57,500 ft^3/s, Oct 11, 1946 (gage height 26.46 ft), from rating curve extended above 46,400 ft^3/s; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Floods in Jun 1935 reached a stage of 23.7 ft and in Jul 1942 about 22 ft, from information by local residents. Maximum stage since about 1902, that of Sep 24, 1967.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	17	1.2	2.2	.18	4.9	3.6	.00	.33	.00	.00	.00
2	12	14	1.2	1.9	.66	4.5	3.4	4.1	.10	.00	.00	.00
3	11	13	1.5	1.7	.85	4.0	3.9	4.2	.02	.00	.00	.00
4	9.8	12	1.4	1.4	.78	3.6	3.8	2.6	1.2	.00	.00	.00
5	21	11	1.3	1.2	.62	3.8	33	1.6	76	.00	.00	.00
6	19	9.7	1.1	1.1	.57	3.9	37	.86	9.6	.00	.00	.00
7	15	8.9	1.0	1.2	.68	3.4	25	.33	2.5	.00	.00	.00
8	11	8.0	.88	1.6	.73	3.1	14	.06	1.0	.00	.00	.00
9	8.8	7.1	1.5	1.3	.69	2.8	17	.00	2.7	.00	.00	.00
10	7.4	6.6	2.1	1.1	.53	2.7	16	.00	165	.00	.00	.00
11	6.6	6.3	2.2	.97	.43	2.2	11	.06	571	.00	.00	.00
12	5.9	5.9	2.3	.83	.34	1.6	8.5	.00	731	.00	.00	.00
13	5.3	5.5	2.1	.83	.30	1.3	6.4	.00	671	.00	.00	.00
14	4.9	5.7	1.8	.68	.27	5.8	6.0	.00	470	.00	.00	.00
15	4.6	5.2	1.6	.60	.30	20	5.4	.00	273	.00	.00	.00
16	4.2	4.4	1.4	.55	.33	9.2	4.5	.00	74	.00	.00	.00
17	3.9	3.8	1.6	.56	.35	127	3.9	.00	27	.00	.00	23
18	3.7	3.4	1.7	.59	6.7	367	3.3	.00	11	.00	.00	74
19	3.9	3.1	1.7	.56	7.9	273	2.8	.00	5.9	.00	.00	34
20	28	2.7	2.0	.49	7.0	93	2.4	.00	3.4	.00	.00	12
21	38	2.3	2.6	.37	6.2	48	2.0	.00	2.2	.00	.00	4.8
22	37	1.9	2.6	.33	6.4	36	1.7	.00	1.5	.00	.00	1.8
23	29	1.6	2.2	.41	6.7	24	1.3	.00	.97	.00	.00	.57
24	19	1.6	2.0	.29	5.9	17	.99	.00	.64	.00	.00	.15
25	38	1.9	3.4	.22	5.1	12	.69	.00	.39	.00	.00	.27
26	44	2.0	2.9	.13	4.6	9.5	.46	.00	.20	.00	.00	.12
27	40	1.9	2.8	.15	4.4	7.8	.28	.00	.21	.00	.00	.02
28	35	1.7	2.6	.19	5.3	6.5	.15	.00	.08	.00	.00	.00
29	30	1.5	2.3	.16	5.6	5.5	.08	.93	.01	.00	.00	.00
30	25	1.4	2.3	.15	---	4.6	.02	1.5	.00	.00	.00	.00
31	21	---	2.3	.16	---	3.9	---	.71	---	.00	.00	---
TOTAL	556.0	171.1	59.58	23.92	80.41	1111.6	218.57	16.95	3101.95	0.00	0.00	150.73
MEAN	17.9	5.70	1.92	.77	2.77	35.9	7.29	.55	103	.000	.000	5.02
MAX	44	17	3.4	2.2	7.9	367	37	4.2	731	.00	.00	74
MIN	3.7	1.4	.88	.13	.18	1.3	.02	.00	.00	.00	.00	.00
AC-FT	1100	339	118	47	159	2200	434	34	6150	.00	.00	299

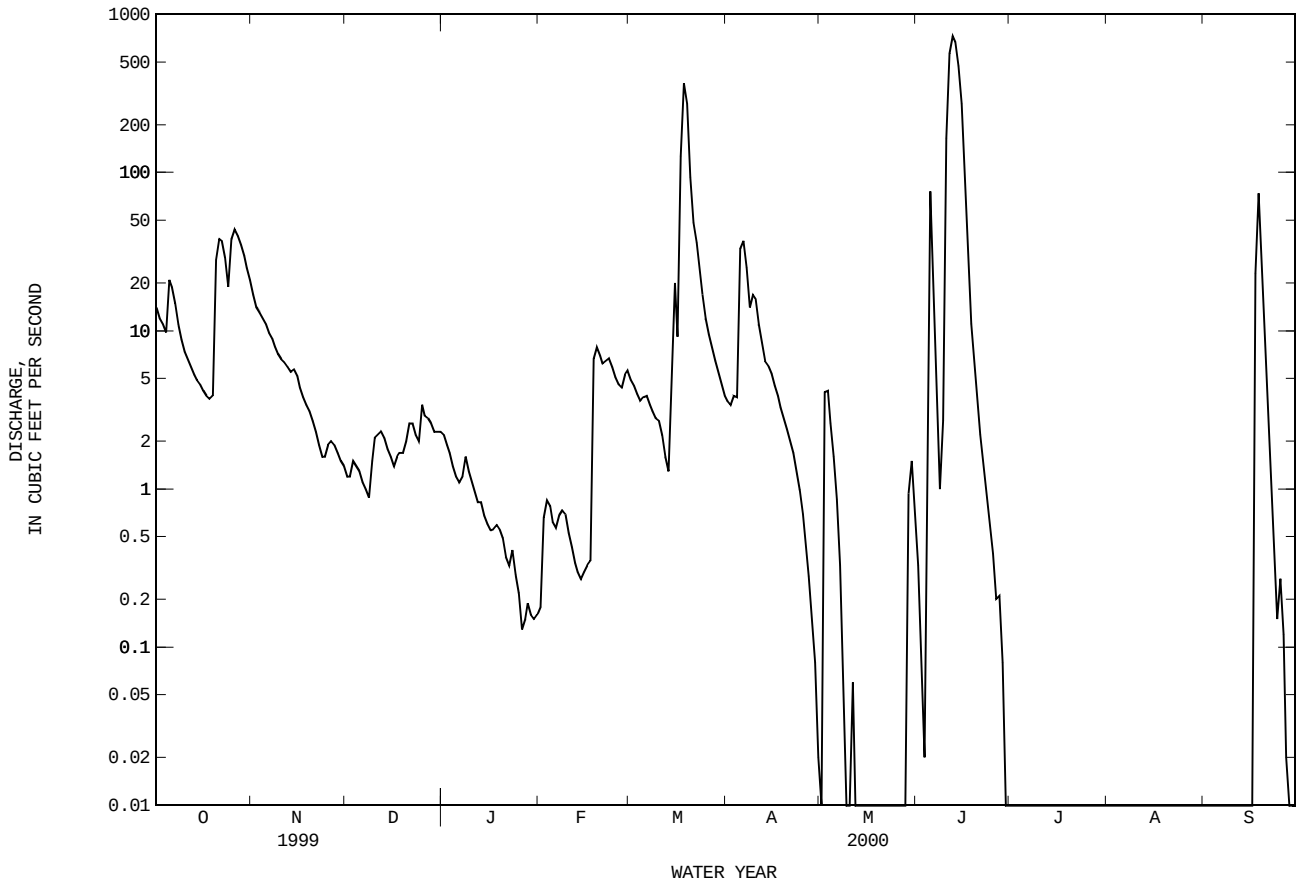
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1949 - 2000z, BY WATER YEAR (WY)

MEAN	810	273	93.0	116	148	117	162	507	686	413	338	715
MAX	11250	3509	1275	1912	4793	2104	2028	4122	5404	6291	7197	10150
(WY)	1972	1977	1977	1958	1958	1949	1949	1957	1987	1971	1971	1967
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1953	1953	1951	1951	1964	1954	1955	1971	1998	1953	1951	1952

08194500 NUECES RIVER NEAR TILDEN, TX--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1949 - 2000z	
ANNUAL TOTAL	90246.58		5490.81			
ANNUAL MEAN	247		15.0		365	
HIGHEST ANNUAL MEAN					1736	1971
LOWEST ANNUAL MEAN					14.0	1989
HIGHEST DAILY MEAN	5510	Sep 3	731	Jun 12	70000	Sep 24 1967
LOWEST DAILY MEAN	.88	Dec 8	.00	May 1	.00	Oct 15 1948
ANNUAL SEVEN-DAY MINIMUM	1.2	Dec 2	.00	May 12	.00	Jan 6 1949
INSTANTANEOUS PEAK FLOW			770	Jun 12	76500	Sep 24 1967
INSTANTANEOUS PEAK STAGE			9.72	Jun 12	26.57	Sep 24 1967
ANNUAL RUNOFF (AC-FT)	179000		10890		264800	
10 PERCENT EXCEEDS	625		19		718	
50 PERCENT EXCEEDS	64		1.3		6.5	
90 PERCENT EXCEEDS	2.6		.00		.00	

z Period of regulated streamflow.



08194500 NUECES RIVER NEAR TILDEN, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--
CHEMICAL DATA: Dec 1997 to current year.
BIOCHEMICAL DATA: Dec 1997 current year.
PESTICIDE DATA: Dec 1997 to current year.

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

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)
NOV												
05...	1020	11	677	7.8	17.5	7.9	81	200	47	60	11	58
FEB												
08...	1130	.73	1230	8.0	15.0	10.1	99	230	17	71	12	150

DATE	SODIUM AD-SORP-TION RATIO (00931)	SODIUM PERCENT (00932)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY WAT DIS FIX END FIELD CAC03 (MG/L) (39036)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)
NOV											
05...	2	38	6.2	150	65	78	.16	5.2	375	<.010	<.050
FEB											
08...	4	58	7.1	210	51	230	.26	3.7	651	<.010	<.050

DATE	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4) (00660)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)	ANTI-MONY, DIS-SOLVED (UG/L AS SB) (01095)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE) (01010)	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)
NOV											
05...	<.020	.35	.067	.044	.13	<1.0	<1.0	2	118	<1.0	<1.0
FEB											
08...	<.020	.37	<.050	.011	.03	<1.0	<1.0	3	138	<1.0	<1.0

DATE	CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030)	COBALT, DIS-SOLVED (UG/L AS CO) (01035)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	LITHIUM DIS-SOLVED (UG/L AS LI) (01130)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MERCURY DIS-SOLVED (UG/L AS HG) (71890)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060)	NICKEL, DIS-SOLVED (UG/L AS NI) (01065)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)
NOV											
05...	<.80	<1.0	2.4	<10	<1.0	16	3.7	<.2	1.3	1.8	<2
FEB											
08...	<2.0	<1.0	1.2	<10	<1.0	32	6.2	<.2	1.3	<1.0	<2

DATE	SILVER, DIS-SOLVED (UG/L AS AG) (01075)	STRON-TIUM, DIS-SOLVED (UG/L AS SR) (01080)	VANA-DIUM, DIS-SOLVED (UG/L AS V) (01085)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)	URANIUM NATURAL DIS-SOLVED (UG/L AS U) (22703)	2,4,5-T TOTAL (UG/L) (39740)	2,4-D, TOTAL (UG/L) (39730)	SILVEX, TOTAL (UG/L) (39760)	DICAMBA TOTAL (UG/L) (82052)	2,4-DP TOTAL (UG/L) (82183)	PIC-LORAM UNFILT RECOVER (UG/L) (39720)
NOV											
05...	<1.0	334	11	1.5	<1.0	<.010	<.010	<.010	<.010	<.010	<.010
FEB											
08...	<1.0	498	E7	<1.0	<1.0	<.010	<.010	<.010	<.010	<.010	<.010

DATE	TOTAL TRI-THION (UG/L) (39786)	CHLOR-PYRIFOS TOTAL RECOVER (UG/L) (38932)	DI-AZINON, TOTAL (UG/L) (39570)	DISUL-FOTON UNFILT RECOVER (UG/L) (39011)	ETHION, TOTAL (UG/L) (39398)	FONOFOS (DY-FONATE) WATER WHOLE TOT.REC (UG/L) (82614)	MALA-THION, TOTAL (UG/L) (39530)	PARA-THION, TOTAL (UG/L) (39540)	METHYL PARA-THION, TOTAL (UG/L) (39600)	PHORATE TOTAL (UG/L) (39023)	DEF TOTAL (UG/L) (39040)
NOV											
05...	<.014	<.014	<.020	<.033	<.013	<.013	<.029	<.012	<.015	<.019	<.020
FEB											
08...	<.014	<.014	<.020	<.033	<.013	<.013	<.029	<.012	<.015	<.019	<.020

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08195000 FRIO RIVER AT CONCAN, TX

LOCATION.--Lat 29°29′18", long 99°42′16", Uvalde County, Hydrologic Unit 12110106, on left bank 0.7 mi southeast of Concan Post Office, 15 mi upstream from Dry Frio River, and 222.8 mi upstream from mouth.

DRAINAGE AREA.--389 mi^2.

PERIOD OF RECORD.--Oct 1923 to Sep 1929, Oct 1930 to current year.
Water-quality data.--Chemical data: Jun 1952, Dec 1964 to Jul 1965, Aug 1968 to Sep 1993, Apr 1996 to Apr 1998. Biochemical data: Aug 1968 to Sep 1993, Apr 1996 to Apr 1998. Pesticide data: Aug 1968 to Sep 1993. Sediment data: Apr 1996 to Apr 1998.

REVISED RECORDS.--WSP 1342: Drainage area. WSP 1512: 1926, 1931-32, 1934(M), 1935-36. WSP 1712: 1958. WSP 1923: 1954(M), 1957(M). WDR TX-83-3: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,203.71 ft above sea level. Oct 26, 1923, to Jul 28, 1924, nonrecording gage at site 86 ft upstream at datum 5.08 ft lower. Jul 29, 1924, to Oct 3, 1930, nonrecording gage, and Oct 4, 1930, to May 18, 1939, water-stage recorder, at site 130 ft downstream at present datum. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. No known regulation. Many small diversions for irrigation above station. No flow at times. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water-quality data.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1869, that of Jul 1, 1932, from information by local residents.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 500 ft^3/s:

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)

No peak greater than base discharge.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	48	53	52	48	48	48	40	32	25	37	19	9.1
2	48	53	52	48	53	48	39	32	25	36	18	8.4
3	48	53	52	48	51	46	38	32	28	35	17	8.4
4	50	53	52	46	49	46	37	32	28	33	16	8.4
5	50	53	51	46	46	46	37	32	29	33	14	8.1
6	50	53	52	46	46	46	37	31	29	33	15	6.8
7	48	53	53	47	46	47	36	29	27	32	14	5.6
8	48	53	53	49	46	47	35	27	27	31	14	5.0
9	48	53	52	48	46	46	31	28	35	30	13	5.5
10	46	53	55	47	46	46	32	28	70	29	13	7.0
11	47	53	58	48	44	45	33	27	60	29	13	6.3
12	46	53	57	48	44	44	37	27	59	27	13	5.8
13	46	53	56	48	45	44	39	27	51	26	12	6.8
14	46	53	54	48	44	44	36	27	47	25	12	8.6
15	48	53	53	48	44	44	35	26	44	24	12	7.6
16	48	53	53	48	45	44	35	26	40	24	12	8.4
17	72	53	53	48	46	42	35	25	40	23	12	7.5
18	69	53	52	48	45	44	33	24	40	21	12	7.3
19	61	53	52	48	44	43	33	24	45	20	12	6.9
20	57	52	53	48	44	42	32	25	46	19	12	7.3
21	56	52	52	47	44	43	30	27	47	18	11	7.5
22	54	52	52	48	44	44	29	25	45	17	11	7.5
23	52	51	52	47	49	44	29	24	44	18	10	7.2
24	52	50	52	46	49	45	29	24	42	21	10	11
25	52	50	52	46	48	45	28	23	41	19	10	34
26	52	50	50	46	46	46	27	23	40	17	10	30
27	52	50	50	47	45	44	27	23	40	17	10	23
28	53	50	50	48	46	44	27	33	38	16	9.8	20
29	53	50	49	46	48	42	27	29	37	16	9.3	18
30	53	51	48	47	---	41	27	27	37	22	9.3	16
31	53	---	48	48	---	40	---	26	---	21	9.3	---
TOTAL	1606	1565	1620	1469	1341	1380	990	845	1206	769	384.7	319.0
MEAN	51.8	52.2	52.3	47.4	46.2	44.5	33.0	27.3	40.2	24.8	12.4	10.6
MAX	72	53	58	49	53	48	40	33	70	37	19	34
MIN	46	50	48	46	44	40	27	23	25	16	9.3	5.0
AC-FT	3190	3100	3210	2910	2660	2740	1960	1680	2390	1530	763	633
CFSM	.13	.13	.13	.12	.12	.11	.08	.07	.10	.06	.03	.03
IN.	.15	.15	.15	.14	.13	.13	.09	.08	.12	.07	.04	.03

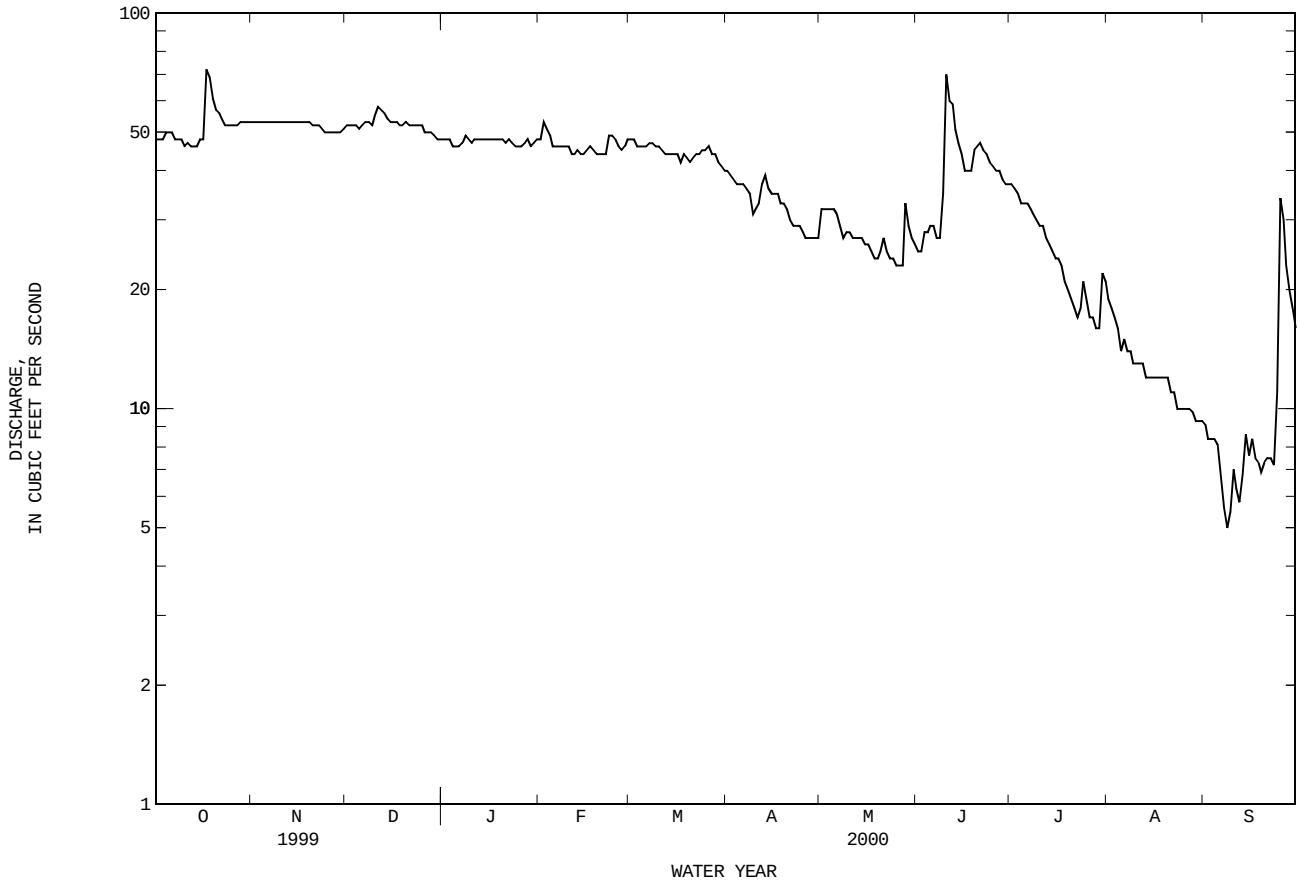
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1924 - 2000h, BY WATER YEAR (WY)

MEAN	146	101	100	90.0	96.0	96.7	107	134	187	166	110	139
MAX	648	391	767	525	613	762	859	1041	2468	2823	1050	1333
(WY)	1970	1959	1992	1992	1992	1992	1981	1935	1935	1932	1971	1936
MIN	.000	.000	.000	3.01	8.25	11.8	8.52	6.48	1.08	1.25	.019	.000
(WY)	1957	1957	1957	1957	1957	1956	1956	1956	1956	1953	1956	1956

08195000 FRIO RIVER AT CONCAN, TX--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1924 - 2000h	
ANNUAL TOTAL	34824		13494.7			
ANNUAL MEAN	95.4		36.9		123	
HIGHEST ANNUAL MEAN					434	1992
LOWEST ANNUAL MEAN					8.80	1956
HIGHEST DAILY MEAN	637	Jun 22	72	Oct 17	52000	Jul 1 1932
LOWEST DAILY MEAN	46	Oct 10	5.0	Sep 8	.00	Aug 5 1956
ANNUAL SEVEN-DAY MINIMUM	47	Oct 8	6.0	Sep 6	.00	Aug 5 1956
INSTANTANEOUS PEAK FLOW			108	Jun 10	i162000	Jul 1 1932
INSTANTANEOUS PEAK STAGE			3.91	Jun 10	a34.44	Jul 1 1932
ANNUAL RUNOFF (AC-FT)	69070		26770		88960	
ANNUAL RUNOFF (CFSM)	.25		.095		.32	
ANNUAL RUNOFF (INCHES)	3.33		1.29		4.29	
10 PERCENT EXCEEDS	150		53		196	
50 PERCENT EXCEEDS	86		44		68	
90 PERCENT EXCEEDS	52		12		19	

a From floodmark.
i From indirect measurement of peak flow.
h See Period of Record paragraph



08196000 DRY FRIO RIVER NEAR REAGAN WELLS, TX

LOCATION.--Lat 29°30′16", long 99°46′52", Uvalde County, Hydrologic Unit 12110106, on right bank 2.3 mi upstream from bridge on U.S. Highway 83, 3.1 mi upstream from Rocky Creek, 4.3 mi southeast of Reagan Wells, and 25.9 mi upstream from mouth.

DRAINAGE AREA.--126 mi^2.

PERIOD OF RECORD.--Sep 1952 to current year.
Water-quality records.--Chemical data: Jan 1966 to Sep 1993. Biochemical data: Jan 1966 to Sep 1993. Pesticide data: Jan 1974 to Sep 1993. Sediment data: Jan 1966.

REVISED RECORDS.--WSP 1712: 1953. WSP 1923: 1955(M). WDR TX-83-3: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,335.2 ft above sea level, from Texas Department of Transportation datum. Satellite telemeter at station.

REMARKS.--Records fair. No known regulation. There are several small diversions above station. No flow at times. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water-quality data.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1875 occurred in 1880 (about 33 ft). Flood of Jun 14, 1935, reached a stage of 26.0 ft (discharge, 64,700 ft^3/s, determined at site 2.6 mi upstream), and flood of Jul 1, 1932, reached a stage of 23 ft (discharge, 30,700 ft^3/s, determined at site 2.0 mi upstream), from information by local residents.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 200 ft^3/s:

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)

No peak greater than base discharge.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.9	8.9	6.4	7.2	6.0	6.2	4.0	2.8	4.9	5.5	2.0	.89
2	3.0	8.6	6.7	7.3	12	6.8	4.7	6.0	13	5.9	2.2	.85
3	3.2	8.1	6.7	7.5	12	6.8	5.2	4.6	12	5.9	2.4	.80
4	3.4	7.7	6.3	6.3	9.7	6.2	4.7	3.4	15	6.0	2.5	.73
5	3.6	7.7	5.6	5.6	8.3	5.3	4.0	2.6	26	5.6	2.6	.66
6	3.3	8.1	5.3	5.6	7.7	6.0	3.6	2.2	27	4.9	2.5	.63
7	3.2	8.2	5.5	6.7	7.9	7.3	3.4	1.8	23	4.4	2.4	.61
8	3.1	7.8	6.3	8.2	8.3	7.7	3.0	1.5	19	4.2	2.4	.62
9	2.7	7.5	6.8	7.8	8.3	6.7	2.6	1.3	22	3.5	2.4	.59
10	2.6	7.2	6.2	7.1	8.5	6.4	2.5	1.3	57	2.9	2.4	.52
11	2.5	7.2	6.0	6.4	8.5	6.2	2.5	1.2	55	2.5	2.2	.49
12	2.5	7.2	6.7	6.6	7.9	5.2	5.3	1.1	56	2.2	2.0	.60
13	2.5	7.1	6.8	7.1	7.7	4.6	7.0	1.3	53	2.2	1.8	.57
14	6.9	6.8	6.1	6.7	6.9	4.8	5.5	1.3	48	2.0	1.8	.52
15	20	6.8	6.0	6.4	6.8	5.0	4.4	1.3	43	1.9	e1.6	.52
16	22	6.8	6.0	6.9	6.8	4.8	4.0	1.1	38	1.9	e1.6	.47
17	39	6.5	6.0	7.2	6.9	4.6	3.6	.98	33	1.6	1.5	.54
18	31	6.0	6.1	7.2	6.8	4.3	3.4	.91	32	1.5	1.4	.99
19	18	6.0	6.4	6.9	6.3	4.1	3.1	.91	44	1.5	1.3	1.0
20	18	6.0	6.4	6.4	5.4	3.9	2.7	.84	40	1.5	1.3	1.1
21	16	6.0	6.8	6.0	5.2	4.1	2.3	.88	35	1.4	1.3	1.2
22	14	6.0	6.9	6.2	5.7	4.5	1.9	.87	32	1.4	1.3	1.8
23	12	6.2	7.6	6.4	12	6.4	1.7	.88	28	1.7	1.3	1.9
24	11	6.3	7.7	6.1	9.8	7.8	1.5	.80	23	1.8	1.3	6.9
25	10	6.4	7.7	5.6	8.6	7.3	1.6	.73	19	1.8	1.2	6.3
26	9.7	6.3	7.8	5.3	7.3	6.2	1.6	.98	17	1.6	1.2	6.1
27	9.7	6.4	8.2	6.0	5.9	5.5	1.4	2.1	14	1.6	1.1	3.9
28	9.7	6.4	7.6	6.5	5.2	5.0	1.4	4.3	12	1.6	1.1	3.4
29	9.6	6.4	7.2	6.2	5.3	4.8	1.3	6.2	9.2	1.6	1.0	2.9
30	9.9	6.4	7.2	5.6	---	4.4	1.3	2.3	7.4	1.9	.93	2.4
31	10	---	7.2	5.6	---	3.8	---	1.7	---	1.8	.91	---
TOTAL	315.0	209.0	206.2	202.6	223.7	172.7	95.2	60.18	857.5	85.8	52.94	50.50
MEAN	10.2	6.97	6.65	6.54	7.71	5.57	3.17	1.94	28.6	2.77	1.71	1.68
MAX	39	8.9	8.2	8.2	12	7.8	7.0	6.2	57	6.0	2.6	6.9
MIN	2.5	6.0	5.3	5.3	5.2	3.8	1.3	.73	4.9	1.4	.91	.47
AC-FT	625	415	409	402	444	343	189	119	1700	170	105	100
CFSM	.08	.06	.05	.05	.06	.04	.03	.02	.23	.02	.01	.01
IN.	.09	.06	.06	.06	.07	.05	.03	.02	.25	.03	.02	.01

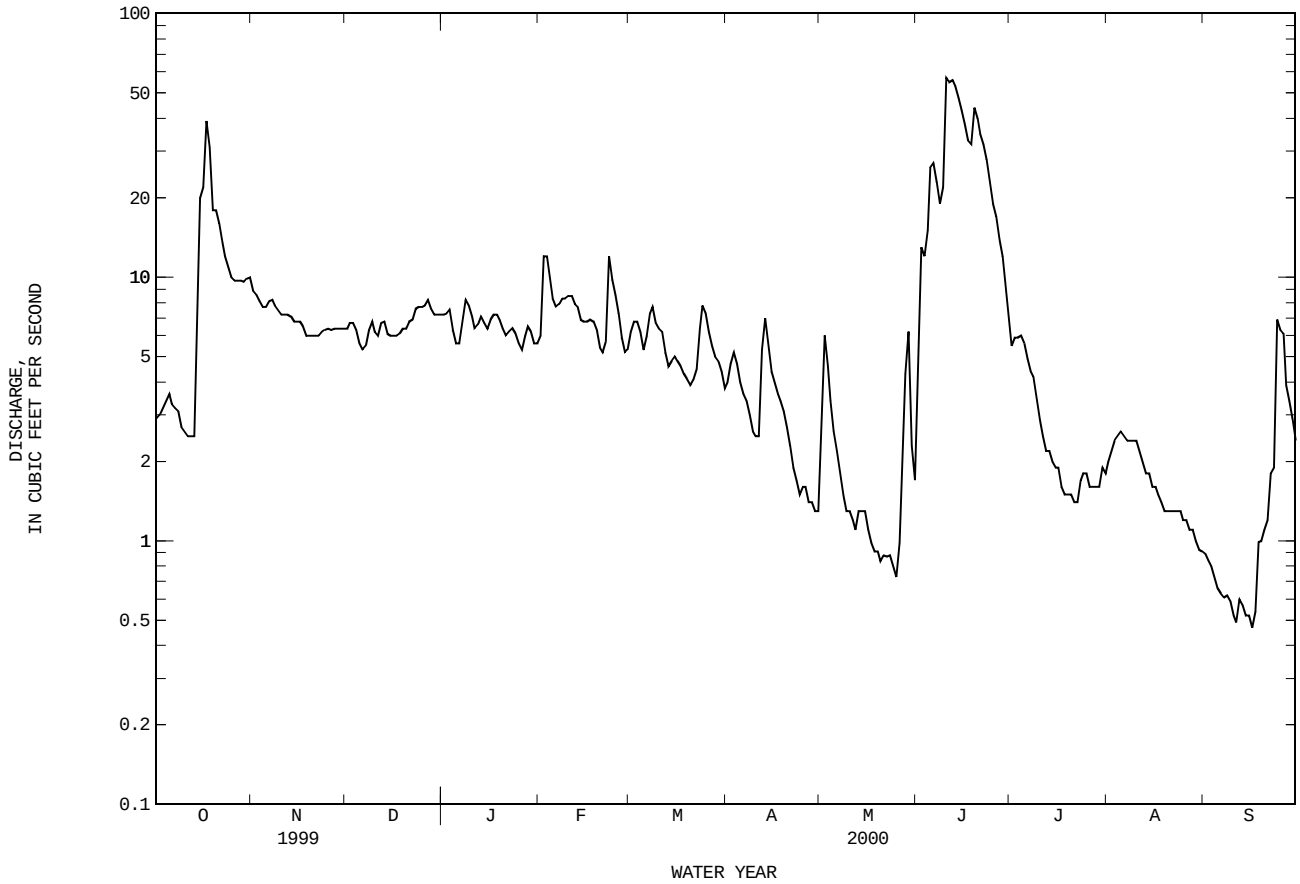
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1952 - 2000, BY WATER YEAR (WY)

MEAN	55.9	30.2	27.2	22.1	24.0	27.7	29.1	38.1	63.2	36.2	37.6	37.1
MAX	258	134	185	120	131	208	257	338	483	277	365	277
(WY)	1970	1968	1992	1992	1992	1992	1981	1987	1987	1976	1966	1958
MIN	.000	.000	.055	.51	.87	2.24	1.50	.86	.19	.077	.000	.000
(WY)	1957	1957	1957	1957	1957	1954	1956	1956	1953	1953	1956	1956

08196000 DRY FRIO RIVER NEAR REAGAN WELLS, TX--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1952 - 2000	
ANNUAL TOTAL	7614.0		2531.32			
ANNUAL MEAN	20.9		6.92		35.8	
HIGHEST ANNUAL MEAN					121	1987
LOWEST ANNUAL MEAN					2.99	1956
HIGHEST DAILY MEAN	839	Jun 21	57	Jun 10	8100	Aug 13 1966
LOWEST DAILY MEAN	2.5	Oct 11	.47	Sep 16	.00	Jul 10 1953
ANNUAL SEVEN-DAY MINIMUM	2.7	Oct 7	.53	Sep 10	.00	Jul 30 1953
INSTANTANEOUS PEAK FLOW			86	Sep 24	123000	Aug 13 1966
INSTANTANEOUS PEAK STAGE			2.41	Jun 11	27.60	Aug 13 1966
ANNUAL RUNOFF (AC-FT)	15100		5020		25940	
ANNUAL RUNOFF (CFSM)	.17		.055		.28	
ANNUAL RUNOFF (INCHES)	2.25		.75		3.86	
10 PERCENT EXCEEDS	27		12		64	
50 PERCENT EXCEEDS	16		5.6		14	
90 PERCENT EXCEEDS	6.0		1.1		2.2	

e Estimated



08197500 FRIO RIVER BELOW DRY FRIO RIVER NEAR UVALDE, TX

LOCATION.--Lat 29°14′44", long 99°40′27", Uvalde County, Hydrologic Unit 12110106, on right bank 1.1 mi upstream from Farm Road 1023, 5.7 mi downstream from Dry Frio River, 6.3 mi downstream from bridge on U.S. Highway 90, 7.2 mi northeast of Uvalde, and 194.5 mi upstream from mouth.

DRAINAGE AREA.--631 mi^2.

PERIOD OF RECORD.--Sep 1952 to current year. Sum of records published as Frio River at Knippa (discontinued station 08195700) and Dry Frio River at Knippa (discontinued station 08196500) for period Sep 1952 to Sep 1953 is equivalent to record for this station.

REVISED RECORDS.--WDR TX-83-3: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 882.47 ft above sea level. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. No known regulation. Part of flow of Frio River enters the Edwards and associated limestones in the Balcones Fault Zone, that crosses the basin between Frio River at Concan (station 08195000) and this station. Most of the low flow enters this formation. Many diversions for irrigation above station. No flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1887, about 35 ft in 1894. Flood of Jul 1, 1932, reached a stage of about 30 ft. A higher flood than that of 1894 occurred prior to 1887, from information by local residents.

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

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)

No peak greater than base discharge.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.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	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
MAX	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1954 - 2000h, BY WATER YEAR (WY)

MEAN	76.2	3.86	27.8	10.6	6.78	11.0	26.5	37.0	119	34.9	68.7	46.6
MAX	842	81.3	710	241	300	455	702	865	1584	597	1224	699
(WY)	1997	1959	1985	1992	1992	1992	1981	1987	1997	1973	1998	1958
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1954	1954	1954	1954	1954	1954	1954	1955	1954	1954	1954	1954

08197500 FRIO RIVER BELOW DRY FRIO RIVER NEAR UVALDE, TX--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1954 - 2000h	
ANNUAL TOTAL	1012.72					
ANNUAL MEAN	2.77				39.2	
HIGHEST ANNUAL MEAN					221	1987
LOWEST ANNUAL MEAN					.000	1962
HIGHEST DAILY MEAN	723	Jun 22			32300	Jun 22 1997
LOWEST DAILY MEAN	.00	Jan 1	.00	Oct 1	.00	Oct 1 1953
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 1	.00	Oct 1	.00	Oct 1 1953
INSTANTANEOUS PEAK FLOW					c100000	Jun 22 1997
INSTANTANEOUS PEAK STAGE					a25.09	Jun 22 1997
ANNUAL RUNOFF (AC-FT)	2010				28400	
10 PERCENT EXCEEDS	.00		.00		.12	
50 PERCENT EXCEEDS	.00		.00		.00	
90 PERCENT EXCEEDS	.00		.00		.00	

c From rating curve extended above indirect measurement of 88,500 ft^3/s.
a From floodmark
h See PERIOD OF RECORD paragraph

08198000 SABINAL RIVER NEAR SABINAL, TX

LOCATION.--Lat 29°29’27", long 99°29’33", Uvalde County, Hydrologic Unit 12110106, on right bank 108 ft upstream from concrete dam, 2.3 mi downstream from mouth of Onion Creek, 12.5 mi north of Sabinal, and 41.6 mi upstream from mouth.

DRAINAGE AREA.--206 mi^2.

PERIOD OF RECORD.--Oct 1942 to current year.
Water-quality data.--Chemical data: Nov 1964 to Jul 1965, Feb 1970 to Sep 1993, Apr 1996 to Apr 1998. Biochemical data: Feb 1970 to Sep 1993, Apr 1996 to Apr 1998. Pesticide data: Aug 1971 to Sep 1993. Sediment data: Nov 1965, Apr 1996 to Apr 1998.

REVISED RECORDS.--WSP 1312: 1943(M), 1944(M), 1947(M).

GAGE.--Water-stage recorder. Datum of gage is 1,131.20 ft above sea level. Prior to Apr 9, 1971, at site 0.3 mi downstream at same datum. Satellite telemeter at station.

REMARKS.--Records good except those for estimated daily discharges, which are fair. No known regulation. There are several small diversions above station for irrigation. No flow at times. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water-quality data.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1892, about 33 ft Jul 2, 1932, from information by local residents. A flood in the middle 1800’s reached a stage of nearly 63 ft. Information indicates that a flood in 1858 covered the townsite of Sabinal. The stage would have been 70 to 80 ft, which seems unlikely. However, it is possible that a flood occurred in 1858 that covered part of the townsite and was higher than any flood since that date.

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

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jun 18	2300	1,330	6.94	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.2	5.0	6.7	7.2	6.5	6.0	5.0	3.8	1.2	9.5	7.5	.41
2	6.2	4.9	6.6	7.2	9.3	5.9	6.4	6.3	1.2	9.4	5.2	.36
3	6.3	4.8	6.5	7.0	7.6	5.8	6.4	5.3	1.2	9.2	3.7	.27
4	6.1	4.9	5.6	6.6	6.7	5.7	5.8	4.4	1.1	8.9	3.2	.16
5	5.6	5.1	6.9	6.3	6.3	5.8	5.5	4.0	1.2	8.5	2.8	.06
6	5.4	5.4	6.6	6.8	6.2	6.2	5.2	3.6	1.0	8.1	2.7	e.04
7	5.3	5.4	7.0	7.2	6.2	6.6	5.0	3.2	1.3	7.9	2.5	e.03
8	5.1	5.5	7.3	7.6	6.3	6.6	4.3	2.8	2.1	7.7	2.3	e.02
9	5.0	5.5	7.5	7.2	6.2	6.2	4.0	2.7	30	7.3	2.2	e.02
10	5.4	5.6	7.2	6.9	6.3	6.1	4.0	2.7	74	6.9	2.1	e.02
11	5.3	5.6	7.4	6.8	6.6	5.9	4.4	2.5	46	6.6	2.1	e.02
12	5.1	5.9	7.8	7.0	e6.6	5.9	7.8	2.5	22	6.2	2.0	e.02
13	5.0	5.8	8.1	7.1	e6.5	5.8	7.6	2.5	17	5.9	1.9	e.02
14	5.0	5.8	7.8	6.7	6.4	6.1	5.8	2.4	15	5.5	1.8	e.02
15	4.9	5.9	7.7	6.7	6.7	6.2	5.3	2.3	13	5.1	1.6	e.02
16	4.8	5.9	7.7	6.7	6.3	6.0	5.0	2.1	11	4.7	1.5	e.01
17	11	5.8	7.8	6.8	6.2	6.1	4.6	2.0	9.1	4.4	1.4	e.01
18	9.9	5.6	7.5	6.6	6.0	6.5	4.9	1.9	108	4.2	1.3	e.01
19	7.8	5.7	7.3	5.9	5.8	6.6	4.5	2.0	116	4.0	1.3	e.01
20	6.3	5.7	7.4	5.4	5.6	5.7	4.5	1.9	28	3.9	1.3	e.01
21	5.7	5.5	7.6	5.2	5.8	6.0	4.0	1.8	19	3.7	1.2	e.01
22	5.4	5.6	7.7	5.4	6.1	6.0	3.7	1.8	16	3.4	1.1	e.01
23	5.0	6.6	7.9	5.5	8.1	6.9	3.5	1.8	14	3.4	1.1	e.01
24	4.8	7.4	7.8	5.4	7.5	7.0	3.4	1.8	13	3.9	1.0	.04
25	4.9	7.5	7.7	5.3	6.6	6.1	3.3	1.7	12	3.9	.96	.03
26	5.1	7.8	7.6	5.4	6.1	5.9	3.1	1.7	12	3.4	.87	e.02
27	5.1	8.1	7.4	5.6	5.9	5.6	3.0	1.7	11	3.1	.78	e.02
28	5.0	8.3	7.5	6.0	5.9	5.3	2.8	1.7	11	2.9	.72	.63
29	4.9	8.1	7.1	5.8	6.0	5.1	2.7	1.5	10	2.7	.62	1.5
30	5.1	8.2	7.1	5.9	---	4.8	2.4	1.4	10	2.8	.55	1.5
31	5.0	---	7.1	5.9	---	4.6	---	1.3	---	3.6	.48	---
TOTAL	177.7	182.9	226.9	197.1	188.3	185.0	137.9	79.1	627.4	170.7	59.78	5.31
MEAN	5.73	6.10	7.32	6.36	6.49	5.97	4.60	2.55	20.9	5.51	1.93	.18
MAX	11	8.3	8.1	7.6	9.3	7.0	7.8	6.3	116	9.5	7.5	1.5
MIN	4.8	4.8	5.6	5.2	5.6	4.6	2.4	1.3	1.0	2.7	.48	.01
AC-FT	352	363	450	391	373	367	274	157	1240	339	119	11
CFSM	.03	.03	.04	.03	.03	.03	.02	.01	.10	.03	.01	.00
IN.	.03	.03	.04	.04	.03	.03	.02	.01	.11	.03	.01	.00

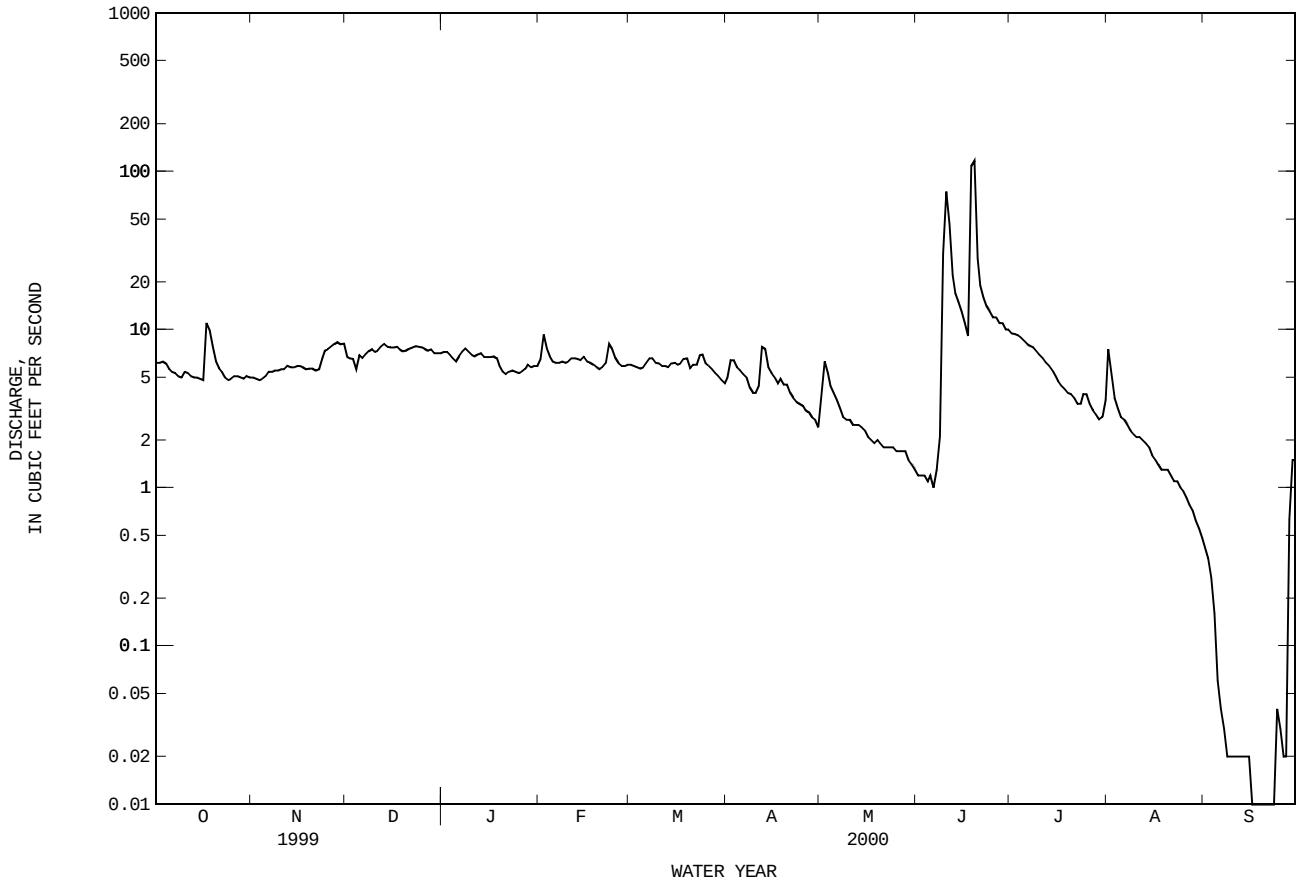
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1943 - 2000, BY WATER YEAR (WY)

MEAN	66.7	50.2	49.6	46.0	51.9	57.9	57.2	68.1	123	77.3	56.9	49.1
MAX	318	321	612	408	584	624	392	389	1527	1035	669	306
(WY)	1972	1959	1992	1992	1992	1992	1992	1987	1987	1973	1971	1980
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1952	1952	1952	1952	1952	1952	1954	1953	1953	1953	1948	1951

08198000 SABINAL RIVER NEAR SABINAL, TX--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1943 - 2000	
ANNUAL TOTAL	13402.5		2238.09			
ANNUAL MEAN	36.7		6.11		62.8	
HIGHEST ANNUAL MEAN					340	1992
LOWEST ANNUAL MEAN					.82	1955
HIGHEST DAILY MEAN	250	May 18	116	Jun 19	13000	Jun 17 1958
LOWEST DAILY MEAN	4.8	Oct 16	.01	Sep 16	.00	Aug 10 1946
ANNUAL SEVEN-DAY MINIMUM	4.9	Oct 29	.01	Sep 16	.00	Aug 10 1946
INSTANTANEOUS PEAK FLOW			1330	Jun 18	c56500	Jun 22 1997
INSTANTANEOUS PEAK STAGE			6.94	Jun 18	a28.50	Jun 22 1997
ANNUAL RUNOFF (AC-FT)	26580		4440		45530	
ANNUAL RUNOFF (CFSM)	.18		.030		.31	
ANNUAL RUNOFF (INCHES)	2.42		.40		4.15	
10 PERCENT EXCEEDS	72		8.1		120	
50 PERCENT EXCEEDS	37		5.6		25	
90 PERCENT EXCEEDS	5.6		1.0		.00	

e Estimated
c From rating curve extended above indirect measurement of 55,200 ft^3/s.
a From floodmark.



08198500 SABINAL RIVER AT SABINAL, TX

LOCATION.--Lat 29°18′05", long 99°28′46", Uvalde County, Hydrologic Unit 12110106, on left bank 80 ft downstream from bridge on U.S. Highway 90, 1,100 ft downstream from Southern Pacific Lines railroad bridge, 0.8 mi west of Sabinal, 5.8 mi upstream from Ranchero Creek, and 223 mi upstream from mouth.

DRAINAGE AREA.--241 mi^2.

PERIOD OF RECORD.--Sep 1952 to current year.

REVISED RECORDS.--WDR TX-83-3: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 882.17 ft above sea level. Prior to Jul 29, 1958, nonrecording gage, and Jul 29, 1958, to Mar 19, 1964, water-stage recorder at site 80 ft upstream at same datum. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. No known regulation. Several small diversions for irrigation above station. Most of low flow of the Sabinal River enters the Edwards and associated limestones in the Balcones Fault Zone, that crosses basin upstream from this station and downstream from Sabinal River near Sabinal (station 08198000). No flow at times. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water-quality data.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1890, 40 ft Aug 24, 1919, from information by local residents. Flood of Jul 2, 1932, reached a stage of 31 ft (discharge, 60,000 ft^3/s), from information by Southern Pacific Lines. Information indicates that a flood in 1858 covered the townsite of Sabinal. The stage would have been 70 to 80 ft, which seems unlikely. However, it is possible that a flood occurred in 1858 that covered part of the townsite and was higher than any flood since that date.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 100 ft^3/s:

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jun 9	2245	1,790	9.49	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.7	1.3	.95	1.0	.74	.80	.59	.48	.23	1.4	.87	.45
2	1.9	1.4	.96	.94	.90	.75	.65	.44	.23	1.3	.80	.43
3	1.7	1.4	1.0	.85	.72	.77	.69	.42	.32	1.3	.76	.43
4	1.5	1.3	1.1	.98	.65	.73	.68	.40	.33	1.2	.71	.38
5	1.4	1.3	1.2	1.0	.65	.60	.59	.40	.33	1.1	.68	.37
6	1.3	1.4	1.4	1.2	.70	.71	.52	.43	.28	1.1	.63	.37
7	1.4	1.4	1.4	1.3	.68	.65	.50	.39	.25	1.0	.54	.38
8	1.4	1.3	1.3	1.4	.61	.57	.45	.34	.29	.96	.48	.42
9	1.5	1.2	1.2	1.4	.59	.52	.49	.33	102	.94	.49	.41
10	1.4	1.1	1.3	1.2	.58	.52	.46	.34	107	.93	.47	.39
11	1.4	1.1	1.3	1.0	.66	.53	.48	.33	5.3	.88	.41	.39
12	1.5	1.1	1.3	1.0	.79	.55	.62	.33	4.1	.80	.41	.37
13	1.4	1.1	1.3	.95	.67	.62	.61	.53	2.5	.79	.38	.45
14	1.5	1.1	1.4	.87	.64	.65	.53	.39	2.5	.85	.39	.45
15	1.4	1.1	1.3	.73	.58	.70	.51	.43	2.5	.92	.44	.49
16	1.3	1.0	1.3	.66	.58	.72	.51	.46	2.4	.91	.48	.43
17	7.4	1.0	1.4	.55	.54	.67	.44	.40	2.2	.83	.46	.39
18	1.4	.99	1.2	.52	.52	.82	.40	.35	2.5	.85	.43	.36
19	1.3	1.1	1.3	.46	.58	.72	.39	.36	3.4	.78	.46	.34
20	1.3	1.2	1.2	.43	.52	.59	.33	.48	2.2	.75	.44	.36
21	1.4	1.3	1.2	.44	.46	.58	.32	.40	2.1	.75	.45	.42
22	1.3	1.2	1.3	.52	.51	.60	.29	.31	2.1	.74	.47	.40
23	1.3	1.3	1.3	.48	.87	.65	.28	.24	2.0	.69	.53	.37
24	1.3	1.3	1.0	.52	.61	.68	.25	.23	1.9	.81	.61	.38
25	1.2	1.3	.96	.49	.42	.65	.27	.26	1.9	.95	.64	.54
26	1.1	1.2	1.2	.52	.46	.65	.28	.26	1.8	.91	.67	.49
27	1.2	1.1	1.3	.55	.48	.63	.31	.34	1.8	.81	.64	.47
28	1.2	1.0	1.3	.62	.53	.66	.30	.60	1.8	.77	.62	.48
29	1.3	.99	1.2	.69	.82	.64	.28	.24	1.7	.75	.53	.42
30	1.3	.93	1.2	.52	---	.57	.28	.22	1.5	.81	.52	.42
31	1.3	---	1.1	.50	---	.58	---	.22	---	.83	.44	---
TOTAL	49.0	35.51	37.87	24.29	18.06	20.08	13.30	11.35	259.46	28.41	16.85	12.45
MEAN	1.58	1.18	1.22	.78	.62	.65	.44	.37	8.65	.92	.54	.41
MAX	7.4	1.4	1.4	1.4	.90	.82	.69	.60	107	1.4	.87	.54
MIN	1.1	.93	.95	.43	.42	.52	.25	.22	.23	.69	.38	.34
AC-FT	97	70	75	48	36	40	26	23	515	56	33	25

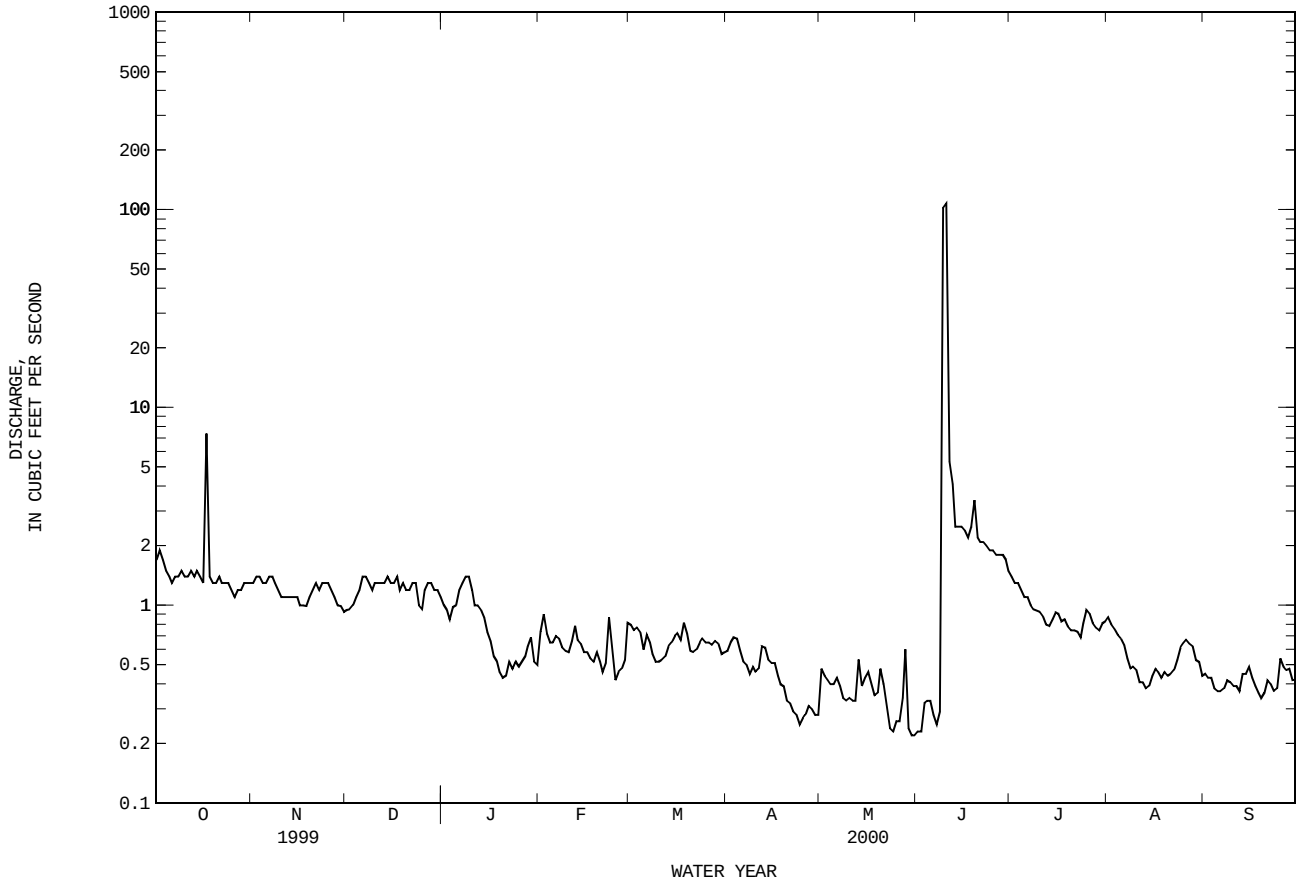
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1953 - 2000, BY WATER YEAR (WY)

MEAN	35.7	15.8	19.3	15.2	20.8	24.6	27.0	33.4	113	56.9	36.0	21.6
MAX	261	219	498	292	510	535	349	427	1493	1066	709	210
(WY)	1970	1959	1992	1992	1992	1992	1992	1987	1987	1973	1971	1958
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1953	1953	1953	1953	1953	1956	1956	1953	1953	1953	1962	1962

08198500 SABINAL RIVER AT SABINAL, TX--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1953 - 2000	
ANNUAL TOTAL	879.78		526.63			
ANNUAL MEAN	2.41		1.44		35.0	
HIGHEST ANNUAL MEAN					265	1992
LOWEST ANNUAL MEAN					.070	1963
HIGHEST DAILY MEAN	55	Jul 11	107	Jun 10	17100	Jun 17 1958
LOWEST DAILY MEAN	.93	Nov 30	.22	May 30	.00	Oct 1 1952
ANNUAL SEVEN-DAY MINIMUM	.99	Nov 27	.26	May 29	.00	Oct 1 1952
INSTANTANEOUS PEAK FLOW			1790	Jun 9	c93500	Jun 22 1997
INSTANTANEOUS PEAK STAGE			9.49	Jun 9	a35.86	Jun 22 1997
ANNUAL RUNOFF (AC-FT)	1750		1040		25340	
10 PERCENT EXCEEDS	3.7		1.4		42	
50 PERCENT EXCEEDS	2.1		.68		1.5	
90 PERCENT EXCEEDS	1.2		.36		.10	

a From floodmark.
c From rating curve extended above current-meter discharge measurements of 43,400 ft^3/s and 71,300 ft^3/s.



08200000 HONDO CREEK NEAR TARPLEY, TX

LOCATION.--Lat 29°34′10", long 99°14′47", Medina County, Hydrologic Unit 12110107, on left bank 460 ft downstream from bridge on Ranch Road 462, 6.3 mi southeast of Tarpley, and 16.6 mi northwest of Hondo.

DRAINAGE AREA.--95.6 mi^2.

PERIOD OF RECORD.--Aug 1952 to current year.
Water-quality records.--Chemical data: Nov 1965 to Sep 1969, Feb 1970 to Sep 1993. Biochemical data: Feb 1970 to Sep 1993. Pesticide data: Aug 1971 to Sep 1993. Sediment data: Nov to Dec 1965.

REVISED RECORDS.--WSP 1712: 1957. WDR TX-83-3: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,169.1 ft, from Magnolia Oil Co. datum. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. No known regulation. There are several small diversions for irrigation above station. No flow at times. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water-quality data.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in Jul 1932 reached a stage of about 26 ft (discharge, 58,500 ft^3/s), from information by local resident. Maximum stage since at least 1907, that of Jun 17, 1958.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 500 ft^3/s:

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)

No peak greater than base discharge.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.7	2.1	1.5	1.3	1.3	1.1	.10	.13	.26	1.2	.09	.00
2	3.6	2.1	1.5	1.3	2.9	1.0	.11	1.8	.19	1.0	.08	.00
3	3.6	2.0	1.5	1.3	2.0	.98	.13	1.5	.29	.84	.06	.00
4	3.5	2.0	1.4	1.1	1.5	.85	.10	.89	.33	.65	.05	.00
5	3.4	1.9	1.4	1.0	1.4	.79	.08	.68	.92	.53	.04	.00
6	3.3	2.0	1.2	1.1	1.4	.90	.10	.51	1.2	.46	.02	.00
7	3.0	2.0	1.3	1.4	1.5	.95	.09	.35	.40	.38	.01	.00
8	2.6	1.9	1.4	1.9	1.4	.79	.08	.26	.22	.31	.00	.00
9	2.7	1.9	1.5	1.4	1.3	.83	.09	.23	.27	.23	.00	.00
10	2.8	1.7	1.3	1.3	1.3	.93	.10	.26	1.9	.17	.00	.00
11	2.8	1.7	1.3	1.3	1.3	.73	.11	.26	3.1	.13	.00	.00
12	2.9	1.9	1.7	1.4	1.2	1.3	.26	.23	2.1	.10	.00	.00
13	2.7	1.7	1.5	1.4	1.2	1.3	.30	1.7	2.2	.08	.00	.00
14	2.7	1.7	1.3	1.3	1.2	1.2	.43	.93	1.8	.06	.00	.00
15	2.5	1.7	1.3	1.2	1.1	.96	.35	.57	1.7	.05	.00	.00
16	2.5	1.6	1.3	1.2	1.2	.80	.32	.54	1.7	.04	.00	.00
17	4.8	1.6	1.3	1.3	1.2	.70	.27	.46	1.6	.03	.00	.00
18	4.4	1.6	1.3	1.3	1.1	.70	.27	.34	1.8	.02	.00	.00
19	3.7	1.6	1.3	1.2	1.1	.62	.26	.39	7.9	.02	.00	.00
20	3.0	1.6	1.3	1.2	1.0	.31	.20	.53	6.3	.01	.00	.00
21	3.1	1.6	1.3	1.2	1.0	.30	.18	.76	5.3	.01	.00	.00
22	2.9	1.6	1.3	1.3	1.1	.28	.15	.58	3.9	.00	.00	.00
23	2.7	1.6	1.3	1.3	3.3	.45	.13	.44	3.1	.32	.00	.00
24	2.7	1.5	1.5	1.2	1.4	.90	.10	.35	2.8	2.3	.00	.00
25	2.7	1.5	1.5	1.1	1.3	.60	.09	.29	2.7	.78	.00	.00
26	2.5	1.5	1.5	1.1	1.3	.32	.08	.23	2.4	.30	.00	.00
27	2.5	1.5	1.5	1.3	1.2	.22	.07	.25	2.1	.20	.00	.00
28	2.5	1.5	1.4	1.6	1.2	.17	.07	1.6	1.7	.13	.00	.00
29	2.3	1.5	1.3	1.2	1.1	.13	.07	1.0	1.5	.09	.00	.00
30	2.6	1.5	1.3	1.2	---	.10	.06	.49	1.3	.09	.00	.00
31	2.3	---	1.3	1.2	---	.09	---	.35	---	.08	.00	---
TOTAL	93.0	51.6	42.8	39.6	40.5	21.30	4.75	18.90	62.98	10.61	0.35	0.00
MEAN	3.00	1.72	1.38	1.28	1.40	.69	.16	.61	2.10	.34	.011	.000
MAX	4.8	2.1	1.7	1.9	3.3	1.3	.43	1.8	7.9	2.3	.09	.00
MIN	2.3	1.5	1.2	1.0	1.0	.09	.06	.13	.19	.00	.00	.00
AC-FT	184	102	85	79	80	42	9.4	37	125	21	.7	.00
CFSM	.03	.02	.01	.01	.01	.01	.00	.01	.02	.00	.00	.00
IN.	.04	.02	.02	.02	.02	.01	.00	.01	.02	.00	.00	.00

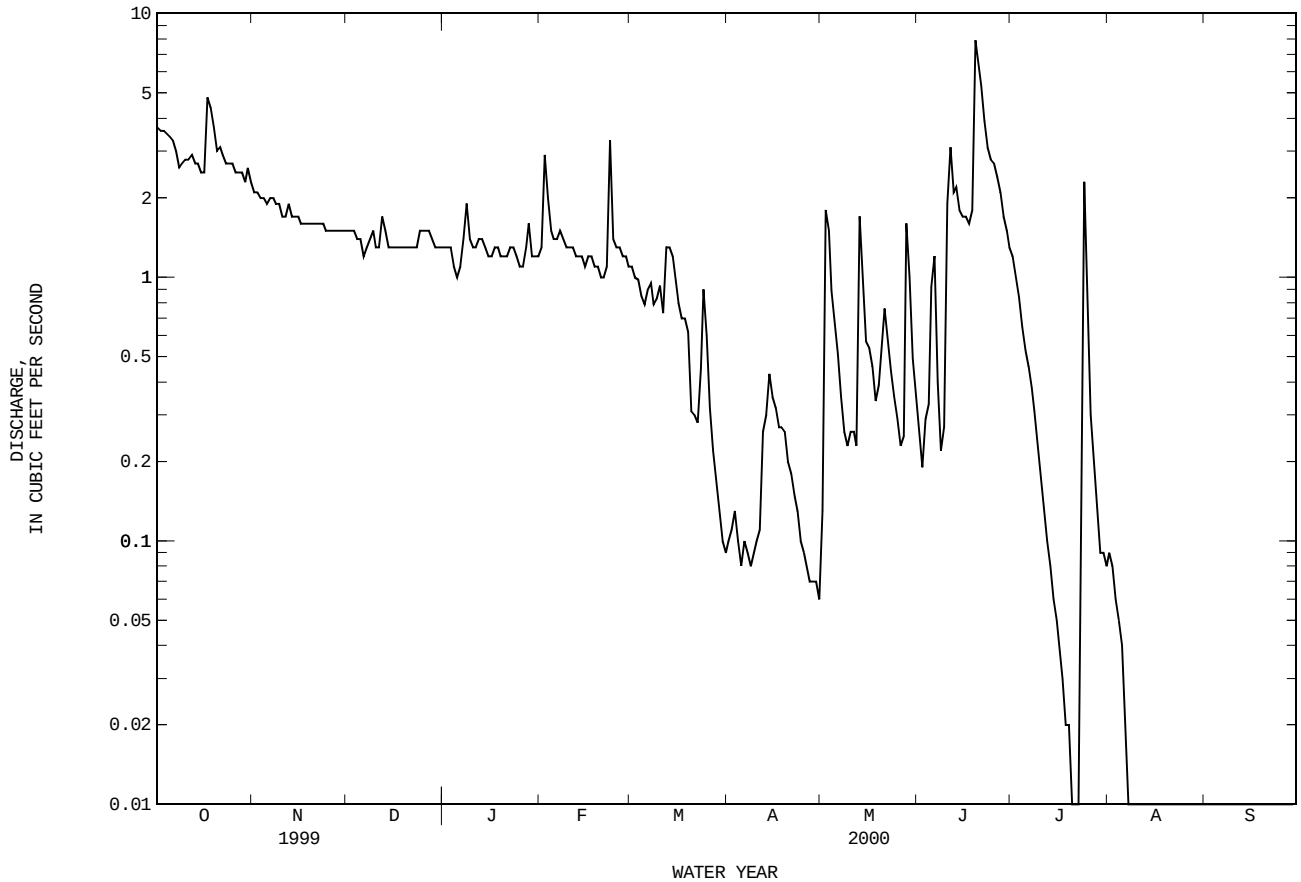
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1952 - 2000, BY WATER YEAR (WY)

MEAN	36.4	26.1	32.4	25.9	33.3	36.1	36.7	63.7	96.8	38.0	37.2	27.1
MAX	254	134	541	172	342	323	178	402	1056	574	654	153
(WY)	1972	1999	1992	1992	1992	1992	1992	1987	1987	1973	1971	1958
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1956	1955	1955	1956	1956	1956	1956	1956	1996	1996	1984	1955

08200000 HONDO CREEK NEAR TARPLEY, TX--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1952 - 2000	
ANNUAL TOTAL	5900.6		386.39			
ANNUAL MEAN	16.2		1.06		40.8	
HIGHEST ANNUAL MEAN					205	1992
LOWEST ANNUAL MEAN					.41	1956
HIGHEST DAILY MEAN	160	Jul 11	7.9	Jun 19	11900	Jun 17 1958
LOWEST DAILY MEAN	1.2	Dec 6	.00	Jul 22	.00	Sep 1 1952
ANNUAL SEVEN-DAY MINIMUM	1.3	Dec 14	.00	Aug 8	.00	Sep 1 1952
INSTANTANEOUS PEAK FLOW			10	Jun 19	c76900	Jun 22 1997
INSTANTANEOUS PEAK STAGE			.38	Jun 19	a29.64	Jun 22 1997
ANNUAL RUNOFF (AC-FT)	11700		766		29580	
ANNUAL RUNOFF (CFSM)	.17		.011		.43	
ANNUAL RUNOFF (INCHES)	2.30		.15		5.80	
10 PERCENT EXCEEDS	34		2.5		81	
50 PERCENT EXCEEDS	13		1.0		12	
90 PERCENT EXCEEDS	1.5		.00		.10	

a From floodmark.
c From rating curve extended above indirect measurement of 69,800 ft^3/s.



08200700 HONDO CREEK AT KING WATERHOLE NEAR HONDO, TX

LOCATION.--Lat 29°23′26", long 99°09′04", Medina County, Hydrologic Unit 12110107, on left bank 0.3 mi downstream from county road low-water crossing, 3.1 mi north of Hondo, 7.8 mi upstream from Verde Creek, and 55.4 mi upstream from mouth.

DRAINAGE AREA.--149 mi^2.

PERIOD OF RECORD.--Oct 1960 to current year.

REVISED RECORDS.--WDR TX-83-3: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 897.87 ft above sea level. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. No known regulation. Most of the low flow enters the Edwards and associated limestones in the Balcones Fault Zone, that crosses the basin between Hondo Creek near Tarpley (station 08200000) and this station. There are several small diversions above station for irrigation. No flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1875, 21 ft in Sep 1919, from information by local resident. Other outstanding floods occurred in Jul 1932, stage 18 ft, and Jun 17, 1958, stage 17 ft.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 500 ft^3/s:

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)

No peak greater than base discharge.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.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	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
MAX	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 2000, BY WATER YEAR (WY)

MEAN	10.6	.47	10.5	2.74	6.84	9.00	7.00	29.0	61.7	13.9	33.8	6.99
MAX	160	10.8	379	56.9	187	168	89.5	468	1060	509	1015	151
(WY)	1972	1972	1992	1968	1992	1992	1981	1987	1987	1973	1971	1980
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1962	1961	1962	1961	1962	1962	1961	1961	1962	1962	1961	1961

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR	FOR 2000 WATER YEAR	WATER YEARS 1961 - 2000	
ANNUAL MEAN			16.1	
HIGHEST ANNUAL MEAN			128	1987
LOWEST ANNUAL MEAN			.000	1962
HIGHEST DAILY MEAN			13900	Jun 22 1997
LOWEST DAILY MEAN	.00 Jan 1	.00 Oct 1	.00	Oct 1 1960
ANNUAL SEVEN-DAY MINIMUM	.00 Jan 1	.00 Oct 1	.00	Oct 1 1960
INSTANTANEOUS PEAK FLOW			i63600	Jun 22 1997
INSTANTANEOUS PEAK STAGE			18.96	Jun 22 1997
ANNUAL RUNOFF (AC-FT)			11650	
10 PERCENT EXCEEDS	.00	.00	.23	
50 PERCENT EXCEEDS	.00	.00	.00	
90 PERCENT EXCEEDS	.00	.00	.00	

i From indirect measurement of peak flow

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08201500 SECO CREEK AT MILLER RANCH NEAR UTOPIA, TX

LOCATION.--Lat 29°34′23", long 99°24′10", Medina County, Hydrologic Unit 12110107, on right bank 200 ft upstream from county road crossing, 4.5 mi downstream from Cascade Creek, 7.9 mi southeast of Utopia, and 58.0 mi upstream from mouth.

DRAINAGE AREA.--45.0 mi^2.

PERIOD OF RECORD.--May 1961 to current year.
Water-quality records.--Chemical data: Nov 1965, Sep 1969 to Jul 1994. Biochemical data: Mar 1970 to Jul 1999. Pesticide data: Jan 1974 to Sep 1998. Sediment data: Nov 1965, Aug 1994 to Sep 1998.

REVISED RECORDS.--WDR TX-83-3: Drainage area.

GAGE.--Water-stage recorder, crest-stage gage, and concrete control. Datum of gage is 1,265.8 ft, from Magnolia Oil Company datum, adjustment unknown. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. No known regulation or diversions. No flow at times. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water-quality data.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1901, 16.4 ft Jun 17, 1958, from floodmarks (discharge, 52,600 ft^3/s, by slope-area measurement of peak flow).

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 600 ft^3/s:

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)

No peak greater than base discharge.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.0	1.0	.77	.64	.78	.65	.43	2.9	.52	2.7	10	.17
2	1.0	.97	.79	.67	1.6	.70	.54	3.7	.34	2.5	3.3	.16
3	1.1	.87	.79	.66	1.7	.70	.68	2.1	.33	2.3	1.8	.16
4	1.1	.83	.73	.56	1.2	.66	.66	1.4	.68	2.1	1.3	.16
5	1.1	.84	.58	.55	.91	.59	.58	1.1	2.9	1.9	1.1	.15
6	1.1	.86	.55	.48	.82	.56	.49	.82	2.0	1.8	1.1	.12
7	1.1	.89	.52	.57	.77	.61	.46	.59	1.2	1.7	1.0	.09
8	1.1	.87	.61	.75	.73	.63	.38	.48	.96	1.7	.96	.08
9	1.1	.85	.63	.81	.73	.57	.35	.43	2.8	1.5	.91	.08
10	1.1	.85	.63	.80	.73	.50	.32	.44	11	1.3	.90	.07
11	1.1	.86	.64	.76	.73	.42	.31	.50	19	1.3	.86	.07
12	1.2	.88	.77	.74	.70	.44	.85	.52	15	1.2	.82	.08
13	1.1	.89	.79	.74	.69	.45	1.7	.61	9.0	1.1	.80	.10
14	1.1	.87	.80	.70	.65	.49	1.2	.71	7.3	1.1	.76	.55
15	1.1	.84	.70	.69	.64	.53	1.0	.78	6.6	1.0	.74	.67
16	1.1	.82	.65	.67	.63	.57	.87	.64	5.9	.96	.73	.51
17	4.6	.80	.61	.71	.66	.52	.70	.51	4.9	.90	.70	.27
18	3.9	.81	.61	.73	.71	.56	.62	.44	11	.87	.65	.17
19	2.7	.82	.63	.73	.63	.51	.56	.43	15	.84	.52	.12
20	1.6	.81	.64	.69	.58	.50	.50	.55	9.8	.91	.48	.10
21	1.3	.81	.63	.62	.54	.52	.42	.74	8.0	.89	.42	.09
22	1.2	.81	.66	.62	.63	.54	.34	.84	7.0	.88	.36	.08
23	1.1	.81	.70	.65	1.9	.85	.28	.76	6.3	1.1	.34	.07
24	1.1	.76	.71	.65	1.9	1.8	.23	.56	5.5	4.4	.33	.14
25	1.1	.71	.72	.62	1.2	1.2	.21	.40	4.6	1.9	.33	1.4
26	1.0	.70	.71	.58	1.0	.99	.19	.33	4.2	1.3	.32	1.3
27	1.1	.73	.73	.61	.86	.87	.18	.35	4.0	1.1	.30	.67
28	1.2	.74	.70	.59	.72	.76	.18	.81	3.6	1.1	.27	.46
29	1.2	.78	.68	.67	.64	.63	.17	1.6	3.2	1.0	.24	.26
30	1.1	.76	.65	.63	---	.53	.18	1.1	3.0	.96	.21	.16
31	1.1	---	.64	.60	---	.45	---	.84	---	11	.19	---
TOTAL	42.8	24.84	20.97	20.49	25.98	20.30	15.58	27.98	175.63	55.31	32.74	8.51
MEAN	1.38	.83	.68	.66	.90	.65	.52	.90	5.85	1.78	1.06	.28
MAX	4.6	1.0	.80	.81	1.9	1.8	1.7	3.7	19	11	10	1.4
MIN	1.0	.70	.52	.48	.54	.42	.17	.33	.33	.84	.19	.07
AC-FT	85	49	42	41	52	40	31	55	348	110	65	17
CFSM	.03	.02	.02	.01	.02	.01	.01	.02	.13	.04	.02	.01
IN.	.04	.02	.02	.02	.02	.02	.01	.02	.15	.05	.03	.01

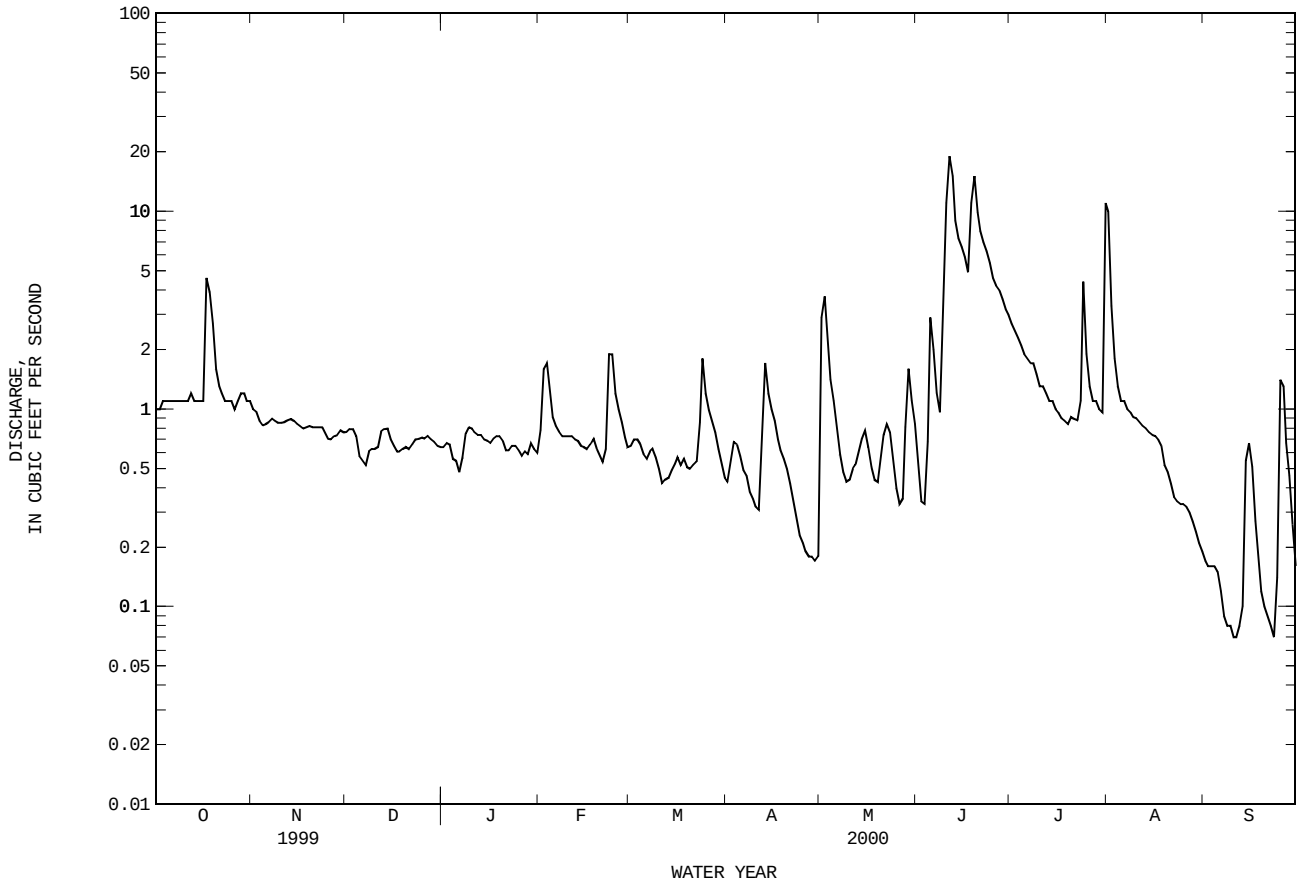
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 2000, BY WATER YEAR (WY)

MEAN	20.3	12.4	16.5	12.1	14.1	15.9	15.3	25.9	42.1	22.1	21.3	14.5
MAX	169	73.6	241	92.9	136	134	91.1	120	471	276	279	63.1
(WY)	1972	1999	1992	1992	1992	1992	1992	1987	1987	1973	1971	1967
MIN	.24	.50	.40	.66	.90	.65	.52	.64	.15	.010	.005	.000
(WY)	1964	1964	1964	2000	2000	2000	2000	1984	1989	1989	1989	1989

08201500 SECO CREEK AT MILLER RANCH NEAR UTOPIA, TX--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1961 - 2000	
ANNUAL TOTAL	2561.81		471.13			
ANNUAL MEAN	7.02		1.29		19.5	
HIGHEST ANNUAL MEAN					87.4	1992
LOWEST ANNUAL MEAN					.97	1989
HIGHEST DAILY MEAN	71	Jun 20	19	Jun 11	5000	Jun 22 1997
LOWEST DAILY MEAN	.52	Dec 7	.07	Sep 10	.00	Jul 30 1963
ANNUAL SEVEN-DAY MINIMUM	.59	Dec 5	.08	Sep 7	.00	Jul 30 1963
INSTANTANEOUS PEAK FLOW			87	Jul 31	i64900	Jun 22 1997
INSTANTANEOUS PEAK STAGE			2.23	Jul 31	a17.70	Jun 22 1997
ANNUAL RUNOFF (AC-FT)	5080		934		14130	
ANNUAL RUNOFF (CFSM)	.16		.029		.43	
ANNUAL RUNOFF (INCHES)	2.12		.39		5.89	
10 PERCENT EXCEEDS	15		2.1		40	
50 PERCENT EXCEEDS	5.8		.73		5.3	
90 PERCENT EXCEEDS	.79		.31		.72	

a From floodmark
i From indirect measurement of peak flow



08202700 SECO CREEK AT ROWE RANCH NEAR D'HANIS, TX

LOCATION.--Lat 29°21'43", long 99°17'05", Medina County, Hydrologic Unit 12110107, on left bank 2.9 mi north of D'Hanis and 8.0 mi downstream from Rocky Creek.

DRAINAGE AREA.--168 mi^2.

PERIOD OF RECORD.--Nov 1960 to current year.

GAGE.--Water-stage recorder. Datum of gage is 900.88 ft above sea level. Prior to Oct 1970, published as "at Crook Ranch, near D'Hanis". Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. No known regulation or diversions. All of low flow from Seco Creek enters the Edwards and associated limestones in the Balcones Fault Zone that crosses the basin between Seco Creek at Miller Ranch near Utopia (station 08201500) and this station. No flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1852, 35.7 ft May 31, 1935, from information by local resident. Other floods occurred Aug 31, 1894, 33 ft; Sep 1919, 28 ft; Jul 2, 1932, 28.2 ft (discharge, 35,800 ft^3/s, by slope-area measurement); and Jun 17, 1958, 32.4 ft.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 600 ft^3/s:

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)

No peak greater than base discharge.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.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	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
MAX	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 2000, BY WATER YEAR (WY)

MEAN	9.45	.002	4.34	.63	.95	1.70	3.30	11.2	28.0	7.71	28.4	4.21
MAX	183	.057	117	24.7	33.2	27.0	74.6	277	411	275	862	58.5
(WY)	1972	1977	1992	1968	1992	1992	1981	1987	1997	1973	1971	1980
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1962	1961	1961	1961	1961	1961	1961	1961	1962	1962	1961	1961

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR	FOR 2000 WATER YEAR	WATER YEARS 1961 - 2000	
ANNUAL MEAN			8.47	
HIGHEST ANNUAL MEAN			73.3	1971
LOWEST ANNUAL MEAN			.000	1962
HIGHEST DAILY MEAN			11800	Jun 22 1997
LOWEST DAILY MEAN	.00 Jan 1	.00 Oct 1	.00	Nov 1 1960
ANNUAL SEVEN-DAY MINIMUM	.00 Jan 1	.00 Oct 1	.00	Nov 1 1960
INSTANTANEOUS PEAK FLOW			i51400	Jun 22 1997
INSTANTANEOUS PEAK STAGE			a30.62	Jun 22 1997
ANNUAL RUNOFF (AC-FT)			6140	
10 PERCENT EXCEEDS	.00	.00	.00	
50 PERCENT EXCEEDS	.00	.00	.00	
90 PERCENT EXCEEDS	.00	.00	.00	

a From floodmark
i From indirect measurement of peak flow

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08205500 FRIO RIVER NEAR DERBY, TX

LOCATION.--Lat 28°44'11", long 99°08'40", Frio County, Hydrologic Unit 12110106, on right bank 17 ft downstream from centerline of railroad tracks, 35 ft right of the Missouri Pacific Railroad Co. bridge abutment, 167 ft downstream from Interstate Highway 35, 917 ft downstream from Leona River, 2.5 mi south of Derby, and 115.1 mi upstream from mouth.

DRAINAGE AREA.--3,429 mi^2.

PERIOD OF RECORD.--Aug 1915 to current year.

REVISED RECORDS.--WSP 568: 1915-16, 1918-22. WSP 1312: 1917-18(M). WSP 1923: 1954. WDR TX-83-3: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 449.11 ft above sea level. Aug 1, 1915, to Apr 21, 1931, nonrecording gage, and Apr 22, 1931, to Mar 6, 1940, water-stage recorder at same site and datum. Mar 7, 1940, to May 4, 1972, water-stage recorder, and May 5 to Nov 1, 1972, nonrecording gage at site 167 ft upstream at same datum. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. No known regulation. Part of the flow of the Frio River and its headwater tributaries enters the Edwards and associated limestones in the Balcones Fault Zone upstream from U.S. Highway 90. There is considerable loss of flow into various permeable formations downstream from the Balcones Fault Zone. There are many small diversions for irrigation above station. No flow at times. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water-quality data.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1860, that of Jul 4, 1932, from information by local resident.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,100 ft^3/s:

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)

No peak greater than base discharge.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	23	26	25	23	23	12	5.6	.00	.23	.00	.00
2	12	23	27	25	27	21	10	5.7	.00	.15	.00	.00
3	12	24	26	25	29	22	9.2	5.0	.00	.07	.00	.00
4	12	24	25	25	29	22	8.3	3.9	.00	.02	.00	.00
5	13	25	27	24	29	20	6.8	3.1	.00	.01	.00	.00
6	14	24	26	26	29	19	7.4	2.1	.00	.00	.00	.00
7	15	21	26	27	28	20	11	1.2	.00	.00	.00	.00
8	15	19	26	27	28	20	11	.67	.00	.00	.00	.00
9	15	18	25	29	26	20	9.2	1.4	.00	.00	.00	.00
10	15	18	26	30	26	19	8.0	2.3	.00	.00	.00	.00
11	15	18	27	31	26	19	7.3	2.4	.00	.00	.00	.00
12	14	19	26	31	25	19	7.3	2.3	378	.00	.00	.00
13	14	20	25	32	24	18	8.1	2.1	181	.00	.00	.00
14	13	19	23	30	23	20	7.5	1.5	54	.00	.00	.00
15	13	17	24	29	22	20	7.7	1.1	26	.00	.00	.00
16	13	16	25	28	21	18	7.7	.53	12	.00	.00	.00
17	15	18	27	28	22	17	9.3	.21	5.2	.00	.00	.00
18	15	22	27	29	23	17	9.4	.09	2.7	.00	.00	.00
19	19	24	27	30	22	17	10	3.3	1.0	.00	.00	.00
20	25	23	27	32	20	16	11	15	.30	.00	.00	.00
21	24	22	27	30	18	15	9.8	2.6	.12	.00	.00	.00
22	25	23	25	28	19	15	7.9	1.3	3.3	.00	.00	.00
23	24	23	25	25	19	16	7.0	.54	11	.00	.00	.00
24	25	22	25	24	19	16	5.6	.21	8.9	.00	.00	.00
25	25	23	26	24	20	16	4.5	.11	5.2	.00	.00	.00
26	27	24	28	23	20	16	3.8	.06	3.4	.00	.00	.00
27	27	24	25	23	26	14	3.5	.04	2.3	.00	.00	.00
28	27	26	27	23	27	14	3.2	.05	1.4	.00	.00	.00
29	27	27	27	22	25	13	2.9	.03	.78	.00	.00	.00
30	25	26	28	21	---	13	2.8	.01	.46	.00	.00	.00
31	23	---	27	22	---	13	---	.01	---	.00	.00	---
TOTAL	571	655	808	828	695	548	229.2	64.46	697.06	0.48	0.00	0.00
MEAN	18.4	21.8	26.1	26.7	24.0	17.7	7.64	2.08	23.2	.015	.000	.000
MAX	27	27	28	32	29	23	12	15	378	.23	.00	.00
MIN	12	16	23	21	18	13	2.8	.01	.00	.00	.00	.00
AC-FT	1130	1300	1600	1640	1380	1090	455	128	1380	1.0	.00	.00

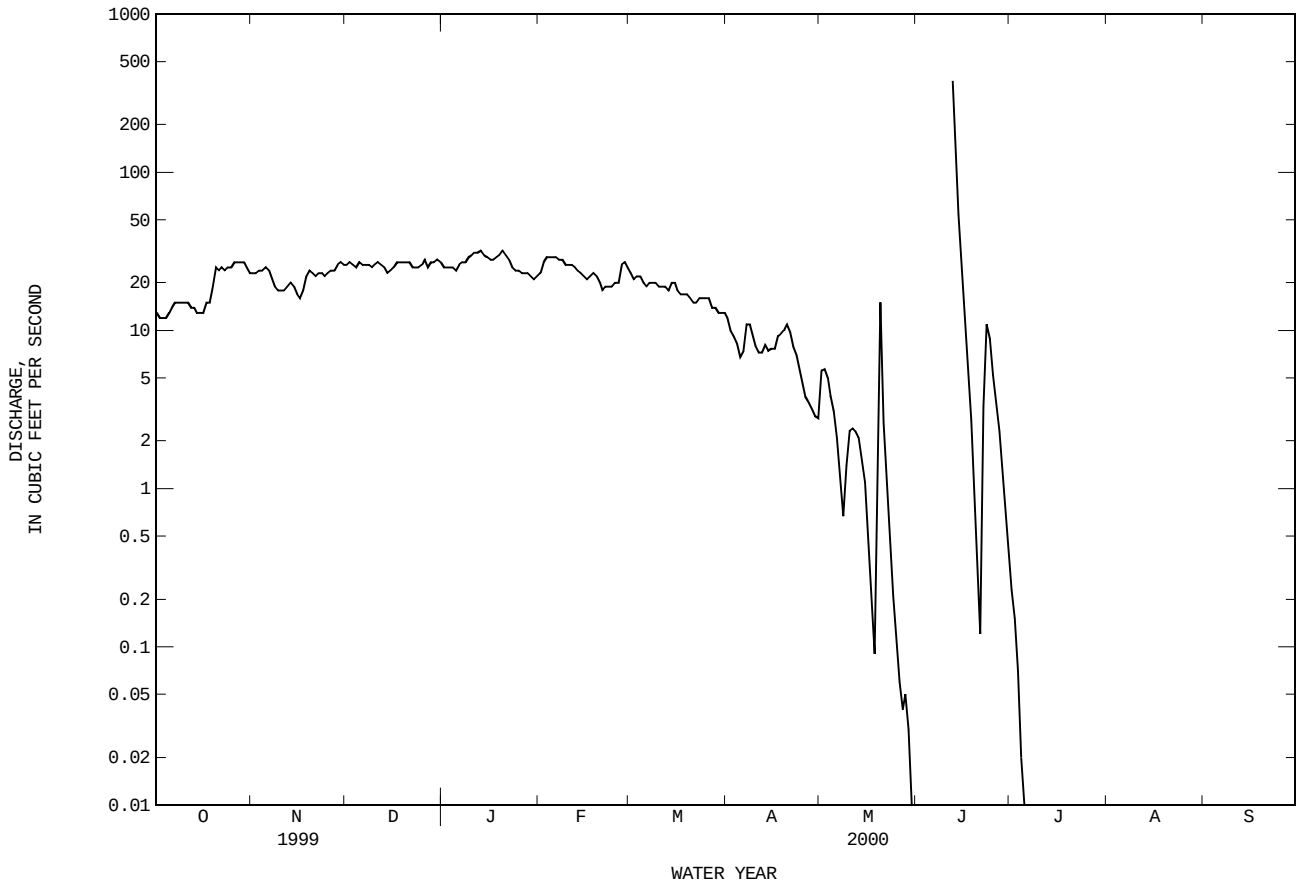
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1915 - 2000, BY WATER YEAR (WY)

MEAN	166	48.0	46.0	50.9	59.6	49.5	113	195	372	248	145	191
MAX	1813	674	950	559	988	1079	1072	2320	8069	8943	5648	3247
(WY)	1920	1920	1992	1992	1992	1992	1957	1935	1935	1932	1971	1919
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1918	1916	1916	1916	1916	1916	1917	1917	1918	1918	1917	1922

08205500 FRIO RIVER NEAR DERBY, TX--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1915 - 2000	
ANNUAL TOTAL	15641.1		5096.20			
ANNUAL MEAN	42.9		13.9		140	
HIGHEST ANNUAL MEAN					1087	1935
LOWEST ANNUAL MEAN					1.76	1952
HIGHEST DAILY MEAN	386	Jun 25	378	Jun 12	135000	Jul 4 1932
LOWEST DAILY MEAN	8.2	Jun 11	.00	Jun 1	.00	Aug 1 1915
ANNUAL SEVEN-DAY MINIMUM	9.2	Jun 9	.00	Jun 1	.00	Aug 1 1915
INSTANTANEOUS PEAK FLOW			617	Jun 12	i230000	Jul 4 1932
INSTANTANEOUS PEAK STAGE			2.59	Jun 12	a29.45	Jul 4 1932
ANNUAL RUNOFF (AC-FT)	31020		10110		101700	
10 PERCENT EXCEEDS	85		27		150	
50 PERCENT EXCEEDS	27		13		5.5	
90 PERCENT EXCEEDS	14		.00		.00	

a From floodmark
i From indirect measurement of peak flow



08206600 FRIO RIVER AT TILDEN, TX

LOCATION.--Lat 28°28′02", long 98°32′50", McMullen County, Hydrologic Unit 12110108, on left bank 80 ft downstream from bridge on State Highway 16 in Tilden, 300 ft downstream from Leoncita Creek, 1.3 mi upstream from Salt Branch, 1.8 mi downstream from Big Slough, and 44.2 mi upstream from mouth.

DRAINAGE AREA.--4,493 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Jul 1978 to current year.

GAGE.--Water-stage recorder. Datum of gage is 216.04 ft above sea level. Jul 14, 1978, to Sep 13, 1994, at site 80 ft upstream at same datum. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. No known regulation. Part of the flow of the Frio River and its headwater tributaries enters the Edwards and associated limestones in the Balcones Fault Zone that crosses the basin upstream from U.S. Highway 90. Considerable flow into various permeable formations also occurs downstream from the Balcones Fault Zone. There are many small diversions above station for irrigation. No flow at times. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water-quality data.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Jul 1932 reached a stage of 38.44 ft, from information by local resident.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,500 ft^3/s:

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)

No peak greater than base discharge.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	23	20	24	20	16	13	1.5	.56	.11	.00	.00
2	12	23	21	25	22	17	24	5.8	.35	.05	.00	.00
3	12	22	22	25	22	20	31	6.9	.27	.02	.00	.00
4	13	21	22	25	21	22	296	3.8	.22	.24	.00	.00
5	13	20	22	23	23	21	198	3.0	14	.05	.00	.00
6	13	20	22	23	25	19	102	3.6	20	.00	.00	.00
7	12	21	23	23	26	18	44	3.7	12	.00	.00	.00
8	11	22	21	24	27	18	25	2.7	4.8	.05	.00	.00
9	11	22	21	24	27	18	15	2.2	8.2	.01	.00	.00
10	12	22	21	24	27	17	10	1.9	43	.01	.00	.00
11	13	21	21	25	27	16	7.2	1.6	50	.32	.00	.00
12	14	19	22	25	26	16	6.1	1.2	25	.09	.00	.00
13	14	18	22	25	26	17	6.4	1.1	15	.26	.00	.00
14	15	17	21	26	25	34	6.2	.83	6.2	.10	.00	.00
15	15	18	22	26	24	555	5.3	.54	79	.35	.00	.00
16	15	18	23	27	24	238	4.6	.19	105	.08	.00	.00
17	14	18	22	27	23	45	4.0	.14	39	.02	.00	.00
18	15	19	21	27	23	28	3.5	.11	23	.00	.00	.00
19	14	18	20	26	21	23	3.5	.11	16	.00	.00	.00
20	15	18	20	26	21	23	3.5	.15	10	.00	.00	.00
21	16	16	21	25	20	22	3.1	.17	6.5	.00	.00	.00
22	16	18	22	25	20	20	2.8	.13	4.3	.00	.00	.00
23	17	21	23	25	20	18	2.9	.11	3.2	.00	.00	.00
24	21	20	24	25	19	16	2.9	.09	2.4	.00	.00	.00
25	22	20	23	26	18	15	2.8	.08	1.7	.00	.00	.00
26	22	19	22	25	17	15	2.9	.05	1.2	.00	.00	.00
27	21	20	21	25	17	14	2.9	.03	.69	.00	.00	.00
28	22	19	21	23	17	14	2.5	.09	.45	.00	.00	.00
29	22	19	21	22	17	14	2.3	2.4	.40	.01	.00	.00
30	23	20	21	22	---	14	2.0	7.0	.22	.00	.00	.00
31	23	---	23	22	---	13	---	2.3	---	.00	.00	---
TOTAL	490	592	671	765	645	1356	835.4	53.52	492.66	1.77	0.00	0.00
MEAN	15.8	19.7	21.6	24.7	22.2	43.7	27.8	1.73	16.4	.057	.000	.000
MAX	23	23	24	27	27	555	296	7.0	105	.35	.00	.00
MIN	11	16	20	22	17	13	2.0	.03	.22	.00	.00	.00
AC-FT	972	1170	1330	1520	1280	2690	1660	106	977	3.5	.00	.00

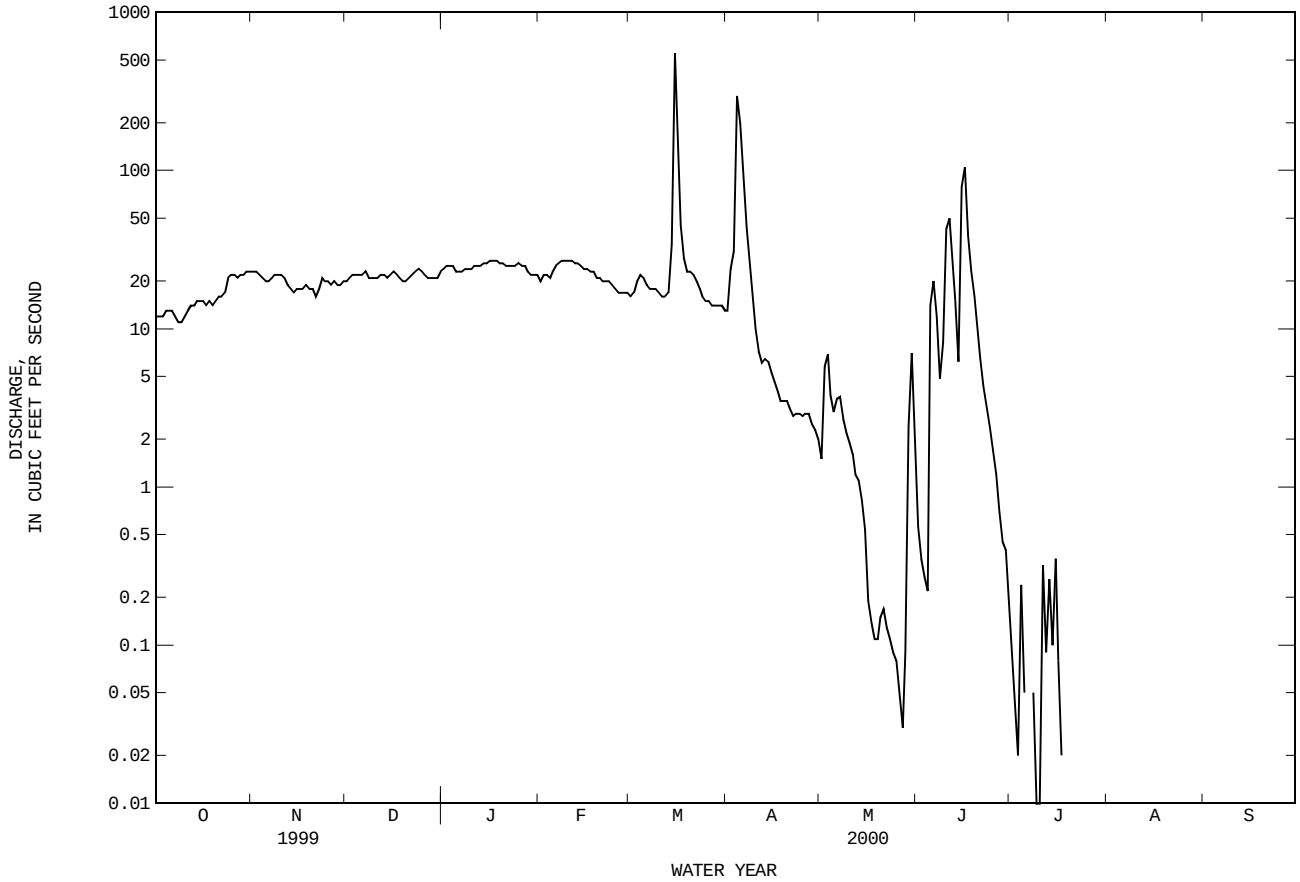
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1978 - 2000, BY WATER YEAR (WY)

MEAN	192	62.4	106	107	122	107	123	187	786	186	118	98.0
MAX	861	191	1314	877	1745	1188	935	1171	8992	1232	842	315
(WY)	1986	1999	1992	1992	1992	1992	1992	1980	1987	1990	1998	1991
MIN	.12	.25	.27	.45	.32	2.91	.55	.46	.025	.000	.000	.000
(WY)	1991	1991	1991	1991	1990	1984	1984	1998	1998	1996	2000	2000

08206600 FRIO RIVER AT TILDEN, TX--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1978 - 2000	
ANNUAL TOTAL	15419.8		5902.35			
ANNUAL MEAN	42.2		16.1		180	
HIGHEST ANNUAL MEAN					1000	1987
LOWEST ANNUAL MEAN					7.06	1984
HIGHEST DAILY MEAN	411	Mar 30	555	Mar 15	20100	Jun 9 1987
LOWEST DAILY MEAN	8.8	Aug 22	.00	Jul 6	.00	Apr 16 1984
ANNUAL SEVEN-DAY MINIMUM	9.4	Aug 16	.00	Jul 18	.00	Apr 22 1984
INSTANTANEOUS PEAK FLOW			719	Mar 15	20900	Jun 9 1987
INSTANTANEOUS PEAK STAGE			10.15	Mar 15	p29.56	Jun 28 1997
ANNUAL RUNOFF (AC-FT)	30590		11710		130600	
10 PERCENT EXCEEDS	76		25		221	
50 PERCENT EXCEEDS	27		14		26	
90 PERCENT EXCEEDS	13		.00		.24	

p Observed.



08206600 FRIO RIVER AT TILDEN, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--
CHEMICAL DATA: Dec 1997 to current year.
BIOCHEMICAL DATA: Dec 1997 to current year.
PESTICIDE DATA: Dec 1997 to current year.

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

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)
NOV												
05...	1103	20	1630	7.9	17.0	8.7	89	500	300	150	32	146
FEB												
08...	1220	26	1630	8.0	14.0	9.3	90	450	260	130	30	158
MAY												
16...	1130	.19	2130	7.1	25.0	3.1	39	380	150	110	29	330

DATE	SODIUM AD-SORP-TION RATIO (00931)	SODIUM PERCENT (00932)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY WAT DIS FIX END FIELD CAC03 (MG/L) (39036)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)
NOV												
05...	3	39	2.9	200	300	220	.23	10	991	--	<.010	5.05
FEB												
08...	3	43	2.6	200	280	220	.26	7.2	974	--	<.010	4.69
MAY												
16...	7	65	6.3	240	300	380	.50	9.6	1310	.519	.023	.542

DATE	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N) (00607)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4) (00660)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)	ANTI-MONY, DIS-SOLVED (UG/L AS SB) (01095)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE) (01010)	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)
NOV												
05...	<.020	--	.18	E.042	<.010	--	<1.0	<1.0	E1	83	<1.0	<1.0
FEB												
08...	<.020	--	.23	<.050	<.010	--	<1.0	<1.0	E2	74	<1.0	<1.0
MAY												
16...	.098	.44	.54	.139	.103	.32	--	<1.0	4	135	<1.0	<1.0

DATE	CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030)	COBALT, DIS-SOLVED (UG/L AS CO) (01035)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	LITHIUM DIS-SOLVED (UG/L AS LI) (01130)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MERCURY DIS-SOLVED (UG/L AS HG) (71890)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060)	NICKEL, DIS-SOLVED (UG/L AS NI) (01065)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)
NOV												
05...	<.80	<1.0	1.9	<10	<1.0	28	2.0	<.2	1.2	2.1	<2	<1.0
FEB												
08...	<2.0	<1.0	2.0	E5.5	<1.0	28	2.4	<.2	1.3	<1.0	E2	<1.0
MAY												
16...	<.80	<1.0	1.8	<30	<1.0	55	--	<.2	2.4	3.0	<2	<1.0

DATE	STRON-TIUM, DIS-SOLVED (UG/L AS SR) (01080)	VANA-DIUM, DIS-SOLVED (UG/L AS V) (01085)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)	URANIUM NATURAL DIS-SOLVED (UG/L AS U) (22703)	2,4,5-T TOTAL (UG/L) (39740)	2,4-D, TOTAL (UG/L) (39730)	SILVEX, TOTAL (UG/L) (39760)	DICAMBA TOTAL (UG/L) (82052)	2,4-DP TOTAL (UG/L) (82183)	PIC-LORAM UNFILT RECOVER (UG/L) (39720)	2,4,5-T DIS-SOLVED (UG/L) (39742)	2,4-D, DIS-SOLVED (UG/L) (39732)
NOV												
05...	1200	E6	1.4	1.6	<.010	<.010	<.010	<.010	<.010	.015	--	--
FEB												
08...	1080	E9	1.6	1.7	<.010	<.010	<.010	<.010	<.010	<.010	--	--
MAY												
16...	971	<30	4.7	1.7	--	--	--	--	--	--	<.0400	<.110

08206600 FRIO RIVER AT TILDEN, TX--Continued

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

DATE	2,4-DB WATER, FLTRD, GF 0.7U REC (UG/L) (38746)	2,6-DI-ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	SILVEX, DIS-SOLVED (UG/L) (39762)	3HYDRXY CARBO-FURAN WAT,FLT GF 0.7U REC (UG/L) (49308)	DNOC WAT,FLT GF 0.7U REC (UG/L) (49299)	ACETO-CHLOR, WATER FLTRD REC (UG/L) (49260)	ACIFL-UORFEN WATER, FLTRD, GF 0.7U REC (UG/L) (49315)	ALA-CHLOR, WATER, DISS, REC, (UG/L) (46342)	ALDI-CARB, WATER, FLTRD, GF 0.7U REC (UG/L) (49312)	ALDI-CARB SULFONE WAT,FLT GF 0.7U REC (UG/L) (49313)	ALDICA-RB SUL-FOXIDE, WAT,FLT GF 0.7U REC (UG/L) (49314)	ALPHA BHC DIS-SOLVED (UG/L) (34253)
NOV												
05...	--	--	--	--	--	--	--	--	--	--	--	--
FEB												
08...	--	--	--	--	--	--	--	--	--	--	--	--
MAY												
16...	<.100	<.0030	<.0600	<.110	<.420	<.0020	<.0900	<.002	<.210	<.100	<.200	<.0020

DATE	ATRA-ZINE, WATER, DISS, REC (UG/L) (39632)	METHYL AZIN-PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)	BEN-FLUR-ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)	BENTA-ZON, WATER, FLTRD, GF 0.7U REC (UG/L) (38711)	BRO-MACIL, WATER, DISS, REC (UG/L) (04029)	BRO-MOXYNIL WATER, FLTRD, GF 0.7U REC (UG/L) (49311)	BUTYL-ATE, WATER, DISS, REC (UG/L) (04028)	CAR-BARYL, WATER, FLTRD, GF 0.7U REC (UG/L) (49310)	CAR-BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBO-FURAN, WATER, FLTRD, GF 0.7U REC (UG/L) (49309)	CARBO-FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	TOTAL TRI-THION (UG/L) (39786)
NOV												
05...	--	--	--	--	--	--	--	--	--	--	--	<.014
FEB												
08...	--	--	--	--	--	--	--	--	--	--	--	<.014
MAY												
16...	.032	<.0010	<.0020	<.0350	<.0600	<.0400	<.0020	<.0700	<.0030	<.290	<.0030	--

DATE	CHLORO-THALO-NIL, WAT,FLT GF 0.7U REC (UG/L) (49306)	CHLOR-PYRIFOS TOTAL RECOVER (UG/L) (38932)	CHLOR-PYRIFOS DIS-SOLVED (UG/L) (38933)	PER-METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	CLOPYR-ALID, WATER, FLTRD, GF 0.7U REC (UG/L) (49305)	CYANA-ZINE, WATER, DISS, REC (UG/L) (04041)	DACTHAL MONO-ACID, WAT,FLT GF 0.7U REC (UG/L) (49304)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	DEETHYL ATRA-ZINE, WATER, DISS, REC (UG/L) (04040)	DI-AZINON, TOTAL (UG/L) (39570)	DI-AZINON, DIS-SOLVED (UG/L) (39572)	DICAMBA WATER, FLTRD, GF 0.7U REC (UG/L) (38442)
NOV												
05...	--	<.014	--	--	--	--	--	--	--	<.020	--	--
FEB												
08...	--	<.014	--	--	--	--	--	--	--	<.020	--	--
MAY												
16...	<.480	--	<.0040	<.0050	<.230	<.0040	<.0390	<.0020	E.0121	--	.005	<.0430

DATE	DICHLO-BENIL, WATER, FLTRD, GF 0.7U REC (UG/L) (49303)	DICHLOR PROP, WATER, FLTRD, GF 0.7U REC (UG/L) (49302)	DI-ELDRIN DIS-SOLVED (UG/L) (39381)	DINOSEB WATER, FLTRD, GF 0.7U REC (UG/L) (49301)	DISUL-FOTON UNFILT RECOVER (UG/L) (39011)	DISUL-FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	DIURON, WATER, FLTRD, GF 0.7U REC (UG/L) (49300)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	ETHAL-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)	ETHION, TOTAL (UG/L) (39398)	ETHO-PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	FEN-URON, WATER, FLTRD, GF 0.7U REC (UG/L) (49297)
NOV												
05...	--	--	--	--	<.033	--	--	--	--	<.013	--	--
FEB												
08...	--	--	--	--	<.033	--	--	--	--	<.013	--	--
MAY												
16...	<.0700	<.0320	<.001	<.0600	--	<.0170	<.0600	<.0020	<.0040	--	<.0030	<.0700

DATE	FLUO-METURON WATER, FLTRD, GF 0.7U REC (UG/L) (38811)	FONOFOS WATER DISS REC (UG/L) (04095)	FONOFOS (DY-FONATE) WATER WHOLE TOT.REC (UG/L) (82614)	LINDANE DIS-SOLVED (UG/L) (39341)	LINURON WATER, FLTRD, GF 0.7U REC (UG/L) (38478)	LIN-URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA-THION, TOTAL (UG/L) (39530)	MALA-THION, DIS-SOLVED (UG/L) (39532)	MCPA, WATER, FLTRD, GF 0.7U REC (UG/L) (38482)	MCPB, WATER, FLTRD, GF 0.7U REC (UG/L) (38487)	METHIO-CARB, WATER, FLTRD, GF 0.7U REC (UG/L) (38501)	METH-OMYL, WATER, FLTRD, GF 0.7U REC (UG/L) (49296)
NOV												
05...	--	--	<.013	--	--	--	<.029	--	--	--	--	--
FEB												
08...	--	--	<.013	--	--	--	<.029	--	--	--	--	--
MAY												
16...	<.0600	<.0030	--	<.004	<.0900	<.0020	--	<.005	<.170	<.130	<.0260	<1.02

08206600 FRIO RIVER AT TILDEN, TX--Continued

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

DATE	METO-LACHLOR WATER DISSOLV (UG/L) (39415)	METRI-BUZIN SENCOR WATER DISSOLV (UG/L) (82630)	MOL-INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPROP-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	NEB-URON, WATER, FLTRD, GF 0.7U REC (UG/L) (49294)	NORFLUR AZON, WATER, FLTRD, GF 0.7U REC (UG/L) (49293)	ORY-ZALIN, WATER, FLTRD, GF 0.7U REC (UG/L) (49292)	OXAMYL, WATER, FLTRD, GF 0.7U REC (UG/L) (38866)	P,P' DDE DISSOLV (UG/L) (34653)	PARA-THION, TOTAL (UG/L) (39540)	PARA-THION, DIS-SOLVED (UG/L) (39542)	METHYL PARA-THION, TOTAL (UG/L) (39600)
NOV												
05...	--	--	--	--	--	--	--	--	--	<.012	--	<.015
FEB												
08...	--	--	--	--	--	--	--	--	--	<.012	--	<.015
MAY												
16...	.019	<.004	.0042	<.0030	<.0700	<.0420	<.310	<.0180	<.0060	--	<.004	--

DATE	METHYL PARA-THION WAT FLT 0.7 U GF, REC (UG/L) (82667)	PEB-ULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	PENDI-METH-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PHORATE TOTAL (UG/L) (39023)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PIC-LORAM, WATER, FLTRD, GF 0.7U REC (UG/L) (49291)	PRO-METON, WATER, DISS, REC (UG/L) (04037)	PROP-CHLOR, WATER, DISS, REC (UG/L) (04024)	PRO-PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	PRO-PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	PRO-PHAM, WATER, FLTRD, GF 0.7U REC (UG/L) (49236)
NOV											
05...	--	--	--	<.019	--	--	--	--	--	--	--
FEB											
08...	--	--	--	<.019	--	--	--	--	--	--	--
MAY											
16...	<.0060	<.0040	<.0040	--	<.0020	<.0500	<.0180	<.0070	<.0040	<.0130	<.0350

DATE	PRO-POXUR, WATER, FLTRD, GF 0.7U REC (UG/L) (38538)	PRON-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	DEF TOTAL (UG/L) (39040)	SI-MAZINE, WATER, DISS, REC (UG/L) (04035)	TEBU-THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER-BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TER-BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	THIO-BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL-LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI-CLOPYR, WATER, FLTRD, GF 0.7U REC (UG/L) (49235)	TRI-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)
NOV											
05...	--	--	<.020	--	--	--	--	--	--	--	--
FEB											
08...	--	--	<.020	--	--	--	--	--	--	--	--
MAY											
16...	<.0800	<.0030	--	<.0050	<.0100	<.0070	<.0130	<.0020	<.0010	<.250	<.0020

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08206700 SAN MIGUEL CREEK NEAR TILDEN, TX

LOCATION.--Lat 28°35′14", long 98°32′44", McMullen County, Hydrologic Unit 12110109, on left bank 25 ft downstream from State Highway 16, 0.3 mi upstream from mouth of Bruce Branch, 0.9 mi downstream from mouth of Far Live Oak Creek, 3 mi upstream from San Patricio Creek, 7 mi downstream from Clear Creek, 8.7 mi north of Tilden, and 12.9 mi upstream from mouth.

DRAINAGE AREA.--783 mi^2.

PERIOD OF RECORD.--Jan 1964 to current year.
Water-quality records.--Chemical data: Jul 1978 to Sep 1984. Biochemical data: Jul 1978 to Sep 1984.

REVISED RECORDS.--WDR TX-83-3: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 242.95 ft above sea level. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. No known regulation. There are five diversions above station, but amounts are unknown. At times, water from Bexar-Medina-Atascosa Counties Water Improvement District No. 1 system enters San Miguel Creek basin via Chacon Creek 52 mi upstream (amounts unknown). No flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1919, 32.6 ft in 1942; stage of 1919 flood not known, from information by local residents.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 900 ft^3/s:

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)

No peak greater than base discharge.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

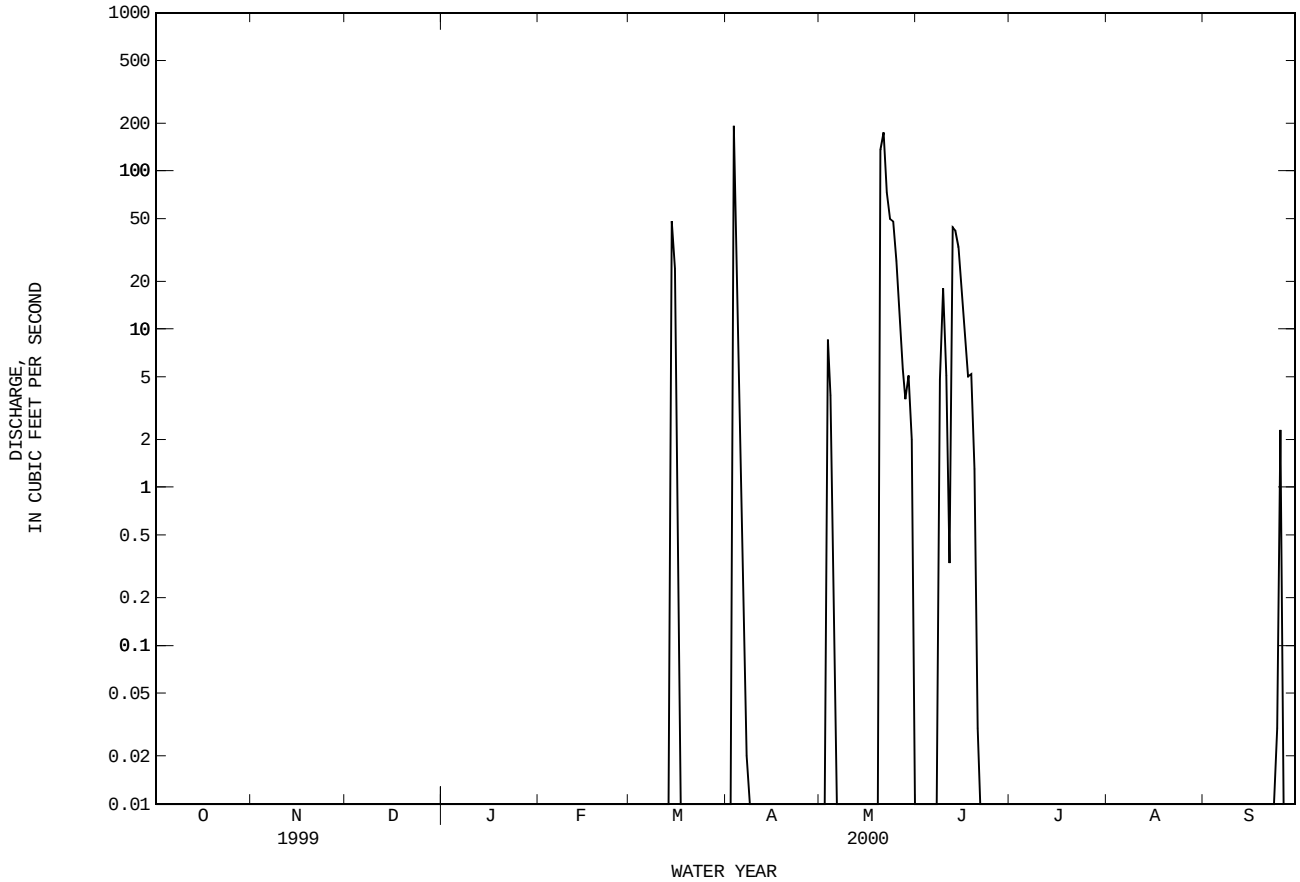
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	192	8.6	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	20	3.8	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	4.1	.37	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.59	.01	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.02	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	4.8	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	18	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	5.1	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.33	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	44	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	42	.00	.00	.00
14	.00	.00	.00	.00	.00	48	.00	.00	33	.00	.00	.00
15	.00	.00	.00	.00	.00	24	.00	.00	18	.00	.00	.00
16	.00	.00	.00	.00	.00	.67	.00	.00	9.8	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	5.0	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	5.2	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	1.3	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	137	.03	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	175	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	73	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	50	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	48	.00	.00	.00	.03
25	.00	.00	.00	.00	.00	.00	.00	27	.00	.00	.00	2.3
26	.00	.00	.00	.00	.00	.00	.00	12	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	5.6	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	3.6	.00	.00	.00	.00
29	.00	.00	.00	.00	.00	.00	.00	5.1	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	2.0	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	0.00	0.00	0.00	72.67	216.71	551.08	186.56	0.00	0.00	2.33
MEAN	.000	.000	.000	.000	.000	2.34	7.22	17.8	6.22	.000	.000	.078
MAX	.00	.00	.00	.00	.00	48	192	175	44	.00	.00	2.3
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	144	430	1090	370	.00	.00	4.6

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 2000, BY WATER YEAR (WY)

MEAN	68.5	20.2	16.3	26.2	24.2	9.84	55.7	119	99.8	37.0	51.7	84.4
MAX	486	286	226	641	352	78.0	1065	900	690	748	741	1233
(WY)	1982	1993	1987	1968	1992	1992	1977	1980	1987	1990	1980	1967
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1980	1995	1989	1989	1995	1996	1996	1971	1967	1996	1991	1999

08206700 SAN MIGUEL CREEK NEAR TILDEN, TX--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1964 - 2000	
ANNUAL TOTAL	1931.65		1029.35			
ANNUAL MEAN	5.29		2.81		52.0	
HIGHEST ANNUAL MEAN					161	1968
LOWEST ANNUAL MEAN					2.43	1984
HIGHEST DAILY MEAN	197	Mar 28	192	Apr 3	16700	May 16 1980
LOWEST DAILY MEAN	.00	May 30	.00	Oct 1	.00	Feb 1 1964
ANNUAL SEVEN-DAY MINIMUM	.00	May 30	.00	Oct 1	.00	Feb 7 1964
INSTANTANEOUS PEAK FLOW			467	Apr 3	20600	May 16 1980
INSTANTANEOUS PEAK STAGE			8.26	Apr 3	27.31	May 16 1980
ANNUAL RUNOFF (AC-FT)	3830		2040		37700	
10 PERCENT EXCEEDS	8.5		.02		35	
50 PERCENT EXCEEDS	.00		.00		1.8	
90 PERCENT EXCEEDS	.00		.00		.00	



08206900 CHOKE CANYON RESERVOIR NEAR THREE RIVERS, TX

LOCATION.--Lat 28°29′01", long 98°14′44", Live Oak County, Hydrologic Unit 12110108, at Choke Canyon Dam on Frio River, 3.9 mi upstream from Atascosa River, and 4.0 mi west of Three Rivers.

DRAINAGE AREA.--5,490 mi^2.

WATER-CONTENT RECORDS

PERIOD OF RECORD.--Oct 1984 to current year.

GAGE.--Water-stage recorder. Datum of gage is sea level. Satellite telemeter at station.

REMARKS.--No estimated daily contents. Records good. The reservoir is formed by a rolled earthfill dam, 3.5 mi long. The dam was completed and deliberate impoundment began on Oct 12, 1982. The spillway has seven radial gates, each 50 ft long and 24 ft high. Water for municipal and industrial use to meet the needs of the Coastal Bend area is released downstream through a 5.0- x 5.0-foot square slide gate. Conservation pool storage is 695,271 acre-ft. Data regarding the dam are given in the following table:

	Elevation (feet)
Top of dam	241.1
Top of spillway gates	222.5
Crest of spillway	199.5
Lowest gated outlet (invert)	136.3

COOPERATION.--Capacity table computed Jun 1, 1983, provided by the city of Corpus Christi. Prior to Oct 1, 1999, elevation and reservoir contents record provided by the city of Corpus Christi.

EXTREMES (AT 0600 HOURS) FOR PERIOD OF RECORD.--Maximum daily contents, 733,100 acre-ft Jun 21, 1987, elevation, 222.1 ft; minimum daily, 4,500 acre-ft Oct 1-9, 1984, elevation, 156.9 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 325,000 acre-ft, Oct 5, elevation, 203.02 ft; minimum contents, 239,000 acre-ft, Sep 23, elevation, 197.33 ft.

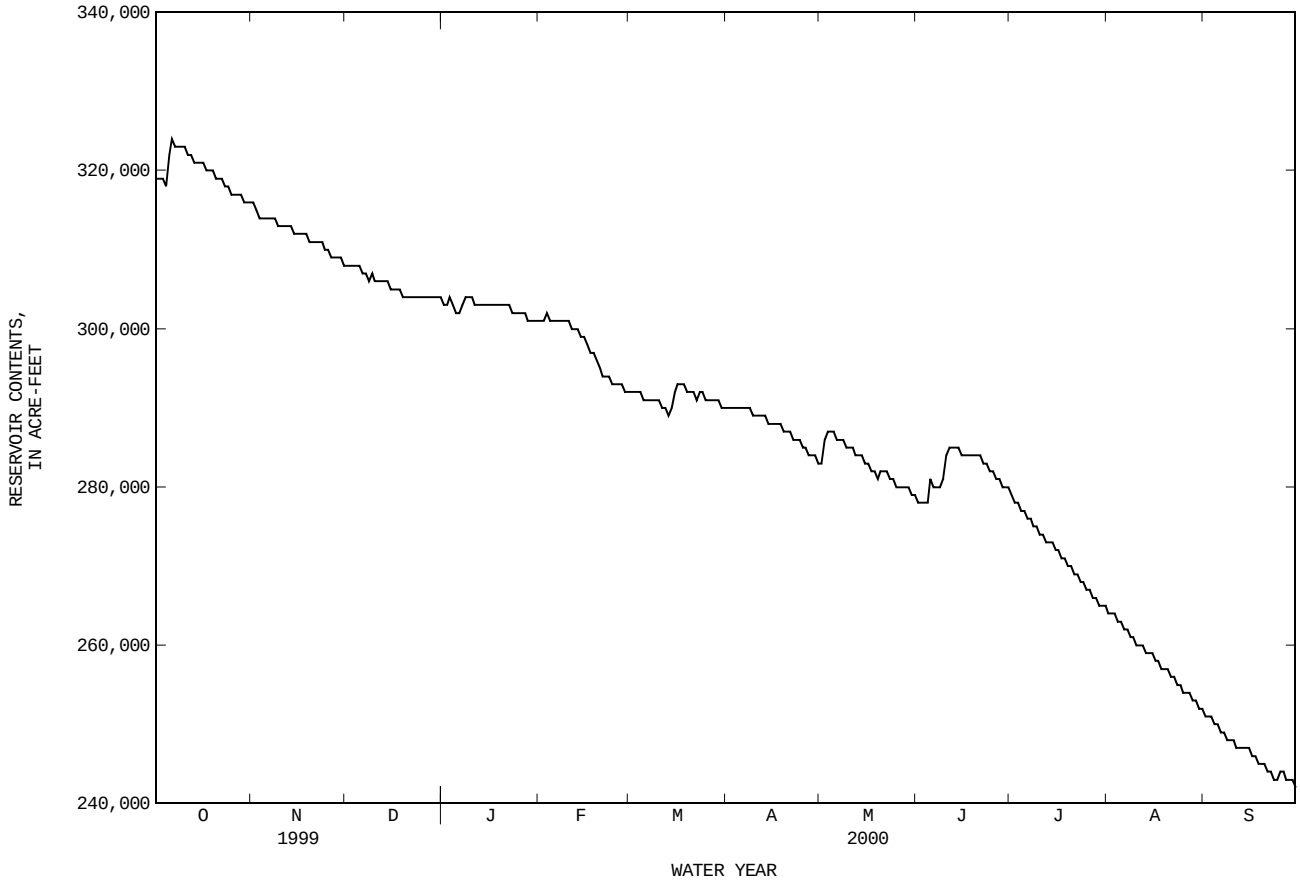
RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	319000	316000	308000	303000	301000	292000	290000	283000	278000	279000	264000	251000
2	319000	315000	308000	303000	301000	292000	290000	286000	278000	278000	264000	251000
3	319000	314000	308000	304000	302000	292000	290000	287000	278000	278000	264000	251000
4	318000	314000	308000	303000	301000	292000	290000	287000	278000	277000	263000	250000
5	322000	314000	308000	302000	301000	291000	290000	287000	281000	277000	263000	250000
6	324000	314000	307000	302000	301000	291000	290000	286000	280000	276000	262000	249000
7	323000	314000	307000	303000	301000	291000	290000	286000	280000	276000	262000	249000
8	323000	314000	306000	304000	301000	291000	290000	286000	280000	275000	261000	248000
9	323000	313000	307000	304000	301000	291000	289000	285000	281000	275000	261000	248000
10	323000	313000	306000	304000	301000	291000	289000	285000	284000	274000	260000	248000
11	322000	313000	306000	303000	300000	290000	289000	285000	285000	274000	260000	247000
12	322000	313000	306000	303000	300000	290000	289000	284000	285000	273000	260000	247000
13	321000	313000	306000	303000	300000	289000	289000	284000	285000	273000	259000	247000
14	321000	312000	306000	303000	299000	290000	288000	284000	285000	273000	259000	247000
15	321000	312000	305000	303000	299000	292000	288000	283000	284000	272000	259000	247000
16	321000	312000	305000	303000	298000	293000	288000	283000	284000	272000	258000	246000
17	320000	312000	305000	303000	297000	293000	288000	282000	284000	271000	258000	246000
18	320000	312000	305000	303000	297000	293000	288000	282000	284000	271000	257000	245000
19	320000	311000	304000	303000	296000	292000	287000	281000	284000	270000	257000	245000
20	319000	311000	304000	303000	295000	292000	287000	282000	284000	270000	257000	245000
21	319000	311000	304000	303000	294000	292000	287000	282000	284000	269000	256000	244000
22	319000	311000	304000	303000	294000	291000	286000	282000	283000	269000	256000	244000
23	318000	311000	304000	302000	294000	292000	286000	281000	283000	268000	255000	243000
24	318000	310000	304000	302000	293000	292000	286000	281000	282000	268000	255000	243000
25	317000	310000	304000	302000	293000	291000	285000	280000	282000	267000	254000	244000
26	317000	309000	304000	302000	293000	291000	285000	280000	281000	267000	254000	244000
27	317000	309000	304000	302000	293000	291000	284000	280000	281000	266000	254000	243000
28	317000	309000	304000	301000	292000	291000	284000	280000	280000	266000	253000	243000
29	316000	309000	304000	301000	292000	291000	284000	280000	280000	265000	253000	243000
30	316000	308000	304000	301000	---	290000	283000	279000	280000	265000	252000	242000
31	316000	---	304000	301000	---	290000	---	279000	---	265000	252000	---
MAX	324000	316000	308000	304000	302000	293000	290000	287000	285000	279000	264000	251000
MIN	316000	308000	304000	301000	292000	289000	283000	279000	278000	265000	252000	242000
(+)	202.5	202.0	201.7	201.5	201.0	200.8	200.4	200.1	200.2	199.2	198.3	197.6
(@)	-3900	-8000	-4000	-3000	-9000	-2000	-7000	-4000	+1000	-15000	-13000	-10000

CAL YR 1999 MAX 361900 MIN 304000 (@) -57900
WTR YR 2000 MAX 324000 MIN 242000 (@) -77900

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

08206900 CHOKE CANYON RESERVOIR NEAR THREE RIVERS, TX--Continued



08206900 CHOKE CANYON RESERVOIR NEAR THREE RIVERS, TX

WATER-QUALITY RECORDS

PERIOD OF RECORD.--
CHEMICAL DATA: Mar 1999 to current year.
PESTICIDE DATA: Mar 1999 to current year.

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

08206890 - Choke Canyon Res Site AC

DATE	TIME	RESER-VOIR STORAGE (AC-FT) (00054)	SAM-PLING DEPTH (FEET) (00003)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	TRANS-PAR-ENCY (SECCHI DISK) (M) (00078)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)
FEB												
08...	0843	301000	1.00	791	8.2	13.0	9.19	8.8	83	190	50	51
08...	0845	--	5.00	791	8.2	13.0	--	8.8	83	--	--	--
08...	0847	--	12.0	791	8.2	13.0	--	8.7	82	--	--	--
08...	0849	--	19.0	791	8.2	13.0	--	8.6	81	--	--	--
08...	0851	--	26.0	791	8.1	13.0	--	8.4	79	--	--	--
08...	0853	--	33.0	791	8.1	13.0	--	8.3	78	--	--	--
08...	0855	--	40.0	791	8.1	13.0	--	8.3	78	--	--	--
08...	0857	--	47.0	791	8.1	13.0	--	8.2	77	--	--	--
08...	0859	--	53.0	791	8.1	13.0	--	8.3	78	--	--	--
08...	0901	--	60.0	792	8.0	13.0	--	8.2	77	--	--	--
08...	0903	--	67.0	794	7.9	13.0	--	8.4	79	190	48	52
MAY												
09...	0805	285000	3.00	839	8.4	25.5	6.56	8.2	102	210	56	58
09...	0807	--	7.00	839	8.4	25.5	--	8.0	99	--	--	--
09...	0809	--	14.0	839	8.3	25.0	--	7.6	94	--	--	--
09...	0811	--	21.0	841	8.2	25.0	--	7.3	90	--	--	--
09...	0813	--	28.0	840	8.2	24.5	--	7.1	87	--	--	--
09...	0815	--	35.0	841	8.2	24.5	--	6.4	78	--	--	--
09...	0817	--	42.0	843	8.0	24.0	--	5.3	64	--	--	--
09...	0819	--	49.0	844	7.6	23.0	--	2.9	34	--	--	--
09...	0821	--	56.0	843	7.5	22.5	--	2.6	31	--	--	--
09...	0823	--	63.0	848	7.4	22.0	--	5.0	58	210	46	57
09...	0825	--	66.0	--	--	--	--	--	--	--	--	--
AUG												
08...	0750	261000	1.00	861	8.3	28.5	8.86	7.5	98	200	53	55
08...	0752	--	10.0	864	8.1	28.0	--	6.3	81	--	--	--
08...	0754	--	20.0	863	8.1	28.0	--	6.4	83	--	--	--
08...	0756	--	30.0	865	8.0	28.0	--	5.6	72	--	--	--
08...	0758	--	40.0	865	7.9	28.0	--	4.7	61	--	--	--
08...	0800	--	50.0	867	7.8	28.0	--	4.8	62	--	--	--
08...	0802	--	63.0	866	7.8	27.5	--	4.2	54	200	49	54

08206890 - Choke Canyon Res Site AC

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	SODIUM PERCENT (00932)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	CAR-BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	ALKA-LINITY WAT DIS FIX END FIELD CAC03 (MG/L) (39036)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)
FEB												
08...	14	79	3	46	13	--	--	--	140	64	120	.20
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08...	14	78	2	46	11	--	--	--	140	64	120	.20
MAY												
09...	15	85	3	45	12	0	186	152	--	71	130	.23
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09...	15	84	3	45	12	0	194	159	--	69	120	.20
09...	--	--	--	--	--	--	--	--	--	--	--	--
AUG												
08...	16	83	3	46	12	6	169	148	--	71	130	.24
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08...	16	88	3	47	12	0	184	151	--	71	130	.23

08206900 CHOKE CANYON RESERVOIR NEAR THREE RIVERS, TX--Continued

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

08206890 - Choke Canyon Res Site AC

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	OIL AND GREASE, TOTAL RECOV. GRAVI-METRIC (MG/L) (00556)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)	ANTI-MONY, DIS-SOLVED (UG/L AS SB) (01095)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE) (01010)	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030)	COBALT, DIS-SOLVED (UG/L AS CO) (01035)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)
FEB												
08...	19	440	--	<1.0	<1.0	5	111	<1.0	<1.0	<.80	<1.0	1.8
08...	--	--	--	--	--	--	--	--	--	--	--	--
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08...	19	439	--	<1.0	<1.0	6	109	<1.0	<1.0	<.80	<1.0	1.9
MAY												
09...	19	479	<1	14	<1.0	5	112	<1.0	<1.0	<.80	<1.0	2.4
09...	--	--	--	--	--	--	--	--	--	--	--	--
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09...	21	478	--	11	<1.0	6	120	<1.0	<1.0	<.80	<1.0	2.7
09...	--	--	--	--	--	--	--	--	--	--	--	--
AUG												
08...	19	477	--	<1.0	<1.0	7	107	<1.0	<1.0	<.80	<1.0	3.1
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08...	20	483	--	<1.0	<1.0	7	107	<1.0	<1.0	<.80	<1.0	2.5

08206890 - Choke Canyon Res Site AC

DATE	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	LITHIUM DIS-SOLVED (UG/L AS LI) (01130)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MERCURY DIS-SOLVED (UG/L AS HG) (71890)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060)	NICKEL, DIS-SOLVED (UG/L AS NI) (01065)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)	STRON-TIUM, DIS-SOLVED (UG/L AS SR) (01080)	VANA-DIUM, DIS-SOLVED (UG/L AS V) (01085)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)
FEB												
08...	<10	<1.0	18	<1.0	<.2	2.2	1.4	<2	<1.0	391	E7	1.7
08...	--	--	--	--	--	--	--	--	--	--	--	--
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08...	<10	<1.0	18	<1.0	<.2	2.1	1.4	<2	<1.0	395	E6	1.7
MAY												
09...	<10	<1.0	20	<1.0	<.2	2.0	1.2	<2	<1.0	427	E7	4.0
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09...	<10	<1.0	20	423	<.2	2.0	1.6	<2	<1.0	422	<10	--
09...	--	--	--	--	--	--	--	--	--	--	--	--
AUG												
08...	<10	<1.0	19	<1.0	<.2	2.5	1.5	<2	<1.0	434	<10	2.1
08...	--	--	--	--	--	--	--	--	--	--	--	--
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08...	<10	<1.0	19	40	<.2	2.5	1.5	<2	<1.0	432	E6	4.9

08206900 CHOKE CANYON RESERVOIR NEAR THREE RIVERS, TX--Continued

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

08206890 - Choke Canyon Res Site AC

DATE	URANIUM NATURAL DIS-SOLVED (UG/L AS U) (22703)	2,4,5-T DIS-SOLVED (UG/L) (39742)	2,4-D, DIS-SOLVED (UG/L) (39732)	2,4-DB WATER, FLTRD, GF 0.7U REC (UG/L) (38746)	2,6-DI-ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	SILVEX, DIS-SOLVED (UG/L) (39762)	3HYDRXY CARBO-FURAN WAT,FLT GF 0.7U REC (UG/L) (49308)	DNOC WAT,FLT GF 0.7U REC (UG/L) (49299)	ACETO-CHLOR, WATER FLTRD REC (UG/L) (49260)	ACIFL-UORFEN WATER, FLTRD, GF 0.7U REC (UG/L) (49315)	ALA-CHLOR, WATER, DISS, REC, (UG/L) (46342)	ALDI-CARB, WATER, FLTRD, GF 0.7U REC (UG/L) (49312)
FEB												
08...	<1.0	<.0400	<.110	<.100	<.0030	<.0600	<.170	<.420	<.0020	<.0900	<.002	<.210
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08...	<1.0	--	--	--	--	--	--	--	--	--	--	--
MAY												
09...	<1.0	<.0400	<.110	<.100	--	<.0600	<.110	<.420	--	<.0900	--	<.620
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09...	<1.0	--	--	--	--	--	--	--	--	--	--	--
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AUG												
08...	<1.0	--	--	--	<.0030	--	--	--	<.0020	--	<.002	--
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08...	<1.0	--	--	--	--	--	--	--	--	--	--	--

08206890 - Choke Canyon Res Site AC

DATE	ALDI-CARB SULFONE WAT,FLT GF 0.7U REC (UG/L) (49313)	ALDICA-RB SUL-FOXIDE, WAT,FLT GF 0.7U REC (UG/L) (49314)	ALPHA BHC DIS-SOLVED (UG/L) (34253)	ATRA-ZINE, WATER, DISS, REC (UG/L) (39632)	METHYL AZIN-PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)	BEN-FLUR-ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)	BENTA-ZON, WATER, FLTRD, GF 0.7U REC (UG/L) (38711)	BRO-MACIL, WATER, DISS, REC (UG/L) (04029)	BRO-MOXYNIL WATER, FLTRD, GF 0.7U REC (UG/L) (49311)	BUTYL-ATE, WATER, DISS, REC (UG/L) (04028)	CAR-BARYL, WATER, FLTRD, GF 0.7U REC (UG/L) (49310)	CAR-BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)
FEB												
08...	<.100	<.0210	<.0020	.035	<.0010	<.0020	<.0350	<.130	<.0400	<.0020	<.0700	<.0030
08...	--	--	--	--	--	--	--	--	--	--	--	--
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MAY												
09...	<.100	<.0210	--	--	--	--	<.0350	<.230	<.0400	--	E.0294	--
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AUG												
08...	--	--	<.0020	.038	<.0010	<.0020	--	--	--	<.0020	--	<.0030
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08206900 CHOKE CANYON RESERVOIR NEAR THREE RIVERS, TX--Continued

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

08206890 - Choke Canyon Res Site AC

DATE	CARBO-FURAN, WATER, FLTRD, GF 0.7U REC (UG/L) (49309)	CARBO-FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	TRI-THION, TOTAL IN BOT-TOM MA-TERIAL (UG/KG) (39787)	CHLORO-THALO-NIL, WAT,FLT GF 0.7U REC (UG/L) (49306)	CHLOR-PYRIFOS DIS-SOLVED (UG/L) (38933)	PER-METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	CLOPYR-ALID, WATER, FLTRD, GF 0.7U REC (UG/L) (49305)	CYANA-ZINE, WATER, DISS, REC (UG/L) (04041)	DACTHAL MONO-ACID, WAT,FLT GF 0.7U REC (UG/L) (49304)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	DEETHYL ATRA-ZINE, WATER, DISS, REC (UG/L) (04040)	DI-AZINON, TOTAL IN BOT-TOM MA-TERIAL (UG/KG) (39571)
FEB												
08...	<.290	<.0030	--	<.480	<.0040	<.0050	<.230	<.0040	<.0390	<.0020	E.0152	--
08...	--	--	--	--	--	--	--	--	--	--	--	--
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08...	--	--	--	--	--	--	--	--	--	--	--	--
MAY												
09...	<.290	--	--	<.480	--	--	<.230	--	<.0390	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--	--
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09...	--	--	<.400	--	--	--	--	--	--	--	--	<.400
AUG												
08...	--	<.0030	--	--	<.0040	<.0050	--	<.0040	--	<.0020	E.0158	--
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08206890 - Choke Canyon Res Site AC

DATE	DI-AZINON, DIS-SOLVED (UG/L) (39572)	DICAMBA WATER, FLTRD, GF 0.7U REC (UG/L) (38442)	DICHLO-BENIL, WATER, FLTRD, GF 0.7U REC (UG/L) (49303)	DICHLOR PROP, WATER, FLTRD, GF 0.7U REC (UG/L) (49302)	DI-ELDRIN DIS-SOLVED (UG/L) (39381)	DINOSEB WATER, FLTRD, GF 0.7U REC (UG/L) (49301)	DISUL-FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	DIURON, WATER, FLTRD, GF 0.7U REC (UG/L) (49300)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	ETHAL-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)	ETHION, TOTAL IN BOT-TOM MA-TERIAL (UG/KG) (39399)	ETHO-PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)
FEB												
08...	<.002	<.0430	<.0700	<.0320	<.001	<.0600	<.0170	<.0600	<.0020	<.0040	--	<.0030
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MAY												
09...	--	<.0430	<.0700	<.0320	--	<.0600	--	<.0600	--	--	--	--
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AUG												
08...	<.002	--	--	--	<.001	--	<.0170	--	<.0020	<.0040	--	<.0030
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08206900 CHOKE CANYON RESERVOIR NEAR THREE RIVERS, TX--Continued

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

08206890 - Choke Canyon Res Site AC

DATE	FEN-URON, WATER, FLTRD, GF 0.7U REC (UG/L) (49297)	FLUO-METURON WATER, FLTRD, GF 0.7U REC (UG/L) (38811)	FONOFOS WATER DISS REC (UG/L) (04095)	LINDANE DIS-SOLVED (UG/L) (39341)	LINURON WATER, FLTRD, GF 0.7U REC (UG/L) (38478)	LIN-URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA-THION, TOTAL IN BOT-TOM MA-TERIAL (UG/KG) (39531)	MALA-THION, DIS-SOLVED (UG/L) (39532)	MCPA, WATER, FLTRD, GF 0.7U REC (UG/L) (38482)	MCPB, WATER, FLTRD, GF 0.7U REC (UG/L) (38487)	METHIO-CARB, WATER, FLTRD, GF 0.7U REC (UG/L) (38501)
FEB											
08...	<.0700	<.0600	<.0030	<.004	<.0900	<.0020	--	<.005	<.170	<.130	<.0260
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MAY											
09...	<.0700	<.0600	--	--	<.0900	--	--	--	<.170	<.130	<.0260
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08206890 - Choke Canyon Res Site AC

DATE	METH-OMYL, WATER, FLTRD, GF 0.7U REC (UG/L) (49296)	METO-LACHLOR WATER DISSOLV (UG/L) (39415)	METRI-BUZIN SENCOR WATER DISSOLV (UG/L) (82630)	MOL-INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPROP-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	NEB-URON, WATER, FLTRD, GF 0.7U REC (UG/L) (49294)	NORFLUR AZON, WATER, FLTRD, GF 0.7U REC (UG/L) (49293)	ORY-ZALIN, WATER, FLTRD, GF 0.7U REC (UG/L) (49292)	OXAMYL, WATER, FLTRD, GF 0.7U REC (UG/L) (38866)	P,P' DDE DISSOLV (UG/L) (34653)	PARA-THION, TOTAL IN BOT-TOM MA-TERIAL (UG/KG) (39541)
FEB											
08...	<.0170	E.004	<.004	<.0040	<.0030	<.0700	<.0420	<.310	<.0180	<.0060	--
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MAY											
09...	<.220	--	--	--	--	<.0700	<.0420	<.310	<.130	--	--
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08206900 CHOKE CANYON RESERVOIR NEAR THREE RIVERS, TX--Continued

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

08206890 - Choke Canyon Res Site AC

DATE	PARA-THION, DIS-SOLVED (UG/L) (39542)	METHYL PARA-THION, TOT. IN BOTTOM MATL. (UG/KG) (39601)	METHYL PARA-THION WAT FLT 0.7 U GF, REC (UG/L) (82667)	PEB-ULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	PENDI-METH-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PIC-LORAM, WATER, FLTRD, GF 0.7U REC (UG/L) (49291)	PRO-METON, WATER, DISS, REC (UG/L) (04037)	PROP-CHLOR, WATER, DISS, REC (UG/L) (04024)	PRO-PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	PRO-PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)
FEB											
08...	<.004	--	<.0060	<.0040	<.0040	<.0020	<.0500	<.0180	<.0070	<.0040	<.0130
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AUG											
08...	<.004	--	<.0060	<.0040	<.0040	<.0020	--	<.0180	<.0070	<.0040	<.0130
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08206890 - Choke Canyon Res Site AC

DATE	PRO-PHAM, WATER, FLTRD, GF 0.7U REC (UG/L) (49236)	PRO-POXUR, WATER, FLTRD, GF 0.7U REC (UG/L) (38538)	PRON-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	SI-MAZINE, WATER, DISS, REC (UG/L) (04035)	TEBU-THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER-BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TER-BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	THIO-BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL-LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI-CLOPYR, WATER, FLTRD, GF 0.7U REC (UG/L) (49235)	TRI-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)
FEB											
08...	<.0350	<.0800	<.0030	<.0050	E.0071	<.0070	<.0130	<.0020	<.0010	<.250	<.0020
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MAY											
09...	<.0350	<.0800	--	--	--	--	--	--	--	<.250	--
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AUG											
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08206900 CHOKE CANYON RESERVOIR NEAR THREE RIVERS, TX--Continued

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

08206880 - Choke Canyon Res Site BC

DATE	TIME	SAMPLING DEPTH (FEET) (00003)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE WATER (DEG C) (00010)	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)
MAY							
09...	0910	1.00	836	8.5	27.0	7.9	101
09...	0912	10.0	835	8.5	27.0	7.8	99
09...	0914	18.0	835	8.5	26.5	7.7	97
AUG							
08...	0840	1.00	860	8.4	29.5	7.8	103
08...	0842	10.0	860	8.4	29.5	7.5	99
08...	0844	19.0	862	8.4	29.5	7.3	97

08206870 - Choke Canyon Res Site CC

DATE	TIME	SAMPLING DEPTH (FEET) (00003)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE WATER (DEG C) (00010)	TRANSPARENCY (SECCHI DISK) (M) (00078)	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)	OIL AND GREASE, TOTAL RECOV. GRAVIMETRIC (MG/L) (00556)	2,4,5-T DISSOLVED (UG/L) (39742)	2,4-D, DISSOLVED (UG/L) (39732)	2,4-DB WATER, FLTRD, GF 0.7U REC (UG/L) (38746)
FEB												
08...	1012	2.00	799	8.5	15.0	6.56	9.7	95	--	<.0400	<.110	<.100
08...	1014	6.00	801	8.4	14.0	--	9.3	89	--	--	--	--
08...	1016	10.0	805	8.2	13.0	--	8.8	83	--	--	--	--
08...	1018	14.0	808	8.1	12.5	--	8.7	81	--	--	--	--
08...	1020	18.0	810	8.1	12.5	--	8.6	80	--	--	--	--
08...	1022	22.0	810	8.1	12.5	--	8.5	79	--	--	--	--
08...	1024	26.0	809	8.0	12.5	--	8.3	77	--	--	--	--
08...	1026	30.0	810	8.0	12.5	--	8.2	76	--	--	--	--
08...	1028	34.0	813	7.9	12.5	--	7.7	72	--	--	--	--
08...	1030	38.0	815	7.9	12.5	--	7.6	71	--	--	--	--
08...	1032	42.0	816	7.9	12.5	--	7.4	69	--	--	--	--
MAY												
09...	0930	3.00	851	8.4	26.0	8.53	7.5	37	<1	<.0400	<.110	<.200
09...	0932	7.00	849	8.4	26.0	--	7.4	93	--	--	--	--
09...	0934	11.0	851	8.4	26.0	--	7.2	90	--	--	--	--
09...	0936	15.0	849	8.4	26.0	--	7.1	89	--	--	--	--
09...	0938	19.0	849	8.4	26.0	--	6.8	85	--	--	--	--
09...	0940	23.0	849	8.4	26.0	--	6.5	81	--	--	--	--
09...	0942	27.0	853	8.3	25.5	--	5.9	73	--	--	--	--
09...	0944	31.0	850	8.1	25.0	--	4.6	57	--	--	--	--
09...	0946	35.0	857	7.8	24.5	--	3.0	37	--	--	--	--
09...	0948	39.0	853	7.9	24.5	--	4.3	52	--	--	--	--
09...	0950	41.0	--	--	--	--	--	--	--	--	--	--
AUG												
08...	0900	1.00	872	8.2	29.0	4.92	6.8	89	--	--	--	--
08...	0902	10.0	873	8.2	29.0	--	6.7	88	--	--	--	--
08...	0904	20.0	873	8.2	29.0	--	6.6	86	--	--	--	--
08...	0906	30.0	874	8.1	28.5	--	6.3	82	--	--	--	--
08...	0908	39.0	875	8.1	28.5	--	6.0	78	--	--	--	--

08206900 CHOKE CANYON RESERVOIR NEAR THREE RIVERS, TX--Continued

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

08206870 - Choke Canyon Res Site CC

DATE	2,6-DI-ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	SILVEX, DIS-SOLVED (UG/L) (39762)	3HYDRXY CARBO-FURAN WAT,FLT GF 0.7U REC (UG/L) (49308)	DNOC WAT,FLT GF 0.7U REC (UG/L) (49299)	ACETO-CHLOR, WATER FLTRD REC (UG/L) (49260)	ACIFL-UORFEN WATER, FLTRD, GF 0.7U REC (UG/L) (49315)	ALA-CHLOR, WATER, DISS, REC, (UG/L) (46342)	ALDI-CARB, WATER, FLTRD, GF 0.7U REC (UG/L) (49312)	ALDI-CARB SULFONE WAT,FLT GF 0.7U REC (UG/L) (49313)	ALDICA-RB SUL-FOXIDE, WAT,FLT GF 0.7U REC (UG/L) (49314)	ALPHA BHC DIS-SOLVED (UG/L) (34253)
FEB											
08...	<.0030	<.0600	<.110	<.420	<.0020	<.0900	<.002	<.280	<.100	<.0210	<.0020
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09...	<.0030	<.0600	<.110	<.420	<.0020	<.0900	<.002	<.470	<.100	<.0210	<.0020
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08206870 - Choke Canyon Res Site CC

DATE	ATRA-ZINE, WATER, DISS, REC (UG/L) (39632)	METHYL AZIN-PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)	BEN-FLUR-ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)	BENTA-ZON, WATER, FLTRD, GF 0.7U REC (UG/L) (38711)	BRO-MACIL, WATER, DISS, REC (UG/L) (04029)	BRO-MOXYNIL WATER, FLTRD, GF 0.7U REC (UG/L) (49311)	BUTYL-ATE, WATER, DISS, REC (UG/L) (04028)	CAR-BARYL, WATER, FLTRD, GF 0.7U REC (UG/L) (49310)	CAR-BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBO-FURAN, WATER, FLTRD, GF 0.7U REC (UG/L) (49309)	CARBO-FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)
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08...	.032	<.0010	<.0020	<.0350	<.130	<.0400	<.0020	<.0700	<.0030	<.290	<.0030
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MAY											
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08206900 CHOKE CANYON RESERVOIR NEAR THREE RIVERS, TX--Continued

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

08206870 - Choke Canyon Res Site CC

DATE	TRI-THION, TOTAL IN BOT-TOM MA-TERIAL (UG/KG) (39787)	CHLORO-THALO-NIL, WAT,FLT GF 0.7U REC (UG/L) (49306)	CHLOR-PYRIFOS DIS-SOLVED (UG/L) (38933)	PER-METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	CLOPYR-ALID, WATER, FLTRD, GF 0.7U REC (UG/L) (49305)	CYANA-ZINE, WATER, DISS, REC (UG/L) (04041)	DACTHAL MONO-ACID, WAT,FLT GF 0.7U REC (UG/L) (49304)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	DEETHYL ATRA-ZINE, WATER, DISS, REC (UG/L) (04040)	DI-AZINON, TOTAL IN BOT-TOM MA-TERIAL (UG/KG) (39571)	DI-AZINON, DIS-SOLVED (UG/L) (39572)
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08...	--	<.480	<.0040	<.0050	<.230	<.0040	<.0390	<.0020	E.0139	--	<.002
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08206870 - Choke Canyon Res Site CC

DATE	DICAMBA WATER, FLTRD, GF 0.7U REC (UG/L) (38442)	DICHLO-BENIL, WATER, FLTRD, GF 0.7U REC (UG/L) (49303)	DICHLOR PROP, WATER, FLTRD, GF 0.7U REC (UG/L) (49302)	DI-ELDRIN DIS-SOLVED (UG/L) (39381)	DINOSEB WATER, FLTRD, GF 0.7U REC (UG/L) (49301)	DISUL-FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	DIURON, WATER, FLTRD, GF 0.7U REC (UG/L) (49300)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	ETHAL-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)	ETHION, TOTAL IN BOT-TOM MA-TERIAL (UG/KG) (39399)	ETHO-PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)
FEB											
08...	<.0430	<.0700	<.0320	<.001	<.0600	<.0170	<.0600	<.0020	<.0040	--	<.0030
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MAY											
09...	<.0430	<.0700	<.0320	<.001	<.0600	<.0170	<.0600	<.0020	<.0040	--	<.0030
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08206900 CHOKE CANYON RESERVOIR NEAR THREE RIVERS, TX--Continued

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

08206870 - Choke Canyon Res Site CC

DATE	FEN-URON, WATER, FLTRD, GF 0.7U REC (UG/L) (49297)	FLUO-METURON WATER, FLTRD, GF 0.7U REC (UG/L) (38811)	FONOFOS WATER DISS REC (UG/L) (04095)	LINDANE DIS-SOLVED (UG/L) (39341)	LINURON WATER, FLTRD, GF 0.7U REC (UG/L) (38478)	LIN-URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA-THION, TOTAL IN BOT-TOM MA-TERIAL (UG/KG) (39531)	MALA-THION, DIS-SOLVED (UG/L) (39532)	MCPA, WATER, FLTRD, GF 0.7U REC (UG/L) (38482)	MCPB, WATER, FLTRD, GF 0.7U REC (UG/L) (38487)	METHIO-CARB, WATER, FLTRD, GF 0.7U REC (UG/L) (38501)
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08...	<.0700	<.0600	<.0030	<.004	<.0900	<.0020	--	<.005	<.170	<.130	<.0260
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MAY											
09...	<.0700	<.0600	<.0030	<.004	<.0900	<.0020	--	<.005	<.170	<.130	<.0260
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08206870 - Choke Canyon Res Site CC

DATE	METH-OMYL, WATER, FLTRD, GF 0.7U REC (UG/L) (49296)	METO-LACHLOR WATER DISSOLV (UG/L) (39415)	METRI-BUZIN SENCOR WATER DISSOLV (UG/L) (82630)	MOL-INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPROP-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	NEB-URON, WATER, FLTRD, GF 0.7U REC (UG/L) (49294)	NORFLUR AZON, WATER, FLTRD, GF 0.7U REC (UG/L) (49293)	ORY-ZALIN, WATER, FLTRD, GF 0.7U REC (UG/L) (49292)	OXAMYL, WATER, FLTRD, GF 0.7U REC (UG/L) (38866)	P,P' DDE DISSOLV (UG/L) (34653)	PARA-THION, TOTAL IN BOT-TOM MA-TERIAL (UG/KG) (39541)
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MAY											
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08206900 CHOKE CANYON RESERVOIR NEAR THREE RIVERS, TX--Continued

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

08206870 - Choke Canyon Res Site CC

DATE	PARA-THION, DIS-SOLVED (UG/L) (39542)	METHYL PARA-THION, TOT. IN BOTTOM MATL. (UG/KG) (39601)	METHYL PARA-THION WAT FLT 0.7 U GF, REC (UG/L) (82667)	PEB-ULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	PENDI-METH-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PIC-LORAM, WATER, FLTRD, GF 0.7U REC (UG/L) (49291)	PRO-METON, WATER, DISS, REC (UG/L) (04037)	PROP-CHLOR, WATER, DISS, REC (UG/L) (04024)	PRO-PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	PRO-PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)
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MAY											
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08206870 - Choke Canyon Res Site CC

DATE	PRO-PHAM, WATER, FLTRD, GF 0.7U REC (UG/L) (49236)	PRO-POXUR, WATER, FLTRD, GF 0.7U REC (UG/L) (38538)	PRON-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	SI-MAZINE, WATER, DISS, REC (UG/L) (04035)	TEBU-THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER-BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TER-BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	THIO-BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL-LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI-CLOPYR, WATER, FLTRD, GF 0.7U REC (UG/L) (49235)	TRI-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)
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AUG											
08...	--	--	<.0030	<.0050	<.0100	<.0070	<.0130	<.0020	<.0010	--	<.0020
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08206900 CHOKE CANYON RESERVOIR NEAR THREE RIVERS, TX--Continued

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

08206860 - Choke Canyon Res Site DC

DATE	TIME	SAMPLING DEPTH (FEET) (00003)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE WATER (DEG C) (00010)	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)
MAY							
09...	1050	1.00	848	8.6	26.5	7.4	93
09...	1052	6.00	847	8.6	26.5	7.2	91
09...	1054	12.0	846	8.6	26.5	6.8	86
AUG							
08...	1000	1.00	869	8.4	30.5	8.4	113
08...	1002	12.5	872	8.3	30.0	6.6	88

08206850 - Choke Canyon Res Site EC

DATE	TIME	SAMPLING DEPTH (FEET) (00003)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE WATER (DEG C) (00010)	TRANSPARENCY (SECCHI DISK) (M) (00078)	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)	2,4,5-T DISSOLVED (UG/L) (39742)	2,4-D, DISSOLVED (UG/L) (39732)	2,4-DB WATER, FLTRD, GF 0.7U REC (UG/L) (38746)
FEB											
08...	1102	1.00	808	8.6	15.5	4.92	10.8	107	<.0400	<.110	<.100
08...	1104	3.00	813	8.4	14.5	--	10.3	100	--	--	--
08...	1106	5.00	819	8.3	14.5	--	10.0	97	--	--	--
08...	1108	7.00	818	8.2	14.0	--	9.9	95	--	--	--
08...	1110	9.00	820	8.3	14.0	--	9.7	93	--	--	--
08...	1112	11.0	819	8.2	14.0	--	9.4	90	--	--	--
08...	1114	13.0	820	8.2	14.0	--	9.1	88	--	--	--
08...	1116	15.0	824	7.9	13.0	--	8.5	80	--	--	--
08...	1118	17.0	825	7.9	13.0	--	8.4	79	--	--	--
08...	1120	19.0	826	7.9	13.0	--	8.3	78	--	--	--
MAY											
09...	1010	1.00	853	8.5	26.0	4.92	7.6	95	<.0400	<.110	<.100
09...	1012	2.00	855	8.5	26.0	--	7.6	95	--	--	--
09...	1014	4.00	856	8.5	26.0	--	7.4	93	--	--	--
09...	1016	5.00	853	8.5	26.0	--	7.4	93	--	--	--
09...	1018	7.00	853	8.5	26.0	--	7.3	91	--	--	--
09...	1020	8.00	852	8.5	26.0	--	7.2	90	--	--	--
09...	1022	11.0	852	8.4	26.0	--	6.9	86	--	--	--
09...	1024	12.0	853	8.4	26.0	--	6.6	83	--	--	--
09...	1026	14.0	856	8.4	26.0	--	5.9	74	--	--	--
09...	1028	16.0	863	8.0	25.5	--	4.8	59	--	--	--
09...	1030	17.0	--	--	--	--	--	--	--	--	--
AUG											
08...	0930	1.00	880	8.2	29.0	4.27	7.1	93	--	--	--
08...	0932	10.0	881	8.2	29.0	--	6.8	89	--	--	--
08...	0934	16.0	887	8.0	28.5	--	5.6	73	--	--	--

08206900 CHOKE CANYON RESERVOIR NEAR THREE RIVERS, TX--Continued

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

08206850 - Choke Canyon Res Site EC

DATE	2,6-DI-ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	SILVEX, DIS-SOLVED (UG/L) (39762)	3HYDRXY CARBO-FURAN WAT,FLT GF 0.7U REC (UG/L) (49308)	DNOC WAT,FLT GF 0.7U REC (UG/L) (49299)	ACETO-CHLOR, WATER FLTRD REC (UG/L) (49260)	ACIFL-UORFEN WATER, FLTRD, GF 0.7U REC (UG/L) (49315)	ALA-CHLOR, WATER, DISS, REC, (UG/L) (46342)	ALDI-CARB, WATER, FLTRD, GF 0.7U REC (UG/L) (49312)	ALDI-CARB SULFONE WAT,FLT GF 0.7U REC (UG/L) (49313)	ALDICA-RB SUL-FOXIDE, WAT,FLT GF 0.7U REC (UG/L) (49314)	ALPHA BHC DIS-SOLVED (UG/L) (34253)
FEB											
08...	<.0030	<.0600	<.110	<.420	<.0020	<.0900	<.002	<.210	<.100	<.650	<.0020
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MAY											
09...	<.0030	<.0600	<.110	<.420	<.0020	<.0900	<.002	<.410	<.100	<.0210	<.0020
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AUG											
08...	<.0030	--	--	--	<.0020	--	<.002	--	--	--	<.0020
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08206850 - Choke Canyon Res Site EC

DATE	ATRA-ZINE, WATER, DISS, REC (UG/L) (39632)	METHYL AZIN-PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)	BEN-FLUR-ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)	BENTA-ZON, WATER, FLTRD, GF 0.7U REC (UG/L) (38711)	BRO-MACIL, WATER, DISS, REC (UG/L) (04029)	BRO-MOXYNIL WATER, FLTRD, GF 0.7U REC (UG/L) (49311)	BUTYL-ATE, WATER, DISS, REC (UG/L) (04028)	CAR-BARYL, WATER, FLTRD, GF 0.7U REC (UG/L) (49310)	CAR-BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBO-FURAN, WATER, FLTRD, GF 0.7U REC (UG/L) (49309)	CARBO-FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)
FEB											
08...	.032	<.0010	<.0020	<.0350	<.120	<.0400	<.0020	<.0700	<.0030	<.290	<.0030
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MAY											
09...	.038	<.0100	<.0020	<.0350	<.210	<.0400	<.0020	E.0131	E.0117	<.290	<.0030
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AUG											
08...	.035	<.0010	<.0020	--	--	--	<.0020	--	<.0030	--	<.0030
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08206900 CHOKE CANYON RESERVOIR NEAR THREE RIVERS, TX--Continued

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

08206850 - Choke Canyon Res Site EC

DATE	TRI-THION, TOTAL IN BOT-TOM MA-TERIAL (UG/KG) (39787)	CHLORO-THALO-NIL, WAT,FLT GF 0.7U REC (UG/L) (49306)	CHLOR-PYRIFOS DIS-SOLVED (UG/L) (38933)	PER-METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	CLOPYR-ALID, WATER, FLTRD, GF 0.7U REC (UG/L) (49305)	CYANA-ZINE, WATER, DISS, REC (UG/L) (04041)	DACTHAL MONO-ACID, WAT,FLT GF 0.7U REC (UG/L) (49304)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	DEETHYL ATRA-ZINE, WATER, DISS, REC (UG/L) (04040)	DI-AZINON, TOTAL IN BOT-TOM MA-TERIAL (UG/KG) (39571)	DI-AZINON, DIS-SOLVED (UG/L) (39572)
FEB											
08...	--	<.480	<.0040	<.0050	<.550	<.0040	<.0390	<.0020	E.0142	--	<.002
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MAY											
09...	--	<.480	<.0040	<.0050	<.230	<.0100	<.0390	<.0020	E.0118	--	<.002
09...	--	--	--	--	--	--	--	--	--	--	--
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09...	<.400	--	--	--	--	--	--	--	--	<.400	--
AUG											
08...	--	--	<.0040	<.0050	--	<.0040	--	<.0020	E.0150	--	<.002
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08206850 - Choke Canyon Res Site EC

DATE	DICAMBA WATER, FLTRD, GF 0.7U REC (UG/L) (38442)	DICHLO-BENIL, WATER, FLTRD, GF 0.7U REC (UG/L) (49303)	DICHLOR PROP, WATER, FLTRD, GF 0.7U REC (UG/L) (49302)	DI-ELDRIN DIS-SOLVED (UG/L) (39381)	DINOSEB WATER, FLTRD, GF 0.7U REC (UG/L) (49301)	DISUL-FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	DIURON, WATER, FLTRD, GF 0.7U REC (UG/L) (49300)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	ETHAL-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)	ETHION, TOTAL IN BOT-TOM MA-TERIAL (UG/KG) (39399)	ETHO-PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)
FEB											
08...	<.0430	<.0700	<.0320	<.001	<.0600	<.0170	<.0600	<.0020	<.0040	--	<.0030
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MAY											
09...	<.0430	<.0700	<.0320	<.001	<.0600	<.0170	<.0600	<.0020	<.0040	--	<.0030
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AUG											
08...	--	--	--	<.001	--	<.0170	--	<.0020	<.0040	--	<.0030
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08206900 CHOKE CANYON RESERVOIR NEAR THREE RIVERS, TX--Continued

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

08206850 - Choke Canyon Res Site EC

DATE	FEN-URON, WATER, FLTRD, GF 0.7U REC (UG/L) (49297)	FLUO-METURON WATER, FLTRD, GF 0.7U REC (UG/L) (38811)	FONOFOS WATER DISS REC (UG/L) (04095)	LINDANE DIS-SOLVED (UG/L) (39341)	LINURON WATER, FLTRD, GF 0.7U REC (UG/L) (38478)	LIN-URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA-THION, TOTAL IN BOT-TOM MA-TERIAL (UG/KG) (39531)	MALA-THION, DIS-SOLVED (UG/L) (39532)	MCPA, WATER, FLTRD, GF 0.7U REC (UG/L) (38482)	MCPB, WATER, FLTRD, GF 0.7U REC (UG/L) (38487)	METHIO-CARB, WATER, FLTRD, GF 0.7U REC (UG/L) (38501)
FEB											
08...	<.0700	<.0600	<.0030	<.004	<.0900	<.0020	--	<.005	<.170	<.130	<.0260
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MAY											
09...	<.0700	<.0600	<.0030	<.004	<.0900	<.0020	--	<.005	<.170	<.130	<.0260
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AUG											
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08206850 - Choke Canyon Res Site EC

DATE	METH-OMYL, WATER, FLTRD, GF 0.7U REC (UG/L) (49296)	METO-LACHLOR WATER DISSOLV (UG/L) (39415)	METRI-BUZIN SENCOR WATER DISSOLV (UG/L) (82630)	MOL-INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPROP-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	NEB-URON, WATER, FLTRD, GF 0.7U REC (UG/L) (49294)	NORFLUR AZON, WATER, FLTRD, GF 0.7U REC (UG/L) (49293)	ORY-ZALIN, WATER, FLTRD, GF 0.7U REC (UG/L) (49292)	OXAMYL, WATER, FLTRD, GF 0.7U REC (UG/L) (38866)	P,P' DDE DISSOLV (UG/L) (34653)	PARA-THION, TOTAL IN BOT-TOM MA-TERIAL (UG/KG) (39541)
FEB											
08...	<.0170	E.003	<.004	<.0040	<.0030	<.0700	<.0420	<.310	<.0180	<.0060	--
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MAY											
09...	<.240	.005	<.004	<.0040	<.0070	<.0700	<.0420	<.380	<.150	E.0028	--
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AUG											
08...	--	<.002	<.004	<.0040	<.0030	--	--	--	--	<.0060	--
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08206900 CHOKE CANYON RESERVOIR NEAR THREE RIVERS, TX--Continued

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

08206850 - Choke Canyon Res Site EC

DATE	PARA-THION, DIS-SOLVED (UG/L) (39542)	METHYL PARA-THION, TOT. IN BOTTOM MATL. (UG/KG) (39601)	METHYL PARA-THION WAT FLT 0.7 U GF, REC (UG/L) (82667)	PEB-ULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	PENDI-METH-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PIC-LORAM, WATER, FLTRD, GF 0.7U REC (UG/L) (49291)	PRO-METON, WATER, DISS, REC (UG/L) (04037)	PROP-CHLOR, WATER, DISS, REC (UG/L) (04024)	PRO-PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	PRO-PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)
FEB											
08...	<.004	--	<.0060	<.0040	<.0040	<.0020	<.0500	E.0029	<.0070	<.0040	<.0130
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MAY											
09...	<.004	--	<.0060	<.0040	<.0040	<.0020	<.110	E.0070	<.0070	<.0040	<.0130
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AUG											
08...	<.004	--	<.0060	<.0040	<.0040	<.0020	--	<.0180	<.0070	<.0040	<.0130
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08206850 - Choke Canyon Res Site EC

DATE	PRO-PHAM, WATER, FLTRD, GF 0.7U REC (UG/L) (49236)	PRO-POXUR, WATER, FLTRD, GF 0.7U REC (UG/L) (38538)	PRON-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	SI-MAZINE, WATER, DISS, REC (UG/L) (04035)	TEBU-THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER-BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TER-BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	THIO-BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL-LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI-CLOPYR, WATER, FLTRD, GF 0.7U REC (UG/L) (49235)	TRI-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)
FEB											
08...	<.0350	<.0800	<.0030	<.0050	E.0078	<.0070	<.0130	<.0020	<.0010	<.250	<.0020
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MAY											
09...	<.0350	<.0800	<.0030	<.0070	E.0092	<.0070	<.0130	<.0020	<.0010	<.250	<.0020
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AUG											
08...	--	--	<.0030	<.0050	<.0100	<.0070	<.0130	<.0020	<.0010	--	<.0020
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08206900 CHOKE CANYON RESERVOIR NEAR THREE RIVERS, TX--Continued

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

08206840 - Choke Canyon Res Site FC

DATE	TIME	SAM-PLING DEPTH (FEET) (00003)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	TRANS-PAR-ENCY (SECCHI DISK) (M) (00078)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	2,4,5-T DIS-SOLVED (UG/L) (39742)	2,4-D, DIS-SOLVED (UG/L) (39732)	2,4-DB WATER, FLTRD, GF 0.7U REC (UG/L) (38746)
FEB											
08...	1240	1.00	1180	8.7	17.0	5.25	13.3	137	<.0400	<.110	<.100
08...	1242	3.00	1230	8.5	16.0	--	12.0	121	--	--	--
08...	1244	5.00	1280	8.2	15.0	--	10.4	102	--	--	--
08...	1246	7.00	1320	8.1	14.0	--	9.5	92	--	--	--
08...	1248	9.00	1340	8.0	13.5	--	9.3	89	--	--	--
08...	1250	11.0	1370	7.9	13.0	--	9.1	86	--	--	--
08...	1252	13.0	1380	7.9	13.0	--	9.0	85	--	--	--
08...	1254	15.0	1390	7.9	13.0	--	8.9	84	--	--	--
08...	1256	17.0	1390	7.9	13.0	--	8.8	83	--	--	--
08...	1258	19.0	1390	7.8	13.0	--	8.8	83	--	--	--
08...	1300	21.0	1390	7.8	13.0	--	8.8	83	--	--	--
MAY											
09...	1145	1.00	826	8.6	27.0	5.25	6.2	79	<.0400	<.110	<.100
09...	1147	4.00	822	8.6	27.0	--	5.8	74	--	--	--
09...	1149	7.00	826	8.6	27.0	--	5.6	71	--	--	--
09...	1151	10.0	827	8.6	27.0	--	5.2	66	--	--	--
09...	1153	13.0	823	8.4	27.0	--	4.3	55	--	--	--
09...	1155	15.0	800	7.9	26.5	--	2.6	33	--	--	--
09...	1157	17.0	776	7.7	26.0	--	1.3	16	--	--	--
09...	1159	19.0	781	7.6	25.5	--	1.4	17	--	--	--
09...	1201	21.0	786	7.6	25.0	--	2.4	29	--	--	--
09...	1203	23.0	791	7.6	25.0	--	4.3	53	--	--	--
09...	1205	25.0	--	--	--	--	--	--	--	--	--
AUG											
08...	1058	1.00	902	7.7	30.0	8.69	4.0	53	--	--	--
08...	1100	10.0	904	7.7	30.0	--	3.5	47	--	--	--
08...	1102	20.0	909	7.6	29.5	--	1.9	25	--	--	--
08...	1104	23.5	910	7.5	29.5	--	1.9	25	--	--	--

08206840 - Choke Canyon Res Site FC

DATE	2,6-DI-ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	SILVEX, DIS-SOLVED (UG/L) (39762)	3HYDRXY CARBO-FURAN WAT,FLT GF 0.7U REC (UG/L) (49308)	DNOC WAT,FLT GF 0.7U REC (UG/L) (49299)	ACETO-CHLOR, WATER FLTRD REC (UG/L) (49260)	ACIFL-UORFEN WATER, FLTRD, GF 0.7U REC (UG/L) (49315)	ALA-CHLOR, WATER, DISS, REC, (UG/L) (46342)	ALDI-CARB, WATER, FLTRD, GF 0.7U REC (UG/L) (49312)	ALDI-CARB SULFONE WAT,FLT GF 0.7U REC (UG/L) (49313)	ALDICA-RB SUL-FOXIDE, WAT,FLT GF 0.7U REC (UG/L) (49314)	ALPHA BHC DIS-SOLVED (UG/L) (34253)
FEB											
08...	<.0030	<.0600	<.110	<.420	<.0020	<.0900	<.002	<.210	<.100	<.0210	<.0020
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MAY											
09...	<.0030	<.0600	<.110	<.420	<.0020	<.0900	<.002	<.210	<.100	<.0210	<.0020
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08206900 CHOKE CANYON RESERVOIR NEAR THREE RIVERS, TX--Continued

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

08206840 - Choke Canyon Res Site FC

DATE	ATRA-ZINE, WATER, DISS, REC (UG/L) (39632)	METHYL AZIN-PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)	BEN-FLUR-ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)	BENTA-ZON, WATER, FLTRD, GF 0.7U REC (UG/L) (38711)	BRO-MACIL, WATER, DISS, REC (UG/L) (04029)	BRO-MOXYNIL WATER, FLTRD, GF 0.7U REC (UG/L) (49311)	BUTYL-ATE, WATER, DISS, REC (UG/L) (04028)	CAR-BARYL, WATER, FLTRD, GF 0.7U REC (UG/L) (49310)	CAR-BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBO-FURAN, WATER, FLTRD, GF 0.7U REC (UG/L) (49309)	CARBO-FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)
FEB											
08...	.008	<.0010	<.0020	<.0350	<.0600	<.0400	<.0020	<.0700	<.0030	<.290	<.0030
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MAY											
09...	.051	<.0010	<.0020	<.0350	<.140	<.0400	<.0020	E.0563	E.185	<.290	<.0030
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08206840 - Choke Canyon Res Site FC

DATE	TRI-THION, TOTAL IN BOT-TOM MA-TERIAL (UG/KG) (39787)	CHLORO-THALO-NIL, WAT,FLT GF 0.7U REC (UG/L) (49306)	CHLOR-PYRIFOS DIS-SOLVED (UG/L) (38933)	PER-METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	CLOPYR-ALID, WATER, FLTRD, GF 0.7U REC (UG/L) (49305)	CYANA-ZINE, WATER, DISS, REC (UG/L) (04041)	DACTHAL MONO-ACID, WAT,FLT GF 0.7U REC (UG/L) (49304)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	DEETHYL ATRA-ZINE, WATER, DISS, REC (UG/L) (04040)	DI-AZINON, TOTAL IN BOT-TOM MA-TERIAL (UG/KG) (39571)	DI-AZINON, DIS-SOLVED (UG/L) (39572)
FEB											
08...	--	<.480	<.0040	<.0050	<.230	<.0040	<.0390	<.0020	E.0116	--	<.002
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MAY											
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AUG											
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08206900 CHOKE CANYON RESERVOIR NEAR THREE RIVERS, TX--Continued

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

08206840 - Choke Canyon Res Site FC

DATE	DICAMBA WATER, FLTRD, GF 0.7U REC (UG/L) (38442)	DICHLO-BENIL, WATER, FLTRD, GF 0.7U REC (UG/L) (49303)	DICHLOR PROP, WATER, FLTRD, GF 0.7U REC (UG/L) (49302)	DI-ELDRIN DIS-SOLVED (UG/L) (39381)	DINOSEB WATER, FLTRD, GF 0.7U REC (UG/L) (49301)	DISUL-FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	DIURON, WATER, FLTRD, GF 0.7U REC (UG/L) (49300)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	ETHAL-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)	ETHION, TOTAL IN BOT-TOM MA-TERIAL (UG/KG) (39399)	ETHO-PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)
FEB											
08...	<.0430	<.0700	<.0320	<.001	<.0600	<.0170	<.0600	<.0020	<.0040	--	<.0030
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MAY											
09...	<.0430	<.0700	<.0320	<.001	<.0600	<.0170	<.0600	<.0020	<.0040	--	<.0030
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08206840 - Choke Canyon Res Site FC

DATE	FEN-URON, WATER, FLTRD, GF 0.7U REC (UG/L) (49297)	FLUO-METURON WATER, FLTRD, GF 0.7U REC (UG/L) (38811)	FONOFOS WATER DISS REC (UG/L) (04095)	LINDANE DIS-SOLVED (UG/L) (39341)	LINURON WATER, FLTRD, GF 0.7U REC (UG/L) (38478)	LIN-URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA-THION, TOTAL IN BOT-TOM MA-TERIAL (UG/KG) (39531)	MALA-THION, DIS-SOLVED (UG/L) (39532)	MCPA, WATER, FLTRD, GF 0.7U REC (UG/L) (38482)	MCPB, WATER, FLTRD, GF 0.7U REC (UG/L) (38487)	METHIO-CARB, WATER, FLTRD, GF 0.7U REC (UG/L) (38501)
FEB											
08...	<.0700	<.0600	<.0030	<.004	<.0900	<.0020	--	<.005	<.170	<.130	<.0260
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MAY											
09...	<.0700	<.0600	<.0030	<.004	<.0900	<.0020	--	<.005	<.170	<.130	<.0260
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08...	--	--	<.0030	<.004	--	<.0020	--	.006	--	--	--
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08206900 CHOKE CANYON RESERVOIR NEAR THREE RIVERS, TX--Continued

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

08206840 - Choke Canyon Res Site FC

DATE	METH-OMYL, WATER, FLTRD, GF 0.7U REC (UG/L) (49296)	METO-LACHLOR WATER DISSOLV (UG/L) (39415)	METRI-BUZIN SENCOR WATER DISSOLV (UG/L) (82630)	MOL-INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPROP-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	NEB-URON, WATER, FLTRD, GF 0.7U REC (UG/L) (49294)	NORFLUR AZON, WATER, FLTRD, GF 0.7U REC (UG/L) (49293)	ORY-ZALIN, WATER, FLTRD, GF 0.7U REC (UG/L) (49292)	OXAMYL, WATER, FLTRD, GF 0.7U REC (UG/L) (38866)	P,P' DDE DISSOLV (UG/L) (34653)	PARA-THION, TOTAL IN BOT-TOM MA-TERIAL (UG/KG) (39541)
FEB											
08...	<.0170	.013	<.004	<.0040	<.0030	<.0700	<.0420	<.310	<.0180	<.0060	--
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MAY											
09...	<.280	E.004	<.004	<.0040	<.0030	<.0700	<.0420	<.310	<.260	<.0060	--
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AUG											
08...	--	.008	<.004	<.0040	<.0030	--	--	--	--	<.0060	--
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08206840 - Choke Canyon Res Site FC

DATE	PARA-THION, DIS-SOLVED (UG/L) (39542)	METHYL PARA-THION, TOT. IN BOTTOM MATL. (UG/KG) (39601)	METHYL PARA-THION WAT FLT 0.7 U GF, REC (UG/L) (82667)	PEB-ULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	PENDI-METH-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PIC-LORAM, WATER, FLTRD, GF 0.7U REC (UG/L) (49291)	PRO-METON, WATER, DISS, REC (UG/L) (04037)	PROP-CHLOR, WATER, DISS, REC (UG/L) (04024)	PRO-PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	PRO-PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)
FEB											
08...	<.004	--	<.0060	<.0040	<.0040	<.0020	<.0500	E.0045	<.0070	<.0040	<.0130
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MAY											
09...	<.004	--	<.0060	<.0040	<.0040	<.0020	<.0500	E.0017	<.0070	<.0040	<.0130
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AUG											
08...	<.004	--	<.0060	<.0040	<.0040	<.0020	--	<.0180	<.0070	<.0040	<.0130
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08206900 CHOKE CANYON RESERVOIR NEAR THREE RIVERS, TX--Continued

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

08206840 - Choke Canyon Res Site FC

DATE	PRO-PHAM, WATER, FLTRD, GF 0.7U REC (UG/L) (49236)	PRO-POXUR, WATER, FLTRD, GF 0.7U REC (UG/L) (38538)	PRON-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	SI-MAZINE, WATER, DISS, REC (UG/L) (04035)	TEBU-THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER-BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TER-BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	THIO-BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL-LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI-CLOPYR, WATER, FLTRD, GF 0.7U REC (UG/L) (49235)	TRI-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)
FEB											
08...	<.0350	<.0800	<.0030	<.0050	<.0100	<.0070	<.0130	<.0020	<.0010	<.250	<.0020
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MAY											
09...	<.120	<.0800	<.0030	<.0050	<.0100	<.0070	<.0130	<.0020	<.0010	<.250	<.0020
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AUG											
08...	--	--	<.0030	<.0050	<.0100	<.0070	<.0130	<.0020	<.0010	--	<.0020
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08206910 CHOKE CANYON RESERVOIR (OUTLET WORKS CHANNEL) NEAR THREE RIVERS, TX

LOCATION.--Lat 28°29′09", long 98°14′29", Live Oak County, Hydrologic Unit 12110108, 0.2 mi downstream from Choke Canyon Dam on Frio River, 3.7 mi upstream from Atascosa River, and 3.8 mi west of Three Rivers.

DRAINAGE AREA.--5,490 mi^2.

PERIOD OF RECORD.--Nov 1991 to Sep 1999 (daily mean discharges when instantaneous discharge is below 73 ft^3/s). Oct 1999 to Sep 2000.

GAGE.--Water-stage recorder. Datum of gage is 124.06 ft above sea level.

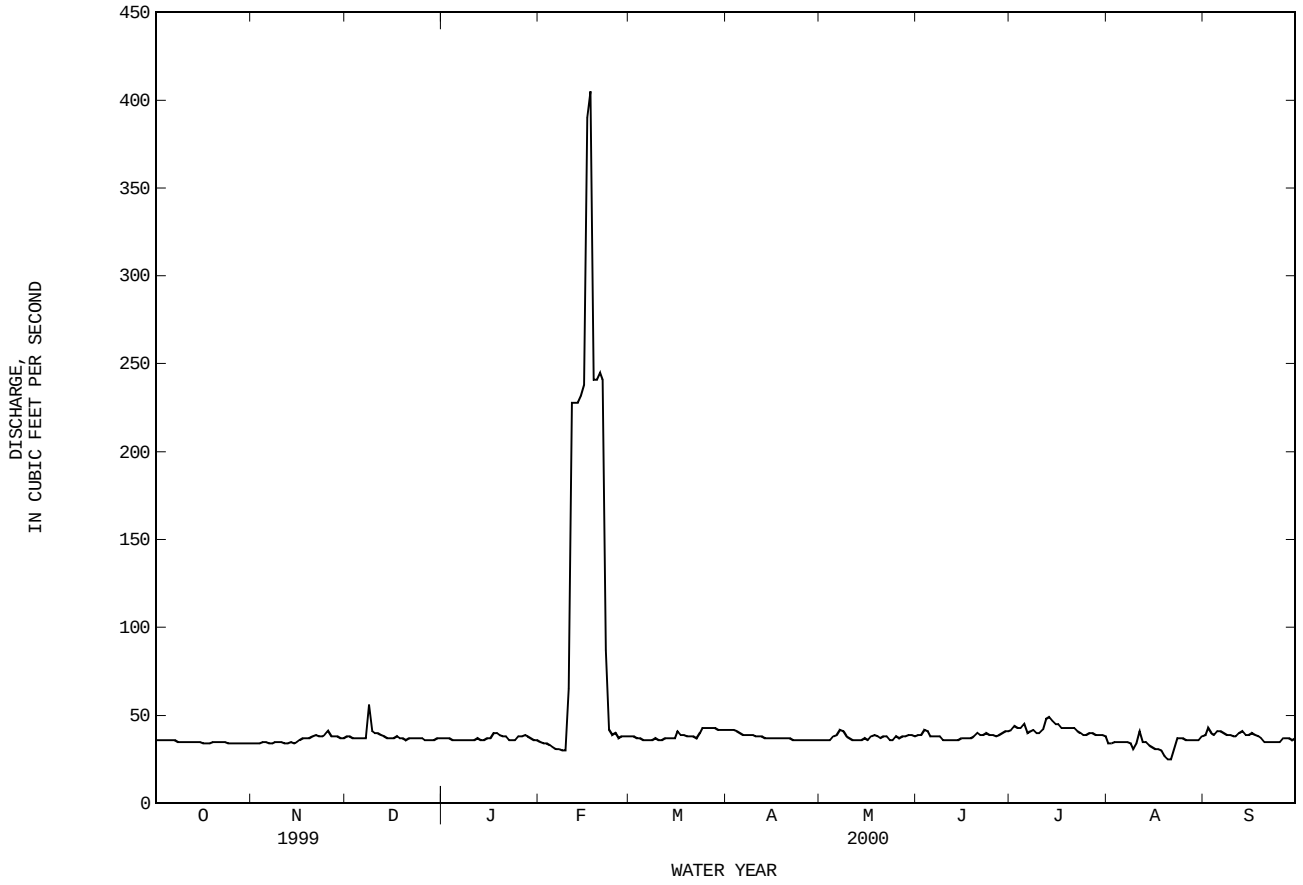
REMARKS.--Records good except those for estimated daily discharges, which are fair. Flow regulated by Choke Canyon Reservoir (station 08206900, conservation pool storage 695,271 acre-ft) 0.2 mi upstream. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water-quality data.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36	34	38	37	35	38	42	36	39	42	34	39
2	36	34	38	37	34	38	42	36	39	44	34	43
3	36	34	37	37	34	37	42	36	42	43	35	40
4	36	35	37	36	33	37	41	36	41	43	35	39
5	36	35	37	36	32	36	40	38	38	45	35	41
6	36	34	37	36	31	36	39	39	38	40	35	41
7	36	34	37	36	31	36	39	42	38	41	35	40
8	35	35	56	36	30	36	39	41	38	42	34	39
9	35	35	41	36	30	37	39	38	36	40	31	39
10	35	35	40	36	65	36	38	37	36	40	34	38
11	35	34	40	36	228	36	38	36	e36	42	41	38
12	35	34	39	37	228	37	38	36	e36	48	35	40
13	35	35	38	36	228	37	37	36	e36	49	35	41
14	35	34	37	36	232	37	37	36	e36	e47	33	39
15	35	35	37	37	238	37	37	37	37	e45	32	39
16	34	36	37	37	390	41	37	36	37	45	31	40
17	34	37	38	40	405	39	37	38	37	43	31	39
18	34	37	37	40	241	39	37	39	37	43	30	38
19	35	37	37	39	241	38	37	38	38	43	27	37
20	35	38	36	38	245	38	37	37	40	43	25	35
21	35	39	37	38	241	38	37	38	39	43	25	35
22	35	38	37	36	87	37	36	38	39	41	31	35
23	35	38	37	36	42	40	36	36	40	40	37	35
24	34	39	37	36	39	43	36	36	39	39	37	35
25	34	41	37	38	40	43	36	38	39	39	37	35
26	34	38	36	38	37	43	36	37	38	40	36	37
27	34	38	36	39	38	43	36	38	39	40	36	37
28	34	38	36	38	38	43	36	38	40	39	36	37
29	34	37	36	37	38	42	36	39	41	39	36	36
30	34	37	37	36	---	42	36	39	41	39	36	37
31	34	---	37	36	---	42	---	38	---	38	38	---
TOTAL	1081	1085	1177	1147	3631	1202	1134	1163	1150	1305	1047	1144
MEAN	34.9	36.2	38.0	37.0	125	38.8	37.8	37.5	38.3	42.1	33.8	38.1
MAX	36	41	56	40	405	43	42	42	42	49	41	43
MIN	34	34	36	36	30	36	36	36	36	38	25	35

e Estimated

08206910 CHOKE CANYON RESERVOIR (OUTLET WORKS CHANNEL) NEAR THREE RIVERS, TX--Continued



08208000 ATASCOSA RIVER AT WHITSETT, TX

LOCATION.--Lat 28°37′19", long 98°16′52", Live Oak County, Hydrologic Unit 12110111, on right bank at downstream side of bridge on Farm Road 99, 1.1 mi southwest of Whitsett, 4.2 mi downstream from La Parita Creek, and 12.9 mi upstream from mouth.

DRAINAGE AREA.--1,171 mi^2.

PERIOD OF RECORD.--Sep 1924 to May 1926 (monthly discharge only), May 1932 to current year.

GAGE.--Water-stage recorder. Datum of gage is 159.04 ft above sea level. Prior to May 8, 1926, nonrecording gage at bridge destroyed in 1956 at site 200 ft downstream at 1.38 ft higher datum. May 21, 1932, to Feb 16, 1983, water-stage recorder at site 1,000 ft upstream at same datum. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. Considerable loss of flow into various permeable formations occurs upstream from this station. The Campbellton water wells discharge into the Atascosa River 12 mi upstream from this station to supplement streamflow during dry periods; however, records provided by the city of Corpus Christi indicate that during the current year, the Campbellton water wells did not discharge into the Atascosa River. No known regulation. There are several small diversions above station. No flow at times. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water-quality data.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1881, that of Sep 23, 1967. Second highest stage, 41 ft (discharge 106,000 ft^3/s), occurred in Sep 1919.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,500 ft^3/s:

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jun 12	1645	3,890	22.41	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.32	.17	.73	1.2	1.9	1.3	1.0	.47	10	13	2.7	.71
2	.30	.19	.75	1.2	3.0	1.4	1.2	21	7.5	12	3.5	.64
3	.28	.18	.75	1.3	4.1	1.4	3.2	459	6.3	12	2.4	.58
4	.48	.20	.74	1.3	4.1	1.4	72	312	5.7	11	1.9	.56
5	.35	.24	.68	1.3	3.2	1.3	43	64	50	9.0	2.1	.53
6	.33	.23	.64	1.3	3.0	1.1	19	23	155	7.5	2.0	.51
7	.30	.23	.58	2.0	4.8	1.1	11	13	99	6.6	1.7	.51
8	.25	.30	.52	2.7	4.0	1.1	10	9.2	36	5.9	1.9	.49
9	.24	.33	.73	3.1	3.3	1.1	7.9	6.6	46	5.4	2.1	.47
10	.20	.40	.76	3.2	2.9	1.1	5.6	4.6	560	5.0	2.3	.50
11	.22	.45	.82	12	2.5	.94	4.1	3.6	2160	4.6	2.4	.51
12	.19	.53	.88	8.6	2.1	.82	3.8	2.9	3700	4.4	2.4	.51
13	.19	.62	.88	5.9	1.9	.72	3.3	2.9	2690	4.1	2.3	.53
14	.20	.50	.86	4.3	1.8	3.3	3.4	3.5	520	3.8	2.0	.59
15	.18	.46	.82	3.4	1.8	6.6	3.5	8.8	139	3.5	2.1	.69
16	.18	.50	.80	2.7	2.0	5.7	3.2	10	87	3.4	2.2	1.0
17	.19	.64	.76	2.5	2.0	4.5	2.5	5.5	63	3.2	1.8	.98
18	.20	.61	.76	2.6	2.1	11	2.0	4.7	52	3.1	1.8	.73
19	.26	.61	.76	2.2	2.2	47	1.8	3.7	62	3.2	1.6	.64
20	.40	.67	.93	1.9	1.9	20	1.5	51	40	3.1	1.2	.61
21	.51	.64	1.1	1.7	1.7	11	1.2	331	36	3.0	1.2	.62
22	.47	.60	1.0	1.7	1.4	7.1	.99	455	28	2.7	1.2	.67
23	.41	.51	1.0	1.4	1.2	5.3	.79	95	23	2.6	2.9	.69
24	.31	.50	1.0	1.3	1.4	4.0	.67	34	20	2.6	1.8	.93
25	.24	.60	.95	1.5	1.4	2.9	.55	21	19	2.1	1.8	15
26	.24	.66	.77	1.7	1.4	2.3	.47	15	17	1.8	1.7	15
27	.28	.65	1.3	1.8	1.3	1.9	.41	13	16	1.4	6.2	8.4
28	.27	.61	1.6	1.7	1.2	1.7	.34	30	15	1.3	3.9	5.0
29	.24	.61	1.5	1.6	1.3	1.6	.42	44	14	1.1	2.4	2.9
30	.19	.70	1.3	1.8	---	1.4	.39	22	13	1.1	1.4	1.9
31	.18	---	1.2	1.9	---	1.2	---	13	---	1.5	.90	---
TOTAL	8.60	14.14	27.87	82.8	66.9	153.28	209.23	2082.47	10689.5	145.0	67.80	63.40
MEAN	.28	.47	.90	2.67	2.31	4.94	6.97	67.2	356	4.68	2.19	2.11
MAX	.51	.70	1.6	12	4.8	47	72	459	3700	13	6.2	15
MIN	.18	.17	.52	1.2	1.2	.72	.34	.47	5.7	1.1	.90	.47
AC-FT	17	28	55	164	133	304	415	4130	21200	288	134	126

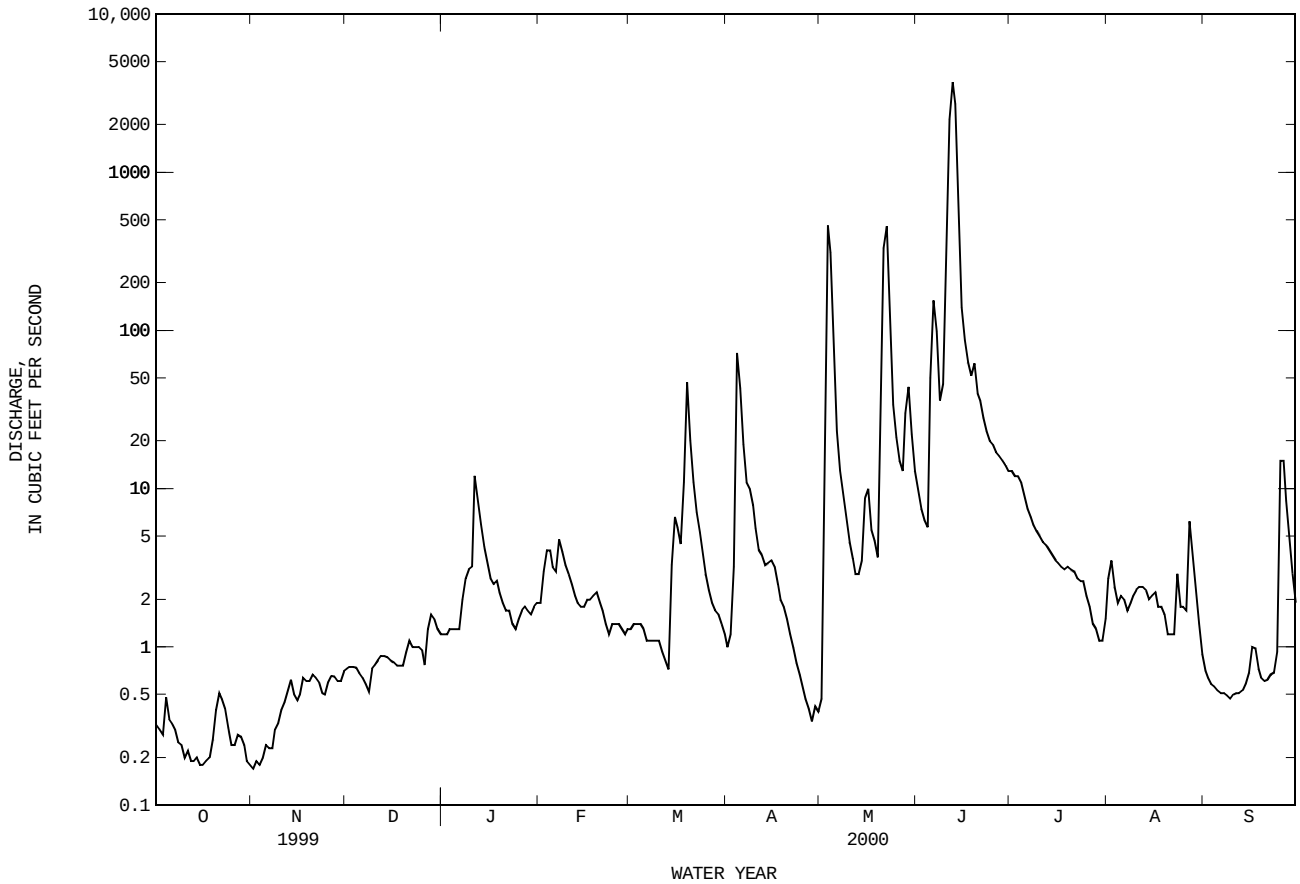
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1932 - 2000, BY WATER YEAR (WY)

MEAN	103	49.4	56.9	78.1	94.3	33.9	147	225	240	117	75.1	239
MAX	788	399	1060	2053	1590	250	2298	1365	3445	2879	1207	5006
(WY)	1947	1941	1992	1968	1992	1970	1977	1957	1935	1942	1946	1967
MIN	.048	.21	.19	1.52	1.57	1.51	.57	.000	.000	.000	.000	.001
(WY)	1989	1989	1989	1996	1990	1996	1996	1996	1989	1998	1954	1997

08208000 ATASCOSA RIVER AT WHITSETT, TX--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1932 - 2000	
ANNUAL TOTAL	13189.68		13610.99			
ANNUAL MEAN	36.1		37.2		122	
HIGHEST ANNUAL MEAN					472	1935
LOWEST ANNUAL MEAN					2.29	1989
HIGHEST DAILY MEAN	2660	Mar 30	3700	Jun 12	65000	Sep 23 1967
LOWEST DAILY MEAN	.17	Nov 1	.17	Nov 1	.00	Jun 11 1934
ANNUAL SEVEN-DAY MINIMUM	.19	Oct 12	.19	Oct 12	.00	Jun 11 1934
INSTANTANEOUS PEAK FLOW			3890	Jun 12	i121000	Sep 23 1967
INSTANTANEOUS PEAK STAGE			22.41	Jun 12	a41.30	Sep 23 1967
ANNUAL RUNOFF (AC-FT)	26160		27000		88100	
10 PERCENT EXCEEDS	26		20		91	
50 PERCENT EXCEEDS	3.7		1.8		11	
90 PERCENT EXCEEDS	.30		.38		.87	

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



08210000 NUECES RIVER NEAR THREE RIVERS, TX

LOCATION.--Lat 28°25′38", long 98°10′40", Live Oak County, Hydrologic Unit 12110111, on right bank at U.S. Highway 281, 1.0 mi downstream from Frio River, 2.2 mi south of Three Rivers, and at mile 100.2.

DRAINAGE AREA.--15,427 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Jul 1915 to current year. Monthly discharge only for Nov 1919 to Jan 1920, published in WSP 1312.

REVISED RECORDS.--WSP 548: 1920-21. WSP 1562: 1916, 1918-21, 1922(M), 1923, 1929. WDR TX-83-3: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 99.26 ft above sea level. Prior to Apr 5, 1932, nonrecording gage at railroad bridge 0.8 mi upstream at datum 1.87 ft higher. Apr 5, 1932, to Aug 9, 1983, recording gage at a site 0.8 mi upstream at datum 1.87 ft higher. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records fair. Part of the flow of the Nueces and Frio Rivers and their headwater tributaries enters the Edwards and associated limestones in the Balcones Fault Zone that crosses the basin upstream from U.S. Highway 90. Some loss of flow into various permeable formations also occurs downstream from the Balcones Fault Zone. Flow of the Atascosa River at Whitsett (station 08208000) is supplemented during dry periods by discharge from the Campbellton water wells. Since Mar 1948, at least 10% of contributing drainage area has been regulated by the Upper Nueces Reservoir (conservation pool storage 7,590 acre-ft). Since Oct 1982, flow of the Frio River has been regulated by Choke Canyon Reservoir (station 08206900, conservation pool storage 695,271 acre-ft), about 11 mi upstream from this station on the Frio River. There are many small diversions for irrigation and for municipal supply above this station. No flow at times. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water-quality data.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--33 years (water years 1916-48) 945 ft^3/s (684,500 acre-ft/yr).

EXTREMES FOR PERIOD PRIOR TO REGULATION (WATER YEARS 1916-48).--Maximum discharge, 85,000 ft^3/s Sep 18, 1919 (gage height, 46.0 ft), site and datum then in use; no flow at times. Maximum stage since about 1875, that of Sep 23, 1967.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	77	68	37	35	36	40	36	28	45	47	32	31
2	72	64	37	36	39	41	35	68	41	46	33	31
3	68	59	38	36	39	41	36	160	39	45	34	31
4	63	56	39	36	38	40	39	444	39	44	33	30
5	58	55	38	37	38	39	83	205	145	43	32	30
6	59	54	38	36	38	40	69	86	230	41	32	30
7	71	50	38	38	37	40	71	59	204	42	32	31
8	68	49	46	40	37	40	65	48	120	37	32	32
9	62	49	46	39	37	39	53	43	87	36	32	32
10	59	49	36	38	37	39	46	41	547	36	32	33
11	54	48	36	38	181	38	46	39	1780	35	32	32
12	52	49	37	41	215	37	46	38	2760	35	32	32
13	50	47	36	43	214	37	42	38	3690	34	32	32
14	49	43	36	41	215	305	39	36	3110	34	32	32
15	49	43	36	39	206	211	37	35	943	33	33	32
16	49	44	36	39	277	70	35	40	487	33	34	32
17	48	44	36	38	401	65	34	44	238	32	33	31
18	50	44	36	37	248	132	33	38	151	32	33	32
19	51	44	36	37	214	376	32	37	124	33	33	32
20	50	43	38	36	214	332	32	37	110	32	33	32
21	49	42	38	35	214	158	31	123	91	31	33	32
22	79	41	37	34	175	99	30	426	82	31	32	32
23	82	39	35	34	47	78	30	337	73	32	32	31
24	79	40	35	34	43	66	30	102	65	32	33	32
25	70	41	35	34	46	58	29	68	59	31	34	36
26	69	40	35	34	44	51	28	55	55	31	32	42
27	89	39	35	37	42	47	28	48	53	32	32	49
28	88	40	35	37	41	43	28	46	51	32	33	42
29	82	40	35	36	41	40	28	69	50	32	36	39
30	79	39	34	36	---	38	27	75	48	32	33	36
31	73	---	34	36	---	36	---	55	---	33	32	---
TOTAL	1998	1403	1144	1147	3454	2716	1198	2968	15517	1099	1013	1001
MEAN	64.5	46.8	36.9	37.0	119	87.6	39.9	95.7	517	35.5	32.7	33.4
MAX	89	68	46	43	401	376	83	444	3690	47	36	49
MIN	48	39	34	34	36	36	27	28	39	31	32	30
AC-FT	3960	2780	2270	2280	6850	5390	2380	5890	30780	2180	2010	1990

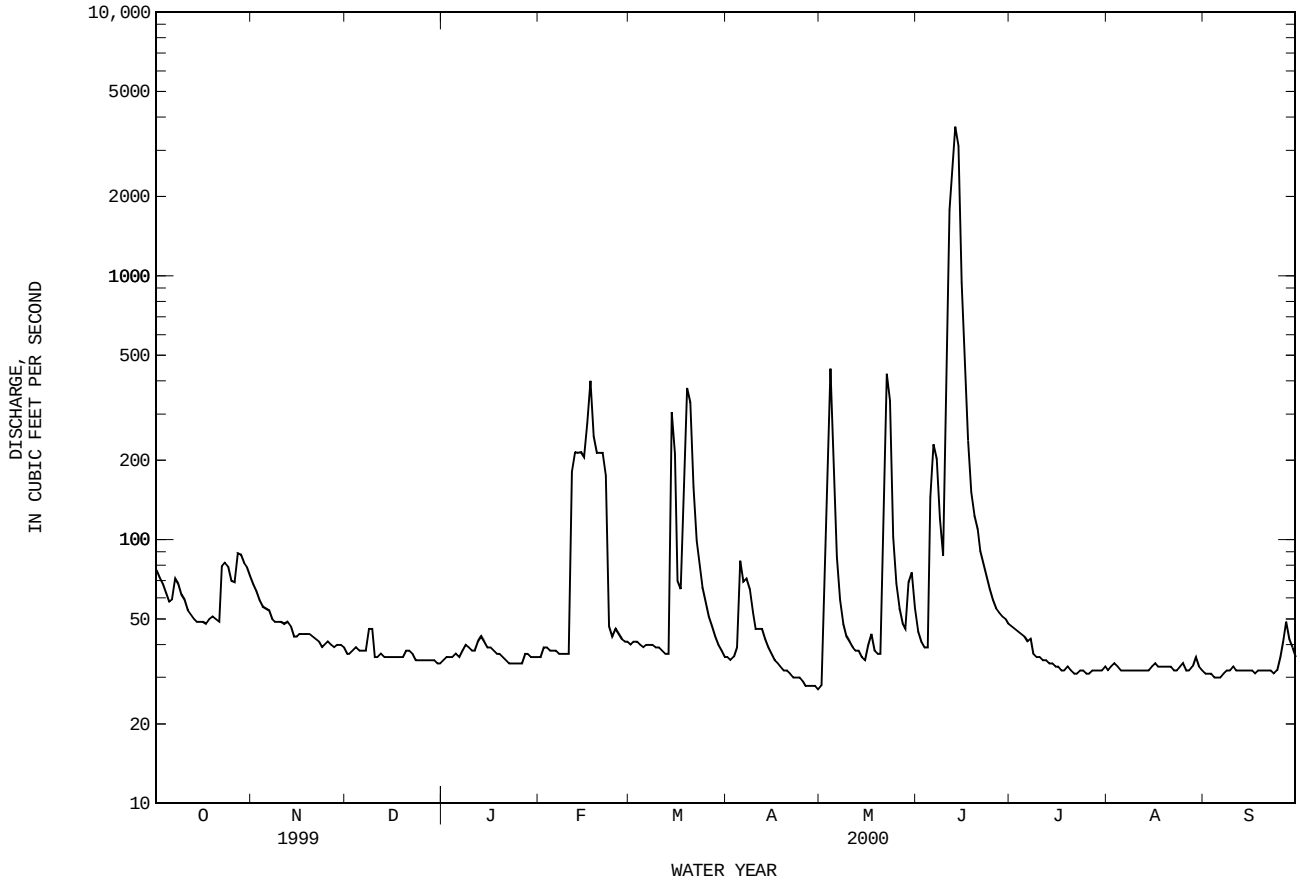
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1949 - 2000z, BY WATER YEAR (WY)

MEAN	1178	458	215	320	366	224	448	1101	1300	634	612	1330
MAX	13810	4944	1801	4833	7868	2285	5082	8645	8451	5723	10550	23650
(WY)	1972	1977	1977	1958	1958	1949	1977	1957	1987	1971	1971	1967
MIN	.54	.033	.63	3.61	5.80	6.21	4.30	1.85	8.72	3.05	.026	1.28
(WY)	1963	1951	1951	1967	1951	1963	1984	1971	1967	1967	1962	1984

08210000 NUECES RIVER NEAR THREE RIVERS, TX--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1949 - 2000z	
ANNUAL TOTAL	116322		34658			
ANNUAL MEAN	319		94.7		682	
HIGHEST ANNUAL MEAN					2110	1971
LOWEST ANNUAL MEAN					82.3	1984
HIGHEST DAILY MEAN	4430	Sep 6	3690	Jun 13	128000	Sep 23 1967
LOWEST DAILY MEAN	34	Dec 30	27	Apr 30	.00	Aug 25 1950
ANNUAL SEVEN-DAY MINIMUM	35	Dec 25	28	Apr 25	.00	Aug 28 1950
INSTANTANEOUS PEAK FLOW			3850	Jun 13	18300	Sep 21 1983
INSTANTANEOUS PEAK STAGE			20.51	Jun 13	37.29	Jun 22 1987
ANNUAL RUNOFF (AC-FT)	230700		68740		494200	
10 PERCENT EXCEEDS	832		123		1400	
50 PERCENT EXCEEDS	141		39		88	
90 PERCENT EXCEEDS	41		32		6.0	

z Period of requlated streamflow.



08210000 NUECES RIVER NEAR THREE RIVERS, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--
CHEMICAL DATA: Aug 1941 to Sep 1952, May 1965 to current year.
BIOCHEMICAL DATA: May 1965 to Jul 1996.
PESTICIDE DATA: Jan 1968 to May 1982, Oct 1996 to current year.
SEDIMENT DATA: Oct 1941 to Aug 1945, Mar 1951 to Sep 1952, Oct 1974 to Aug 1994.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Oct 1941 to Sep 1952, Oct 1974 to Sep 1981.
WATER TEMPERATURE: Oct 1950 to Sep 1952, Oct 1974 to Sep 1981.
SUSPENDED-SEDIMENT DISCHARGE: Oct 1950 to Sep 1951.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 4,310 microsiemens, Jan 17, 1977; minimum daily, 157 microsiemens, May 26, 1975.
WATER TEMPERATURE: Maximum daily, 32.0°C, on several days during summers of 1977, 1978, and 1981; minimum daily, 7.0°C, Jan 2, 3, 1979.

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

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)
NOV												
05...	0900	55	732	7.8	17.5	8.4	87	180	56	53	12	69
FEB												
08...	0950	36	950	7.8	14.0	9.3	89	190	11	53	14	110
MAY												
16...	0945	37	874	7.4	25.0	6.5	79	200	--	58	15	97
AUG												
08...	1050	31	923	7.3	29.0	5.8	78	180	31	50	14	85

DATE	SODIUM AD-SORP-TION RATIO (00931)	SODIUM PERCENT (00932)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	CAR-BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	ALKA-LINITY WAT DIS FIX END FIELD CAC03 (MG/L) (39036)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)
NOV												
05...	2	43	10	--	--	--	130	57	110	.18	17	402
FEB												
08...	3	54	11	--	--	--	180	70	140	.32	18	526
MAY												
16...	3	49	11	--	--	--	--	72	130	.22	18	--
AUG												
08...	3	48	11	0	187	153	--	77	150	.20	16	494

DATE	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N) (00607)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4) (00660)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)	ANTI-MONY, DIS-SOLVED (UG/L AS SB) (01095)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)
NOV												
05...	--	<.010	.154	<.020	--	.52	.080	.015	.05	<1.0	<1.0	6
FEB												
08...	--	<.010	.113	.041	.58	.62	.066	.061	.19	1.0	<1.0	6
MAY												
16...	--	<.010	.174	.031	.59	.62	.093	.064	.20	--	<1.0	7
AUG												
08...	.100	.014	.114	.036	.62	.65	.071	.046	.14	.86	<1.0	7

DATE	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE) (01010)	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030)	COBALT, DIS-SOLVED (UG/L AS CO) (01035)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	LITHIUM DIS-SOLVED (UG/L AS LI) (01130)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MERCURY DIS-SOLVED (UG/L AS HG) (71890)
NOV											
05...	107	<1.0	<1.0	<.80	<1.0	1.7	<10	<1.0	16	6.1	<.2
FEB											
08...	107	<1.0	<1.0	<.80	<1.0	1.4	<10	<1.0	26	6.1	<.2
MAY											
16...	111	<1.0	<1.0	<.80	<1.0	2.4	<10	<1.0	21	3.7	<.2
AUG											
08...	114	<1.0	<1.0	<.80	<1.0	1.8	<10	<1.0	23	3.3	<.2

08210000 NUECES RIVER NEAR THREE RIVERS, TX--Continued

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

DATE	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060)	NICKEL, DIS-SOLVED (UG/L AS NI) (01065)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)	STRON-TIUM, DIS-SOLVED (UG/L AS SR) (01080)	VANA-DIUM, DIS-SOLVED (UG/L AS V) (01085)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)	URANIUM NATURAL DIS-SOLVED (UG/L AS U) (22703)	2,4,5-T TOTAL (UG/L) (39740)	2,4-D, TOTAL (UG/L) (39730)	SILVEX, TOTAL (UG/L) (39760)
NOV											
05...	1.6	1.3	<2	<1.0	361	10	1.7	<1.0	<.010	<.010	<.010
FEB											
08...	2.0	<1.0	<2	<1.0	404	E9	2.1	1.0	<.010	<.010	<.010
MAY											
16...	2.3	1.4	<2	<1.0	421	<10	5.0	1.0	--	--	--
AUG											
08...	2.3	1.2	<2	<1.0	401	E8	6.2	<1.0	--	--	--

DATE	DICAMBA TOTAL (UG/L) (82052)	2,4-DP TOTAL (UG/L) (82183)	PIC-LORAM UNFILT RECOVER (UG/L) (39720)	2,4,5-T DIS-SOLVED (UG/L) (39742)	2,4-D, DIS-SOLVED (UG/L) (39732)	2,4-DB WATER, FLTRD, GF 0.7U REC (UG/L) (38746)	2,6-DI-ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	SILVEX, DIS-SOLVED (UG/L) (39762)	3HYDRXY CARBO-FURAN WAT,FLT GF 0.7U REC (UG/L) (49308)	DNOC WAT,FLT GF 0.7U REC (UG/L) (49299)	ACETO-CHLOR, WATER FLTRD REC (UG/L) (49260)
NOV											
05...	<.010	<.010	<.010	--	--	--	--	--	--	--	--
FEB											
08...	<.010	<.010	<.010	--	--	--	--	--	--	--	--
MAY											
16...	--	--	--	<.0400	<.110	<.100	<.0030	<.0600	<.110	<.420	<.0020
AUG											
08...	--	--	--	<.0400	<.110	<.100	<.0030	<.0600	<.110	<.420	<.0020

DATE	ACIFL-UORFEN WATER, FLTRD, GF 0.7U REC (UG/L) (49315)	ALA-CHLOR, WATER, DISS, REC, (UG/L) (46342)	ALDI-CARB, WATER, FLTRD, GF 0.7U REC (UG/L) (49312)	ALDI-CARB SULFONE WAT,FLT GF 0.7U REC (UG/L) (49313)	ALDICA-RB SUL-FOXIDE, WAT,FLT GF 0.7U REC (UG/L) (49314)	ALPHA BHC DIS-SOLVED (UG/L) (34253)	ATRA-ZINE, WATER, DISS, REC (UG/L) (39632)	METHYL AZIN-PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)	BEN-FLUR-ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)	BENTA-ZON, WATER, FLTRD, GF 0.7U REC (UG/L) (38711)	BRO-MACIL, WATER, DISS, REC (UG/L) (04029)
NOV											
05...	--	--	--	--	--	--	--	--	--	--	--
FEB											
08...	--	--	--	--	--	--	--	--	--	--	--
MAY											
16...	<.0900	<.002	<.210	<.100	<.0210	<.0020	.094	<.0010	<.0020	<.0350	<.190
AUG											
08...	<.0900	<.002	<.210	<.310	<.410	<.0020	.032	<.0010	<.0020	<.0350	<.240

DATE	BRO-MOXYNIL WATER, FLTRD, GF 0.7U REC (UG/L) (49311)	BUTYL-ATE, WATER, DISS, REC (UG/L) (04028)	CAR-BARYL, WATER, FLTRD, GF 0.7U REC (UG/L) (49310)	CAR-BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBO-FURAN, WATER, FLTRD, GF 0.7U REC (UG/L) (49309)	CARBO-FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	TOTAL TRI-THION (UG/L) (39786)	CHLORO-THALO-NIL, WAT,FLT GF 0.7U REC (UG/L) (49306)	CHLOR-PYRIFOS TOTAL RECOVER (UG/L) (38932)	CHLOR-PYRIFOS DIS-SOLVED (UG/L) (38933)	PER-METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)
NOV											
05...	--	--	--	--	--	--	<.014	--	<.014	--	--
FEB											
08...	--	--	--	--	--	--	<.014	--	<.014	--	--
MAY											
16...	<.0400	<.0020	<.0700	<.0030	<.290	<.0030	--	<.480	--	<.0040	<.0050
AUG											
08...	<.0400	<.0020	<.0700	<.0030	<.290	<.0030	--	<.480	--	<.0040	<.0050

DATE	CLOPYR-ALID, WATER, FLTRD, GF 0.7U REC (UG/L) (49305)	CYANA-ZINE, WATER, DISS, REC (UG/L) (04041)	DACTHAL MONO-ACID, WAT,FLT GF 0.7U REC (UG/L) (49304)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	DEETHYL ATRA-ZINE, WATER, DISS, REC (UG/L) (04040)	DI-AZINON, TOTAL (UG/L) (39570)	DI-AZINON, DIS-SOLVED (UG/L) (39572)	DICAMBA WATER, FLTRD, GF 0.7U REC (UG/L) (38442)	DICHLO-BENIL, WATER, FLTRD, GF 0.7U REC (UG/L) (49303)	DICHLOR PROP, WATER, FLTRD, GF 0.7U REC (UG/L) (49302)	DI-ELDRIN DIS-SOLVED (UG/L) (39381)
NOV											
05...	--	--	--	--	--	<.020	--	--	--	--	--
FEB											
08...	--	--	--	--	--	<.020	--	--	--	--	--
MAY											
16...	<.230	<.0040	<.0390	<.0020	E.0147	--	<.002	<.0430	<.0700	<.0320	<.001
AUG											
08...	<.230	<.0040	<.0390	<.0020	E.0128	--	<.002	<.0430	<.0700	<.0320	<.001

08210000 NUECES RIVER NEAR THREE RIVERS, TX--Continued

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

DATE	DINOSEB WATER, FLTRD, GF 0.7U REC (UG/L) (49301)	DISUL-FOTON UNFILT RECOVER (UG/L) (39011)	DISUL-FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	DIURON, WATER, FLTRD, GF 0.7U REC (UG/L) (49300)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	ETHAL-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)	ETHION, TOTAL (UG/L) (39398)	ETHO-PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	FEN-URON, WATER, FLTRD, GF 0.7U REC (UG/L) (49297)	FLUO-METURON WATER, FLTRD, GF 0.7U REC (UG/L) (38811)	FONOFOS WATER DISS REC (UG/L) (04095)
NOV											
05...	--	<.033	--	--	--	--	<.013	--	--	--	--
FEB											
08...	--	<.033	--	--	--	--	<.013	--	--	--	--
MAY											
16...	<.0600	--	<.0170	<.0600	<.0020	<.0040	--	<.0030	<.0700	<.0600	<.0030
AUG											
08...	<.0600	--	<.0170	<.0600	<.0020	<.0040	--	<.0030	<.0700	<.0600	<.0030

DATE	FONOFOS (DY-FONATE) WATER WHOLE TOT.REC (UG/L) (82614)	LINDANE DIS-SOLVED (UG/L) (39341)	LINURON WATER, FLTRD, GF 0.7U REC (UG/L) (38478)	LIN-URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA-THION, TOTAL (UG/L) (39530)	MALA-THION, DIS-SOLVED (UG/L) (39532)	MCPA, WATER, FLTRD, GF 0.7U REC (UG/L) (38482)	MCPB, WATER, FLTRD, GF 0.7U REC (UG/L) (38487)	METHIO-CARB, WATER, FLTRD, GF 0.7U REC (UG/L) (38501)	METH-OMYL, WATER, FLTRD, GF 0.7U REC (UG/L) (49296)	METO-LACHLOR WATER DISSOLV (UG/L) (39415)
NOV											
05...	<.013	--	--	--	<.029	--	--	--	--	--	--
FEB											
08...	<.013	--	--	--	<.029	--	--	--	--	--	--
MAY											
16...	--	<.004	<.0900	<.0020	--	<.005	<.170	<.130	<.0260	<1.80	E.002
AUG											
08...	--	<.004	<.0900	<.0020	--	.007	<.170	<.130	<.0260	<1.22	<.002

DATE	METRI-BUZIN SENCOR WATER DISSOLV (UG/L) (82630)	MOL-INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPROP-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	NEB-URON, WATER, FLTRD, GF 0.7U REC (UG/L) (49294)	NORFLUR AZON, WATER, FLTRD, GF 0.7U REC (UG/L) (49293)	ORY-ZALIN, WATER, FLTRD, GF 0.7U REC (UG/L) (49292)	OXAMYL, WATER, FLTRD, GF 0.7U REC (UG/L) (38866)	P,P' DDE DISSOLV (UG/L) (34653)	PARA-THION, TOTAL (UG/L) (39540)	PARA-THION, DIS-SOLVED (UG/L) (39542)	METHYL PARA-THION, TOTAL (UG/L) (39600)
NOV											
05...	--	--	--	--	--	--	--	--	<.012	--	<.015
FEB											
08...	--	--	--	--	--	--	--	--	<.012	--	<.015
MAY											
16...	<.004	<.0040	<.0030	<.0700	<.0420	<.310	<.0180	<.0060	--	<.004	--
AUG											
08...	<.004	<.0040	<.0030	<.0700	<.0420	<.310	<.0180	<.0060	--	<.004	--

DATE	METHYL PARA-THION WAT FLT 0.7 U GF, REC (UG/L) (82667)	PEB-ULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	PENDI-METH-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PHORATE TOTAL (UG/L) (39023)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PIC-LORAM, WATER, FLTRD, GF 0.7U REC (UG/L) (49291)	PRO-METON, WATER, DISS, REC (UG/L) (04037)	PROP-CHLOR, WATER, DISS, REC (UG/L) (04024)	PRO-PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	PRO-PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	PRO-PHAM, WATER, FLTRD, GF 0.7U REC (UG/L) (49236)
NOV											
05...	--	--	--	<.019	--	--	--	--	--	--	--
FEB											
08...	--	--	--	<.019	--	--	--	--	--	--	--
MAY											
16...	<.0060	<.0040	<.0040	--	<.0020	<.140	E.0077	<.0070	<.0040	<.0130	<.0350
AUG											
08...	<.0060	<.0040	<.0040	--	<.0020	<.0500	<.0180	<.0070	<.0040	<.0130	<.110

DATE	PRO-POXUR, WATER, FLTRD, GF 0.7U REC (UG/L) (38538)	PRON-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	DEF TOTAL (UG/L) (39040)	SI-MAZINE, WATER, DISS, REC (UG/L) (04035)	TEBU-THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER-BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TER-BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	THIO-BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL-LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI-CLOPYR, WATER, FLTRD, GF 0.7U REC (UG/L) (49235)	TRI-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)
NOV											
05...	--	--	<.020	--	--	--	--	--	--	--	--
FEB											
08...	--	--	<.020	--	--	--	--	--	--	--	--
MAY											
16...	<.0800	<.0030	--	<.0050	<.0100	<.0070	<.0130	<.0020	<.0010	<.250	<.0020
AUG											
08...	<.0800	<.0030	--	<.0050	E.0075	<.0070	<.0130	<.0020	<.0010	<.250	<.0020

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08210500 LAKE CORPUS CHRISTI NEAR MATHIS, TX

LOCATION.--Lat 28°02′17", long 97°52′15", San Patricio-Jim Wells County line, Hydrologic Unit 12110111, on right upstream corner of outlet tower at right end of Wesley E. Seale Dam on Nueces River, 0.6 mi upstream from bridge on State Highway 359, and 4.5 mi southwest of Mathis.

DRAINAGE AREA.--16,656 mi^2.

WATER-CONTENT RECORDS

PERIOD OF RECORD.--Sep 1948 to current year. Prior to Oct 1960, month end records only. Oct 1960 to Aug 31, 1998, the city of Corpus Christi provided daily observer readings. Beginning Sep 1, 1998, a USGS recording gage at site. The Natural Resources Conservation Service, in cooperation with the Texas Natural Resources Conservation Commission, collected fragmentary gage-height records in connection with sedimentation studies from Feb 2, 1942, to Jul 10, 1947.

REVISED RECORDS.--WSP 1923: 1953(M), 1957(M).

GAGE.--Water-stage recorder. Supplemental water-stage recorder operated by city of Corpus Christi. Datum of gage is sea level. Prior to Oct 1, 1957, nonrecording gage at various sites 0.2 mi upstream at datum 0.52 ft higher. Oct 1, 1957, to Apr 3, 1961, nonrecording gage near left end of Mathis Dam 0.2 mi upstream at present datum. Satellite telemeter at station.

REMARKS.--No estimated daily contents. Records good. Mathis Dam was completed and storage began Jul 24, 1934. The original capacity at spillway crest (elevation, 74.5 ft) was 54,000 acre-ft, but by Mar 1948 had decreased to 39,400 acre-ft because of sedimentation. Wesley E. Seale Dam was completed and deliberate impoundment began on Apr 26, 1958, submerging the old Mathis Dam. Wesley E. Seale Dam is a rolled earthfill dam, 5,930 ft long, including two spillways. The 1,320-foot north spillway has 33 gates that are operated by movable hydraulic lifts. The 1,080-foot south spillway has 27 gates that are electrically operated from the control tower. The gates were repaired and modified in Aug 1966. All gates in both spillways are 37.5 by 8.75 ft wide. Water for municipal supply for the city of Corpus Christi is released downstream through a 4.0-foot-diameter cylinder valve and three 2.5- by 4.0-foot rectangular openings. The releases are diverted from the river at Calallen 35 mi downstream for domestic, municipal, irrigation, mining, and industrial uses in the Corpus Christi area. The cities of Alice, Beeville, and Mathis withdrew 10,076 acre-ft from the lake during the current year for municipal use. Conservation pool storage is 269,900 acre-ft. Data regarding the dam are given in the following table:

	Elevation (feet)
Top of dam	106.0
Top of north spillway gates	94.46
Top of south spillway gates	94.0
Crest of spillways	88.0
Lowest gated outlet (invert)	55.5

COOPERATION.--Capacity curve 5-C is from a Jan 1987 survey provided by the city of Corpus Christi. Figures for new capacity curve were used beginning Oct 1, 1989.

EXTREMES (AT 0600 HOURS) FOR PERIOD OF RECORD.--Maximum daily contents, 320,000 acre-ft Sep 22, 1967, and Sep 12, 1971; maximum elevation, 94.82 ft Sep 22, 1967; minimum daily, 14,740 acre-ft May 5, 1951, elevation, 67.62 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 184,300 acre-ft, Oct 8, elevation, 90.89 ft; minimum contents, 64,960 acre-ft, Sep 24, elevation, 82.22 ft.

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

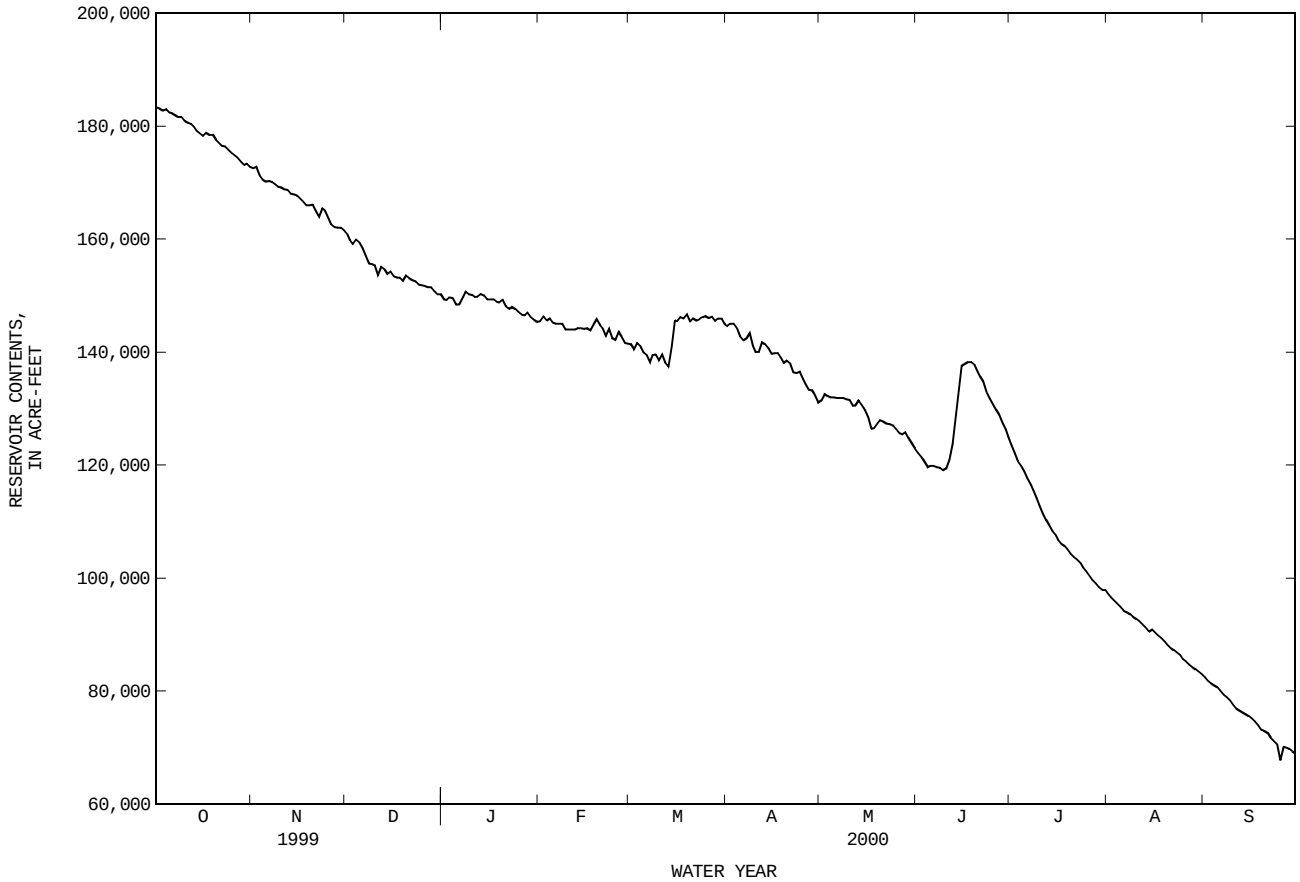
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	183300	172600	160900	149300	145500	141400	144600	131500	122200	123500	97270	82370
2	183100	172800	159900	149200	146300	140500	145100	132600	121500	122200	96600	81790
3	182800	171300	159100	149700	145600	141600	145100	132200	120600	120700	95960	81340
4	183000	170600	159900	149600	145900	141100	144200	132000	119700	119900	95460	81040
5	182400	170200	159400	148500	145300	140000	142800	132000	119900	118900	94850	80630
6	182300	170300	158400	148500	145000	139500	142100	131900	119900	117600	94210	80030
7	182000	170100	157100	149600	145000	138300	142400	131900	119700	116600	93920	79340
8	181700	169800	155700	150700	145000	139500	143300	131900	119600	115600	93650	78920
9	181600	169300	155600	150300	144000	139600	141100	131700	119100	114200	93200	78270
10	181000	169200	155400	150200	144000	138600	140100	131600	119400	112800	92840	77550
11	180600	168900	153700	149800	144000	139600	140100	130500	121000	111400	92390	76990
12	180400	168700	155100	149800	144000	138100	141800	130500	123800	110300	91770	76590
13	179800	168100	154700	150300	144200	137500	141400	131400	127900	109400	91180	76290
14	179200	167900	153800	150000	144300	141000	140700	130600	132900	108300	90570	75900
15	178700	167700	154200	149400	144100	145600	139700	129700	137600	107600	90830	75560
16	178200	167300	153400	149300	144300	145500	139800	128500	137900	106800	90360	75170
17	178800	166700	153200	149300	143900	146200	139800	126500	138200	106100	89810	74540
18	178500	166000	153200	148900	144900	146000	139200	126600	138200	105700	89460	73890
19	178500	166000	152600	148800	145800	146600	138100	127400	137800	105000	88890	73250
20	177600	166100	153600	149200	144800	145400	138500	127900	136600	104300	88190	72940
21	177000	165000	153100	148100	144200	145900	138000	127700	135600	103700	87600	72680
22	176500	164000	152700	147700	142900	145600	136400	127400	134700	103200	87300	71690
23	176400	165400	152500	148000	144100	145800	136300	127300	132900	102700	86820	71150
24	175900	165100	152000	147600	142600	146200	136500	127000	131800	101900	86330	70640
25	175300	163900	151800	147100	142200	146400	135300	126400	130800	101200	85650	67710
26	174900	162600	151700	146600	143600	146100	134400	125700	129700	100400	85160	70110
27	174400	162200	151500	146500	142700	146300	133400	125400	128800	99640	84660	70000
28	173700	162100	151500	147000	141700	145500	133300	125800	127500	99070	84180	69780
29	173200	162000	150800	146200	141500	146000	132400	124800	126400	98390	83830	69390
30	173400	161600	150300	145700	---	145900	131100	123800	125000	97940	83440	69000
31	172800	---	150300	145400	---	144900	---	122900	---	97850	82940	---

08210500 LAKE CORPUS CHRISTI NEAR MATHIS, TX--Continued

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MAX	183300	172800	160900	150700	146300	146600	145100	132600	138200	123500	97270	82370
MIN	172800	161600	150300	145400	141500	137500	131100	122900	119100	97850	82940	67710
(+)	90.22	89.55	88.85	88.54	88.29	88.51	87.61	87.05	87.20	85.24	84.01	82.66
(@)	-11500	-11200	-11300	-4900	-3900	+3400	-13800	-8200	+2100	-27150	-14910	-13940

CAL YR 1999 MAX 190400 MIN 150300 (@) -37000
WTR YR 2000 MAX 183300 MIN 67710 (@)-115300

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



08210500 LAKE CORPUS CHRISTI NEAR MATHIS, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--
CHEMICAL DATA: Mar 1971 to Sep 1976, Mar 1999 to current year.
BIOCHEMICAL DATA: Mar 1971 to Sep 1976.
PESTICIDE DATA: Mar 1999 to current year.

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

280238097521301 - Lk Corpus Christi Site AC

DATE	TIME	RESER-VOIR STORAGE (AC-FT) (00054)	SAM-PLING DEPTH (FEET) (00003)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	TRANS-PAR-ENCY (SECCHI DISK) (M) (00078)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)
FEB												
08...	1853	146000	2.00	516	8.4	16.0	--	10.1	101	170	11	56
08...	1855	--	6.00	516	8.4	15.0	--	10.0	98	--	--	--
08...	1857	--	9.00	517	8.4	14.5	--	10.0	97	--	--	--
08...	1859	--	12.0	516	8.4	14.5	--	9.8	95	--	--	--
08...	1901	--	16.0	516	8.3	14.0	--	9.8	94	--	--	--
08...	1903	--	19.0	516	8.3	14.0	--	9.8	94	--	--	--
08...	1905	--	22.0	516	8.3	14.0	--	9.7	93	--	--	--
08...	1907	--	25.0	516	8.3	14.0	--	9.7	93	--	--	--
08...	1909	--	29.0	517	8.3	14.0	--	9.3	89	--	--	--
08...	1911	--	32.0	516	8.3	14.0	--	8.2	79	180	17	56
MAY												
10...	1330	132000	1.60	585	8.5	26.5	5.58	7.7	97	200	19	63
10...	1332	--	4.80	586	8.5	26.5	--	7.6	95	--	--	--
10...	1334	--	8.00	586	8.5	26.5	--	7.5	94	--	--	--
10...	1336	--	11.2	586	8.5	26.5	--	7.4	93	--	--	--
10...	1338	--	14.4	586	8.5	26.5	--	7.2	90	--	--	--
10...	1340	--	17.6	585	8.4	26.0	--	7.0	87	--	--	--
10...	1342	--	20.8	585	8.4	26.0	--	6.9	86	--	--	--
10...	1344	--	24.0	586	8.4	26.0	--	6.6	82	--	--	--
10...	1346	--	27.2	585	8.4	26.0	--	6.4	80	--	--	--
10...	1348	--	30.4	584	8.2	25.0	--	5.8	71	200	22	63
10...	1350	--	32.0	--	--	--	--	--	--	--	--	--
AUG												
08...	1432	92600	1.00	665	8.4	29.0	2.95	6.8	88	210	23	66
08...	1434	--	10.0	666	8.4	30.0	--	6.6	87	--	--	--
08...	1436	--	20.0	666	8.3	28.5	--	6.6	85	--	--	--
08...	1438	--	29.0	669	8.2	28.5	--	--	--	210	31	68

280238097521301 - Lk Corpus Christi Site AC

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	SODIUM PERCENT (00932)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	CAR-BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	ALKA-LINITY WAT DIS FIX END FIELD CAC03 (MG/L) (39036)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)
FEB												
08...	8.4	33	1	28	8.9	--	--	--	160	28	43	.18
08...	--	--	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--	--	--
08...	8.4	33	1	28	8.8	--	--	--	160	28	44	.18
MAY												
10...	9.5	39	1	29	9.4	7	201	176	--	34	55	.19
10...	--	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--	--
10...	9.5	39	1	29	9.3	0	212	174	--	34	54	.19
10...	--	--	--	--	--	--	--	--	--	--	--	--
AUG												
08...	10	51	2	34	9.4	11	203	184	--	41	73	.24
08...	--	--	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--	--	--
08...	11	48	1	31	10	9	206	183	--	41	73	.30

08210500 LAKE CORPUS CHRISTI NEAR MATHIS, TX--Continued

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

280238097521301 - Lk Corpus Christi Site AC

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	OIL AND GREASE, TOTAL RECOV. GRAVI-METRIC (MG/L) (00556)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)	ANTI-MONY, DIS-SOLVED (UG/L AS SB) (01095)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE) (01010)	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030)	COBALT, DIS-SOLVED (UG/L AS CO) (01035)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)
FEB												
08...	20	295	--	<1.0	<1.0	7	116	<1.0	<1.0	<.80	<1.0	2.1
08...	--	--	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--	--	--
08...	20	294	--	<1.0	<1.0	7	117	<1.0	<1.0	<.80	<1.0	2.1
MAY												
10...	20	336	E4	12	<1.0	7	128	<1.0	<1.0	<.80	<1.0	2.3
10...	--	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	E3	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--	--
10...	21	333	--	7.4	<1.0	7	126	<1.0	<1.0	<.80	<1.0	2.1
10...	--	--	--	--	--	--	--	--	--	--	--	--
AUG												
08...	22	384	--	<1.0	<1.0	10	129	<1.0	<1.0	<.80	<1.0	2.9
08...	--	--	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--	--	--
08...	23	385	--	<1.0	<1.0	10	132	<1.0	<1.0	<.80	<1.0	2.9

280238097521301 - Lk Corpus Christi Site AC

DATE	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	LITHIUM DIS-SOLVED (UG/L AS LI) (01130)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MERCURY DIS-SOLVED (UG/L AS HG) (71890)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060)	NICKEL, DIS-SOLVED (UG/L AS NI) (01065)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)	STRON-TIUM, DIS-SOLVED (UG/L AS SR) (01080)	VANA-DIUM, DIS-SOLVED (UG/L AS V) (01085)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)
FEB												
08...	<10	<1.0	10	<1.0	<.2	1.8	1.7	<2	<1.0	304	E9	1.0
08...	--	--	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--	--	--
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08...	<10	<1.0	10	<1.0	<.2	1.8	1.7	<2	<1.0	301	E10	1.6
MAY												
10...	<10	<1.0	11	<1.0	<.2	1.8	1.7	<2	<1.0	333	15	5.1
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10...	<10	<1.0	11	13	<.2	1.8	1.8	<2	<1.0	332	E9	2.5
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AUG												
08...	<10	<1.0	13	<1.0	<.2	2.4	1.9	<2	<1.0	374	12	<1.0
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08...	<10	<1.0	13	6.6	<.2	2.4	1.9	<2	<1.0	377	14	<1.0

08210500 LAKE CORPUS CHRISTI NEAR MATHIS, TX--Continued

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

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DATE	URANIUM NATURAL DIS-SOLVED (UG/L AS U) (22703)	2,4,5-T DIS-SOLVED (UG/L) (39742)	2,4-D, DIS-SOLVED (UG/L) (39732)	2,4-DB WATER, FLTRD, GF 0.7U REC (UG/L) (38746)	2,6-DI-ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	SILVEX, DIS-SOLVED (UG/L) (39762)	3HYDRXY CARBO-FURAN WAT,FLT GF 0.7U REC (UG/L) (49308)	DNOC WAT,FLT GF 0.7U REC (UG/L) (49299)	ACETO-CHLOR, WATER FLTRD REC (UG/L) (49260)	ACIFL-UORFEN WATER, FLTRD, GF 0.7U REC (UG/L) (49315)	ALA-CHLOR, WATER, DISS, REC, (UG/L) (46342)	ALDI-CARB, WATER, FLTRD, GF 0.7U REC (UG/L) (49312)
FEB												
08...	<1.0	<.0400	<.110	<.100	<.0030	<.0600	<.110	<.420	<.0020	<.0900	<.002	<.210
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MAY												
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DATE	ALDI-CARB SULFONE WAT,FLT GF 0.7U REC (UG/L) (49313)	ALDICA-RB SUL-FOXIDE, WAT,FLT GF 0.7U REC (UG/L) (49314)	ALPHA BHC DIS-SOLVED (UG/L) (34253)	ATRA-ZINE, WATER, DISS, REC (UG/L) (39632)	METHYL AZIN-PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)	BEN-FLUR-ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)	BENTA-ZON, WATER, FLTRD, GF 0.7U REC (UG/L) (38711)	BRO-MACIL, WATER, DISS, REC (UG/L) (04029)	BRO-MOXYNIL WATER, FLTRD, GF 0.7U REC (UG/L) (49311)	BUTYL-ATE, WATER, DISS, REC (UG/L) (04028)	CAR-BARYL, WATER, FLTRD, GF 0.7U REC (UG/L) (49310)	CAR-BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)
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08210500 LAKE CORPUS CHRISTI NEAR MATHIS, TX--Continued

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

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DATE	CARBO-FURAN, WATER, FLTRD, GF 0.7U REC (UG/L) (49309)	CARBO-FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	TRI-THION, TOTAL IN BOT-TOM MA-TERIAL (UG/KG) (39787)	CHLORO-THALO-NIL, WAT,FLT GF 0.7U REC (UG/L) (49306)	CHLOR-PYRIFOS DIS-SOLVED (UG/L) (38933)	PER-METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	CLOPYR-ALID, WATER, FLTRD, GF 0.7U REC (UG/L) (49305)	CYANA-ZINE, WATER, DISS, REC (UG/L) (04041)	DACTHAL MONO-ACID, WAT,FLT GF 0.7U REC (UG/L) (49304)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	DEETHYL ATRA-ZINE, WATER, DISS, REC (UG/L) (04040)	DI-AZINON, TOTAL IN BOT-TOM MA-TERIAL (UG/KG) (39571)
FEB												
08...	<.290	<.0030	--	<.480	<.0040	<.0050	<.230	<.0040	<.0390	<.0020	E.0068	--
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MAY												
10...	<.290	<.0030	--	<.480	<.0040	<.0050	<.230	<.0040	<.0390	<.0020	E.0096	--
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DATE	DI-AZINON, DIS-SOLVED (UG/L) (39572)	DICAMBA WATER, FLTRD, GF 0.7U REC (UG/L) (38442)	DICHLO-BENIL, WATER, FLTRD, GF 0.7U REC (UG/L) (49303)	DICHLOR PROP, WATER, FLTRD, GF 0.7U REC (UG/L) (49302)	DI-ELDRIN DIS-SOLVED (UG/L) (39381)	DINOSEB WATER, FLTRD, GF 0.7U REC (UG/L) (49301)	DISUL-FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	DIURON, WATER, FLTRD, GF 0.7U REC (UG/L) (49300)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	ETHAL-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)	ETHION, TOTAL IN BOT-TOM MA-TERIAL (UG/KG) (39399)	ETHO-PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)
FEB												
08...	<.002	<.0430	<.0700	<.0320	<.001	<.0600	<.0170	<.0600	<.0020	<.0040	--	<.0030
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MAY												
10...	.004	<.0430	<.0700	<.0320	<.001	<.0600	<.0170	<.0600	<.0020	<.0040	--	<.0030
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08210500 LAKE CORPUS CHRISTI NEAR MATHIS, TX--Continued

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

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DATE	FEN-URON, WATER, FLTRD, GF 0.7U REC (UG/L) (49297)	FLUO-METURON WATER, FLTRD, GF 0.7U REC (UG/L) (38811)	FONOFOS WATER DISS REC (UG/L) (04095)	LINDANE DIS-SOLVED (UG/L) (39341)	LINURON WATER, FLTRD, GF 0.7U REC (UG/L) (38478)	LIN-URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA-THION, TOTAL IN BOT-TOM MA-TERIAL (UG/KG) (39531)	MALA-THION, DIS-SOLVED (UG/L) (39532)	MCPA, WATER, FLTRD, GF 0.7U REC (UG/L) (38482)	MCPB, WATER, FLTRD, GF 0.7U REC (UG/L) (38487)	METHIO-CARB, WATER, FLTRD, GF 0.7U REC (UG/L) (38501)
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08...	<.0700	<.0600	<.0030	<.004	<.0900	<.0020	--	<.005	<.170	<.130	<.0260
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MAY											
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DATE	METH-OMYL, WATER, FLTRD, GF 0.7U REC (UG/L) (49296)	METO-LACHLOR WATER DISSOLV (UG/L) (39415)	METRI-BUZIN SENCOR WATER DISSOLV (UG/L) (82630)	MOL-INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPROP-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	NEB-URON, WATER, FLTRD, GF 0.7U REC (UG/L) (49294)	NORFLUR AZON, WATER, FLTRD, GF 0.7U REC (UG/L) (49293)	ORY-ZALIN, WATER, FLTRD, GF 0.7U REC (UG/L) (49292)	OXAMYL, WATER, FLTRD, GF 0.7U REC (UG/L) (38866)	P,P' DDE DISSOLV (UG/L) (34653)	PARA-THION, TOTAL IN BOT-TOM MA-TERIAL (UG/KG) (39541)
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08...	<.860	<.002	<.004	<.0040	<.0030	<.0700	<.0420	<.310	<.0180	<.0060	--
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MAY											
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08210500 LAKE CORPUS CHRISTI NEAR MATHIS, TX--Continued

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

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DATE	PARA-THION, DIS-SOLVED (UG/L) (39542)	METHYL PARA-THION, TOT. IN BOTTOM MATL. (UG/KG) (39601)	METHYL PARA-THION WAT FLT 0.7 U GF, REC (UG/L) (82667)	PEB-ULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	PENDI-METH-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PIC-LORAM, WATER, FLTRD, GF 0.7U REC (UG/L) (49291)	PRO-METON, WATER, DISS, REC (UG/L) (04037)	PROP-CHLOR, WATER, DISS, REC (UG/L) (04024)	PRO-PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	PRO-PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)
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08...	<.004	--	<.0060	<.0040	<.0040	<.0020	<.160	E.0020	<.0070	<.0040	<.0130
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MAY											
10...	<.004	--	<.0060	<.0040	<.0040	<.0020	<.0500	E.0073	<.0070	<.0040	<.0130
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AUG											
08...	<.004	--	<.0060	<.0040	<.0040	<.0020	--	E.0038	<.0070	<.0040	<.0130
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280238097521301 - Lk Corpus Christi Site AC

DATE	PRO-PHAM, WATER, FLTRD, GF 0.7U REC (UG/L) (49236)	PRO-POXUR, WATER, FLTRD, GF 0.7U REC (UG/L) (38538)	PRON-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	SI-MAZINE, WATER, DISS, REC (UG/L) (04035)	TEBU-THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER-BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TER-BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	THIO-BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL-LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI-CLOPYR, WATER, FLTRD, GF 0.7U REC (UG/L) (49235)	TRI-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)
FEB											
08...	<.0350	<.0800	<.0030	<.0050	<.0100	<.0070	<.0130	<.0020	<.0010	<.250	E.0023
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MAY											
10...	<.0350	<.0800	<.0030	<.0070	<.0100	<.0070	<.0130	<.0020	<.0010	<.250	<.0020
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AUG											
08...	--	--	<.0030	<.0050	<.0100	<.0070	<.0130	<.0020	<.0010	--	<.0020
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WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

280656097542801 - Lk Corpus Christi Site BC

DATE	TIME	SAM-PLING DEPTH (FEET) (00003)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	TRANS-PAR-ENCY (SECCHI DISK) (M) (00078)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	OIL AND GREASE, TOTAL RECOV. GRAVI-METRIC (MG/L) (00556)	2,4,5-T DIS-SOLVED (UG/L) (39742)	2,4-D, DIS-SOLVED (UG/L) (39732)	2,4-DB WATER, FLTRD, GF 0.7U REC (UG/L) (38746)
FEB												
08...	1805	.50	540	8.4	18.5	4.59	10.0	106	--	<.0400	<.110	<.100
08...	1807	2.50	537	8.4	18.0	--	9.9	104	--	--	--	--
08...	1809	4.50	532	8.4	14.5	--	10.0	97	--	--	--	--
08...	1811	6.50	531	8.4	14.0	--	10.0	96	--	--	--	--
08...	1813	8.50	532	8.4	14.0	--	9.9	95	--	--	--	--
08...	1815	10.5	534	8.3	13.5	--	9.7	92	--	--	--	--
08...	1817	12.5	536	8.3	13.5	--	9.6	91	--	--	--	--
08...	1819	14.5	535	8.3	13.0	--	9.4	88	--	--	--	--
08...	1821	16.5	535	8.3	13.0	--	9.5	89	--	--	--	--
08...	1823	18.5	534	8.3	14.0	--	10.0	96	--	--	--	--
MAY												
10...	1250	1.80	630	8.5	27.5	3.94	7.4	94	E3	<.0400	<.110	<.100
10...	1252	3.60	630	8.5	27.5	--	7.4	94	--	--	--	--
10...	1254	5.40	629	8.5	27.0	--	7.3	92	--	--	--	--
10...	1256	7.20	629	8.5	27.0	--	7.3	92	--	--	--	--
10...	1258	9.00	629	8.5	27.0	--	7.3	92	--	--	--	--
10...	1301	10.8	629	8.5	27.0	--	7.2	91	--	--	--	--
10...	1303	12.6	629	8.5	27.0	--	7.2	91	--	--	--	--
10...	1305	14.4	629	8.5	27.0	--	7.2	91	--	--	--	--
10...	1307	16.2	629	8.5	27.0	--	7.2	91	--	--	--	--
AUG												
08...	1510	1.00	669	8.3	29.5	2.95	--	--	--	--	--	--
08...	1512	10.0	669	8.3	29.5	--	--	--	--	--	--	--
08...	1514	21.0	671	8.1	29.0	--	--	--	--	--	--	--

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DATE	2,6-DI-ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	SILVEX, DIS-SOLVED (UG/L) (39762)	3HYDRXY CARBO-FURAN WAT,FLT GF 0.7U REC (UG/L) (49308)	DNOC WAT,FLT GF 0.7U REC (UG/L) (49299)	ACETO-CHLOR, WATER FLTRD REC (UG/L) (49260)	ACIFL-UORFEN WATER, FLTRD, GF 0.7U REC (UG/L) (49315)	ALA-CHLOR, WATER, DISS, REC, (UG/L) (46342)	ALDI-CARB, WATER, FLTRD, GF 0.7U REC (UG/L) (49312)	ALDI-CARB SULFONE WAT,FLT GF 0.7U REC (UG/L) (49313)	ALDICA-RB SUL-FOXIDE, WAT,FLT GF 0.7U REC (UG/L) (49314)	ALPHA BHC DIS-SOLVED (UG/L) (34253)	ATRA-ZINE, WATER, DISS, REC (UG/L) (39632)
FEB												
08...	<.0030	<.0600	<.110	<.420	<.0020	<.0900	<.002	<.210	<1.00	<.0210	<.0020	.027
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MAY												
10...	<.0030	<.0600	<.110	<.420	<.0020	<.0900	<.002	<.380	<.100	<.0210	<.0020	.101
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AUG												
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08210500 LAKE CORPUS CHRISTI NEAR MATHIS, TX--Continued

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

280656097542801 - Lk Corpus Christi Site BC

DATE	METHYL AZIN-PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)	BEN-FLUR-ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)	BENTA-ZON, WATER, FLTRD, GF 0.7U REC (UG/L) (38711)	BRO-MACIL, WATER, DISS, REC (UG/L) (04029)	BRO-MOXYNIL WATER, FLTRD, GF 0.7U REC (UG/L) (49311)	BUTYL-ATE, WATER, DISS, REC (UG/L) (04028)	CAR-BARYL, WATER, FLTRD, GF 0.7U REC (UG/L) (49310)	CAR-BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBO-FURAN, WATER, FLTRD, GF 0.7U REC (UG/L) (49309)	CARBO-FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	CHLORO-THALO-NIL, WAT,FLT GF 0.7U REC (UG/L) (49306)	CHLOR-PYRIFOS DIS-SOLVED (UG/L) (38933)
FEB												
08...	<.0010	<.0020	<.0350	<.110	<.0400	<.0020	<.0700	<.0030	<.290	<.0030	<.480	<.0040
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MAY												
10...	<.0010	<.0020	<.0350	<.0600	<.0400	<.0020	E.0406	E.0442	<.290	<.0030	<.480	<.0040
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AUG												
08...	<.0010	<.0020	--	--	--	<.0020	--	<.0030	--	<.0030	--	<.0040
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280656097542801 - Lk Corpus Christi Site BC

DATE	PER-METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	CLOPYR-ALID, WATER, FLTRD, GF 0.7U REC (UG/L) (49305)	CYANA-ZINE, WATER, DISS, REC (UG/L) (04041)	DACTHAL MONO-ACID, WAT,FLT GF 0.7U REC (UG/L) (49304)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	DEETHYL ATRA-ZINE, WATER, DISS, REC (UG/L) (04040)	DI-AZINON, DIS-SOLVED (UG/L) (39572)	DICAMBA WATER, FLTRD, GF 0.7U REC (UG/L) (38442)	DICHLO-BENIL, WATER, FLTRD, GF 0.7U REC (UG/L) (49303)	DICHLOR PROP, WATER, FLTRD, GF 0.7U REC (UG/L) (49302)	DI-ELDRIN DIS-SOLVED (UG/L) (39381)	DINOSEB WATER, FLTRD, GF 0.7U REC (UG/L) (49301)
FEB												
08...	<.0050	<.360	<.0040	<.0390	<.0020	E.0074	<.002	<.0430	<.0700	<.0320	<.001	<.0600
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MAY												
10...	<.0050	<.230	<.0040	<.0390	<.0020	E.0134	<.002	<.0430	<.0700	<.0320	<.001	<.0600
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AUG												
08...	<.0050	--	<.0040	--	<.0020	E.0182	<.002	--	--	--	<.001	--
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08210500 LAKE CORPUS CHRISTI NEAR MATHIS, TX--Continued

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

280656097542801 - Lk Corpus Christi Site BC

DATE	DISUL-FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	DIURON, WATER, FLTRD, GF 0.7U REC (UG/L) (49300)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	ETHAL-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)	ETHO-PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	FEN-URON, WATER, FLTRD, GF 0.7U REC (UG/L) (49297)	FLUO-METURON WATER, FLTRD, GF 0.7U REC (UG/L) (38811)	FONOFOS WATER DISS REC (UG/L) (04095)	LINDANE DIS-SOLVED (UG/L) (39341)	LINURON WATER, FLTRD, GF 0.7U REC (UG/L) (38478)	LIN-URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA-THION, DIS-SOLVED (UG/L) (39532)
FEB												
08...	<.0170	<.0600	<.0020	<.0040	<.0030	<.0700	<.0600	<.0030	<.004	<.0900	<.0020	<.005
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MAY												
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AUG												
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DATE	MCPA, WATER, FLTRD, GF 0.7U REC (UG/L) (38482)	MCPB, WATER, FLTRD, GF 0.7U REC (UG/L) (38487)	METHIO-CARB, WATER, FLTRD, GF 0.7U REC (UG/L) (38501)	METH-OMYL, WATER, FLTRD, GF 0.7U REC (UG/L) (49296)	METO-LACHLOR WATER DISSOLV (UG/L) (39415)	METRI-BUZIN SENCOR WATER DISSOLV (UG/L) (82630)	MOL-INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPROP-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	NEB-URON, WATER, FLTRD, GF 0.7U REC (UG/L) (49294)	NORFLUR AZON, WATER, FLTRD, GF 0.7U REC (UG/L) (49293)	ORY-ZALIN, WATER, FLTRD, GF 0.7U REC (UG/L) (49292)	OXAMYL, WATER, FLTRD, GF 0.7U REC (UG/L) (38866)
FEB												
08...	<.170	<.130	<.0260	<.160	<.002	<.004	<.0040	<.0030	<.0700	<.0420	<.310	<.260
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MAY												
10...	<.170	<.130	<.0260	<.0170	.013	<.004	<.0040	<.0030	<.0700	<.0420	<.310	<.0180
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AUG												
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08210500 LAKE CORPUS CHRISTI NEAR MATHIS, TX--Continued

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

280656097542801 - Lk Corpus Christi Site BC

DATE	P,P' DDE DISSOLV (UG/L) (34653)	PARA-THION, DIS-SOLVED (UG/L) (39542)	METHYL PARA-THION WAT FLT 0.7 U GF, REC (UG/L) (82667)	PEB-ULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	PENDI-METH-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PIC-LORAM, WATER, FLTRD, GF 0.7U REC (UG/L) (49291)	PRO-METON, WATER, DISS, REC (UG/L) (04037)	PROP-CHLOR, WATER, DISS, REC (UG/L) (04024)	PRO-PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	PRO-PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)
FEB											
08...	<.0060	<.004	<.0060	<.0040	<.0040	<.0020	<.0500	E.0022	<.0070	<.0040	<.0130
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MAY											
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AUG											
08...	<.0060	<.004	<.0060	<.0040	<.0040	<.0020	--	E.0042	<.0070	<.0040	<.0130
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280656097542801 - Lk Corpus Christi Site BC

DATE	PRO-PHAM, WATER, FLTRD, GF 0.7U REC (UG/L) (49236)	PRO-POXUR, WATER, FLTRD, GF 0.7U REC (UG/L) (38538)	PRON-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	SI-MAZINE, WATER, DISS, REC (UG/L) (04035)	TEBU-THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER-BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TER-BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	THIO-BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL-LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI-CLOPYR, WATER, FLTRD, GF 0.7U REC (UG/L) (49235)	TRI-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)
FEB											
08...	<.0350	<.0800	<.0030	<.0050	<.0100	<.0070	<.0130	<.0020	<.0010	<.250	E.0022
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MAY											
10...	<.0350	<.0800	<.0030	<.0050	<.0100	<.0070	<.0130	<.0020	<.0010	<.250	<.0020
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AUG											
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08210500 LAKE CORPUS CHRISTI NEAR MATHIS, TX--Continued

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

281411097564801 - Lk Corpus Christi Site EC

DATE	TIME	SAM-PLING DEPTH (FEET) (00003)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	OIL AND GREASE, TOTAL RECOV. GRAVI-METRIC (MG/L) (00556)	2,4,5-T DIS-SOLVED (UG/L) (39742)	2,4-D, DIS-SOLVED (UG/L) (39732)	2,4-DB WATER, FLTRD, GF 0.7U REC (UG/L) (38746)
FEB											
08...	1645	1.50	950	8.2	19.5	9.6	104	--	<.0400	<.110	<.100
08...	1647	3.00	951	8.1	18.5	9.4	100	--	--	--	--
08...	1649	4.50	951	7.9	16.0	9.2	92	--	--	--	--
08...	1651	6.00	952	7.9	16.0	9.1	91	--	--	--	--
08...	1653	7.50	953	7.8	14.5	9.0	88	--	--	--	--
08...	1655	9.00	957	7.8	14.0	8.9	86	--	--	--	--
08...	1657	10.5	965	7.7	14.0	8.9	86	--	--	--	--
08...	1659	12.0	965	7.7	13.5	9.0	86	--	--	--	--
08...	1701	13.5	969	7.6	13.5	9.3	89	--	--	--	--
08...	1703	15.0	969	7.6	14.0	10.1	97	--	--	--	--
MAY											
09...	1440	1.00	1040	8.1	28.5	6.7	87	<1	<.0400	<.110	<.100
09...	1442	2.50	1040	8.1	28.5	6.6	86	--	--	--	--
09...	1444	4.00	1040	8.1	28.5	6.4	83	--	--	--	--
09...	1446	5.50	1040	8.1	28.0	6.1	79	--	--	--	--
09...	1448	7.00	1040	8.1	28.5	6.3	82	--	--	--	--
09...	1450	8.50	1040	8.1	28.0	6.0	77	--	--	--	--
09...	1452	10.0	1040	8.0	28.0	5.8	75	--	--	--	--
09...	1454	11.5	1050	7.9	28.0	5.6	72	--	--	--	--
09...	1456	13.0	1040	7.9	27.5	5.5	70	--	--	--	--
09...	1458	15.0	--	--	--	--	--	--	--	--	--
AUG											
08...	1310	1.00	1160	8.1	31.5	6.4	86	--	--	--	--
08...	1312	10.0	1180	7.9	30.5	4.4	58	--	--	--	--
08...	1314	14.0	1170	7.7	30.5	4.3	57	--	--	--	--

281411097564801 - Lk Corpus Christi Site EC

DATE	2,6-DI-ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	SILVEX, DIS-SOLVED (UG/L) (39762)	3HYDRXY CARBO-FURAN WAT,FLT GF 0.7U REC (UG/L) (49308)	DNOC WAT,FLT GF 0.7U REC (UG/L) (49299)	ACETO-CHLOR, WATER FLTRD REC (UG/L) (49260)	ACIFL-UORFEN WATER, FLTRD, GF 0.7U REC (UG/L) (49315)	ALA-CHLOR, WATER, DISS, REC, (UG/L) (46342)	ALDI-CARB, WATER, FLTRD, GF 0.7U REC (UG/L) (49312)	ALDI-CARB SULFONE WAT,FLT GF 0.7U REC (UG/L) (49313)	ALDICA-RB SUL-FOXIDE, WAT,FLT GF 0.7U REC (UG/L) (49314)	ALPHA BHC DIS-SOLVED (UG/L) (34253)
FEB											
08...	<.0030	<.0600	<.110	<.420	<.0020	<.0900	<.002	<.210	<.100	<.0210	<.0020
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MAY											
09...	<.0030	<.0600	<.110	<.420	<.0020	<.0900	.007	E.101	<.100	<.0210	<.0020
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AUG											
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08210500 LAKE CORPUS CHRISTI NEAR MATHIS, TX--Continued

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

281411097564801 - Lk Corpus Christi Site EC

DATE	ATRA-ZINE, WATER, DISS, REC (UG/L) (39632)	METHYL AZIN-PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)	BEN-FLUR-ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)	BENTA-ZON, WATER, FLTRD, GF 0.7U REC (UG/L) (38711)	BRO-MACIL, WATER, DISS, REC (UG/L) (04029)	BRO-MOXYNIL WATER, FLTRD, GF 0.7U REC (UG/L) (49311)	BUTYL-ATE, WATER, DISS, REC (UG/L) (04028)	CAR-BARYL, WATER, FLTRD, GF 0.7U REC (UG/L) (49310)	CAR-BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBO-FURAN, WATER, FLTRD, GF 0.7U REC (UG/L) (49309)	CARBO-FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)
FEB											
08...	.028	<.0010	<.0020	<.0350	<.0600	<.0400	<.0020	<.0700	<.0030	<.290	<.0030
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MAY											
09...	.083	<.0100	<.0020	<.0350	<.120	<.0400	<.0020	E.0169	E.0268	<.290	<.0030
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AUG											
08...	.028	<.0010	<.0020	--	--	--	<.0020	--	<.0030	--	<.0030
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281411097564801 - Lk Corpus Christi Site EC

DATE	TRI-THION, TOTAL IN BOT-TOM MA-TERIAL (UG/KG) (39787)	CHLORO-THALO-NIL, WAT,FLT GF 0.7U REC (UG/L) (49306)	CHLOR-PYRIFOS DIS-SOLVED (UG/L) (38933)	PER-METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	CLOPYR-ALID, WATER, FLTRD, GF 0.7U REC (UG/L) (49305)	CYANA-ZINE, WATER, DISS, REC (UG/L) (04041)	DACTHAL MONO-ACID, WAT,FLT GF 0.7U REC (UG/L) (49304)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	DEETHYL ATRA-ZINE, WATER, DISS, REC (UG/L) (04040)	DI-AZINON, TOTAL IN BOT-TOM MA-TERIAL (UG/KG) (39571)	DI-AZINON, DIS-SOLVED (UG/L) (39572)
FEB											
08...	--	<.480	<.0040	<.0050	<.240	<.0040	<.0390	<.0020	E.0134	--	<.002
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MAY											
09...	--	<.480	<.0040	<.0050	<.230	<.0040	<.0390	<.0020	E.0139	--	<.005
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AUG											
08...	--	--	<.0040	<.0050	--	<.0040	--	<.0020	E.0119	--	<.002
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08210500 LAKE CORPUS CHRISTI NEAR MATHIS, TX--Continued

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

281411097564801 - Lk Corpus Christi Site EC

DATE	DICAMBA WATER, FLTRD, GF 0.7U REC (UG/L) (38442)	DICHLO-BENIL, WATER, FLTRD, GF 0.7U REC (UG/L) (49303)	DICHLOR PROP, WATER, FLTRD, GF 0.7U REC (UG/L) (49302)	DI-ELDRIN DIS-SOLVED (UG/L) (39381)	DINOSEB WATER, FLTRD, GF 0.7U REC (UG/L) (49301)	DISUL-FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	DIURON, WATER, FLTRD, GF 0.7U REC (UG/L) (49300)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	ETHAL-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)	ETHION, TOTAL IN BOT-TOM MA-TERIAL (UG/KG) (39399)	ETHO-PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)
FEB											
08...	<.0430	<.0700	<.0320	<.001	<.0600	<.0170	<.0600	<.0020	<.0040	--	<.0030
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MAY											
09...	<.0430	<.0700	<.0320	<.001	<.0600	<.0170	E.0244	<.0020	<.0040	--	<.0030
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AUG											
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281411097564801 - Lk Corpus Christi Site EC

DATE	FEN-URON, WATER, FLTRD, GF 0.7U REC (UG/L) (49297)	FLUO-METURON WATER, FLTRD, GF 0.7U REC (UG/L) (38811)	FONOFOS WATER DISS REC (UG/L) (04095)	LINDANE DIS-SOLVED (UG/L) (39341)	LINURON WATER, FLTRD, GF 0.7U REC (UG/L) (38478)	LIN-URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA-THION, TOTAL IN BOT-TOM MA-TERIAL (UG/KG) (39531)	MALA-THION, DIS-SOLVED (UG/L) (39532)	MCPA, WATER, FLTRD, GF 0.7U REC (UG/L) (38482)	MCPB, WATER, FLTRD, GF 0.7U REC (UG/L) (38487)	METHIO-CARB, WATER, FLTRD, GF 0.7U REC (UG/L) (38501)
FEB											
08...	<.0700	<.0600	<.0030	<.004	<.0900	<.0020	--	<.005	<.170	<.130	<.0260
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MAY											
09...	<.0700	<.0600	<.0030	<.004	<.0900	<.0020	--	.009	<.170	<.130	<.0260
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AUG											
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08210500 LAKE CORPUS CHRISTI NEAR MATHIS, TX--Continued

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

281411097564801 - Lk Corpus Christi Site EC

DATE	METH-OMYL, WATER, FLTRD, GF 0.7U REC (UG/L) (49296)	METO-LACHLOR WATER DISSOLV (UG/L) (39415)	METRI-BUZIN SENCOR WATER DISSOLV (UG/L) (82630)	MOL-INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPROP-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	NEB-URON, WATER, FLTRD, GF 0.7U REC (UG/L) (49294)	NORFLUR AZON, WATER, FLTRD, GF 0.7U REC (UG/L) (49293)	ORY-ZALIN, WATER, FLTRD, GF 0.7U REC (UG/L) (49292)	OXAMYL, WATER, FLTRD, GF 0.7U REC (UG/L) (38866)	P,P' DDE DISSOLV (UG/L) (34653)	PARA-THION, TOTAL IN BOT-TOM MA-TERIAL (UG/KG) (39541)
FEB											
08...	<.420	<.002	<.004	<.0040	<.0030	<.0700	<.0420	<.310	<.0180	<.0060	--
08...	--	--	--	--	--	--	--	--	--	--	--
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08...	--	--	--	--	--	--	--	--	--	--	--
MAY											
09...	<.0170	.005	<.004	<.0040	<.0070	<.0700	<.0420	<.400	<.0180	<.0060	--
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09...	--	--	--	--	--	--	--	--	--	--	<.400
AUG											
08...	--	<.002	<.004	<.0040	<.0030	--	--	--	--	<.0060	--
08...	--	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--	--

281411097564801 - Lk Corpus Christi Site EC

DATE	PARA-THION, DIS-SOLVED (UG/L) (39542)	METHYL PARA-THION, TOT. IN BOTTOM MATL. (UG/KG) (39601)	METHYL PARA-THION WAT FLT 0.7 U GF, REC (UG/L) (82667)	PEB-ULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	PENDI-METH-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PIC-LORAM, WATER, FLTRD, GF 0.7U REC (UG/L) (49291)	PRO-METON, WATER, DISS, REC (UG/L) (04037)	PROP-CHLOR, WATER, DISS, REC (UG/L) (04024)	PRO-PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	PRO-PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)
FEB											
08...	<.004	--	<.0060	<.0040	<.0040	<.0020	<.0500	E.0036	<.0070	<.0040	<.0130
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MAY											
09...	<.004	--	<.0060	<.0040	<.0040	<.0020	<.0500	E.0075	<.0070	<.0040	<.0130
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09...	--	<.400	--	--	--	--	--	--	--	--	--
AUG											
08...	<.004	--	<.0060	<.0040	<.0040	<.0020	--	<.0180	<.0070	<.0040	<.0130
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08210500 LAKE CORPUS CHRISTI NEAR MATHIS, TX--Continued

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

281411097564801 - Lk Corpus Christi Site EC

DATE	PRO-PHAM, WATER, FLTRD, GF 0.7U REC (UG/L) (49236)	PRO-POXUR, WATER, FLTRD, GF 0.7U REC (UG/L) (38538)	PRON-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	SI-MAZINE, WATER, DISS, REC (UG/L) (04035)	TEBU-THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER-BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TER-BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	THIO-BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL-LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI-CLOPYR, WATER, FLTRD, GF 0.7U REC (UG/L) (49235)	TRI-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)
FEB											
08...	<.0350	<.0800	<.0030	<.0050	E.0060	<.0070	<.0130	<.0020	<.0010	<.250	E.0016
08...	--	--	--	--	--	--	--	--	--	--	--
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MAY											
09...	<.330	<.0800	<.0030	<.0070	E.0076	<.0070	<.0130	<.0020	<.0010	<.250	<.0020
09...	--	--	--	--	--	--	--	--	--	--	--
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09...	--	--	--	--	--	--	--	--	--	--	--
AUG											
08...	--	--	<.0030	<.0050	<.0100	<.0070	<.0130	<.0020	<.0010	--	<.0020
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08211000 NUECES RIVER NEAR MATHIS, TX

LOCATION.--Lat 28°02'17", long 97°51'36", San Patricio-Jim Wells County line, Hydrologic Unit 12110111, at downstream side of bridge on State Highway 359, 0.6 mi downstream from Wesley E. Seale Dam, 4 mi southwest of Mathis, and at mile 46.7.

DRAINAGE AREA.--16,660 mi^2, of which 16,656 mi^2 is above Wesley E. Seale Dam.

PERIOD OF RECORD.--Aug 1939 to current year.
Water-quality records.--Chemical data: Oct 1947 to Sep 1991. Specific conductance: Oct 1947 to Sep 1991. Water temperature: Oct 1947 to Sep 1991.

GAGE.--Water-stage recorder. Datum of gage is 26.53 ft above sea level. Aug 5, 1939, to Aug 29, 1984, on left bank 9 ft upstream at datum 1.0 ft higher. Aug 29 to Nov 5, 1984, on left bank 9 ft upstream at present datum. Nov 5, 1984, to Aug 5, 1987, on left bank 154 ft downstream at present datum. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records fair. Since installation of gage in water year 1939, at least 10% of contributing drainage area has been regulated by Lake Corpus Christi (station 08210500, conservation pool storage 269,900 acre-ft) 0.6 mi upstream. Upstream from Lake Corpus Christi, flow is affected by recharge to permeable formations, small diversions, and minor regulation. Water for municipal and industrial uses at Corpus Christi is released from Lake Corpus Christi above gage and is diverted from river at Calallen 34 mi downstream. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water-quality data.

EXTREMES OUTSIDE PERIOD OF RECORD.--A stage of about 41 ft, present datum, occurred Sep 20, 1919, from information by Texas and New Orleans Railroad Co. and is the second highest known. Maximum stage since at least 1888, that of Sep 24, 1967.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	87	65	78	119	71	74	67	95	277	443	157	141
2	86	61	67	81	81	118	80	91	277	443	150	163
3	86	123	128	137	81	103	75	91	277	442	144	149
4	86	108	213	93	57	98	74	89	277	441	143	149
5	71	77	212	85	69	98	74	80	227	439	139	170
6	73	77	176	92	65	84	75	72	150	439	134	221
7	73	76	186	59	52	93	100	71	114	439	136	192
8	72	77	243	50	126	97	122	81	118	439	141	179
9	72	88	285	49	157	102	125	81	102	439	144	195
10	72	94	91	53	174	102	127	89	96	438	144	154
11	80	120	119	68	200	102	123	99	91	437	141	180
12	108	119	112	66	145	102	114	100	97	437	141	162
13	154	95	124	86	137	97	123	108	216	437	141	160
14	120	74	87	52	92	154	119	109	354	386	143	151
15	91	73	88	49	60	66	126	101	357	154	147	134
16	89	81	86	49	100	41	126	109	369	153	132	126
17	86	103	82	91	166	67	127	124	438	144	120	144
18	81	99	82	147	199	76	141	121	440	136	139	183
19	78	89	82	151	170	85	204	76	441	135	191	179
20	63	88	68	123	173	80	205	64	439	131	183	157
21	70	88	65	143	153	74	204	106	439	137	131	149
22	83	83	75	145	136	66	203	120	439	152	139	141
23	97	81	68	149	143	64	202	110	439	174	154	134
24	96	79	68	154	154	60	206	134	409	175	151	126
25	96	71	78	154	168	60	209	148	440	167	142	118
26	122	70	78	166	184	60	211	253	441	163	136	106
27	173	70	80	175	185	61	215	267	441	160	133	84
28	236	69	134	120	104	63	204	274	440	149	133	84
29	157	75	140	56	43	75	106	279	440	142	140	99
30	88	80	144	51	---	69	98	280	441	144	147	125
31	65	---	158	56	---	67	---	278	---	162	149	---
TOTAL	3011	2553	3697	3069	3645	2558	4185	4100	9526	8677	4465	4455
MEAN	97.1	85.1	119	99.0	126	82.5	140	132	318	280	144	148
MAX	236	123	285	175	200	154	215	280	441	443	191	221
MIN	63	61	65	49	43	41	67	64	91	131	120	84
AC-FT	5970	5060	7330	6090	7230	5070	8300	8130	18890	17210	8860	8840

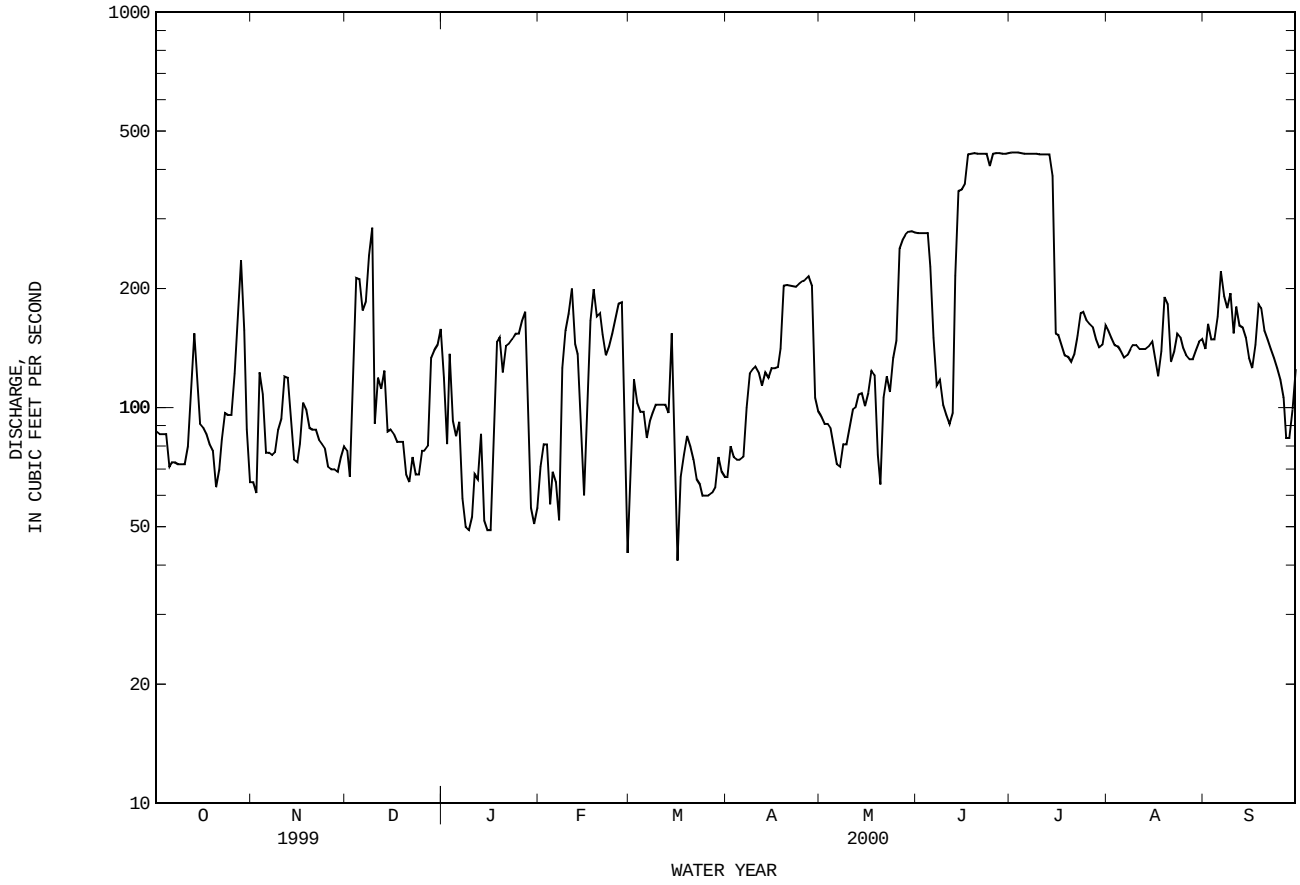
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 2000, BY WATER YEAR (WY)

MEAN	1233	425	199	294	327	279	431	1188	1272	820	517	1490
MAX	14850	4552	1871	4994	5165	4377	4639	10500	8204	10440	10050	24950
(WY)	1972	1977	1977	1958	1958	1958	1977	1941	1987	1942	1971	1967
MIN	55.3	31.0	27.9	28.1	24.3	31.0	37.3	39.3	43.7	67.0	41.6	44.0
(WY)	1953	1940	1940	1940	1942	1948	1948	1948	1948	1951	1943	1945

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1939 - 2000	
ANNUAL TOTAL	100190		53941			
ANNUAL MEAN	274		147		708	
HIGHEST ANNUAL MEAN					2167	1967
LOWEST ANNUAL MEAN					104	1964
HIGHEST DAILY MEAN	4970	Sep 7	443	Jul 1	125000	Sep 25 1967
LOWEST DAILY MEAN	61	Nov 2	41	Mar 16	6.8	Aug 15 1940
ANNUAL SEVEN-DAY MINIMUM	71	Dec 20	60	Jan 9	15	Aug 9 1940
INSTANTANEOUS PEAK FLOW			446	Dec 9	i138000	Sep 24 1967
INSTANTANEOUS PEAK STAGE			4.06	Dec 9	a48.70	Sep 24 1967
ANNUAL RUNOFF (AC-FT)	198700		107000		513000	
10 PERCENT EXCEEDS	312		277		1200	
50 PERCENT EXCEEDS	146		122		130	
90 PERCENT EXCEEDS	80		68		53	

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

08211000 NUECES RIVER NEAR MATHIS, TX--Continued



08211200 NUECES RIVER AT BLUNTZER, TX
(Partial-record station)

LOCATION.--Lat 27°56′15", long 97°46′32", Nueces County, Hydrologic Unit 12110111, on right bank, at downstream end of bridge on Farm Road 666, 1.2 mi south of San Patricio, 5.5 mi upstream from Cayamon Creek, and 10.3 mi northwest of Calallen.

DRAINAGE AREA.--16,772 mi^2.

PERIOD OF RECORD.--Jan 1966 to Feb 1967, Mar 1992 to current year (daily mean discharges when instantaneous maximum discharge is less than 2,950 ft^3/s). Prior to Oct 1994, published as "above Calallen".

GAGE.--Water-stage recorder. Datum of gage is sea level. Prior to Mar 27, 1992, at same site at datum 6.04 ft higher. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records fair. Since installation of gage in Jan 1966, at least 10% of contributing drainage area has been regulated by Lake Corpus Christi (station 08210500, conservation pool storage 269,900 acre-ft). Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water-quality data.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 27.18 ft Mar 29, 1992; minimum discharge, 67 ft^3/s Feb 29, Mar 01, 2000.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 12.08 ft Mar 15; minimum discharge, 67 ft^3/s, Feb 29, Mar 1, gage height, 6.64 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	350	92	102	146	79	72	78	99	316	449	178	155
2	166	89	102	100	85	94	82	95	317	450	171	157
3	123	99	106	99	88	107	84	93	317	450	166	161
4	110	139	205	114	87	97	82	92	318	449	161	156
5	104	119	275	89	72	99	83	90	317	449	160	155
6	89	99	281	97	87	99	83	84	202	448	155	192
7	91	97	247	88	76	91	84	79	146	448	152	219
8	91	96	270	79	80	96	103	82	100	447	153	184
9	90	99	354	74	134	99	109	85	100	447	154	205
10	90	106	241	74	146	100	119	85	91	446	157	190
11	88	122	105	77	203	97	120	91	86	445	156	169
12	98	138	115	82	163	97	118	93	83	443	155	184
13	136	140	108	86	144	97	121	97	90	442	155	166
14	164	111	107	84	123	162	120	100	296	441	154	170
15	124	98	92	75	87	648	119	101	366	345	162	158
16	108	96	93	74	78	277	124	99	378	187	162	143
17	107	105	89	74	117	89	125	104	406	160	149	138
18	110	129	88	110	180	87	125	123	442	145	139	160
19	103	114	89	138	171	150	172	106	451	142	175	178
20	97	111	91	151	172	104	219	80	451	140	209	172
21	86	111	82	125	176	90	227	81	450	138	184	163
22	91	112	85	144	145	83	231	99	449	141	142	154
23	108	105	82	150	133	80	230	106	449	161	157	150
24	117	104	82	155	142	78	230	104	444	175	164	143
25	118	102	82	161	163	76	235	139	431	182	163	137
26	117	95	88	168	190	76	239	193	447	174	157	131
27	161	94	85	185	205	75	244	286	449	176	150	120
28	221	94	95	191	203	76	242	308	449	171	149	114
29	264	94	127	103	88	79	205	313	448	161	148	113
30	161	100	129	76	---	82	108	315	448	158	153	123
31	108	---	139	74	---	79	---	316	---	160	154	---
TOTAL	3991	3210	4236	3443	3817	3636	4461	4138	9737	9170	4944	4760
MEAN	129	107	137	111	132	117	149	133	325	296	159	159
MAX	350	140	354	191	205	648	244	316	451	450	209	219
MIN	86	89	82	74	72	72	78	79	83	138	139	113
AC-FT	7920	6370	8400	6830	7570	7210	8850	8210	19310	18190	9810	9440

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08211500 NUECES RIVER AT CALALLEN, TX
(Partial-record station)

LOCATION.--Lat 27°52′34", long 97°37′32", Nueces County, Hydrologic Unit 12110111, below the Cunningham pumping station in Corpus Christi, 0.4 mi upstream from Calallen Dam, 0.5 mi northwest of Calallen, about 1.4 mi downstream from bridge on Interstate Highway 37, about 1.0 mi upstream from Missouri-Pacific Railroad bridge, and about 7.5 mi upstream from Nueces Bay.

DRAINAGE AREA.--16,920 mi^2.

PERIOD OF RECORD.--Oct 1983 to Sep 1989 (maximum annual gage height and discharge). Oct 1989 to current year (daily mean discharges when instantaneous maximum discharge is less than 2,570 ft^3/s).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 0.84 ft above sea level. From Aug 12, 1915, to Mar 31, 1919, and Apr 1, 1920, to Jul 31, 1950, nonrecording gage at same site and datum. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records poor. Since installation of gage in Oct 1989, at least 10% of contributing drainage area has been regulated by Lake Corpus Christi (station 08210500, conservation pool storage 269,900 acre-ft). There are numerous diversions above station for agricultural, municipal, and industrial supply. The cities of Corpus Christi, San Patricio, Robstown, and the Nueces River Water Control and Improvement District No. 3 have a combined withdrawal capacity of 205,500 gallons/minute.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,780 ft^3/s Jun 11, 1987 (gage height, 9.25 ft), from extension of rating above 2,500 ft^3/s; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 790 ft^3/s, Mar 15, gage height, 5.89 ft; minimum discharge, 0.00 ft^3/s, on many days, gage height, 3.62 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	381	19	6.7	.00	3.4	5.1	.00	20	182	348	17	.00
2	113	2.3	17	2.1	17	.00	.00	25	190	355	28	.00
3	48	.00	4.5	.00	14	4.9	.90	21	223	364	14	.00
4	26	.00	47	.00	22	13	15	10	219	351	8.9	.00
5	27	7.0	129	.11	3.1	24	8.8	22	162	351	10	.00
6	26	3.0	133	6.0	8.1	16	9.2	22	164	343	5.3	.00
7	7.2	.00	149	25	12	17	.00	3.8	41	338	1.1	.23
8	1.2	.00	115	19	.00	7.9	.00	.00	8.5	358	.00	.00
9	.00	.00	192	8.8	.00	4.9	.00	.00	9.2	348	.00	37
10	.00	.00	235	1.6	.00	9.0	2.8	.00	38	347	.27	64
11	.00	.00	28	4.4	.00	19	15	.00	52	323	.00	17
12	.00	.00	.00	19	13	11	33	.00	20	329	.00	.43
13	.00	12	.11	.00	10	19	45	.00	8.3	341	.00	11
14	.31	23	22	2.0	26	54	38	11	46	343	.00	41
15	8.4	6.3	9.6	4.1	33	592	34	30	259	272	13	27
16	11	.00	.00	1.0	9.0	369	36	30	301	72	51	5.8
17	29	.00	.22	.00	.00	86	36	9.1	319	22	23	.05
18	14	.00	18	.00	.00	38	30	13	378	7.9	.66	.00
19	20	.00	47	9.4	2.5	75	9.9	49	415	11	15	.20
20	11	.00	52	69	30	73	84	32	416	11	34	16
21	4.9	4.3	40	59	15	53	101	1.3	385	.00	3.3	25
22	.57	3.9	26	23	4.2	24	102	3.3	392	.00	.00	26
23	.93	.41	44	36	.00	26	83	46	399	.00	.00	26
24	.94	7.1	24	51	.89	4.2	100	19	400	3.3	12	19
25	17	18	.14	58	29	3.1	79	20	338	23	20	16
26	.31	24	.00	72	72	3.7	87	53	349	14	19	19
27	.00	23	.00	77	101	.00	91	132	366	7.1	10	12
28	.00	21	.00	110	95	.11	94	162	354	22	9.2	6.4
29	62	1.9	.00	82	54	.00	97	176	355	22	1.4	.00
30	98	.00	.00	43	---	.00	33	182	346	6.6	.00	.00
31	41	---	.00	11	---	1.9	---	185	---	.00	.00	---
TOTAL	948.76	176.21	1339.27	793.51	574.19	1553.81	1264.60	1277.50	7135.0	5332.90	296.13	369.11
MEAN	30.6	5.87	43.2	25.6	19.8	50.1	42.2	41.2	238	172	9.55	12.3
MAX	381	24	235	110	101	592	102	185	416	364	51	64
MIN	.00	.00	.00	.00	.00	.00	.00	.00	8.3	.00	.00	.00
AC-FT	1880	350	2660	1570	1140	3080	2510	2530	14150	10580	587	732

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08211503 RINCON BAYOU CHANNEL NEAR CALALLEN, TX

LOCATION.--Lat 27°53′48", long 97°37′31", San Patricio County, Hydrologic Unit 12110111, on the left bank, 800 ft downstream of the Nueces River, about 1400 ft downstream from bridge on Interstate Highway 37, and 2.8 mi NNE of Calallen.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--May 1996 to Aug 10, 2000 (discontinued).

GAGE.--Water-stage recorder and acoustic velocity meter. Datum of gage is sea level. Satelilite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. No flow many days. Flow in channel is bidirectional and determined by Nueces Bay tides and discharge at Nueces River at Calallen (station 08211500), 1.2 mi upstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge 300 ft^3/s, Oct 19, 1998, gage height 7.36 ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 47 ft^3/s, Mar 14, gage height, 3.26 ft; minimum discharge, no flow many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.23	.00	-.17	.00	1.4	-1.4	2.8	19	2.1	2.4	-.02	---
2	-.02	.00	2.7	.02	1.7	-1.2	-3.7	-.53	1.4	2.5	-.12	---
3	2.1	-.13	3.0	-.04	-.19	-.61	-.14	-7.4	.94	2.6	.15	---
4	1.4	-.10	.82	.00	.00	-.26	.00	-.59	-.18	-.69	-.24	---
5	.96	-.17	.00	.00	.00	-.99	-.44	2.7	-.64	-.62	-.07	---
6	5.5	-.05	.00	.00	.00	-1.9	.12	-.66	.10	-1.1	-.20	---
7	1.3	-.09	.23	.04	.00	1.9	-.47	-2.1	.14	-1.8	-.24	---
8	-.19	-.15	.38	-.26	.00	-2.2	-.23	-2.4	2.6	-1.6	-.22	---
9	-8.5	-.30	1.1	-.07	.00	-.95	.55	-3.4	2.0	-.58	-.27	---
10	-5.5	-.27	-.23	.00	.00	.74	3.7	-2.9	-.17	.33	.23	---
11	-3.4	-.27	-.65	.00	.00	-.26	1.9	-2.3	-2.3	-1.1	---	---
12	-1.9	-.36	.05	.00	.00	-.41	-3.5	-3.6	-3.1	-.60	---	---
13	-.76	-.19	.00	.00	.00	-.36	-.65	-3.6	-1.4	-.69	---	---
14	-.99	-.37	.00	-.21	-.13	11	-.71	.19	-.45	-.57	---	---
15	-.43	-.10	.00	-.09	.12	23	.65	-2.0	.35	-.49	---	---
16	-1.3	-.07	.00	-.39	-.22	-12	-2.8	.85	2.7	-.28	---	---
17	-1.6	-.22	.00	-.02	.03	-3.8	-1.2	3.8	2.5	-.07	---	---
18	-.72	.09	-.02	-.01	-.37	-1.7	-.70	.04	.15	-.34	---	---
19	-.23	-.47	-.02	.00	-.32	-.64	3.2	-1.2	.48	-.18	---	---
20	-.17	-.07	-.05	.03	-.52	-1.5	-1.6	-8.2	.30	-.17	---	---
21	-.30	.79	.11	-.09	-.82	2.5	-.62	-4.1	-2.2	-.08	---	---
22	-.09	2.0	-.18	-.16	.93	4.7	.93	-2.1	-1.9	-.24	---	---
23	-.01	.04	-.17	-.35	-.56	-3.4	.22	-.46	-1.6	-.01	---	---
24	-.02	.28	.00	.00	1.0	-5.1	-.27	-.22	-1.7	-.43	---	---
25	-.04	-.03	.00	.00	3.5	-3.7	-.09	.78	-1.8	-.22	---	---
26	-.22	-.09	.00	-.11	-.58	-1.6	-.37	1.5	-1.3	-.14	---	---
27	-.12	-.16	.00	-.42	-1.5	-.67	.04	-.81	-1.1	-.45	---	---
28	-.76	-.06	.00	.00	.07	.40	-.70	-4.1	.00	-.48	---	---
29	.04	.00	.00	.00	-.05	-.31	.07	-.99	.59	.22	---	---
30	.45	-.24	.00	.00	---	-.38	4.4	-.61	2.0	-.05	---	---
31	-.06	---	.00	.09	---	2.9	---	.01	---	.09	---	---
TOTAL	-15.35	-0.76	6.90	-2.04	3.49	1.80	0.39	-25.40	-1.49	-4.84	---	---
MEAN	-.50	-.025	.22	-.066	.12	.058	.013	-.82	-.050	-.16	---	---
MAX	5.5	2.0	3.0	.09	3.5	23	4.4	19	2.7	2.6	---	---
MIN	-8.5	-.47	-.65	-.42	-1.5	-12	-3.7	-8.2	-3.1	-1.8	---	---
AC-FT	-30	-1.5	14	-4.0	6.9	3.6	.8	-50	-3.0	-9.6	---	---

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 2000, BY WATER YEAR (WY)

MEAN	11.2	.96	.024	-.028	.21	.28	.48	-.49	2.25	2.82	-.011	6.24
MAX	37.1	2.84	.22	.040	.45	.44	1.73	.50	12.6	12.8	.35	13.8
(WY)	1999	1999	2000	1997	1998	1999	1999	1996	1997	1997	1996	1999
MIN	-.50	-.086	-.10	-.072	-.020	.058	-.11	-2.16	-1.39	-.17	-.66	.094
(WY)	2000	1998	1999	1999	1999	2000	1997	1999	1999	1998	1999	1997

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		WATER YEARS 1996 - 2000	
ANNUAL TOTAL	388.38			
ANNUAL MEAN	1.06		2.00	
HIGHEST ANNUAL MEAN			4.46	1999
LOWEST ANNUAL MEAN			-.12	2000
HIGHEST DAILY MEAN	177	Sep 10	274	Oct 21 1998
LOWEST DAILY MEAN	-60	Sep 12	-69	Jul 19 1997
ANNUAL SEVEN-DAY MINIMUM	-22	Sep 12	-29	Oct 16 1997
INSTANTANEOUS PEAK FLOW			300	Oct 21 1998
INSTANTANEOUS PEAK STAGE			7.36	Oct 21 1998
ANNUAL RUNOFF (AC-FT)	770		1450	
10 PERCENT EXCEEDS	2.3		3.7	
50 PERCENT EXCEEDS	-.15		.00	
90 PERCENT EXCEEDS	-4.8		-2.1	

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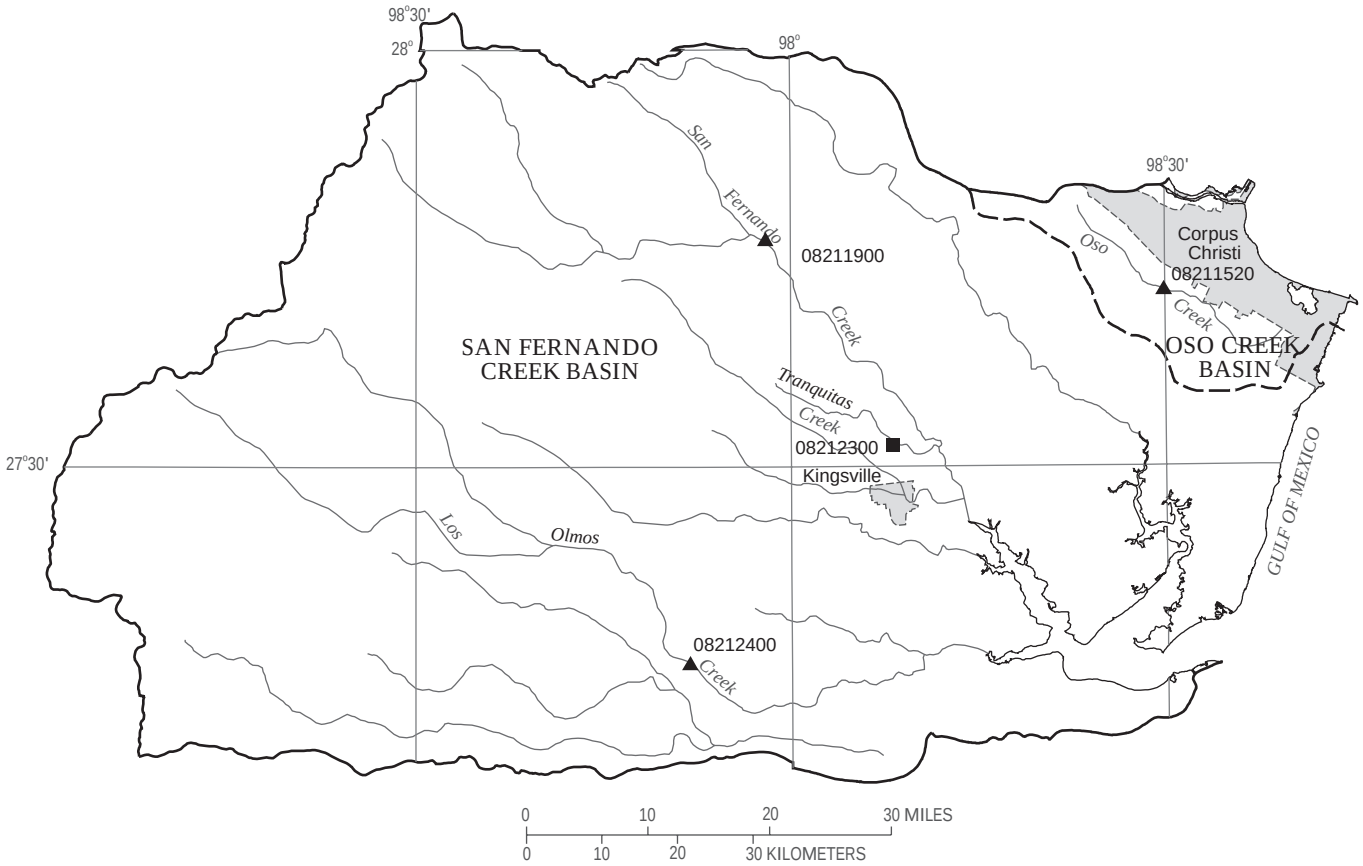


EXPLANATION

08212400 ▲ **Surface-water continuous station and number**

08212300 ■ **Surface-water partial record/stage only station and number**

Figure 8.--Map showing location of gaging stations in the Oso Creek and San Fernando Creek Basins

08211520 Oso Creek at Corpus Christi, TX 314
08211900 San Fernando Creek at Alice, TX 316
08212300 Tranquitas Creek at Kingsville, TX 383
08212400 Los Olmos Creek near Falfurias, TX 320

08211520 OSO CREEK AT CORPUS CHRISTI, TX

LOCATION.--Lat 27°42′40", long 97°30′06", Nueces County, Hydrologic Unit 12110202, on left downstream end of bridge on Farm Road 763, 1.5 mi south of intersection of Farm Roads 763 and 665, 1.6 mi downstream from mouth of West Oso Creek, and 1.9 mi southwest of intersection of Farm Road 665 and State Highway 357.

DRAINAGE AREA.--90.3 mi^2.

PERIOD OF RECORD.--Sep 1972 to current year.
Water-quality records.--Chemical data: Jul 1972 to Aug 1988. Biochemical data: Jul 1972 to Aug 1988. Pesticide data: Jul 1972 to Jul 1981.

GAGE.--Water-stage recorder. Datum of gage is 1.91 ft below sea level. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. No known regulation or diversions. An undetermined amount of water from oil-field operations enters the stream upstream from station at various points. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water-quality data.

EXTREMES OUTSIDE PERIOD OF RECORD.--A stage of 24.5 ft occurred in May 1968, from information by local resident.

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

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar 14	1915	1,100	18.65	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

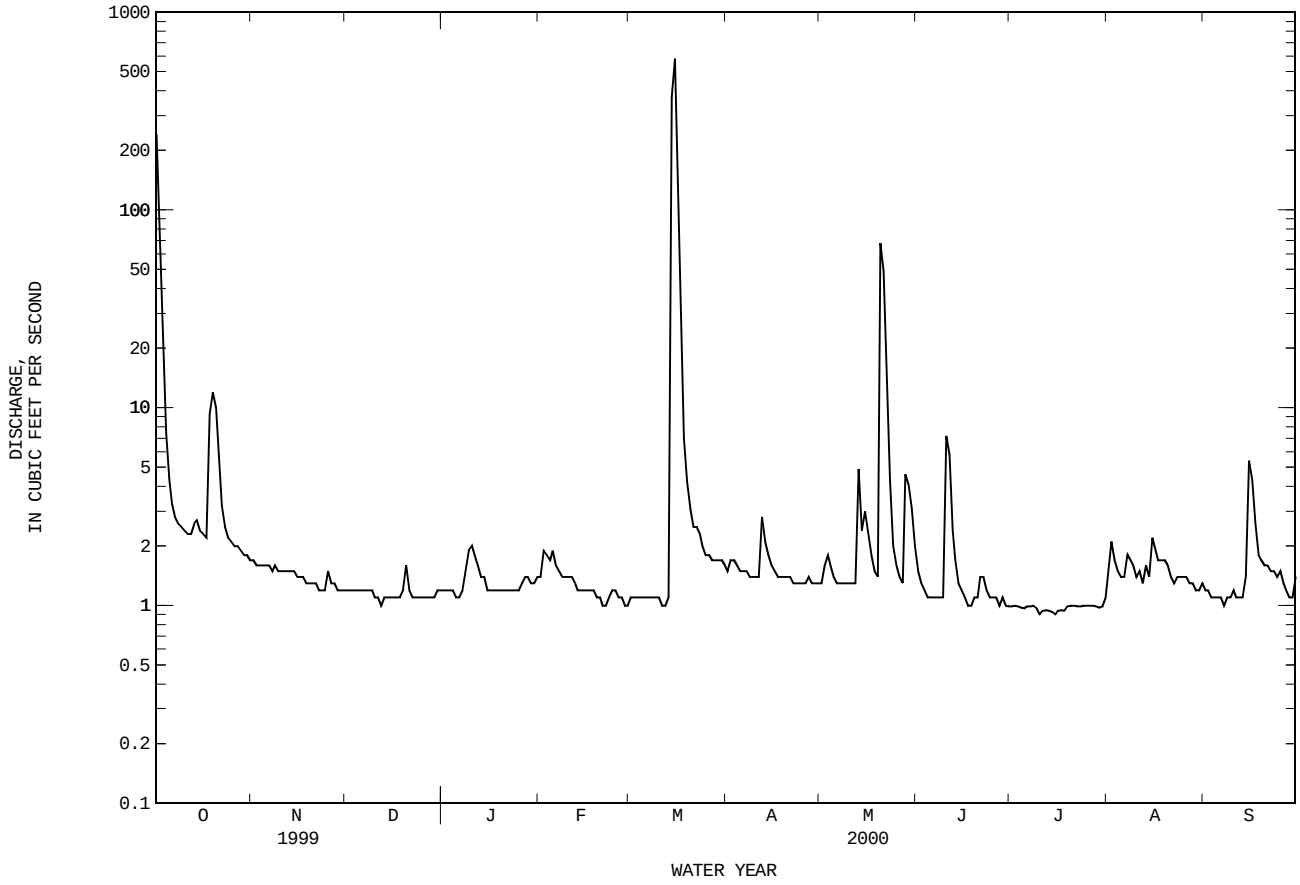
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	241	1.7	1.2	1.2	1.4	1.1	1.5	1.3	1.5	.99	1.5	1.2
2	49	1.6	1.2	1.2	1.9	1.1	1.7	1.6	1.3	1.0	2.1	1.2
3	18	1.6	1.2	1.2	1.8	1.1	1.7	1.8	1.2	.99	1.7	1.1
4	7.5	1.6	1.2	1.2	1.7	1.1	1.6	1.6	1.1	.98	1.5	1.1
5	4.3	1.6	1.2	1.1	1.9	1.1	1.5	1.4	1.1	.97	1.4	1.1
6	3.3	1.6	1.2	1.1	1.6	1.1	1.5	1.3	1.1	.99	1.4	1.1
7	2.8	1.5	1.2	1.2	1.5	1.1	1.5	1.3	1.1	.99	1.8	1.0
8	2.6	1.6	1.2	1.5	1.4	1.1	1.4	1.3	1.1	1.0	1.7	1.1
9	2.5	1.5	1.2	1.9	1.4	1.1	1.4	1.3	1.1	.97	1.6	1.1
10	2.4	1.5	1.1	2.0	1.4	1.1	1.4	1.3	7.2	.90	1.4	1.2
11	2.3	1.5	1.1	1.8	1.4	1.0	1.4	1.3	5.8	.94	1.5	1.1
12	2.3	1.5	1.0	1.6	1.3	1.0	2.8	1.3	2.4	.95	1.3	1.1
13	2.6	1.5	1.1	1.4	1.2	1.1	2.1	4.9	1.7	.94	1.6	1.1
14	2.7	1.5	1.1	1.4	1.2	373	1.8	2.4	1.3	.93	1.4	1.4
15	2.4	1.4	1.1	1.2	1.2	580	1.6	3.0	1.2	.90	2.2	5.4
16	2.3	1.4	1.1	1.2	1.2	84	1.5	2.3	1.1	.94	1.9	4.3
17	2.2	1.4	1.1	1.2	1.2	22	1.4	1.8	1.0	.95	1.7	2.6
18	9.3	1.3	1.1	1.2	1.2	7.0	1.4	1.5	1.0	.94	1.7	1.8
19	12	1.3	1.2	1.2	1.1	4.2	1.4	1.4	1.1	.99	1.7	1.7
20	10	1.3	1.6	1.2	1.1	3.1	1.4	68	1.1	1.0	1.6	1.6
21	5.6	1.3	1.2	1.2	1.0	2.5	1.4	49	1.4	1.0	1.4	1.6
22	3.2	1.2	1.1	1.2	1.0	2.5	1.3	17	1.4	.99	1.3	1.5
23	2.5	1.2	1.1	1.2	1.1	2.3	1.3	4.3	1.2	.99	1.4	1.5
24	2.2	1.2	1.1	1.2	1.2	2.0	1.3	2.0	1.1	1.0	1.4	1.4
25	2.1	1.5	1.1	1.2	1.2	1.8	1.3	1.6	1.1	1.0	1.4	1.5
26	2.0	1.3	1.1	1.3	1.1	1.8	1.3	1.4	1.1	1.0	1.4	1.3
27	2.0	1.3	1.1	1.4	1.1	1.7	1.4	1.3	1.0	1.0	1.3	1.2
28	1.9	1.2	1.1	1.4	1.0	1.7	1.3	4.6	1.1	.99	1.3	1.1
29	1.8	1.2	1.1	1.3	1.0	1.7	1.3	4.1	1.0	.98	1.2	1.1
30	1.8	1.2	1.2	1.3	---	1.7	1.3	3.1	.99	.99	1.2	1.4
31	1.7	---	1.2	1.4	---	1.6	---	2.0	---	1.1	1.3	---
TOTAL	408.3	42.5	35.8	41.1	37.8	1108.7	45.2	192.5	46.89	30.30	47.3	46.9
MEAN	13.2	1.42	1.15	1.33	1.30	35.8	1.51	6.21	1.56	.98	1.53	1.56
MAX	241	1.7	1.6	2.0	1.9	580	2.8	68	7.2	1.1	2.2	5.4
MIN	1.7	1.2	1.0	1.1	1.0	1.0	1.3	1.3	.99	.90	1.2	1.0
AC-FT	810	84	71	82	75	2200	90	382	93	60	94	93

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1972 - 2000, BY WATER YEAR (WY)

MEAN	71.3	19.7	14.0	11.9	19.7	17.6	20.3	30.5	51.6	22.6	27.4	43.4
MAX	477	119	181	130	238	128	176	185	379	339	454	228
(WY)	1998	1982	1992	1984	1982	1995	1997	1993	1993	1976	1980	1979
MIN	1.26	1.40	1.15	1.33	1.29	.89	1.05	1.34	1.09	.86	1.07	1.56
(WY)	1991	1994	2000	2000	1975	1988	1975	1998	1998	1996	1997	2000

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1972 - 2000	
ANNUAL TOTAL	8173.4		2083.29			
ANNUAL MEAN	22.4		5.69		29.2	
HIGHEST ANNUAL MEAN					54.3	1992
LOWEST ANNUAL MEAN					3.03	1989
HIGHEST DAILY MEAN	2050	Aug 24	580	Mar 15	6160	Aug 11 1980
LOWEST DAILY MEAN	1.0	Dec 12	.90	Jul 10	.27	Mar 12 1988
ANNUAL SEVEN-DAY MINIMUM	1.1	Dec 10	.93	Jul 10	.35	Mar 9 1988
INSTANTANEOUS PEAK FLOW			1100	Mar 14	12100	Aug 10 1980
INSTANTANEOUS PEAK STAGE			18.65	Mar 14	29.37	Aug 10 1980
INSTANTANEOUS LOW FLOW			.85	Sep 7	.85	Sep 7 2000
ANNUAL RUNOFF (AC-FT)	16210		4130		21160	
10 PERCENT EXCEEDS	9.7		2.6		19	
50 PERCENT EXCEEDS	2.0		1.3		2.3	
90 PERCENT EXCEEDS	1.3		1.0		1.2	

08211520 OSO CREEK AT CORPUS CHRISTI, TX--Continued



08211900 SAN FERNANDO CREEK AT ALICE, TX

LOCATION.--Lat 27°46'20", long 98°02'00", Jim Wells County, Hydrologic Unit 12110204, on left bank 34 ft downstream from downstream bridge of two bridges on State Highways 44 and 359, 0.5 mi downstream from confluence of San Diego and Chiltipin Creeks, 2.3 mi upstream from head of Pintas Creek, and 2.7 mi northeast of Alice.

DRAINAGE AREA.--507 mi^2.

PERIOD OF RECORD.--Dec 1964 to Mar 1987, Apr 1999 to current year.

GAGE.--Water-stage recorder. Datum of gage is 160.05 ft above sea level. Prior to Mar 1987 at datum 1.63 ft higher at same site. Satellite telemeter at station.

REMARKS.--Records good. San Diego Creek joins Chiltipin Creek below Lake Alice to form San Fernando Creek. Since installation of gage in Dec 1964, at least 10% of contributing drainage area has been regulated by Lake Alice (station 08211850, conservation pool storage 2,780 acre-ft)) 2.3 mi upstream from Chiltipin Creek. Flow is affected at times by discharge from the flood-detention pools of ten floodwater-retarding structures with a combined detention capacity of 35,980 acre-ft. These structures control runoff from 170 mi^2 in the San Diego-Rosita drainage basins. Records furnished by city of Alice show that 354 acre-ft of sewage effluent was discharged into San Diego Creek 1.3 mi upstream. which comprises most of the low flow. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water-quality data.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	1.6	4.1	.62	1.7	1.3
2	---	---	---	---	---	---	e1.6	2.0	3.8	.97	1.8	1.3
3	---	---	---	---	---	---	1.6	2.4	2.5	.44	1.3	1.2
4	---	---	---	---	---	---	2.0	3.0	2.5	.87	1.5	1.2
5	---	---	---	---	---	---	1.9	2.5	1.9	1.5	1.1	1.1
6	---	---	---	---	---	---	2.3	2.2	2.2	1.9	1.1	1.4
7	---	---	---	---	---	---	2.1	2.7	2.7	2.5	.67	1.4
8	---	---	---	---	---	---	2.9	1.9	2.3	7.5	.95	1.5
9	---	---	---	---	---	---	2.9	3.2	2.6	2.8	1.4	1.5
10	---	---	---	---	---	---	1.7	2.5	.82	2.0	1.5	1.5
11	---	---	---	---	---	---	3.5	.47	1.1	1.9	.78	1.0
12	---	---	---	---	---	---	3.9	2.5	1.9	2.3	.75	1.0
13	---	---	---	---	---	---	2.4	4.1	2.1	2.2	1.0	1.1
14	---	---	---	---	---	---	3.9	3.1	3.1	.99	.95	1.1
15	---	---	---	---	---	---	3.2	2.5	4.0	1.2	1.5	1.0
16	---	---	---	---	---	---	2.5	2.7	6.2	.98	1.4	.90
17	---	---	---	---	---	---	1.9	2.9	12	1.9	2.0	1.4
18	---	---	---	---	---	---	2.2	5.3	18	2.7	e2.7	1.4
19	---	---	---	---	---	---	2.5	3.9	4.6	1.9	e2.4	1.4
20	---	---	---	---	---	---	3.3	3.9	3.2	1.1	e2.5	1.2
21	---	---	---	---	---	---	1.1	2.9	2.4	1.9	e2.6	.68
22	---	---	---	---	---	---	2.7	2.3	1.7	1.5	e2.7	1.3
23	---	---	---	---	---	---	2.2	2.6	1.6	1.4	11	1.1
24	---	---	---	---	---	---	2.3	4.2	1.6	.77	110	.95
25	---	---	---	---	---	---	2.0	3.3	1.3	.78	129	.50
26	---	---	---	---	---	---	2.6	1.3	1.3	.96	11	1.2
27	---	---	---	---	---	---	3.1	3.0	1.3	.88	3.4	1.0
28	---	---	---	---	---	---	3.5	2.5	1.1	1.1	2.6	.69
29	---	---	---	---	---	---	2.6	2.4	1.3	1.6	2.1	1.6
30	---	---	---	---	---	---	2.4	2.1	1.1	1.5	2.1	1.4
31	---	---	---	---	---	---	---	3.8	---	.78	1.7	---
TOTAL	---	---	---	---	---	---	---	85.77	96.32	51.44	307.20	35.32
MEAN	---	---	---	---	---	---	---	2.77	3.21	1.66	9.91	1.18
MAX	---	---	---	---	---	---	---	5.3	18	7.5	129	1.6
MIN	---	---	---	---	---	---	---	.47	.82	.44	.67	.50
AC-FT	---	---	---	---	---	---	---	170	191	102	609	70

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 1999h, BY WATER YEAR (WY)

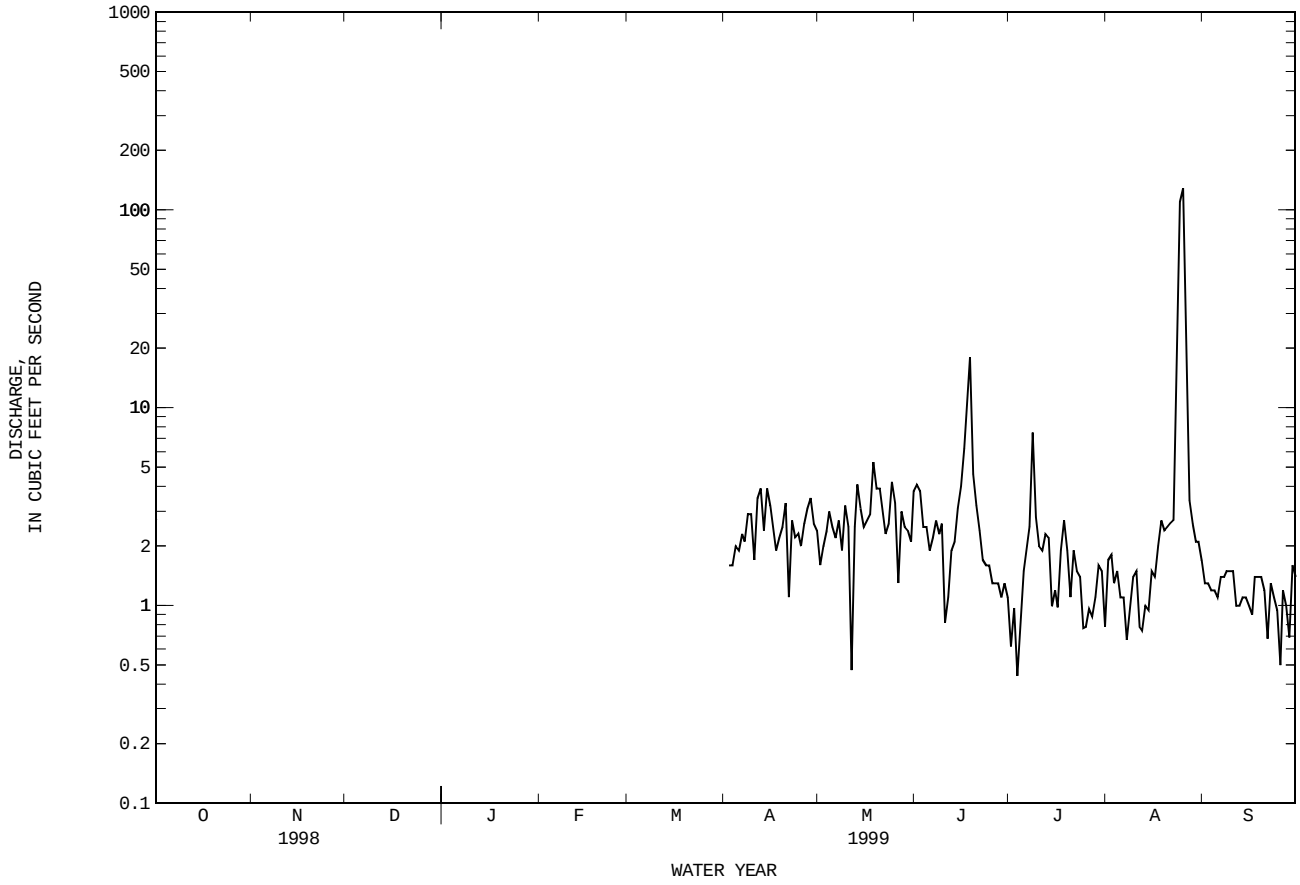
MEAN	47.5	4.23	2.74	2.97	3.38	3.52	7.89	16.9	9.63	11.3	28.1	116
MAX	827	27.8	13.3	17.0	18.5	28.6	93.7	96.4	59.8	188	403	1419
(WY)	1972	1972	1977	1980	1969	1965	1985	1985	1981	1976	1980	1971
MIN	1.21	1.13	1.16	1.08	1.38	1.16	1.28	1.62	1.30	.74	.73	.79
(WY)	1976	1973	1976	1965	1976	1975	1967	1973	1965	1965	1965	1965

SUMMARY STATISTICS	WATER YEARS 1965 - 1999h	
ANNUAL MEAN	22.5	
HIGHEST ANNUAL MEAN	126	1971
LOWEST ANNUAL MEAN	2.36	1975
HIGHEST DAILY MEAN	22200	Sep 12 1971
LOWEST DAILY MEAN	.20	Aug 2 1965
ANNUAL SEVEN-DAY MINIMUM	.39	Aug 22 1965
INSTANTANEOUS PEAK FLOW	273	Aug 25 1999
INSTANTANEOUS PEAK STAGE	4.11	Aug 25 1999
ANNUAL RUNOFF (AC-FT)	16320	
10 PERCENT EXCEEDS	4.2	
50 PERCENT EXCEEDS	2.0	
90 PERCENT EXCEEDS	1.2	

e Estimated

(h) See PERIOD OF RECORD paragraph.

08211900 SAN FERNANDO CREEK AT ALICE, TX--Continued



08211900 SAN FERNANDO CREEK AT ALICE, TX--Continued

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.3	.71	1.1	.86	.78	.94	.36	.70	.56	.51	1.0	.57
2	1.2	.89	.59	1.1	1.3	1.1	.85	.97	1.9	.56	.67	.56
3	1.2	.66	1.2	.93	1.1	1.1	.90	1.4	1.2	.91	.40	.56
4	1.2	.66	1.2	.83	.94	.60	.90	1.5	2.2	1.3	.46	.54
5	.92	.83	1.2	.73	.70	1.0	.67	1.1	1.8	.84	.45	.73
6	.69	.87	1.2	.91	.74	.99	.71	.89	1.4	.40	.38	.71
7	.84	.97	.56	1.3	.76	1.2	.45	1.5	.59	.42	.49	.38
8	1.1	.77	1.0	1.3	.69	1.2	.63	1.2	1.8	.41	.75	.38
9	.79	.98	1.1	1.2	.51	.89	.54	1.4	.81	.46	.81	.38
10	1.1	.82	.83	1.2	.68	.80	.51	1.4	1.9	.61	.71	.84
11	.70	.87	.45	1.1	.70	.86	.90	2.0	1.6	.84	1.1	1.1
12	.78	1.1	1.1	1.3	.64	.74	.82	1.4	1.4	.93	.53	1.1
13	.85	.66	1.2	1.2	.66	1.1	.68	1.6	1.8	.38	.46	1.1
14	.92	1.0	1.1	.99	.91	1.4	1.1	2.2	1.0	.38	.53	.86
15	1.1	1.1	.81	.94	.98	.99	.77	2.7	1.0	.72	1.3	.38
16	1.3	1.2	.45	.58	.74	.80	1.0	2.3	.85	.53	1.2	.45
17	.60	.77	.97	.94	.80	.87	.81	2.4	.91	.43	1.1	.60
18	1.3	1.1	.69	.61	.67	.85	.83	2.2	.85	.49	.52	.38
19	1.2	1.0	.83	.87	.64	.98	.91	.73	1.6	.51	.63	.55
20	1.2	.59	1.1	.89	.71	1.1	.99	3.1	1.6	.49	.57	.78
21	1.1	1.2	1.0	.67	.89	1.1	1.1	8.6	1.1	.54	.58	.66
22	1.1	.99	1.1	.86	1.0	1.1	1.0	3.4	.90	.46	.62	1.1
23	.75	1.2	1.1	.88	.70	.81	.33	1.6	.43	.47	.87	1.1
24	.62	.80	1.0	.78	1.1	1.1	.46	1.1	.78	.67	.42	1.2
25	.97	1.3	.71	.86	.75	1.1	.65	1.5	.96	.83	.55	1.3
26	.75	1.2	.77	.56	1.1	.89	.66	.80	.57	.38	.53	.91
27	.60	1.2	.87	.74	.82	.41	.32	.84	1.2	.55	.67	.44
28	.68	1.2	.74	.76	1.3	.70	.40	1.2	.83	.73	1.2	.83
29	.94	.78	1.1	.93	.96	.88	.39	1.6	.41	.91	.54	.23
30	.71	1.2	.78	.88	---	.86	.83	2.2	.74	.90	.69	.17
31	.53	---	1.1	.92	---	.66	---	2.1	---	.92	.53	---
TOTAL	29.04	28.62	28.95	28.62	24.27	29.12	21.47	57.63	34.69	19.48	21.26	20.89
MEAN	.94	.95	.93	.92	.84	.94	.72	1.86	1.16	.63	.69	.70
MAX	1.3	1.3	1.2	1.3	1.3	1.4	1.1	8.6	2.2	1.3	1.3	1.3
MIN	.53	.59	.45	.56	.51	.41	.32	.70	.41	.38	.38	.17
AC-FT	58	57	57	57	48	58	43	114	69	39	42	41

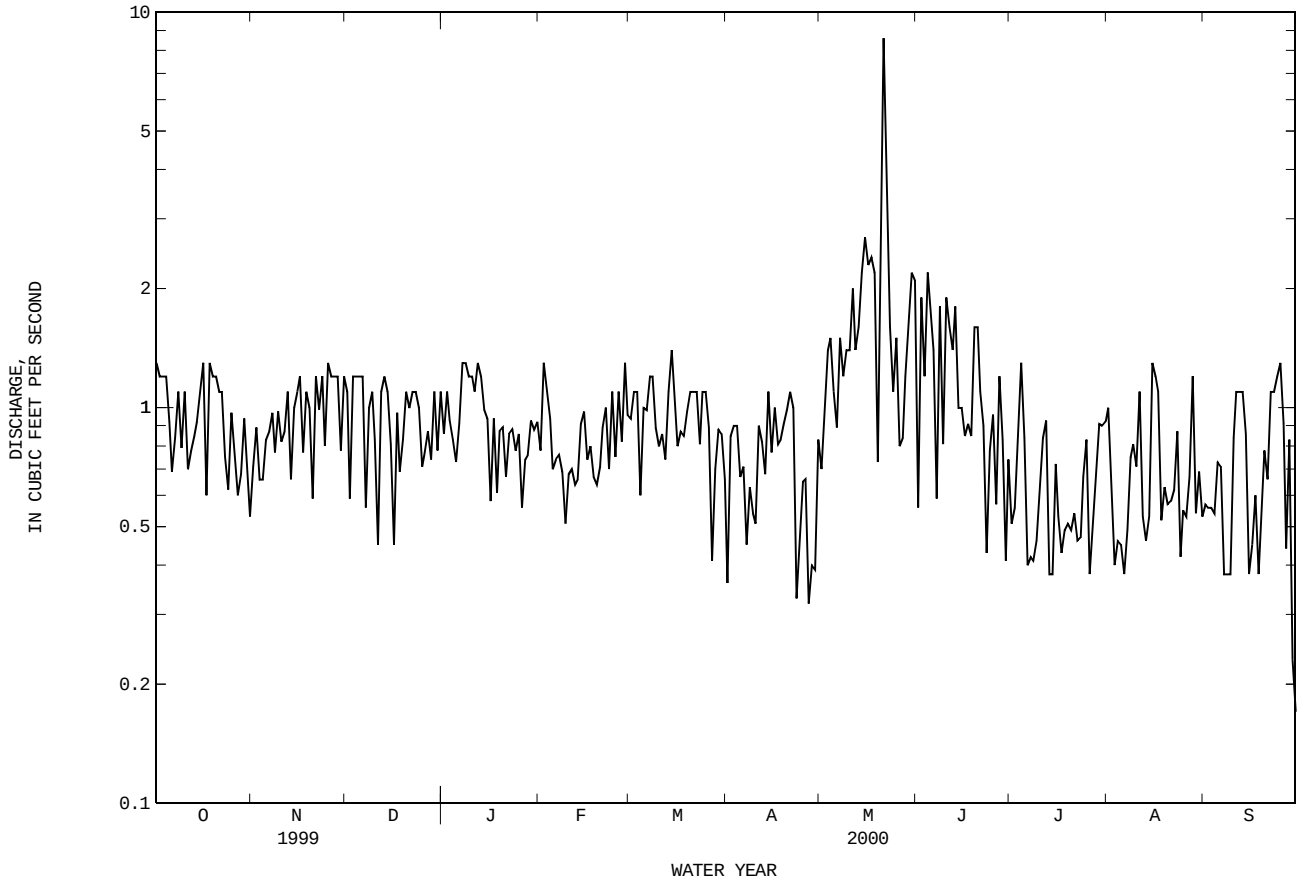
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 2000h, BY WATER YEAR (WY)

MEAN	45.5	4.09	2.66	2.89	3.27	3.41	7.58	16.3	9.24	10.8	26.9	111
MAX	827	27.8	13.3	17.0	18.5	28.6	93.7	96.4	59.8	188	403	1419
(WY)	1972	1972	1977	1980	1969	1965	1985	1985	1981	1976	1980	1971
MIN	.94	.95	.93	.92	.84	.94	.72	1.62	1.16	.63	.69	.70
(WY)	2000	2000	2000	2000	2000	2000	2000	1973	2000	2000	2000	2000

SUMMARY STATISTICS	FOR 2000 WATER YEAR		WATER YEARS 1965 - 2000h	
ANNUAL TOTAL	344.04			
ANNUAL MEAN	.94		21.5	
HIGHEST ANNUAL MEAN			126	1971
LOWEST ANNUAL MEAN			.94	2000
HIGHEST DAILY MEAN	8.6	May 21	22200	Sep 12 1971
LOWEST DAILY MEAN	.17	Sep 30	.10	Jul 3 1999
ANNUAL SEVEN-DAY MINIMUM	.46	Apr 23	.39	Aug 22 1965
INSTANTANEOUS PEAK FLOW	15	May 21	273	Aug 25 1999
INSTANTANEOUS PEAK STAGE	1.46	May 21	4.11	Aug 25 1999
INSTANTANEOUS LOW FLOW	.14	Sep 30	.14	Sep 30 2000
ANNUAL RUNOFF (AC-FT)	682		15610	
10 PERCENT EXCEEDS	1.3		4.0	
50 PERCENT EXCEEDS	.86		1.9	
90 PERCENT EXCEEDS	.47		1.1	

h See PERIOD OF RECORD paragraph.

08211900 SAN FERNANDO CREEK AT ALICE, TX--Continued



08212400 LOS OLMOS CREEK NEAR FALFURRIAS, TX

LOCATION.--Lat 27°15'51", long 98°08'08", Brooks County, Hydrologic Unit 12110205, at downstream side of bridge on U.S. Highway 281 and 2.6 mi north of Falfurrias.

DRAINAGE AREA.--480 mi^2, of which 4.5 mi^2 probably is noncontributing.

PERIOD OF RECORD.--Jan 1967 to Sep 1983, Mar 1999 to current year.

GAGE.--Water-stage recorder. Datum of gage is 116.58 ft above sea level. Satellite telemeter at station.

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

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1929, 15.0 ft Sep 13, 1951, from information by Texas Department of Transportation. No flow at times.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 100 ft^3/s:

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
May 4	1900	527	8.10	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.08	.00	.00	.00	.00	.00	.00	14	.00	.00	.00	.00
3	.04	.00	.00	.00	.00	.00	.00	26	.00	.00	.00	.00
4	.02	.00	.00	.00	.00	.00	.00	331	.00	.00	.00	.00
5	.01	.00	.00	.00	.00	.00	.00	393	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	111	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	18	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	11	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	6.5	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	3.6	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	1.7	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.69	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	.48	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.01	.00	.27	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.01	.00	.10	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.05	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.02	.00	.00	.00	.00
18	.01	.00	.00	.00	.00	.00	.00	.01	.00	.00	.00	.00
19	3.3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	1.8	.00	.00	.00	.00	.00	.00	.01	.00	.00	.00	.00
21	.28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
22	.08	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	.05	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	.03	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.01	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	5.93	0.00	0.00	0.00	0.00	0.02	0.00	917.43	0.00	0.00	0.00	0.00
MEAN	.19	.000	.000	.000	.000	.001	.000	29.6	.000	.000	.000	.000
MAX	3.3	.00	.00	.00	.00	.01	.00	393	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	12	.00	.00	.00	.00	.04	.00	1820	.00	.00	.00	.00

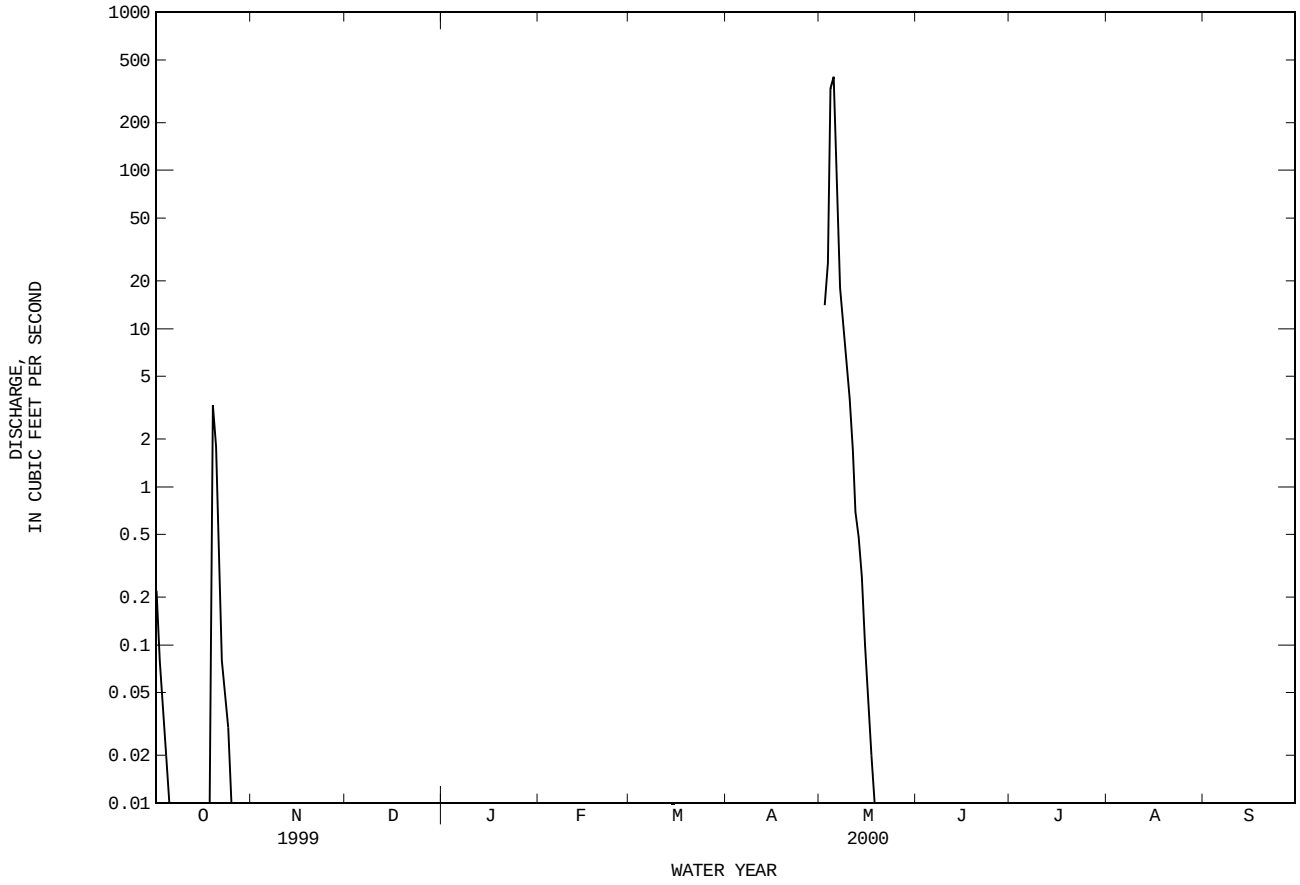
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 2000h, BY WATER YEAR (WY)

MEAN	1.68	.40	.14	.13	.13	3.69	.34	11.6	5.52	3.91	8.53	51.4
MAX	8.95	4.89	.75	.69	.67	50.8	3.31	146	52.8	36.1	62.5	491
(WY)	1977	1977	1970	1970	1970	1974	1979	1982	1973	1976	1980	1967
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1973	1971	1971	1972	1973	1971	1971	1971	1980	1972	1972	1972

SUMMARY STATISTICS	FOR 2000 WATER YEAR		WATER YEARS 1967 - 2000h	
ANNUAL TOTAL	923.38			
ANNUAL MEAN	2.52		5.32	
HIGHEST ANNUAL MEAN			34.1	1971
LOWEST ANNUAL MEAN			.000	1983
HIGHEST DAILY MEAN	393	May 5	3790	Sep 14 1971
LOWEST DAILY MEAN	.00	Oct 6	.00	Aug 10 1970
ANNUAL SEVEN-DAY MINIMUM	.00	Oct 6	.00	Sep 4 1970
INSTANTANEOUS PEAK FLOW	527	May 4	5300	Sep 13 1971
INSTANTANEOUS PEAK STAGE	8.10	May 4	12.66	Sep 13 1971
INSTANTANEOUS LOW FLOW	.00	Oct 6	.00	Oct 6 1999
ANNUAL RUNOFF (AC-FT)	1830		3850	
10 PERCENT EXCEEDS	.00		.68	
50 PERCENT EXCEEDS	.00		.00	
90 PERCENT EXCEEDS	.00		.00	

h See PERIOD OF RECORD paragraph.

08212400 LOS OLMOS CREEK NEAR FALFURRIAS, TX--Continued



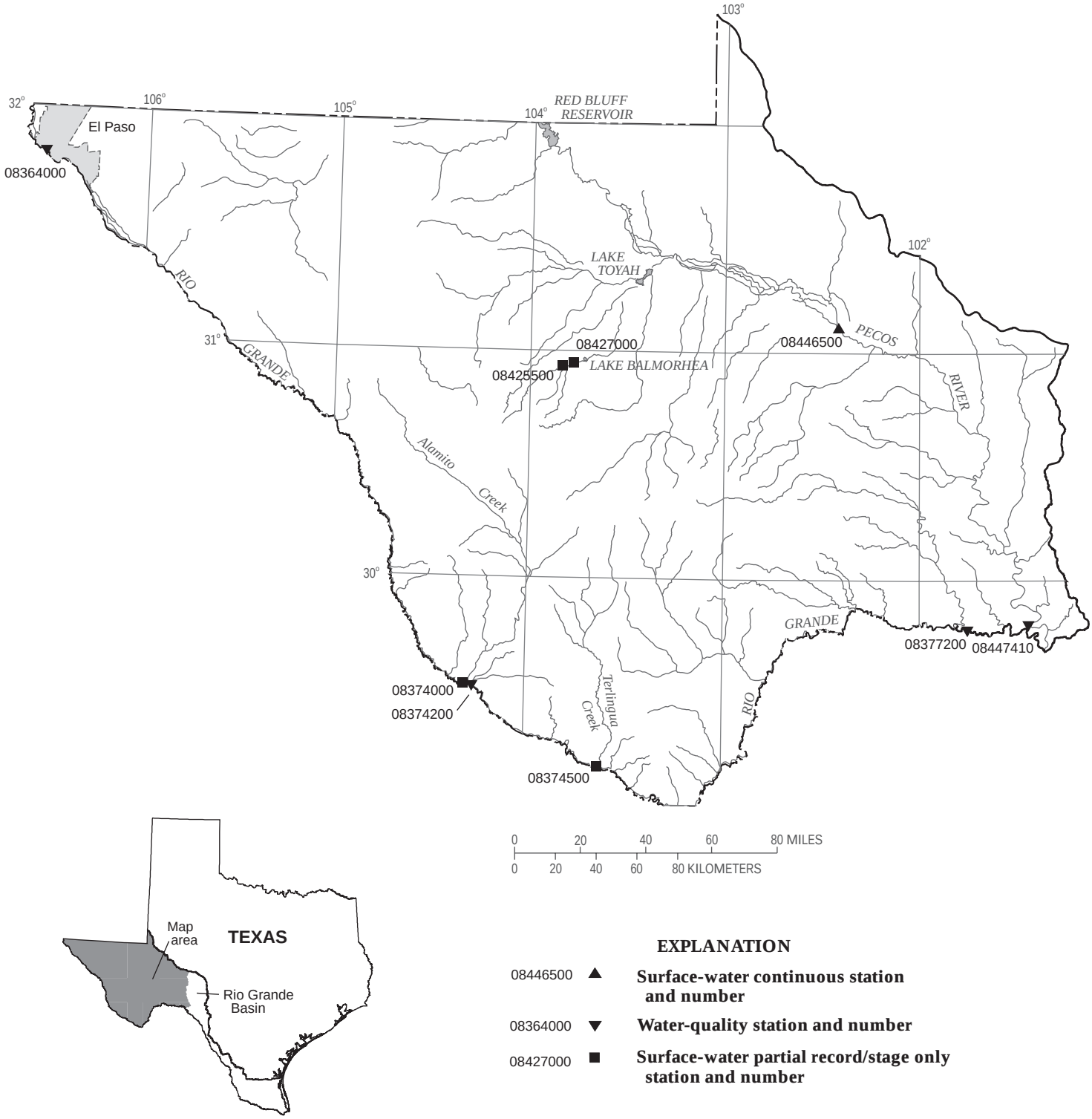


Figure 9.--Map showing location of gaging stations in the first section of the Rio Grande Basin

08364000 Rio Grande at El Paso, TX 324
08374000 Alamito Creek near Presidio, TX 384
08374200 Rio Grande below Rio Conchos near Presidio, TX 328
08374500 Terlingua Creek near Terlingua, TX 384
08377200 Rio Grande at Foster Ranch near Langtry, TX 332
08425500 Phantom Lake Springs near Toyahvale, TX 381
08427000 Giffin Springs at Toyahvale, TX 381
08446500 Pecos River near Girvin, TX 336
08447410 Pecos River near Langtry, TX 338

08364000 RIO GRANDE AT EL PASO, TX
(National stream-quality accounting network)
(National water-quality assessment program)

LOCATION.--Lat 31°48′10", long 106°32′25", El Paso County, Hydrologic Unit 13030102, at gaging station on the downstream side of the Courchesne Bridge, 5.6 mi upstream from the Santa Fe Street-Juarez Avenue bridge between El Paso, and Cuidad Juarez, Chihuahua, at mile 1,249, and 1.7 mi upstream from the American Dam.

DRAINAGE AREA.--29,267 mi^2.

PERIOD OF RECORD.--
CHEMICAL DATA: Feb 1930 to current year.

REMARKS.--Discharges published in the table were obtained directly from rating table furnished by International Boundary and Water Commission. Records of specific conductance and discharge for water year 1999 are given in International Boundary and Water Commission Water Bulletins Nos. 68 and 69. Since 1995, quality assurance data for this station may be obtained from the U.S. Geological Survey, Texas District office, upon request.

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

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	TUR-BID-ITY (NTU) (00076)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)
OCT											
13...	0820	826	1040	8.4	13.0	18.0	71	665	7.5	91	240
NOV											
23...	0900	147	1870	8.4	10.0	8.0	15	668	10.0	97	370
MAR											
22...	0920	1030	841	8.1	10.5	9.5	95	660	9.0	91	190
MAY											
04...	1640	685	1060	8.4	33.5	26.0	30	659	8.9	128	230
31...	0940	1090	944	8.3	26.5	24.0	62	660	6.8	94	220
JUN											
22...	0850	1070	986	8.3	26.0	25.0	83	662	6.9	97	230
JUL											
14...	1000	1090	936	8.4	25.5	27.0	110	668	7.0	101	210
AUG											
02...	0740	864	1050	7.8	25.0	25.5	58	664	6.7	95	220
18...	0840	1160	863	8.3	26.5	24.5	12	672	7.1	97	200
SEP											
06...	0920	809	967	8.4	32.5	24.5	58	664	7.8	108	230

DATE	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR-BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)
OCT											
13...	48	70.3	14.5	118	3	7.4	222	4	188	195	97.1
NOV											
23...	120	104	25.7	241	5	10.3	272	12	243	414	226
MAR											
22...	40	54.6	12.6	91.4	3	5.7	182	0	149	153	78.1
MAY											
04...	74	67.6	15.7	122	3	8.0	186	5	168	201	97.2
31...	53	62.9	14.6	108	3	7.2	197	2	172	173	81.5
JUN											
22...	50	65.5	15.1	114	3	7.8	195	10	176	190	85.3
JUL											
14...	42	60.5	14.2	112	3	7.5	185	10	167	167	78.8
AUG											
02...	60	62.9	15.1	117	3	7.1	195	0	160	194	102
18...	40	57.2	13.8	99.0	3	6.8	195	0	160	156	70.4
SEP											
06...	61	66.5	15.1	106	3	8.1	195	5	177	176	83.1

08364000 RIO GRANDE AT EL PASO, TX--Continued
(National stream-quality accounting network)
(National water-quality assessment program)

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

DATE	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N) (00607)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)
OCT											
13...	.7	16.6	670	636	--	<.010	.441	.034	.18	.27	.22
NOV											
23...	.6	22.6	1230	1200	1.21	.054	1.26	.148	.42	.88	.57
MAR											
22...	.7	12.1	526	500	--	<.010	.293	.053	.25	.93	.30
MAY											
04...	.6	12.8	652	623	.098	.011	.109	.064	.27	.79	.33
31...	<.1	11.2	575	560	--	<.010	.169	.108	.18	.97	.29
JUN											
22...	.7	13.8	620	600	.240	.014	.254	<.020	--	.91	.24
JUL											
14...	.6	14.6	574	558	--	<.010	.300	<.020	--	1.0	.25
AUG											
02...	.7	16.4	634	614	--	<.010	.330	<.020	--	.94	.22
18...	.6	14.0	529	516	--	<.010	.283	.024	.24	.76	.27
SEP											
06...	.7	15.3	605	574	--	<.010	.314	.034	.23	.75	.26

DATE	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC PARTIC-ULATE TOTAL (MG/L AS C) (00689)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)	ANTI-MONY, DIS-SOLVED (UG/L AS SB) (01095)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE) (01010)
OCT										
13...	.066	.063	.054	3.5	3.4	3	<1	2.8	82	<1
NOV										
23...	.226	.090	.077	3.6	.9	3	<1	3.6	96	<1
MAR										
22...	.359	.062	.041	3.5	2.0	3	<1	2.7	64	<1
MAY										
04...	.200	E.037	.032	3.5	1.4	18	<1	3.4	69	<1
31...	.323	<.050	.038	3.0	.6	14	<1	3.3	72	<1
JUN										
22...	.316	E.033	.029	2.8	1.5	26	<1	4.6	77	<1
JUL										
14...	.385	E.042	.047	3.5	--	11	<1	3.7	82	<1
AUG										
02...	.243	<.050	.013	3.6	1.3	6	<1	4.3	79	<1
18...	.236	<.050	.025	3.2	.7	3	<1	3.3	73	<1
SEP										
06...	.194	E.037	.028	3.1	1.4	2	<1	3.9	83	<1

DATE	BORON, DIS-SOLVED (UG/L AS B) (01020)	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030)	COBALT, DIS-SOLVED (UG/L AS CO) (01035)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	LITHIUM DIS-SOLVED (UG/L AS LI) (01130)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060)
OCT										
13...	179	<1.0	<.8	<1	2	<10	<1	97.2	3	8
NOV										
23...	312	<1.0	<.8	<1	2	<10	<1	192	25	12
MAR										
22...	153	<1.0	<1.0	<1	2	<10	<1	80.9	6	8
MAY										
04...	196	<1.0	<.8	<1	2	E10	<1	106	5	9
31...	176	<1.0	<.8	<1	1	<10	<1	96.5	<1	9
JUN										
22...	178	<1.0	<.8	<1	2	<10	<1	99.5	2	9
JUL										
14...	171	<1.0	<.8	<1	2	<10	<1	93.8	<1	8
AUG										
02...	192	<1.0	<.8	<1	2	<10	<1	99.7	2	9
18...	168	<1.0	E.4	<1	2	<10	<1	87.1	<1	8
SEP										
06...	168	<1.0	<.8	<1	2	<10	<1	87.6	<1	8

08364000 RIO GRANDE AT EL PASO, TX--Continued
(National stream-quality accounting network)
(National water-quality assessment program)

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

DATE	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)	SEDI- MENT, SUS- PENDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT										
13...	2	<2.4	<1	846	<10	2	4	373	832	79
NOV										
23...	3	<2.4	<1	1450	<10	5	5	81	32	55
MAR										
22...	<1	<2.4	<1	712	<10	2	3	612	1700	62
MAY										
04...	6	<2.4	<1	887	<10	5	3	210	388	66
31...	3	<2.4	<1	833	E7	3	3	394	1160	76
JUN										
22...	2	<2.4	<1	861	E6	3	4	486	1400	85
JUL										
14...	<1	<2.4	<1	786	E5	4	4	473	1390	85
AUG										
02...	<1	<2.4	<1	846	<10	5	4	280	653	91
18...	<1	<2.4	<1	760	<10	2	3	276	864	54
SEP										
06...	<1	<2.4	<1	855	E5	2	4	196	428	86

DATE	TIME	PROPA- CHLOR, WATER, DISS, REC (UG/L) (04024)	BUTYL- ATE, WATER, DISS, REC (UG/L) (04028)	SI- MAZINE, WATER, DISS, REC (UG/L) (04035)	PRO- METON, WATER, DISS, REC (UG/L) (04037)	DEETHYL ATRA- ZINE, WATER, DISS, REC (UG/L) (04040)	CYANA- ZINE, WATER, DISS, REC (UG/L) (04041)	FONOFOS WATER DISS REC (UG/L) (04095)	ALPHA BHC DIS- SOLVED (UG/L) (34253)	P,P' DDE DISSOLV (UG/L) (34653)	CHLOR- PYRIFOS DIS- SOLVED (UG/L) (38933)	LINDANE DIS- SOLVED (UG/L) (39341)
OCT												
13...	0820	<.007	<.002	<.005	<.018	<.002	<.004	<.003	<.002	<.006	<.004	<.004
NOV												
23...	0900	<.007	<.002	<.005	<.018	<.002	<.004	<.003	<.002	<.006	<.004	<.004
MAR												
22...	0920	<.007	<.002	E.003	E.005	<.002	.008	<.003	<.002	<.006	<.004	<.004
MAY												
04...	1640	<.007	<.002	<.005	E.005	<.002	<.004	<.003	<.002	E.002	<.004	<.004
31...	0940	<.007	<.002	<.005	E.013	<.002	<.004	<.003	<.002	<.006	E.002	<.004
JUN												
22...	0850	<.007	<.002	E.005	E.010	<.002	.008	<.003	<.002	<.006	<.004	<.004
JUL												
14...	1000	<.007	<.002	<.005	<.018	<.002	.008	<.003	<.002	<.006	<.004	<.004
AUG												
02...	0740	<.007	<.002	<.005	<.018	<.002	<.004	<.003	<.002	<.006	.047	<.004
18...	0840	<.007	<.002	<.005	E.015	<.002	.005	<.003	<.002	<.006	E.003	<.004
SEP												
06...	0920	<.007	<.002	E.003	E.008	<.002	<.004	<.003	<.002	E.002	E.003	<.004

DATE	DI- ELDRIN DIS- SOLVED (UG/L) (39381)	METO- LACHLOR WATER DISSOLV (UG/L) (39415)	MALA- THION, DIS- SOLVED (UG/L) (39532)	PARA- THION, DIS- SOLVED (UG/L) (39542)	DI- AZINON, DIS- SOLVED (UG/L) (39572)	ATRA- ZINE, WATER, DISS, REC (UG/L) (39632)	ALA- CHLOR, WATER, DISS, REC, (UG/L) (46342)	ACETO- CHLOR, WATER FLTRD REC (UG/L) (49260)	METRI- BUZIN SENCOR WATER DISSOLV (UG/L) (82630)	2,6-DI- ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	TRI- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)	ETHAL- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)
OCT												
13...	<.001	<.002	.227	<.004	<.002	.008	<.002	<.002	<.004	<.003	<.002	<.004
NOV												
23...	<.001	.006	<.005	<.004	.017	<.001	<.002	<.002	<.004	<.003	<.002	<.004
MAR												
22...	<.001	E.002	<.005	<.004	E.002	E.003	<.002	<.002	<.004	<.003	<.002	<.004
MAY												
04...	<.001	E.004	<.005	<.004	.012	E.002	<.002	<.002	<.004	<.003	<.002	<.004
31...	<.001	.006	<.005	<.004	<.002	<.001	<.002	<.002	<.004	<.003	<.002	<.004
JUN												
22...	<.001	.007	<.005	<.004	E.001	.005	<.002	<.002	<.004	<.003	<.002	<.004
JUL												
14...	<.001	.007	E.004	<.004	<.002	<.001	<.002	<.002	<.004	<.003	E.004	<.004
AUG												
02...	<.001	.006	<.005	<.004	<.002	.004	<.002	<.002	<.004	<.003	<.002	<.004
18...	<.001	.005	E.005	<.004	E.004	<.003	<.002	<.002	<.004	<.003	<.002	<.004
SEP												
06...	<.001	E.003	E.004	<.004	E.002	<.001	<.002	<.002	<.004	<.003	<.002	<.004

08364000 RIO GRANDE AT EL PASO, TX--Continued
(National stream-quality accounting network)
(National water-quality assessment program)

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

DATE	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	TER-BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	LIN-URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	METHYL PARA-THION WAT FLT 0.7 U GF, REC (UG/L) (82667)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	PEB-ULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	TEBU-THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	MOL-INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	ETHO-PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	BEN-FLUR-ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)	CARBO-FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	TER-BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)
OCT												
13...	<.002	<.007	<.002	<.006	<.002	<.004	<.010	<.004	<.003	<.002	<.003	<.013
NOV												
23...	<.002	<.007	<.002	<.006	<.030	<.004	<.010	<.004	<.003	<.002	<.003	<.013
MAR												
22...	<.002	<.007	<.002	<.006	<.002	<.004	E.009	<.004	<.003	<.002	<.003	<.013
MAY												
04...	<.002	<.007	<.002	<.006	<.002	<.004	E.006	<.004	<.003	<.002	<.003	<.013
31...	<.002	<.007	<.002	<.006	<.002	<.004	E.008	<.004	<.003	<.002	<.003	<.013
JUN												
22...	<.002	<.007	<.002	<.006	<.002	<.004	E.008	<.004	<.003	<.002	<.003	<.013
JUL												
14...	<.002	<.007	<.002	<.006	<.002	<.004	.012	<.004	<.003	<.002	<.003	<.013
AUG												
02...	<.002	<.007	<.002	<.006	<.002	<.004	E.008	<.004	<.003	<.002	<.007	<.013
18...	<.002	<.007	<.002	<.006	<.002	<.004	E.008	<.004	<.003	<.002	<.009	<.013
SEP												
06...	<.002	<.007	<.002	<.006	<.002	<.004	E.005	<.004	<.003	<.002	<.003	<.013

DATE	PRON-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	DISUL-FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	TRIAL-LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	PRO-PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	CAR-BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	THIO-BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	PENDI-METH-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	NAPROP-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	PRO-PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	METHYL AZIN-PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)	PER-METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)
OCT												
13...	<.003	<.017	<.001	<.004	<.003	<.002	<.002	<.004	<.003	<.013	<.001	<.005
NOV												
23...	<.003	<.017	<.001	<.004	<.003	<.002	E.002	<.004	<.003	<.013	<.001	<.005
MAR												
22...	<.003	<.017	<.001	<.004	<.003	<.002	E.002	<.004	<.003	<.013	<.001	<.005
MAY												
04...	<.003	<.017	<.001	<.004	<.003	<.002	E.001	<.004	<.003	<.013	<.001	<.005
31...	<.003	<.017	<.001	<.004	E.026	<.002	<.002	<.004	<.003	<.013	<.005	<.005
JUN												
22...	<.003	<.017	<.001	<.004	<.003	<.002	<.002	<.004	<.003	<.013	<.001	<.005
JUL												
14...	<.003	<.017	<.001	<.004	<.003	<.002	<.002	<.004	<.003	<.013	<.001	<.005
AUG												
02...	<.003	<.017	<.001	<.004	<.003	<.002	<.002	<.004	<.003	<.013	<.001	<.005
18...	<.003	<.017	<.001	<.004	E.004	<.002	<.002	<.004	<.003	<.013	<.001	<.005
SEP												
06...	<.003	<.017	<.001	<.004	<.003	<.002	<.002	<.004	<.003	<.013	<.001	<.005

08374200 RIO GRANDE BELOW RIO CONCHOS NEAR PRESIDIO, TX
(National stream-quality accounting network)

LOCATION.--Lat 29°31'10", long 104°17'10", Presidio County, Hydrologic Unit 13040203, at gaging station 0.4 miles downstream from Alamito Creek and 8.9 river miles downstream from the International Highway bridge between Presidio, Texas and Ojinaga, Chihuahua.

DRAINAGE AREA.-- 66,200 mi^2.

PERIOD OF RECORD.--
CHEMICAL DATA: Apr 1999 to current year.
BIOCHEMICAL DATA: Apr 1999 to current year.
PESTICIDE DATA: Aug 1999 to current year.
SEDIMENT DATA: Apr 1999 to current year.

REMARKS.--Discharges published in the table were obtained directly from rating table furnished by International Boundary and Water Commission. Records of daily mean discharge for water year 2000 are given in International Boundary and Water Commission Water Bulletins Nos. 69 and 70. Since 1999, quality assurance data for this station may be obtained from the U.S. Geological Survey Texas District office upon request.

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

DATE	TIME	AGENCY COL-LECTING SAMPLE (CODE NUMBER) (00027)	SAM-PLING METHOD, CODES (82398)	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	TUR-BID-ITY (NTU) (00076)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)
DEC												
14...	1340	1053	10	256	2980	7.8	8.5	37	6.1	61	600	340
JAN												
18...	1200	1053	10	256	3200	8.0	12.0	24	9.6	103	620	410
FEB												
08...	1220	1053	10	223	2970	8.1	11.5	26	11.3	119	560	360
APR												
18...	1130	1053	10	117	3060	--	22.5	72	6.8	90	640	440
MAY												
23...	1200	1053	10	309	2070	7.9	27.0	52	6.4	94	420	290
JUL												
25...	1110	1053	10	114	2710	7.9	28.5	70	8.0	106	550	400
AUG												
15...	1110	1053	10	152	2410	7.9	25.5	130	7.8	98	560	390
SEP												
12...	1150	1053	10	76	2810	7.7	27.5	240	7.7	101	650	440

DATE	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	SODIUM PERCENT (00932)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	CAR-BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)
DEC												
14...	170	38	432	8	61	10	0	306	251	590	480	1.2
JAN												
18...	180	39	460	8	61	11	0	260	213	600	540	1.2
FEB												
08...	160	37	428	8	62	11	0	241	198	590	470	1.1
APR												
18...	190	39	427	7	59	10	0	246	202	800	390	1.9
MAY												
23...	130	24	310	7	61	9.0	0	157	129	660	160	2.3
JUL												
25...	170	31	370	7	59	10	0	186	155	710	340	1.6
AUG												
15...	180	28	301	6	53	10	0	214	178	730	210	1.9
SEP												
12...	200	34	377	6	56	10	0	247	203	950	270	1.8

08374200 RIO GRANDE BELOW RIO CONCHOS NEAR PRESIDIO, TX--Continued
(National stream-quality accounting network)

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

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, TOTAL (MG/L AS N) (00600)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N) (00607)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)
DEC												
14...	24	1970	1920	2.40	.075	2.47	.340	3.8	.97	.68	1.0	1.3
JAN												
18...	17	2140	1990	1.35	.017	1.37	.068	2.2	.81	.37	.43	.88
FEB												
08...	14	1950	1830	.395	.011	.406	<.020	1.5	--	--	.35	1.1
APR												
18...	19	2080	2000	--	<.010	<.050	<.020	--	--	--	.26	.93
MAY												
23...	21	1430	1400	--	<.010	.197	.033	.85	.62	.29	.33	.65
JUL												
25...	21	1840	1750	--	<.010	<.050	<.020	--	--	--	.29	.87
AUG												
15...	23	1650	1600	.337	.010	.347	<.020	1.0	--	--	.26	.66
SEP												
12...	27	1970	2000	--	<.010	.091	<.020	.84	--	--	.19	.75

DATE	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4) (00660)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC SUS-PENDED TOTAL (MG/L AS C) (00689)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)	ANTI-MONY, DIS-SOLVED (UG/L AS SB) (01095)
DEC											
14...	1.07	.997	.863	2.6	E3.0	.50	37	53	97	<2.0	<2.0
JAN											
18...	.458	.364	.323	.99	E1.4	V.30	91	131	67	<2.0	<2.0
FEB											
08...	.267	.112	.083	.25	7.0	.60	78	130	66	1.5	<1.0
APR											
18...	.164	<.050	<.010	--	3.5	.75	63	200	99	8.4	<2.0
MAY											
23...	.100	<.050	<.010	--	3.9	.86	88	105	92	--	<1.0
JUL											
25...	.123	<.050	<.010	--	--	--	43	139	87	.91	<2.0
AUG											
15...	.169	<.050	<.010	--	5.3	.28	136	331	96	1.4	<1.0
SEP											
12...	.127	<.050	<.010	--	4.5	1.0	54	264	93	<2.0	<2.0

DATE	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE) (01010)	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030)	COBALT, DIS-SOLVED (UG/L AS CO) (01035)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	LITHIUM DIS-SOLVED (UG/L AS LI) (01130)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)
DEC											
14...	6	98	<2.0	<2.0	<1.0	<2.0	3.4	<10	<2.0	170	60
JAN											
18...	5	93	<2.0	<2.0	<1.0	<2.0	2.6	<10	<2.0	210	84
FEB											
08...	5	84	<1.0	<1.0	<.80	<1.0	3.2	<30	<1.0	170	83
APR											
18...	5	80	<2.0	<2.0	<1.0	<2.0	3.0	<30	<2.0	180	<2.0
MAY											
23...	6	68	<1.0	<1.0	<.80	<1.0	2.6	<30	<1.0	140	9.5
JUL											
25...	5	62	<2.0	<2.0	--	<2.0	<2.0	13	<2.0	160	9.1
AUG											
15...	5	107	<1.0	<1.0	<.80	<1.0	--	<30	<1.0	130	11
SEP											
12...	6	77	<2.0	<2.0	<.80	<2.0	2.8	<10	<2.0	140	53

08374200 RIO GRANDE BELOW RIO CONCHOS NEAR PRESIDIO, TX--Continued
(National stream-quality accounting network)

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

DATE	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060)	NICKEL, DIS-SOLVED (UG/L AS NI) (01065)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)	STRON-TIUM, DIS-SOLVED (UG/L AS SR) (01080)	VANA-DIUM, DIS-SOLVED (UG/L AS V) (01085)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)	URANIUM NATURAL DIS-SOLVED (UG/L AS U) (22703)	2,6-DI-ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	ACETO-CHLOR, WATER FLTRD REC (UG/L) (49260)	ALA-CHLOR, WATER, DISS, REC, (UG/L) (46342)
DEC											
14...	11	6.6	<2	<2.0	2820	11	V6.2	6.0	<.0030	<.0020	<.002
JAN											
18...	11	2.6	<2	<2.0	2920	9	4.1	6.0	<.0030	<.0020	<.002
FEB											
08...	12	4.8	<2	<1.0	2550	9	7.2	5.3	<.0030	<.0020	<.002
APR											
18...	12	2.8	E2	<2.0	3040	3	V6.8	9.9	<.0030	<.0020	<.002
MAY											
23...	11	2.1	<2	<1.0	2300	5	5.8	10	<.0030	<.0020	<.002
JUL											
25...	5.1	<2.0	<2	<2.0	2950	<2	6.5	3.5	<.0030	<.0020	<.002
AUG											
15...	9.3	<1.0	E2	<1.0	2660	5	5.0	9.4	<.0030	<.0020	<.002
SEP											
12...	8.4	3.8	E2	<2.0	2840	3	<2.0	9.2	<.0030	<.0020	<.002

DATE	ALPHA BHC DIS-SOLVED (UG/L) (34253)	ATRA-ZINE, WATER, DISS, REC (UG/L) (39632)	METHYL AZIN-PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)	BEN-FLUR-ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)	BUTYL-ATE, WATER, DISS, REC (UG/L) (04028)	CAR-BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBO-FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	CHLOR-PYRIFOS DIS-SOLVED (UG/L) (38933)	PER-METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	CYANA-ZINE, WATER, DISS, REC (UG/L) (04041)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)
DEC											
14...	<.0020	<.001	<.0010	<.0020	<.0020	E.0076	<.0030	<.0040	<.0050	.0119	<.0020
JAN											
18...	<.0020	<.001	<.0010	<.0020	<.0020	<.0075	<.0030	<.0040	<.0050	<.0040	<.0020
FEB											
08...	<.0020	E.004	<.0010	<.0020	<.0020	<.0030	<.0200	<.0040	<.0050	<.0080	<.0020
APR											
18...	<.0020	<.003	<.0010	<.0020	<.0020	<.0030	<.0400	<.0040	<.0050	<.0040	<.0020
MAY											
23...	<.0020	E.002	<.0010	<.0020	<.0020	<.0030	<.0350	<.0040	<.0050	<.0040	<.0020
JUL											
25...	<.0020	<.001	<.0010	<.0020	<.0020	<.0030	<.0400	<.0040	<.0050	<.0040	<.0020
AUG											
15...	<.0020	<.001	<.0010	<.0020	<.0020	<.0030	<.0030	<.0040	<.0050	<.0040	<.0020
SEP											
12...	<.0020	<.001	<.0010	<.0020	<.0020	<.0030	<.0410	<.0040	<.0050	<.0040	<.0020

DATE	DEETHYL ATRA-ZINE, WATER, DISS, REC (UG/L) (04040)	DI-AZINON, DIS-SOLVED (UG/L) (39572)	DI-ELDRIN DIS-SOLVED (UG/L) (39381)	DISUL-FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	ETHAL-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)	ETHO-PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	FONOFOS WATER DISS REC (UG/L) (04095)	LINDANE DIS-SOLVED (UG/L) (39341)	LIN-URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA-THION, DIS-SOLVED (UG/L) (39532)
DEC											
14...	<.0020	.029	<.001	<.0170	<.0100	<.0040	<.0030	<.0030	<.004	<.0020	.017
JAN											
18...	<.0020	.007	<.001	<.0170	<.0020	<.0040	<.0030	<.0030	<.004	<.0020	<.005
FEB											
08...	<.0020	.005	<.001	<.0170	<.0020	<.0040	<.0030	<.0030	<.004	<.0020	<.005
APR											
18...	<.0020	<.002	<.001	<.0170	<.0020	<.0040	<.0030	<.0030	<.004	<.0020	<.005
MAY											
23...	<.0020	<.002	<.001	<.0170	<.0020	<.0040	<.0030	<.0030	<.004	<.0020	<.005
JUL											
25...	<.0020	<.002	<.001	<.0170	<.0020	<.0040	<.0030	<.0030	<.004	<.0020	<.005
AUG											
15...	<.0020	<.002	<.001	<.0170	<.0020	<.0040	<.0030	<.0030	<.004	<.0020	<.005
SEP											
12...	<.0020	<.002	<.001	<.0170	<.0020	<.0040	<.0030	<.0030	<.004	<.0020	<.005

08374200 RIO GRANDE BELOW RIO CONCHOS NEAR PRESIDIO, TX--Continued
(National stream-quality accounting network)

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

DATE	METO-LACHLOR WATER DISSOLV (UG/L) (39415)	METRI-BUZIN SENCOR WATER DISSOLV (UG/L) (82630)	MOL-INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPROP-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	P,P' DDE DISSOLV (UG/L) (34653)	PARA-THION, DIS-SOLVED (UG/L) (39542)	METHYL PARA-THION WAT FLT 0.7 U GF, REC (UG/L) (82667)	PEB-ULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	PENDI-METH-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PRO-METON, WATER, DISS, REC (UG/L) (04037)
DEC											
14...	.008	<.004	<.0040	<.0030	<.0060	<.004	<.0060	<.0040	<.0040	<.0020	<.0180
JAN											
18...	<.002	<.015	<.0040	<.0030	<.0060	<.004	<.0060	<.0040	<.0040	<.0020	<.0180
FEB											
08...	.005	<.004	<.0040	<.0030	<.0060	<.004	<.0060	<.0040	<.0040	<.0020	<.0180
APR											
18...	<.002	<.004	<.0040	<.0030	<.0060	<.004	<.0060	<.0040	<.0040	<.0020	<.0180
MAY											
23...	<.002	<.004	<.0040	<.0030	<.0060	<.004	<.0060	<.0040	<.0040	<.0020	<.0180
JUL											
25...	<.002	<.004	<.0040	<.0030	<.0060	<.004	<.0060	<.0040	<.0040	<.0020	<.0180
AUG											
15...	<.002	<.004	<.0040	<.0030	<.0060	<.004	<.0060	<.0040	<.0040	<.0020	<.0180
SEP											
12...	<.002	<.004	<.0040	<.0030	<.0060	<.004	<.0060	<.0040	<.0040	<.0020	<.0180

DATE	PROP-CHLOR, WATER, DISS, REC (UG/L) (04024)	PRO-PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	PRO-PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	PRON-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	SI-MAZINE, WATER, DISS, REC (UG/L) (04035)	TEBU-THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER-BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TER-BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	THIO-BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL-LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)
DEC											
14...	<.0070	<.0040	<.0130	<.0030	<.0050	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020
JAN											
18...	<.0070	<.0040	<.0130	<.0030	<.0050	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020
FEB											
08...	<.0070	<.0040	<.0130	<.0030	<.0050	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020
APR											
18...	<.0070	<.0040	<.0130	<.0030	<.0050	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020
MAY											
23...	<.0070	<.0040	<.0130	<.0030	<.0050	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020
JUL											
25...	<.0070	<.0040	<.0130	<.0030	<.0050	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020
AUG											
15...	<.0070	<.0040	<.0130	<.0030	<.0050	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020
SEP											
12...	<.0070	<.0040	<.0130	<.0030	<.0050	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020

08377200 RIO GRANDE AT FOSTER RANCH NEAR LANGTRY, TX
(National stream-quality accounting network)

LOCATION.--Lat 29°46′50", long 101°45′20", Val Verde County, Hydrologic Unit 13040212, at gaging station 0.1 mi downstream from Terrell-Val Verde County line, 16.9 mi from Langtry, and 597.2 mi downstream from the American Dam at El Paso.

DRAINAGE AREA.--80,742 mi^2, United States and Mexico; from International Boundary and Water Commission Water Bulletin No. 44.

PERIOD OF RECORD.--
INORGANIC CHEMICAL DATA: Apr 1944 to current year.
ORGANIC CHEMICAL DATA: Jul 1975 to Jun 1982 and Oct 1995 to current year.
BIOCHEMICAL DATA: Oct 1974 to Aug 1995.
SEDIMENT DATA: Oct 1974 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Oct 1974 to Sep 1981 (local observer).
WATER TEMPERATURE: Oct 1974 to Sep 1981 (local observer).

REMARKS.--Discharges published in the table were obtained directly from rating table furnished by International Boundary and Water Commission. Records of daily mean discharge for water year 1999 are given in International Boundary and Water Commission Water Bulletins Nos. 69 and 70. Since Sep 1995, suspended sediment chemistry and quality assurance data 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, 2,110 microsiemens, Dec 4, 1974; minimum daily, 225 microsiemens, May 2, 1981.
WATER TEMPERATURE: Maximum daily, 32.0°C, Jun 13, 1977, Jul 25, 26, 1979, Jul 4, 1980, and Jun 8, 1981; minimum daily, 9.0°C, Jan 12, 1975, Jan 8, 1976, and Jan 18, 1981.

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

DATE	TIME	AGENCY COLLECTING SAMPLE (CODE NUMBER) (00027)	SAMPLING METHOD, CODES (82398)	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE WATER (DEG C) (00010)	TURBIDITY (NTU) (00076)	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)	HARDNESS TOTAL (MG/L AS CACO3) (00900)	HARDNESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)
DEC												
08...	1130	1028	10	419	1840	7.9	12.5	48	10.1	98	360	200
JAN												
19...	1200	1028	10	429	1850	7.9	17.0	29	8.9	98	380	240
MAR												
08...	1300	1028	10	519	2070	8.2	20.6	92	10.3	120	440	290
APR												
13...	1200	1028	10	222	1270	7.7	19.7	63	7.9	90	330	180
MAY												
31...	1100	1028	10	124	944	8.0	25.2	42	6.9	88	260	120
JUN												
18...	1430	1028	10	2040	1260	7.4	27.3	39	6.2	80	480	400
20...	1800	1028	40	12600	766	7.5	27.0	.10	2.6	34	250	150
27...	1030	1028	10	1700	1210	7.6	27.7	21	6.5	85	410	320
JUL												
19...	1100	1028	10	540	1260	7.9	26.5	550	7.3	94	310	160
SEP												
07...	1030	1028	10	251	1140	8.1	27.5	<.50	6.9	91	360	250

DATE	CALCIUM DISSOLVED (MG/L AS CA) (00915)	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)	SODIUM, DISSOLVED (MG/L AS NA) (00930)	SODIUM ADSORPTION RATIO (00931)	SODIUM PERCENT (00932)	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	CARBONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	BICARBONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	ALKALINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)
DEC												
08...	95	29	221	5	57	6.4	0	192	158	390	260	1.1
JAN												
19...	100	31	232	5	56	7.2	0	177	145	370	270	1.2
MAR												
08...	120	34	268	6	57	8.1	0	183	149	450	290	1.4
APR												
13...	85	27	144	3	49	6.1	0	183	148	290	130	1.3
MAY												
31...	63	24	91	2	43	5.1	0	171	140	200	73	1.2
JUN												
18...	170	16	77	2	25	6.6	0	102	84	520	28	.65
20...	87	7.9	53	1	31	5.6	0	120	98	230	19	.59
27...	140	12	87	2	31	6.7	0	119	98	420	47	.78
JUL												
19...	97	15	115	3	44	6.5	0	180	147	270	110	.83
SEP												
07...	110	19	94	2	36	6.1	0	134	111	350	49	1.2

08377200 RIO GRANDE AT FOSTER RANCH NEAR LANGTRY, TX--Continued
(National stream-quality accounting network)

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

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, TOTAL (MG/L AS N) (00600)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N) (00607)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)
DEC												
08...	16	1150	1110	.662	.003	.665	.008	1.1	.38	.16	.17	.39
JAN												
19...	11	1170	1110	.220	.002	.222	.005	.88	.66	.17	.18	.66
MAR												
08...	14	1340	1280	.247	.002	.249	.011	1.0	.75	.21	.22	.77
APR												
13...	21	822	805	.668	.005	.673	.008	1.1	.39	.12	.13	.40
MAY												
31...	23	590	572	.571	.005	.576	.034	.96	.35	.12	.15	.39
JUN												
18...	9.8	956	884	1.49	.163	1.65	.035	12	11	.18	.21	11
20...	10	513	484	1.29	.115	1.40	.018	21	20	.32	.34	20
27...	15	846	795	1.19	.002	1.19	.021	15	14	.24	.26	14
JUL												
19...	17	774	732	1.03	.004	1.04	.013	2.9	1.8	.19	.20	1.8
SEP												
07...	20	776	726	1.04	.004	1.04	.012	1.5	.40	.09	.10	.41

DATE	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4) (00660)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC SUS-PENDED TOTAL (MG/L AS C) (00689)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)	ANTI-MONY, DIS-SOLVED (UG/L AS SB) (01095)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)
DEC												
08...	.070	E.004	<.001	--	2.2	.80	100	88	100	<1.0	<1.0	3
JAN												
19...	.069	E.004	<.001	--	2.6	18	71	61	99	--	--	3
MAR												
08...	.152	<.050	<.001	--	2.6	1.1	233	166	99	1.1	<1.0	3
APR												
13...	.111	E.003	<.001	--	1.4	.81	115	192	100	--	--	4
MAY												
31...	.073	E.005	<.001	--	1.4	.60	29	86	100	15	<1.0	3
JUN												
18...	5.81	.006	.002	.01	2.6	>17	46500	8440	100	--	--	E1
20...	14.3	.010	.002	.01	4.1	>19	572000	16800	100	15	<1.0	<2
27...	7.07	.019	.015	.05	3.4	>20	40700	8870	100	--	--	E2
JUL												
19...	.862	.017	.012	.04	3.4	6.8	1820	1250	100	--	--	4
SEP												
07...	.106	<.006	<.001	--	1.6	.83	94	139	100	1.0	<1.0	3

DATE	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE) (01010)	BORON, DIS-SOLVED (UG/L AS B) (01020)	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030)	COBALT, DIS-SOLVED (UG/L AS CO) (01035)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	LITHIUM DIS-SOLVED (UG/L AS LI) (01130)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060)
DEC												
08...	89	<1.0	297	<1.0	<.80	<1.0	1.9	<10	<1.0	120	<1.0	11
JAN												
19...	--	--	320	--	--	--	--	<10	--	130	--	--
MAR												
08...	104	<1.0	331	<1.0	<1.0	<1.0	3.0	<30	<1.0	130	1.4	12
APR												
13...	--	--	267	--	--	--	--	<10	--	98	--	--
MAY												
31...	86	<1.0	207	<1.0	<.80	<1.0	1.5	<10	<1.0	79	3.0	10
JUN												
18...	--	--	134	--	--	--	--	<10	--	36	--	--
20...	109	<1.0	103	<1.0	<.80	<1.0	2.1	<10	<1.0	18	<1.0	9.6
27...	--	--	150	--	--	--	--	<10	--	44	--	--
JUL												
19...	--	--	190	--	--	--	--	<10	--	51	--	--
SEP												
07...	103	<1.0	167	<1.0	<.80	<1.0	3.1	<10	<1.0	55	<1.0	8.9

08377200 RIO GRANDE AT FOSTER RANCH NEAR LANGTRY, TX--Continued
(National stream-quality accounting network)

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

DATE	NICKEL, DIS-SOLVED (UG/L AS NI) (01065)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)	STRON-TIUM, DIS-SOLVED (UG/L AS SR) (01080)	VANA-DIUM, DIS-SOLVED (UG/L AS V) (01085)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)	URANIUM NATURAL DIS-SOLVED (UG/L AS U) (22703)	2,6-DI-ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	ACETO-CHLOR, WATER FLTRD REC (UG/L) (49260)	ALA-CHLOR, WATER, DISS, REC, (UG/L) (46342)	ALPHA BHC DIS-SOLVED (UG/L) (34253)	ATRA-ZINE, WATER, DISS, REC (UG/L) (39632)
DEC												
08...	2.3	<2	<1.0	2130	<10	1.5	5.6	<.0030	<.0020	<.002	<.0020	<.001
JAN												
19...	--	E1	--	2290	<10	--	--	<.0030	<.0020	<.002	<.0020	<.001
MAR												
08...	<1.0	E2	<1.0	2740	<1	--	5.5	<.0030	<.0020	<.002	<.0020	<.001
APR												
13...	--	E1	--	2090	E7	--	--	<.0030	<.0020	<.002	<.0020	<.004
MAY												
31...	1.1	<2	<1.0	1840	11	4.5	4.5	<.0030	<.0020	<.002	<.0020	<.001
JUN												
18...	--	3	--	2500	<10	--	--	<.0030	<.0020	<.002	<.0020	<.001
20...	<1.0	<2	<1.0	1270	<10	2.8	3.5	<.0030	<.0020	<.002	<.0020	E.002
27...	--	<2	--	2230	E5	--	--	<.0030	<.0020	<.002	<.0020	<.001
JUL												
19...	--	<2	--	1620	E8	--	--	<.0030	<.0020	<.002	<.0020	<.001
SEP												
07...	<1.0	E2	<1.0	2330	E7	2.4	4.0	<.0030	<.0020	<.002	<.0020	<.001

DATE	METHYL AZIN-PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)	BEN-FLUR-ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)	BUTYL-ATE, WATER, DISS, REC (UG/L) (04028)	CAR-BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBO-FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	CHLOR-PYRIFOS DIS-SOLVED (UG/L) (38933)	PER-METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	CYANA-ZINE, WATER, DISS, REC (UG/L) (04041)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	DEETHYL ATRA-ZINE, WATER, DISS, REC (UG/L) (04040)	DI-AZINON, DIS-SOLVED (UG/L) (39572)	DI-ELDRIN DIS-SOLVED (UG/L) (39381)
DEC												
08...	<.0010	<.0020	<.0020	<.0030	<.0030	<.0040	<.0050	<.0040	<.0020	<.0020	.006	<.001
JAN												
19...	<.0010	<.0020	<.0020	<.0030	<.0030	<.0040	<.0050	<.0040	<.0020	<.0020	<.005	<.001
MAR												
08...	<.0010	<.0020	<.0020	<.0030	<.0030	<.0040	<.0050	<.0040	<.0020	<.0020	<.002	<.001
APR												
13...	<.0010	<.0020	<.0020	<.0030	<.0030	<.0040	<.0050	<.0040	<.0020	<.0020	<.002	<.001
MAY												
31...	<.0010	<.0020	<.0020	<.0030	<.0030	<.0040	<.0050	<.0040	<.0020	<.0020	<.002	<.001
JUN												
18...	<.0010	<.0020	<.0020	<.0030	<.0030	<.0040	<.0050	<.0040	<.0020	<.0020	<.002	<.001
20...	<.0010	<.0020	.0072	<.0030	<.0150	<.0040	<.0050	<.0040	<.0020	<.0020	<.002	<.015
27...	<.0010	<.0020	<.0020	<.0030	<.0080	<.0040	<.0050	<.0040	<.0020	E.0017	<.002	<.001
JUL												
19...	<.0010	<.0020	<.0020	<.0030	<.0100	<.0040	<.0050	<.0040	<.0020	<.0020	<.002	<.001
SEP												
07...	<.0010	<.0020	<.0020	<.0030	<.0030	<.0040	<.0050	<.0040	<.0020	<.0020	E.004	<.001

DATE	DISUL-FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	ETHAL-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)	ETHO-PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	FONOFOS WATER DISS REC (UG/L) (04095)	LINDANE DIS-SOLVED (UG/L) (39341)	LIN-URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA-THION, DIS-SOLVED (UG/L) (39532)	METO-LACHLOR WATER DISSOLV (UG/L) (39415)	METRI-BUZIN SENCOR WATER DISSOLV (UG/L) (82630)	MOL-INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)
DEC											
08...	<.0170	<.0020	<.0040	<.0030	<.0030	<.004	<.0020	<.005	.005	<.004	<.0040
JAN											
19...	<.0170	<.0020	<.0040	<.0030	<.0030	<.004	<.0020	<.005	<.002	<.004	<.0040
MAR											
08...	<.0170	<.0020	<.0040	<.0030	<.0030	<.004	<.0020	<.005	<.002	<.004	<.0040
APR											
13...	<.0170	<.0020	<.0040	<.0030	<.0030	<.004	<.0020	<.005	<.002	<.004	<.0040
MAY											
31...	<.0170	<.0020	<.0040	<.0030	<.0030	<.004	<.0020	<.005	<.002	<.004	<.0040
JUN											
18...	<.0170	<.0075	<.0040	<.0030	<.0030	<.004	<.0020	<.005	<.002	<.004	<.0040
20...	<.0170	<.0100	<.0040	<.0030	<.0030	<.004	<.0020	<.005	<.002	<.004	<.0040
27...	<.0170	<.0020	<.0040	<.0030	<.0030	<.004	<.0020	<.005	<.002	<.004	<.0040
JUL											
19...	<.0170	<.0020	<.0040	<.0030	<.0030	<.004	<.0020	<.005	<.002	<.004	<.0040
SEP											
07...	<.0170	<.0020	<.0040	<.0030	<.0030	<.004	<.0020	E.004	<.002	<.004	<.0040

08377200 RIO GRANDE AT FOSTER RANCH NEAR LANGTRY, TX--Continued
(National stream-quality accounting network)

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

DATE	NAPROP-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	P,P' DDE DISSOLV (UG/L) (34653)	PARA-THION, DIS-SOLVED (UG/L) (39542)	METHYL PARA-THION WAT FLT 0.7 U GF, REC (UG/L) (82667)	PEB-ULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	PENDI-METH-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PRO-METON, WATER, DISS, REC (UG/L) (04037)	PROP-CHLOR, WATER, DISS, REC (UG/L) (04024)	PRO-PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	PRO-PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)
DEC											
08...	<.0030	<.0060	<.004	<.0060	<.0040	<.0040	<.0020	<.0180	<.0070	<.0040	<.0130
JAN											
19...	<.0030	<.0060	<.004	<.0060	<.0040	<.0040	<.0020	E.0028	<.0070	<.0040	<.0130
MAR											
08...	<.0030	<.0060	<.004	<.0060	<.0040	<.0040	<.0020	<.0180	<.0070	<.0040	<.0130
APR											
13...	<.0030	<.0060	<.004	<.0060	<.0040	<.0040	<.0020	<.0180	<.0070	<.0040	<.0130
MAY											
31...	<.0030	<.0060	<.004	<.0060	<.0040	<.0040	<.0020	<.0180	<.0070	<.0040	<.0130
JUN											
18...	<.0030	<.0060	<.004	<.0060	<.0040	<.0040	<.0020	<.0180	<.0070	<.0040	<.0130
20...	<.0030	<.0060	<.004	<.0060	<.0040	<.0040	<.0020	<.0180	<.0070	<.0040	<.0130
27...	<.0030	<.0060	<.004	<.0060	<.0040	<.0040	<.0020	<.0180	<.0070	<.0040	<.0130
JUL											
19...	<.0030	<.0060	<.004	<.0060	<.0040	<.0040	<.0020	<.0180	<.0070	<.0040	<.0130
SEP											
07...	<.0030	<.0060	<.004	<.0060	<.0040	<.0040	<.0020	<.0180	<.0070	<.0040	<.0130

DATE	PRON-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	SI-MAZINE, WATER, DISS, REC (UG/L) (04035)	TEBU-THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER-BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TER-BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	THIO-BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL-LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)	DIAZ-INON D10 SRG WAT FLT 0.7 U GF, REC PERCENT (91063)	HCH ALPHA D6 SRG WAT FLT 0.7 U GF, REC PERCENT (91065)	SAMPLE VOLUME SCHED-ULE 2001 (ML) (99856)
DEC											
08...	<.0030	<.0050	<.0100	E.0071	<.0130	<.0020	<.0010	<.0020	112	103	943
JAN											
19...	<.0030	<.0050	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020	116	103	934
MAR											
08...	<.0030	<.0050	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020	92.7	86.2	952
APR											
13...	<.0030	<.0050	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020	114	98.5	862
MAY											
31...	<.0030	<.0050	<.0100	E.0118	<.0130	<.0020	<.0010	<.0020	116	91.8	909
JUN											
18...	<.0030	<.0050	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020	88.6	80.1	877
20...	<.0030	<.0050	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020	85.3	75.6	909
27...	<.0030	<.0050	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020	94.4	95.3	909
JUL											
19...	<.0030	<.0050	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020	106	83.8	862
SEP											
07...	<.0030	<.0050	<.0100	E.0114	<.0130	<.0020	<.0010	<.0020	113	106	862

08446500 PECOS RIVER NEAR GIRVIN, TX

LOCATION.--Lat 31°06′47", long 102°25′02", Pecos County, Hydrologic Unit 13070001, on right bank 2.1 mi upstream from Comanche Creek, 3.8 mi northwest of Girvin, and 7.2 mi upstream from bridge on U.S. Highway 67.

DRAINAGE AREA.--29,560 mi^2 approximately, for contributing area of supplementary gage 7.2 mi downstream.

PERIOD OF RECORD.--Aug 1939 to current year.
Water-quality records.--Chemical data: Oct 1939 to Jun 1941, Oct 1946 to Sep 1947, and Oct 1953 to Aug 1982. Pesticide data: May 1968 to Jul 1974. Specific conductance: Oct 1939 to Jun 1941, Oct 1946 to Sep 1947, Oct 1953 to Sep 1982. Water temperature: Oct 1953 to Jan 1959 and Mar 1964 to Sep 1982.

GAGE.--Water-stage recorder with concrete control and measuring flume. Datum of gage not determined. Supplementary water-stage recorder, used as regular gage prior to Jul 17, 1951, is now used only for peaks exceeding about 750 ft^3/s, 7.2 mi downstream at datum 2,269.65 ft above sea level. Satellite telemeter at station.

REMARKS.--Records good except those for Mar 24, 25 and Jun 21, 22, which are fair, and those for estimated daily discharges, which are poor. Since installation of gage in water year 1939, at least 10% of contributing drainage area has been regulated by Red Bluff Reservoir (station 08410000, conservation pool storage 307,000 acre-ft). There are also numerous diversions above station for irrigation. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water-quality data.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1932 occurred Oct 5, 1941.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	12	29	26	25	19	20	17	24	19	e20	21
2	11	12	31	26	25	19	20	18	32	19	e20	25
3	11	12	31	26	26	19	20	18	22	19	e25	28
4	15	11	29	25	25	19	19	19	22	18	23	24
5	19	11	27	25	24	18	19	19	22	17	19	20
6	20	12	25	25	24	18	19	18	22	17	17	17
7	18	13	24	27	25	18	19	16	17	16	15	17
8	19	13	24	28	25	18	18	14	14	15	15	15
9	20	13	23	28	25	18	17	12	19	15	19	14
10	19	13	23	28	25	18	17	11	36	30	22	13
11	19	13	23	28	25	17	18	11	29	28	21	13
12	19	14	22	27	24	17	17	10	19	27	25	13
13	19	14	21	27	24	18	17	9.4	17	29	28	18
14	19	14	20	27	24	18	17	9.0	20	29	31	17
15	18	14	20	26	23	18	17	9.6	25	27	37	14
16	19	14	21	26	23	18	16	9.8	26	24	40	13
17	18	14	26	26	22	17	16	9.7	28	21	43	13
18	18	15	26	26	21	17	16	9.5	33	19	41	13
19	18	15	25	26	21	17	15	9.4	31	18	34	13
20	19	15	24	26	20	16	15	9.1	65	16	29	13
21	18	24	24	26	19	17	15	9.4	90	16	21	13
22	18	39	24	25	20	56	14	9.4	27	15	17	13
23	19	50	25	25	20	157	14	9.0	22	15	16	13
24	19	38	25	25	19	1670	16	8.6	30	14	15	12
25	18	29	26	25	19	187	17	8.4	21	14	15	13
26	16	24	26	24	19	30	16	9.2	18	14	14	12
27	15	22	26	25	19	25	15	8.8	18	18	14	13
28	14	20	26	25	18	23	13	8.2	18	19	14	14
29	13	20	26	25	19	22	13	7.8	19	18	14	17
30	13	23	25	24	---	21	15	7.6	19	18	15	17
31	13	---	26	24	---	20	---	8.0	---	18	15	---
TOTAL	525	553	773	802	648	2585	500	352.9	805	602	694	471
MEAN	16.9	18.4	24.9	25.9	22.3	83.4	16.7	11.4	26.8	19.4	22.4	15.7
MAX	20	50	31	28	26	1670	20	19	90	30	43	28
MIN	11	11	20	24	18	16	13	7.6	14	14	14	12
AC-FT	1040	1100	1530	1590	1290	5130	992	700	1600	1190	1380	934

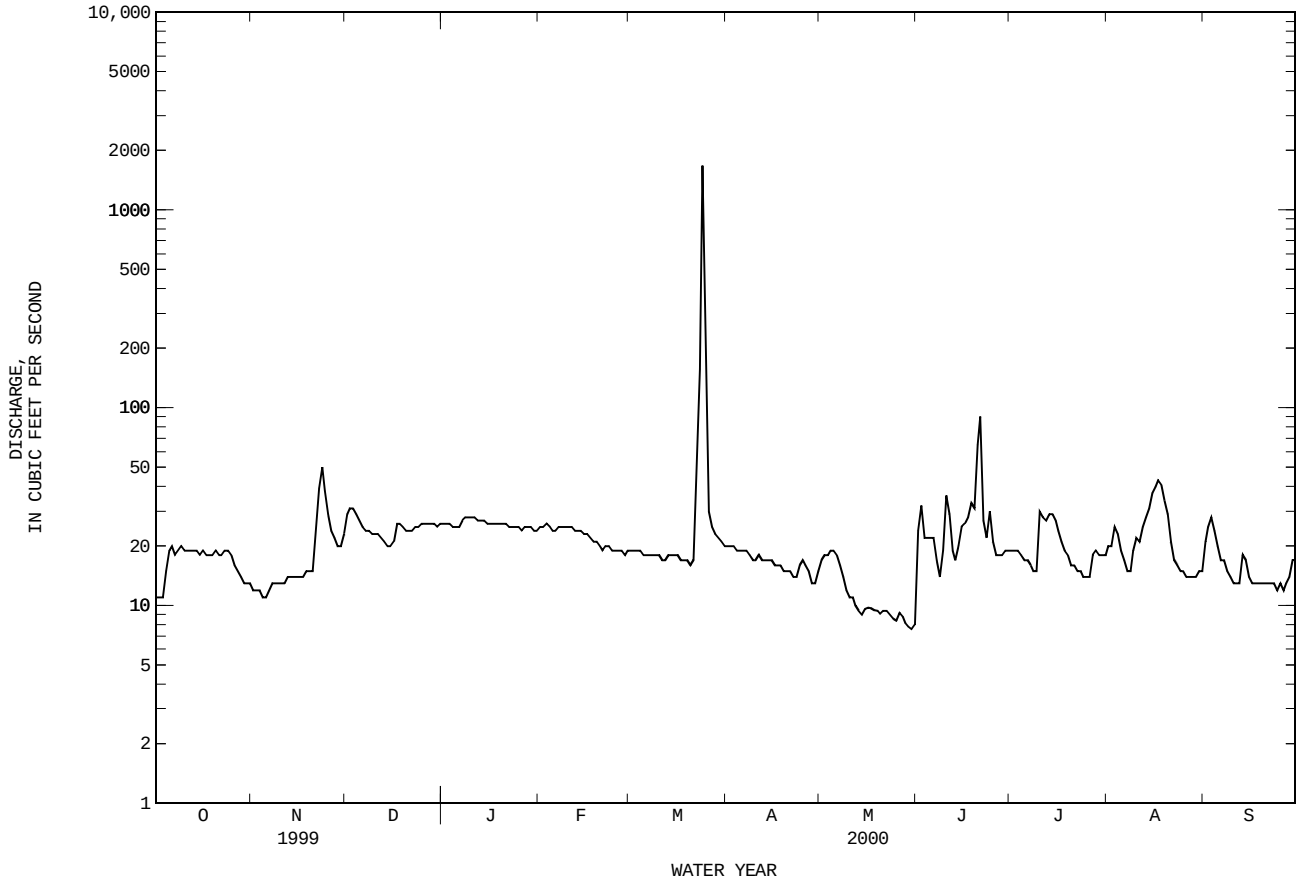
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 2000, BY WATER YEAR (WY)

MEAN	195	104	67.7	63.7	54.3	45.5	35.9	45.7	100	46.6	34.3	64.0
MAX	8506	3007	1192	935	769	314	142	538	3556	813	376	1168
(WY)	1942	1942	1942	1942	1942	1942	1957	1942	1941	1941	1941	1941
MIN	9.52	13.0	15.7	18.3	14.5	16.7	11.3	7.62	2.84	3.86	4.13	6.05
(WY)	1980	1974	1984	1984	1982	1966	1985	1985	1983	1964	1969	1983

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1939 - 2000	
ANNUAL TOTAL	7377.3		9310.9			
ANNUAL MEAN	20.2		25.4		71.5	
HIGHEST ANNUAL MEAN					1386	1942
LOWEST ANNUAL MEAN					16.2	1984
HIGHEST DAILY MEAN	63	Jul 21	1670	Mar 24	19400	Oct 5 1941
LOWEST DAILY MEAN	7.9	May 21	7.6	May 30	1.9	Jun 19 1982
ANNUAL SEVEN-DAY MINIMUM	8.8	May 18	8.3	May 25	2.3	Jul 1 1983
INSTANTANEOUS PEAK FLOW			k2060	Mar 24	k20000	Oct 5 1941
INSTANTANEOUS PEAK STAGE			ak9.93	Mar 24	pk20.49	Oct 5 1941
ANNUAL RUNOFF (AC-FT)	14630		18470		51820	
10 PERCENT EXCEEDS	29		28		85	
50 PERCENT EXCEEDS	20		19		28	
90 PERCENT EXCEEDS	12		13		11	

e Estimated
a From floodmark.
k From supplementary gage.
p Observed.

08446500 PECOS RIVER NEAR GIRVIN, TX--Continued



08447410 PECOS RIVER NEAR LANGTRY, TX
(National stream-quality accounting network)

LOCATION.--Lat 29°48′10", long 101°26′45", Val Verde County, Hydrologic Unit 13070008, at gaging station 7.4 mi east of Langtry, and 15.0 mi upstream from confluence with the Rio Grande.

DRAINAGE AREA.--35,179 mi^2.

PERIOD OF RECORD.--
INORGANIC CHEMICAL DATA: Oct 1954 to current year.
ORGANIC CHEMICAL DATA: Jul 1975 to Jun 1982 and Oct 1995 to current year.
BIOCHEMICAL DATA: Oct 1974 to Aug 1995.
SEDIMENT DATA: Oct 1974 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Oct 1970 to Sep 1976 and Oct 1980 (local observer), Nov 1980 to Sep 1985.
WATER TEMPERATURE: Oct 1970 to Sep 1976 and Oct 1980 (local observer), Nov 1980 to Sep 1985.

INSTRUMENTATION.--Water-quality monitor Nov 1980 to Sep 1985.

REMARKS.--Discharges published in the table were obtained directly from rating table furnished by International Boundary and Water Commission. Records of daily mean discharge for water year 1999 are given in International Boundary and Water Commission Water Bulletins Nos. 69 and 70. Since Oct 1995, suspended sediment chemistry and quality assurance data 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, 6,000 microsiemens, Mar 21, 22, 1981; minimum, 230 microsiemens, Oct 11, 1981.
WATER TEMPERATURE: Maximum, 32.5°C, Jun 8, 1981; minimum, 1.5°C, Dec 26, 27, 1983.

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

DATE	TIME	AGENCY COLLECTING SAMPLE (CODE NUMBER) (00027)	SAMPLING METHOD, CODES (82398)	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE WATER (DEG C) (00010)	TURBIDITY (NTU) (00076)	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)	HARDNESS TOTAL (MG/L AS CACO3) (00900)	HARDNESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)
DEC												
07...	1600	1028	20	102	2910	7.9	11.7	.46	11.0	105	560	430
JAN												
18...	1600	1028	20	130	3680	7.9	15.2	.40	9.5	98	710	580
MAR												
07...	1510	1028	20	109	3940	8.2	21.6	.54	9.8	118	770	670
APR												
12...	1550	1028	20	114	4420	8.1	20.9	.46	8.7	102	820	710
MAY												
30...	1530	1028	20	67	3380	7.9	29.3	.50	7.8	113	650	560
JUN												
26...	1350	1028	20	380	2460	8.0	28.4	3.1	7.7	102	520	360
JUL												
18...	1530	1028	20	142	2900	7.9	30.0	.80	8.2	112	550	440
SEP												
06...	1030	1028	20	87	2340	8.0	29.6	<.50	7.8	106	440	340

DATE	CALCIUM DISSOLVED (MG/L AS CA) (00915)	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)	SODIUM, DISSOLVED (MG/L AS NA) (00930)	SODIUM ADSORPTION RATIO (00931)	SODIUM PERCENT (00932)	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	CARBONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	BICARBONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	ALKALINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)
DEC												
07...	120	60	360	7	58	5.8	0	163	134	400	640	.84
JAN												
18...	160	77	450	7	58	7.8	0	159	130	490	810	.81
MAR												
07...	170	86	529	8	60	8.6	0	130	114	540	920	.90
APR												
12...	180	90	572	9	60	10	0	136	117	620	1000	.89
MAY												
30...	130	77	474	8	61	7.7	0	103	84	460	810	.91
JUN												
26...	120	53	327	6	58	6.4	0	191	156	310	530	.66
JUL												
18...	110	63	382	7	60	7.2	0	137	112	390	630	.78
SEP												
06...	91	51	304	6	60	6.4	0	126	103	310	490	.88

08447410 PECOS RIVER NEAR LANGTRY, TX--Continued
(National stream-quality accounting network)

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

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, TOTAL (MG/L AS N) (00600)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N) (00607)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)
DEC												
07...	11	1730	1680	--	<.010	.301	.024	.97	.64	.10	.13	.67
JAN												
18...	9.9	2230	2100	--	<.010	.370	.053	.52	.10	.11	.17	.15
MAR												
07...	7.4	2390	2330	--	<.010	.138	.023	.40	.24	.17	.19	.26
APR												
12...	7.5	2720	2570	--	<.010	.084	.033	.37	.25	.22	.25	.28
MAY												
30...	15	2080	2030	--	<.010	<.050	.028	--	.39	.35	.37	.42
JUN												
26...	15	1520	1460	1.38	.016	1.39	<.020	1.8	--	--	.41	.41
JUL												
18...	9.8	1750	1670	--	<.010	.187	.029	.51	.30	.18	.21	.33
SEP												
06...	11	1400	1330	--	<.010	.064	.036	.42	.32	.24	.27	.35

DATE	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4) (00660)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC SUS-PENDED TOTAL (MG/L AS C) (00689)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)	ANTI-MONY, DIS-SOLVED (UG/L AS SB) (01095)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)
DEC												
07...	<.008	.006	<.001	--	E.60	<.20	.83	3	58	<2.0	<2.0	<2
JAN												
18...	<.008	<.006	<.001	--	.71	<.20	1.4	4	47	--	--	<2
MAR												
07...	.152	<.006	<.001	--	2.2	<.20	.59	2	64	4.6	<1.0	E2
APR												
12...	<.008	.027	<.001	--	2.8	<.20	.62	2	69	--	--	E2
MAY												
30...	E.005	E.003	<.001	--	3.4	<.20	.72	4	80	<2.0	<2.0	<2
JUN												
26...	.009	E.003	.002	.01	2.9	<.20	7.2	7	83	--	--	E2
JUL												
18...	E.005	<.006	<.001	--	2.2	<.20	1.5	4	83	--	--	2
SEP												
06...	E.004	<.006	.003	.01	2.3	<.20	.47	2	89	1.9	<1.0	E2

DATE	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE) (01010)	BORON, DIS-SOLVED (UG/L AS B) (01020)	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030)	COBALT, DIS-SOLVED (UG/L AS CO) (01035)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	LITHIUM DIS-SOLVED (UG/L AS LI) (01130)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060)
DEC												
07...	70	<2.0	212	<2.0	<.80	<2.0	<2.0	<10	<2.0	55	<2.0	6.4
JAN												
18...	--	--	219	--	--	--	--	<30	--	74	--	--
MAR												
07...	79	<1.0	237	<1.0	<1.0	<1.0	4.9	<30	<1.0	71	2.1	6.9
APR												
12...	--	--	285	--	--	--	--	<30	--	86	--	--
MAY												
30...	76	<2.0	255	<2.0	<1.0	<2.0	2.0	<30	<2.0	67	2.9	6.1
JUN												
26...	--	--	174	--	--	--	--	<30	--	53	--	--
JUL												
18...	--	--	230	--	--	--	--	<30	--	59	--	--
SEP												
06...	65	<1.0	208	<1.0	<.80	<1.0	2.3	<10	<1.0	52	1.5	5.7

08447410 PECOS RIVER NEAR LANGTRY, TX--Continued
(National stream-quality accounting network)

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

DATE	NICKEL, DIS-SOLVED (UG/L AS NI) (01065)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)	STRON-TIUM, DIS-SOLVED (UG/L AS SR) (01080)	VANA-DIUM, DIS-SOLVED (UG/L AS V) (01085)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)	URANIUM NATURAL DIS-SOLVED (UG/L AS U) (22703)	2,6-DI-ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	ACETO-CHLOR, WATER FLTRD REC (UG/L) (49260)	ALA-CHLOR, WATER, DISS, REC, (UG/L) (46342)	ALPHA BHC DIS-SOLVED (UG/L) (34253)	ATRA-ZINE, WATER, DISS, REC (UG/L) (39632)
DEC												
07...	<2.0	<2	<2.0	2310	16	2.1	3.2	<.0030	<.0020	<.002	<.0020	<.001
JAN												
18...	--	<2	--	2870	14	--	--	<.0030	<.0020	<.002	<.0020	<.001
MAR												
07...	<1.0	E2	<1.0	3200	3	--	3.6	<.0030	<.0020	<.002	<.0020	<.001
APR												
12...	--	E2	--	3450	6	--	--	<.0030	<.0020	<.002	<.0020	.005
MAY												
30...	<2.0	<2	<2.0	2810	7	4.6	2.6	<.0030	<.0020	<.002	<.0020	<.001
JUN												
26...	--	<2	--	2040	7	--	--	<.0030	<.0020	<.002	<.0020	E.001
JUL												
18...	--	<2	--	2310	7	--	--	<.0030	<.0020	<.002	<.0020	.006
SEP												
06...	<1.0	<2	<1.0	1900	8	2.9	2.4	<.0030	<.0020	<.002	<.0020	<.001

DATE	METHYL AZIN-PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)	BEN-FLUR-ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)	BUTYL-ATE, WATER, DISS, REC (UG/L) (04028)	CAR-BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBO-FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	CHLOR-PYRIFOS DIS-SOLVED (UG/L) (38933)	PER-METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	CYANA-ZINE, WATER, DISS, REC (UG/L) (04041)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	DEETHYL ATRA-ZINE, WATER, DISS, REC (UG/L) (04040)	DI-AZINON, DIS-SOLVED (UG/L) (39572)	DI-ELDRIN DIS-SOLVED (UG/L) (39381)
DEC												
07...	<.0010	<.0020	<.0020	<.0030	<.0030	<.0040	<.0050	<.0040	<.0020	<.0020	<.002	<.001
JAN												
18...	<.0010	<.0020	<.0020	<.0030	<.0030	<.0040	<.0050	<.0040	<.0020	<.0020	<.002	<.001
MAR												
07...	<.0010	<.0020	<.0020	<.0030	<.0030	<.0040	<.0050	<.0040	<.0020	<.0020	<.002	<.001
APR												
12...	<.0010	<.0020	<.0020	<.0030	<.0030	<.0040	<.0050	<.0040	<.0020	<.0040	<.002	<.001
MAY												
30...	<.0010	<.0020	<.0020	<.0030	<.0300	<.0040	<.0050	<.0040	<.0020	<.0020	.005	<.001
JUN												
26...	<.0010	<.0020	<.0020	<.0030	<.0100	<.0040	<.0050	<.0040	<.0020	<.0020	E.004	<.001
JUL												
18...	<.0010	<.0020	<.0020	<.0030	<.0030	<.0040	<.0050	<.0040	<.0020	<.0020	<.002	<.001
SEP												
06...	<.0010	<.0020	<.0020	<.0030	<.0030	<.0040	<.0050	<.0040	<.0020	<.0020	.004	<.001

DATE	DISUL-FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	ETHAL-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)	ETHO-PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	FONOFOS WATER DISS REC (UG/L) (04095)	LINDANE DIS-SOLVED (UG/L) (39341)	LIN-URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA-THION, DIS-SOLVED (UG/L) (39532)	METO-LACHLOR WATER DISSOLV (UG/L) (39415)	METRI-BUZIN SENCOR WATER DISSOLV (UG/L) (82630)	MOL-INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)
DEC											
07...	<.0170	<.0020	<.0040	<.0030	<.0030	<.004	<.0020	<.005	<.002	<.004	<.0040
JAN											
18...	<.0170	<.0020	<.0040	<.0030	<.0030	<.004	<.0020	<.005	<.002	<.004	<.0040
MAR											
07...	<.0170	<.0020	<.0040	<.0030	<.0030	<.004	<.0020	<.005	<.002	<.004	<.0040
APR											
12...	<.0170	<.0020	<.0040	<.0030	<.0030	<.004	<.0020	<.005	<.002	<.004	<.0040
MAY											
30...	<.0170	<.0020	<.0040	<.0030	<.0030	<.004	<.0020	<.005	<.002	<.004	<.0040
JUN											
26...	<.0170	<.0020	<.0040	<.0030	<.0030	<.004	<.0020	<.005	<.002	<.004	<.0040
JUL											
18...	<.0170	<.0020	<.0040	<.0030	<.0030	<.004	<.0020	<.005	.009	<.004	<.0040
SEP											
06...	<.0170	<.0020	<.0040	<.0030	<.0030	<.004	<.0020	<.005	<.002	<.004	<.0040

08447410 PECOS RIVER NEAR LANGTRY, TX--Continued
(National stream-quality accounting network)

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

DATE	NAPROP-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	P,P' DDE DISSOLV (UG/L) (34653)	PARA-THION, DIS-SOLVED (UG/L) (39542)	METHYL PARA-THION WAT FLT 0.7 U GF, REC (UG/L) (82667)	PEB-ULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	PENDI-METH-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PRO-METON, WATER, DISS, REC (UG/L) (04037)	PROP-CHLOR, WATER, DISS, REC (UG/L) (04024)	PRO-PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	PRO-PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)
DEC											
07...	<.0030	<.0060	<.004	<.0060	<.0040	<.0040	<.0020	<.0180	<.0070	<.0040	<.0130
JAN											
18...	<.0030	<.0060	<.004	<.0060	<.0040	<.0040	<.0020	<.0180	<.0070	<.0040	<.0130
MAR											
07...	<.0030	<.0060	<.004	<.0060	<.0040	<.0040	<.0020	<.0180	<.0070	<.0040	<.0130
APR											
12...	<.0030	<.0060	<.004	<.0060	<.0040	<.0040	<.0020	<.0180	<.0070	<.0040	<.0130
MAY											
30...	<.0030	<.0060	<.004	<.0060	<.0040	<.0040	<.0020	<.0180	<.0070	<.0040	<.0130
JUN											
26...	<.0030	<.0060	<.004	<.0060	<.0040	<.0040	<.0020	<.0180	<.0070	<.0040	<.0130
JUL											
18...	<.0030	<.0060	<.004	<.0060	<.0040	<.0040	<.0020	<.0180	<.0070	<.0040	<.0130
SEP											
06...	<.0030	<.0060	<.004	<.0060	<.0040	<.0040	<.0020	<.0180	<.0070	<.0040	<.0130

DATE	PRON-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	SI-MAZINE, WATER, DISS, REC (UG/L) (04035)	TEBU-THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER-BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TER-BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	THIO-BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL-LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)	DIAZ-INON D10 SRG WAT FLT 0.7 U GF, REC PERCENT (91063)	HCH ALPHA D6 SRG WAT FLT 0.7 U GF, REC PERCENT (91065)	SAMPLE VOLUME SCHED-ULE 2001 (ML) (99856)
DEC											
07...	<.0030	<.0050	<.0100	E.0077	<.0130	<.0020	<.0010	<.0020	107	97.2	917
JAN											
18...	<.0030	<.0050	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020	88.8	79.0	917
MAR											
07...	<.0030	<.0050	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020	100	92.8	917
APR											
12...	<.0030	<.0050	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020	115	101	862
MAY											
30...	<.0030	<.0050	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020	110	98.1	917
JUN											
26...	<.0030	<.0050	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020	93.5	83.9	934
JUL											
18...	<.0030	.0124	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020	106	95.6	909
SEP											
06...	<.0030	<.0050	<.0100	E.0108	<.0130	<.0020	<.0010	<.0020	113	103	884

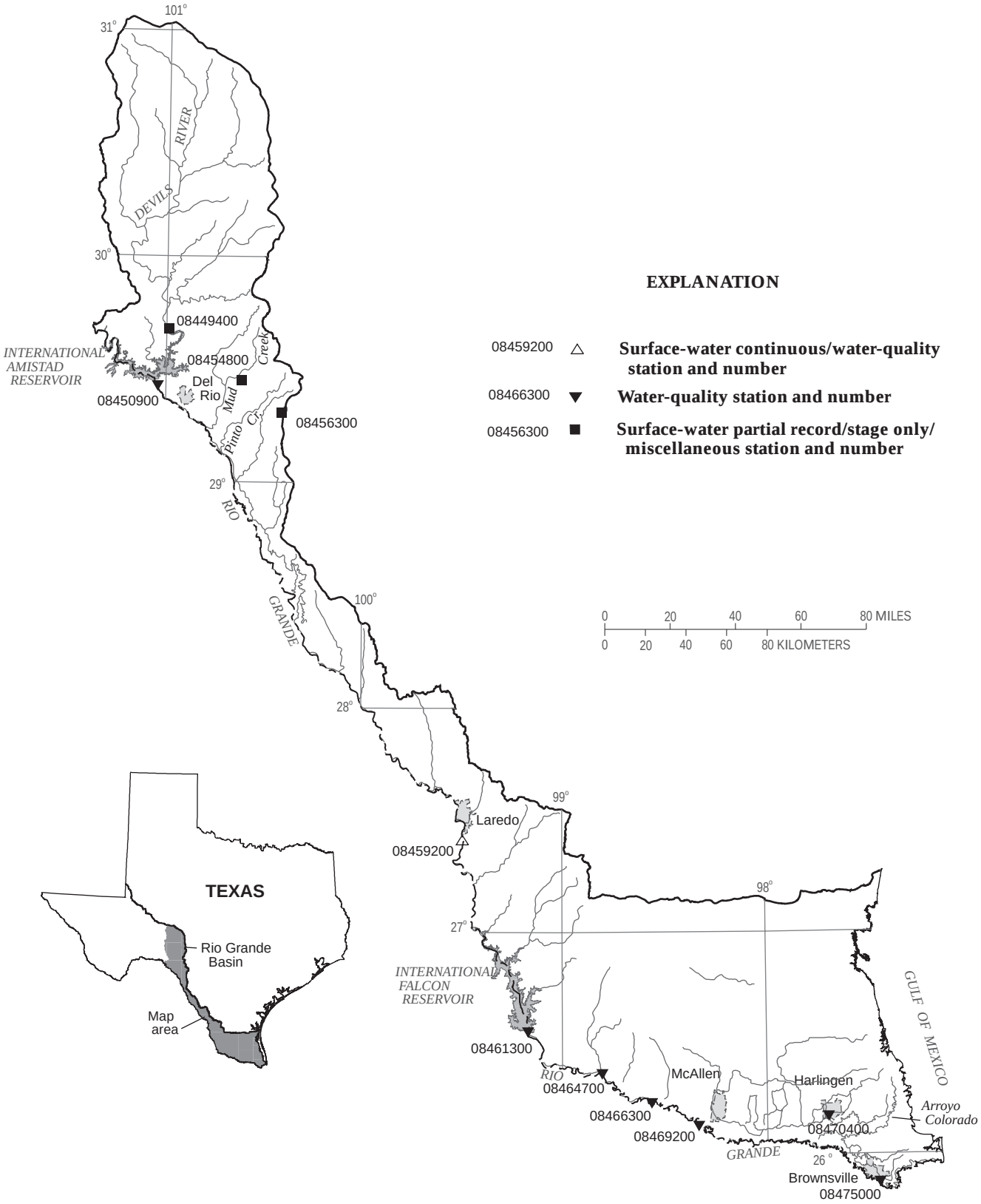


Figure 10.--Map showing location of gaging stations in the second section of the Rio Grande Basin

08449400 Devils River at Pafford Crossing near Comstock, TX 384
08450900 Rio Grande below Amistad Dam near Del Rio, TX 344
08454800 Mud Springs at Mays Ranch near Brackettville, TX 384
08456300 Las Moras Springs at Brackettville, TX 382
08459200 Rio Grande at Pipeline Crossing below Laredo, TX 348
08461300 Rio Grande below Falcon Dam, TX 356
08464700 Rio Grande at Fort Ringgold, Rio Grande City, TX 360
08466300 Rio Grande near Los Ebanos, TX 362
08469200 Rio Grande below Anzalduas Dam, TX 364
08470400 Arroyo Colorado at Harlingen, TX 368
08475000 Rio Grande near Brownsville, TX 372

08450900 RIO GRANDE BELOW AMISTAD DAM NEAR DEL RIO, TX
(National stream-quality accounting network)

LOCATION.--Lat 29°25′00", long 101°27′02", Val Verde County, Hydrologic Unit 13080001, 2.2 mi downstream from Amistad Dam and 10 mi northwest of Del Rio.

DRAINAGE AREA.--123,143 mi^2.

PERIOD OF RECORD.--
INORGANIC CHEMICAL DATA: Jul 1968 to current year.
ORGANIC CHEMICAL DATA: Oct 1995 to current year.
SEDIMENT DATA: Oct 1995 to current year.

REMARKS.--The flow is controlled largely by releases from Amistad Reservoir. Discharges published in the table were obtained directly from rating table furnished by International Boundary and Water Commission. Records of daily mean discharge for water year 1999 are given in International Boundary and Water Commission Water Bulletins Nos. 69 and 70. Since Jun 1996, suspended sediment chemistry and quality assurance data for this station may be obtained from the U.S. Geological Survey Texas District Office upon request.

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

DATE	TIME	AGENCY COL-LECTING SAMPLE (CODE NUMBER) (00027)	SAM-PLING METHOD, CODES (82398)	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	TUR-BID-ITY (NTU) (00076)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)
JAN												
20...	0920	1028	10	106	1070	7.6	12.5	2.0	8.3	81	250	150
MAR												
09...	1000	1028	10	143	1120	8.1	13.9	1.5	8.1	81	270	150
APR												
14...	1000	1028	10	1590	1080	7.7	15.6	.49	7.1	74	260	140
JUN												
01...	0900	1028	10	1660	739	7.5	19.8	1.5	3.6	41	270	150
JUL												
20...	1000	1028	10	282	1110	7.2	22.5	.80	2.9	34	260	140
SEP												
08...	1000	1028	40	1620	1080	7.6	26.0	<.50	3.3	42	250	160

DATE	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	SODIUM PERCENT (00932)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	CAR-BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)
JAN												
20...	67	21	110	3	48	4.6	0	131	107	210	140	.67
MAR												
09...	71	22	120	3	49	4.5	0	142	116	210	150	.82
APR												
14...	70	21	115	3	48	4.7	0	153	112	200	140	.69
JUN												
01...	69	23	121	3	49	4.6	0	138	113	200	150	.75
JUL												
20...	66	22	113	3	49	3.9	0	140	115	200	140	.61
SEP												
08...	66	21	110	3	48	4.8	0	113	93	200	140	.81

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, TOTAL (MG/L AS N) (00600)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N) (00607)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)
JAN											
20...	14	628	630	<.010	.161	.030	.37	.18	.13	.16	.21
MAR											
09...	13	676	655	<.010	.211	.030	.44	.20	.18	.21	.23
APR											
14...	13	648	636	<.010	.228	<.020	.41	--	--	.17	.18
JUN											
01...	13	662	653	<.010	.181	.026	.46	.26	.21	.23	.28
JUL											
20...	13	662	630	<.010	.188	<.020	.38	--	--	.15	.20
SEP											
08...	15	656	616	<.010	.140	.056	.44	.24	.19	.25	.30

08450900 RIO GRANDE BELOW AMISTAD DAM NEAR DEL RIO, TX--Continued
(National stream-quality accounting network)

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

DATE	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4) (00660)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC SUS-PENDED TOTAL (MG/L AS C) (00689)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	BORON, DIS-SOLVED (UG/L AS B) (01020)
JAN											
20...	E.004	<.006	<.001	--	2.2	<.20	1.4	5	93	E2	154
MAR											
09...	<.008	<.006	.009	.03	2.1	<.20	1.9	5	80	2	165
APR											
14...	<.008	<.006	<.001	--	2.1	<.20	8.6	2	100	2	164
JUN											
01...	E.006	E.003	<.001	--	2.2	<.20	22	5	78	E2	161
JUL											
20...	E.005	<.006	.001	M	1.9	<.20	2.3	3	81	4	157
SEP											
08...	.010	E.004	.001	M	2.1	<.20	8.7	2	100	3	158

DATE	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LITHIUM DIS-SOLVED (UG/L AS LI) (01130)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)	STRON-TIUM, DIS-SOLVED (UG/L AS SR) (01080)	VANA-DIUM, DIS-SOLVED (UG/L AS V) (01085)	2,6-DI-ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	ACETO-CHLOR, WATER FLTRD REC (UG/L) (49260)	ALA-CHLOR, WATER, DISS, REC, (UG/L) (46342)	ALPHA BHC DIS-SOLVED (UG/L) (34253)	ATRA-ZINE, WATER, DISS, REC (UG/L) (39632)	METHYL AZIN-PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)
JAN											
20...	<10	45	<2	1230	E7	<.0030	<.0020	<.002	<.0020	E.003	<.0010
MAR											
09...	<10	46	<2	1310	<10	<.0030	<.0020	<.002	<.0020	<.001	<.0010
APR											
14...	<10	47	<2	1210	<10	<.0030	<.0020	<.002	<.0020	<.005	<.0010
JUN											
01...	<10	44	<2	1300	<10	<.0030	<.0020	<.002	<.0020	<.001	<.0010
JUL											
20...	<10	42	<2	1200	<10	<.0030	<.0020	<.002	<.0020	<.001	<.0010
SEP											
08...	<10	41	<2	1200	<10	<.0030	<.0020	<.002	<.0020	.005	<.0100

DATE	BEN-FLUR-ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)	BUTYL-ATE, WATER, DISS, REC (UG/L) (04028)	CAR-BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBO-FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	CHLOR-PYRIFOS DIS-SOLVED (UG/L) (38933)	PER-METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	CYANA-ZINE, WATER, DISS, REC (UG/L) (04041)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	DEETHYL ATRA-ZINE, WATER, DISS, REC (UG/L) (04040)	DI-AZINON, DIS-SOLVED (UG/L) (39572)	DI-ELDRIN DIS-SOLVED (UG/L) (39381)
JAN											
20...	<.0020	<.0020	<.0030	<.0030	<.0040	<.0050	<.0040	<.0020	<.0020	<.002	<.001
MAR											
09...	<.0020	<.0020	<.0030	<.0030	<.0040	<.0050	<.0040	<.0020	<.0020	<.002	<.001
APR											
14...	<.0020	<.0020	<.0030	<.0030	<.0040	<.0050	<.0040	<.0020	<.0020	<.002	<.001
JUN											
01...	<.0020	<.0020	<.0030	<.0100	<.0040	<.0050	<.0040	<.0020	<.0020	.004	<.001
JUL											
20...	<.0020	<.0020	<.0030	<.0030	<.0040	<.0050	<.0040	<.0020	<.0020	<.002	<.001
SEP											
08...	<.0020	<.0020	<.0030	<.0030	<.0040	<.0050	<.0040	<.0020	E.0020	E.003	<.001

DATE	DISUL-FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	ETHAL-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)	ETHO-PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	FONOFOS WATER DISS REC (UG/L) (04095)	LINDANE DIS-SOLVED (UG/L) (39341)	LIN-URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA-THION, DIS-SOLVED (UG/L) (39532)	METO-LACHLOR WATER DISSOLV (UG/L) (39415)	METRI-BUZIN SENCOR WATER DISSOLV (UG/L) (82630)	MOL-INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)
JAN											
20...	<.0170	<.0020	<.0040	<.0030	<.0030	<.004	<.0020	<.005	<.002	<.004	<.0040
MAR											
09...	<.0170	<.0020	<.0040	<.0030	<.0030	<.004	<.0020	<.005	<.002	<.004	<.0040
APR											
14...	<.0170	<.0020	<.0040	<.0030	<.0030	<.004	<.0020	<.005	<.002	<.004	<.0040
JUN											
01...	<.0170	<.0020	<.0040	<.0030	<.0030	<.004	<.0020	<.005	<.002	<.004	<.0040
JUL											
20...	<.0170	<.0020	<.0040	<.0030	<.0030	<.004	<.0020	<.005	<.002	<.004	<.0040
SEP											
08...	<.0170	<.0020	<.0040	<.0030	<.0030	<.004	<.0020	<.005	<.002	<.004	<.0040

08450900 RIO GRANDE BELOW AMISTAD DAM NEAR DEL RIO, TX--Continued
(National stream-quality accounting network)

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

DATE	NAPROP-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	P,P' DDE DISSOLV (UG/L) (34653)	PARA-THION, DIS-SOLVED (UG/L) (39542)	METHYL PARA-THION WAT FLT 0.7 U GF, REC (UG/L) (82667)	PEB-ULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	PENDI-METH-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PRO-METON, WATER, DISS, REC (UG/L) (04037)	PROP-CHLOR, WATER, DISS, REC (UG/L) (04024)	PRO-PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	PRO-PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)
JAN											
20...	<.0030	<.0060	<.004	<.0060	<.0040	<.0040	<.0020	E.0021	<.0070	<.0040	<.0130
MAR											
09...	<.0030	<.0060	<.004	<.0060	<.0040	<.0040	<.0020	<.0180	<.0070	<.0040	<.0130
APR											
14...	<.0030	<.0060	<.004	<.0060	<.0040	<.0040	<.0020	<.0180	<.0070	<.0040	<.0130
JUN											
01...	<.0030	<.0060	<.004	<.0060	<.0040	<.0040	<.0020	<.0180	<.0070	<.0040	<.0130
JUL											
20...	<.0030	<.0060	<.004	<.0060	<.0040	<.0040	<.0020	<.0180	<.0070	<.0040	<.0130
SEP											
08...	<.0030	<.0060	<.004	<.0060	<.0040	<.0040	<.0020	E.0031	<.0070	<.0040	<.0130

DATE	PRON-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	SI-MAZINE, WATER, DISS, REC (UG/L) (04035)	TEBU-THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER-BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TER-BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	THIO-BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL-LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)	DIAZ-INON D10 SRG WAT FLT 0.7 U GF, REC PERCENT (91063)	HCH ALPHA D6 SRG WAT FLT 0.7 U GF, REC PERCENT (91065)	SAMPLE VOLUME SCHED-ULE 2001 (ML) (99856)
JAN											
20...	<.0030	<.0050	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020	86.3	79.3	900
MAR											
09...	<.0030	<.0050	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020	100	94.8	892
APR											
14...	<.0030	<.0050	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020	116	109	892
JUN											
01...	<.0030	<.0050	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020	109	102	925
JUL											
20...	<.0030	<.0050	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020	109	104	847
SEP											
08...	<.0030	<.0050	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020	115	105	884

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08459200 RIO GRANDE RIVER AT PIPELINE CROSSING BELOW LAREDO, TX
(National stream-quality accounting network)

LOCATION.--Lat 27°24′01", long 99°29′18", Webb County, Hydrologic Unit 13080002, 8.7 mi (14.0 km) downstream from Texas-Mexican Railway bridge near Laredo, and at mile 352.60 (567.47 km).

DRAINAGE AREA.--132,578 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Oct 1997 to current year.

GAGE.--Water-stage recorder. Datum of gage is 335 ft above sea level. Satellite telemeter at station.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Since installation of gage in Oct 1997, at least 10% of contributing drainage area has been regulated by Falcon Dam (conservation pool storage 2,767,400 acre-ft) located 95 mi upstream. Extensive withdrawal during the year for municipal and agricultural usage. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water-quality data.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1270	1360	1100	943	989	1130	738	3080	1240	1460	3940	708
2	1250	1350	1100	978	1580	1150	929	3410	1310	1400	3900	819
3	1240	1320	1040	980	1120	1080	700	3670	1220	1490	3600	834
4	1300	1290	961	977	1290	1130	709	3570	1290	1380	3580	775
5	1380	1260	959	942	1230	1130	665	3520	2860	1350	3550	1610
6	1380	1270	957	932	1170	1100	822	3580	1970	1350	3560	1720
7	1350	1300	953	e980	1110	1110	977	4520	2150	1320	3670	1130
8	1330	1350	1020	e972	1070	1100	942	5270	1160	1270	4680	983
9	1380	1340	978	e965	1050	1100	1330	5360	1260	1210	4800	926
10	1420	1310	943	e997	1060	1070	2140	5270	1490	1210	4780	901
11	1410	1320	945	e990	1070	1050	2450	5350	1730	1240	4830	847
12	1390	1270	938	1000	1090	1040	2730	5230	3920	1230	4610	820
13	1170	1240	935	981	1070	1010	2340	5610	2710	1180	4690	892
14	1070	1260	844	976	1070	3480	2570	7570	2080	1240	4810	960
15	1050	1270	1020	1020	1050	6810	2450	4620	1940	1200	4850	1070
16	1040	1310	952	1000	1010	4060	2240	e4580	1690	1220	4920	1240
17	1370	e1300	891	991	995	1660	2290	e3750	1720	1210	4880	1690
18	2240	e1290	880	1010	960	1170	2270	e5820	1880	1220	4840	1490
19	2370	e1300	888	1020	1030	979	2250	e7830	3470	1250	4790	1230
20	1830	e1230	878	985	972	1010	2200	e9250	3380	1240	4860	1060
21	1630	e1210	901	972	957	887	2150	e7680	4170	1180	4950	971
22	1530	e1150	933	978	910	864	2110	e7080	2450	1200	4710	1040
23	1520	1180	897	942	893	844	2160	e5680	2050	1210	2550	1000
24	1530	1100	893	923	900	857	2200	4520	1880	1330	2220	996
25	1490	1070	920	935	898	915	2190	4170	1760	3230	1740	1060
26	1510	1100	961	960	855	1030	2920	2350	1680	3420	1120	2220
27	1500	1100	994	917	894	933	3000	1880	1660	3470	947	1620
28	1430	1130	994	894	940	874	3000	1610	1610	3540	882	1300
29	1410	1090	1000	936	992	859	3060	1350	1550	3530	948	1160
30	1450	1150	950	958	---	815	2980	1390	1480	3640	938	1070
31	1410	---	935	985	---	761	---	1290	---	4270	808	---
TOTAL	44650	37220	29560	30039	30225	43008	59512	139860	60760	55690	109953	34142
MEAN	1440	1241	954	969	1042	1387	1984	4512	2025	1796	3547	1138
MAX	2370	1360	1100	1020	1580	6810	3060	9250	4170	4270	4950	2220
MIN	1040	1070	844	894	855	761	665	1290	1160	1180	808	708
AC-FT	88560	73830	58630	59580	59950	85310	118000	277400	120500	110500	218100	67720

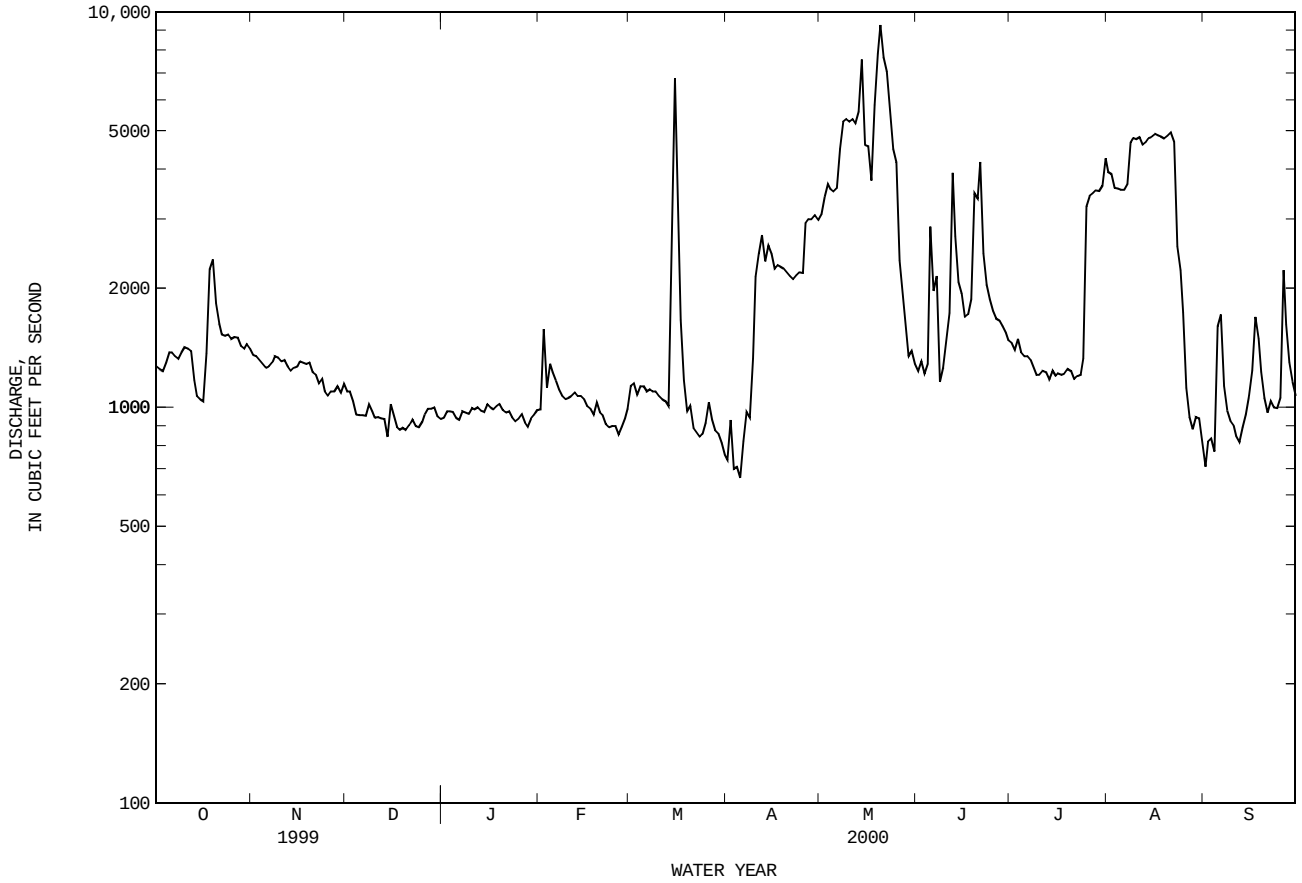
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1997 - 2000, BY WATER YEAR (WY)

MEAN	1541	1227	1006	969	1123	1912	3252	4123	2950	1934	4832	1549
MAX	2066	1659	1478	1451	1329	3092	4417	5832	3707	2440	7561	1795
(WY)	1998	1998	1998	1998	1998	1999	1999	1998	1999	1999	1998	1999
MIN	1117	781	586	489	1002	1255	1984	2026	2025	1567	3389	1138
(WY)	1999	1999	1999	1999	1999	1998	2000	1999	2000	1998	1999	2000

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1997 - 2000	
ANNUAL TOTAL	791578		674619			
ANNUAL MEAN	2169		1843		2209	
HIGHEST ANNUAL MEAN					2713	1998
LOWEST ANNUAL MEAN					1843	2000
HIGHEST DAILY MEAN	24600	Aug 26	9250	May 20	88000	Aug 27 1998
LOWEST DAILY MEAN	414	Feb 7	665	Apr 5	1.7	Sep 28 1997
ANNUAL SEVEN-DAY MINIMUM	439	Feb 1	760	Mar 30	439	Feb 1 1999
INSTANTANEOUS PEAK FLOW			15000	May 21	91000	Aug 27 1998
INSTANTANEOUS PEAK STAGE			10.13	May 21	a34.61	Aug 27 1998
ANNUAL RUNOFF (AC-FT)	1570000		1338000		1600000	
10 PERCENT EXCEEDS	4440		4090		4390	
50 PERCENT EXCEEDS	1410		1240		1380	
90 PERCENT EXCEEDS	523		901		780	

e Estimated
a From floodmark.

08459200 RIO GRANDE RIVER AT PIPELINE CROSSING BELOW LAREDO, TX--Continued
(National stream-quality accounting network)



08459200 RIO GRANDE RIVER AT PIPELINE CROSSING BELOW LAREDO, TX--Continued
(National stream-quality accounting network)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--
CHEMICAL DATA: Jan 1998 to current year.
BIOCHEMICAL DATA: Apr 1977 to Dec 1981, Jan 1998 to current year.
RADIOCHEMICAL DATA: Jan 1998 to current year.
PESTICIDE DATA: Jan 1998 to current year.
SEDIMENT DATA: Jan 1998 to current year.

REMARKS.--Since Jan 1998, suspended sediment chemistry and quality assurance data for this station may be obtained from the U.S. Geological Survey Texas District office upon request.

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

DATE	TIME	AGENCY COL-LECTING SAMPLE (CODE NUMBER) (00027)	SAM-PLING METHOD, CODES (82398)	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	TUR-BID-ITY (NTU) (00076)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)
OCT												
26...	1030	84823	--	1440	805	8.1	20.0	--	--	--	240	110
NOV												
23...	1420	1028	10	1230	870	7.6	22.5	22	7.5	87	230	110
DEC												
16...	0945	84823	--	1100	930	8.0	12.0	--	9.0	83	250	120
JAN												
12...	1000	1028	10	1030	970	7.7	16.0	5.5	9.0	90	250	120
FEB												
14...	0950	1028	10	1100	991	8.0	20.0	9.1	8.2	91	240	120
MAR												
30...	1040	1028	10	774	974	8.1	25.0	32	6.7	82	250	130
APR												
20...	0930	1028	10	1860	1050	8.0	25.5	41	7.0	87	260	140
MAY												
31...	0950	1028	10	1280	1120	8.2	28.0	5.5	6.3	82	280	160
JUN												
21...	1400	1028	10	4090	865	7.9	28.0	120	7.3	94	230	110
JUL												
19...	1030	1028	10	1370	1040	8.2	28.5	39	6.4	83	250	140
AUG												
23...	0930	1028	10	2210	1100	7.9	28.5	34	7.8	102	270	160
SEP												
12...	1150	1028	10	816	1280	7.8	29.0	.70	8.2	110	280	180

DATE	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	SODIUM PERCENT (00932)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	CAR-BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	ALKA-LINITY WAT DIS FIX END FIELD CAC03 (MG/L) (39036)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)
OCT												
26...	69	15	70	2	39	3.2	--	--	--	130	130	88
NOV												
23...	63	17	79	2	43	3.4	0	145	119	--	160	100
DEC												
16...	69	18	91	3	44	3.8	--	--	--	120	170	110
JAN												
12...	69	19	92	3	44	3.7	0	158	130	--	180	110
FEB												
14...	66	19	91	3	45	3.7	0	146	120	--	180	120
MAR												
30...	70	19	92	3	44	4.2	0	152	124	--	180	110
APR												
20...	71	20	107	3	47	4.8	0	144	118	--	200	130
MAY												
31...	72	24	129	3	50	4.7	0	147	121	--	210	150
JUN												
21...	62	17	83	2	44	4.5	0	137	113	--	150	100
JUL												
19...	65	22	111	3	48	4.5	0	143	117	--	200	140
AUG												
23...	72	22	116	3	48	5.3	0	131	107	--	210	140
SEP												
12...	72	23	134	4	51	5.4	0	122	100	--	230	150

08459200 RIO GRANDE RIVER AT PIPELINE CROSSING BELOW LAREDO, TX--Continued
(National stream-quality accounting network)

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

DATE	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, TOTAL (MG/L AS N) (00600)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N) (00607)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)
OCT												
26...	.46	.36	--	453	--	--	--	--	--	--	--	--
NOV												
23...	.55	6.7	530	501	.714	.013	.727	.101	1.2	.39	.22	.32
DEC												
16...	.56	2.6	--	542	--	--	--	--	--	--	--	--
JAN												
12...	.59	.96	581	560	.249	.014	.263	.437	1.0	.30	.16	.60
FEB												
14...	.55	1.1	597	559	.205	.035	.240	.343	.97	.38	.32	.67
MAR												
30...	.60	5.2	584	562	.731	.053	.784	.204	1.5	.46	.25	.45
APR												
20...	.73	13	634	621	.672	.021	.693	.100	1.2	.45	.24	.34
MAY												
31...	.70	14	706	685	.368	.015	.383	.080	.83	.36	.21	.29
JUN												
21...	.50	11	512	505	.559	.011	.570	.052	1.4	.81	.24	.29
JUL												
19...	.67	11	682	630	.455	.015	.470	.084	1.1	.56	.20	.29
AUG												
23...	.72	15	656	649	--	<.010	.486	.035	.98	.46	.19	.23
SEP												
12...	.78	15	712	692	.774	.027	.801	.153	1.4	.46	.28	.44

DATE	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4) (00660)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC SUS-PENDED TOTAL (MG/L AS C) (00689)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)	ANTI-MONY, DIS-SOLVED (UG/L AS SB) (01095)
OCT												
26...	--	--	--	--	--	--	--	--	--	--	--	--
NOV												
23...	.49	.265	.206	.170	.52	2.2	.30	139	42	98	--	--
DEC												
16...	--	--	--	--	--	--	--	--	--	--	--	--
JAN												
12...	.73	.239	.193	--	--	2.8	.50	64	23	96	20	<1.0
FEB												
14...	.73	.235	.194	.169	.52	--	2.0	89	30	96	--	--
MAR												
30...	.67	.267	.200	.174	.53	3.4	1.0	113	54	100	17	<1.0
APR												
20...	.55	.207	.116	.103	.32	3.5	1.2	452	90	99	--	--
MAY												
31...	.44	.136	.093	.100	.31	2.7	.63	--	--	--	14	<1.0
JUN												
21...	.86	.276	.082	.071	.22	3.2	1.5	3610	327	99	--	--
JUL												
19...	.64	.194	.113	.109	.33	2.7	.57	237	64	100	34	<1.0
AUG												
23...	.50	.179	.100	.092	.28	3.2	.29	567	95	99	--	--
SEP												
12...	.61	.246	.202	.164	.50	3.0	.38	33	15	97	--	--

08459200 RIO GRANDE RIVER AT PIPELINE CROSSING BELOW LAREDO, TX--Continued
(National stream-quality accounting network)

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

DATE	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
OCT											
26...	--	--	--	--	--	--	--	--	--	--	--
NOV											
23...	E2	--	--	--	--	--	--	<10	--	27	--
DEC											
16...	--	--	--	--	--	--	--	--	--	--	--
JAN											
12...	E1	85	<1.0	<1.0	<.80	<1.0	1.5	<10	<1.0	34	6.0
FEB											
14...	E2	--	--	--	--	--	--	<10	--	33	--
MAR											
30...	2	87	<1.0	<1.0	<1.0	<1.0	1.4	<10	<1.0	36	6.9
APR											
20...	2	--	--	--	--	--	--	<10	--	38	--
MAY											
31...	2	108	<1.0	<1.0	<.80	<1.0	1.4	<10	<1.0	47	3.6
JUN											
21...	3	--	--	--	--	--	--	<10	--	31	--
JUL											
19...	4	99	<1.0	<1.0	<.80	<1.0	2.3	<10	<1.0	33	1.3
AUG											
23...	2	--	--	--	--	--	--	<10	--	47	--
SEP											
12...	4	--	--	--	--	--	--	<10	--	46	--

DATE	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)	2,6-DI- ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	ACETO- CHLOR, WATER FLTRD REC (UG/L) (49260)	ALA- CHLOR, WATER, DISS, REC, (UG/L) (46342)
OCT											
26...	--	--	--	--	--	--	--	--	--	--	--
NOV											
23...	--	--	<2	--	1070	<10	--	--	<.0030	<.0020	<.002
DEC											
16...	--	--	--	--	--	--	--	--	--	--	--
JAN											
12...	5.4	2.1	<2	<1.0	1150	<10	3.0	2.3	<.0030	<.0020	<.002
FEB											
14...	--	--	<2	--	1180	<10	--	--	<.0030	<.0020	<.002
MAR											
30...	5.5	<1.0	<2	<1.0	1200	<10	V5.6	2.5	<.0030	<.0020	<.002
APR											
20...	--	--	E2	--	1230	E6	--	--	<.0030	<.0020	<.002
MAY											
31...	7.6	1.1	<2	<1.0	1330	E7	4.0	3.0	<.0030	<.0020	<.002
JUN											
21...	--	--	<2	--	1210	E6	--	--	<.0030	<.0020	<.002
JUL											
19...	6.3	1.6	<2	<1.0	1180	<10	5.1	2.6	<.0030	<.0020	<.002
AUG											
23...	--	--	<2	--	1230	<10	--	--	<.0030	<.0020	<.002
SEP											
12...	--	--	<2	--	1350	E7	--	--	<.0030	<.0020	<.002

08459200 RIO GRANDE RIVER AT PIPELINE CROSSING BELOW LAREDO, TX--Continued
(National stream-quality accounting network)

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

DATE	ALPHA BHC DIS-SOLVED (UG/L) (34253)	ATRA-ZINE, WATER, DISS, REC (UG/L) (39632)	METHYL AZIN-PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)	BEN-FLUR-ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)	BUTYL-ATE, WATER, DISS, REC (UG/L) (04028)	CAR-BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBO-FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	CHLOR-PYRIFOS DIS-SOLVED (UG/L) (38933)	PER-METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	CYANA-ZINE, WATER, DISS, REC (UG/L) (04041)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)
OCT											
26...	--	--	--	--	--	--	--	--	--	--	--
NOV											
23...	<.0020	<.001	<.0010	<.0020	<.0020	<.0030	<.0030	<.0040	<.0050	<.0040	<.0020
DEC											
16...	--	--	--	--	--	--	--	--	--	--	--
JAN											
12...	<.0020	E.004	<.0010	<.0020	<.0020	E.0044	<.0030	<.0040	<.0050	<.0040	<.0020
FEB											
14...	<.0020	<.006	<.0010	<.0020	<.0020	<.0030	<.0030	<.0040	<.0050	<.0040	<.0020
MAR											
30...	<.0020	.006	<.0010	<.0020	<.0020	<.0100	<.0030	<.0040	<.0050	<.0040	<.0020
APR											
20...	<.0020	.016	<.0010	<.0020	<.0020	<.0030	<.0030	<.0040	<.0050	<.0040	<.0020
MAY											
31...	<.0020	<.001	<.0010	<.0020	<.0020	<.0030	<.0030	<.0040	<.0050	<.0040	<.0020
JUN											
21...	<.0020	.007	<.0010	<.0020	<.0020	E.0034	<.0030	<.0040	<.0050	<.0040	<.0020
JUL											
19...	<.0020	.005	<.0010	<.0020	<.0020	E.0046	<.0070	<.0040	<.0050	<.0040	<.0020
AUG											
23...	<.0020	<.001	<.0010	<.0020	<.0020	<.0100	<.0030	<.0040	<.0050	<.0040	<.0020
SEP											
12...	<.0020	E.003	<.0010	<.0020	<.0020	E.0050	<.0030	<.0040	<.0050	<.0040	<.0020

DATE	DEETHYL ATRA-ZINE, WATER, DISS, REC (UG/L) (04040)	DI-AZINON, DIS-SOLVED (UG/L) (39572)	DI-ELDRIN DIS-SOLVED (UG/L) (39381)	DISUL-FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	ETHAL-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)	ETHO-PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	FONOFOS WATER DISS REC (UG/L) (04095)	LINDANE DIS-SOLVED (UG/L) (39341)	LIN-URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA-THION, DIS-SOLVED (UG/L) (39532)
OCT											
26...	--	--	--	--	--	--	--	--	--	--	--
NOV											
23...	<.0020	<.002	<.001	<.0170	<.0020	<.0040	<.0030	<.0030	<.004	<.0020	<.005
DEC											
16...	--	--	--	--	--	--	--	--	--	--	--
JAN											
12...	<.0020	.006	<.001	<.0170	<.0020	<.0040	<.0030	<.0030	<.004	<.0020	<.005
FEB											
14...	<.0020	V.006	<.001	<.0170	<.0020	<.0040	<.0030	<.0030	<.004	<.0020	<.005
MAR											
30...	<.0020	.010	<.001	<.0170	<.0020	<.0040	<.0030	<.0030	<.004	<.0020	<.005
APR											
20...	<.0020	.018	<.001	<.0170	<.0020	<.0040	<.0030	<.0030	<.004	<.0020	<.005
MAY											
31...	<.0020	.020	<.001	<.0170	<.0020	<.0040	<.0030	<.0030	<.004	<.0020	<.005
JUN											
21...	E.0026	V.008	<.001	<.0170	<.0020	<.0040	<.0030	<.0030	<.004	<.0020	<.005
JUL											
19...	E.0024	.009	<.001	<.0170	<.0020	<.0040	<.0030	<.0030	<.004	<.0020	<.005
AUG											
23...	<.0020	.018	<.001	<.0170	<.0020	<.0040	<.0030	<.0030	<.004	<.0020	<.005
SEP											
12...	<.0020	.013	<.001	<.0170	<.0075	<.0040	<.0030	<.0030	<.004	<.0020	<.005

08459200 RIO GRANDE RIVER AT PIPELINE CROSSING BELOW LAREDO, TX--Continued
(National stream-quality accounting network)

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

DATE	METO-LACHLOR WATER DISSOLV (UG/L) (39415)	METRI-BUZIN SENCOR WATER DISSOLV (UG/L) (82630)	MOL-INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPROP-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	P,P' DDE DISSOLV (UG/L) (34653)	PARA-THION, DIS-SOLVED (UG/L) (39542)	METHYL PARA-THION WAT FLT 0.7 U GF, REC (UG/L) (82667)	PEB-ULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	PENDI-METH-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PRO-METON, WATER, DISS, REC (UG/L) (04037)
OCT											
26...	--	--	--	--	--	--	--	--	--	--	--
NOV											
23...	.006	<.004	<.0040	<.0030	<.0060	<.004	<.0060	<.0040	<.0040	<.0020	<.0180
DEC											
16...	--	--	--	--	--	--	--	--	--	--	--
JAN											
12...	<.004	<.004	<.0040	<.0030	<.0060	<.004	<.0060	<.0040	<.0100	<.0020	<.0180
FEB											
14...	<.002	<.004	<.0040	<.0030	<.0060	<.004	<.0060	<.0040	<.0040	<.0020	<.0180
MAR											
30...	<.002	<.004	<.0040	<.0030	<.0060	<.004	<.0060	<.0040	<.0040	<.0020	<.0180
APR											
20...	E.003	<.013	<.0040	<.0030	<.0060	<.004	<.0060	<.0040	<.0040	<.0020	<.0180
MAY											
31...	<.002	<.004	<.0040	<.0030	<.0060	<.004	<.0060	<.0040	<.0040	<.0020	<.0180
JUN											
21...	<.002	<.004	<.0040	<.0030	<.0060	<.004	<.0060	<.0040	<.0040	<.0020	<.0180
JUL											
19...	<.002	<.004	<.0040	<.0030	<.0060	<.004	<.0060	<.0040	<.0040	<.0020	<.0180
AUG											
23...	<.002	<.004	<.0040	<.0030	<.0060	<.004	<.0060	<.0040	<.0040	<.0020	<.0180
SEP											
12...	<.002	<.004	<.0040	<.0030	<.0060	<.004	<.0060	<.0040	<.0040	<.0020	<.0180

DATE	PROP-CHLOR, WATER, DISS, REC (UG/L) (04024)	PRO-PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	PRO-PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	PRON-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	SI-MAZINE, WATER, DISS, REC (UG/L) (04035)	TEBU-THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER-BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TER-BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	THIO-BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL-LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)
OCT											
26...	--	--	--	--	--	--	--	--	--	--	--
NOV											
23...	<.0070	<.0040	<.0130	<.0030	<.0050	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020
DEC											
16...	--	--	--	--	--	--	--	--	--	--	--
JAN											
12...	<.0070	<.0040	<.0130	<.0030	<.0050	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020
FEB											
14...	<.0070	<.0040	<.0130	<.0030	<.0050	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020
MAR											
30...	<.0070	<.0040	<.0130	<.0030	<.0050	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020
APR											
20...	<.0070	<.0040	<.0130	<.0030	<.0050	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020
MAY											
31...	<.0070	<.0040	<.0130	<.0030	<.0050	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020
JUN											
21...	<.0070	<.0040	<.0130	<.0030	<.0050	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020
JUL											
19...	<.0070	<.0040	<.0130	<.0030	<.0050	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020
AUG											
23...	<.0070	<.0040	<.0130	<.0030	<.0050	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020
SEP											
12...	<.0070	<.0040	<.0130	<.0030	<.0050	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020

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08461300 RIO GRANDE BELOW FALCON DAM, TX
(National stream-quality accounting network)

LOCATION.--Lat 26°33'25", long 99°10'05", Starr County, Hydrologic Unit 13090001, U.S. Tailrace at Falcon Dam.

DRAINAGE AREA.--159,270 mi^2, United States and Mexico; from International Boundary and Water Commission Water Bulletin No. 44.

PERIOD OF RECORD.--
CHEMICAL DATA: Jul 1955 to current year.
BIOCHEMICAL DATA: Oct 1995 to current year.
RADIOCHEMICAL DATA: Oct 1995 to current year.
PESTICIDE DATA: Oct 1995 to current year.
SEDIMENT DATA: Oct 1995 to current year.

REMARKS.--The flow is controlled by releases from Falcon Reservoir. Discharges published in the table were obtained directly from rating table furnished by International Boundary and Water Commission. Records of daily mean discharge and specific conductance for water year 2000 are given in International Boundary and Water Commission Water Bulletins Nos. 69 and 70. Since Sep 1995, suspended sediment chemistry and quality assurance data for this station may be obtained from the U.S. Geological Survey Texas District office upon request.

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

DATE	TIME	AGENCY COLLECTING SAMPLE (CODE NUMBER) (00027)	SAMPLING METHOD, CODES (82398)	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE WATER (DEG C) (00010)	TURBIDITY (NTU) (00076)	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)	HARDNESS TOTAL (MG/L AS CACO3) (00900)	HARDNESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)
NOV												
23...	0820	1028	10	883	762	--	21.5	4.5	5.6	64	200	82
JAN												
11...	1610	1028	10	1410	788	7.9	22.0	4.5	11.1	126	210	90
APR												
19...	1730	1028	10	5300	869	8.0	24.0	11	7.6	90	230	110
MAY												
30...	1850	1028	10	699	975	8.0	30.0	4.4	7.6	103	240	140
JUL												
18...	0900	1028	30	2900	1030	8.0	27.5	21	--	--	230	140
AUG												
22...	1610	1028	10	1840	1090	7.9	29.0	18	8.7	115	250	160

DATE	CALCIUM DISSOLVED (MG/L AS CA) (00915)	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)	SODIUM, DISSOLVED (MG/L AS NA) (00930)	SODIUM ADSORPTION RATIO (00931)	SODIUM PERCENT (00932)	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	CARBONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	BICARBONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	ALKALINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)
NOV												
23...	54.5	14.7	66.6	2	42	4.9	0	141	116	128	86.9	.5
JAN												
11...	58.7	15.0	70.6	2	42	4.8	0	145	119	135	87.5	.4
APR												
19...	63.3	16.9	82.8	2	44	4.7	0	147	121	159	104	.6
MAY												
30...	62.0	19.9	109	3	49	4.8	0	124	102	187	127	.6
JUL												
18...	61.1	19.5	109	3	50	5.1	0	118	97	192	135	.6
AUG												
22...	63.3	21.8	123	3	51	5.8	0	112	92	205	148	.7

DATE	SILICA, DISSOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L) (70301)	NITROGEN, NITRATE DISSOLVED (MG/L AS N) (00618)	NITROGEN, NITRITE DISSOLVED (MG/L AS N) (00613)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N) (00608)	NITROGEN, TOTAL (MG/L AS N) (00600)	NITROGEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITROGEN, ORGANIC DISSOLVED (MG/L AS N) (00607)	NITROGEN,AMMONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)
NOV												
23...	10.1	462	437	--	<.010	.108	.037	.60	.45	.26	.30	.49
JAN												
11...	9.7	480	454	--	<.010	<.050	.042	--	.42	.26	.30	.46
APR												
19...	7.9	534	513	--	<.010	<.050	.083	--	.48	.33	.41	.56
MAY												
30...	11.4	616	586	.197	.084	.281	.107	.95	.56	.30	.41	.67
JUL												
18...	9.4	628	592	--	<.010	<.050	.023	--	.83	.27	.29	.86
AUG												
22...	11.9	646	636	--	<.010	.059	.050	.71	.60	.28	.33	.65

08461300 RIO GRANDE BELOW FALCON DAM, TX--Continued
(National stream-quality accounting network)

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

DATE	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4) (00660)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC PARTIC-ULATE TOTAL (MG/L AS C) (00689)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)	ANTI-MONY, DIS-SOLVED (UG/L AS SB) (01095)
NOV											
23...	.035	.009	.007	.021	3.3	.4	26	11	96	--	--
JAN											
11...	.028	.008	.001	.003	3.8	.7	23	6	93	2	<1
APR											
19...	.050	.011	.003	.009	3.5	.8	258	18	96	--	--
MAY											
30...	.070	.029	.021	.064	3.2	1.2	83	44	97	2	<1
JUL											
18...	.082	.012	.006	.018	3.5	1.2	164	21	100	<1	<1
AUG											
22...	.056	.008	.002	.006	3.9	.8	--	--	--	--	--

DATE	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE) (01010)	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030)	COBALT, DIS-SOLVED (UG/L AS CO) (01035)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	LITHIUM DIS-SOLVED (UG/L AS LI) (01130)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)
NOV											
23...	2.2	--	--	--	--	--	--	<10	--	22.4	--
JAN											
11...	E1.9	107	<1	<1.0	<.8	<1	1	<10	<1	25.1	3
APR											
19...	E2.0	--	--	--	--	--	--	<10	--	28.2	--
MAY											
30...	2.3	112	<1	<1.0	<.8	<1	2	<10	<1	39.6	7
JUL											
18...	4.0	104	<1	<1.0	<.8	<1	2	<10	<1	34.1	2
AUG											
22...	2.7	--	--	--	--	--	--	<10	--	49.3	--

DATE	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060)	NICKEL, DIS-SOLVED (UG/L AS NI) (01065)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)	STRON-TIUM, DIS-SOLVED (UG/L AS SR) (01080)	VANA-DIUM, DIS-SOLVED (UG/L AS V) (01085)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)	URANIUM NATURAL DIS-SOLVED (UG/L AS U) (22703)	2,6-DI-ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	ACETO-CHLOR, WATER FLTRD REC (UG/L) (49260)	ALA-CHLOR, WATER, DISS, REC, (UG/L) (46342)
NOV											
23...	--	--	<2.4	--	916	<10	--	--	<.003	<.002	<.002
JAN											
11...	5	2	<2.4	<1	928	E5	--	2	<.003	<.002	<.002
APR											
19...	--	--	<2.4	--	1030	<10	--	--	<.003	<.002	<.002
MAY											
30...	7	1	<2.4	<1	1150	E6	3	3	<.003	<.002	<.002
JUL											
18...	7	2	<2.4	<1	1120	E7	4	3	<.003	<.002	<.002
AUG											
22...	--	--	<2.4	--	1230	E5	--	--	<.003	<.002	<.002

DATE	ALPHA BHC DIS-SOLVED (UG/L) (34253)	ATRA-ZINE, WATER, DISS, REC (UG/L) (39632)	METHYL AZIN-PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)	BEN-FLUR-ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)	BUTYL-ATE, WATER, DISS, REC (UG/L) (04028)	CAR-BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBO-FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	CHLOR-PYRIFOS DIS-SOLVED (UG/L) (38933)	PER-METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	CYANA-ZINE, WATER, DISS, REC (UG/L) (04041)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)
NOV											
23...	<.002	.004	<.001	<.002	<.002	<.003	<.003	<.004	<.005	<.004	<.002
JAN											
11...	<.002	.005	<.001	<.002	<.002	<.003	<.003	<.004	<.005	<.004	<.002
APR											
19...	<.002	.011	<.001	<.002	<.002	<.003	<.003	<.004	<.005	<.004	E.001
MAY											
30...	<.002	.007	<.001	<.002	<.002	<.003	<.003	<.004	<.005	<.004	<.002
JUL											
18...	<.002	.008	<.001	<.002	<.002	<.003	<.006	<.004	<.005	<.004	<.002
AUG											
22...	<.002	.005	<.001	<.002	<.002	<.003	<.003	<.004	<.005	<.004	<.002

08461300 RIO GRANDE BELOW FALCON DAM, TX--Continued
(National stream-quality accounting network)

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

DATE	DEETHYL ATRA-ZINE, WATER, DISS, REC (UG/L) (04040)	DI-AZINON, DIS-SOLVED (UG/L) (39572)	DI-ELDRIN DIS-SOLVED (UG/L) (39381)	DISUL-FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	ETHAL-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)	ETHO-PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	FONOFOS WATER DISS REC (UG/L) (04095)	LINDANE DIS-SOLVED (UG/L) (39341)	LIN-URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA-THION, DIS-SOLVED (UG/L) (39532)
NOV											
23...	<.002	<.002	<.001	<.017	<.002	<.004	<.003	<.003	<.004	<.002	<.005
JAN											
11...	<.002	<.006	<.001	<.017	<.002	<.004	<.003	<.003	<.004	<.002	<.005
APR											
19...	<.002	E.004	<.001	<.017	<.002	<.004	<.003	<.003	<.004	<.002	<.005
MAY											
30...	<.002	.014	<.001	<.017	<.002	<.004	<.003	<.003	<.004	<.002	<.005
JUL											
18...	E.002	E.004	<.001	<.017	<.002	<.004	<.003	<.003	<.004	<.002	<.005
AUG											
22...	<.002	<.002	<.001	<.017	<.002	<.004	<.003	<.003	<.004	<.002	<.005

DATE	METO-LACHLOR WATER DISSOLV (UG/L) (39415)	METRI-BUZIN SENCOR WATER DISSOLV (UG/L) (82630)	MOL-INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPROP-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	P,P' DDE DISSOLV (UG/L) (34653)	PARA-THION, DIS-SOLVED (UG/L) (39542)	METHYL PARA-THION WAT FLT 0.7 U GF, REC (UG/L) (82667)	PEB-ULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	PENDI-METH-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PRO-METON, WATER, DISS, REC (UG/L) (04037)
NOV											
23...	<.002	<.004	<.004	<.003	<.006	<.004	<.006	<.004	<.004	<.002	<.018
JAN											
11...	.005	<.004	<.004	<.003	<.006	<.004	<.006	<.004	<.004	<.002	<.018
APR											
19...	<.002	<.004	<.004	<.003	<.006	<.004	<.006	<.004	<.004	<.002	<.018
MAY											
30...	<.002	<.004	<.004	<.003	<.006	<.004	<.006	<.004	<.004	<.002	<.018
JUL											
18...	<.002	<.004	<.004	<.003	<.006	<.004	<.006	<.004	<.004	<.002	<.018
AUG											
22...	<.002	<.004	<.004	<.003	<.006	<.004	<.006	<.004	<.004	<.002	<.018

DATE	PROPA-CHLOR, WATER, DISS, REC (UG/L) (04024)	PRO-PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	PRO-PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	PRON-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	SI-MAZINE, WATER, DISS, REC (UG/L) (04035)	TEBU-THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER-BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TER-BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	THIO-BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL-LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)
NOV											
23...	<.007	<.004	<.013	<.003	<.005	<.010	<.007	<.013	<.002	<.001	<.002
JAN											
11...	<.007	<.004	<.013	<.003	<.005	E.002	<.007	<.013	<.002	<.001	<.002
APR											
19...	<.007	<.004	<.013	<.003	<.005	<.010	<.007	<.013	<.002	<.001	<.002
MAY											
30...	<.007	<.004	<.013	<.003	<.005	<.010	<.007	<.013	<.002	<.001	<.002
JUL											
18...	<.007	<.004	<.013	<.003	<.005	<.010	<.007	<.013	<.002	<.001	<.002
AUG											
22...	<.007	<.004	<.013	<.003	<.005	<.010	<.007	<.013	<.002	<.001	<.002

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08464700 RIO GRANDE AT FORT RINGGOLD, RIO GRANDE CITY, TX

LOCATION.--Lat 26°22′05", long 98°48′20", Starr County, Hydrologic Unit 13090001, at gaging station about 1 mi downstream from Rio Grande City, 3.9 mi downstream from mouth of Rio San Juan, and 1,014.3 mi downstream from the American Dam at El Paso.

DRAINAGE AREA.--174,362 mi^2, United States and Mexico; from International Boundary and Water Commission Water Bulletin No. 44.

PERIOD OF RECORD.--
CHEMICAL DATA: Jan 1959 to Sep 12, 2000 (discontinued).

COOPERATION.--Water sample and discharge for water year 2000 provided by International Boundary and Water Commission.

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

DATE	TIME	AGENCY COL-LECTING SAMPLE (CODE NUMBER) (00027)	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)
OCT											
19...	0845	1028	1410	810	7.5	21.0	170	82	50.2	11.6	81.7
NOV											
09...	0845	1028	1720	780	7.8	22.0	210	81	57.8	14.9	71.4
DEC											
08...	0858	1028	880	830	7.8	17.4	210	130	58.5	15.8	81.7
JAN											
11...	0850	1028	1540	820	8.1	16.1	200	74	54.9	14.5	78.6
FEB											
23...	0815	1028	2240	860	7.8	22.0	210	99	59.6	15.5	78.0
MAR											
21...	0853	1028	882	900	8.2	23.0	210	110	56.1	17.0	92.9
APR											
18...	0840	1028	5650	880	7.6	24.1	220	110	61.1	17.1	83.1
MAY											
23...	0845	1028	1060	1100	7.0	27.7	250	130	67.4	20.5	121
JUN											
21...	0910	1028	1270	1070	7.5	28.0	230	140	61.0	19.9	138
JUL											
11...	0855	1028	2720	1020	7.5	27.0	220	130	58.1	18.5	105
AUG											
22...	0905	1028	2240	1100	7.7	28.0	230	130	59.0	21.1	116
SEP											
12...	0835	1028	1160	1230	7.9	30.2	240	140	59.4	22.7	138

DATE	SODIUM AD-SORP-TION RATIO (00931)	SODIUM PERCENT (00932)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	ALKA-LINITY WAT DIS FIX END FIELD CACO3 (MG/L) (39036)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)
OCT										
19...	3	50	5.1	--	91	125	105	.4	10.1	443
NOV										
09...	2	42	5.0	--	120	129	92.0	.5	10.1	456
DEC										
08...	2	45	4.9	--	86	144	102	.5	8.9	467
JAN										
11...	2	46	4.7	--	120	138	100	.4	8.3	473
FEB										
23...	2	44	4.6	--	110	144	95.7	.5	8.1	473
MAR										
21...	3	48	4.3	--	100	158	112	.5	3.3	507
APR										
18...	2	44	5.2	--	120	156	104	.6	8.2	505
MAY										
23...	3	50	5.6	--	120	192	138	.6	12.1	631
JUN										
21...	4	55	5.6	99	--	201	145	.7	11.6	642
JUL										
11...	3	50	5.0	95	--	196	135	.7	10.4	585
AUG										
22...	3	51	4.9	101	.0	204	147	.7	12.4	625
SEP										
12...	4	55	5.7	98	--	218	157	.7	13.6	674

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08466300 RIO GRANDE NEAR LOS EBANOS, TX

LOCATION.--Lat 26°14'15", long 98°33'49", Hidalgo County, Hydrologic Unit 13090001, on Farm Road 886 at U.S. Border Port of Entry near Los Ebanos and at mile 204.37.

PERIOD OF RECORD.--
CHEMICAL DATA: Jun 1977 to Sep 19, 2000 (discontinued).

REMARKS.--Water sample and discharge for water year 2000 provided by International Boundary and Water Commission.

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

DATE	TIME	AGENCY COL-LECTING SAMPLE (CODE NUMBER) (00027)	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)
OCT											
20...	1135	1028	1930	660	7.7	20.0	160	73	47.6	10.2	60.2
DEC											
14...	1045	1028	480	910	7.9	16.3	230	120	63.7	17.3	92.4
JAN											
19...	1030	1028	819	835	8.1	19.0	200	85	55.1	14.6	72.3
MAR											
15...	1205	1028	2.0	860	8.2	22.0	220	110	60.5	16.3	82.8
MAY											
23...	1135	1028	1960	1110	8.0	28.4	260	150	69.9	20.8	121
JUL											
19...	1210	1028	2840	1040	7.9	29.0	240	140	62.9	19.6	111
SEP											
19...	1145	1028	1400	970	8.0	28.0	220	120	58.3	17.7	111

DATE	SODIUM AD-SORP-TION RATIO (00931)	SODIUM PERCENT (00932)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	ALKA-LINITY WAT DIS FIX END FIELD CACO3 (MG/L) (39036)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)
OCT										
20...	2	44	4.9	--	88	107	73.0	.3	9.9	366
DEC										
14...	3	46	5.3	--	110	160	118	.5	9.3	531
JAN										
19...	2	44	4.9	--	110	138	95.1	.5	9.6	457
MAR										
15...	2	45	4.5	--	110	148	99.5	.5	5.5	485
MAY										
23...	3	50	5.4	--	120	202	145	.6	13.3	648
JUL										
19...	3	50	5.5	96	--	198	138	.7	10.8	605
SEP										
19...	3	52	5.7	99	--	178	126	.6	12.5	569

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08469200 RIO GRANDE BELOW ANZALDUAS DAM, TX

LOCATION.--Lat 26°08′00", long 98°20′05", Hidalgo County, Hydrologic Unit 13090002, at gaging station 0.5 mi downstream from Anzalduas Dam, 12.2 mi from Hidalgo, and 1,077.1 mi downstream from the American Dam at El Paso.

DRAINAGE AREA.--176,112 mi^2, United States and Mexico; from International Boundary and Water Commission Water Bulletin No. 44.

PERIOD OF RECORD.--
CHEMICAL DATA: Mar 1959 to Sep 12, 2000 (discontinued).
PESTICIDE DATA: Oct 1967 to Jul 1972.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Oct 1977 to Sep 30, 2000 (discontinued).

REMARKS.--Mean monthly and annual concentrations and loads for selected chemical constituents have been computed using the daily (or continuous) records of specific conductance and a regression relation between each chemical constituent and specific conductance. New regression equations were developed based on data from water years 1991 to 2000. The standard error of estimate for dissolved solids is 7%, chloride is 8%, sulfate is 12% and for hardness is 6%. Regression equations for this station may be obtained from the U.S. Geological Survey Texas District office upon request.

COOPERATION.--Water sample and discharge for 2000 water year provided by International Boundary and Water Commission. Records of daily mean discharge and specific conductance for water year 1999 are given in International Boundary and Water Commission Water Bulletin Nos. 69 and 70.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 5,810 microsiemens, Aug 27, 1998; minimum daily, 340 microsiemens, Sep 22, 1997.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 1,550 microsiemens, Oct 9, 2000; minimum daily, 720 microsiemens, Jan 26, 2000.

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

DATE	TIME	AGENCY COL-LECTING SAMPLE (CODE NUMBER) (00027)	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)
OCT											
26...	1150	1028	968	740	7.8	22.0	190	95	55.5	12.0	72.7
DEC											
14...	1320	1028	870	880	8.4	18.0	230	130	63.1	16.8	88.4
JAN											
19...	1310	1028	1380	892	8.0	19.8	220	110	60.9	16.2	82.6
MAR											
15...	1050	1028	1.0	880	8.3	22.0	220	110	60.5	16.5	84.8
MAY											
23...	1015	1028	880	1120	8.3	28.7	260	150	67.9	21.2	121
JUL											
19...	1040	1028	2270	1080	8.0	30.0	240	140	62.8	20.3	119
AUG											
22...	1020	1028	1570	1300	8.1	30.0	310	200	80.5	27.5	154
SEP											
19...	1030	1028	843	1170	8.4	29.3	250	160	61.7	23.7	140

08469200 RIO GRANDE BELOW ANZALDUAS DAM, TX--Continued

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

DATE	SODIUM AD-SORP-TION RATIO (00931)	SODIUM PERCENT (00932)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	ALKA-LINITY WAT DIS FIX END FIELD CAC03 (MG/L) (39036)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)
OCT										
26...	2	45	4.7	--	93	115	93.2	.4	12.9	422
DEC										
14...	3	45	5.0	--	100	160	114	.5	9.9	518
JAN										
19...	2	44	5.1	--	110	151	109	.5	8.9	499
MAR										
15...	2	45	4.5	--	110	149	99.7	.5	4.9	488
MAY										
23...	3	50	5.7	--	110	206	143	.7	12.0	642
JUL										
19...	3	51	5.7	98	--	207	143	.7	10.8	628
AUG										
22...	4	51	5.6	112	--	248	188	.7	14.5	786
SEP										
19...	4	54	5.6	89	--	229	165	.8	14.4	694

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1999 TO SEPTEMBER 2000

MONTH	YEAR	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCT-ANCE (MICRO-SIEMENS)	DIS-SOLVED SOLIDS (MG/L)	DIS-SOLVED SOLIDS (TONS)	DIS-SOLVED CHLORIDE (MG/L)	DIS-SOLVED CHLORIDE (TONS)	DIS-SOLVED SULFATE (MG/L)	DIS-SOLVED SULFATE (TONS)	HARDNESS (CA,MG) (MG/L)
OCT.	1999	838	922	544	1230	110	246	180	415	210
NOV.	1999	872	854	502	1180	98	232	170	398	200
DEC.	1999	732	888	523	1030	100	204	180	348	210
JAN.	2000	1006	864	508	1380	100	271	170	464	200
FEB.	2000	1091	891	525	1550	100	306	180	520	210
MAR.	2000	1348	899	530	1930	110	383	180	649	210
APR.	2000	1985	908	535	2870	110	570	180	965	210
MAY	2000	1618	969	573	2500	120	506	190	843	220
JUNE	2000	1090	1070	635	1870	130	387	210	629	240
JULY	2000	1852	1000	594	2970	120	604	200	999	230
AUG.	2000	1193	1080	640	2060	130	427	220	693	240
SEPT	2000	815	1110	661	1460	140	304	220	490	250
TOTAL		14440	**	**	22030	**	4440	**	7410	**
WTD.AVG.		39	956	565	**	110	**	190	**	220

08469200 RIO GRANDE BELOW ANZALDUAS DAM, TX--Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	960	970	880	890	860	840	900	950	1080	1070	990	1110
2	980	960	940	920	870	870	890	940	1110	990	1020	1000
3	980	940	960	950	850	900	900	980	1020	1000	920	1090
4	990	910	1000	940	890	880	920	950	1150	1030	1010	1080
5	920	930	1020	930	970	870	980	950	1170	1030	1100	1080
6	890	920	940	940	940	880	910	960	1020	1000	1170	1090
7	920	890	920	920	970	870	900	920	1020	1010	1070	1130
8	970	970	890	910	960	860	850	960	1070	1010	1040	1140
9	1550	940	850	940	960	870	890	970	950	1010	1080	1130
10	950	890	870	910	970	880	880	980	1000	1010	1060	1130
11	920	900	860	840	1000	880	910	990	890	1000	1000	1140
12	890	870	870	800	1010	890	890	1000	1030	990	1090	1090
13	920	830	860	780	1040	860	880	930	1030	990	1090	1060
14	910	810	860	790	1110	850	880	940	1020	1010	1090	1010
15	930	780	840	800	1040	810	880	960	1080	970	1210	1130
16	930	810	900	810	950	900	920	940	1270	1040	1110	1150
17	910	760	930	920	900	850	910	950	1120	1010	1120	1150
18	900	800	950	870	880	870	900	970	1130	1000	1090	1140
19	900	790	940	770	870	880	910	920	1110	1000	1110	1140
20	900	790	930	930	870	890	890	980	1110	970	1090	1120
21	960	780	900	1010	850	900	910	960	1100	990	1100	1140
22	830	820	850	830	830	890	910	980	1110	1000	1120	1130
23	840	810	860	800	830	910	910	1020	1120	1000	1230	1130
24	860	810	800	860	830	930	930	1010	1120	950	1090	1110
25	840	850	830	830	840	930	920	1040	1090	1010	1070	1070
26	820	830	820	720	840	950	970	1010	1110	1000	1070	1000
27	770	840	820	800	830	1040	920	1030	1000	1020	1090	1140
28	900	850	830	870	840	1160	910	1020	1010	1010	1080	1140
29	900	820	840	870	850	1070	950	1350	1020	950	1060	1160
30	850	880	890	860	---	1100	920	1100	1040	1010	1080	1150
31	900	---	890	860	---	980	---	1200	---	1010	1110	---
TOTAL	28690	25750	27540	26870	26450	28260	27240	30860	32100	31090	33560	33280
MEAN	925	858	888	867	912	912	908	995	1070	1000	1080	1110
MAX	1550	970	1020	1010	1110	1160	980	1350	1270	1070	1230	1160
MIN	770	760	800	720	830	810	850	920	890	950	920	1000

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08470400 ARROYO COLORADO AT HARLINGEN, TX
(National stream-quality accounting network)

LOCATION.--Lat 26°10’24", long 97°42’01", Cameron County, Hydrologic Unit 12110208, on downstream side of northbound service road on U.S. Highways 83 & 77, about 18 mi from point of main floodway that divides into North Floodway and Arroyo Colorado.

DRAINAGE AREA.--182 mi^2.

PERIOD OF RECORD.--
CHEMICAL DATA: Nov 1986 to current year.
BIOCHEMICAL DATA: Nov 1986 to current year.
RADIOCHEMICAL DATA: Oct 1995 to current year.
PESTICIDE DATA: Oct 1995 to current year.
SEDIMENT DATA: Oct 1995 to current year.

REMARKS.--Discharges published in the table were obtained directly from rating table furnished by International Boundary and Water Commission. Records of daily mean discharge for water year 2000 are given in International Boundary and Water Commission Water Bulletins Nos. 69 and 70. Since Sep 1995, suspended sediment chemistry and quality assurance data for this station may be obtained from the U.S. Geological Survey Texas District office upon request.

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

DATE	TIME	AGENCY COL-LECTING SAMPLE (CODE NUMBER) (00027)	SAM-PLING METHOD, CODES (82398)	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	TUR-BID-ITY (NTU) (00076)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)
NOV												
18...	1030	1028	10	155	4320	7.6	21.5	60	8.7	100	860	630
JAN												
20...	1050	1028	10	169	3920	7.6	20.5	80	7.9	89	790	560
FEB												
24...	0850	1028	10	158	3820	7.8	21.0	110	6.5	74	760	530
MAR												
07...	0950	1028	10	93	3880	7.9	22.5	110	7.5	87	800	580
APR												
13...	0900	1028	10	267	3100	7.7	21.5	99	7.2	82	670	490
MAY												
09...	1920	1028	10	220	3380	7.5	28.5	82	8.9	116	670	470
JUN												
29...	1400	1028	10	224	3970	7.9	29.0	98	7.5	99	780	570
JUL												
25...	0830	1028	10	204	3820	8.0	28.5	97	6.4	83	810	600
AUG												
16...	1110	1028	10	184	3860	7.6	27.0	68	8.4	109	730	510
SEP												
06...	0750	1028	10	130	4140	7.9	28.0	85	5.8	75	830	630

DATE	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	SODIUM PERCENT (00932)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	CAR-BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)
NOV												
18...	200	86	591	9	60	12	0	286	234	770	840	.87
JAN												
20...	190	75	523	8	59	11	0	277	227	690	770	.79
FEB												
24...	180	70	508	8	59	11	0	271	222	660	740	.78
MAR												
07...	200	75	541	8	59	11	0	268	220	670	720	.86
APR												
13...	170	61	438	7	58	10	0	229	188	550	590	.78
MAY												
09...	160	63	442	7	59	9.5	0	243	199	580	630	.81
JUN												
29...	180	76	550	9	60	10	0	253	207	710	790	.78
JUL												
25...	200	76	515	8	58	9.9	0	256	210	710	750	.86
AUG												
16...	170	71	498	8	60	11	0	261	214	680	730	.92
SEP												
06...	200	82	631	10	62	11	0	247	202	760	830	.97

08470400 ARROYO COLORADO AT HARLINGEN, TX--Continued
(National stream-quality accounting network)

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

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, TOTAL (MG/L AS N) (00600)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N) (00607)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)
NOV												
18...	28	2800	2690	4.43	.146	4.57	.054	5.8	1.2	.54	.60	1.2
JAN												
20...	25	2590	2450	3.96	.179	4.14	.056	5.3	1.1	.47	.52	1.1
FEB												
24...	23	2420	2360	4.76	.248	5.01	.091	6.4	1.3	.42	.51	1.4
MAR												
07...	25	2500	2400	3.89	.187	4.08	.044	5.3	1.2	.47	.51	1.2
APR												
13...	21	2040	1990	4.82	.178	4.99	.062	5.7	.66	.59	.65	.72
MAY												
09...	22	2130	2050	3.77	.155	3.93	<.020	5.1	--	--	.53	1.2
JUN												
29...	23	2580	2490	3.15	.105	3.25	.066	4.8	1.5	.73	.79	1.5
JUL												
25...	24	2520	2430	2.40	.052	2.45	<.020	3.7	--	--	.57	1.2
AUG												
16...	23	2460	2340	2.77	.094	2.87	<.020	4.3	--	--	.53	1.5
SEP												
06...	24	2760	2680	2.21	.065	2.27	<.020	4.1	--	--	.56	1.8

DATE	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4) (00660)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC SUS-PENDED TOTAL (MG/L AS C) (00689)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)	ANTI-MONY, DIS-SOLVED (UG/L AS SB) (01095)
NOV											
18...	.940	.607	.574	1.8	--	2.4	81	193	98	--	--
JAN											
20...	.730	.463	.421	1.3	4.1	4.8	84	184	98	4.1	<1.0
FEB											
24...	.747	.461	.403	1.2	7.0	3.0	87	205	99	--	--
MAR											
07...	.633	.374	.344	1.1	5.0	2.9	49	195	99	9.1	<1.0
APR											
13...	.606	.305	.279	.86	5.1	2.2	239	331	99	--	--
MAY											
09...	.538	.244	.215	.66	5.1	5.5	256	431	99	--	<2.0
JUN											
29...	.503	.222	.199	.61	5.5	4.1	142	235	96	--	--
JUL											
25...	.533	.248	.228	.70	E3.2	2.5	250	454	100	47	<1.0
AUG											
16...	.643	.360	.325	1.0	5.4	2.7	176	355	100	--	--
SEP											
06...	.526	.227	.199	.61	5.8	2.8	154	439	100	--	--

DATE	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE) (01010)	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030)	COBALT, DIS-SOLVED (UG/L AS CO) (01035)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	LITHIUM DIS-SOLVED (UG/L AS LI) (01130)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)
NOV											
18...	8	--	--	--	--	--	--	<30	--	130	--
JAN											
20...	6	71	<1.0	<1.0	.88	<1.0	4.1	<10	<1.0	110	5.5
FEB											
24...	6	--	--	--	--	--	--	<30	--	110	--
MAR											
07...	7	70	<1.0	<1.0	<1.0	<1.0	4.7	<30	<1.0	100	2.3
APR											
13...	9	--	--	--	--	--	--	<30	--	97	--
MAY											
09...	8	72	<2.0	<2.0	<1.0	<2.0	3.4	<30	<2.0	110	<2.0
JUN											
29...	10	--	--	--	--	--	--	<10	--	120	--
JUL											
25...	8	93	<1.0	<1.0	<.80	<1.0	3.6	<30	<1.0	120	1.3
AUG											
16...	8	--	--	--	--	--	--	<10	--	110	--
SEP											
06...	8	--	--	--	--	--	--	<30	--	120	--

08470400 ARROYO COLORADO AT HARLINGEN, TX--Continued
(National stream-quality accounting network)

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

DATE	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060)	NICKEL, DIS-SOLVED (UG/L AS NI) (01065)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)	STRON-TIUM, DIS-SOLVED (UG/L AS SR) (01080)	VANA-DIUM, DIS-SOLVED (UG/L AS V) (01085)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)	URANIUM NATURAL DIS-SOLVED (UG/L AS U) (22703)	2,6-DI-ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	ACETO-CHLOR, WATER FLTRD REC (UG/L) (49260)	ALA-CHLOR, WATER, DISS, REC, (UG/L) (46342)
NOV											
18...	--	--	2	--	4430	--	--	--	<.0030	<.0020	<.002
JAN											
20...	21	4.2	E1	<1.0	3870	17	4.9	10	<.0030	<.0020	<.002
FEB											
24...	--	--	E2	--	3720	17	--	--	<.0030	<.0020	<.002
MAR											
07...	21	2.5	E2	<1.0	3990	12	6.0	8.9	<.0030	<.0020	<.002
APR											
13...	--	--	3	--	3270	13	--	--	<.0030	<.0020	<.002
MAY											
09...	18	4.3	E2	<2.0	3420	13	8.2	7.9	<.0030	<.0020	.016
JUN											
29...	--	--	E2	--	3900	17	--	--	<.0030	<.0020	<.002
JUL											
25...	20	1.5	E1	<1.0	3880	15	8.8	8.7	<.0030	<.0020	<.002
AUG											
16...	--	--	E2	--	3550	14	--	--	<.0030	<.0020	<.002
SEP											
06...	--	--	E2	--	4220	14	--	--	<.0030	<.0020	<.002

DATE	ALPHA BHC DIS-SOLVED (UG/L) (34253)	ATRA-ZINE, WATER, DISS, REC (UG/L) (39632)	METHYL AZIN-PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)	BEN-FLUR-ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)	BUTYL-ATE, WATER, DISS, REC (UG/L) (04028)	CAR-BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBO-FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	CHLOR-PYRIFOS DIS-SOLVED (UG/L) (38933)	PER-METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	CYANA-ZINE, WATER, DISS, REC (UG/L) (04041)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)
NOV											
18...	<.0020	.232	<.0010	<.0020	<.0020	E.0402	<.0030	<.0040	<.0050	<.0040	E.0024
JAN											
20...	<.0020	.608	<.0010	<.0020	<.0020	<.0030	<.0030	<.0040	<.0050	<.0040	E.0022
FEB											
24...	<.0020	3.81	<.0010	<.0020	<.0020	E.0324	E.134	<.0040	<.0050	<.0040	E.0022
MAR											
07...	<.0020	.676	<.0010	<.0020	<.0020	<.0030	<.0030	<.0040	<.0050	<.0040	<.0020
APR											
13...	<.0020	7.43	<.0010	<.0020	<.0020	E.0327	<.0030	<.0040	<.0050	<.0040	<.0020
MAY											
09...	<.0020	.262	E.0175	<.0020	<.0020	<.0060	E.0503	<.0040	<.0050	<.0040	<.0020
JUN											
29...	<.0020	.076	E.0148	<.0020	<.0020	<.0030	E.0574	<.0040	<.0050	<.0040	<.0020
JUL											
25...	<.0020	.044	E.0102	<.0020	<.0020	<.0030	<.0070	<.0040	<.0050	<.0040	<.0020
AUG											
16...	<.0020	.029	<.0010	<.0020	<.0020	E.0073	<.0100	<.0040	<.0050	<.0040	<.0020
SEP											
06...	<.0020	.261	<.0010	E.0030	<.0020	E.0057	E.0150	<.0040	<.0050	<.0040	E.0016

DATE	DEETHYL ATRA-ZINE, WATER, DISS, REC (UG/L) (04040)	DI-AZINON, DIS-SOLVED (UG/L) (39572)	DI-ELDRIN DIS-SOLVED (UG/L) (39381)	DISUL-FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	ETHAL-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)	ETHO-PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	FONOFOS WATER DISS REC (UG/L) (04095)	LINDANE DIS-SOLVED (UG/L) (39341)	LIN-URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA-THION, DIS-SOLVED (UG/L) (39532)
NOV											
18...	E.0309	.370	<.001	<.0170	<.0020	<.0040	<.0030	<.0030	<.004	<.0020	<.005
JAN											
20...	E.162	V.014	<.001	<.0170	<.0020	<.0040	<.0030	<.0030	<.004	<.0020	<.015
FEB											
24...	E.525	.009	<.001	<.0170	<.0020	<.0040	<.0030	<.0030	<.004	.0551	<.005
MAR											
07...	E.0885	.012	<.001	<.0170	<.0020	<.0040	<.0030	<.0030	<.004	.0394	<.005
APR											
13...	E1.21	.016	<.001	<.0170	<.0020	<.0040	<.0030	<.0030	<.004	.0170	<.005
MAY											
09...	E.134	.009	<.001	<.0170	<.0020	<.0040	<.0030	<.0030	<.004	.0103	<.005
JUN											
29...	E.0545	V.008	<.001	<.0170	<.0020	<.0040	<.0030	<.0030	<.004	<.0020	.052
JUL											
25...	E.0333	.009	<.001	<.0170	<.0020	<.0040	<.0030	<.0030	<.004	<.0020	<.005
AUG											
16...	E.0279	.020	<.001	<.0170	<.0020	<.0040	<.0030	<.0030	<.004	<.0020	<.005
SEP											
06...	E.0352	.014	<.001	<.0170	<.0020	<.0040	<.0030	<.0030	<.004	<.0020	<.005

08470400 ARROYO COLORADO AT HARLINGEN, TX--Continued
(National stream-quality accounting network)

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

DATE	METO-LACHLOR WATER DISSOLV (UG/L) (39415)	METRI-BUZIN SENCOR WATER DISSOLV (UG/L) (82630)	MOL-INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPROP-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	P,P' DDE DISSOLV (UG/L) (34653)	PARA-THION, DIS-SOLVED (UG/L) (39542)	METHYL PARA-THION WAT FLT 0.7 U GF, REC (UG/L) (82667)	PEB-ULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	PENDI-METH-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PRO-METON, WATER, DISS, REC (UG/L) (04037)
NOV											
18...	<.002	<.004	<.0040	<.0030	<.0060	<.004	<.0060	<.0040	<.0040	<.0020	<.0180
JAN											
20...	.004	<.050	<.0040	<.0030	<.0060	<.004	<.0060	<.0040	<.0040	<.0020	E.0088
FEB											
24...	<.002	<.004	<.0040	<.0030	<.0060	<.004	<.0060	<.0040	<.0040	<.0020	E.0051
MAR											
07...	<.002	<.004	<.0040	<.0030	<.0060	<.004	<.0060	<.0040	<.0040	<.0020	<.0180
APR											
13...	.008	<.004	<.0040	<.0030	<.0060	<.004	<.0060	<.0040	<.0040	<.0020	<.0180
MAY											
09...	.006	<.004	<.0040	<.0030	E.0022	<.004	.0320	<.0040	<.0040	<.0020	<.0180
JUN											
29...	E.001	<.004	<.0040	<.0030	E.0030	<.004	.164	<.0040	<.0040	<.0020	<.0180
JUL											
25...	<.002	<.004	<.0040	<.0030	<.0060	<.004	.0428	<.0040	<.0040	<.0020	<.0180
AUG											
16...	<.002	<.004	<.0040	<.0030	<.0060	<.004	<.0060	<.0040	<.0040	<.0020	<.0180
SEP											
06...	<.002	<.004	<.0040	<.0030	E.0019	<.004	<.0060	<.0040	<.0040	<.0020	E.0056

DATE	PROP-CHLOR, WATER, DISS, REC (UG/L) (04024)	PRO-PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	PRO-PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	PRON-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	SI-MAZINE, WATER, DISS, REC (UG/L) (04035)	TEBU-THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER-BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TER-BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	THIO-BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL-LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)
NOV											
18...	<.0070	<.0040	<.0130	<.0030	.0528	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020
JAN											
20...	<.0070	<.0040	<.0130	<.0030	.0440	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020
FEB											
24...	<.0070	<.0040	<.0130	<.0030	.101	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020
MAR											
07...	<.0070	<.0040	<.0130	<.0030	.0588	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020
APR											
13...	<.0070	<.0040	<.0130	<.0030	.0663	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020
MAY											
09...	<.0070	<.0040	<.0130	<.0030	.366	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020
JUN											
29...	<.0070	<.0040	<.0130	<.0030	.0177	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020
JUL											
25...	<.0070	<.0040	<.0130	<.0030	.0137	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020
AUG											
16...	<.0070	<.0040	<.0130	<.0030	.0282	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020
SEP											
06...	<.0070	<.0040	<.0130	<.0030	.0139	<.0100	<.0070	<.0130	<.0020	<.0010	E.0031

08475000 RIO GRANDE NEAR BROWNSVILLE, TX
(National stream-quality accounting network)

LOCATION.--Lat 25°52′35", long 97°27′15", Cameron County, Hydrologic Unit 13090002, at International Boundary and Water Commission gaging station, 1,000 ft downstream from El Jardin pumping plant, 6.8 mi below International Bridge between Brownsville and Matamoros, Tamps., Mex., and 48.8 mi above the Gulf of Mexico.

DRAINAGE AREA.--176,333 mi^2.

PERIOD OF RECORD.--
CHEMICAL DATA: Jan 1932, Mar 1943 to Feb 1944, Feb 1966 to current year.
BIOCHEMICAL DATA: Oct 1974 to current year.
RADIOCHEMICAL DATA: Oct 1995 to current year.
PESTICIDE DATA: May 1975 to May 1982, Oct 1995 to current year.
SEDIMENT DATA: Feb 1996 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Mar 1943 to Feb 1944, Apr 1967 to Sep 1983.
WATER TEMPERATURE: Oct 1966 to Sep 1983.
SUSPENDED SEDIMENT DISCHARGE: Feb 1966 to Sep 1983.

REMARKS.--The flow is controlled largely by releases from Falcon Reservoir. Discharges published in the table were obtained directly from rating table furnished by International Boundary and Water Commission. Records of daily mean discharge for water year 2000 are given in International Boundary and Water Commission Water Bulletins Nos. 69 and 70. Since Sep 1995, suspended sediment chemistry and quality assurance data 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, 4,130 microsiemens, May 29, 1972; minimum daily, 337 microsiemens, Sep 3, 1967.
WATER TEMPERATURE: Maximum daily, 35.0°C, on several days during summer months of 1982 and 1983; minimum daily, 8.0°C, Jan 10, 1967.
SEDIMENT CONCENTRATION: Maximum daily mean, 6,000 mg/L, Feb 28, 1983; minimum daily mean, 4 mg/L, Apr 26, 1970, Aug 16, 18, 24, 27, 1977.
SEDIMENT LOADS: Maximum daily, 181,000 tons Feb 28, 1983; minimum daily, 0.12 tons Aug 26, 1983.

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

DATE	TIME	AGENCY COLLECTING SAMPLE (CODE NUMBER) (00027)	SAMPLING METHOD, CODES (82398)	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE WATER (DEG C) (00010)	TURBIDITY (NTU) (00076)	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)	HARDNESS TOTAL (MG/L AS CACO3) (00900)	HARDNESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)
JAN												
19...	1350	1028	30	21	1030	8.0	22.0	14	10.5	121	260	120
MAY												
10...	1350	1028	10	438	1000	7.7	28.5	18	6.2	81	250	130
JUN												
29...	1100	1028	10	97	1320	7.9	30.0	22	6.2	82	280	160
AUG												
16...	0830	1028	10	168	1180	7.6	29.5	5.5	8.5	114	250	150

DATE	CALCIUM DISSOLVED (MG/L AS CA) (00915)	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)	SODIUM, DISSOLVED (MG/L AS NA) (00930)	SODIUM ADSORPTION RATIO (00931)	SODIUM PERCENT (00932)	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	CARBONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	BICARBONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	ALKALINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)
JAN												
19...	73	19	97	3	44	5.3	0	178	146	170	130	.49
MAY												
10...	69	20	94	3	44	5.4	0	146	119	180	120	.51
JUN												
29...	72	24	152	4	54	6.2	--	148	122	230	190	.57
AUG												
16...	64	22	123	3	51	5.1	0	121	100	220	160	.69

DATE	SILICA, DISSOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L) (70301)	NITROGEN, NITRATE DISSOLVED (MG/L AS N) (00618)	NITROGEN, NITRITE DISSOLVED (MG/L AS N) (00613)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N) (00608)	NITROGEN, TOTAL (MG/L AS N) (00600)	NITROGEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITROGEN, ORGANIC DISSOLVED (MG/L AS N) (00607)	NITROGEN,AMMONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)
JAN												
19...	3.5	644	589	.247	.008	.255	<.002	.86	--	--	.29	.60
MAY												
10...	10	599	572	.339	.006	.345	.014	1.1	.75	.30	.31	.76
JUN												
29...	15	796	766	.006	.003	.009	.016	.53	.51	.39	.41	.52
AUG												
16...	12	706	670	--	.001	<.005	.010	--	.45	.28	.29	.46

08475000 RIO GRANDE NEAR BROWNSVILLE, TX--Continued
(National stream-quality accounting network)

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

DATE	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4) (00660)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC SUS-PENDED TOTAL (MG/L AS C) (00689)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)	ANTI-MONY, DIS-SOLVED (UG/L AS SB) (01095)
JAN											
19...	.175	.126	.108	.33	3.9	.80	1.4	25	99	1.2	<1.0
MAY											
10...	.098	.114	.099	.30	4.0	.87	35	30	97	1.8	<1.0
JUN											
29...	.192	.149	.125	.38	5.0	.40	7.1	27	99	--	--
AUG											
16...	.099	.066	.053	.16	3.7	.42	12	26	99	--	--

DATE	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE) (01010)	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030)	COBALT, DIS-SOLVED (UG/L AS CO) (01035)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	LITHIUM DIS-SOLVED (UG/L AS LI) (01130)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)
JAN											
19...	2	101	<1.0	<1.0	<.80	<1.0	1.6	<10	<1.0	32	1.2
MAY											
10...	2	106	<1.0	<1.0	<.80	<1.0	1.2	<10	<1.0	34	6.2
JUN											
29...	5	--	--	--	--	--	--	<10	--	46	--
AUG											
16...	4	--	--	--	--	--	--	<10	--	45	--

DATE	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060)	NICKEL, DIS-SOLVED (UG/L AS NI) (01065)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)	STRON-TIUM, DIS-SOLVED (UG/L AS SR) (01080)	VANA-DIUM, DIS-SOLVED (UG/L AS V) (01085)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)	URANIUM NATURAL DIS-SOLVED (UG/L AS U) (22703)	2,6-DI-ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	ACETO-CHLOR, WATER FLTRD REC (UG/L) (49260)	ALA-CHLOR, WATER, DISS, REC, (UG/L) (46342)
JAN											
19...	5.5	2.0	<2	<1.0	1120	<10	2.5	2.4	<.0030	<.0020	<.005
MAY											
10...	5.6	1.5	<2	<1.0	1120	<10	2.6	2.2	<.0030	<.0020	<.002
JUN											
29...	--	--	<2	--	1280	E6	--	--	<.0030	<.0020	<.002
AUG											
16...	--	--	<2	--	1150	<10	--	--	<.0030	<.0020	<.002

DATE	ALPHA BHC DIS-SOLVED (UG/L) (34253)	ATRA-ZINE, WATER, DISS, REC (UG/L) (39632)	METHYL AZIN-PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)	BEN-FLUR-ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)	BUTYL-ATE, WATER, DISS, REC (UG/L) (04028)	CAR-BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBO-FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	CHLOR-PYRIFOS DIS-SOLVED (UG/L) (38933)	PER-METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	CYANA-ZINE, WATER, DISS, REC (UG/L) (04041)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)
JAN											
19...	<.0020	.008	<.0010	<.0020	<.0020	<.0030	<.0030	<.0040	<.0050	<.0040	<.0020
MAY											
10...	<.0020	.011	E.0093	<.0020	<.0020	<.0030	<.0030	<.0040	<.0050	<.0040	<.0020
JUN											
29...	<.0020	.008	<.0010	<.0020	<.0020	<.0030	<.0030	<.0040	<.0050	<.0040	<.0020
AUG											
16...	<.0020	.006	<.0040	<.0020	<.0020	<.0030	<.0100	<.0040	<.0050	<.0040	<.0020

DATE	DEETHYL ATRA-ZINE, WATER, DISS, REC (UG/L) (04040)	DI-AZINON, DIS-SOLVED (UG/L) (39572)	DI-ELDRIN DIS-SOLVED (UG/L) (39381)	DISUL-FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	ETHAL-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)	ETHO-PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	FONOFOS WATER DISS REC (UG/L) (04095)	LINDANE DIS-SOLVED (UG/L) (39341)	LIN-URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA-THION, DIS-SOLVED (UG/L) (39532)
JAN											
19...	E.0041	V.004	<.001	<.0170	<.0020	<.0040	<.0030	<.0030	<.004	<.0020	<.005
MAY											
10...	<.0040	.008	<.001	<.0170	<.0020	<.0040	<.0030	<.0030	<.004	<.0020	<.005
JUN											
29...	E.0027	.008	<.001	<.0170	<.0020	<.0040	<.0030	<.0030	<.004	<.0020	<.005
AUG											
16...	E.0011	.007	<.001	<.0170	<.0020	<.0040	<.0030	<.0030	<.004	<.0020	<.005

08475000 RIO GRANDE NEAR BROWNSVILLE, TX--Continued
(National stream-quality accounting network)

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

DATE	METO-LACHLOR WATER DISSOLV (UG/L) (39415)	METRI-BUZIN SENCOR WATER DISSOLV (UG/L) (82630)	MOL-INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPROP-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	P,P' DDE DISSOLV (UG/L) (34653)	PARA-THION, DIS-SOLVED (UG/L) (39542)	METHYL PARA-THION WAT FLT 0.7 U GF, REC (UG/L) (82667)	PEB-ULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	PENDI-METH-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PRO-METON, WATER, DISS, REC (UG/L) (04037)
JAN											
19...	<.002	<.050	<.0040	<.0030	<.0060	<.004	<.0060	<.0040	<.0040	<.0020	<.0180
MAY											
10...	<.002	<.004	<.0040	<.0030	E.0032	<.004	<.0060	<.0040	<.0040	<.0020	<.0180
JUN											
29...	<.002	<.004	<.0040	<.0030	<.0060	<.004	<.0060	<.0040	<.0040	<.0020	<.0180
AUG											
16...	<.002	<.004	<.0040	<.0030	<.0060	<.004	<.0060	<.0040	<.0040	<.0020	<.0180

DATE	PROP-CHLOR, WATER, DISS, REC (UG/L) (04024)	PRO-PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	PRO-PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	PRON-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	SI-MAZINE, WATER, DISS, REC (UG/L) (04035)	TEBU-THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER-BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TER-BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	THIO-BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL-LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)
JAN											
19...	<.0070	<.0040	<.0130	<.0030	<.0050	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020
MAY											
10...	<.0070	<.0040	<.0130	<.0030	<.0070	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020
JUN											
29...	<.0070	<.0040	<.0130	<.0030	<.0050	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020
AUG											
16...	<.0070	<.0040	<.0130	<.0030	<.0050	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020

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MULTIPLE STATION ANALYSES

STATION NUMBER	STATION NAME	DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)
08166000	Johnson Ck nr Ingram, TX	11-17-99	0952	21	467	16.0
	Johnson Ck nr Ingram, TX	01-11-00	1425	21	354	25.0
	Johnson Ck nr Ingram, TX	03-14-00	1027	18	458	16.0
	Johnson Ck nr Ingram, TX	05-02-00	1411	54	411	23.0
	Johnson Ck nr Ingram, TX	07-06-00	1348	12	422	30.0
	Johnson Ck nr Ingram, TX	08-17-00	0940	11	433	27.5
08167500	Guadalupe Rv nr Spg Branch, TX	01-04-00	1125	85	490	10.5
	Guadalupe Rv nr Spg Branch, TX	03-06-00	1100	86	435	19.0
	Guadalupe Rv nr Spg Branch, TX	04-26-00	1100	48	464	23.5
	Guadalupe Rv nr Spg Branch, TX	06-20-00	0955	85	417	28.5
	Guadalupe Rv nr Spg Branch, TX	07-17-00	1017	22	433	29.5
	Guadalupe Rv nr Spg Branch, TX	08-15-00	0940	11	467	26.0
08167800	Guadalupe Rv at Sattler, TX	01-04-00	1433	102	398	13.0
	Guadalupe Rv at Sattler, TX	03-06-00	1435	98	396	14.0
	Guadalupe Rv at Sattler, TX	07-07-00	1020	56	347	15.0
	Guadalupe Rv at Sattler, TX	08-15-00	1450	58	376	15.5
08168500	Guadalupe Rv abv Comal Rv at New Braunfels, TX	03-03-00	1500	100	426	21.5
	Guadalupe Rv abv Comal Rv at New Braunfels, TX	04-24-00	1325	88	410	24.0
	Guadalupe Rv abv Comal Rv at New Braunfels, TX	06-23-00	1235	146	370	23.5
	Guadalupe Rv abv Comal Rv at New Braunfels, TX	08-17-00	1053	45	424	27.0
08169000	Comal Rv at New Braunfels, TX	03-03-00	1125	271	531	21.5
	Comal Rv at New Braunfels, TX	05-02-00	1426	273	524	23.0
	Comal Rv at New Braunfels, TX	06-27-00	1350	252	523	24.6
	Comal Rv at New Braunfels, TX	08-10-00	1020	176	522	24.5
08170500	San Marcos Rv at San Marcos, TX	11-03-99	1417	107	585	21.5
	San Marcos Rv at San Marcos, TX	12-01-99	1123	120	616	19.0
	San Marcos Rv at San Marcos, TX	01-06-00	0924	107	577	19.5
	San Marcos Rv at San Marcos, TX	02-09-00	1035	116	608	21.0
	San Marcos Rv at San Marcos, TX	03-08-00	0933	116	623	21.5
	San Marcos Rv at San Marcos, TX	04-04-00	1125	110	612	19.5
	San Marcos Rv at San Marcos, TX	04-28-00	0925	114	615	21.5
	San Marcos Rv at San Marcos, TX	07-07-00	1015	165	591	22.5
	San Marcos Rv at San Marcos, TX	07-26-00	0939	139	591	22.5
08171000	Blanco Rv at Wimberley, TX	11-02-99	1542	20	473	17.5
	Blanco Rv at Wimberley, TX	01-05-00	1530	19	490	12.0
	Blanco Rv at Wimberley, TX	03-07-00	1256	24	471	20.5
	Blanco Rv at Wimberley, TX	04-27-00	1408	19	473	25.0
	Blanco Rv at Wimberley, TX	06-21-00	1407	34	377	29.0
	Blanco Rv at Wimberley, TX	08-16-00	1256	12	373	31.0
08171300	Blanco Rv nr Kyle, TX	01-05-00	1050	.65	419	13.0
	Blanco Rv nr Kyle, TX	06-21-00	1016	9.4	358	29.0
08172000	San Marcos Rv at Luling, TX	11-01-99	1537	126	535	19.0
	San Marcos Rv at Luling, TX	12-13-99	1348	122	548	15.0
	San Marcos Rv at Luling, TX	03-31-00	1229	114	570	23.0
	San Marcos Rv at Luling, TX	09-12-00	1027	86	486	29.0
08172400	Plum Ck at Lockhart, TX	06-13-00	1428	33	415	28.0
	Plum Ck at Lockhart, TX	06-22-00	1025	3.4	568	26.5
08173900	Guadalupe Rv at Gonzales, TX	12-13-99	1800	647	576	14.9
	Guadalupe Rv at Gonzales, TX	02-11-00	0958	540	603	15.1
	Guadalupe Rv at Gonzales, TX	05-31-00	1210	122	542	29.4
	Guadalupe Rv at Gonzales, TX	06-12-00	1507	3990	456	26.8
	Guadalupe Rv at Gonzales, TX	07-17-00	1135	76	471	32.7

MULTIPLE STATION ANALYSES

STATION NUMBER	STATION NAME	DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)
08173900	Guadalupe Rv at Gonzales, TX	09-11-00	1424	113	534	30.1
08175000	Sandies Ck nr Westhoff, TX	12-16-99	1430	5.1	2740	10.0
	Sandies Ck nr Westhoff, TX	02-11-00	1045	7.6	1470	17.5
	Sandies Ck nr Westhoff, TX	03-15-00	1236	286	453	18.0
	Sandies Ck nr Westhoff, TX	04-11-00	1316	6.5	1210	20.0
	Sandies Ck nr Westhoff, TX	05-25-00	1231	14	580	28.0
	Sandies Ck nr Westhoff, TX	07-18-00	0924	2.8	1630	28.0
08176500	Guadalupe Rv at Victoria, TX	12-13-99	1126	521	629	18.0
	Guadalupe Rv at Victoria, TX	04-13-00	1335	605	531	23.5
	Guadalupe Rv at Victoria, TX	05-26-00	1016	619	505	28.5
	Guadalupe Rv at Victoria, TX	07-21-00	0932	352	533	30.5
08176900	Coleto Ck at Arnold Rd nr Schroeder, TX	12-15-99	1023	2.7	978	12.5
	Coleto Ck at Arnold Rd nr Schroeder, TX	02-08-00	1034	6.1	953	16.6
	Coleto Ck at Arnold Rd nr Schroeder, TX	04-14-00	0924	5.0	892	20.0
	Coleto Ck at Arnold Rd nr Schroeder, TX	05-25-00	1541	9.8	842	28.0
08177500	Coleto Ck nr Victoria, TX	12-16-99	0930	2.7	844	12.5
	Coleto Ck nr Victoria, TX	02-10-00	1420	3.0	715	22.0
	Coleto Ck nr Victoria, TX	04-12-00	1040	44	714	22.0
	Coleto Ck nr Victoria, TX	05-24-00	1507	11	763	29.5
	Coleto Ck nr Victoria, TX	07-21-00	1203	8.9	768	33.0
	Coleto Ck nr Victoria, TX	08-31-00	0754	1.7	800	30.0
08178050	San Antonio Rv at Mitchell St, San Antonio, TX	01-26-00	1034	12	535	13.5
	San Antonio Rv at Mitchell St, San Antonio, TX	03-24-00	1403	13	470	24.0
	San Antonio Rv at Mitchell St, San Antonio, TX	05-23-00	1325	21	393	25.5
	San Antonio Rv at Mitchell St, San Antonio, TX	07-21-00	0907	15	815	27.0
08178565	San Antonio Rv at Loop 410 at San Antonio, TX	12-01-99	1558	13	565	19.0
	San Antonio Rv at Loop 410 at San Antonio, TX	01-28-00	1328	20	720	8.0
	San Antonio Rv at Loop 410 at San Antonio, TX	03-20-00	1300	21	490	20.5
	San Antonio Rv at Loop 410 at San Antonio, TX	05-01-00	1505	317	335	22.0
	San Antonio Rv at Loop 410 at San Antonio, TX	06-01-00	1057	17	482	28.7
	San Antonio Rv at Loop 410 at San Antonio, TX	07-28-00	0849	8.6	725	27.2
	San Antonio Rv at Loop 410 at San Antonio, TX	09-13-00	1427	76	369	29.5
08180640	Medina Rv at La Coste, TX	01-19-00	1122	46	473	16.0
	Medina Rv at La Coste, TX	04-07-00	1143	37	504	19.5
	Medina Rv at La Coste, TX	05-23-00	1131	39	356	24.5
	Medina Rv at La Coste, TX	07-13-00	1027	36	469	28.0
08180700	Medina Rv nr MacDona, TX	01-19-00	1435	56	484	17.5
	Medina Rv nr MacDona, TX	04-07-00	1400	48	564	20.5
	Medina Rv nr MacDona, TX	05-23-00	1511	48	564	26.0
08180800	Medina Rv nr Somerset, TX	07-06-00	1000	45	721	26.5
	Medina Rv nr Somerset, TX	08-07-00	1600	41	700	29.0
08181500	Medina Rv at San Antonio, TX	06-27-00	0945	119	967	28.5
08183500	San Antonio Rv nr Falls City, TX	12-06-99	1330	252	1110	20.0
	San Antonio Rv nr Falls City, TX	02-09-00	1011	299	1020	16.0
08183850	Cibolo Ck at IH 10 abv Boerne, TX	11-05-99	0944	.40	493	18.5
	Cibolo Ck at IH 10 abv Boerne, TX	11-05-99	1145	.40	493	18.5
	Cibolo Ck at IH 10 abv Boerne, TX	11-15-99	0846	.09	526	15.5
	Cibolo Ck at IH 10 abv Boerne, TX	01-12-00	1103	.07	483	14.5
	Cibolo Ck at IH 10 abv Boerne, TX	01-12-00	1134	.07	483	14.7

MULTIPLE STATION ANALYSES

STATION NUMBER	STATION NAME	DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)
08183850	Cibolo Ck at IH 10 abv Boerne, TX	03-13-00	0910	.12	489	13.0
	Cibolo Ck at IH 10 abv Boerne, TX	03-13-00	0942	.12	489	13.2
	Cibolo Ck at IH 10 abv Boerne, TX	05-01-00	1216	.50	399	21.0
	Cibolo Ck at IH 10 abv Boerne, TX	05-01-00	1243	.50	399	21.1
	Cibolo Ck at IH 10 abv Boerne, TX	07-05-00	0926	.19	589	28.5
	Cibolo Ck at IH 10 abv Boerne, TX	07-05-00	1018	.19	589	28.5
	Cibolo Ck at IH 10 abv Boerne, TX	08-14-00	1245	.03	678	35.0
	Cibolo Ck at IH 10 abv Boerne, TX	08-14-00	1355	.03	678	35.0
08185000	Cibolo Ck at Selma, TX	06-13-00	1020	1.0	207	27.0
08186000	Cibolo Ck nr Falls City, TX	12-10-99	1001	25	1460	11.5
	Cibolo Ck nr Falls City, TX	02-09-00	1241	33	1310	17.0
08189200	Copano Ck nr Refugio, TX	08-03-00	1350	.40	420	27.0
08189500	Mission Rv at Refugio, TX	12-08-99	1024	4.4	3080	15.0
	Mission Rv at Refugio, TX	02-11-00	0853	6.8	2200	18.5
	Mission Rv at Refugio, TX	03-22-00	1113	39	4800	22.0
	Mission Rv at Refugio, TX	04-21-00	1013	8.7	1420	23.0
	Mission Rv at Refugio, TX	06-08-00	1027	7.1	1420	30.0
	Mission Rv at Refugio, TX	08-03-00	1157	.73	5510	27.5
08189700	Aransas Rv nr Skidmore, TX	12-07-99	1411	3.2	1570	13.0
	Aransas Rv nr Skidmore, TX	02-09-00	1600	3.9	1540	19.0
08190000	Nueces Rv at Laguna, TX	11-03-99	1416	80	413	19.0
	Nueces Rv at Laguna, TX	03-02-00	1146	73	411	20.0
08190500	W Nueces Rv nr Brackettville, TX	11-03-99	1050	.58	334	16.5
08192000	Nueces Rv bl Uvalde, TX	11-05-99	1019	40	524	20.0
	Nueces Rv bl Uvalde, TX	11-05-99	1035	40	524	20.0
	Nueces Rv bl Uvalde, TX	01-04-00	1640	28	461	15.5
	Nueces Rv bl Uvalde, TX	03-03-00	0840	25	538	20.0
	Nueces Rv bl Uvalde, TX	05-04-00	1119	18	537	25.5
	Nueces Rv bl Uvalde, TX	08-11-00	1028	8.3	449	29.5
08193000	Nueces Rv nr Asherton, TX	11-29-99	1707	4.8	656	14.5
	Nueces Rv nr Asherton, TX	01-24-00	1332	1.0	1230	16.5
	Nueces Rv nr Asherton, TX	03-20-00	1518	.45	1350	19.0
08194000	Nueces Rv at Cotulla, TX	01-25-00	1010	1.2	808	13.5
	Nueces Rv at Cotulla, TX	03-21-00	0949	.94	814	18.0
08194500	Nueces Rv nr Tilden, TX	11-30-99	1400	1.2	736	16.0
	Nueces Rv nr Tilden, TX	01-25-00	1655	.18	1020	16.0
	Nueces Rv nr Tilden, TX	03-21-00	1509	44	763	21.0
08195000	Frio Rv at Concan, TX	11-04-99	1300	53	410	16.5
	Frio Rv at Concan, TX	01-06-00	1333	47	425	11.0
	Frio Rv at Concan, TX	05-03-00	1100	32	380	23.5
	Frio Rv at Concan, TX	06-27-00	0926	41	397	27.5
	Frio Rv at Concan, TX	08-10-00	1035	13	380	28.5
08196000	Dry Frio Rv nr Reagan Wells, TX	11-04-99	1020	7.5	380	17.0
	Dry Frio Rv nr Reagan Wells, TX	03-01-00	1410	6.1	383	20.5
	Dry Frio Rv nr Reagan Wells, TX	08-10-00	1349	2.3	398	30.5

MULTIPLE STATION ANALYSES

STATION NUMBER	STATION NAME	DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)
08198000	Sabinal Rv nr Sabinal, TX	11-02-99	1400	4.9	454	19.5
	Sabinal Rv nr Sabinal, TX	03-01-00	1125	5.9	472	20.0
	Sabinal Rv nr Sabinal, TX	08-09-00	1048	2.1	450	28.0
08198500	Sabinal Rv at Sabinal, TX	11-02-99	1005	1.4	1020	18.0
	Sabinal Rv at Sabinal, TX	03-01-00	0958	.84	1080	20.0
08200000	Hondo Ck nr Tarpley, TX	11-01-99	1009	2.2	415	17.4
	Hondo Ck nr Tarpley, TX	11-01-99	1041	2.2	415	17.4
	Hondo Ck nr Tarpley, TX	11-18-99	1055	1.6	453	13.3
	Hondo Ck nr Tarpley, TX	11-18-99	1202	1.6	418	13.3
	Hondo Ck nr Tarpley, TX	01-13-00	1007	1.5	453	13.0
	Hondo Ck nr Tarpley, TX	01-13-00	1035	1.5	453	13.0
	Hondo Ck nr Tarpley, TX	03-16-00	1026	.79	415	13.5
	Hondo Ck nr Tarpley, TX	03-16-00	1130	.79	415	13.5
	Hondo Ck nr Tarpley, TX	05-04-00	0954	.85	369	22.5
	Hondo Ck nr Tarpley, TX	05-04-00	1010	.85	369	22.7
	Hondo Ck nr Tarpley, TX	07-11-00	0937	.16	394	26.0
08201500	Seco Ck at Miller Rh nr Utopia, TX	02-29-00	1141	.61	399	20.5
	Seco Ck at Miller Rh nr Utopia, TX	08-09-00	1429	.97	366	33.5
08205500	Frio Rv nr Derby, TX	11-29-99	1223	27	1430	13.0
	Frio Rv nr Derby, TX	01-24-00	0926	23	1360	14.5
	Frio Rv nr Derby, TX	03-20-00	1011	16	1120	21.0
	Frio Rv nr Derby, TX	05-08-00	0950	.60	1340	25.5
	Frio Rv nr Derby, TX	06-26-00	1147	3.2	1710	28.5
08206600	Frio Rv at Tilden, TX	12-02-99	1206	21	1630	16.0
	Frio Rv at Tilden, TX	01-26-00	1007	26	1540	14.0
	Frio Rv at Tilden, TX	03-22-00	1114	20	1550	21.5
	Frio Rv at Tilden, TX	05-09-00	1310	2.2	2000	26.0
	Frio Rv at Tilden, TX	06-27-00	1506	.67	916	31.5
08206910	Choke Canyon Res OWC nr Three Rvs, TX	12-01-99	1515	37	776	18.9
	Choke Canyon Res OWC nr Three Rvs, TX	01-26-00	1634	38	808	15.0
	Choke Canyon Res OWC nr Three Rvs, TX	03-22-00	1622	37	806	19.5
	Choke Canyon Res OWC nr Three Rvs, TX	05-09-00	1710	37	843	25.5
	Choke Canyon Res OWC nr Three Rvs, TX	08-22-00	1512	36	842	28.0
08208000	Atascosa Rv at Whitsett, TX	12-02-99	0931	.71	2710	14.5
	Atascosa Rv at Whitsett, TX	01-27-00	1314	1.9	2220	12.5
	Atascosa Rv at Whitsett, TX	03-23-00	1352	5.3	1020	21.5
	Atascosa Rv at Whitsett, TX	05-10-00	1135	4.5	682	25.5
	Atascosa Rv at Whitsett, TX	08-23-00	1414	2.7	2100	28.0
08210000	Nueces Rv nr Three Rvs, TX	12-01-99	0839	37	827	16.0
	Nueces Rv nr Three Rvs, TX	01-27-00	1043	36	884	14.0
	Nueces Rv nr Three Rvs, TX	03-23-00	0915	78	649	21.0
	Nueces Rv nr Three Rvs, TX	05-10-00	0904	41	822	25.5
	Nueces Rv nr Three Rvs, TX	06-27-00	1805	53	1020	30.5
	Nueces Rv nr Three Rvs, TX	08-23-00	0942	33	709	27.0
08211000	Nueces Rv nr Mathis, TX	12-07-99	0851	184	567	16.0
	Nueces Rv nr Mathis, TX	02-14-00	1505	77	558	24.0
	Nueces Rv nr Mathis, TX	04-17-00	1300	129	528	25.5
	Nueces Rv nr Mathis, TX	06-07-00	1340	100	508	29.0
	Nueces Rv nr Mathis, TX	08-01-00	1300	152	521	28.5
	Nueces Rv nr Mathis, TX	09-20-00	1400	156	549	27.0

MULTIPLE STATION ANALYSES

STATION NUMBER	STATION NAME	DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)
08211200	Nueces Rv at Bluntzer, TX	12-08-99	1533	296	520	18.5
	Nueces Rv at Bluntzer, TX	02-14-00	1236	121	540	20.5
	Nueces Rv at Bluntzer, TX	04-17-00	1545	124	730	24.5
	Nueces Rv at Bluntzer, TX	06-07-00	1139	147	796	28.0
	Nueces Rv at Bluntzer, TX	08-01-00	1030	180	788	28.5
	Nueces Rv at Bluntzer, TX	09-19-00	1048	176	727	26.0
08211520	Oso Ck at Corpus Christi, TX	12-09-99	1500	1.1	5200	19.0
	Oso Ck at Corpus Christi, TX	02-11-00	1400	1.4	4600	21.5
	Oso Ck at Corpus Christi, TX	04-11-00	1015	1.5	6000	24.5
	Oso Ck at Corpus Christi, TX	06-06-00	1552	.60	4400	28.5
	Oso Ck at Corpus Christi, TX	08-04-00	0745	1.4	2600	30.0
	Oso Ck at Corpus Christi, TX	09-21-00	1421	1.5	4100	28.0
08211900	San Fernando Ck at Alice, TX	12-09-99	0926	.98	1130	20.5
	San Fernando Ck at Alice, TX	02-10-00	0830	.46	1190	17.5
	San Fernando Ck at Alice, TX	04-21-00	1503	1.1	1150	29.5
	San Fernando Ck at Alice, TX	06-19-00	1239	1.4	1110	31.5
	San Fernando Ck at Alice, TX	08-01-00	0910	.82	1120	27.5
	San Fernando Ck at Alice, TX	09-21-00	1723	.32	1260	32.0
08374000	Alamito Ck nr Presidio, TX	11-09-99	0930	.51	644	19.0
	Alamito Ck nr Presidio, TX	01-11-00	1435	.64	613	20.5
	Alamito Ck nr Presidio, TX	04-11-00	1005	.26	3800	19.5
	Alamito Ck nr Presidio, TX	05-23-00	0855	.04	662	24.5
	Alamito Ck nr Presidio, TX	07-06-00	0840	.68	662	28.5
	Alamito Ck nr Presidio, TX	09-06-00	1145	.25	588	32.5
08374500	Terlingua Ck nr Terlingua, TX	01-11-00	0850	2.0	1450	10.0
	Terlingua Ck nr Terlingua, TX	04-10-00	1445	1.3	1320	25.5
	Terlingua Ck nr Terlingua, TX	05-22-00	1305	.99	1310	26.0
	Terlingua Ck nr Terlingua, TX	07-06-00	1255	24	653	23.0
	Terlingua Ck nr Terlingua, TX	09-06-00	1455	1.7	1500	35.0
08425500	Phantom Lk Spg nr Toyahvale, TX	01-12-00	0930	.04	3690	10.5
	Phantom Lk Spg nr Toyahvale, TX	04-11-00	1500	.02	3600	27.0
	Phantom Lk Spg nr Toyahvale, TX	05-23-00	1350	.06	3600	32.5
	Phantom Lk Spg nr Toyahvale, TX	07-05-00	1355	.02	3610	28.5
	Phantom Lk Spg nr Toyahvale, TX	09-05-00	1250	.01	3570	30.0
08427000	Giffin Spgs at Toyahvale, TX	11-08-99	1507	4.2	3410	26.0
	Giffin Spgs at Toyahvale, TX	01-12-00	1035	3.7	3390	24.0
	Giffin Spgs at Toyahvale, TX	04-11-00	1540	4.2	3400	26.5
	Giffin Spgs at Toyahvale, TX	05-23-00	1430	4.1	3360	27.5
	Giffin Spgs at Toyahvale, TX	07-05-00	1320	4.5	3380	28.0
	Giffin Spgs at Toyahvale, TX	09-05-00	1215	4.2	3460	26.5
08446500	Pecos Rv nr Girvin, TX	11-08-99	1225	14	>20000	19.5
	Pecos Rv nr Girvin, TX	01-10-00	1150	27	18200	7.5
	Pecos Rv nr Girvin, TX	04-12-00	0910	16	25600	15.5
	Pecos Rv nr Girvin, TX	05-24-00	0850	9.8	27200	23.0
	Pecos Rv nr Girvin, TX	06-22-00	1140	27	6410	27.5
	Pecos Rv nr Girvin, TX	08-04-00	1325	23	17900	30.5
	Pecos Rv nr Girvin, TX	09-07-00	0940	15	16800	26.0
08449400	USGS Devils Rv at Pafford Crsg nr Comstock, TX	04-14-00	1430	146	376	23.5
	USGS Devils Rv at Pafford Crsg nr Comstock, TX	06-01-00	1455	136	372	24.5
	USGS Devils Rv at Pafford Crsg nr Comstock, TX	06-28-00	1000	235	379	26.5
	USGS Devils Rv at Pafford Crsg nr Comstock, TX	07-20-00	1640	177	359	30.5
	USGS Devils Rv at Pafford Crsg nr Comstock, TX	09-05-00	1650	151	352	31.5
08459200	Rio Grande at Pipeline Crsg bl Laredo, TX	10-26-99	1030	1440	805	20.0
	Rio Grande at Pipeline Crsg bl Laredo, TX	12-16-99	0945	1100	930	12.0

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 2000

Station number	Station name	Location	Drainage area (mi^2)	Period of record	Measurements: Date	Measurements: Discharge (ft^3/s)
		Guadalupe River Basin				
08168000	Hueco Springs near New Braunfels, TX	Lat 29º45'33", long 98º08'23", Comal County, two springs located 400 and 500 ft west of the Guadalupe River, 600 ft downstream from the mouth of Elm Creek, and 4.2 mi north of New Braunfels.	--	1944-2000	10-01-99 01-06-00 03-02-00 04-24-00 06-14-00 08-14-00	17.1 10.4 9.50 6.36 85.5 3.90
08177818	San Antonio Springs at San Antonio, TX	Lat 29º27'56", long 98º28'04", Bexar County, just below Hildebrand Ave. in San Antonio.	--	1951-52, 1959-62, 1972, 1974-77, 1979-2000	10-29-00 11-29-00 01-12-00 09-14-00	0 0 0 0
08178090	San Pedro Springs at San Antonio, TX	Lat 29º26'42", long 98º30'06", Bexar County, at San Pedro Park in San Antonio.	--	1933-35, 1951-52, 1958-61, 1966, 1971, 1974-77, 1979-2000	10-29-99 11-29-99 01-12-00 05-15-00 06-14-00 09-14-00	2.74 2.60 2.84 0 1.12 0
		Nueces River Basin				
08204000	Leona River Springflow near Uvalde TX	Lat 29º09'15", long 99º44'35", Uvalde County, at old road crossing on White’s Ranch, 2.0 mi downstream from Cooks Slough, and 4.7 mi southeast of Uvalde.	--	1939-65✞, 1966-2000	11-01-99 01-03-00 03-02-00 05-04-00 06-28-00 08-08-00	38.3 35.6 26.5 15.2 13.1 4.43
		Rio Grande Basin				
08425500	Phantom Lake Spring near Toyahvale, TX	Lat 30º56'01", long 103º50'43", Jeff Davis County, 375 ft downstream from source of spring, 3.5 mi southwest of Toyahvale, and 7.0 mi southwest of Balmorhea.	--	1931-33✞, 1942-66✞, 1967-2000	11-08-99 01-12-00 04-11-00 05-23-00 07-05-00 09-05-00	0 0.04 0.02 0.06 0.02 0.01
08427000	Giffin Springs at Toyahvale, TX	Lat 30º56'51", long 103º47'19", Reeves County, 2,000 ft northwest of post office in Toyahvale.	--	1919, 1922-23, 1925, 1932-33✞, 1941-86, 1988-2000	11-08-99 01-12-00 04-11-00 05-23-00 07-05-00 09-05-00	4.20 3.67 4.23 4.14 4.48 4.15

See footnote at end of table.

Discharge measurements made at low-flow partial-record station during water year 2000--Continued

Station number	Station name	Location	Drainage area (mi^2)	Period of record	Measurements	
					Date	Dis-charge (ft^3/s)
		Rio Grande Basin--Continued				
08456300	Las Moras Springs at Brackettville, TX l/	Lat 29°18'33", long 100°25'13", Kinney County, in springflow pool at Brackettville, 160 ft south of U.S. Highway 90, and 1,550 ft upstream from bridge on Brackettville-Fort Clark Road.	--	1896, 1899-1900, 1902, 1904-06, 1910, 1912, 1925, 1928, 1951-2000	10-13-99	18.9
					11-09-99	15.7
					12-13-99	16.0
					01-12-00	12.1
					02-08-00	15.5
					03-14-00	10.8
					04-11-00	9.90
					05-09-00	9.00
					06-13-00	9.10
					07-11-00	8.10
					08-08-00	5.35
					09-12-00	2.58

✞ Operated as a continuous-record station.

l/ Measurements furnished by International Boundary and Water Commission.

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 2000

Station name and number	Location	Period of record	Water Year 2000 maximum			Period of record maximum		
			Date	Gage height (ft)	Discharge (ft^3/s)	Date	Gage height (ft)	Discharge (ft^3/s)
		Guadalupe River Basin						
San Antonio River at Navarro St., San Antonio, TX 08177900	Lat 29°25'50", long 98°29'24", Bexar County, at bridge on Navarro Street in San Antonio. Drainage area is unknown.	1973-2000	06-10-00	--	--	10-17-98	*643.72	--
San Pedro Creek at Santa Rosa St., San Antonio, TX 08178100	Lat 29°25'51", long 98°29'49", Bexar County, at bridge on Santa Rosa Street in San Antonio. Drainage area is unknown.	1973-2000	06-10-00	--	--	07-16-90	*648.38	--
Martinez Creek at Fredericksburg Rd., San Antonio, TX 08178350	Lat 29°27'22", long 98°31'04", Bexar County, at bridge on Fredericksburg Road in San Antonio. Drainage area is unknown.	1973-2000	06-10-00	*682.84	--	10-17-98	*685.46	--
		Nueces River Basin						
Rutledge Hollow at 7th Street, Poteet, TX 08207220	Lat 29°02'07", long 98°34'18", Atascosa County, in city of Poteet at 7th Street, and 2.0 mi above Atascosa River. Drainage area is 9.74 mi^2. (Discontinued)	1979-2000	06-10-00	*422.99	--	07-17-90	*424.89	--
Atascosa River at U.S. Highway 281, Pleasanton, TX 08207300	Lat 28°57'44", long 98°28'51", Atascosa County, at bridge on U.S. Highway 281 in Pleasanton. Drainage area is unknown. (Discontinued)	1973-2000	05-02-00	*341.45	--	06-28-93	*352.84	--
		San Fernando Creek Basin						
Tranquitas Creek at Kingsville, TX 08212300	Lat 27°31'33", long 97°52'02", Kleberg County, at bridge on U.S. Highway 77 Business Route in Kingsville, 4.9 mi upstream from San Fernando Creek, and 5.9 mi downstream from Tranquitas Dam. Drainage area is 48.5 mi^2.	1965-82, 1984-90, 1992-2000	--	<1.85	--	08-10-80	6.88	--

* Elevation, in feet above sea level.
✞ 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 2000

Station number	Tributary to	Location	Drainage area (mi^2)	Measured previously (water years)	Measurements	
					Date	Dis-charge (ft^3/s)
		Rio Grande Basin				
Alamito Creek nr Presidio, TX 08374000	Rio Grande	Lat 29º31'25", long 104º17'15", Presidio County on downstream side of highway bridge on FM 170, about 0.25 mi upstream from the confluence with the Rio Grande, and about 6 mi southeast of Presidio.	1,504	1999-2000	11-09-99 01-11-00 04-11-00 05-23-00 07-06-00 09-06-00	0.51 0.64 0.26 0.04 0.68 0.25
Terlingua Creek nr Terlingua, TX 08374500	Rio Grande	Lat 29º11'50", long 103º36'20", Brewster County, on left bank, 2.6 mi upstream from the confluence with the Rio Grande, and about 8.5 mi south of Terlingua.	1,070	1999-2000	01-11-00 04-10-00 05-22-00 07-06-00 09-06-00	2.05 1.31 0.99 24.3 1.73
Devils River at Pafford Crossing nr Comstock, TX 08449400	Rio Grande	Lat 29º40'35", long 101º00'00", Val Verde County, on left bank, about 11.5 mi east of Comstock, and about 25.5 mi upstream from the confluence with the Rio Grande.	3,961	1999-2000	01-20-00 04-14-00 06-01-00 06-28-00 07-20-00 09-05-00	170 146 136 235 177 151
Mud Springs at Mays Ranch nr Brackettville, TX 08454800 1/	Mud Creek	Lat 29º27'10", long 100º37'30", Kinney County, on Mays Ranch about 16 mi northwest of Brackettville. (Discontinued)	--	1939-41, 1952-53, 1962, 1965-2000	10-13-99 11-09-99	24.2 21.6

✞ Operated as a continuous-record station.

1/ Measurements furnished by International Boundary and Water Commission.

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