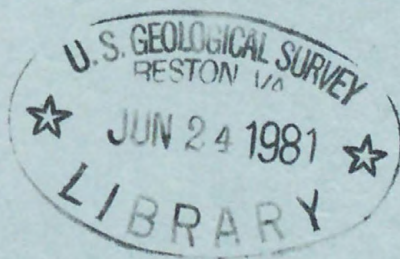


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Hydrologic Data for Urban Studies in the Austin, Texas Metropolitan Area, 1979

U.S. GEOLOGICAL SURVEY

Open-File Report 81-628



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*Prepared in cooperation with the City of Austin and the
Texas Department of Water Resources*



Hydrologic Data for Urban Studies in the Austin, Texas Metropolitan Area, 1979

R.M. Slade, Jr., M.E. Dorsey, J.D. Gordon, R.N. Mitchell, and J.L. Gaylord

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MAY 1981

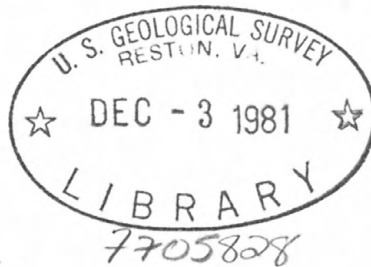
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UNITED STATES DEPARTMENT OF THE INTERIOR

JAMES G. WATT, Secretary

GEOLOGICAL SURVEY

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METRIC CONVERSIONS

The inch-pound units of measurements used in this report may be converted to metric units by using the following conversion factors:

From		Multiply by	To obtain	
Unit	Abbrevia- tion		Unit	Abbrevia- tion
inch	--	25.4	millimeter	mm
foot	--	.3048	meter	m
mile	--	1.609	kilometer	km
square mile	mi ²	2.590	square kilometer	km ²
cubic foot per second	ft ³ /s	.02832	cubic meter per second	m ³ /s
foot per mile	ft/mi	.189	meter per kilometer	m/km
acre-foot	--	1233	cubic meter	m ³
		.001233	cubic hectometer	hm ³

HYDROLOGIC DATA FOR URBAN STUDIES IN THE
AUSTIN, TEXAS, METROPOLITAN AREA

1979

By

R. M. Slade, Jr., M. E. Dorsey, J. D. Gordon,
R. N. Mitchell and J. L. Gaylord
U.S. Geological Survey

INTRODUCTION

Hydrologic investigations of urban watersheds in Texas were begun by the U.S. Geological Survey in 1954. Studies are now in progress in Austin, Houston, and San Antonio. Studies have been completed in the Dallas and Fort Worth areas.

The Geological Survey, in cooperation with the Texas Department of Water Resources, began hydrologic studies in the Austin urban area in 1954. In cooperation with the city of Austin, the program was expanded in 1975 to include additional streamflow and rainfall gaging stations, and the collection of surface water-quality data. In 1978, the program was expanded to include a ground-water resources study of the South Austin metropolitan area in the Balcones fault zone.

The objectives of the Austin urban hydrology study are as follows:

1. To determine, on the basis of historical data and hydrologic analyses, the magnitude and frequency of flood peaks and flood volume.
2. To determine the effect of urban development on flood peaks and volume.
3. To determine the variations in water quality during different seasons in selected basins under various types of urban development.
4. To quantitatively appraise the ground-water resources along the Balcones fault zone, the effect of urbanization on the quality and quantity of recharge and discharge, and the extent of pollution in the Edwards and associated limestones.

This report presents the basic hydrologic data collected in the Austin urban area for the 1979 water year (Oct. 1, 1978 to Sept. 30, 1979). To facilitate the publication and distribution of this report at the earliest feasible time, certain material has been included that does not conform to the formal publication standards of the U.S. Geological Survey.

Additional explanations of terms related to streamflow, water quality, and other hydrologic data used in this report are defined in the U.S. Geological Survey annual report Water Resources Data for Texas, TX-79-3, 1979.

LOCATION AND DESCRIPTION OF THE AREA

The Austin study area is about 80 miles northeast of San Antonio and about 160 miles northwest of Houston. The study area extends from the Hill Country at the eastern edge of the Edwards Plateau across the Balcones Fault Escarpment to the Blackland Prairie of Texas. The land surface decreases in altitude from about 1,100 feet above mean sea level in the northwest to about 420 feet above mean sea level in the southeast.

Slopes generally range from 2 to 15 percent; slopes greater than 5 percent are present along the eastern edge of the Edwards Plateau, average about 5 percent within the Balcones Escarpment, and are less than 5 percent east of the escarpment and along the flood plain and alluvial terraces of the Colorado River and its tributaries.

Soils overlying the hard limestone in the western half of the study area are in general poorly developed thin calcareous clays, clay loams, and stony clays. Bedrock is locally exposed. Soils on the soft limestones and shales of the Balcones Fault Zone are generally dark brown calcareous clays, clay loams, or silty clay loams 6 inches or more thick. Soils on the shaly formation in the eastern part of the area are dark gray to olive calcareous clays and clay loams, 12 inches or more thick. Soils on the flood plain and terraces of the Colorado River and its tributaries are dark gray to red-brown, calcareous, noncalcareous, sandy loams, silty clay loams, clay loams, and gravelly sands 12 inches or more thick.

Detailed descriptions of the soils in the Austin urban study area can be found in Soil Survey of Travis County, U.S. Dept. of Agriculture, 1974. Additional geologic information in the Austin urban study area can be found in publications by the University of Texas Bureau of Economic Geology.

The major streams in the study area are the Colorado River, Onion Creek, Barton Creek, Walnut Creek, Bull Creek, Boggy Creek, Shoal Creek, Williamson Creek, Slaughter Creek, Bear Creek, and Waller Creek. Throughout the year, low flow for some of the smaller streams in the predominantly urban areas is partly sustained by return flow from industrial and residential users; during the summer months the low flow is partly sustained by drainage from municipal and private swimming pools.

The climate of the Austin urban area is characterized by short mild winters, long moderately hot summers, moderately high humidity, and prevailing southerly winds. Records of the National Weather Service show that the mean annual temperature (based on the period 1941-70) is 70.6°F (21.5°C); the mean maximum temperature for July is 95°F (35.0°C); and the mean minimum temperature for January is 41°F (5.0°C). The average growing season is about 270 days.

The average rainfall (based on the period 1941-70) is 32.49 inches and is generally well distributed throughout the year; however, individual storms may cause flooding in any season. The major storms usually occur during the months of April-May and September-October.

DATA COLLECTION METHODS

The drainage basins and locations of hydrologic-instrument installations and surface-water-quality sampling sites in the Austin urban study area are shown on figure 1. The locations of hydrologic instruments and data-collection sites in the individual drainage basins are shown on figures 7-18.

Precipitation Data

Precipitation data are based on 29 recording rain gages. The gages are distributed throughout the drainage basins to measure total precipitation and to define rainfall intensities.

Precipitation at individual gages and weighted precipitation in each basin is given in the section "Compilation of data." Weighted-mean precipitation factors are shown in table 1. Weighted mean precipitation for a study area is determined by the Thiessen method described by Linsley, Kohler, and Paulhus (1949). For example, the weighted-mean precipitation for the drainage basin upstream from the Bull Creek at Loop 360 streamflow-gaging station could be computed as follows: Multiply the recorded precipitation at rain-gage 1-BUL by 0.57 and to that value, add the recorded precipitation at rain-gage 2-BUL multiplied by 0.43.

Rainfall for the current water year was unevenly distributed over the area. Individual station totals ranged from 33.18 inches at gage 2-BUL in the Bull Creek basin to 50.22 inches at gage 1-BOL in the West Bouldin Creek basin. The mean water-year total of all the rain gages is 42.68 inches as compared with the 30-year average (1941-70) of 32.49 inches at the Austin Municipal Airport rain gage which is operated by the National Weather Service. Daily and monthly precipitation data at individual gages in the study area are given in Tables 13 and 14.

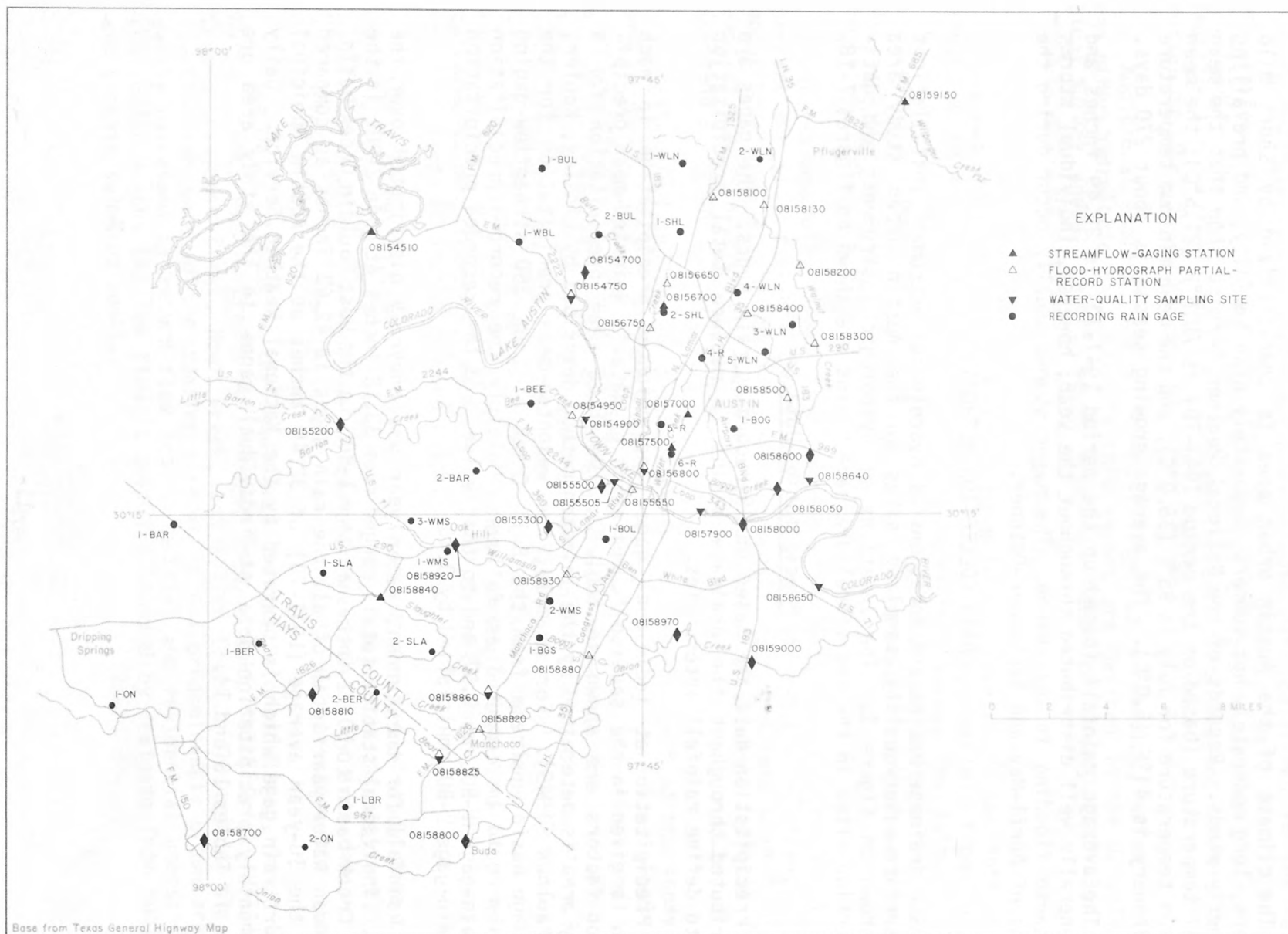


FIGURE 1.-Locations of surface-water hydrologic-instrument installations and surface-water-quality sampling sites in the Austin urban study area

Table 1.--Weighted-mean precipitation factors for drainage basins
above stations in the Austin metropolitan area

Station number	Station name (abbreviated)	Rain gage <u>1/</u>	Weighted-mean precipitation factor <u>2/</u>
08154700	Bull Creek at Loop 360	1-BUL 2-BUL	0.57 .43
08154750	West Bull Creek at Loop 360	1-WBL	1.00
08154950	Bee Creek at West Lake Drive	1-BEE	1.00
08155200	Barton Creek at State Highway 71 near Oak Hill	1-BAR	1.00
08155300	Barton Creek at Loop 360	1-BAR 2-BAR	.77 .23
08155550	West Bouldin Creek at Riverside Drive	1-BOL	1.00
08156650	Shoal Creek at Steck Avenue	1-SHL	1.00
08156700	Shoal Creek at Northwest Park	1-SHL 2-SHL	.45 .55
08156750	Shoal Creek at White Rock Drive	1-SHL 2-SHL	.42 .58
08156800	Shoal Creek at 12th Street	1-SHL 2-SHL	.24 .76
08157000	Waller Creek at 38th Street	4-R 5-R	.81 .19
08157500	Waller Creek at 23rd Street	4-R 5-R 6-R	.50 .40 .10
08158050	Boggy Creek at U.S. Highway 183	1-BOG	1.00
08158100	Walnut Creek at Farm Road 1325	1-WLN	1.00
08158130	Wells Branch at Parmer Lane	2-WLN	1.00
08158200	Walnut Creek at Dessau Road	1-WLN 2-WLN	.51 .49

See footnotes at end of table.

Table 1.--Weighted-mean precipitation factors for drainage basins
above stations in the Austin metropolitan area--Continued

Station number	Station name (abbreviated)	Rain gage <u>1</u> /	Weighted-mean precipitation factor <u>2</u> /
08158300	Ferguson Branch at Springdale Road	3-WLN	1.00
08158400	Little Walnut Creek at Interstate Highway 35	1-SHL 4-WLN	.34 .66
08158500	Little Walnut Creek at Manor Road	1-SHL 4-WLN 5-WLN	.15 .43 .42
08158600	Walnut Creek at Webberville Road	1-WLN 2-WLN 3-WLN 4-WLN 5-WLN	.25 .21 .28 .15 .11
08158810	Bear Creek below Farm Road 1826	1-BER	1.00
08158820	Bear Creek at Farm Road 1626	1-BER 2-BER	.66 .34
08158825	Little Bear Creek at Farm Road 1626	1-LBR	1.00
08158840	Slaughter Creek at Farm Road 1826	1-SLA	1.00
08158860	Slaughter Creek at Farm Road 2304	1-SLA 2-SLA	.48 .52
08158880	Boggy Creek (South) at Circle S Road	1-RGS	1.00
08158920	Williamson Creek at Oak Hill	1-WMS 3-WMS	.16 .84
08158930	Williamson Creek at Manchaca Road	1-WMS 2-WMS 3-WMS	.46 .25 .29

See footnotes at end of table.

Table 1.--Weighted-mean precipitation factors for drainage basins
above stations in the Austin metropolitan area--Continued

Station number	Station name (abbreviated)	Rain gage 1/	Weighted-mean precipitation factor 2/
08158970	Williamson Creek at Jimmy Clay Road	1-WMS	0.31
		2-WMS	.49
		3-WMS	.20

1/ Rain gage designations are: BUL-Bull Creek; WBL-West Bull Creek; BEE-Bee Creek; BAR-Barton Creek; BOL-Bouldin Creek; SHL-Shoal Creek; R-Waller Creek; BOG-Boggy Creek; WLN-Walnut Creek; BER-Bear Creek; LBR-Little Bear Creek; SLA-Slaughter Creek; BGS-Boggy Creek (South); and WMS-Williamson Creek. See locations of rain gages on figure 1.

2/ See page on "Precipitation of data" for explanation of use of weighted-mean precipitation factors

Several large runoff producing storms occurred during the year. The most significant storm occurred on May 21-22, with rainfall totals ranging from 0.33 to 7.56 inches. The rainfall distribution for this storm is shown on figure 2. Widespread showers also fell on November 5, December 31, and July 27. These storms produced rainfall totals ranging from 2.97 to 4.62 inches, 1.85 to 3.09 inches, and 1.88 to 6.06 inches respectively.

The storm of May 21-22 was analyzed for all stations except for those stations where rainfall distribution was uneven, where the quality of recorded data was poor, or where the stage-discharge relationships were poorly defined. Other less significant storms were arbitrarily selected for analyses based on the discharge magnitude, quality of recorded data, and distribution of rainfall.

Runoff Data

Runoff data are based on discharge measurements and stage records at 16 continuous-record streamflow stations and 17 flood-hydrograph partial-record streamflow gaging stations. Streamflow data for continuous-record gaging stations, and for flood-hydrograph partial-record stations for the 1979 water year are presented in downstream order in the section "Compilation of data."

Rainfall and runoff for the 1979 water year for the continuous-record gaging stations in the Austin urban study area are summarized in table 2. Runoff varied from 4.40 inches for the Bull Creek gage to 17.91 inches for the Slaughter Creek gage, which was 13 percent and 40 percent of the basin's annual weighted-mean rainfall, respectively. Detailed storm rainfall and runoff records for each gaging station are shown in the section "Compilation of data."

Water-Quality Data

Water-quality data were collected at 17 streamflow locations during the 1979 water year. The locations of the streamflow water-quality data-collection sites are shown on figure 1. Water-quality samples are collected and analyzed during various flow and seasonal conditions so that the variations in the water quality may be documented for future study. Two of these water-quality data collection sites are equipped with automated samplers that collect discrete samples during storms. These two automated samplers are located at the gaging stations Barton Creek at Loop 360 and Bull Creek at Loop 360. The peak discharges associated with the water-quality samples collected during storms at all the gaging stations are shown in table 3.

Water-quality data were also collected at eight sites on Lake Austin and at 11 sites on Town Lake. The locations of these sites are shown on figures 3 and 4 respectively, and the analyses of these samples are given in the "Compilation of data" section in this report.

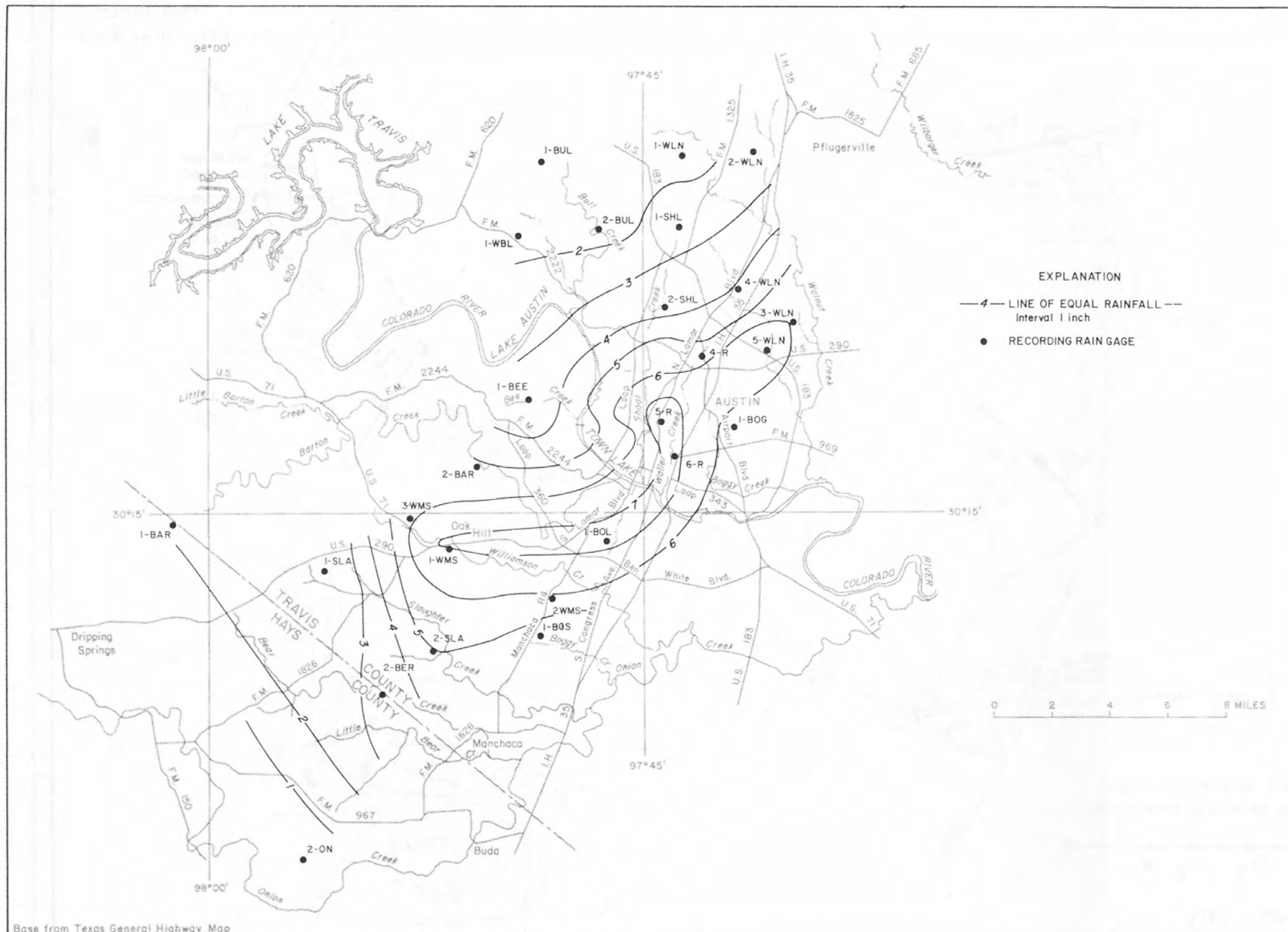


Figure 2.-Rainfall for the storm of May 21-22, 1979, on drainage basins in the Austin urban study area

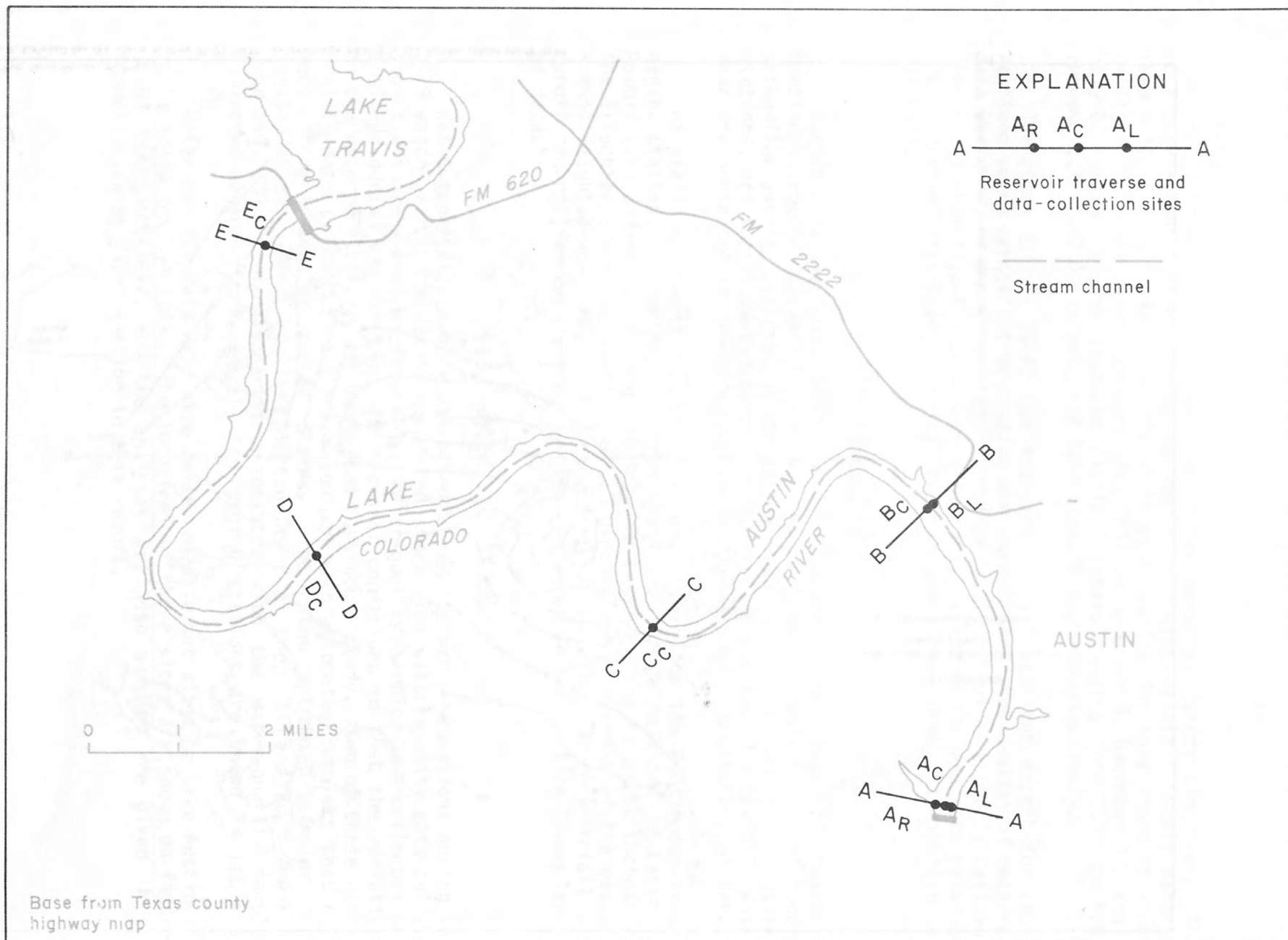


Figure 3.-Locations of the water-quality data-collection sites on Lake Austin

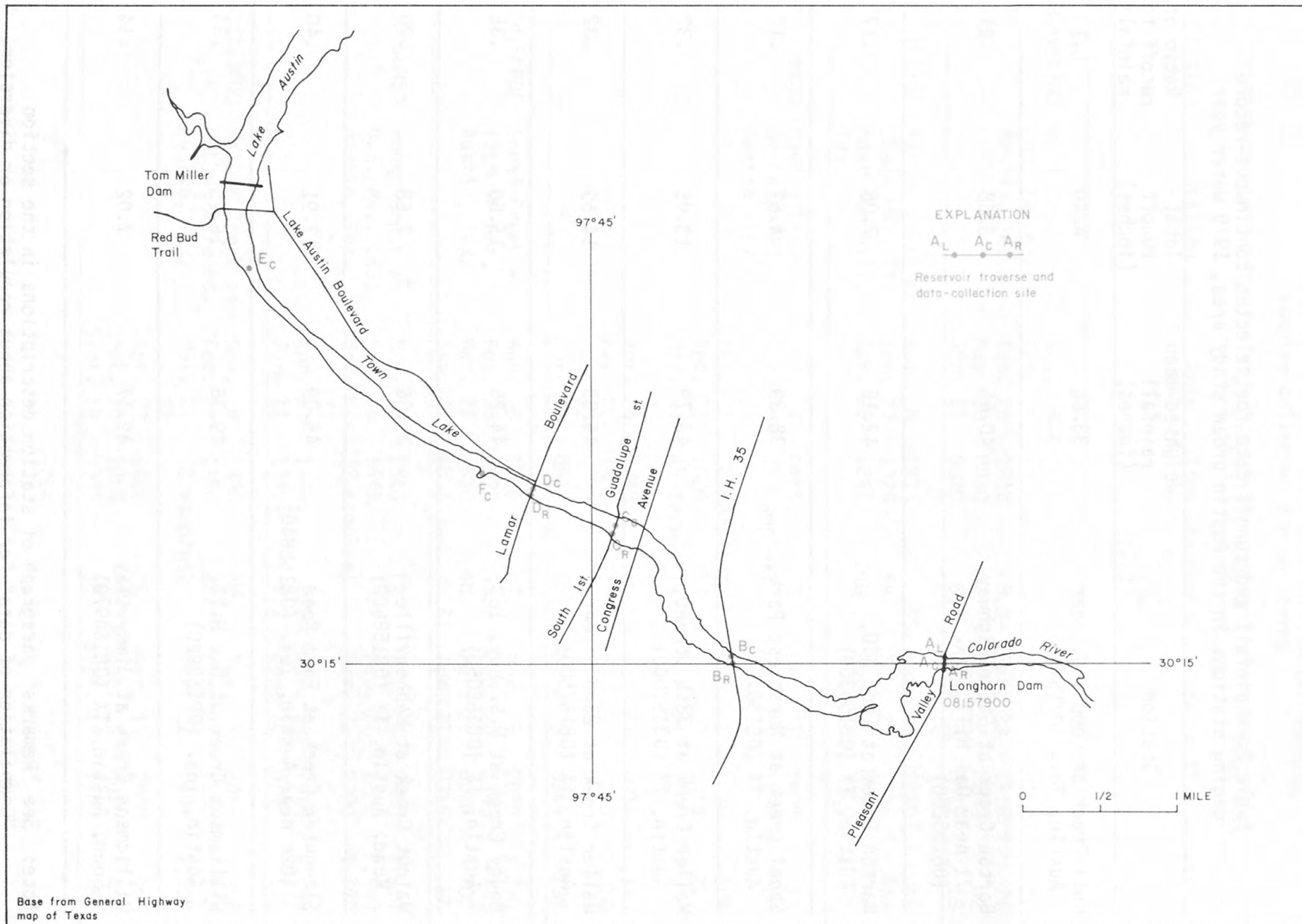


Figure 4.- Locations of the water-quality data-collection sites on Town Lake

Table 2.--Rainfall and runoff data for selected continuous-record gaging stations in the Austin urban study area, 1979 water year

Station	Weighted-mean rainfall (inches)	Total runoff (inches)	Ratio of runoff to rainfall
Bull Creek at Loop 360, near Austin, Tex. (08154700)	33.86	4.40	0.13
Barton Creek at State Highway 71 near Oak Hill, Tex. (08155200)	40.65	8.68	.21
Barton Creek at Loop 360, Austin, TX (08155300)	42.16	7.06	.17
Shoal Creek at Northwest Park, Austin, TX (08156700)	38.39	4.67	.12
Waller Creek at 38th Street, Austin, TX (03157000)	43.79	13.95	.32
Waller Creek at 23rd Street, Austin, TX (08157500)	45.83	14.59	.32
Boggy Creek at U.S. Hwy. 183, Austin, TX (08158050)	44.25	15.66	.35
Walnut Creek at Webberville Road, Austin, TX (08158600)	39.36	7.68	.20
Slaughter Creek at Farm Road 1826 near Austin, Tex. (08158840)	45.09	17.91	.40
Williamson Creek at Oak Hill, Austin, Tex. (08158920)	49.36	16.15	.33
Williamson Creek at Jimmy Clay Road, Austin, TX (08158970)	49.17	7.02	.14

Note: See "Remarks" paragraph of station descriptions in the section
"Compilation of data" for information about regulation or diversion.

Table 3.--Peak discharges associated with water-quality samples collected during storms

Station no.	Station name	Water-quality sample			Peak flow		
		Date	Time	Instantaneous flow (ft ³ /s)	Date	Time	(ft ³ /s)
08154700	Bull Creek at Loop 360 near Austin, Tex.	Nov. 5-6	(4 samples)		Nov. 5	1900	94
		Feb. 5	(3 samples)		Feb. 5	1015	30
		Feb. 26	1010	8.3	Feb. 23	1115	26
		May 22	0830	21	May 22	0200	42
		June 11	0820	6.0	June 5	0845	15
08155200	Barton Creek at State Hwy. 71 near Oak Hill, Tex.	Nov. 6	1235	.55	Nov. 5	2230	46
		Feb. 27	1325	59	Feb. 23	1845	162
		Apr. 25	1252	168	Apr. 21	0415	1,130
08155300	Barton Creek at Loop 360, Austin, Tex.	Jan. 4	1415	15	Dec. 31	1400	23
		Jan. 10-11	(3 samples)		Jan. 11	1000	700
		Feb. 6	(2 samples)		Feb. 6	1530	404
		Feb. 28	1020	57	Feb. 23	1315	215
		Mar. 21-22	(5 samples)		Mar. 21	1000	2,660
		Apr. 24	1245	209	Apr. 21	0915	1,180
		May 21-22	(5 samples)		May 21	2345	3,010
		June 12	0930	68	June 6	0345	132
08156800	Shoal Creek at 12th Street, Austin, Tex.	Nov. 6	1200	4.6	Nov. 5	2030	1,290
		Feb. 26	1120	3.6	Feb. 23	1145	385
		Mar. 21	0830	40	Mar. 21	0030	702
		Apr. 23	1053	.87	Apr. 21	0315	86
08158050	Boggy Creek at U.S. Hwy. 183, Austin, Tex.	Nov. 6	1540	12	Nov. 5	2000	1,840
		Feb. 26	1445	5.7	Feb. 23	1200	2,460
		Mar. 21-22	(2 samples)		Mar. 21	0300	1,360
		Apr. 23	1400	2.1	Apr. 19	1615	99
		June 11	1345	1.3	June 10	0700	132
08153600	Walnut Creek at Webberville Rd., Austin, Tex.	Nov. 6	1330	18	Nov. 5	2015	955
		Feb. 26	1250	22	Feb. 23	1230	1,370
		Mar. 21-22	(2 samples)		Mar. 21	0400	1,190
		Apr. 23	1202	25	Apr. 19	2000	408
		Sept. 10	1010	5.2	Sept. 6	0015	126
		Sept. 19	0945	12	Sept. 18	1100	52

Table 3.--Peak discharges associated with water-quality samples collected during storms--Continued

Station no.	Station name	Water-quality sample			Peak flow		
		Date	Time	Instantaneous flow (ft ³ /s)	Date	Time	(ft ³ /s)
08158800	Onion Creek at Buda, Tex.	Sept. 11	0837	0.48	Sept. 7	1845	551
08158810	Bear Creek below Farm Road 1826 near Driftwood, Tex.	Feb. 23	1215	409	Feb. 23	unknown	1,110
		Mar. 21	1325	74	Mar. 20	unknown	1,080
		Sept. 11	1105	1.2	Sept. 5	1800	9
08158825	Little Bear Creek at Farm Road 1626 near Manchaca, Tex.	Mar. 21	1045	120	Mar. 20	unknown	740
08158860	Slaughter Creek at Farm Road 2304 near Austin, Tex.	Jan. 11-12	(2 samples)		Jan. 11	about 0100	365
		Feb. 7	1000	18	Feb. 6	0530	79
		Mar. 21	0845	230	Mar. 21	about 0600	834
08158920	Williamson Creek at Oak Hill, Tx	Nov. 6	1130	1.2	Nov. 5	1830	84
		Feb. 28	1050	4.3	Feb. 23	1030	555
		Apr. 24	1155	11	Apr. 21	0015	337
		May 22	1045	62	May 21	2300	2130
08158970	Williamson Creek at Jimmy Clay Rd., Austin, Tex.	Nov. 6	0815	31	Nov. 5	1845	950
		Feb. 28	1135	6.1	Feb. 23	1245	1,780
		Apr. 24	1120	24	Apr. 19	0030	2,070
		Jun. 12	0715	1.0	Jun. 8	1615	280
08159000	Onion Creek at U.S. Hwy. 183 near Austin, Tex.	Jan. 2	1320	58	Dec. 31	0900	3,130
		Feb. 7	1340	370	Feb. 6	1000	1,550
		Mar. 29	1446	333	Mar. 21	1315	7,090
		May 2	1558	454	May 1	1800	1,660
		May 22	1110	1,500	May 22	0530	10,000
		Jul. 9	1325	15	Jul. 6	1730	164
		Jul. 31	1400	30	Jul. 27	1700	7,110
		Sept. 13	1440	5.6	Sept. 9	0015	27

Water-quality data were collected from 33 wells in Travis County and from 12 wells in Hays County. The locations of these sites are shown on figures 5 and 6, and the analyses of these samples are given in table 16.

Ground-Water Data

Ground-water data for the Austin urban study area consist of well and spring inventories, water-quality sampling, and water-level measurements. These data are presented in the section "Compilation of data." The descriptions and characteristics of the wells and springs inventoried by the U.S. Geological Survey and the water-level measurements from the annual water-level survey are presented in table 15. The water-quality data from the wells and springs are shown in table 16, and the monthly water-level measurements made at the observation wells are presented in table 17.

The data are listed according to a well-numbering system which is used throughout the State, and which was developed by the Texas Department of Water Resources. The well-numbering system consists of a two-letter county-designation prefix plus a seven-digit well number. The two-letter prefix for Travis County is YD, and the prefix for Hays County is LR. Each one-degree quadrangle in the State is given a number consisting of two digits from 01 through 89. These are the first two digits of the well number. Each 1-degree quadrangle is divided into 7-1/2-minute quadrangles which are given two-digit numbers from 01 through 64. These are the third and fourth digits of the well number. Each 7-1/2-minute quadrangle is divided into 2-1/2-minute quadrangles which are given a single-digit number from 1 through 9. This is the fifth digit of the well number. Each well or spring located within a 2-1/2-minute quadrangle is given a two-digit number beginning with 01, according to the order in which it was inventoried. These are the last two digits of the numbering system.

Only the last three digits of the well-numbering system are shown at each of the ground-water data-collection sites on figures 5 and 6; the second two digits are shown in or near the northwest corner of each 7-1/2-minute quadrangle; and the first two digits are shown by the large block numbers 57, 58, 67, or 68.

The estimated total ground-water pumpage from the Edwards and associated limestone aquifer south of the Colorado River in Travis and Hays Counties during the 1979 calendar year was 3,700 acre-feet. The estimated total discharge as springflow from the aquifer was 58,800 acre-feet of which about 55,800 acre-feet was from Barton Springs and the remaining 3,000 acre-feet was from other springs.

Figure 5.- Ground-water data-collection sites in Travis County

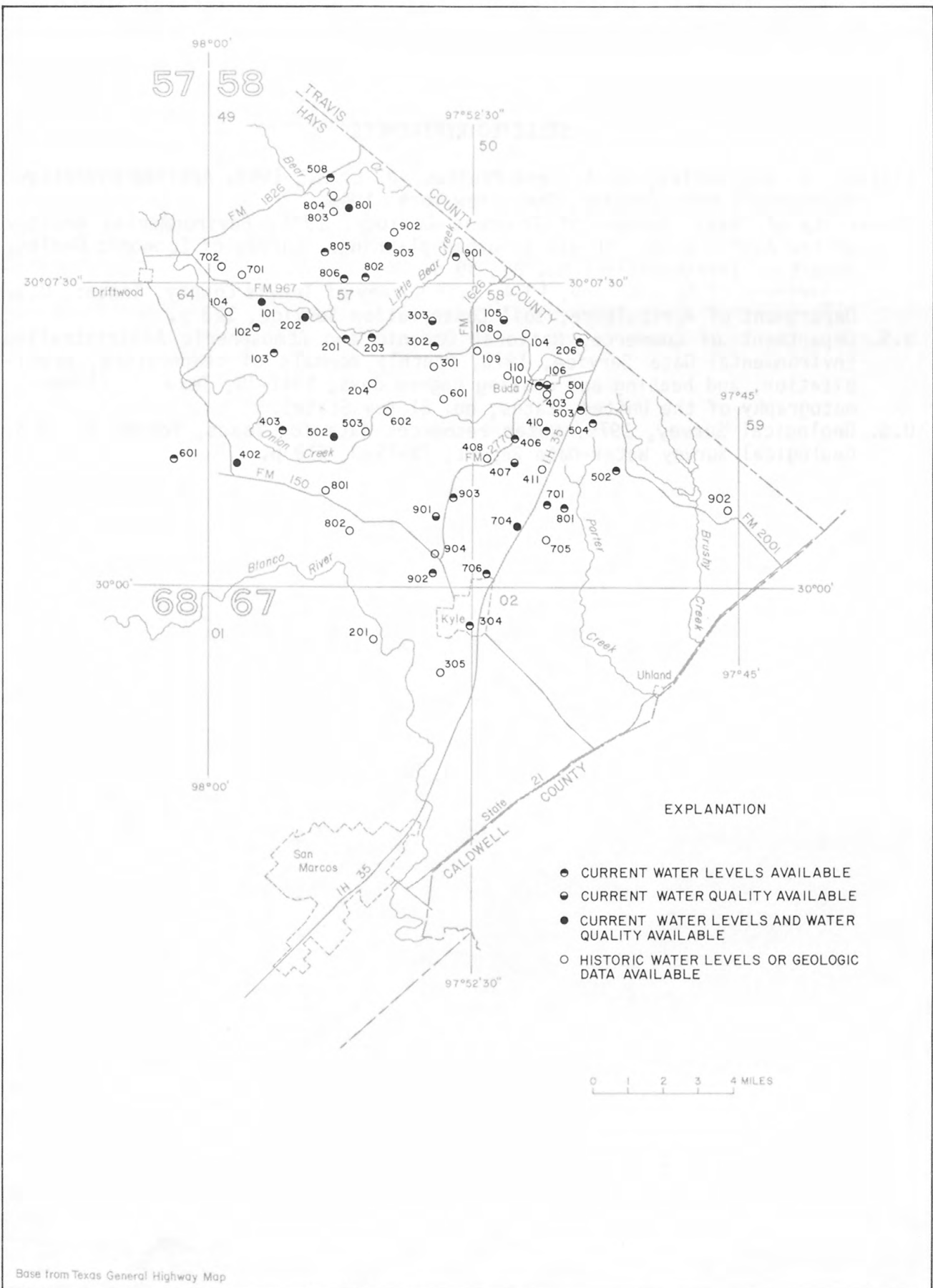


Figure 6.- Ground-water data-collection sites in Hays County

SELECTED REFERENCES

- Linsley, R. K., Kohler, M. A., and Paulhus, J. L. H., 1949, Applied hydrology: McGraw-Hill Book Company, Inc., New York, 1949.
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COLORADO RIVER BASIN

08154510 COLORADO RIVER BELOW MANSFIELD DAM, AUSTIN, TX

LOCATION.--Lat 30°23'30", long 97°54'28", Travis County, Hydrologic Unit 12090205, at the downstream side of Mansfield Dam, 12.9 mi (20.8 km) northwest of the State Capitol at Austin, and at mile 318.0 (511.7 km).

DRAINAGE AREA.--38,130 mi² (98,760 km²), approximately, of which 12,880 mi² (33,360 km²) probably is noncontributing.

PERIOD OF RECORD.--October 1974 to current year.

GAGE.--None. Daily discharge record is based on daily releases from Lake Travis.

REMARKS.--Records fair.

COOPERATION.--All records of releases were furnished by the Lower Colorado River Authority.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 25,300 ft³/s (716 m³/s) Apr. 17-19, 1977; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 8,590 ft³/s (243 m³/s) June 5, 6; no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	698	.00	.00	.00	.00	.00	.00	2780	2140	1380	907	1700
2	561	.00	.00	2110	.00	.00	66	3090	3520	1730	1020	1730
3	981	265	.00	.00	.00	.00	781	3480	8100	1960	1420	1780
4	907	.00	48	.00	.00	.00	722	3050	8570	1800	1240	1840
5	1080	.00	.00	.00	.00	.00	112	2970	8590	1600	1200	1820
6	1040	.00	51	.00	.00	.00	.00	3090	8590	1590	1270	1450
7	.00	.00	146	.00	.00	.00	202	1600	6090	1590	1870	1250
8	.00	.00	.00	10	.00	.00	1250	2450	3250	1630	2080	1230
9	.00	.00	.00	.00	.00	.00	1670	2630	3030	1570	1820	1360
10	.00	.00	.00	.00	.00	.00	1610	2220	3030	1300	1990	1310
11	.00	.00	.00	.00	.00	.00	1510	.00	3030	1540	2010	1380
12	179	.00	.00	.00	.00	.00	1540	.00	3030	1140	1870	1390
13	313	.00	.00	.00	.00	19	1590	.00	3030	955	1990	1540
14	.00	.00	.00	.00	.00	.00	1520	.00	3250	1140	1910	1670
15	.00	.00	.00	.00	.00	.00	809	879	3320	961	1860	1680
16	218	.00	.00	.00	.00	.00	555	1240	3030	969	1910	1760
17	.00	.00	.00	.00	.00	.00	529	1240	2010	1040	1980	1870
18	201	.00	.00	.00	.00	.00	434	1660	1770	1050	2130	1650
19	.00	.00	.00	.00	.00	.00	635	1780	1970	896	1970	.00
20	192	.00	.00	.00	.00	.00	532	1870	1140	951	2050	1100
21	.00	95	26	.00	.00	.00	2100	1340	1850	1460	2020	1400
22	180	157	.00	.00	.00	.00	3080	199	2380	1020	2010	1260
23	.00	.00	.00	.00	.00	.00	3480	.00	1830	784	2020	1370
24	596	.00	.00	.00	.00	.00	3110	.00	2150	821	1950	1470
25	.00	.00	.00	.00	.00	.00	1560	1070	2230	734	1910	1310
26	.00	.00	89	.00	.00	.00	1410	893	1850	.00	2060	966
27	.00	20	.00	.00	.00	.00	829	1020	1700	.00	2090	950
28	.00	92	.00	.00	.00	.00	762	1530	1790	.00	2020	1230
29	.00	.00	.00	.00	---	32	1570	1770	1820	.00	2160	961
30	325	.00	.00	.00	---	.00	2850	1510	1600	801	2360	958
31	24	---	.00	.00	---	.00	---	1370	---	927	1940	---
TOTAL	7495.00	629.00	360.00	2120.00	.00	51.00	36824.00	46731.00	99690	33339.00	57037	41385.00
MEAN	242	21.0	11.6	68.4	.000	1.65	1227	1507	3323	1075	1840	1380
MAX	1080	265	146	2110	.00	32	3480	3480	8590	1960	2360	1870
MIN	.00	.00	.00	.00	.00	.00	.00	.00	1140	.00	907	.00
AC-FT	14870	1250	714	4210	.00	101	73040	92690	197700	66130	113100	82090
CAL YR 1978	TOTAL	368165.00	MEAN	1009	MAX	3830	MIN	.00	AC-FT	730300		
WTR YR 1979	TOTAL	325661.00	MEAN	892	MAX	8590	MIN	.00	AC-FT	645900		

BULL CREEK DRAINAGE BASIN

The locations of surface-water data-collection sites in the Bull Creek drainage basin are shown on figure 7.

A summary of storm rainfall and runoff data for the basin is shown in table 4.

The peak discharges associated with water-quality samples collected during storms at the Bull Creek at Loop 360 site are shown in table 3.

Daily and monthly rainfall totals for the 1979 water year are given in table 13.

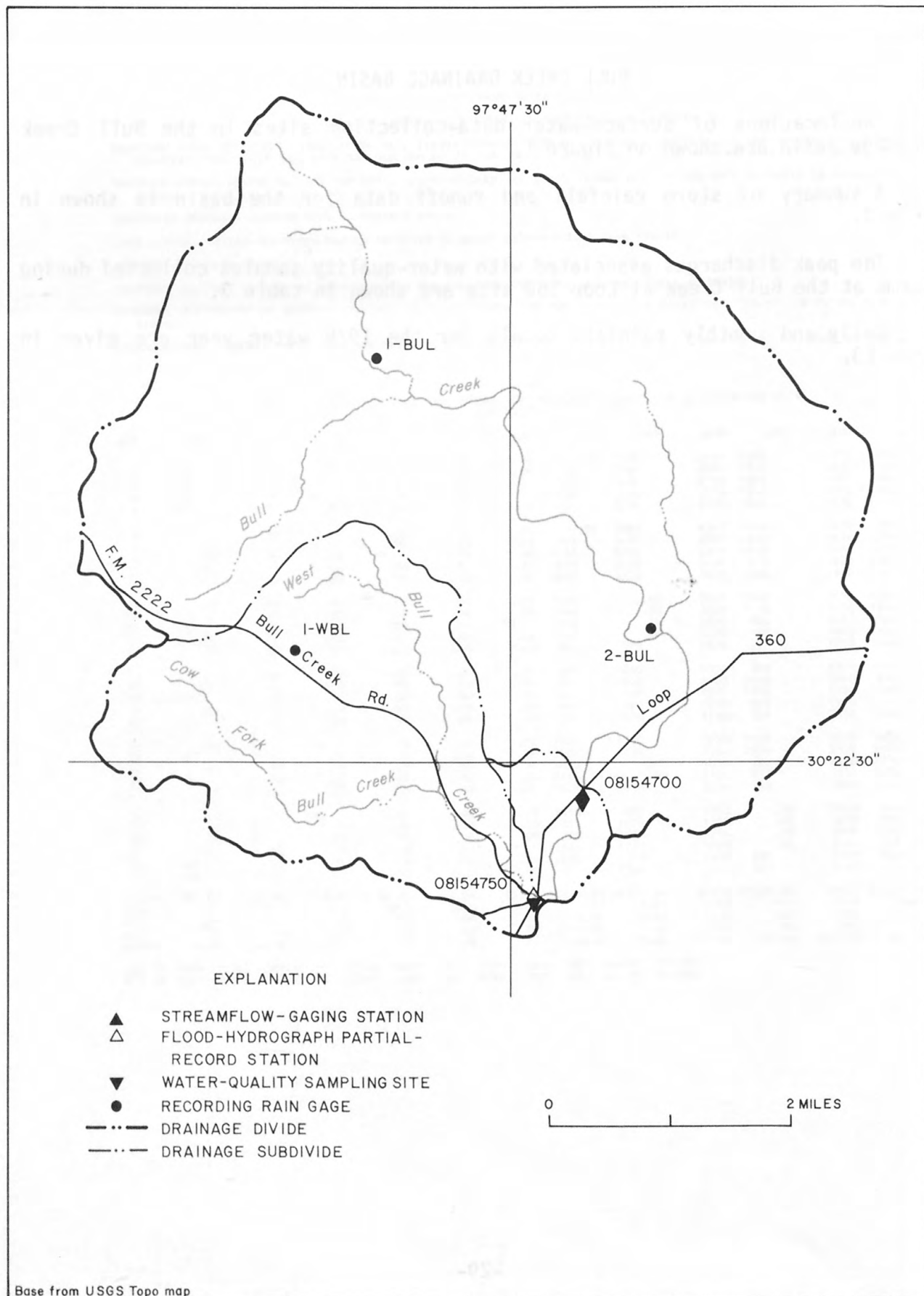


Figure 7.-Locations of surface-water data-collection sites in the Bull Creek drainage basin

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GEOLOGICAL SURVEY-TEXAS DISTRICT

ANNUAL STORM RAINFALL-RUNOFF SUMMARY DATA

Table 4.--Storm rainfall-runoff data, 1979 water year, Bull Creek

Date of Storm	Rainfall (inches)					Runoff (inches)	Ratio runoff to rainfall	Maximum discharge (ft ³ /s)
	Duration (hours)	Total	Maximum increment					
			15-minute	30-minute	60-minute			

Bull Creek at Loop 360, Austin, Texas
(Drainage area.--22.3 mi²)

Dec. 31, 1978	24	2.64	0.48	0.86	1.30	0.13	0.05	268
Apr. 29-30, 1979	5	1.30	.87	1.16	1.25	.08	.06	280

[illegible]

COLORADO RIVER BASIN

08154700 BULL CREEK AT LOOP 360 NEAR AUSTIN, TX

LOCATION.--Lat 30°22'19", long 97°47'04", Travis County, Hydrologic Unit 12090205, on right bank at downstream side of bridge at Loop 360, 1.0 mi (1.6 km) upstream from West Fork Bull Creek and Farm Road 2222, and 7.1 mi (11.4 km) northwest of the State Capitol Building in Austin.

DRAINAGE AREA.--22.3 mi² (57.8 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1976 to July 1978 (operated as a flood-hydrograph partial-record station only), July 1978 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 534.08 ft (162.788 m) National Geodetic Vertical Datum of 1929 (levels from city of Austin bench mark).

REMARKS.--Water-discharge records good. No known regulation or diversion above station. There are two recording rain gages in the basin above the station. This station is part of a hydrologic research project to study the rainfall-runoff relationship for the Austin urban-rural areas.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 6.09 ft (1.856 m) Apr. 18, 1976 (discharge unknown); minimum discharge not determined.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 200 ft³/s (5.66 m³/s), revised, and maximum (*):

Date	Time	Discharge (ft ³ /s)	(m ³ /s)	Gage height (ft)	(m)
Dec. 31	0445	268	7.59	4.18	1.274
Apr. 29	0730	*280	7.93	4.22	1.286
July 19	2200	253	7.16	4.13	1.259

Minimum daily discharge, 0.21 ft³/s (0.006 m³/s) Oct. 17, Oct. 22-24, Sept. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979 MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.36	.25	2.0	28	5.4	7.7	33	33	11	1.3	2.7	.39
2	.29	.25	2.0	13	5.4	7.8	34	25	15	1.4	2.7	.40
3	.29	.25	2.2	11	6.0	8.7	33	20	11	.85	2.4	.42
4	.29	.25	1.8	9.2	12	6.8	29	18	8.9	.65	2.2	.34
5	.29	13	1.6	8.9	29	6.4	26	16	12	.71	1.8	3.5
6	.27	13	1.6	9.2	59	6.4	23	14	11	2.6	1.6	1.5
7	.25	2.2	1.6	9.0	39	6.4	22	13	9.2	1.3	1.4	.69
8	.25	1.4	1.6	7.2	31	6.3	22	13	8.7	1.1	1.3	.49
9	.27	1.2	1.6	6.4	25	6.2	20	12	8.3	1.0	1.3	.46
10	.29	.98	1.5	17	21	6.1	20	12	7.0	1.3	1.2	.34
11	.29	.83	1.5	43	19	6.1	18	18	6.4	1.1	2.2	.34
12	.28	.86	1.5	26	17	6.1	17	12	6.0	.78	1.5	.40
13	.25	.88	1.5	20	15	6.4	15	9.3	5.7	.61	1.3	.42
14	.25	.78	1.5	15	14	6.3	14	8.4	5.6	.58	1.3	.37
15	.22	1.1	1.6	13	13	5.7	13	7.8	5.0	.60	1.2	.33
16	.22	2.8	1.7	12	12	13	13	6.8	4.7	.49	1.1	.29
17	.21	1.6	1.5	11	11	8.8	15	6.8	4.6	.48	.92	.25
18	.25	1.2	1.6	10	11	7.9	15	6.8	4.3	.47	.91	1.6
19	.40	3.0	1.6	9.8	9.5	8.2	13	6.4	4.0	14	.81	1.7
20	.29	2.4	1.7	9.5	9.5	9.0	13	6.3	3.5	4.6	.81	.87
21	.24	2.2	1.6	8.3	9.5	40	12	13	3.0	2.1	.77	.51
22	.21	2.1	1.5	7.8	9.5	44	11	20	3.0	1.5	.72	.40
23	.21	1.8	1.5	7.3	13	35	9.5	10	2.6	1.1	.62	.42
24	.21	1.3	1.5	6.4	11	29	9.2	7.7	2.4	.98	.62	.34
25	.31	1.3	1.5	7.3	9.1	25	8.7	6.6	2.0	.80	.61	.34
26	.40	2.5	2.6	7.2	8.3	22	7.9	6.4	1.6	2.4	.54	.29
27	.28	2.4	1.6	6.5	8.3	20	8.6	6.4	1.6	24	.60	.29
28	.25	1.8	1.6	6.2	8.3	18	6.8	6.5	1.4	8.3	.61	.25
29	.25	1.5	1.6	6.1	---	18	32	6.3	1.3	4.7	.54	.25
30	.25	1.7	1.6	6.0	---	27	15	8.6	1.1	3.7	.53	.21
31	.25	---	47	5.4	---	28	---	9.5	---	3.0	.48	---
TOTAL	8.37	66.83	96.8	362.7	440.8	452.3	528.7	365.6	171.9	88.50	37.29	18.40
MEAN	.27	2.23	3.12	11.7	15.7	14.6	17.6	11.8	5.73	2.85	1.20	.61
MAX	.40	13	47	43	59	44	34	33	15	24	2.7	3.5
MIN	.21	.25	1.5	5.4	5.4	5.7	6.8	6.3	1.1	.47	.48	.21
CFSM	.01	.10	.14	.53	.70	.66	.79	.53	.26	.13	.05	.03
IN.	.01	.11	.16	.61	.74	.75	.88	.61	.29	.15	.06	.03
AC-FT	17	133	192	719	874	897	1050	725	341	176	74	36
(11)	.37	5.81	3.35	2.29	2.88	4.40	2.84	3.47	1.34	5.03	.65	1.46

CAL YR 1978	TOTAL	-	MEAN	-	MAX	-	MIN	-	CFSM	-	IN	-	AC-FT	-	11	-
WTR YR 1979	TOTAL	2638.19	MEAN	7.23	MAX	59	MIN	.21	CFSM	.32	IN	4.40	AC-FT	5230	11	33.86

11 Weighted-mean rainfall, in inches, based on two rain gages.

COLORADO RIVER BASIN

08154700 BULL CREEK AT LOOP 360 NEAR AUSTIN, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical, biochemical, and pesticide analyses: April 1978 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM- COBALT UNITS)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)
NOV										
05...	1740	30	367	7.9	--	20	280	--	--	12
05...	1800	39	280	7.9	--	30	900	--	--	5.9
05...	1820	42	--	--	--	35	1300	--	--	5.9
05...	1840	45	217	8.0	--	60	1900	--	--	5.7
06...	0900	11	552	7.8	16.5	20	130	8.6	91	2.2
DEC										
18...	0905	1.5	712	8.0	11.0	0	2.0	9.8	92	.5
FEB										
05...	0910	25	613	8.1	--	0	30	--	--	1.1
05...	1130	29	595	8.3	--	0	25	--	--	.6
05...	1323	29	--	8.2	7.5	--	--	12.1	104	.3
26...	1010	8.3	620	8.0	7.5	0	2.0	13.0	112	.6
APR										
23...	0905	11	574	8.0	18.5	0	2.0	9.6	105	.9
MAY										
22...	0830	21	561	7.9	20.0	10	12	8.4	91	1.1
JUN										
11...	0820	6.0	583	7.6	19.5	5	2.8	8.5	96	.4
SEP										
10...	0850	.34	604	7.7	21.5	10	1.2	7.0	79	.1

DATE	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCOCCI, FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO
NOV									
05...	250000	20000	24000	140	52	39	11	16	.6
05...	210000	32000	25000	110	36	33	6.9	8.8	.4
05...	210000	21000	35000	--	--	--	--	--	--
05...	390000	28000	41000	92	26	29	4.7	5.2	.2
06...	50000	5700	15000	210	71	61	14	30	.9
DEC									
18...	1300	K28	20	300	96	81	24	30	.8
FEB									
05...	2700	55	800	260	58	74	19	18	.5
05...	2500	72	1000	260	56	73	19	19	.5
05...	2000	91	1400	--	--	--	--	--	--
26...	920	7	76	--	--	--	--	--	--
APR									
23...	660	120	800	280	54	79	21	16	.4
MAY									
22...	7700	770	3900	260	33	74	10	16	.4
JUN									
11...	2100	640	600	--	--	--	--	--	--
SEP									
10...	2600	320	230	240	61	62	21	28	.8

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)
NOV									
05...	3.7	110	0	47	26	.1	5.6	203	476
05...	3.5	91	0	36	17	.1	4.8	155	1190
05...	--	--	--	--	--	--	--	--	2310
05...	3.0	80	0	34	10	.1	4.2	130	3900
06...	3.3	170	0	74	41	.2	8.1	316	158
DEC									
18...	2.1	250	0	97	55	.2	7.2	420	2
FEB									
05...	1.4	250	0	57	35	.1	6.7	334	38
05...	1.4	250	0	58	31	.1	6.7	332	31
05...	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	0
APR									
23...	1.3	280	0	39	28	.2	7.2	330	2
MAY									
22...	1.5	280	0	38	23	.2	8.3	318	19
JUN									
11...	--	--	--	--	--	--	--	--	6
SEP									
10...	2.6	220	0	53	48	.3	9.0	332	2

COLORADO RIVER BASIN

08154700 BULL CREEK AT LOOP 360 NEAR AUSTIN, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	SOLIDS, VOLATILE, SUSPENDED (MG/L)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
NOV									
05...	56	.24	.02	.26	.01	.87	.88	.16	26
05...	128	.61	.01	.62	.01	.92	.93	.33	32
05...	315	.62	.02	.64	.03	4.2	4.2	.44	44
05...	550	.71	.01	.72	.04	9.5	9.5	.63	63
06...	22	.45	.01	.46	.01	2.0	2.0	.09	8.8
DEC									
18...	1	.06	.01	.07	.01	.22	.23	.01	2.6
FEB									
05...	1	.59	.02	.61	.01	.39	.40	.04	3.6
05...	4	.45	.02	.47	.01	.29	.30	.04	3.7
05...	--	.41	.02	.43	.01	.29	.30	.03	3.0
26...	0	.55	.00	.55	.01	.09	.10	.00	2.6
APR									
23...	0	.09	.00	.09	.01	.14	.15	.00	2.2
MAY									
22...	18	.24	.02	.26	.04	.30	.34	.02	5.0
JUN									
11...	6	.06	.00	.06	.02	.35	.37	.01	5.0
SEP									
10...	1	.00	.00	.00	.07	.41	.48	.00	4.5

DATE	TIME	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED ⁵⁰ (UG/L AS CR)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)
NOV							
05...	1740	1	30	<1	0	3	50
05...	1800	1	20	<1	0	2	60
05...	1840	1	20	<1	0	2	50
06...	0900	0	50	<1	0	1	40
FEB							
05...	1130	2	100	0	0	2	0
APR							
23...	0905	0	0	0	0	1	10
MAY							
22...	0830	1	0	0	0	0	10
SEP							
10...	0850	2	50	<1	0	0	20

DATE	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, DIS- SOLVED (UG/L AS ZN)
NOV						
05...	0	<1	.0	0	0	7
05...	0	<1	.0	0	0	3
05...	0	<1	.0	1	0	5
06...	0	2	.0	0	0	<3
FEB						
05...	0	0	.0	0	0	10
APR						
23...	0	10	.0	0	0	20
MAY						
22...	0	0	.0	0	0	10
SEP						
10...	0	9	.3	0	0	<3

COLORADO RIVER BASIN
08154700 BULL CREEK AT LOOP 360 NEAR AUSTIN, TX--Continued
WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	PCB, TOTAL (UG/L)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLOR- DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)
NOV								
05...	1740	.0	.00	.00	.0	.00	.00	.00
05...	1840	.0	.00	.00	.0	.00	.00	.00
06...	0900	.0	.00	.00	.0	.00	.00	.00
FEB								
05...	1130	.0	--	.00	.0	.00	.00	.00
APR								
23...	0905	.0	--	.00	.0	.00	.00	.00
MAY								
22...	0830	.0	--	.00	.0	.00	.00	.00
SEP								
10...	0850	.0	--	.00	.0	.00	.00	.00

DATE	DI- AZINON, TOTAL (UG/L)	DI- ELDRIN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	MALA- THION, TOTAL (UG/L)	METH- OXY- CHLOR, TOTAL (UG/L)
NOV									
05...	.19	.00	.00	.00	.00	.00	.00	.00	--
05...	.11	.00	.00	.00	.00	.00	.00	.00	--
06...	.07	.00	.00	.00	.00	.00	.00	.00	--
FEB									
05...	.00	.00	.00	.00	.00	.00	.00	.00	--
APR									
23...	.00	.00	.00	.00	.00	.00	.00	.00	--
MAY									
22...	.05	.00	.00	.00	.00	.00	.00	.00	--
SEP									
10...	.00	.00	.00	.00	.00	.00	.00	.00	.00

DATE	METHYL PARA- THION, TOTAL (UG/L)	METHYL TRI- THION, TOTAL (UG/L)	PARA- THION, TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOTAL TRI- THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
NOV								
05...	.00	.00	.00	0	.00	.00	.01	.00
05...	.00	.00	.00	0	.00	.00	.00	.00
06...	.00	.00	.00	0	.00	.02	.00	.00
FEB								
05...	.00	.00	.00	0	.00	.00	.00	.00
APR								
23...	.00	.00	.00	0	.00	.00	.00	.00
MAY								
22...	.00	.00	.00	0	.00	.01	.00	.00
SEP								
10...	.00	.00	.00	0	.00	.00	.04	.00

STORM RAINFALL AND RUNOFF RECORD										1979 WATER YEAR	
BULL CREEK AT LOOP 360, AUSTIN, TEXAS										ACCUM.	DISCHARGE
STORM OF DEC. 31, 1978										WEIGHTED	IN
DATE & TIME	1RUL	2RUL	G A G E N U M B E R						PRECIP.	IN.	CFS
											IN.
DEC. 31											
0000	0.0	0.0							0.0	1.6	0.0000
0015	0.01	0.01							0.01	1.6	0.0001
0210	0.03	0.08							0.05	2.3	0.0003
0230	0.22	0.34							0.27	6.4	0.0004
0245	0.45	0.40							0.43	6.8	0.0006
0300	0.51	0.47							0.49	6.8	0.0006
0305	0.52	0.57							0.54	13.0	0.0007
0310	0.54	0.74							0.63	20.0	0.0008
0315	0.56	0.88							0.70	26.0	0.0010
0320	0.81	1.03							0.90	33.0	0.0012
0325	0.94	1.16							1.03	40.0	0.0014
0330	1.04	1.28							1.14	47.0	0.0017
0335	1.18	1.39							1.27	56.0	0.0020
0340	1.29	1.53							1.39	65.0	0.0024
0345	1.42	1.62							1.51	74.0	0.0028
0350	1.48	1.67							1.56	73.0	0.0032
0355	1.54	1.71							1.61	73.0	0.0037
0400	1.57	1.77							1.66	72.0	0.0045
0415	1.69	1.84							1.75	115.0	0.0065
0430	1.73	1.92							1.81	238.0	0.0106
0445	1.79	1.95							1.86	268.0	0.0153
0500	1.85	2.06							1.94	190.0	0.0186
0515	1.95	2.13							2.03	113.0	0.0205
0530	2.01	2.18							2.08	87.0	0.0228
0600	2.10	2.25							2.16	66.0	0.0262
0700	2.20	2.33							2.26	60.0	0.0325
0900	2.20	2.33							2.26	51.0	0.0383
1015	2.20	2.34							2.26	48.0	0.0433
1200	2.20	2.34							2.26	57.0	0.0507
1400	2.20	2.34							2.26	50.0	0.0594
1700	2.20	2.34							2.26	40.0	0.0663
1900	2.22	2.38							2.29	33.0	0.0721
2200	2.22	2.38							2.29	24.0	0.0750
2230	2.22	2.51							2.34	24.0	0.0758
2300	2.47	2.52							2.49	24.0	0.0771
2400	2.55	2.77							2.64	43.0	0.0793
JAN. 1											
0000	2.55	2.77							2.64	43.0	0.0793
0100	2.55	2.77							2.64	61.0	0.0864
0300	2.55	2.77							2.64	40.0	0.0934

STA. NO. 08154700				STORM RAINFALL AND RUNOFF RECORD				1979 WATER YEAR		
BULL CREEK AT LOOP 360, AUSTIN, TEXAS				STORM OF DEC. 31, 1978				ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
DATE & TIME	19UL	2HUL		G A G E	N U M B E R					
JAN. 1										
0600	2.55	2.77						2.64	32.0	0.1034
1200	2.55	2.77						2.64	26.0	0.1142
1800	2.55	2.77						2.64	19.0	0.1221
2400	2.55	2.77						2.64	17.0	0.1257

STA. NO.08154700			STORM RAINFALL AND RUNOFF RECORD					1979 WATER YEAR		
BULL CREEK AT LOOP 360, AUSTIN, TEXAS			STORM OF APRIL 29-30, 1979					ACCUM.	DISCHARGE	ACCUM.
DATE & TIME	1RUL	2RUL	G A G E N U M B E R					WEIGHTED PRECIP. IN.	IN CFS	RUNOFF IN.
APR. 29										
0000	0.0	0.0						0.0	6.8	0.0015
0610	0.06	0.0						0.03	6.8	0.0029
0615	0.18	0.02						0.11	6.8	0.0030
0620	0.40	0.15						0.29	11.0	0.0030
0625	0.66	0.47						0.58	14.0	0.0031
0630	0.82	0.77						0.80	18.0	0.0032
0635	0.90	1.02						0.95	35.0	0.0034
0640	0.95	1.11						1.02	52.0	0.0037
0645	0.97	1.18						1.06	69.0	0.0041
0650	0.98	1.22						1.08	61.0	0.0045
0655	1.00	1.23						1.10	54.0	0.0048
0700	1.01	1.24						1.11	46.0	0.0051
0705	1.01	1.25						1.11	50.0	0.0053
0710	1.02	1.25						1.12	54.0	0.0058
0720	1.02	1.26						1.12	132.0	0.0073
0730	1.04	1.28						1.14	280.0	0.0114
0745	1.05	1.30						1.16	222.0	0.0153
0800	1.05	1.31						1.16	120.0	0.0173
0815	1.06	1.31						1.17	85.0	0.0188
0830	1.08	1.33						1.19	64.0	0.0205
0900	1.13	1.36						1.23	48.0	0.0230
1000	1.15	1.39						1.25	35.0	0.0260
1130	1.16	1.39						1.26	34.0	0.0308
1400	1.16	1.40						1.26	38.0	0.0380
1700	1.16	1.40						1.26	32.0	0.0447
2000	1.16	1.40						1.26	24.0	0.0489
2200	1.16	1.40						1.26	20.0	0.0516
2400	1.16	1.40						1.26	18.0	0.0548
APR. 30										
0000	1.16	1.40						1.26	18.0	0.0548
0600	1.16	1.40						1.26	15.0	0.0629
1200	1.18	1.44						1.29	15.0	0.0723
2400	1.19	1.45						1.30	13.0	0.0777

COLORADO RIVER BASIN

08154750 WEST BULL CREEK AT LOOP 360 NEAR AUSTIN, TX
(Flood-hydrograph partial-record station)

LOCATION.--Lat 30°21'34", long 97°47'24", Travis County, Hydrologic Unit 12090205, 150 ft (46 m) north of the intersection of Farm Road 2222 and northbound Loop 360 access road, and 6.5 mi (10.5 km) northwest of the State Capitol Building in Austin.

DRAINAGE AREA.--6.77 mi² (17.53 km²).

PERIOD OF RECORD.--Chemical, biochemical, and pesticide analyses: April 1978 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNIT)	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM- COBALT UNITS)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)
NOV 06...	0930	2.8	839	8.0	17.5	0	1.0	9.2	99	.6
DEC 18...	0845	.10	948	7.5	16.5	0	2.0	10.7	99	.4
FEB 26...	0935	4.2	586	7.9	10.5	0	2.0	11.6	107	.8
APR 23...	0950	2.8	540	7.9	20.0	0	2.0	9.0	102	.5
JUN 11...	0755	.10	561	7.8	20.5	5	.20	8.4	95	.2
SEP 10...	0825	.05	722	8.1	19.5	10	.70	10.0	109	.1

DATE	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCE- FECAL, NE AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CaCO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CaCO3)	CALCIUM DIS- SOLVED (MG/L AS Ca)	MAGNE- SIUM, DIS- SOLVED (MG/L AS Mg)	SODIUM, DIS- SOLVED (MG/L AS Na)	SODIUM AD- SORP- TION RATIO
NOV 06...	37000	1200	2600	430	250	110	37	11	.2
DEC 18...	2000	220	220	--	--	--	--	--	--
FEB 26...	150	14	55	290	57	89	23	9.6	.2
APR 23...	370	10	260	--	--	--	--	--	--
JUN 11...	3200	41	120	260	6	78	23	9.8	.3
SEP 10...	940	460	370	360	61	95	29	11	.3

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	PICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)
NOV 06...	3.5	220	0	250	20	.2	9.8	550	1
DEC 18...	--	360	0	--	--	--	--	--	5
FEB 26...	.8	290	0	41	23	.2	8.4	329	2
APR 23...	--	--	--	--	--	--	--	--	1
JUN 11...	.8	310	0	27	15	.2	12	308	0
SEP 10...	1.9	360	0	74	17	.2	13	419	0

DATE	SOLIDS, VOLATILE, SUS- PENDED (MG/L)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
NOV 06...	0	.10	.01	.11	.00	.30	.30	.01	4.2
DEC 18...	2	.22	.01	.23	.02	.34	.36	.04	2.5
FEB 26...	1	.11	.00	.11	.01	.09	.10	.00	2.7
APR 23...	0	.05	.00	.05	.01	.09	.10	.01	2.3
JUN 11...	0	.04	.00	.04	.00	.31	.31	.01	3.3
SEP 10...	0	.32	.00	.32	.00	.37	.37	.00	3.3

COLORADO RIVER BASIN

08154750 WEST BULL CREEK AT LOOP 360 NEAR AUSTIN, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)
NOV 06...	0930	1	40	1	0	1	10
FEB 26...	0935	1	0	0	0	0	10
JUN 11...	0755	0	40	2	10	0	10
SEP 10...	0825	1	50	<1	0	0	<10

DATE	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, DIS- SOLVED (UG/L AS ZN)
NOV 06...	0	8	.0	1	0	10
FEB 26...	0	10	.0	1	0	20
JUN 11...	0	6	.0	0	0	<3
SEP 10...	0	50	.2	0	0	<3

DATE	TIME	PCB, TOTAL (UG/L)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLOR- DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)
NOV 06...	0930	.0	.00	.00	.0	.00	.00	.00
FEB 26...	0935	.0	--	.00	.0	.00	.00	.00
JUN 11...	0755	.0	--	.00	.0	.00	.00	.00
SEP 10...	0825	.0	--	.00	.0	.00	.00	.00

DATE	DI- AZINON, TOTAL (UG/L)	DI- ELDRIN TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	MALA- THION, TOTAL (UG/L)	METH- OXY- CHLOR, TOTAL (UG/L)
NOV 06...	.00	.00	.00	.00	.00	.00	.00	.00	--
FEB 26...	.00	.00	.00	.00	.00	.00	.00	.00	--
JUN 11...	.00	.00	.00	.00	.00	.00	.00	.00	--
SEP 10...	.00	.00	.00	.00	.00	.00	.00	.00	.00

DATE	METHYL PARA- THION, TOTAL (UG/L)	METHYL TRI- THION, TOTAL (UG/L)	PARA- THION, TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOTAL TRI- THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
NOV 06...	.00	.00	.00	0	.00	.00	.00	.00
FEB 26...	.00	.00	.00	0	.00	.00	.00	.00
JUN 11...	.00	.00	.00	0	.00	.00	.00	.00
SEP 10...	.00	.00	.00	0	.00	.00	.00	.00

COLORADO RIVER BASIN

08154900 LAKE AUSTIN AT AUSTIN, TX

LOCATION.--Lat 30°18'53", long 97°47'10", Travis County, Hydrologic Unit 12090205, at city of Austin Waterplant No. 2 and 1.5 mi (2.4 km) upstream from Tom Miller Dam on the Colorado River at Austin.

DRAINAGE AREA.--38,240 mi² (99,040 km²), of which 11,900 mi² (30,800 km²) probably is noncontributing.

PERIOD OF RECORD.--Chemical analyses: October 1964 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1964 to current year.

WATER TEMPERATURES: October 1964 to current year.

REMARKS.--No water-discharge records available.

EXTREMES FOR PERIOD OF DAILY RECORDS.--

SPECIFIC CONDUCTANCE (1964-75): Maximum daily, 982 micromhos Aug. 15-17, 1974; minimum daily, 311 micromhos June 19, 1968.

WATER TEMPERATURES (1964-75): Maximum daily, 32.0°C Aug. 24, 1965; minimum daily, 9.0°C Jan. 30, 1966, Jan. 9, 11, 1968, and Jan. 5, 1969.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)	HARDNESS (MG/L AS CaCO3)	HARDNESS, NONCARBONATE (MG/L AS CaCO3)	CALCIUM DIS-SOLVED (MG/L AS Ca)	MAGNESIUM, DIS-SOLVED (MG/L AS Mg)	SODIUM, DIS-SOLVED (MG/L AS Na)	SODIUM ADSORPTION RATIO
OCT 20...	1415	534	22.0	180	49	39	20	34	1.1
NOV 17...	1100	529	18.0	180	51	40	20	33	1.1
DEC 15...	1100	541	11.5	210	66	41	25	34	1.0
FEB 16...	1255	565	10.5	210	53	49	21	31	.9
MAR 15...	1135	559	15.0	210	54	51	20	30	.9
APR 16...	1430	554	16.5	210	60	47	22	34	1.0
JUN 14...	1300	546	19.0	210	50	46	22	31	.9
JUL 17...	1630	550	21.5	200	43	45	21	33	1.0
SEP 19...	1420	522	24.0	200	37	49	19	27	.8

DATE	POTASSIUM, DIS-SOLVED (MG/L AS K)	BICARBONATE (MG/L AS HCO3)	CARBONATE (MG/L AS CO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLORIDE, DIS-SOLVED (MG/L AS CL)	FLUORIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED (MG/L)
OCT 20...	4.3	160	0	35	63	.2	9.9	284
NOV 17...	3.8	160	0	36	63	.2	10	285
DEC 15...	4.3	170	0	42	64	.3	13	307
FEB 16...	3.3	190	0	43	53	.3	6.1	300
MAR 15...	3.2	190	0	44	52	.2	5.0	299
APR 16...	3.8	180	0	42	57	.3	8.2	303
JUN 14...	3.5	190	0	41	55	.2	8.7	301
JUL 17...	3.4	190	0	43	57	.3	8.5	305
SEP 19...	3.6	200	0	34	48	.3	7.8	287

COLORADO RIVER BASIN
08154900 LAKE AUSTIN AT AUSTIN, TX--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	536	550	---	538	545	553	---	---	514
2	536	---	---	---	553	551	549	541	529	---	---	---
3	536	---	---	---	553	564	---	548	546	---	---	---
4	---	---	530	533	551	533	503	546	546	530	---	508
5	---	---	531	533	556	538	532	548	549	553	510	---
6	529	---	535	533	553	---	551	553	547	540	545	---
7	---	---	534	535	553	---	549	550	549	542	547	---
8	---	---	534	533	561	---	---	556	549	---	548	513
9	---	528	---	---	555	512	543	550	551	---	---	494
10	533	526	---	---	---	---	---	550	550	---	---	520
11	526	527	538	539	561	---	526	548	545	---	---	474
12	529	---	539	535	558	---	---	550	545	---	---	527
13	529	530	543	539	556	---	---	---	542	---	---	525
14	---	526	538	540	559	---	545	---	546	---	539	514
15	530	---	---	540	562	553	---	556	---	---	546	---
16	530	526	---	538	559	544	---	---	546	---	---	---
17	533	526	---	538	---	551	---	550	550	---	---	507
18	530	530	538	540	561	564	---	---	543	543	---	---
19	530	530	542	540	558	562	551	---	551	548	---	---
20	534	526	538	545	565	512	546	---	550	532	545	489
21	533	---	---	548	---	508	547	548	---	535	543	---
22	533	527	---	548	---	551	546	533	547	540	539	---
23	534	528	540	548	565	533	545	544	551	501	532	516
24	535	527	539	547	561	542	545	536	553	548	521	512
25	---	530	538	551	565	551	551	533	547	---	---	---
26	534	---	---	---	565	547	---	548	551	539	---	---
27	535	---	---	548	---	508	554	---	532	---	546	504
28	535	527	540	548	---	538	---	548	546	518	---	520
29	535	531	538	550	---	547	---	548	---	---	---	505
30	534	532	538	548	---	542	549	545	546	536	529	---
31	---	---	---	---	---	547	---	549	---	537	---	---
MEAN	532	528	537	541	558	541	543	547	547	536	538	509

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	10.0	8.5	---	18.0	16.0	20.0	---	---	22.0
2	20.5	---	---	---	10.0	13.0	18.0	16.0	18.5	---	---	---
3	21.0	---	---	---	9.0	12.0	---	20.0	18.0	---	---	---
4	---	---	16.0	9.0	9.5	13.0	17.0	14.5	16.5	22.0	---	21.0
5	---	---	15.5	9.5	13.0	12.0	17.0	---	14.5	22.0	22.0	---
6	25.5	---	16.5	9.0	9.5	---	18.0	---	13.5	21.0	22.0	---
7	---	---	15.5	9.0	10.0	---	18.5	15.0	15.5	20.5	24.0	---
8	---	---	13.5	8.0	10.5	---	---	16.5	17.0	---	23.0	22.0
9	---	19.0	---	---	9.5	14.5	19.0	16.5	18.0	---	---	22.0
10	24.0	21.0	---	---	---	---	---	14.0	17.0	---	---	22.0
11	24.0	21.0	12.0	7.0	10.5	---	19.5	17.0	17.0	---	---	22.0
12	24.5	---	11.5	7.0	8.5	---	---	16.5	16.5	---	---	23.0
13	24.0	20.0	12.0	8.0	8.5	---	---	---	16.0	---	---	23.0
14	---	19.5	11.5	6.5	9.0	---	17.0	---	17.0	---	22.0	21.5
15	23.5	---	---	6.5	11.5	15.0	---	17.0	---	---	22.0	---
16	23.0	19.5	---	7.0	9.0	14.5	---	---	18.0	---	---	---
17	23.0	19.5	---	7.0	---	14.5	---	19.0	18.0	---	---	21.0
18	23.0	19.5	11.5	8.0	9.0	15.5	---	---	18.5	23.0	---	---
19	21.5	18.5	11.5	8.5	9.0	16.0	18.5	---	20.0	21.5	---	---
20	22.0	19.5	12.0	9.0	9.5	15.5	18.5	---	20.5	23.0	21.5	21.0
21	22.0	---	---	9.0	---	15.5	18.0	19.5	---	---	22.0	---
22	22.0	16.5	---	9.0	---	15.5	18.0	19.5	21.5	22.0	22.0	---
23	22.0	17.0	11.5	8.5	10.5	16.0	19.0	19.5	21.0	21.0	23.0	21.5
24	22.0	16.5	12.0	8.5	11.5	16.0	14.5	20.0	21.5	21.5	22.0	22.0
25	---	17.0	11.5	9.0	10.5	16.0	---	20.0	21.5	---	---	---
26	22.0	---	---	---	10.5	16.5	---	20.5	20.0	23.5	---	---
27	22.0	---	---	9.0	---	17.0	---	---	20.5	---	21.5	22.0
28	21.0	16.5	11.5	10.0	---	17.0	---	20.0	19.5	22.0	---	22.0
29	22.0	16.5	11.5	8.5	---	18.0	---	21.0	---	---	---	23.0
30	20.5	17.0	11.5	8.5	---	18.0	---	20.5	20.0	21.0	23.0	---
31	---	---	---	---	---	18.0	---	20.5	---	24.0	---	---
MEAN	22.5	18.5	12.5	8.5	10.0	15.5	18.0	18.0	18.5	22.0	22.5	22.0

COLORADO RIVER BASIN
LAKE AUSTIN AT AUSTIN, TX--Continued

301739097471601 LAKE AUSTIN (AUSTIN) SITE AR
WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
OCT							
17...	1110	1.0	531	7.9	23.0	7.8	93
17...	1111	10	531	7.9	22.5	7.8	92
17...	1112	20	531	7.9	23.0	7.6	90
17...	1113	34	531	7.8	23.0	7.1	85
FEB							
07...	1210	1.0	548	8.5	8.0	12.0	104
07...	1212	10	548	8.5	7.5	12.0	103
07...	1214	20	553	8.5	7.5	11.9	103
07...	1216	30	553	8.5	7.5	11.9	103
07...	1218	40	553	8.5	7.5	11.9	103
07...	1220	52	553	8.5	7.5	11.9	103
MAY							
30...	1055	1.0	542	8.1	21.0	8.4	94
30...	1057	10	542	8.1	18.0	8.2	87
30...	1059	20	542	8.0	17.0	7.8	81
30...	1101	30	545	8.0	16.0	7.5	77
30...	1103	40	545	7.9	16.0	7.1	72
30...	1105	53	545	7.9	16.0	6.8	69
AUG							
21...	1130	1.0	538	7.9	24.0	7.3	87
21...	1132	10	538	7.7	21.0	5.8	65
21...	1134	20	538	7.6	20.5	5.5	61
21...	1136	30	538	7.6	20.0	5.3	58
21...	1138	40	538	7.6	20.0	5.0	55
21...	1140	49	538	7.5	20.0	4.6	51

301739097471201 LAKE AUSTIN (AUSTIN) SITE AC
WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM COBALT UNITS)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)
OCT										
17...	1030	1.0	531	7.9	23.0	5	4.0	7.8	93	1.0
17...	1035	10	531	7.9	23.0	--	--	7.7	92	--
17...	1037	20	531	7.9	22.5	--	--	7.6	89	--
17...	1042	30	531	7.8	22.5	--	--	7.5	88	--
17...	1044	40	531	7.8	22.5	--	--	7.4	87	--
17...	1046	45	531	7.8	22.5	--	--	7.4	87	--
17...	1051	54	531	7.7	22.5	10	65	6.4	75	1.1
FEB										
07...	1129	1.0	548	8.5	8.0	0	2.0	11.9	103	1.1
07...	1132	10	548	8.5	7.5	--	--	11.9	103	--
07...	1134	20	553	8.5	7.5	--	--	11.9	103	--
07...	1136	30	553	8.5	7.5	--	--	11.9	103	--
07...	1137	36	551	8.4	7.5	0	2.0	11.9	103	1.3
MAY										
30...	1030	1.0	542	8.1	21.0	5	--	8.4	94	.8
30...	1032	10	542	8.0	18.0	--	--	8.2	87	--
30...	1034	20	542	8.0	17.0	--	--	7.8	81	--
30...	1036	30	545	7.9	16.0	--	--	7.5	77	--
30...	1038	35	545	7.8	16.0	3	--	7.4	76	.3
AUG										
21...	1145	1.0	538	8.0	25.0	5	.90	7.6	92	--
21...	1147	10	538	7.7	21.0	--	--	5.9	66	--
21...	1149	20	538	7.7	20.0	--	--	5.4	59	--
21...	1151	30	538	7.7	20.0	--	--	5.1	56	--
21...	1153	39	538	7.6	20.0	5	4.6	5.1	56	--

COLORADO RIVER BASIN
LAKE AUSTIN AT AUSTIN, TX--Continued

301739097471201 LAKE AUSTIN (AUSTIN) SITE AC--Continued
WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	COLI-FORM, TOTAL, IMMEDIATE (COLS. PER 100 ML)	COLI-FORM, FECAL, 0.7 UM-MF (COLS. / 100 ML)	STREP-TOCOCCHI, KF AGAR (COLS. PER 100 ML)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)
OCT										
17...	500	4	1	190	50	43	20	33	1.0	3.8
17...	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	180	43	40	20	32	1.0	3.8
FEB										
07...	K120	K6	K12	200	50	44	21	32	1.0	3.0
07...	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	190	37	42	21	32	1.0	3.0
MAY										
30...	1100	9	1	200	51	45	21	31	1.0	3.7
30...	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	200	49	44	21	33	1.0	3.8
AUG										
21...	--	--	--	200	49	44	21	31	1.0	3.5
21...	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	200	43	45	21	30	.9	3.6

DATE	BICAR-BONATE (MG/L AS HCO3)	CAR-BONATE (MG/L AS CO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS-PENDED (MG/L)	SOLIDS, VOLA-TILE, SUS-PENDED (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)
OCT										
17...	170	0	38	62	.2	9.8	294	2	1	.03
17...	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	.03
17...	--	--	--	--	--	--	--	--	--	--
17...	170	0	38	62	.2	10	290	121	14	.03
FEB										
07...	170	4	45	56	.2	7.1	296	2	1	.01
07...	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	.03
07...	--	--	--	--	--	--	--	--	--	--
07...	180	4	45	52	.2	7.1	295	2	1	.00
MAY										
30...	180	0	43	56	.2	6.3	295	6	4	.15
30...	--	--	--	--	--	--	--	--	--	.14
30...	--	--	--	--	--	--	--	--	--	.17
30...	--	--	--	--	--	--	--	--	--	--
30...	180	0	44	58	.2	7.2	300	6	5	.21
AUG										
21...	180	0	39	56	.3	8.3	292	0	0	.11
21...	--	--	--	--	--	--	--	--	--	.20
21...	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--
21...	190	0	38	54	.3	8.4	294	--	3	.19

DATE	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	PHOS-PHATE, TOTAL (MG/L AS PO4)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, TOTAL (MG/L AS PO4)	CARBON, ORGANIC TOTAL (MG/L AS C)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
OCT										
17...	.01	.04	.01	.26	--	.020	--	3.6	10	10
17...	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--
17...	.01	.04	.01	.36	--	.020	--	--	10	20
17...	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--
17...	.01	.04	.04	.48	--	.080	--	--	30	80
FEB										
07...	.02	.03	.01	.36	--	.020	--	3.0	10	0
07...	--	--	--	--	--	--	--	--	--	--
07...	.02	.05	.01	.33	--	.020	--	--	10	0
07...	--	--	--	--	--	--	--	--	--	--
07...	.02	.02	.01	.42	--	.030	--	3.5	10	0
MAY										
30...	.02	.17	.01	.43	.06	.020	.06	9.5	0	0
30...	.02	.16	.03	.39	.03	.010	.03	--	0	0
30...	.02	.19	.04	.23	.03	.010	.03	--	10	0
30...	--	--	--	--	--	--	--	--	--	--
30...	.02	.23	.03	.26	.03	.010	.03	4.0	0	0
AUG										
21...	.02	.13	.01	.52	--	.000	--	2.8	10	1
21...	.02	.22	.01	.17	--	.000	--	--	0	10
21...	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--
21...	.02	.21	.00	.06	--	.000	--	4.6	10	3

COLORADO RIVER BASIN
LAKE AUSTIN AT AUSTIN, TX--Continued

301739097470901 LAKE AUSTIN (AUSTIN) SITE AL
WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
OCT							
17...	1125	1.0	531	7.9	23.0	8.0	95
17...	1126	10	531	7.9	23.0	7.9	94
17...	1127	16	531	7.9	23.0	7.9	94
FEB							
07...	1202	1.0	548	8.5	8.0	11.8	103
07...	1204	12	548	8.5	7.5	12.0	103
MAY							
30...	1115	1.0	542	8.2	21.5	8.6	98
30...	1117	10	542	8.0	17.0	8.0	83
30...	1119	15	542	8.0	17.0	7.6	79
AUG							
21...	1210	1.0	538	8.0	25.0	7.6	92
21...	1212	14	538	7.7	20.5	5.2	58

302043097472401 LAKE AUSTIN (AUSTIN) SITE BC
WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TRANS- PAR- ENCY (SECCHI DISK) (M)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)
OCT									
17...	1150	1.0	531	7.8	23.0	1.50	7.4	88	.01
17...	1152	10	531	7.8	23.0	--	7.2	86	--
17...	1154	20	531	7.7	23.0	--	7.0	83	--
17...	1156	28	531	7.7	22.5	--	6.9	81	.03
FEB									
07...	1240	1.0	552	8.5	7.5	2.40	11.4	98	.00
07...	1242	10	552	8.5	7.5	--	11.4	98	--
07...	1244	20	552	8.5	7.5	--	11.3	97	--
07...	1246	28	552	8.5	7.5	--	11.2	97	.00
MAY									
30...	1135	1.0	542	8.2	22.5	1.90	8.3	97	.12
30...	1137	10	542	8.2	22.0	--	8.5	98	--
30...	1139	20	542	8.1	17.0	--	8.8	92	--
30...	1141	28	542	8.1	17.0	--	8.8	92	.16
AUG									
21...	1225	1.0	538	8.0	26.0	--	7.4	91	.10
21...	1227	10	538	7.7	21.0	--	6.1	69	--
21...	1229	20	538	7.7	20.5	--	5.7	63	--
21...	1231	29	538	7.7	20.5	--	5.6	62	.20

DATE	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	PHOS- PHATE, TOTAL (MG/L AS PO4)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, TOTAL (MG/L AS PO4)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
OCT									
17...	.01	.02	.01	.39	--	.010	--	20	10
17...	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--
17...	.01	.04	.01	.34	--	.020	--	50	20
FEB									
07...	.02	.02	.01	.27	--	.010	--	10	10
07...	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--
07...	.02	.02	.00	.30	--	.010	--	20	0
MAY									
30...	.02	.14	.01	.35	.03	.010	.03	0	0
30...	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--
30...	.02	.18	.03	.22	.03	.010	.03	10	0
AUG									
21...	.02	.12	.01	.20	--	.000	.00	10	10
21...	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--
21...	.02	.22	.01	.08	--	.020	.06	0	10

COLORADO RIVER BASIN
LAKE AUSTIN AT AUSTIN, TX--Continued

302044097472301 LAKE AUSTIN (AUSTIN) SITE BL
WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
OCT							
17...	1200	1.0	531	7.8	23.0	7.5	89
17...	1202	11	531	7.8	23.0	7.6	90
FEB							
07...	1250	1.0	552	8.5	8.0	11.7	102
07...	1252	8.0	552	8.6	8.0	11.8	103
MAY							
30...	1200	1.0	542	8.2	23.0	8.2	96
30...	1202	12	542	8.1	22.0	8.0	92
AUG							
21...	1235	1.0	538	8.0	26.5	7.5	93
21...	1237	13	538	7.7	21.0	5.6	63

301926097502201 LAKE AUSTIN (AUSTIN) SITE CC
WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM COBALT UNITS)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)
OCT										
17...	1220	1.0	531	7.6	23.5	0	2.0	7.0	84	.6
17...	1222	10	531	7.6	23.0	--	--	7.0	83	--
17...	1224	20	531	7.6	23.0	--	--	6.8	81	--
17...	1226	28	531	7.5	23.0	0	5.0	6.6	79	.4
FEB										
07...	1315	1.0	536	8.4	8.0	0	5.0	11.0	96	.1
07...	1317	10	536	8.4	8.0	--	--	11.0	96	--
07...	1320	20	536	8.4	8.0	--	--	11.0	96	--
07...	1322	27	536	8.4	8.0	0	4.0	11.0	96	.1
MAY										
30...	1223	1.0	542	8.2	21.0	3	--	8.6	97	.6
30...	1225	10	542	8.1	15.5	--	--	8.8	89	--
30...	1227	20	542	8.1	15.5	--	--	8.8	89	--
30...	1229	27	542	8.1	15.5	3	--	8.8	89	.2
AUG										
21...	1255	1.0	538	7.8	21.5	3	.70	6.2	70	--
21...	1257	10	538	7.8	20.5	--	--	5.8	64	--
21...	1259	20	538	7.8	20.0	--	--	5.7	63	--
21...	1301	29	538	7.7	20.0	5	1.4	5.5	60	--

DATE	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCT FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
OCT										
17...	520	3	<1	180	46	38	20	34	1.1	4.0
17...	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	180	46	38	20	34	1.1	3.8
FEB										
07...	28	K3	22	190	40	43	21	31	1.0	3.0
07...	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	190	40	43	21	31	1.0	3.0
MAY										
30...	67	9	1	190	46	43	21	32	1.0	3.2
30...	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	190	46	43	21	33	1.0	3.9
AUG										
21...	--	--	--	200	41	44	21	30	.9	3.5
21...	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	200	43	45	21	30	.9	3.6

COLORADO RIVER BASIN
LAKE AUSTIN AT AUSTIN, TX--Continued

301926097502201 LAKE AUSTIN (AUSTIN) SITE CC--Continued
WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDE (MG/L)	SOLIDS, VOLA- TILE, SUS- PENDE (MG/L)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)
OCT										
17...	160	0	38	68	.2	9.6	291	2	1	.03
17...	--	--	--	--	--	--	--	--	--	.03
17...	--	--	--	--	--	--	--	--	--	--
17...	160	0	39	64	.2	9.8	288	7	1	.04
FEB										
07...	180	4	41	56	.2	7.1	295	2	1	.03
07...	--	--	--	--	--	--	--	--	--	.00
07...	--	--	--	--	--	--	--	--	--	--
07...	180	4	41	56	.2	7.1	295	3	2	.03
MAY										
30...	180	0	43	58	.2	6.7	296	3	0	.17
30...	--	--	--	--	--	--	--	--	--	.19
30...	--	--	--	--	--	--	--	--	--	--
30...	180	0	43	58	.2	7.1	298	5	3	.24
AUG										
21...	190	0	39	55	.3	8.1	295	0	0	.18
21...	--	--	--	--	--	--	--	--	--	.19
21...	--	--	--	--	--	--	--	--	--	--
21...	190	0	39	53	.3	8.3	294	0	0	.19

DATE	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	PHOS- PHATE, TOTAL (MG/L AS PO4)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, TOTAL (MG/L AS PO4)	CARBON, ORGANIC TOTAL (MG/L AS C)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
OCT										
17...	.01	.04	.02	.32	--	.010	--	5.4	0	0
17...	.01	.04	.01	.45	--	.010	--	--	20	10
17...	--	--	--	--	--	--	--	--	--	--
17...	.01	.05	.03	.26	--	.010	--	3.6	10	10
FEB										
07...	.02	.05	.03	.23	--	.010	--	3.0	20	0
07...	.02	.02	.01	.29	--	.010	--	--	10	0
07...	--	--	--	--	--	--	--	--	--	--
07...	.02	.05	.01	.26	--	.010	--	3.1	10	0
MAY										
30...	.02	.19	.02	.25	.03	.010	.03	2.7	0	0
30...	.02	.21	.02	.20	.03	.010	.03	--	0	10
30...	--	--	--	--	--	--	--	--	--	--
30...	.00	.24	.02	.18	.03	.010	.03	2.0	0	10
AUG										
21...	.02	.20	.01	.09	--	.000	--	3.7	10	7
21...	.02	.21	.08	1.2	--	.040	--	--	0	10
21...	--	--	--	--	--	--	--	--	--	--
21...	.02	.21	.01	.14	--	.000	--	3.5	10	8

302021097540001 LAKE AUSTIN (AUSTIN) SITE DC
WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)
OCT									
17...	1305	1.0	542	7.8	23.0	7.5	89	.04	.01
17...	1307	10	542	7.8	22.5	7.4	87	--	--
17...	1309	16	542	7.7	22.5	7.0	82	.02	.01
FEB									
07...	1400	1.0	527	8.6	8.5	11.1	98	.01	.00
07...	1402	10	527	8.6	8.5	11.2	99	--	--
07...	1406	16	524	8.6	8.5	11.2	99	.00	.00
MAY									
30...	1317	1.0	545	8.2	15.5	9.1	92	.22	.00
30...	1319	10	545	8.2	15.0	9.1	91	--	--
30...	1321	14	545	8.2	15.0	9.4	94	.23	.00
AUG									
21...	1335	1.0	538	7.7	19.0	4.6	49	.21	.02
21...	1337	10	538	7.6	18.5	4.3	46	--	--
21...	1339	17	538	7.6	19.0	4.2	45	.21	.02

COLORADO RIVER BASIN
LAKE AUSTIN AT AUSTIN, TX--Continued

302021097540001 LAKE AUSTIN (AUSTIN) SITE DC--Continued
WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	PHOS- PHATE, TOTAL (MG/L AS PO4)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS PO4)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
OCT								
17...	.05	.01	.53	--	.020	--	0	0
17...	--	--	--	--	--	--	--	--
17...	.03	.02	.42	--	.020	--	0	0
FEB								
07...	.01	.00	.28	--	.010	--	0	10
07...	--	--	--	--	--	--	--	--
07...	.00	.00	.28	--	.010	--	10	0
MAY								
30...	.22	.02	.21	.03	.010	.03	0	10
30...	--	--	--	--	--	--	--	--
30...	.23	.02	.24	.03	.010	.03	10	10
AUG								
21...	.23	.01	.00	--	.010	--	0	10
21...	--	--	--	--	--	--	--	--
21...	.23	.01	.36	--	.000	--	0	20

302314097544901 LAKE AUSTIN (AUSTIN) SITE EC
WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM COBALT UNITS)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)
OCT										
17...	1400	1.0	552	8.2	25.0	0	2.0	9.3	115	.8
17...	1405	7.0	555	8.1	23.5	5	15	8.5	102	2.3
18...	1400	1.0	552	8.4	25.0	--	--	9.3	115	--
18...	1405	7.0	555	8.1	23.5	--	--	8.5	102	--
FEB										
07...	1430	1.0	538	8.5	9.5	0	3.0	11.7	105	.3
07...	1433	7.0	538	8.5	9.5	0	25	12.0	108	2.3
MAY										
30...	1412	1.0	545	8.0	13.5	3	--	7.9	77	.5
30...	1414	8.0	545	8.0	13.5	3	--	7.8	76	.3
AUG										
21...	1400	1.0	535	7.6	18.0	5	.30	3.2	34	--
21...	1402	9.0	535	7.6	18.0	3	1.5	3.6	38	--

DATE	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
OCT										
17...	3000	1	<1	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	180	47	38	21	35	1.1	4.0
18...	--	--	--	180	42	38	21	36	1.2	4.0
FEB										
07...	K20	K2	K6	200	54	48	20	33	1.0	3.4
07...	--	--	--	--	--	--	--	--	--	--
MAY										
30...	2200	2	<1	190	46	43	21	33	1.0	3.8
30...	--	--	--	190	46	43	21	33	1.0	3.8
AUG										
21...	--	--	--	210	55	48	22	31	.9	3.2
21...	--	--	--	200	41	46	20	31	1.0	3.2

DATE	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDE (MG/L)	SOLIDS, VOLA- TILE, SUS- PENDE (MG/L)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)
OCT										
17...	--	--	--	--	--	--	--	2	1	--
17...	--	--	--	--	--	--	--	24	4	--
18...	160	2	40	71	.2	8.1	298	--	--	.01
18...	170	0	40	66	.2	8.1	297	--	--	.05
FEB										
07...	170	4	45	62	.2	7.6	307	3	2	.05
07...	--	--	--	--	--	--	--	53	18	--
MAY										
30...	180	0	44	59	.3	7.3	300	4	4	.23
30...	180	0	43	58	.3	7.3	298	5	6	.32
AUG										
21...	190	0	38	54	.2	8.3	298	24	3	.23
21...	190	0	38	53	.2	8.3	293	3	0	.23

COLORADO RIVER BASIN
LAKE AUSTIN AT AUSTIN, TX--Continued

302314097544901 LAKE AUSTIN (AUSTIN) SITE EC--Continued
WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	PHOS- PHATE, TOTAL (MG/L AS PO4)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, TOTAL (MG/L AS PO4)	CARBON, ORGANIC TOTAL (MG/L AS C)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
OCT										
17...	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--
18...	.01	.02	.01	.28	--	.020	--	3.5	0	0
18...	.01	.06	.03	.56	--	.050	--	4.8	0	10
FEB										
07...	.02	.07	.01	.20	--	.010	--	3.0	0	0
07...	--	--	--	--	--	--	--	--	--	--
MAY										
30...	.02	.25	.01	.21	.03	.010	.03	2.3	200	0
30...	.02	.34	.01	.21	.03	.010	.03	2.3	0	0
AUG										
21...	.02	.25	.00	.04	--	.000	--	3.2	0	10
21...	.02	.25	.01	.60	--	.000	--	4.1	0	10

301739097471201 LAKE AUSTIN (AUSTIN) SITE AC
WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, DIS- SOLVED (UG/L AS CU)
OCT							
17...	1030	1.0	2	0	0	0	4
17...	1042	30	--	--	--	--	--
17...	1051	54	2	0	0	0	4
FEB							
07...	1129	1.0	1	100	0	10	1
07...	1134	20	--	--	--	--	--
07...	1137	36	1	100	0	10	1
MAY							
30...	1030	1.0	--	--	--	--	--
30...	1032	10	--	--	--	--	--
30...	1034	20	--	--	--	--	--
30...	1038	35	--	--	--	--	--
AUG							
21...	1145	1.0	1	70	1	10	1
21...	1147	10	--	--	--	--	--
21...	1153	39	1	70	1	0	1

DATE	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, DIS- SOLVED (UG/L AS ZN)
OCT							
17...	10	0	10	.0	0	0	10
17...	10	--	20	--	--	--	--
17...	30	0	80	.0	0	0	10
FEB							
07...	10	0	0	.0	0	0	10
07...	10	--	0	--	--	--	--
07...	10	0	0	.0	0	0	10
MAY							
30...	0	--	0	--	--	--	--
30...	0	--	0	--	--	--	--
30...	10	--	0	--	--	--	--
30...	0	--	0	--	--	--	--
AUG							
21...	10	0	1	.0	0	0	30
21...	0	--	10	--	--	--	--
21...	10	0	3	.0	0	0	3

COLORADO RIVER BASIN
LAKE AUSTIN AT AUSTIN, TX--Continued

301926097502201 LAKE AUSTIN (AUSTIN) SITE CC
WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, DIS- SOLVED (UG/L AS CU)
OCT							
17...	1220	1.0	2	100	0	0	4
17...	1222	10	--	--	--	--	--
17...	1226	28	2	0	0	0	4
FEB							
07...	1315	1.0	1	100	0	20	1
07...	1317	10	--	--	--	--	--
07...	1322	27	1	100	0	10	1
MAY							
30...	1223	1.0	--	--	--	--	--
30...	1225	10	--	--	--	--	--
30...	1229	27	--	--	--	--	--
AUG							
21...	1255	1.0	1	70	1	20	1
21...	1257	10	--	--	--	0	--
21...	1301	29	1	70	1	10	1

DATE	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, DIS- SOLVED (UG/L AS ZN)
OCT							
17...	0	0	0	.0	0	0	0
17...	20	--	10	--	--	--	--
17...	10	0	10	.0	0	0	0
FEB							
07...	20	0	0	.0	0	0	0
07...	10	--	0	--	--	--	--
07...	10	0	0	.0	1	0	10
MAY							
30...	0	--	0	--	--	--	--
30...	0	--	10	--	--	--	--
30...	0	--	10	--	--	--	--
AUG							
21...	10	0	7	.0	0	0	3
21...	0	--	10	--	--	--	--
21...	10	0	8	.0	0	0	6

302314097544901 LAKE AUSTIN (AUSTIN) SITE EC
WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, DIS- SOLVED (UG/L AS CU)
OCT							
18...	1400	1.0	2	100	0	0	4
18...	1405	7.0	2	100	0	0	4
FEB							
07...	1430	1.0	1	0	0	10	1
MAY							
30...	1412	1.0	--	--	--	--	--
30...	1414	8.0	--	--	--	--	--
AUG							
21...	1400	1.0	1	0	0	20	0
21...	1402	9.0	1	0	0	0	0

DATE	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, DIS- SOLVED (UG/L AS ZN)
OCT							
18...	0	0	0	.0	0	0	0
18...	0	0	10	.0	0	0	0
FEB							
07...	0	0	0	.0	0	0	10
MAY							
30...	200	--	0	--	--	--	--
30...	0	--	0	--	--	--	--
AUG							
21...	0	0	10	.0	0	0	2
21...	0	0	10	.0	0	0	6

COLORADO RIVER BASIN
LAKE AUSTIN AT AUSTIN, TX--Continued

301739097471201 LAKE AUSTIN (AUSTIN) SITE AC
WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	PCB, TOTAL (UG/L)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	ALDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	CHLOR- DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)
OCT									
17...	1030	1.0	.0	.00	--	.0	.0	.00	.00
17...	1051	54	.0	.00	--	.0	.0	.00	.00
FEB									
07...	1129	1.0	.0	--	.00	--	.0	.00	.00
07...	1137	36	.0	--	.00	--	.0	.00	.00
AUG									
21...	1145	1.0	.0	--	.00	--	.0	.00	.00
21...	1153	39	.0	--	.00	--	.0	.00	.00

DATE	DDT, TOTAL (UG/L)	DI- AZINON, TOTAL (UG/L)	DI- ELDRIN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	MALA- THION, TOTAL (UG/L)
OCT									
17...	.00	.00	.00	.00	.00	.00	.00	.00	.00
17...	.00	.00	.00	.00	.00	.00	.00	.00	.00
FEB									
07...	.00	.00	.00	.00	.00	.00	.00	.00	.00
07...	.00	.00	.00	.00	.00	.00	.00	.00	.00
AUG									
21...	.00	.00	.00	.00	.00	.00	--	.00	.00
21...	.00	.00	.00	.00	.00	.00	--	.00	.00

DATE	METHYL PARA- THION, TOTAL (UG/L)	METHYL TRI- THION, TOTAL (UG/L)	PARA- THION, TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOTAL TRI- THION TOTAL (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
OCT								
17...	.00	.00	.00	0	.00	.04	.00	.00
17...	.00	.00	.00	0	.00	.00	.00	.00
FEB								
07...	.00	.00	.00	0	.00	.13	.00	.00
07...	.00	.00	.00	0	.00	.11	.00	.00
AUG								
21...	.00	.00	.00	0	.00	.24	.00	.00
21...	.00	.00	.00	0	.00	.00	.00	.00

301926097502201 LAKE AUSTIN (AUSTIN) SITE CC
WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	PCB, TOTAL (UG/L)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLOR- DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)
OCT								
17...	1220	1.0	.0	.00	.00	.0	.00	.00
17...	1226	28	.0	.00	.00	.0	.00	.00
FEB								
07...	1315	1.0	.0	--	.00	.0	.00	.00
07...	1322	27	.0	--	.00	.0	.00	.00
AUG								
21...	1255	1.0	.0	--	.00	.0	.00	.00
21...	1301	29	.0	--	.00	.0	.00	.00

DATE	DDT, TOTAL (UG/L)	DI- AZINON, TOTAL (UG/L)	DI- ELDRIN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	MALA- THION, TOTAL (UG/L)
OCT									
17...	.00	.00	.00	.00	.00	.00	.00	.00	.00
17...	.00	.00	.00	.00	.00	.00	.00	.00	.00
FEB									
07...	.00	.00	.00	.00	.00	.00	.00	.00	.00
07...	.00	.00	.00	.00	.00	.00	.00	.00	.00
AUG									
21...	.00	.00	.00	.00	.00	.00	.00	.00	.00
21...	.00	.00	.00	.00	.00	.00	.00	.00	.00

COLORADO RIVER BASIN
LAKE AUSTIN AT AUSTIN, TX--Continued

301926097502201 LAKE AUSTIN (AUSTIN) SITE CC--Continued
WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	METHYL PARA- THION, TOTAL (UG/L)	METHYL TRI- THION, TOTAL (UG/L)	PARA- THION, TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOTAL TRI- THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
OCT								
17...	.00	.00	.00	0	.00	.03	.00	.00
17...	.00	.00	.00	0	.00	.02	.00	.00
FEB								
07...	.00	.00	.00	0	.00	.00	.00	.00
07...	.00	.00	.00	0	.00	.00	.00	.00
AUG								
21...	.00	.00	.00	0	.00	.00	.00	.00
21...	.00	.00	.00	0	--	.08	.00	.00

302314097544901 LAKE AUSTIN (AUSTIN) SITE EC
WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	PCB, TOTAL (UG/L)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLOR- DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)
OCT								
18...	1400	1.0	.0	.00	.00	.0	.00	.00
18...	1405	7.0	.0	.00	.00	.0	.00	.00
FEB								
07...	1430	1.0	--	--	--	--	--	--
AUG								
21...	1400	1.0	.0	--	.00	.0	.00	.00
21...	1402	9.0	.0	--	--	--	.00	.00

DATE	DDT, TOTAL (UG/L)	DI- AZINON, TOTAL (UG/L)	DI- ELDRIN TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	MALA- THION, TOTAL (UG/L)
OCT									
18...	.00	.00	.00	.00	.00	.00	.00	.00	.00
18...	.00	.00	.00	.00	.00	.00	.00	.00	.00
FEB									
07...	--	--	--	--	--	--	--	--	--
AUG									
21...	.00	.00	.00	.00	.00	.00	.00	.00	.00
21...	.00	.00	.00	.00	.00	.00	.00	--	.00

DATE	METHYL PARA- THION, TOTAL (UG/L)	METHYL TRI- THION, TOTAL (UG/L)	PARA- THION, TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOTAL TRI- THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
OCT								
18...	.00	.00	.00	0	.00	.00	.00	.00
18...	.00	.00	.00	0	.00	.00	.00	.00
FEB								
07...	--	--	--	--	--	.00	.00	.00
AUG								
21...	.00	.00	.00	0	.00	.00	.00	.00
21...	.00	.00	.00	--	.00	--	.00	.00

BEE CREEK DRAINAGE BASIN

The locations of data-collection sites in the Bee Creek drainage basin are shown on figure 8.

Daily and monthly rainfall totals for the 1979 water year are given in table 14.



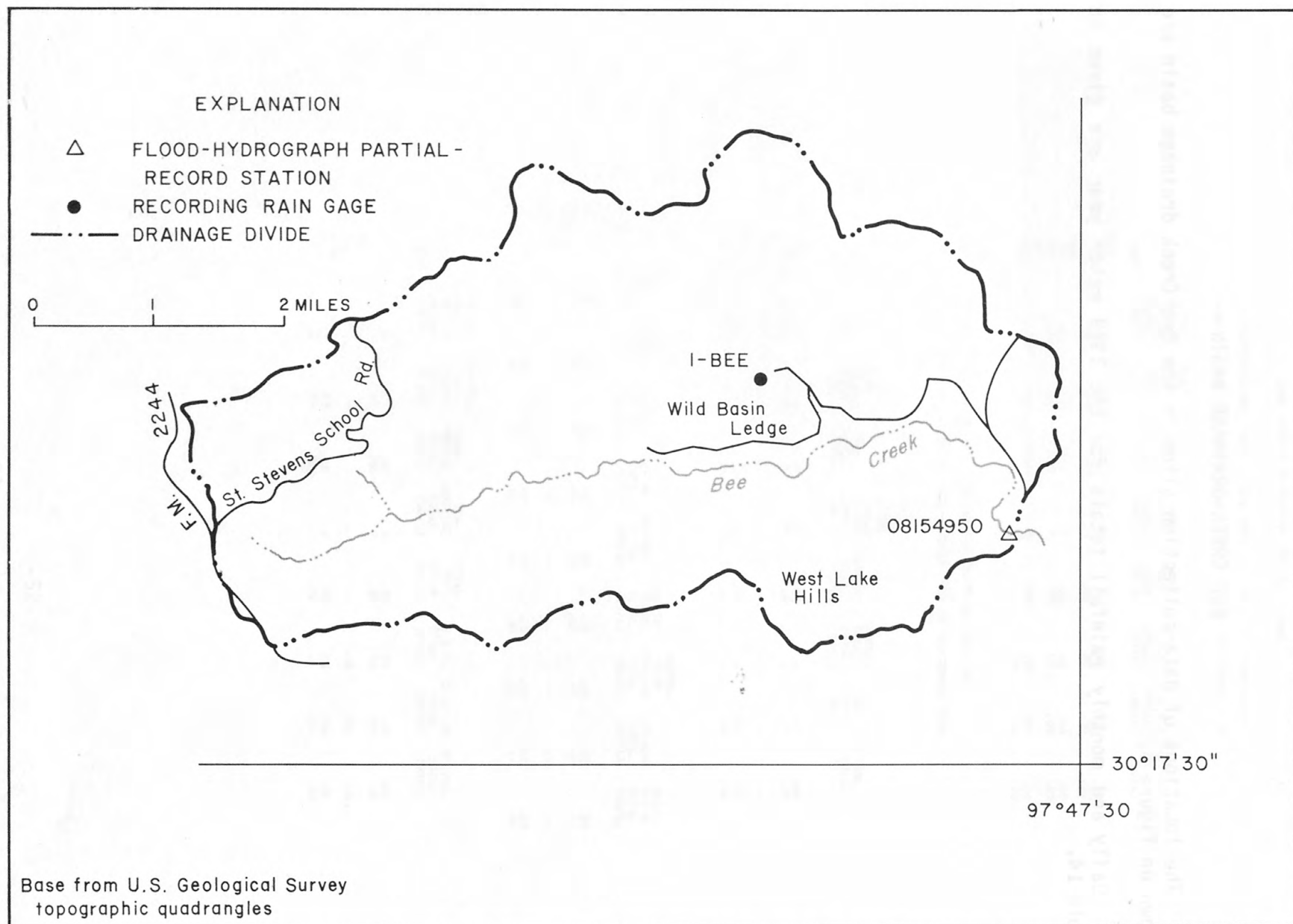


Figure 8.- Locations of surface -water data-collection sites in the Bee Creek drainage basin

08154950 BEE CREEK AT WEST LAKE DRIVE NEAR AUSTIN, TEX.
(Flood-hydrograph partial-record station)

LOCATION.--Lat 30°18'11", long 97°47'43", Travis County, on downstream side of the culvert on West Lake Drive and 3.8 mi northwest of the State Capitol Building in Austin.

DRAINAGE AREA.--3.28 mi.

PERIOD OF RECORD.--April 1976 to current year.

GAGE.--Digital water-stage recorder and crest-stage gage. Datum of gage is 499.72 ft NGVD.

REMARKS.--Because of insufficient data, no storms were analyzed for this station for the period of record.

BARTON CREEK DRAINAGE BASIN

The locations of data-collection sites in the Barton Creek drainage basin are shown on figure 9.

A summary of storm rainfall and runoff for the basin is shown in table 5.

The peak discharges associated with water-quality samples collected during the storms at the Barton Creek at State Highway 71 and Barton Creek at Loop 360 sites are shown in table 3.

Daily and monthly rainfall totals for the 1979 water year are given in table 14.



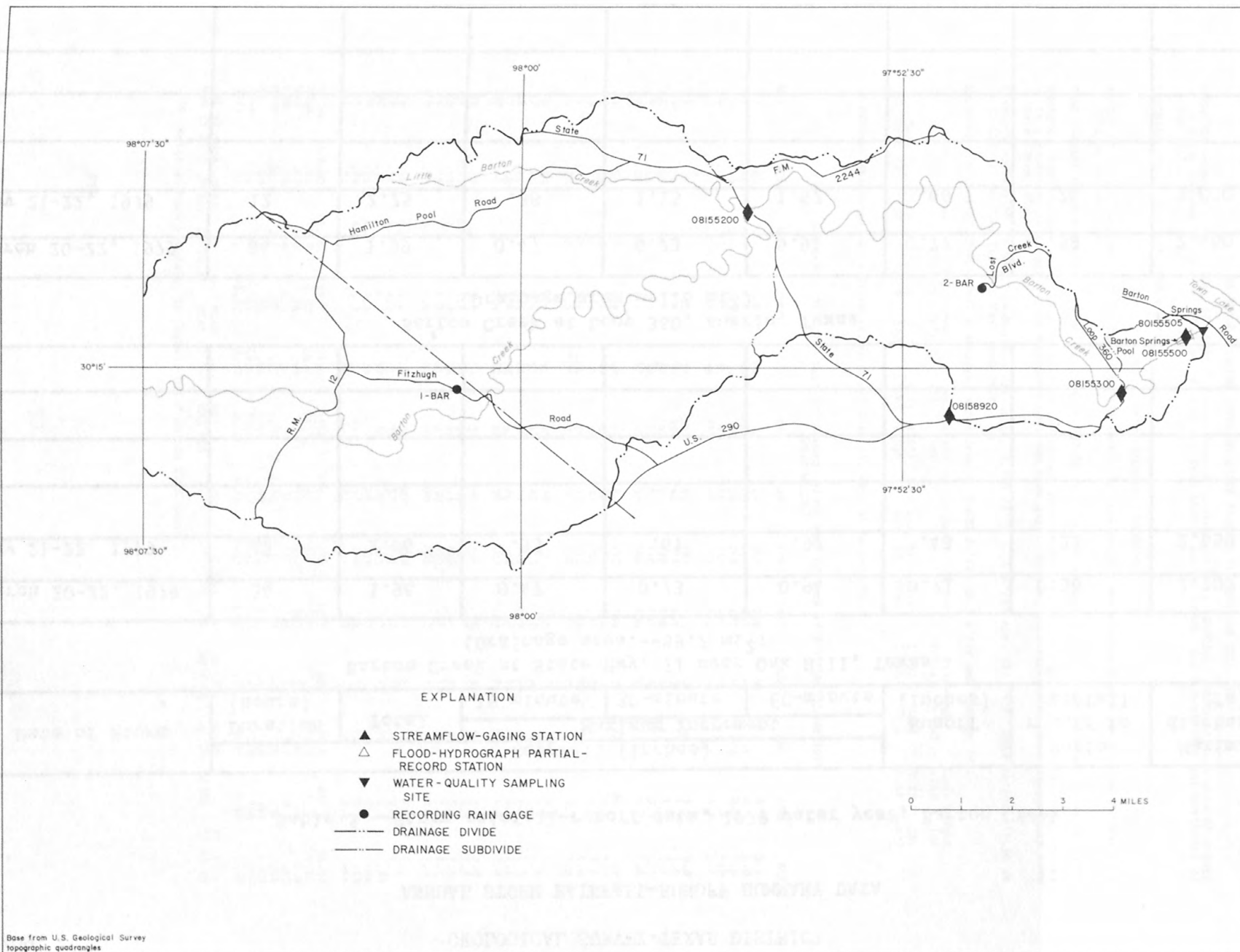


Figure 9.- Locations of surface-water data-collection sites in the Barton Creek drainage basin

TX-35
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UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY-TEXAS DISTRICT

ANNUAL STORM RAINFALL-RUNOFF SUMMARY DATA

Table 5.--Storm rainfall-runoff data, 1979 water year, Barton Creek

Date of Storm	Rainfall (inches)					Runoff (inches)	Ratio runoff to rainfall	Maximum discharge (cfs)
	Duration (hours)	Total	Maximum increment					
			15-minute	30-minute	60-minute			
Barton Creek at State Hwy. 71 near Oak Hill, Texas (Drainage area.--89.7 mi ²)								
March 20-22, 1979	34	1.96	0.47	0.73	0.94	0.71	0.36	2,700
May 21-22, 1979	12	2.06	.35	.61	.97	.43	.21	2,650
Barton Creek at Loop 360, Austin, Texas (Drainage area.--116 mi ²)								
March 20-22, 1979	34	1.99	0.47	0.73	0.94	0.77	0.39	2,660
May 21-22, 1979	12	2.75	.88	1.15	1.67	.66	.24	3,000

COLORADO RIVER BASIN

08155200 BARTON CREEK AT STATE HIGHWAY 71 NEAR OAK HILL, TX

LOCATION.--Lat 30°17'46", long 97°55'31", Travis County, Hydrologic Unit 12090205, at downstream side of bridge on State Highway 71, 0.1 mi (0.2 km) downstream from Little Barton Creek, and 5.8 mi (9.3 km) northwest of Oak Hill.

DRAINAGE AREA.--89.7 mi² (232.3 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1975 to February 1978 (periodic gage heights and discharge measurements only), February 1978 to current year.

GAGE.--Water-stage recorder. Datum of gage is 737.04 ft (224.650 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair above 15.0 ft³/s (0.42 m³/s) and poor below. No known regulation or diversions. There is a recording rain gage in the watershed upstream from gage. Several observations of water temperature were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,750 ft³/s (135 m³/s) Apr. 18, 1976, gage height, 11.56 ft (3.523 m); no flow for many days each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,000 ft³/s (28.3 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Mar. 21	0515	*2,670 75.6	8.71 2.655	Apr. 21	0415	1,130 32.0	6.17 1.881
Mar. 22	1230	1,410 39.9	6.68 2.036	May 22	0445	2,650 75.0	8.65 2.637

Minimum discharge, 0.14 ft³/s (0.004 m³/s) Oct. 23, Oct. 31 to Nov. 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.47	.14	4.6	60	32	53	368	296	55	10	9.9	2.1
2	.46	.14	4.6	48	32	52	315	244	62	8.1	8.9	2.0
3	.43	.14	5.8	40	34	54	248	222	47	7.5	8.0	1.8
4	.43	.15	6.3	36	43	48	221	203	41	6.7	7.4	1.9
5	.39	1.3	5.8	36	119	45	201	186	48	5.7	6.6	2.8
6	.26	1.2	5.8	37	327	42	181	173	47	16	5.9	3.8
7	.26	.81	5.8	39	209	42	171	159	39	27	5.5	2.9
8	.26	.56	5.8	36	162	41	176	146	42	17	5.2	2.7
9	.26	.49	5.8	34	132	19	150	137	41	13	5.1	2.2
10	.26	.45	5.8	67	122	37	146	130	35	17	4.7	1.8
11	.26	.45	5.8	369	114	37	155	124	32	12	26	1.7
12	.26	.55	5.8	149	104	36	141	118	29	10	34	1.7
13	.25	.54	5.8	119	96	35	155	99	27	8.7	18	1.6
14	.22	.55	5.9	108	90	.33	145	86	28	6.8	11	1.4
15	.20	.58	5.8	100	83	31	133	77	26	6.5	9.6	1.3
16	.20	1.1	5.6	92	72	39	121	73	24	6.5	7.8	1.3
17	.20	1.1	5.4	85	67	42	143	62	20	6.1	6.3	1.2
18	.18	.94	5.4	74	66	41	146	59	20	5.8	5.4	1.8
19	.18	1.0	5.4	68	63	88	142	57	18	12	4.6	2.2
20	.16	1.2	5.4	62	62	158	137	53	17	37	4.5	2.4
21	.15	1.5	5.2	55	59	995	530	64	16	35	3.9	2.2
22	.15	2.0	4.8	50	56	643	229	767	15	16	3.6	1.8
23	.14	3.0	4.8	48	86	327	199	91	13	10	3.4	1.6
24	.15	3.3	4.8	44	84	259	182	61	13	7.6	3.0	1.4
25	.15	3.6	4.5	44	63	222	166	57	12	6.3	2.8	1.3
26	.18	4.0	4.4	45	59	201	149	51	13	5.7	2.9	1.2
27	.18	4.8	4.3	41	59	181	137	50	13	26	2.9	1.1
28	.17	4.7	4.3	37	56	170	125	49	12	47	2.8	.99
29	.15	4.6	4.3	36	---	161	354	45	12	15	2.4	.94
30	.15	4.6	4.3	37	---	215	204	42	11	12	2.3	.89
31	.14	---	34	34	---	197	---	38	---	11	2.2	---
TOTAL	7.30	49.49	192.1	2130	2551	4564	5870	4019	828	431.0	226.6	54.02
MEAN	.24	1.65	6.20	68.7	91.1	147	196	130	27.6	13.9	7.31	1.80
MAX	.47	4.8	34	369	327	995	530	767	62	47	34	3.8
MIN	.14	.14	4.3	34	32	31	121	38	11	5.7	2.2	.89
CFSM	.003	.02	.07	.77	1.02	1.64	2.19	1.45	.31	.16	.08	.02
IN.	.00	.02	.08	.88	1.06	1.89	2.43	1.67	.34	.18	.09	.02
AC-FT	14	98	381	4220	5060	9050	11640	7970	1640	855	449	107
(ft)	.47	5.72	2.77	2.77	3.12	5.24	5.25	3.26	1.61	6.30	1.84	2.30

CAL YR 1978	TOTAL	-	MEAN	-	MAX	-	MIN	-	CFSM	-	IN	-	AC-FT	-	††	-
WTR YR 1979	TOTAL	20922.51	MEAN	57.3	MAX	995	MIN	.14	CFSM	.64	IN	8.68	AC-FT	41500	††	40.65

†† Weighted-mean rainfall, in inches, based on one rain gage.

COLORADO RIVER BASIN

08155200 BARTON CREEK AT STATE HIGHWAY 71 NEAR OAK HILL, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical, biochemical, and pesticide analyses: April 1978 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM- COBALT UNITS)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)
NOV 06...	1235	.55	375	7.7	18.0	3	2.0	7.7	84	.5
DEC 18...	1130	5.4	445	8.1	11.0	0	.00	11.0	103	.3
FEB 27...	1325	59	501	7.9	13.0	0	2.0	10.5	103	.8
APR 25...	1252	168	480	8.0	22.5	0	1.0	8.7	102	.8
JUN 12...	0815	54	462	7.8	21.0	5	.50	8.2	94	.1
SEP 11...	1145	.51	373	8.0	26.5	10	.60	8.0	99	.2

DATE	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.7 UH-MF (COLS./ 100 ML)	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO
NOV 06...	23000	1400	980	180	19	47	16	6.3	.2
DEC 18...	440	5	46	--	--	--	--	--	--
FEB 27...	80	20	28	270	52	80	18	6.6	.2
APR 25...	1100	22	540	250	19	70	18	6.7	.2
JUN 12...	78	22	80	--	--	--	--	--	--
SEP 11...	460	38	130	170	9	43	16	10	.3

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)
NOV 06...	1.1	200	0	19	10	.2	8.5	207	2
DEC 18...	--	250	0	--	--	--	--	--	1
FEB 27...	.8	270	0	24	19	.2	6.7	288	1
APR 25...	1.0	280	0	17	12	.2	7.2	270	1
JUN 12...	--	--	--	--	--	--	--	--	0
SEP 11...	1.0	200	0	17	21	.2	10	217	8

DATE	SOLIDS, VOLA- TILE, SUS- PENDED (MG/L)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
NOV 06...	0	.03	.01	.04	.00	.16	.16	.00	3.3
DEC 18...	1	.01	.01	.02	.01	.15	.16	.01	1.6
FEB 27...	1	.17	.00	.17	.01	.09	.10	.01	1.9
APR 25...	0	.13	.00	.13	.01	.08	.09	.01	5.0
JUN 12...	0	.05	.00	.05	.02	.20	.22	.00	4.6
SEP 11...	9	.00	.02	.01	.00	.56	.56	.00	4.9

COLORADO RIVER BASIN

08155200 BARTON CREEK AT STATE HIGHWAY 71 NEAR OAK HILL, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, DIS- SOLVED (UG/L AS CU)
NOV 06...	1235	1	20	<1	0	0
FEB 27...	1325	0	0	0	0	0
APR 25...	1252	0	0	0	0	0
SEP 11...	1145	1	20	<1	10	0

DATE	TIME	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, DIS- SOLVED (UG/L AS ZN)
NOV 06...	10	0	4	.0	0	0	0	<3
FEB 27...	10	0	10	.0	0	0	0	10
APR 25...	10	0	10	.0	0	0	0	10
SEP 11...	<10	0	<1	.4	0	0	0	<3

DATE	TIME	PCB, TOTAL (UG/L)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLOR- DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI- AZINON, TOTAL (UG/L)
NOV 06...	1235	.0	.00	.00	.0	.00	.00	.00	.00
FEB 27...	1325	.0	--	.00	.0	.00	.00	.00	.00
APR 25...	1252	.0	.00	.00	.0	.00	.00	.00	.00
SEP 11...	1145	.0	--	.00	.0	.00	.00	.00	.00

DATE	DI- ELDRIN TOTAL (UG/L)	ENDO- SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	MALA- THION, TOTAL (UG/L)	METH- OXY- CHLOR, TOTAL (UG/L)
NOV 06...	.00	.00	.00	.00	.00	.00	.00	.00	--
FEB 27...	.00	.00	.00	.00	.00	.00	.00	.00	--
APR 25...	.00	.00	.00	.00	.00	.00	.00	.00	--
SEP 11...	.00	.00	.00	.00	.00	.00	.00	.00	.00

DATE	METHYL PARA- THION, TOTAL (UG/L)	METHYL TRI- THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	PARA- THION, TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOTAL TRI- THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
NOV 06...	.00	.00	.00	.00	0	.00	.00	.00	.00
FEB 27...	.00	.00	.00	.00	0	.00	.00	.00	.00
APR 25...	.00	.00	.00	.00	0	.00	.00	.00	.00
SEP 11...	.00	.00	.00	.00	0	.00	.01	.00	.00

STORM RAINFALL AND RUNOFF RECORD										1979 WATER YEAR		
STA. NO. 08155200												
BARTON CREEK AT STATE HWY. 71 NEAR AUSTIN, TEXAS										STORM OF MARCH 20-22, 1979		
DATE & TIME	G A G E N U M B E R									ACCUM. WEIGHTED PRECIP.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
	18AR									IN.		IN.
MAR. 22												
0815	1.94									1.94	607.0	0.4943
0830	1.95									1.95	595.0	0.4994
0915	1.95									1.95	543.0	0.5065
1000	1.95									1.95	703.0	0.5171
1100	1.95									1.95	904.0	0.5307
1145	1.95									1.95	1410.0	0.5460
1215	1.95									1.95	1620.0	0.5565
1230	1.95									1.95	1630.0	0.5635
1245	1.95									1.95	1630.0	0.5776
1330	1.96									1.96	1430.0	0.5992
1430	1.96									1.96	1080.0	0.6225
1600	1.96									1.96	783.0	0.6462
1800	1.96									1.96	587.0	0.6665
2000	1.96									1.96	501.0	0.6838
2200	1.96									1.96	452.0	0.6994
2400	1.96									1.96	416.0	0.7066

STA. NO. 0H155200		STORM RAINFALL AND RUNOFF RECORD					1979 WATER YEAR		
BARTON CREEK AT STATE HWY. 71 NEAR AUSTIN, TEXAS					STORM OF MARCH 20-22, 1979		ACCUM.	DISCHARGE	ACCUM.
DATE & TIME		G A G E N U M B E R					WEIGHTED PRECIP.	IN	RUNOFF
							IN.	CFS	IN.
MAR. 20									
2100	0.06						0.06	104.0	0.0198
2200	0.15						0.15	102.0	0.0209
2215	0.41						0.41	106.0	0.0213
2230	0.88						0.88	109.0	0.0218
2245	1.05						1.05	111.0	0.0223
2300	1.09						1.09	115.0	0.0235
2400	1.13						1.13	117.0	0.0249
MAR. 21									
0000	1.13						1.13	117.0	0.0249
0040	1.14						1.14	128.0	0.0263
0100	1.33						1.33	159.0	0.0281
0200	1.51						1.51	202.0	0.0308
0230	1.58						1.58	234.0	0.0328
0300	1.58						1.58	646.0	0.0370
0315	1.58						1.58	1410.0	0.0430
0330	1.58						1.58	1890.0	0.0553
0400	1.58						1.58	2280.0	0.0750
0430	1.58						1.58	2460.0	0.0962
0500	1.58						1.58	2630.0	0.1133
0515	1.58						1.58	2700.0	0.1249
0530	1.58						1.58	2680.0	0.1423
0600	1.58						1.58	2560.0	0.1755
0700	1.58						1.58	2240.0	0.2142
0800	1.58						1.58	2100.0	0.2504
0900	1.58						1.58	1770.0	0.2810
1000	1.58						1.58	1390.0	0.3050
1100	1.59						1.59	1050.0	0.3232
1200	1.59						1.59	858.0	0.3454
1400	1.59						1.59	637.0	0.3674
1600	1.60						1.60	543.0	0.3909
1900	1.60						1.60	456.0	0.4106
2100	1.60						1.60	424.0	0.4289
2400	1.60						1.60	382.0	0.4474
MAR. 22									
0000	1.60						1.60	382.0	0.4474
0515	1.60						1.60	336.0	0.4720
0530	1.70						1.70	336.0	0.4742
0600	1.87						1.87	361.0	0.4789
0700	1.94						1.94	375.0	0.4846
0745	1.94						1.94	535.0	0.4903

STA. NO. 04155200		STORM RAINFALL AND RUNOFF RECORD					1979 WATER YEAR		
BARTON CREEK AT STATE HWY. 71 NEAR AUSTIN, TEXAS		STORM OF MAY 21-22, 1979					ACCUM.	DISCHARGE	ACCUM.
DATE & TIME		G A G E	N U M B E R				WEIGHTED PRECIP.	IN	RUNOFF
	184R						IN.	CFS	IN.
MAY 21									
0000	0.0						0.0	51.0	0.0025
0535	0.01						0.01	51.0	0.0091
1500	0.02						0.02	52.0	0.0139
1615	0.04						0.04	52.0	0.0145
1630	0.23						0.23	52.0	0.0149
1700	0.34						0.34	72.0	0.0169
1950	0.38						0.38	87.0	0.0196
2030	0.51						0.51	96.0	0.0213
2155	0.58						0.58	99.0	0.0226
2200	0.59						0.59	100.0	0.0227
2205	0.60						0.60	101.0	0.0229
2210	0.64						0.64	103.0	0.0230
2215	0.80						0.80	104.0	0.0232
2220	0.90						0.90	105.0	0.0233
2225	0.99						0.99	107.0	0.0235
2230	1.01						1.01	108.0	0.0236
2235	1.18						1.18	111.0	0.0238
2240	1.25						1.25	114.0	0.0240
2245	1.36						1.36	117.0	0.0241
2250	1.45						1.45	119.0	0.0243
2255	1.55						1.55	122.0	0.0255
2400	1.90						1.90	146.0	0.0278
MAY 22									
0000	1.90						1.90	146.0	0.0278
0130	1.98						1.98	240.0	0.0329
0200	1.99						1.99	368.0	0.0361
0230	2.01						2.01	535.0	0.0407
0300	2.05						2.05	1060.0	0.0499
0330	2.05						2.05	2030.0	0.0718
0415	2.05						2.05	2620.0	0.0944
0430	2.05						2.05	2650.0	0.1059
0445	2.05						2.05	2650.0	0.1402
0600	2.05						2.05	2330.0	0.1905
0715	2.05						2.05	1970.0	0.2246
0800	2.05						2.05	1460.0	0.2466
0900	2.05						2.05	926.0	0.2626
1000	2.05						2.05	722.0	0.2751
1100	2.05						2.05	562.0	0.2872
1230	2.06						2.06	432.0	0.3022
1500	2.06						2.06	323.0	0.3175

STA. NO. 0+155200		STORM RAINFALL AND RUNOFF RECORD					1979 WATER YEAR		
BARTON CREEK AT STATE HWY. 71 NEAR AUSTIN, TEXAS					STORM OF MAY 21-22, 1979		ACCUM. WEIGHTED	DISCHARGE IN	ACCUM. RUNOFF
DATE & TIME	G A G E N U M B E R					PRECIP. IN.		CFS	IN.
MAY 22									
1800	2.06					2.06		248.0	0.3282
2000	2.06					2.06		200.0	0.3386
2400	2.06					2.06		130.0	0.3442
MAY 23									
0000	2.06					2.06		130.0	0.3442
0200	2.06					2.06		110.0	0.3510
0600	2.06					2.06		96.0	0.3643
1800	2.06					2.06		83.0	0.3772
2400	2.06					2.06		74.0	0.3836
MAY 24									
0000	2.06					2.06		74.0	0.3836
0800	2.06					2.06		66.0	0.3953
1600	2.06					2.06		66.0	0.4044
2400	2.06					2.06		60.0	0.4106
MAY 25									
0000	2.06					2.06		60.0	0.4106
0800	2.06					2.06		59.0	0.4208
1600	2.06					2.06		56.0	0.4286
2400	2.06					2.06		52.0	0.4322

COLORADO RIVER BASIN

08155300 BARTON CREEK AT LOOP 360, AUSTIN, TX

LOCATION.--Lat 30°14'40", long 97°48'07", Travis County, Hydrologic Unit 12090205, on Loop 360, 0.9 mi (1.4 km) west of the intersection of Ben White and Lamar Boulevards, and 4.3 mi (6.9 km) southwest of the State Capitol Building in Austin.

DRAINAGE AREA.--116 mi² (300 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1975 to January 1977 (periodic gage heights and discharge measurements only), February 1977 to current year.

GAGE.--Water-stage recorder. Datum of gage is 510.32 ft (155.546 m) National Geodetic Vertical Datum of 1929 (State Department of Highways and Public Transportation bench mark).

REMARKS.--Records fair. No known regulation or diversions. There are two recording rain gages located in the watershed above station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,270 ft³/s (92.6 m³/s) Apr. 15, 1977, gage height, 7.67 ft (2.338 m); no flow for many days each year.

EXTREMES OUTSIDE PERIOD OF RECORD.--The flood of May 28, 1929, was probably the highest since that date, discharge 39,400 ft³/s (1,120 m³/s), based on a slope-area measurement of peak flow at a site about 2 mi (3 km) upstream.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,000 ft³/s (28.3 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Mar. 21	1000	2,660 75.3	7.08 2.158	May 21	2345	*3,010 85.2	7.38 2.249
Mar. 22	1700	1,570 44.5	6.18 1.884	May 22	0900	2,700 76.5	7.11 2.167
Apr. 21	0915	1,180 33.4	5.87 1.789				

Minimum discharge, no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	18	18	49	290	255	137	.00	3.7	.00
2	.00	.00	.00	17	17	47	416	283	163	.00	.00	.00
3	.00	.00	.00	16	18	48	280	227	129	.00	.00	.00
4	.00	.00	.00	15	25	44	257	201	113	.00	.00	.00
5	.00	.00	.00	15	82	38	231	180	113	.00	.00	.00
6	.00	.00	.00	16	309	35	212	168	121	.00	.00	.00
7	.00	.00	.00	17	249	33	195	152	103	.00	.00	.00
8	.00	.00	.00	13	191	31	198	139	93	.00	.00	.00
9	.00	.00	.00	10	150	29	177	130	87	.00	.00	.00
10	.00	.00	.00	18	133	26	165	123	79	.00	.00	.00
11	.00	.00	.00	388	118	26	156	115	70	.00	.00	.00
12	.00	.00	.00	192	107	25	135	108	64	.00	.00	.00
13	.00	.00	.00	135	95	23	121	94	59	.00	3.8	.00
14	.00	.00	.00	103	86	19	113	84	52	.00	3.4	.00
15	.00	.00	.00	90	76	18	106	77	45	.00	.00	.00
16	.00	.00	.00	85	62	24	100	73	39	.00	.00	.00
17	.00	.00	.00	77	59	32	107	67	34	.00	.00	.00
18	.00	.00	.00	70	57	32	130	63	28	.00	.00	.00
19	.00	.00	.00	63	53	28	129	59	25	.00	.00	.00
20	.00	.00	.00	50	51	146	119	56	20	.00	.00	.00
21	.00	.00	.00	43	47	929	529	388	17	5.8	.00	.00
22	.00	.00	.00	39	43	698	269	1140	14	5.7	.00	.00
23	.00	.00	.00	37	71	418	217	227	11	.00	.00	.00
24	.00	.00	.00	33	96	295	194	153	9.5	.00	.00	.00
25	.00	.00	.00	31	63	258	173	129	8.3	.00	.00	.00
26	.00	.00	.00	32	59	230	155	117	5.3	.00	.00	.00
27	.00	.00	.00	30	58	204	141	108	3.2	74	.00	.00
28	.00	.00	.00	25	55	195	130	104	1.9	82	.00	.00
29	.00	.00	.00	24	---	185	310	96	1.0	41	.00	.00
30	.00	.00	.00	24	---	196	234	94	.50	21	.00	.00
31	.00	---	13	20	---	249	---	91	---	11	.00	---
TOTAL	.00	.00	13.00	1746	2448	4610	5989	5301	1645.70	240.50	10.90	.00
MEAN	.0000	.0000	.42	56.3	87.4	149	200	171	54.9	7.76	.35	.0000
MAX	.00	.00	13	388	309	929	529	1140	163	82	3.8	.00
MIN	.00	.00	.00	10	17	18	100	56	.50	.00	.00	.00
CFSM	.0000	.0000	.004	.49	.75	1.28	1.72	1.47	.47	.07	.003	.0000
IN.	.00	.00	.00	.56	.79	1.48	1.92	1.70	.53	.08	.00	.00
AC-FT	.00	.00	26	3460	4860	9140	11880	10510	3260	477	22	.00
††	.43	5.81	2.90	2.83	3.22	5.02	5.36	4.00	1.41	7.10	1.90	2.18

CAL YR 1978	TOTAL	13.00	MEAN	.036	MAX	13	MIN	.00	CFSM	.0000	IN	.00	AC-FT	26	††	29.40
WTR YR 1979	TOTAL	22004.10	MEAN	60.3	MAX	1140	MIN	.00	CFSM	.52	IN	7.06	AC-FT	43650	††	42.16

†† Weighted-mean rainfall, in inches, based on two rain gages.

COLORADO RIVER BASIN

08155300 BARTON CREEK AT LOOP 360, AUSTIN, TX--Continued

PERIOD OF RECORD.--Periodic chemical, biochemical, and pesticide analyses: January to September 1979.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM- COBALT UNITS)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)
DEC 18...	--	.00	--	--	--	--	--	--	--	--
JAN 04...	1415	15	463	8.2	4.0	0	2.0	12.0	94	.4
10...	2330	102	453	8.1	--	0	10	--	--	.8
10...	2340	104	470	8.2	--	5	20	--	--	.4
11...	1220	593	401	7.9	6.0	10	100	12.2	101	1.5
FEB 06...	0745	260	449	8.2	--	0	30	--	--	.4
06...	1005	285	462	8.2	--	0	15	--	--	.3
28...	1020	57	467	8.1	12.0	0	.00	10.8	104	.9
MAR 21...	0800	875	360	8.6	--	50	90	--	--	1.9
21...	0840	2250	395	--	--	50	310	--	--	2.4
21...	0930	2660	404	8.4	--	10	360	--	--	2.2
21...	1010	2660	408	--	--	--	--	--	--	3.2
22...	1325	656	417	8.5	18.5	5	45	9.2	101	.8
APR 24...	1245	209	464	8.1	21.0	0	1.0	10.0	115	.6
MAY 21...	2030	936	218	8.1	--	100	660	--	--	4.7
21...	2100	2250	262	8.2	--	60	330	--	--	4.2
22...	0910	2700	389	8.3	--	30	310	--	--	3.5
22...	0930	2700	389	7.8	21.0	25	360	8.6	96	3.4
22...	1230	1580	250	8.1	--	150	480	--	--	4.3
JUN 12...	0930	68	421	7.8	23.0	3	.20	8.4	100	.1

DATE	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO
DEC 18...	--	--	--	--	--	--	--	--	--
JAN 04...	640	80	170	220	29	59	17	6.9	.2
10...	1600	92	880	230	30	63	17	7.5	.2
10...	1900	84	380	230	33	64	17	7.2	.2
11...	14000	2600	18000	200	17	56	14	5.1	.2
FEB 06...	1800	520	8400	240	39	68	16	4.6	.1
06...	1600	120	3800	230	23	65	16	5.3	.2
28...	440	18	64	--	--	--	--	--	--
MAR 21...	24000	8700	25000	190	32	53	13	5.2	.2
21...	18000	4000	7700	--	--	--	--	--	--
21...	13000	3300	6100	210	29	60	14	5.7	.2
21...	--	--	--	--	--	--	--	--	--
22...	10000	6800	4600	220	26	65	14	5.2	.2
APR 24...	340	15	600	--	--	--	--	--	--
MAY 21...	94000	50000	66000	100	21	33	4.9	2.9	.1
21...	87000	39000	50000	--	--	--	--	--	--
22...	20000	15000	17000	--	--	--	--	--	--
22...	33000	11000	27000	190	8	54	13	5.2	.2
22...	58000	18000	44000	--	--	--	--	--	--
JUN 12...	96	59	84	190	0	50	17	6.9	.2

COLORADO RIVER BASIN

08155300 BARTON CREEK AT LOOP 360, AUSTIN, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)
DEC 18...	--	--	--	--	--	--	--	--	--
JAN 04...	.9	230	0	34	15	.1	7.0	253	0
10...	.8	240	0	31	13	.2	7.0	258	14
10...	.9	240	0	31	13	.1	7.1	259	26
11...	1.3	220	0	18	10	.1	6.7	220	186
FEB 06...	1.0	240	0	26	12	.1	7.0	253	37
06...	.8	250	0	26	12	.1	6.9	255	21
28...	--	--	--	--	--	--	--	--	1
MAR 21...	1.3	180	4	19	9.3	.2	7.0	201	157
21...	--	--	--	--	--	--	--	--	644
21...	1.1	210	4	20	10	.2	7.1	226	836
21...	--	--	--	--	--	--	--	--	--
22...	1.2	220	8	20	9.6	.2	7.7	239	54
APR 24...	--	--	--	--	--	--	--	--	2
MAY 21...	2.8	100	0	19	5.4	.2	6.3	124	774
21...	--	--	--	--	--	--	--	--	536
22...	--	--	--	--	--	--	--	--	714
22...	1.4	220	0	17	10	.2	7.1	216	424
22...	--	--	--	--	--	--	--	--	768
JUN 12...	.9	240	0	19	12	.2	9.0	233	0

DATE	SOLIDS, VOLA- TILE, SUS- PENDED (MG/L)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
DEC 18...	--	--	--	--	--	--	--	--	--
JAN 04...	0	.44	.01	.45	.01	.19	.20	.02	1.6
10...	3	.45	.00	.45	.00	.40	.40	.02	2.3
10...	3	.47	.02	.49	.00	2.1	2.1	.02	2.1
11...	39	.47	.02	.49	.02	.08	.10	.06	7.6
FEB 06...	7	.19	.00	.19	.01	.19	.20	.05	3.0
06...	4	.23	.00	.23	.01	.09	.10	.03	2.7
28...	0	.33	.00	.33	.01	.00	.00	.01	2.3
MAR 21...	23	.19	.02	.21	.02	.59	.61	.01	6.3
21...	108	.27	.02	.29	.05	1.2	1.2	.10	18
21...	106	.26	.02	.28	.04	1.8	1.8	.10	26
21...	--	.27	.02	.29	.06	1.1	1.2	.11	30
22...	5	.16	.02	.18	.02	.30	.32	.01	4.7
APR 24...	0	.22	.00	.22	.02	.11	.13	.02	1.1
MAY 21...	166	.38	--	--	--	1.3	1.4	--	36
21...	122	.38	--	--	--	1.2	1.3	--	22
22...	140	.28	--	--	--	--	.00	--	30
22...	78	.28	--	--	--	.79	.84	--	36
22...	160	.24	.02	.26	.07	2.0	2.1	.18	28
JUN 12...	0	.02	.00	.02	.00	.37	.37	.00	6.1

DATE	TIME	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, DIS- SOLVED (UG/L AS CU)
JAN 04...	1415	0	20	<1	0	0
10...	2330	0	20	8	10	4
10...	2340	0	20	2	10	2
11...	1220	0	20	1	0	0
MAR 21...	0800	1	0	0	0	4
21...	0930	0	0	0	10	1
22...	1325	1	0	0	0	0
MAY 21...	2030	1	0	0	0	3
22...	0930	1	0	0	0	0
JUN 12...	0930	0	20	2	10	0

COLORADO RIVER BASIN

08155300 BARTON CREEK AT LOOP 360, AUSTIN, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, DIS- SOLVED (UG/L AS ZN)
JAN							
04...	<0	0	<1	.0	1	0	<3
10...	10	2	1	.0	0	1	30
10...	<0	0	<1	.0	0	1	<3
11...	10	0	<1	.0	0	0	<3
MAR							
21...	0	0	0	.0	0	0	20
21...	0	0	0	.1	0	0	10
22...	0	0	0	.0	0	0	10
MAY							
21...	70	0	0	.0	0	0	10
22...	10	0	0	.0	0	0	10
JUN							
12...	<0	0	<1	.0	0	0	<3

DATE	TIME	PCB, TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLOR- DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI- AZINON, TOTAL (UG/L)
JAN								
04...	1415	--	--	--	--	--	--	--
10...	2330	.0	.00	.0	.00	.00	.00	.00
10...	2340	.0	.00	.0	.00	.00	.00	.00
11...	1220	.0	.00	.0	.00	.00	.00	.00
MAR								
21...	0800	.0	.00	.0	.00	.00	.00	.10
21...	0930	.0	.00	.0	.00	.00	.00	.00
22...	1325	.0	.00	.0	.00	.00	.00	.01
MAY								
21...	2030	.0	.00	.0	.00	.00	.00	.26
JUN								
12...	0930	.0	.00	.0	.00	.00	.00	.00

DATE	DI- ELDRIN TOTAL (UG/L)	ENDO- SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	MALA- THION, TOTAL (UG/L)	METHYL PARA- THION, TOTAL (UG/L)
JAN									
04...	--	--	--	--	--	--	--	--	--
10...	.00	.00	.00	.00	.00	.00	.00	.00	.00
10...	.00	.00	.00	.00	.00	.00	.00	.00	.00
11...	.00	.00	.00	.00	.00	.00	.00	.00	.00
MAR									
21...	.00	.00	.00	.00	.00	.00	.00	.00	.00
21...	.00	.00	.00	.00	.00	.00	.00	.00	.00
22...	.00	.00	.00	.00	.00	.00	.00	.00	.00
MAY									
21...	.00	.00	.00	.00	.00	.00	.00	.00	.00
JUN									
12...	.00	.00	.00	.00	.00	.00	.00	.00	.00

DATE	METHYL TRI- THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	PARA- THION, TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOTAL TRI- THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
JAN								
04...	--	--	--	--	--	.00	.00	.00
10...	.00	.00	.00	0	.00	.00	.00	.00
10...	.00	.00	.00	0	.00	.00	.00	.00
11...	.00	.00	.00	0	.00	.01	.00	.00
MAR								
21...	.00	.00	.00	0	.00	.02	.00	.00
21...	.00	.00	.00	0	.00	.00	.00	.00
22...	.00	.00	.00	0	.00	.00	.00	.00
MAY								
21...	.00	.00	.00	0	.00	.04	.00	.00
JUN								
12...	.00	.00	.00	0	.00	.00	.00	.00

STA. NO.0H155300			STORM RAINFALL AND RUNOFF RECORD					1979 WATER YEAR			
BARTON CREEK AT LOOP 360, AUSTIN, TEXAS					STORM OF MARCH 20-22, 1979			ACCUM. WEIGHTED PRECIP.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.	
DATE & TIME	1RAR	2BAR	G A G E			N U M B E R			IN.		IN.
MAR. 20											
2100	0.06	0.03							0.05	123.0	0.0181
2200	0.15	0.08							0.13	125.0	0.0191
2215	0.41	0.08							0.33	125.0	0.0195
2230	0.88	0.23							0.73	123.0	0.0199
2245	1.05	0.56							0.94	123.0	0.0204
2300	1.09	0.66							0.99	121.0	0.0214
2400	1.13	0.77							1.05	123.0	0.0225
MAR. 21											
0000	1.13	0.77							1.05	123.0	0.0225
0040	1.14	0.77							1.05	123.0	0.0236
0100	1.33	0.84							1.22	127.0	0.0241
0115	1.40	1.09							1.33	141.0	0.0248
0145	1.46	1.23							1.41	158.0	0.0258
0215	1.54	1.28							1.48	168.0	0.0272
0300	1.58	1.30							1.52	182.0	0.0306
0500	1.58	1.30							1.52	208.0	0.0368
0730	1.58	1.30							1.52	208.0	0.0406
0745	1.58	1.30							1.52	236.0	0.0414
0800	1.58	1.30							1.52	875.0	0.0458
0830	1.58	1.30							1.52	2050.0	0.0595
0900	1.58	1.30							1.52	2460.0	0.0841
1000	1.58	1.30							1.52	2660.0	0.1197
1100	1.59	1.31							1.53	2500.0	0.1531
1200	1.59	1.31							1.53	2280.0	0.1835
1300	1.59	1.31							1.53	1920.0	0.2092
1400	1.59	1.31							1.53	1490.0	0.2291
1500	1.60	1.32							1.54	1190.0	0.2529
1700	1.60	1.32							1.54	836.0	0.2753
1900	1.60	1.32							1.54	673.0	0.2887
2000	1.60	1.32							1.54	614.0	0.3011
2200	1.60	1.32							1.54	529.0	0.3152
2400	1.60	1.32							1.54	471.0	0.3278
MAR. 22											
0000	1.60	1.32							1.54	471.0	0.3278
0400	1.60	1.32							1.54	410.0	0.3491
0530	1.70	1.37							1.62	398.0	0.3538
0545	1.81	1.78							1.80	398.0	0.3551
0600	1.87	1.88							1.87	398.0	0.3584
0700	1.94	2.02							1.96	417.0	0.3640
0800	1.94	2.02							1.96	430.0	0.3726

SIA. NO.0R155300										STORM RAINFALL AND RUNOFF RECORD			1979 WATER YEAR		
BARTON CREEK AT LOOP 360, AUSTIN, TEXAS										STORM OF MARCH 20-22, 1979			ACCUM.	DISCHARGE	ACCUM.
DATE & TIME										G A G E N U M B E R			WEIGHTED	IN	RUNOFF
													PRECIP.	CFS	IN.
													IN.		
MAR. 22															
1000	1.95	2.04											1.97	457.0	0.3848
1200	1.95	2.05											1.97	500.0	0.3982
1400	1.96	2.05											1.98	682.0	0.4118
1500	1.96	2.06											1.98	826.0	0.4201
1530	1.96	2.06											1.98	979.0	0.4267
1600	1.96	2.06											1.98	1240.0	0.4370
1645	1.96	2.06											1.98	1530.0	0.4472
1700	1.96	2.06											1.98	1570.0	0.4525
1715	1.96	2.06											1.98	1530.0	0.4729
1900	1.96	2.09											1.99	1160.0	0.5020
2100	1.96	2.09											1.99	845.0	0.5302
2400	1.96	2.09											1.99	639.0	0.5515
MAR. 23															
0000	1.96	2.09											1.99	639.0	0.5515
0400	1.96	2.09											1.99	507.0	0.5872
0800	1.96	2.09											1.99	430.0	0.6187
1500	1.96	2.09											1.99	373.0	0.6586
2400	1.96	2.09											1.99	322.0	0.6866
MAR. 24															
0000	1.96	2.09											1.99	322.0	0.6866
0800	1.96	2.09											1.99	299.0	0.7431
2400	1.96	2.09											1.99	274.0	0.7724

STA. NO.08155300			STORM RAINFALL AND RUNOFF RECORD					1979 WATER YEAR		
BARTON CREEK AT LOOP 360, AUSTIN, TEXAS			STORM OF MAY 21-22,1979					ACCUM.	DISCHARGE	ACCUM.
DATE & TIME			G A G E N U M B E R					WEIGHTED PRECIP.	IN	RUNOFF
			1BAR	2BAR				IN.	CFS	IN.
MAY 21										
0000	0.0	0.0						0.0	54.0	0.0020
0535	0.01	0.0						0.01	54.0	0.0072
1420	0.01	0.0						0.01	54.0	0.0106
1500	0.02	0.42						0.11	55.0	0.0113
1615	0.04	0.42						0.13	59.0	0.0120
1645	0.33	0.58						0.39	59.0	0.0123
1700	0.34	0.98						0.49	63.0	0.0126
1730	0.34	1.00						0.49	117.0	0.0134
1800	0.35	1.00						0.50	163.0	0.0145
1830	0.35	1.11						0.52	304.0	0.0167
1905	0.36	1.74						0.68	328.0	0.0181
1910	0.36	1.97						0.73	329.0	0.0185
1915	0.36	2.36						0.82	331.0	0.0188
1920	0.36	2.62						0.88	329.0	0.0192
1925	0.36	2.68						0.89	328.0	0.0196
1930	0.36	2.77						0.91	326.0	0.0199
1935	0.36	2.81						0.92	331.0	0.0203
1940	0.36	2.84						0.93	335.0	0.0207
1945	0.36	2.95						0.96	340.0	0.0211
1950	0.38	3.06						1.00	351.0	0.0215
1955	0.41	3.16						1.04	362.0	0.0219
2000	0.43	3.29						1.09	373.0	0.0223
2005	0.43	3.41						1.12	385.0	0.0248
2100	0.58	3.55						1.26	2250.0	0.0424
2115	0.58	3.55						1.26	2360.0	0.0503
2130	0.58	3.56						1.27	2280.0	0.0617
2200	0.59	4.07						1.39	1920.0	0.0713
2215	0.80	4.21						1.58	1800.0	0.0773
2230	1.01	4.35						1.78	1730.0	0.0860
2300	1.58	4.66						2.29	1900.0	0.0966
2320	1.58	4.68						2.29	2360.0	0.1071
2340	1.61	4.69						2.32	2900.0	0.1200
2400	1.90	4.82						2.57	3000.0	0.1317
MAY 22										
0000	1.90	4.82						2.57	3000.0	0.1317
0030	1.41	4.95						2.61	2630.0	0.1586
0115	1.96	5.00						2.66	2010.0	0.1788
0200	1.99	5.02						2.69	1310.0	0.1941
0300	2.05	5.07						2.74	885.0	0.2059
0400	2.05	5.07						2.74	682.0	0.2150

STA. NO.08155300				STORM RAINFALL AND RUNOFF RECORD				1979 WATER YEAR		
BARTON CREEK AT LOOP 360, AUSTIN, TEXAS				STORM OF MAY 21-22,1979				ACCUM.	DISCHARGE	ACCUM.
DATE & TIME				G A G E N U M B E R				WEIGHTED	IN	RUNOFF
								PRECIP.		
								IN.	CFS	IN.
MAY 22										
0500	2.05	5.07						2.74	559.0	0.2225
0600	2.05	5.07						2.74	493.0	0.2274
0630	2.05	5.07						2.74	464.0	0.2305
0700	2.05	5.07						2.74	485.0	0.2338
0730	2.05	5.07						2.74	1230.0	0.2420
0800	2.05	5.07						2.74	2250.0	0.2570
0830	2.05	5.07						2.74	2560.0	0.2741
0900	2.05	5.07						2.74	2700.0	0.2921
0930	2.05	5.07						2.74	2700.0	0.3192
1030	2.05	5.07						2.74	2510.0	0.3527
1130	2.06	5.07						2.75	2130.0	0.3741
1200	2.06	5.07						2.75	1850.0	0.3926
1300	2.06	5.07						2.75	1380.0	0.4133
1415	2.06	5.07						2.75	1000.0	0.4300
1530	2.06	5.07						2.75	798.0	0.4447
1700	2.06	5.07						2.75	647.0	0.4576
1830	2.06	5.07						2.75	543.0	0.4685
2000	2.06	5.07						2.75	457.0	0.4777
2130	2.06	5.07						2.75	348.0	0.4883
2400	2.06	5.07						2.75	331.0	0.4961
MAY 23										
0000	2.06	5.07						2.75	331.0	0.4961
0200	2.06	5.07						2.75	299.0	0.5063
0400	2.06	5.07						2.75	274.0	0.5172
0800	2.06	5.07						2.75	236.0	0.5298
1200	2.06	5.07						2.75	219.0	0.5445
1800	2.06	5.07						2.75	191.0	0.5598
2400	2.06	5.07						2.75	171.0	0.5712
MAY 24										
0000	2.06	5.07						2.75	171.0	0.5712
0800	2.06	5.07						2.75	158.0	0.5927
1600	2.06	5.07						2.75	150.0	0.6087
2400	2.06	5.07						2.75	136.0	0.6196
MAY 25										
0000	2.06	5.07						2.75	136.0	0.6196
0800	2.06	5.07						2.75	130.0	0.6371
1600	2.06	5.07						2.75	127.0	0.6507
2400	2.06	5.07						2.75	121.0	0.6572

COLORADO RIVER BASIN

08155500 BARTON SPRINGS AT AUSTIN, TX

LOCATION.--Lat 30°15'48", long 97°46'16", Travis County, Hydrologic Unit 12090205, at ground-water well (YD 58-42-903), on right bank 0.4 mi (0.6 km) upstream from Barton Springs Road bridge over Barton Creek, 0.7 mi (1.1 km) upstream from mouth, and 1.8 mi (2.9 km) southwest of the State Capitol Building in Austin.

DRAINAGE AREA.--Not applicable. Only flow from springs is published for this station.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--November 1894 to April 1917, and October 1918 to February 1978 (discharge measurements only), May 1917 to September 1918 (published as "Barton Creek at Austin, Texas"), and March 1978 to current year.

GAGE.--Water-stage recorder. Datum of gage, at ground-water well (YD 58-42-903), is 462.34 ft (140.92 m) National Geodetic Vertical Datum of 1929. May 1917 to September 1918, nonrecording gage at site 1,000 ft (305 m) downstream at different datum.

REMARKS.--Water-discharge records fair. Entire flow published is springflow from the Edwards and associated limestones in the Balcones Fault Zone. This station is part of an urban hydrologic project to study the ground-water resources in the Austin urban area.

EXTREMES FOR PERIOD OF RECORD (DISCHARGE MEASUREMENTS ONLY).--Maximum measured discharge, 166 ft³/s (4.70 m³/s) May 10, 1941; minimum measured, 9.6 ft³/s (0.27 m³/s) Mar. 29, 1956.

EXTREMES FOR PERIOD OF RECORD (1917-18 AND SINCE MARCH 1978).--Maximum daily discharge, 108 ft³/s (3.06 m³/s) June 9-11, 16, 20, 21, 1979; minimum daily, 12 ft³/s (0.34 m³/s) Feb. 25, 1918.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 108 ft³/s (3.06 m³/s) June 9-11, 16, 20, 21; minimum daily, 22 ft³/s (0.62 m³/s) Oct. 6, 7.

DISCHARGE, IN CUBIC FEET PER SECOND, MARCH TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1						41	32	31	32	26	19	22
2						41	32	30	31	25	21	24
3						40	32	30	31	25	20	24
4						40	32	30	31	25	20	23
5						40	32	30	31	24	20	23
6						41	32	31	31	21	21	23
7						41	31	31	32	24	22	23
8						40	31	31	35	24	24	23
9						40	31	31	34	23	25	24
10						42	31	31	35	23	24	24
11						41	32	31	35	22	24	25
12						42	32	30	35	21	25	25
13						40	31	31	35	20	24	25
14						42	30	31	34	20	23	24
15						41	31	31	33	20	22	23
16						41	31	31	32	20	22	26
17						39	31	31	32	20	21	26
18						39	31	30	32	20	21	26
19						40	31	31	31	20	22	26
20						39	31	31	31	20	22	26
21						39	30	31	30	20	22	25
22						39	30	32	29	20	22	24
23						40	30	31	28	21	24	25
24						33	30	31	29	20	23	26
25						34	30	30	28	19	23	26
26						34	31	30	28	20	23	26
27						34	30	31	28	19	23	26
28						34	30	31	27	19	23	25
29						33	31	32	27	19	23	24
30						33	31	32	27	20	24	25
31						31	---	32	---	20	23	---
TOTAL						1194	930	957	934	660	695	737
MEAN						38.5	31.0	30.9	31.1	21.3	22.4	24.6
MAX						42	32	32	35	26	25	26
MIN						31	30	30	27	19	19	22
AC-FT						2370	1840	1900	1850	1310	1380	1460

WTR YR 1978 TOTAL - MEAN - MAX - MIN - AC-FT

COLORADO RIVER BASIN

08155500 BARTON SPRINGS AT AUSTIN, TX--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25	32	37	50	69	84	91	101	105	102	96	88
2	24	30	37	51	69	84	91	102	105	102	96	88
3	24	30	37	52	69	84	92	102	106	101	96	88
4	24	28	37	52	69	84	93	101	107	101	96	87
5	24	30	37	52	74	84	94	101	106	101	96	87
6	22	30	38	54	84	85	94	101	105	100	96	87
7	22	28	37	55	85	84	93	102	105	100	95	87
8	23	31	37	55	77	84	93	102	106	100	95	86
9	23	31	37	53	78	83	93	102	108	100	95	86
10	23	31	37	55	78	82	95	102	108	99	94	85
11	23	31	37	64	79	83	95	102	108	99	94	85
12	23	31	37	72	80	83	94	101	105	99	94	85
13	23	31	36	71	80	84	92	101	105	98	94	85
14	25	31	36	70	80	83	92	101	106	98	94	85
15	25	32	36	68	80	81	92	101	107	98	94	85
16	24	32	36	67	80	81	92	101	108	97	94	84
17	24	33	36	70	80	82	93	101	107	97	93	84
18	25	33	36	70	79	82	93	101	107	97	93	84
19	24	34	37	70	79	82	97	101	107	97	93	83
20	23	35	36	70	81	83	98	101	108	96	93	83
21	25	35	35	69	80	84	98	101	108	96	92	82
22	26	36	35	69	79	84	98	103	107	96	92	82
23	26	38	35	69	83	85	97	105	107	95	91	82
24	26	38	36	68	86	85	98	107	107	95	91	80
25	26	39	35	70	84	85	98	106	106	95	91	80
26	23	39	36	70	84	86	98	106	105	94	91	79
27	25	40	35	69	84	86	98	106	105	96	91	79
28	27	39	35	69	84	86	99	106	104	98	90	78
29	27	38	35	69	---	86	100	106	103	99	90	78
30	28	37	35	69	---	92	100	106	103	99	90	77
31	29	---	44	69	---	91	---	106	---	97	89	---
TOTAL	761	1003	1130	1981	2214	2612	2851	3185	3184	3042	2889	2509
MEAN	24.5	33.4	36.5	63.9	79.1	84.3	95.0	103	106	98.1	93.2	83.6
MAX	29	40	44	72	86	92	100	107	108	102	96	88
MIN	22	28	35	50	69	81	91	101	103	94	89	77
AC-FT	1510	1990	2240	3930	4390	5180	5650	6320	6320	6030	5730	4980
CAL YR 1978	TOTAL	-	MEAN	-	MAX	-	MIN	-	AC-FT	-		
WTR YR 1979	TOTAL	27361	MEAN	75.0	MAX	108	MIN	22	AC-FT	54270		

COLORADO RIVER BASIN
08155500 BARTON SPRINGS AT AUSTIN, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical, biochemical, and pesticide analyses: December 1978 to September 1979.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM COBALT UNITS)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)
FEB 28...	0950	84	590	7.7	18.0	0	2.0	7.8	85	.5
JUL 10...	0700	99	580	7.5	22.5	--	--	--	--	--
SEP 19...	1005	83	593	7.0	21.0	0	.30	7.4	82	.3

DATE	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOC- CI, FECAL, KF ACAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
FEB 28...	460	140	160	300	47	91	18	12	.3	1.0
JUL 10...	200	25	10	--	--	--	--	--	--	--
SEP 19...	700	420	18	300	32	85	20	13	.3	1.1

DATE	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	SOLIDS, VOLA- TILE, SUS- PENDED (MG/L)
FEB 28...	310	0	25	26	.2	9.5	336	4	1
JUL 10...	--	--	--	--	--	--	--	--	--
SEP 19...	320	--	31	26	.3	11	345	5	0

DATE	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)
FEB 28...	1.0	.00	1.0	.01	.09	.10	.020	1.2	--
JUL 10...	1.4	.00	1.4	.02	.23	.25	.010	--	.00
SEP 19...	1.6	.00	1.6	.07	.11	.18	.000	1.7	--

DATE	TIME	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)
DEC 05...	1245	0	600	0	0	0	10
FEB 28...	0950	0	100	0	0	0	0
SEP 19...	1005	1	50	1	10	0	10

DATE	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, DIS- SOLVED (UG/L AS ZN)
DEC 05...	0	0	.0	1	0	10
FEB 28...	0	10	.0	1	0	10
SEP 19...	0	1	.2	0	0	3

COLORADO RIVER BASIN

08155500 BARTON SPRINGS AT AUSTIN, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	PCB, TOTAL (UG/L)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLOR- DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI- AZINON, TOTAL (UG/L)
DEC 05...	1245	.0	.00	.00	.0	.00	.00	.00	.00
FEB 28...	0950	.0	--	.00	.0	.00	.00	.00	.00

DATE	DI- ELDRIN TOTAL (UG/L)	ENDO- SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	MALA- THION, TOTAL (UG/L)	METHYL PARA- THION, TOTAL (UG/L)
DEC 05...	.00	.00	.00	.00	.00	.00	.00	.00	.00
FEB 28...	.00	.00	.00	.00	.00	.00	.00	.00	.00

DATE	METHYL TRI- THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	PARA- THION, TOTAL (UG/L)	TOX- THION, APHENE, TOTAL (UG/L)	TOTAL TRI- THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
DEC 05...	.00	--	.00	0	.00	.00	.00	.00
FEB 28...	.00	.00	.00	0	.00	.00	.00	.00

COLORADO RIVER BASIN

08155505 BARTON CREEK BELOW BARTON SPRINGS AT AUSTIN, TX
(Reconnaissance partial-record station)

LOCATION.--Lat 30°15'50", long 97°46'03", Travis County, Hydrologic Unit 12090205, 800 ft (240 m) upstream from bridge on Barton Springs Road and 1.8 mi (2.9 km) southwest of State Capitol at Austin.

DRAINAGE AREA.--125.3 mi² (324.5 km²).

PERIOD OF RECORD.--Occasional discharge measurements and water-quality data: January 1975 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM COBALT UNITS)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)
JAN 19...	1100	109	506	7.9	15.0	1	2.0	9.4	96	.1
FEB 28...	0925	142	496	7.7	13.5	0	10	10.2	101	.7
APR 25...	1045	257	486	7.5	21.5	0	3.0	8.8	102	.5
JUN 13...	0930	152	502	7.3	22.5	5	.60	8.3	98	.1
SEP 19...	1130	85	605	7.2	21.5	3	14	8.2	92	.2

DATE	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO
JAN 19...	--	--	--	260	38	76	17	7.3	.2
FEB 28...	600	80	210	--	--	--	--	--	--
APR 25...	1400	33	560	260	35	73	18	7.7	.2
JUN 13...	360	48	52	--	--	--	--	--	--
SEP 19...	2400	920	210	280	9	79	20	14	.4

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)
JAN 19...	1.1	270	0	29	20	.1	7.6	291	2
FEB 28...	--	--	--	--	--	--	--	--	22
APR 25...	1.1	270	0	19	14	.2	7.6	274	3
JUN 13...	--	--	--	--	--	--	--	--	0
SEP 19...	1.2	330	0	23	19	.2	11	330	8

DATE	SOLIDS, VOLA- TILE, SUS- PENDED (MG/L)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
JAN 19...	1	.70	.00	.70	.00	.10	.10	.010	2.4
FEB 28...	5	.47	.00	.47	.03	.07	.10	.010	2.1
APR 25...	0	.33	.00	.33	.05	.08	.13	.010	1.9
JUN 13...	0	.38	.02	.40	.00	.39	.39	.030	3.4
SEP 19...	2	1.6	.00	1.6	.01	.26	.27	.000	1.8

COLORADO RIVER BASIN

08155505 BARTON CREEK BELOW BARTON SPRINGS AT AUSTIN, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)
APR 25...	1045	0	0	0	0	1	10
SEP 19...	1130	1	50	<1	20	1	<10

DATE	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, DIS- SOLVED (UG/L AS ZN)
APR 25...	0	0	.0	0	0	10
SEP 19...	0	<1	.7	1	0	<3

DATE	TIME	PCB, TOTAL (UG/L)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLOR- DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI- AZINON, TOTAL (UG/L)
APR 25...	1045	--	.00	.00	.0	.00	.00	.00	.00
SEP 19...	1130	.0	--	.00	.0	.00	.00	.00	.00

DATE	DI- ELDRIN TOTAL (UG/L)	ENDO- SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	MALA- THION, TOTAL (UG/L)	METH- OXY- CHLOR, TOTAL (UG/L)
APR 25...	.00	.00	.00	.00	.00	--	.00	.00	--
SEP 19...	.00	.00	.00	.00	.00	.00	.00	.00	.00

DATE	METHYL PARA- THION, TOTAL (UG/L)	METHYL TRI- THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	PARA- THION, TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOTAL TRI- THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
APR 25...	.00	--	--	.00	0	.00	.00	.00	.00
SEP 19...	.00	.00	.00	.00	0	.00	.00	.00	.00

WEST BOULDIN CREEK DRAINAGE BASIN

The locations of data-collection sites in the West Bouldin Creek drainage basin are shown on figure 10.

A summary of storm rainfall and runoff for the basin is shown in table 6.

Daily and monthly rainfall totals for the 1979 water year are given in table 14.

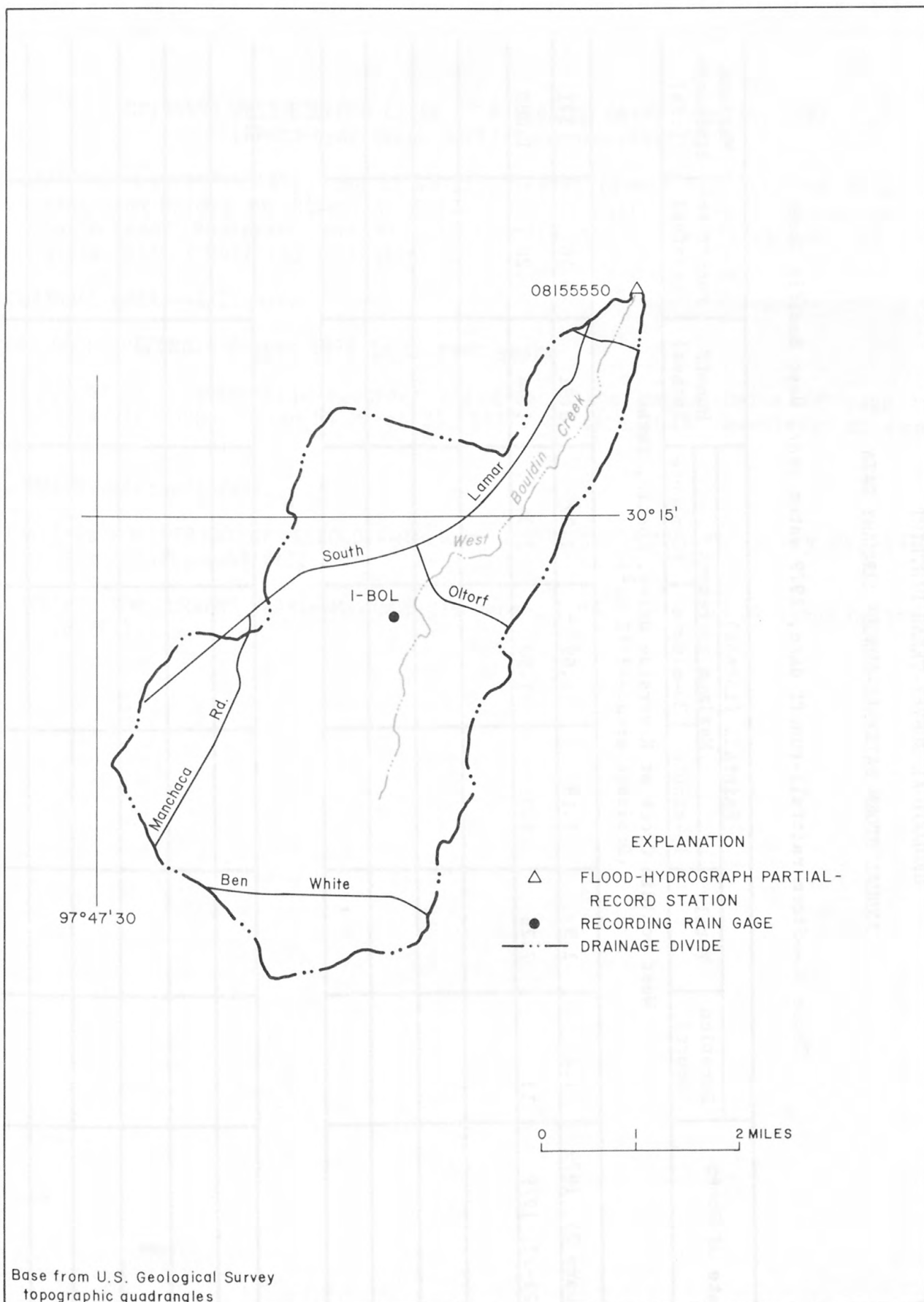


Figure 10.-Locations of surface-water data-collection sites in the West Bouldin Creek drainage basin

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UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY-TEXAS DISTRICT

ANNUAL STORM RAINFALL-RUNOFF SUMMARY DATA

Table 6.--Storm rainfall-runoff data, 1979 water year, West Bouldin Creek

Date of Storm	Rainfall (inches)					Runoff (inches)	Ratio runoff to rainfall	Maximum discharge (cfs)
	Duration (hours)	Total	Maximum increment					
			15-minute	30-minute	60-minute			

West Bouldin Creek at Riverside Drive, Austin, Texas
(Drainage area.--3.12 mi²)

February 23, 1979	1.4	1.93	1.18	1.69	1.87	0.31	0.16	371
May 21-22, 1979	13	7.26	1.05	1.90	2.34	1.44	.20	1,080

[illegible]

08155550 WEST BOULDIN CREEK AT RIVERSIDE DRIVE, AUSTIN, TEX.
(Flood-hydrograph partial-record station)

LOCATION.--Lat 30°15'49", long 97°45'17", Travis County, on upstream side of eastbound bridge on Riverside Drive, 0.1 mi east of the intersection of South Lamar Boulevard and Riverside Drive and 1.2 mi southwest of the State Capitol Building in Austin.

DRAINAGE AREA.--3.12 mi².

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

GAGE.--Digital water-stage recorder and crest-stage gage. Datum of gage is 434.42 ft NGVD. Prior to March 31, 1977, at site 30 ft downstream at same datum.

REMARKS.--Records fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,080 ft³/s May 21, 1979 (gage height, 4.64 ft).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,080 ft³/s May 21 (gage height, 4.64 ft).

SIA. NO.08155550									
STORM RAINFALL AND RUNOFF RECORD									
1979 WATER YEAR									
WEST BOULDIN CREEK AT RIVERSIDE DRIVE, AUSTIN, TEXAS									
STORM OF FEBRUARY 23, 1979									
DATE & TIME	G A G E N U M B E R						ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
FER. 23	1401								
0000	0.0						0.0	0.0	0.0
0545	0.01						0.01	0.0	0.0
0900	0.01						0.01	0.0	0.0
0925	0.05						0.05	0.2	0.0000
0930	0.06						0.06	0.2	0.0000
0935	0.07						0.07	0.3	0.0000
0940	0.09						0.09	0.5	0.0001
0945	0.11						0.11	0.8	0.0001
0950	0.16						0.16	1.0	0.0001
0955	0.23						0.23	2.0	0.0002
1000	0.43						0.43	5.0	0.0004
1005	0.82						0.82	10.0	0.0008
1010	1.19						1.19	27.0	0.0020
1015	1.61						1.61	59.0	0.0044
1020	1.85						1.85	92.0	0.0082
1025	1.92						1.92	120.0	0.0157
1035	1.92						1.92	250.0	0.0364
1045	1.92						1.92	320.0	0.0562
1050	1.92						1.92	371.0	0.0716
1055	1.92						1.92	331.0	0.0921
1105	1.92						1.92	315.0	0.1182
1115	1.92						1.92	342.0	0.1394
1120	1.92						1.92	291.0	0.1575
1130	1.92						1.92	301.0	0.1824
1140	1.92						1.92	237.0	0.2020
1150	1.92						1.92	183.0	0.2172
1200	1.92						1.92	126.0	0.2302
1215	1.93						1.93	77.0	0.2398
1230	1.93						1.93	60.0	0.2510
1300	1.93						1.93	40.0	0.2659
1400	1.93						1.93	27.0	0.2860
1600	1.93						1.93	12.0	0.2979
1800	1.93						1.93	5.0	0.3041
2100	1.93						1.93	1.0	0.3056
2400	1.93						1.93	0.5	0.3060

STATION NO. 04155550							STORM RAINFALL AND RUNOFF RECORD			1979 WATER YEAR		
WEST ROULIN CREEK AT RIVERSIDE DRIVE, AUSTIN, TEXAS							STORM OF MAY 21-22, 1979			ACCUM.	DISCHARGE	ACCUM.
DATE & TIME							G A G E N U M B E R			WEIGHTED PRECIP.	IN	RUNOFF
										IN.	CFS	IN.
MAY 21												
0000	0.0									0.0	0.0	0.0
1435	0.08									0.08	0.1	0.0004
1455	0.40									0.40	1.0	0.0007
1600	0.43									0.43	15.0	0.0094
1715	0.51									0.51	10.0	0.0127
1720	0.71									0.71	43.0	0.0145
1725	1.05									1.05	77.0	0.0177
1730	1.50									1.50	91.0	0.0215
1735	1.76									1.76	128.0	0.0268
1740	1.94									1.94	169.0	0.0338
1745	2.33									2.33	253.0	0.0442
1750	2.61									2.61	278.0	0.0557
1755	2.65									2.65	270.0	0.0669
1800	2.68									2.68	283.0	0.0786
1805	2.69									2.69	304.0	0.0912
1810	2.80									2.80	323.0	0.1046
1815	2.85									2.85	304.0	0.1297
1830	3.07									3.07	442.0	0.1755
1840	3.59									3.59	576.0	0.2112
1845	3.77									3.77	800.0	0.2443
1850	3.93									3.93	1080.0	0.2890
1855	3.94									3.94	800.0	0.3221
1900	3.94									3.94	605.0	0.3722
1915	3.94									3.94	430.0	0.4345
1935	3.95									3.95	231.0	0.4680
1950	4.32									4.32	197.0	0.4884
2000	4.83									4.83	291.0	0.5185
2015	4.95									4.95	421.0	0.5795
2035	5.56									5.56	576.0	0.6748
2055	5.61									5.61	484.0	0.7549
2115	6.00									6.00	421.0	0.8159
2130	6.26									6.26	357.0	0.9046
2215	6.28									6.28	239.0	0.9936
2300	6.29									6.29	116.0	1.0200
2310	6.30									6.30	101.0	1.0326
2330	6.71									6.71	122.0	1.0578
2400	6.76									6.76	145.0	1.0848
MAY 22												
0000	6.76									6.76	145.0	1.0848
0030	7.09									7.09	171.0	1.1469

STA. NO. 04155550							STORM RAINFALL AND RUNOFF RECORD			1979 WATER YEAR		
WEST BOULDIN CREEK AT RIVERSIDE DRIVE, AUSTIN, TEXAS							STORM OF MAY 21-22, 1979			ACCUM.	DISCHARGE	ACCUM.
DATE & TIME							G A G E N U M B E R			WEIGHTED	IN	RUNOFF
										PRECIP.		
										IN.	CFS	IN.
MAY 22												
0115		7.14								7.14	156.0	1.2050
0200		7.21								7.21	109.0	1.2524
0300		7.26								7.26	62.0	1.2986
0500		7.26								7.26	45.0	1.3433
0700		7.26								7.26	35.0	1.3867
1000		7.26								7.26	20.0	1.4115
1200		7.26								7.26	10.0	1.4240
1500		7.26								7.26	5.0	1.4314
1800		7.26								7.26	2.0	1.4344
2100		7.26								7.26	1.0	1.4359
2400		7.26								7.26	0.5	1.4363

SHOAL CREEK DRAINAGE BASIN

The locations of data-collection sites in the Shoal Creek drainage basin are shown on figure 11.

A summary of storm rainfall and runoff for the basin is shown in table 7.

The peak discharges associated with the water-quality samples collected during storms at the Shoal Creek at 12th Street site are shown in table 3.

Daily and monthly rainfall totals for the 1979 water year are given in table 13.

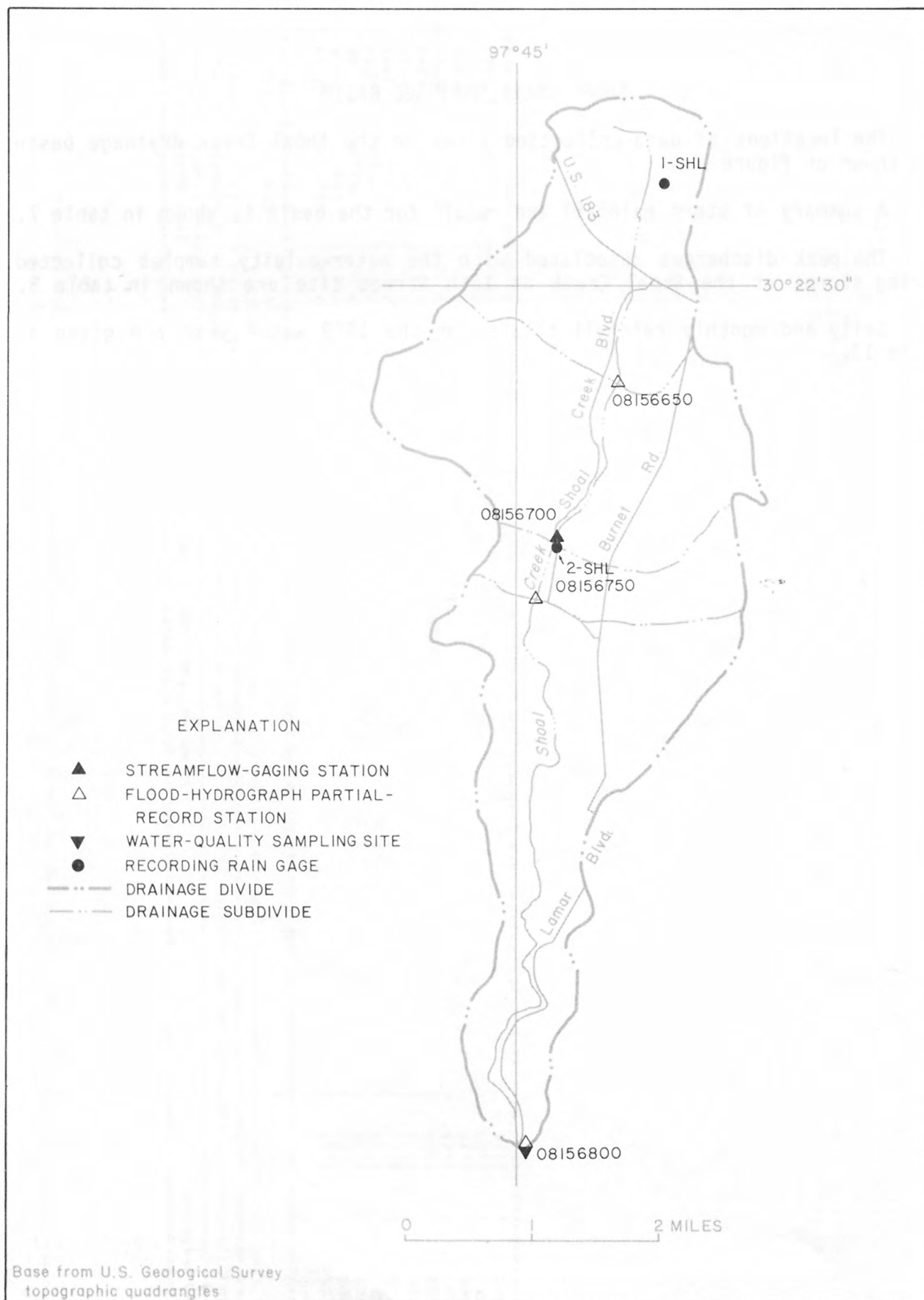


Figure 11.- Locations of surface-water data-collection sites in the Shoal Creek drainage basin

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UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY-TEXAS DISTRICT

ANNUAL STORM RAINFALL-RUNOFF SUMMARY DATA

Table 7.--Storm rainfall-runoff data, 1979 water year, Shoal Creek

Date of Storm	Rainfall (inches)					Runoff (inches)	Ratio runoff to rainfall	Maximum discharge (ft ³ /s)
	Duration (hours)	Total	Maximum increment					
			15-minute	30-minute	60-minute			

Shoal Creek at Steck Avenue, Austin, Texas
(Drainage area.--3.19 mi²)

December 31, 1978	7	2.42	0.59	0.92	1.43	0.71	0.29	705
May 21, 1979	10	1.99	.41	.68	.89	.27	.14	200
July 19-20, 1979	7	2.59	.59	.95	1.18	.56	.22	957

Shoal Creek at Northwest Park, Austin, Texas
(Drainage area.--7.03 mi²)

December 31, 1978	7	2.43	0.59	0.92	1.43	0.43	0.18	875
May 21-22, 1979	13	3.19	.68	.99	1.08	.50	.16	852
July 19-20, 1979	4	3.19	.60	1.00	1.57	.59	.18	2,110

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UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY-TEXAS DISTRICT

ANNUAL STORM RAINFALL-RUNOFF SUMMARY DATA

Table 7.--Storm rainfall-runoff data, 1979 water year, Shoal Creek--Continued

Date of Storm	Rainfall (inches)					Runoff (inches)	Ratio runoff to rainfall	Maximum discharge (ft ³ /s)
	Duration (hours)	Total	Maximum increment					
			15-minute	30-minute	60-minute			
Shoal Creek at White Rock Drive, Austin, Texas (Drainage area.--7.56 mi ²)								
December 31, 1978	6	2.43	0.59	0.92	1.43	0.42	0.17	994
May 21-22, 1979	13	3.23	.68	.99	1.08	.75	.23	976
July 19-20, 1979	7	3.33	.67	1.00	1.57	.69	.21	1,920
Shoal Creek at 12th Street, Austin, Texas (Drainage area.--12.8 mi ²)								
December 31, 1978	6	2.42	0.59	0.92	1.41	0.69	0.28	2,070
May 21-22, 1979	13	3.46	.68	.99	1.08	1.99	.57	4,970
July 19-20, 1979	7	3.48	.67	1.00	1.57	1.22	.35	2,670

08156650 SHOAL CREEK AT STECK AVENUE, AUSTIN, TEX.
(Flood-hydrograph partial-record station)

LOCATION.--Lat 30°21'55", long 97°44'11", Travis County, on downstream side of bridge on Steck Avenue, 0.5 mi west of the intersection of Burnet Road and Steck Avenue, and 6.3 mi north of the State Capitol Building in Austin.

DRAINAGE AREA.--3.19 mi².

PERIOD OF RECORD.--April 1975 to current year. Periodic measurements only, November 1974 to April 1975.

GAGE.--Digital water-stage recorder and crest-stage gage. Datum of gage is 703.00 ft NGVD.

REMARKS.--Records fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,590 ft³/s Nov. 23, 1974 (gage height, 4.34 ft).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 957 ft³/s July 19 (gage height, 3.63 ft).

STA. NO.08156650		STORM RAINFALL AND RUNOFF RECORD						1979 WATER YEAR		
SHOAL CREEK AT STECK AVENUE, AUSTIN, TEXAS		STORM OF DECEMBER 31, 1978						ACCUM.	DISCHARGE	ACCUM.
DATE & TIME		G A G E N U M B E R						WEIGHTED PRECIP.	IN	RUNOFF
		1SHL						IN.	CFS	IN.
DEC. 31										
0000	0.0							0.0	0.2	0.0000
0005	0.01							0.01	0.2	0.0001
0155	0.04							0.04	0.5	0.0004
0210	0.21							0.21	4.0	0.0009
0230	0.32							0.32	16.0	0.0032
0245	0.33							0.33	44.0	0.0076
0255	0.36							0.36	22.0	0.0090
0300	0.48							0.48	17.0	0.0097
0305	0.54							0.54	17.0	0.0103
0310	0.62							0.62	30.0	0.0116
0315	0.70							0.70	48.0	0.0135
0320	0.81							0.81	79.0	0.0167
0325	0.95							0.95	127.0	0.0218
0330	1.11							1.11	147.0	0.0278
0335	1.14							1.14	190.0	0.0355
0340	1.44							1.44	291.0	0.0473
0345	1.59							1.59	358.0	0.0618
0350	1.73							1.73	421.0	0.0788
0355	1.79							1.79	517.0	0.1102
0405	1.86							1.86	673.0	0.1647
0415	1.89							1.89	705.0	0.2075
0420	1.91							1.91	673.0	0.2892
0445	2.00							2.00	545.0	0.3775
0500	2.08							2.08	411.0	0.4523
0530	2.23							2.23	321.0	0.5303
0600	2.32							2.32	236.0	0.5876
0630	2.37							2.37	162.0	0.6270
0700	2.41							2.41	111.0	0.6539
0730	2.42							2.42	71.0	0.6755
0815	2.42							2.42	32.0	0.6910
0930	2.42							2.42	13.0	0.6997
1100	2.42							2.42	5.0	0.7064
1500	2.42							2.42	1.0	0.7091

STA. NO. 08156650		STORM RAINFALL AND RUNOFF RECORD					1979 WATER YEAR		
SHOAL CREEK AT STECK AVENUE, AUSTIN, TEXAS		STORM OF MAY 21, 1979					ACCUM.	DISCHARGE	ACCUM.
DATE & TIME		G A G E N U M B E R					WEIGHTED PRECIP.	IN	RUNOFF
		ISHL					IN.	CFS	IN.
MAY 21									
0000		0.0					0.0	0.1	0.0003
1420		0.01					0.01	0.1	0.0007
1425		0.05					0.05	0.1	0.0007
1430		0.08					0.08	0.2	0.0007
1435		0.10					0.10	0.4	0.0007
1440		0.11					0.11	0.6	0.0008
1445		0.19					0.19	1.0	0.0008
1450		0.40					0.40	2.0	0.0009
1455		0.49					0.49	5.0	0.0011
1500		0.60					0.60	10.0	0.0015
1505		0.71					0.71	15.0	0.0021
1510		0.79					0.79	30.0	0.0033
1515		0.86					0.86	50.0	0.0053
1520		0.90					0.90	53.0	0.0085
1530		0.91					0.91	84.0	0.0153
1540		0.91					0.91	75.0	0.0199
1545		0.91					0.91	84.0	0.0250
1555		0.91					0.91	53.0	0.0293
1605		0.91					0.91	43.0	0.0363
1635		0.91					0.91	32.0	0.0434
1700		1.08					1.08	41.0	0.0492
1710		1.09					1.09	63.0	0.0543
1720		1.11					1.11	93.0	0.0637
1735		1.11					1.11	59.0	0.0733
1800		1.18					1.18	38.0	0.0802
1820		1.33					1.33	36.0	0.0875
1850		1.34					1.34	34.0	0.0943
1910		1.34					1.34	38.0	0.1005
1930		1.76					1.76	65.0	0.1084
1940		1.77					1.77	156.0	0.1210
1950		1.79					1.79	194.0	0.1328
1955		1.80					1.80	200.0	0.1409
2000		1.81					1.81	174.0	0.1515
2010		1.84					1.84	187.0	0.1780
2035		1.93					1.93	153.0	0.2058
2055		1.93					1.93	127.0	0.2238
2110		1.93					1.93	93.0	0.2370
2130		1.93					1.93	50.0	0.2451
2150		1.94					1.94	38.0	0.2520

SIA. NO.08156650		STORM RAINFALL AND RUNOFF RECORD					1979 WATER YEAR		
SHOAL CREEK AT STECK AVENUE, AUSTIN, TEXAS					STORM OF MAY 21, 1979		ACCUM. WEIGHTED PRECIP.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
DATE & TIME	ISHL		G A G E	N U M B E R			IN.		
MAY 21									
2215	1.96						1.96	34.0	0.2616
2300	1.94						1.99	19.0	0.2697

SIA. NO.08156650									
STORM RAINFALL AND RUNOFF RECORD									
1979 WATER YEAR									
SHOAL CREEK AT STECK AVENUE, AUSTIN, TEXAS									
STORM OF JULY 19-20, 1979									
DATE & TIME	G A G E N U M B E R						ACCUM. WEIGHTED PRECIP.	DISCHARGE IN	ACCUM. RUNOFF
	ISHL						IN.	CFS	IN.
JULY 19									
0000	0.0						0.0	0.1	0.0004
1515	0.01						0.01	0.1	0.0008
1840	0.01						0.01	0.1	0.0009
1845	0.05						0.05	0.1	0.0009
1850	0.09						0.09	0.3	0.0009
1855	0.34						0.34	0.5	0.0009
1900	0.50						0.50	1.0	0.0010
1905	0.68						0.68	1.5	0.0010
1910	0.81						0.81	2.0	0.0011
1915	0.93						0.93	3.0	0.0012
1920	1.04						1.04	4.0	0.0014
1925	1.12						1.12	5.0	0.0016
1930	1.16						1.16	7.0	0.0019
1935	1.18						1.18	8.9	0.0023
1940	1.19						1.19	26.0	0.0044
1955	1.24						1.24	98.0	0.0143
2005	1.26						1.26	111.0	0.0255
2020	1.34						1.34	108.0	0.0386
2035	1.44						1.44	65.0	0.0465
2050	1.64						1.64	69.0	0.0535
2100	1.97						1.97	218.0	0.0667
2105	2.08						2.08	386.0	0.0824
2110	2.16						2.16	574.0	0.1056
2115	2.26						2.26	692.0	0.1336
2120	2.36						2.36	905.0	0.1702
2125	2.39						2.39	920.0	0.2075
2130	2.42						2.42	957.0	0.2462
2135	2.44						2.44	812.0	0.2791
2140	2.48						2.48	718.0	0.3227
2150	2.51						2.51	563.0	0.3683
2200	2.53						2.53	426.0	0.4114
2215	2.57						2.57	308.0	0.4488
2230	2.57						2.57	214.0	0.4791
2250	2.57						2.57	122.0	0.4939
2300	2.57						2.57	88.0	0.5082
2330	2.57						2.57	50.0	0.5203
2400	2.57						2.57	32.0	0.5262
JULY 20									
0000	2.57						2.57	32.0	0.5262
0030	2.57						2.57	18.0	0.5336

STA. NO. 08156650		STORM RAINFALL AND RUNOFF RECORD					1979 WATER YEAR		
SHOAL CREEK AT STECK AVENUE, AUSTIN, TEXAS		STORM OF JULY 19-20, 1979					ACCUM.	DISCHARGE	ACCUM.
DATE & TIME	G A G E N U M B E R					WEIGHTED	IN	RUNOFF	
	1SHL					PRECIP.			
						IN.	CFS	IN.	
JULY 20									
0115	2.57					2.57	11.0	0.5483	
0600	2.58					2.58	2.0	0.5535	
1200	2.58					2.58	1.0	0.5566	
1900	2.59					2.59	0.2	0.5572	

COLORADO RIVER BASIN

08156700 SHOAL CREEK AT NORTHWEST PARK, AUSTIN, TX

LOCATION.--Lat 30°20'50", long 97°44'41", Travis County, Hydrologic Unit 12090205, at Northwest Park in Austin, 400 ft (122 m) upstream from Shoal Creek Boulevard bridge, 0.5 mi (0.8 km) west of intersection of Burnet Road and Justin Lane, and 5.0 mi (8.0 km) north of State Capitol Building in Austin.

DRAINAGE AREA.--7.03 mi² (18.21 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 661.34 ft (201.576 m) National Geodetic Vertical Datum of 1929 (city of Austin bench mark).

REMARKS.--Records fair. The city of Austin diverts water into the channel above gage during the summer months from a swimming pool at Northwest Park. There is some diversion into and out of the drainage area by storm sewers. This station is part of a hydrologic project to study the rainfall-runoff relationship for the Austin urban area. There are two digital recording rain gages in the watershed. Several observations of water temperature were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,110 ft³/s (59.8 m³/s) July 19, 1979, gage height, 8.31 ft (2.533 m); no flow for several days each year.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1885 occurred Apr. 22, 1915, stage and discharge unknown.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 500 ft³/s (14.2 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Nov. 5	1815	599 17.0	5.43 1.655	May 21	1730	852 24.1	6.02 1.825
Dec. 31	0410	875 24.8	6.07 1.850	May 21	1945	684 19.4	5.64 1.719
Apr. 29	0710	736 20.8	5.76 1.756	July 19	2120	*2,110 59.8	8.31 2.533

Minimum discharge, no flow on May 17-20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.21	.04	.33	11	.39	.37	8.3	12	2.0	.13	.14	.05
2	.07	.05	.31	1.3	.96	.60	2.2	.75	2.9	.11	.13	.05
3	.12	.05	1.8	.92	3.5	1.1	1.4	.58	.36	.11	.13	.05
4	.13	.26	.25	2.3	12	.36	1.1	.44	.49	.12	.13	.05
5	.08	80	.22	1.7	17	.33	.82	.33	.87	.24	.12	5.3
6	.06	6.4	.22	3.5	18	.27	.65	.31	.37	15	.12	.41
7	.04	.54	.25	1.0	2.7	.22	1.2	.32	.28	.28	.13	.13
8	.04	.55	.23	.67	1.6	.19	.89	.25	.54	.13	.13	.05
9	.10	.45	.25	.64	1.0	.21	.55	.25	.26	.11	.10	.04
10	.08	.41	.26	20	.86	1.3	.53	.25	.22	.30	.10	.04
11	.06	.45	.19	5.6	.74	.55	.60	3.3	.17	.21	1.6	.04
12	.08	.97	.14	2.3	.68	.51	.45	.28	.19	.10	.13	.04
13	.05	.32	.14	1.2	.59	.46	.55	.18	.17	.09	.07	.04
14	.04	.10	.19	.89	.52	.55	.50	.18	.15	.40	.08	.03
15	.03	4.1	.26	.84	.52	1.2	.38	.16	.17	.19	.15	.03
16	.04	6.4	.20	.80	.52	6.9	.20	.04	.16	.10	.13	.18
17	.05	.41	.17	.88	.54	.67	14	.00	.13	.11	.06	.02
18	.05	.22	.22	1.7	.57	.67	7.8	.00	.17	.10	.14	3.6
19	.05	5.9	.24	.80	.56	.63	6.3	.00	.14	108	.40	2.7
20	.05	1.4	.22	.87	.56	9.8	.79	.00	.14	4.1	.11	.18
21	.06	2.1	.19	.54	.54	23	1.5	80	.13	.28	.07	.10
22	.04	1.2	.19	.52	.53	20	.32	13	.14	.14	.08	.08
23	.05	.42	.20	.52	5.5	1.9	.29	.76	.25	.13	.09	.08
24	.05	.48	.21	.52	.62	1.2	.23	.46	.13	.12	.09	.08
25	.72	.84	.35	2.1	.47	1.0	.19	.35	.14	.11	.10	.09
26	.99	4.3	.24	1.1	.45	.84	.19	.28	.14	4.6	.11	.09
27	.15	2.4	.39	.50	.45	.69	.16	.27	.14	57	.08	.10
28	.16	.36	.45	.42	.43	.64	.12	1.3	.13	.60	.06	.11
29	.10	.37	.79	.74	---	.79	29	.39	.13	.25	.06	.10
30	.06	.38	1.4	.84	---	11	.78	7.3	.14	.20	.07	.10
31	.05	---	83	.39	---	4.9	---	.55	---	.17	.05	---
TOTAL	3.86	121.87	93.50	67.10	72.80	92.85	81.99	124.28	11.35	193.53	4.96	13.96
MEAN	.12	4.06	3.02	2.16	2.60	3.00	2.73	4.01	.38	6.24	.16	.47
MAX	.99	80	83	20	18	23	29	80	2.9	108	1.6	5.3
MIN	.03	.04	.14	.39	.39	.19	.12	.00	.13	.09	.05	.02
CFSM	.02	.58	.43	.31	.37	.43	.39	.57	.05	.89	.02	.07
IN.	.02	.64	.49	.36	.39	.49	.43	.66	.06	1.02	.03	.07
AC-FT	7.7	242	185	133	144	184	163	247	23	384	9.8	28
(††)	.35	5.88	3.24	2.02	2.78	3.91	3.89	4.99	1.15	7.50	.63	2.05

CAL YR 1978	TOTAL 774.91	MEAN 2.12	MAX 104	MIN .00	CFSM .30	IN 4.10	AC-FT 1540	†† 33.00
WTR YR 1979	TOTAL 882.05	MEAN 2.42	MAX 108	MIN .00	CFSM .34	IN 4.67	AC-FT 1750	†† 38.39

†† Weighted-mean rainfall, in inches, based on two rain gages.

SIA. NO.08156700									
STORM RAINFALL AND RUNOFF RECORD									
1979 WATER YEAR									
SHOAL CREEK AT NORTHWEST PARK, AUSTIN, TEXAS						STORM OF DECEMBER 31, 1978		ACCUM.	DISCHARGE
DATE & TIME						WEIGHTED		PRECIP.	IN
G A G E N U M B E R						IN.		CFS	ACCUM.
1SHL 2SHL						IN.		CFS	IN.
DEC. 31									
0000	0.0	0.0				0.0	1.2	0.0001	
0030	0.03	0.02				0.02	1.2	0.0002	
0100	0.04	0.02				0.03	1.2	0.0003	
0115	0.04	0.02				0.03	15.0	0.0013	
0135	0.04	0.02				0.03	16.0	0.0026	
0200	0.08	0.17				0.13	12.0	0.0035	
0215	0.25	0.28				0.27	9.9	0.0042	
0240	0.33	0.33				0.33	14.0	0.0050	
0245	0.33	0.33				0.33	35.0	0.0056	
0250	0.33	0.40				0.37	102.0	0.0075	
0255	0.36	0.51				0.44	111.0	0.0095	
0300	0.48	0.60				0.55	105.0	0.0114	
0305	0.54	0.67				0.61	86.0	0.0130	
0310	0.62	0.72				0.67	72.0	0.0144	
0315	0.70	0.88				0.80	67.0	0.0156	
0320	0.81	1.01				0.92	67.0	0.0168	
0325	0.95	1.14				1.05	67.0	0.0180	
0330	1.11	1.28				1.20	82.0	0.0195	
0335	1.14	1.30				1.23	142.0	0.0222	
0340	1.44	1.56				1.51	244.0	0.0266	
0345	1.59	1.69				1.64	310.0	0.0323	
0350	1.73	1.81				1.77	381.0	0.0393	
0355	1.79	1.85				1.83	474.0	0.0524	
0405	1.86	1.92				1.89	651.0	0.0763	
0415	1.89	1.95				1.92	839.0	0.0994	
0420	1.91	1.97				1.94	875.0	0.1155	
0425	1.93	1.99				1.96	870.0	0.1475	
0440	1.99	2.04				2.02	736.0	0.1880	
0455	2.06	2.09				2.08	572.0	0.2248	
0515	2.16	2.18				2.17	470.0	0.2680	
0545	2.29	2.27				2.28	388.0	0.3107	
0615	2.34	2.30				2.32	284.0	0.3420	
0645	2.40	2.35				2.37	198.0	0.3693	
0730	2.42	2.37				2.39	111.0	0.3846	
0800	2.42	2.37				2.39	69.0	0.3922	
0830	2.42	2.37				2.39	45.0	0.3984	
0915	2.42	2.37				2.39	28.0	0.4061	
1100	2.42	2.37				2.39	16.0	0.4127	
1300	2.42	2.37				2.39	9.5	0.4180	

STA. NO.08156700				STORM RAINFALL AND RUNOFF RECORD				1979 WATER YEAR			
SHOAL CREEK AT NORTHWEST PARK, AUSTIN, TEXAS				STORM OF DECEMBER 31, 1978				ACCUM.	DISCHARGE	ACCUM.	
DATE & TIME		G A G E N U M B E R				WEIGHTED	IN	RUNOFF			
		1SHL	2SHL				PRECIP.				
							IN.	CFS	IN.		
DEC. 31											
1600		2.42	2.37				2.39	5.1	0.4213		
1900		2.46	2.39				2.42	3.9	0.4239		
2200		2.47	2.40				2.43	3.2	0.4251		

STA. NO.08156700							STORM RAINFALL AND RUNOFF RECORD			1979 WATER YEAR		
SHOAL CREEK AT NORTHWEST PARK, AUSTIN, TEXAS							STORM OF MAY 21-22, 1979			ACCUM.	DISCHARGE	ACCUM.
DATE & TIME							G A G E N U M B E R			WEIGHTED	IN	RUNOFF
										PRECIP.	CFS	IN.
										IN.		
MAY 21												
0000	0.0	0.0								0.0	0.0	0.0
1420	0.01	0.0								0.00	0.0	0.0
1445	0.19	0.13								0.16	0.0	0.0
1500	0.60	0.57								0.58	0.2	0.0000
1515	0.86	0.79								0.82	96.0	0.0044
1525	0.91	0.80								0.85	333.0	0.0136
1530	0.91	0.82								0.86	375.0	0.0205
1535	0.91	0.82								0.86	360.0	0.0304
1545	0.91	0.82								0.86	268.0	0.0427
1600	0.91	0.82								0.86	173.0	0.0522
1615	0.91	0.82								0.86	116.0	0.0597
1635	0.91	0.82								0.86	71.0	0.0630
1640	0.93	0.84								0.88	65.0	0.0642
1645	1.00	0.89								0.94	57.0	0.0652
1650	1.04	0.95								0.99	54.0	0.0662
1655	1.08	1.15								1.12	54.0	0.0672
1700	1.08	1.37								1.24	54.0	0.0682
1705	1.09	1.54								1.34	75.0	0.0696
1710	1.09	1.83								1.50	144.0	0.0722
1715	1.11	1.85								1.52	330.0	0.0783
1720	1.11	1.86								1.52	588.0	0.0891
1725	1.11	1.88								1.53	768.0	0.1032
1730	1.11	1.89								1.54	852.0	0.1188
1735	1.11	1.90								1.54	706.0	0.1383
1745	1.11	1.90								1.54	435.0	0.1543
1755	1.12	1.90								1.55	270.0	0.1642
1805	1.21	1.91								1.59	184.0	0.1709
1815	1.33	1.91								1.65	128.0	0.1756
1825	1.34	1.92								1.66	96.0	0.1809
1845	1.34	1.93								1.66	62.0	0.1843
1855	1.34	2.15								1.79	58.0	0.1870
1910	1.34	2.29								1.86	90.0	0.1911
1920	1.60	2.56								2.13	215.0	0.1990
1930	1.76	2.82								2.34	411.0	0.2141
1940	1.77	2.89								2.39	651.0	0.2321
1945	1.77	2.95								2.42	684.0	0.2509
1955	1.80	3.04								2.48	668.0	0.2816
2010	1.84	3.10								2.53	557.0	0.3123
2025	1.93	3.22								2.64	417.0	0.3353

STA. NO.08156700										STORM RAINFALL AND RUNOFF RECORD										1979 WATER YEAR		
SHOAL CREEK AT NORTHWEST PARK, AUSTIN, TEXAS										STORM OF MAY 21-22, 1979										ACCUM.	DISCHARGE	ACCUM.
DATE & TIME										G A G E N U M B E R										WEIGHTED	IN	RUNOFF
																				PRECIP.		
																				IN.	CFS	IN.
MAY 21																						
2040		1.93		3.23												2.64	360.0	0.3584				
2100		1.93		3.23												2.64	301.0	0.3778				
2115		1.93		3.23												2.64	218.0	0.3898				
2130		1.93		3.23												2.64	146.0	0.3978				
2145		1.93		3.23												2.64	105.0	0.4036				
2200		1.94		3.26												2.67	77.0	0.4086				
2220		1.97		3.32												2.71	58.0	0.4128				
2240		1.98		3.35												2.73	54.0	0.4168				
2300		1.99		3.37												2.75	49.0	0.4213				
2330		2.14		3.43												2.87	38.0	0.4255				
2400		2.21		3.44												2.89	39.0	0.4287				
MAY 22																						
0000		2.21		3.44												2.89	39.0	0.4287				
0030		2.36		3.65												3.07	36.0	0.4337				
0100		2.37		3.66												3.08	156.0	0.4509				
0130		2.38		3.67												3.09	90.0	0.4609				
0200		2.40		3.68												3.10	55.0	0.4669				
0230		2.43		3.71												3.13	38.0	0.4732				
0330		2.47		3.75												3.17	29.0	0.4812				
0500		2.47		3.75												3.17	15.0	0.4853				
0600		2.47		3.75												3.17	9.9	0.4880				
0730		2.47		3.75												3.17	6.0	0.4907				
1000		2.48		3.75												3.18	3.2	0.4923				
1200		2.48		3.75												3.18	2.4	0.4939				
1600		2.49		3.76												3.19	1.6	0.4960				
2400		2.49		3.76												3.19	1.1	0.4970				

STA. NO.08156700						STORM RAINFALL AND RUNOFF RECORD			1979 WATER YEAR		
SHOAL CREEK AT NORTHWEST PARK, AUSTIN, TEXAS						STORM OF JULY 19-20, 1979			ACCUM.	DISCHARGE	ACCUM.
DATE & TIME						G A G E N U M B E R			WEIGHTED PRECIP.	IN	RUNOFF
									IN.	CFS	IN.
JULY 19											
0000	0.0	0.0							0.0	0.1	0.0002
1625	0.01	0.0							0.00	0.1	0.0004
1840	0.01	0.01							0.01	0.1	0.0004
1845	0.05	0.21							0.14	0.1	0.0004
1850	0.09	0.38							0.25	0.1	0.0004
1855	0.34	0.49							0.42	0.1	0.0004
1900	0.50	0.58							0.54	0.3	0.0004
1905	0.68	0.83							0.76	1.1	0.0004
1910	0.81	1.01							0.92	1.8	0.0005
1915	0.93	1.18							1.07	3.0	0.0005
1920	1.04	1.27							1.17	11.0	0.0007
1925	1.12	1.37							1.26	28.0	0.0012
1930	1.16	1.46							1.32	93.0	0.0030
1935	1.18	1.54							1.38	187.0	0.0064
1940	1.19	1.58							1.40	284.0	0.0142
1950	1.24	1.70							1.49	372.0	0.0313
2005	1.26	1.99							1.66	424.0	0.0508
2015	1.28	2.08							1.72	449.0	0.0673
2025	1.38	2.28							1.87	431.0	0.0910
2045	1.47	3.08							2.36	385.0	0.1122
2055	1.75	3.25							2.57	627.0	0.1353
2105	2.08	3.47							2.84	1140.0	0.1771
2115	2.26	3.53							2.96	1840.0	0.2278
2120	2.36	3.55							3.01	2110.0	0.2666
2125	2.39	3.56							3.03	2030.0	0.3225
2135	2.44	3.57							3.06	1650.0	0.3832
2145	2.50	3.59							3.10	1230.0	0.4396
2200	2.53	3.64							3.14	777.0	0.4825
2215	2.57	3.66							3.17	470.0	0.5127
2235	2.57	3.67							3.17	307.0	0.5380
2300	2.57	3.68							3.18	173.0	0.5555
2330	2.57	3.68							3.18	92.0	0.5657
2400	2.57	3.68							3.18	51.0	0.5699
JULY 20											
0000	2.57	3.68							3.18	51.0	0.5699
0030	2.57	3.68							3.18	34.0	0.5750
0100	2.57	3.68							3.18	25.0	0.5792
0200	2.57	3.68							3.18	15.0	0.5825
0300	2.58	3.68							3.18	10.0	0.5852
0430	2.58	3.68							3.18	5.1	0.5869

SFA. NO.08156700				STORM RAINFALL AND RUNOFF RECORD				1979 WATER YEAR		
SHOAL CREEK AT NORTHWEST PARK, AUSTIN, TEXAS				STORM OF JULY 19-20, 1979				ACCUM.	DISCHARGE	ACCUM.
DATE & TIME				G A G E N U M B E R				WEIGHTED	IN	RUNOFF
	1SHL	2SHL						PRECIP.		
								IN.	CFS	IN.
JULY 20										
0600	2.58	3.68						3.18	2.9	0.5887
1000	2.58	3.68						3.18	1.1	0.5895
1300	2.58	3.68						3.18	0.7	0.5902
1900	2.59	3.68						3.19	0.4	0.5907

08156750 SHOAL CREEK AT WHITE ROCK DRIVE, AUSTIN, TEX.
(Flood-hydrograph partial-record station)

LOCATION.--Lat 30°20'21", long 97°44'50", Travis County, on downstream side of bridge on White Rock Drive, 0.6 mi west of intersection of Burnet Road and Koenig Lane, and 4.5 mi north of the State Capitol Building in Austin.

DRAINAGE AREA.--7.56 mi².

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

GAGE.--Digital water-stage recorder and crest-stage gage. Datum of gage is 642.60 ft NGVD.

REMARKS.--Records fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,920 ft³/s July 19, 1979 (gage height, 10.77 ft).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,920 ft³/s July 19 (gage height, 10.77 ft).

STORM RAINFALL AND RUNOFF RECORD										1979 WATER YEAR		
STA. NO. 08156750												
SHOAL CREEK AT WHITE ROCK DRIVE, AUSTIN, TEXAS										ACCUM.	DISCHARGE	ACCUM.
STORM OF DECEMBER 31, 1978										WEIGHTED	IN	RUNOFF
DATE & TIME	1SHL	2SHL	G A G E N U M B E R							PRECIP.		
										IN.	CFS	IN.
DEC. 31												
0000	0.0	0.0								0.0	1.5	0.0002
0100	0.04	0.02								0.03	1.5	0.0004
0135	0.04	0.02								0.03	9.0	0.0013
0200	0.08	0.17								0.13	15.0	0.0023
0215	0.25	0.28								0.27	17.0	0.0032
0230	0.32	0.32								0.32	23.0	0.0046
0250	0.33	0.40								0.37	62.0	0.0072
0255	0.36	0.51								0.45	106.0	0.0090
0300	0.48	0.60								0.55	108.0	0.0109
0305	0.54	0.67								0.62	100.0	0.0126
0310	0.62	0.72								0.68	91.0	0.0142
0315	0.70	0.88								0.80	98.0	0.0158
0320	0.81	1.01								0.93	97.0	0.0175
0325	0.95	1.14								1.06	101.0	0.0192
0330	1.11	1.28								1.21	127.0	0.0214
0335	1.14	1.30								1.23	216.0	0.0251
0340	1.44	1.56								1.51	328.0	0.0307
0345	1.59	1.69								1.65	401.0	0.0375
0350	1.73	1.81								1.78	538.0	0.0467
0355	1.79	1.86								1.83	630.0	0.0629
0405	1.86	1.92								1.89	803.0	0.0903
0415	1.89	1.95								1.92	980.0	0.1154
0420	1.91	1.97								1.94	994.0	0.1409
0430	1.95	2.01								1.98	950.0	0.1733
0440	1.99	2.04								2.02	766.0	0.1995
0450	2.03	2.07								2.05	641.0	0.2214
0500	2.08	2.11								2.10	550.0	0.2496
0520	2.20	2.21								2.21	443.0	0.2874
0550	2.31	2.28								2.29	366.0	0.3187
0610	2.32	2.29								2.30	270.0	0.3440
0645	2.40	2.35								2.37	173.0	0.3632
0715	2.42	2.37								2.39	118.0	0.3783
0800	2.42	2.37								2.39	62.0	0.3895
0900	2.42	2.37								2.39	36.0	0.3987
1030	2.42	2.37								2.39	21.0	0.4051
1200	2.42	2.37								2.39	14.0	0.4130
1600	2.42	2.37								2.39	6.0	0.4192
2200	2.47	2.40								2.43	4.0	0.4225

STATION NO. 08156750									
STORM RAINFALL AND RUNOFF RECORD									
1979 WATER YEAR									
SHOAL CREEK AT WHITE ROCK DRIVE, AUSTIN, TEXAS									
STORM OF MAY 21-22, 1979									
DATE & TIME	G A G E N U M B E R						ACCUM. WEIGHTED PRECIP.	DISCHARGE IN	ACCUM. RUNOFF
	1SHL	2SHL					IN.	CFS	IN.
MAY 21									
0000	0.0	0.0					0.0	0.0	0.0
1420	0.01	0.0					0.00	0.0	0.0
1445	0.19	0.13					0.16	0.0	0.0
1500	0.60	0.57					0.58	33.0	0.0017
1515	0.86	0.79					0.82	51.0	0.0039
1525	0.91	0.80					0.85	388.0	0.0138
1530	0.91	0.82					0.86	500.0	0.0224
1535	0.91	0.82					0.86	504.0	0.0396
1550	0.91	0.82					0.86	382.0	0.0591
1605	0.91	0.82					0.86	268.0	0.0729
1620	0.91	0.82					0.86	198.0	0.0830
1635	0.91	0.82					0.86	149.0	0.0881
1640	0.93	0.84					0.88	134.0	0.0904
1645	1.00	0.89					0.94	125.0	0.0925
1650	1.04	0.95					0.99	118.0	0.0946
1655	1.08	1.15					1.12	132.0	0.0968
1700	1.08	1.37					1.25	173.0	0.0998
1705	1.09	1.54					1.35	227.0	0.1036
1710	1.09	1.83					1.52	273.0	0.1083
1715	1.11	1.85					1.54	366.0	0.1146
1720	1.11	1.86					1.54	550.0	0.1239
1725	1.11	1.88					1.56	838.0	0.1383
1730	1.11	1.89					1.56	976.0	0.1549
1735	1.11	1.90					1.57	941.0	0.1790
1745	1.11	1.90					1.57	706.0	0.2032
1755	1.12	1.90					1.57	478.0	0.2195
1805	1.21	1.91					1.62	340.0	0.2340
1820	1.33	1.91					1.67	220.0	0.2453
1835	1.34	1.92					1.68	155.0	0.2532
1850	1.34	1.97					1.71	118.0	0.2583
1900	1.34	2.26					1.87	173.0	0.2657
1915	1.40	2.40					1.98	216.0	0.2749
1925	1.73	2.74					2.32	443.0	0.2900
1935	1.76	2.88					2.41	710.0	0.3143
1945	1.77	2.95					2.45	936.0	0.3382
1950	1.79	3.02					2.50	950.0	0.3545
1955	1.80	3.04					2.52	927.0	0.3941
2015	1.89	3.12					2.60	726.0	0.4375
2030	1.93	3.22					2.68	588.0	0.4726

SIA. NO.08156750										STORM RAINFALL AND RUNOFF RECORD										1979 WATER YEAR		
SHOAL CREEK AT WHITE ROCK DRIVE, AUSTIN, TEXAS										STORM OF MAY 21-22, 1979										ACCUM. WEIGHTED	DISCHARGE IN	ACCUM. RUNOFF
DATE & TIME		G A G E N U M B E R								PRECIP.												
		1SHL	2SHL							IN.	CFS	IN.										
MAY 21																						
2050		1.93	3.23							2.68	482.0	0.5097										
2115		1.93	3.23							2.68	360.0	0.5373										
2135		1.93	3.23							2.68	239.0	0.5557										
2200		1.94	3.26							2.71	157.0	0.5785										
2300		1.99	3.37							2.79	101.0	0.5940										
2330		2.19	3.43							2.91	89.0	0.6031										
2400		2.21	3.44							2.92	85.0	0.6108										
MAY 22																						
0000		2.21	3.44							2.92	85.0	0.6108										
0045		2.37	3.65							3.11	110.0	0.6253										
0100		2.37	3.66							3.12	239.0	0.6376										
0115		2.37	3.66							3.12	227.0	0.6550										
0145		2.39	3.68							3.14	139.0	0.6692										
0215		2.42	3.69							3.16	95.0	0.6814										
0300		2.46	3.74							3.20	82.0	0.6961										
0400		2.47	3.75							3.21	56.0	0.7133										
0600		2.47	3.75							3.21	30.0	0.7256										
0800		2.47	3.75							3.21	19.0	0.7373										
1200		2.48	3.75							3.22	5.0	0.7424										
1800		2.49	3.76							3.23	2.0	0.7449										
2400		2.49	3.76							3.23	1.5	0.7458										

STA. NO.08156750		STORM RAINFALL AND RUNOFF RECORD						1979 WATER YEAR		
SHOAL CREEK AT WHITE ROCK DRIVE, AUSTIN, TEXAS		STORM OF JULY 19-20, 1979						ACCUM. WEIGHTED PRECIP.	DISCHARGE IN	ACCUM. RUNOFF
DATE & TIME		1SHL	2SHL					IN.	CFS	IN.
JULY 19										
0000		0.0	0.0					0.0	0.2	0.0003
1515		0.01	0.0					0.00	0.2	0.0007
1840		0.01	0.01					0.01	0.2	0.0008
1845		0.05	0.21					0.14	0.2	0.0008
1850		0.09	0.38					0.26	0.4	0.0008
1855		0.34	0.49					0.43	1.0	0.0008
1900		0.50	0.58					0.55	2.0	0.0008
1905		0.68	0.83					0.77	5.0	0.0009
1910		0.81	1.01					0.93	10.0	0.0011
1915		0.93	1.18					1.07	25.0	0.0015
1920		1.04	1.27					1.17	41.0	0.0022
1925		1.12	1.37					1.26	74.0	0.0035
1930		1.16	1.46					1.33	97.0	0.0051
1935		1.18	1.54					1.39	151.0	0.0077
1940		1.19	1.58					1.42	318.0	0.0213
2000		1.25	1.92					1.64	542.0	0.0537
2015		1.28	2.08					1.74	645.0	0.0867
2030		1.43	2.41					2.00	638.0	0.1194
2045		1.47	3.08					2.40	660.0	0.1533
2100		1.97	3.39					2.79	927.0	0.1928
2110		2.16	3.53					2.95	1380.0	0.2400
2120		2.36	3.55					3.05	1870.0	0.3039
2130		2.42	3.57					3.09	1920.0	0.3531
2135		2.44	3.57					3.10	1830.0	0.4000
2145		2.50	3.59					3.13	1510.0	0.4515
2155		2.52	3.62					3.16	1110.0	0.4895
2205		2.54	3.66					3.19	825.0	0.5388
2230		2.57	3.67					3.21	447.0	0.5808
2300		2.57	3.68					3.21	260.0	0.6074
2330		2.57	3.68					3.21	155.0	0.6233
2400		2.57	3.68					3.21	97.0	0.6308
JULY 20										
0000		2.57	3.68					3.21	97.0	0.6308
0030		2.57	3.68					3.21	82.0	0.6416
0100		2.57	3.68					3.21	53.0	0.6498
0200		2.57	3.68					3.21	36.0	0.6609
0400		2.58	3.68					3.22	22.0	0.6699
0600		2.58	3.68					3.22	12.0	0.6797
1200		2.58	3.68					3.22	3.0	0.6853
2400		2.84	3.68					3.33	1.0	0.6865

COLORADO RIVER BASIN

08156800 SHOAL CREEK AT 12TH STREET, AUSTIN, TX
(Flood-hydrograph partial-record station)

LOCATION.--Lat 30°16'35", long 97°45'00", Travis County, Hydrologic Unit 12090205, at downstream side of bridge on 12th Street and 0.6 mi (1.0 km) west of the State Capitol Building in Austin.

DRAINAGE AREA.--12.8 mi² (33.2 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1975 to current year. Periodic discharge measurements only: November 1974 to current year.

GAGE.--Flood-hydrograph recorder and crest-stage gage. Datum of gage is 455.33 ft (138.785 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Additional storm rainfall-runoff data for this site can be obtained from the report "Hydrologic Data for Urban Studies in the Austin, Texas Metropolitan Area, 1979."

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,970 ft³/s (141 m³/s) May 21, 1979, gage height, 15.20 ft (4.633 m).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,970 ft³/s (141 m³/s) May 21, gage height, 15.20 ft (4.633 m).

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical, biochemical, and pesticide analyses: January 1975 to current year. Water temperatures: January 1975 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM- COBALT UNITS)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)
NOV 06...	1200	4.6	306	7.8	18.0	20	35	8.6	93	1.8
DEC 18...	--	.00	--	--	--	--	--	--	--	--
FEB 26...	1120	3.6	859	7.9	10.0	0	1.0	10.6	97	.9
MAR 21...	0830	40	253	6.7	16.5	40	180	7.6	80	3.6
APR 23...	1053	--	724	7.8	21.0	5	4.0	10.3	118	1.0
JUN 11...	0910	1.0	664	7.4	20.5	5	.50	6.2	70	.3

DATE	100 ML	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCOCCI KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO
NOV 06...	80000	24000	27000	120	42	43	3.2	8.6	.3	
DEC 18...	--	--	--	--	--	--	--	--	--	--
FEB 26...	42000	23000	6900	360	170	130	8.4	38	.9	
MAR 21...	80000	43000	130000	110	31	40	2.4	6.1	.3	
APR 23...	55000	24000	2200	--	--	--	--	--	--	--
JUN 11...	7500	580	1100	220	52	80	6.0	30	.9	

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDE (MG/L)
NOV 06...	2.9	96	0	47	14	.2	4.5	171	40
DEC 18...	--	--	--	--	--	--	--	--	--
FEB 26...	3.2	230	0	130	86	.3	5.4	515	1
MAR 21...	2.7	96	0	28	9.8	.2	5.0	142	221
APR 23...	--	--	--	--	--	--	--	--	7
JUN 11...	3.4	210	0	74	45	.3	6.7	349	0

COLORADO RIVER BASIN

08156800 SHOAL CREEK AT 12TH STREET, AUSTIN, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	SOLIDS, VOLATILE, SUSPENDED (MG/L)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
NOV 06...	3	.64	.04	.68	.01	.39	.40	.13	5.8
DEC 18...	--	--	--	--	--	--	--	--	--
FEB 26...	1	.47	.00	.47	.03	.27	.30	.03	2.8
MAR 21...	28	1.1	.06	1.2	.17	.77	.94	.29	9.4
APR 23...	1	.27	.02	.29	.04	.44	.48	.03	4.1
JUN 11...	0	.10	.00	.10	.00	.42	.42	.01	5.6

DATE	TIME	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)
NOV 06...	1200		24	30	<1	0	2
FEB 26...	1120		4	0	0	0	10
MAR 21...	0830		6	0	0	10	3
JUN 11...	0910		2	70	<1	10	0

DATE	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, DIS- SOLVED (UG/L AS ZN)
NOV 06...	0	3	.0	0	0	<3
FEB 26...	0	10	.0	1	0	20
MAR 21...	0	0	.0	0	0	10
JUN 11...	0	20	.0	0	0	<3

DATE	TIME	PCB, TOTAL (UG/L)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLOR- DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI- AZINON, TOTAL (UG/L)	DI- ELDRIN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)
NOV 06...	1200	.0	.00	.00	.0	.00	.00	.01	.30	.01	.00	.00
FEB 26...	1120	.0	--	.00	.1	.00	.00	.00	.03	.01	.00	.00
MAR 21...	0830	.0	--	.00	.1	.00	.01	.02	.30	.01	.00	.00
JUN 11...	0910	.0	--	.00	.0	.00	.00	.00	.00	.01	.00	.00

DATE	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	MALA- THION, TOTAL (UG/L)	METHYL PARA- THION, TOTAL (UG/L)	METHYL TRI- THION, TOTAL (UG/L)	PARA- THION, TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOTAL TRI- THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
NOV 06...	.00	.00	.01	.00	.00	.00	.00	0	.00	.02	.02	.00
FEB 26...	.00	.00	.00	.00	.02	.00	.00	0	.00	.00	.00	.00
MAR 21...	.00	.01	.00	.02	.00	.00	.00	0	.00	.09	.02	.00
JUN 11...	.00	.00	.00	.00	.00	.00	.00	0	.00	.00	.00	.00

STORM RAINFALL AND RUNOFF RECORD									
STA. NO.08156800				1979 WATER YEAR					
SHOAL CREEK AT 12TH. STREET, AUSTIN, TEXAS						ACCUM.	DISCHARGE	ACCUM.	
STORM OF DECEMBER 31, 1978						WEIGHTED	IN	RUNOFF	
DATE & TIME	G A G E N U M B E R					PRECIP.			
	1SHL	2SHL				IN.	CFS	IN.	
DEC. 31									
0000	0.0	0.0				0.0	0.0	0.0	
0145	0.04	0.02				0.02	0.0	0.0	
0200	0.08	0.17				0.15	0.0	0.0	
0215	0.25	0.28				0.27	0.0	0.0	
0230	0.32	0.32				0.32	0.0	0.0	
0250	0.33	0.40				0.38	2.0	0.0001	
0255	0.36	0.51				0.47	4.0	0.0001	
0300	0.48	0.60				0.57	5.9	0.0002	
0305	0.54	0.67				0.64	27.0	0.0004	
0310	0.62	0.72				0.70	47.0	0.0009	
0315	0.70	0.88				0.84	68.0	0.0016	
0320	0.81	1.01				0.96	99.0	0.0026	
0325	0.95	1.14				1.09	130.0	0.0039	
0330	1.11	1.24				1.24	161.0	0.0055	
0335	1.14	1.30				1.26	275.0	0.0083	
0340	1.44	1.56				1.53	389.0	0.0122	
0345	1.59	1.69				1.67	503.0	0.0173	
0350	1.73	1.81				1.79	572.0	0.0259	
0400	1.84	1.90				1.89	711.0	0.0439	
0415	1.89	1.95				1.94	952.0	0.0727	
0430	1.95	2.01				2.00	1310.0	0.1123	
0445	2.00	2.05				2.04	1810.0	0.1671	
0500	2.08	2.11				2.10	2070.0	0.2298	
0515	2.16	2.18				2.18	1970.0	0.3192	
0545	2.29	2.27				2.27	1390.0	0.4244	
0630	2.37	2.32				2.33	967.0	0.5122	
0715	2.42	2.37				2.38	638.0	0.5701	
0800	2.42	2.37				2.38	358.0	0.6026	
0845	2.42	2.37				2.38	216.0	0.6222	
0930	2.42	2.37				2.38	127.0	0.6357	
1030	2.42	2.37				2.38	86.0	0.6487	
1200	2.42	2.37				2.38	62.0	0.6599	
1330	2.42	2.37				2.38	48.0	0.6687	
1500	2.42	2.37				2.38	35.0	0.6782	
1800	2.46	2.39				2.41	22.0	0.6862	
2100	2.47	2.40				2.42	15.0	0.6898	
2200	2.47	2.40				2.42	13.0	0.6922	

STA. NO.08156800							STORM RAINFALL AND RUNOFF RECORD			1979 WATER YEAR	
SHOAL CREEK AT 12TH. STREET, AUSTIN, TEXAS							STORM OF MAY 21-22, 1979			ACCUM.	DISCHARGE
DATE & TIME							G A G E N U M B E R			WEIGHTED PRECIP.	IN
										IN.	CFS
											IN.
MAY 21											
0000	0.0	0.0							0.0	0.0	0.0
1420	0.01	0.0							0.00	0.0	0.0
1445	0.19	0.13							0.14	0.0	0.0
1500	0.60	0.57							0.58	22.0	0.0007
1515	0.86	0.79							0.81	51.0	0.0022
1530	0.91	0.82							0.84	87.0	0.0048
1545	0.91	0.82							0.84	123.0	0.0086
1600	0.91	0.82							0.84	209.0	0.0149
1615	0.91	0.82							0.84	189.0	0.0216
1635	0.91	0.82							0.84	480.0	0.0337
1640	0.93	0.84							0.86	551.0	0.0392
1645	1.00	0.89							0.92	621.0	0.0455
1650	1.04	0.95							0.97	597.0	0.0515
1655	1.08	1.15							1.13	573.0	0.0573
1700	1.08	1.37							1.30	549.0	0.0628
1705	1.09	1.54							1.43	553.0	0.0684
1710	1.09	1.83							1.65	556.0	0.0740
1715	1.11	1.85							1.67	560.0	0.0797
1720	1.11	1.86							1.68	688.0	0.0866
1725	1.11	1.88							1.70	817.0	0.0949
1730	1.11	1.89							1.70	945.0	0.1044
1735	1.11	1.90							1.71	997.0	0.1346
1800	1.18	1.90							1.73	1130.0	0.1802
1815	1.33	1.91							1.77	1530.0	0.2265
1830	1.34	1.92							1.78	2160.0	0.2918
1845	1.34	1.93							1.79	2340.0	0.3627
1900	1.34	2.26							2.04	2250.0	0.4308
1915	1.40	2.40							2.16	1740.0	0.4834
1930	1.76	2.82							2.57	1530.0	0.5297
1945	1.77	2.95							2.67	1950.0	0.5887
2000	1.81	3.05							2.75	3890.0	0.7065
2015	1.89	3.12							2.82	4970.0	0.8569
2030	1.93	3.22							2.91	4640.0	0.9973
2045	1.93	3.23							2.92	3860.0	1.1142
2100	1.93	3.23							2.92	2760.0	1.1977
2115	1.93	3.23							2.92	1930.0	1.2561
2130	1.93	3.23							2.92	1440.0	1.2997
2145	1.93	3.23							2.92	1090.0	1.3327
2200	1.94	3.26							2.94	907.0	1.3601

STA. NO. 08156800							STORM RAINFALL AND RUNOFF RECORD			1979 WATER YEAR		
SHOAL CREEK AT 12TH. STREET, AUSTIN, TEXAS							STORM OF MAY 21-22, 1979			ACCUM.	DISCHARGE	ACCUM.
DATE & TIME							G A G E N U M B E R			WEIGHTED	IN	RUNOFF
										PRECIP.	CFS	IN.
										IN.		
MAY 21												
2215	1.96	3.31								2.99	770.0	1.3951
2245	1.98	3.35								3.02	582.0	1.4303
2315	2.09	3.39								3.08	508.0	1.4534
2330	2.19	3.43								3.13	513.0	1.4767
2400	2.21	3.44								3.14	460.0	1.4975
MAY 22												
0000	2.21	3.44								3.14	460.0	1.4975
0030	2.36	3.65								3.34	518.0	1.5359
0100	2.37	3.66								3.35	490.0	1.5655
0130	2.38	3.67								3.36	436.0	1.5919
0200	2.40	3.68								3.37	446.0	1.6121
0215	2.42	3.69								3.39	505.0	1.6274
0230	2.43	3.71								3.40	485.0	1.6568
0315	2.47	3.74								3.44	383.0	1.6974
0415	2.47	3.75								3.44	302.0	1.7385
0530	2.47	3.75								3.44	240.0	1.7784
0700	2.47	3.75								3.44	182.0	1.8170
0900	2.48	3.75								3.45	133.0	1.8573
1200	2.48	3.75								3.45	104.0	1.8950
1500	2.48	3.76								3.45	84.0	1.9255
1800	2.49	3.76								3.46	73.0	1.9520
2100	2.49	3.76								3.46	65.0	1.9756
2400	2.49	3.76								3.46	59.0	1.9864

SIA. NO.08156800									
STORM RAINFALL AND RUNOFF RECORD									
1979 WATER YEAR									
SHOAL CREEK AT 12TH. STREET, AUSTIN, TEXAS									
STORM OF JULY 19-20, 1979									
DATE & TIME	G A G E N U M B E R						ACCUM. WEIGHTED PRECIP.	DISCHARGE IN	ACCUM. RUNOFF
	1SHL	2SHL					IN.	CFS	IN.
JULY 19									
0000	0.0	0.0					0.0	0.5	0.0005
1515	0.01	0.0					0.00	0.5	0.0010
1830	0.01	0.0					0.00	0.5	0.0011
1840	0.01	0.01					0.01	0.5	0.0011
1845	0.05	0.21					0.17	0.7	0.0011
1850	0.09	0.38					0.31	1.0	0.0011
1855	0.34	0.49					0.45	2.0	0.0012
1900	0.50	0.58					0.56	5.2	0.0012
1905	0.68	0.83					0.79	84.0	0.0021
1910	0.81	1.01					0.96	164.0	0.0037
1915	0.93	1.18					1.12	243.0	0.0062
1920	1.04	1.27					1.21	283.0	0.0090
1925	1.12	1.37					1.31	323.0	0.0123
1930	1.16	1.46					1.39	363.0	0.0160
1935	1.18	1.54					1.45	445.0	0.0204
1940	1.19	1.58					1.49	527.0	0.0258
1945	1.23	1.63					1.53	609.0	0.0380
2000	1.25	1.92					1.76	1080.0	0.0707
2015	1.28	2.08					1.89	1460.0	0.1149
2030	1.43	2.41					2.17	1440.0	0.1585
2045	1.47	3.08					2.69	1360.0	0.1997
2100	1.97	3.39					3.05	1340.0	0.2402
2115	2.26	3.53					3.23	1360.0	0.3020
2145	2.50	3.59					3.33	1420.0	0.3664
2200	2.53	3.64					3.37	1770.0	0.4200
2215	2.57	3.66					3.40	2490.0	0.4954
2230	2.57	3.67					3.41	2670.0	0.5762
2245	2.57	3.67					3.41	2150.0	0.6412
2300	2.57	3.68					3.41	1500.0	0.6866
2315	2.57	3.68					3.41	1050.0	0.7184
2330	2.57	3.68					3.41	786.0	0.7422
2345	2.57	3.68					3.41	621.0	0.7610
2400	2.57	3.68					3.41	523.0	0.7768
JULY 20									
0000	2.57	3.68					3.41	523.0	0.7768
0030	2.57	3.68					3.41	389.0	0.8083
0100	2.57	3.68					3.41	304.0	0.8267
0130	2.57	3.68					3.41	256.0	0.8499
0230	2.58	3.68					3.42	196.0	0.8737
0330	2.58	3.68					3.42	159.0	0.9025

STA. NO.08156800		STORM RAINFALL AND RUNOFF RECORD							1979 WATER YEAR			
SHOAL CREEK AT 12TH. STREET, AUSTIN, TEXAS							STORM OF JULY 19-20, 1979			ACCUM.	DISCHARGE	ACCUM.
DATE & TIME		G A G E N U M B E R					WEIGHTED	IN	RUNOFF			
		1SHL	2SHL				PRECIP.					
							IN.	CFS	IN.			
JULY 20												
0530		2.58	3.68				3.42	115.0	0.9339			
0800		2.58	3.68				3.42	87.0	0.9681			
1200		2.58	3.68				3.42	73.0	0.9990			
1500		2.59	3.68				3.42	58.0	1.0201			
1800		2.59	3.68				3.42	54.0	1.0332			
1900		2.59	3.68				3.42	84.0	1.0408			
1930		2.82	3.68				3.47	186.0	1.0520			
2000		2.84	3.68				3.48	126.0	1.0597			
2030		2.84	3.68				3.48	95.0	1.0712			
2200		2.84	3.68				3.48	67.0	1.0854			
2400		2.84	3.68				3.48	55.0	1.1053			
JULY 21												
0000		2.84	3.68				3.48	55.0	1.1053			
0800		2.84	3.68				3.48	46.0	1.1632			
1600		2.84	3.68				3.48	39.0	1.2010			
2400		2.84	3.68				3.48	36.0	1.2184			

WALLER CREEK DRAINAGE BASIN

The locations of data-collection sites in the Waller Creek drainage basin are shown on figure 12.

A summary of storm rainfall and runoff is shown in table 8.

Daily and monthly rainfall totals for the 1979 water year are given in table 13.

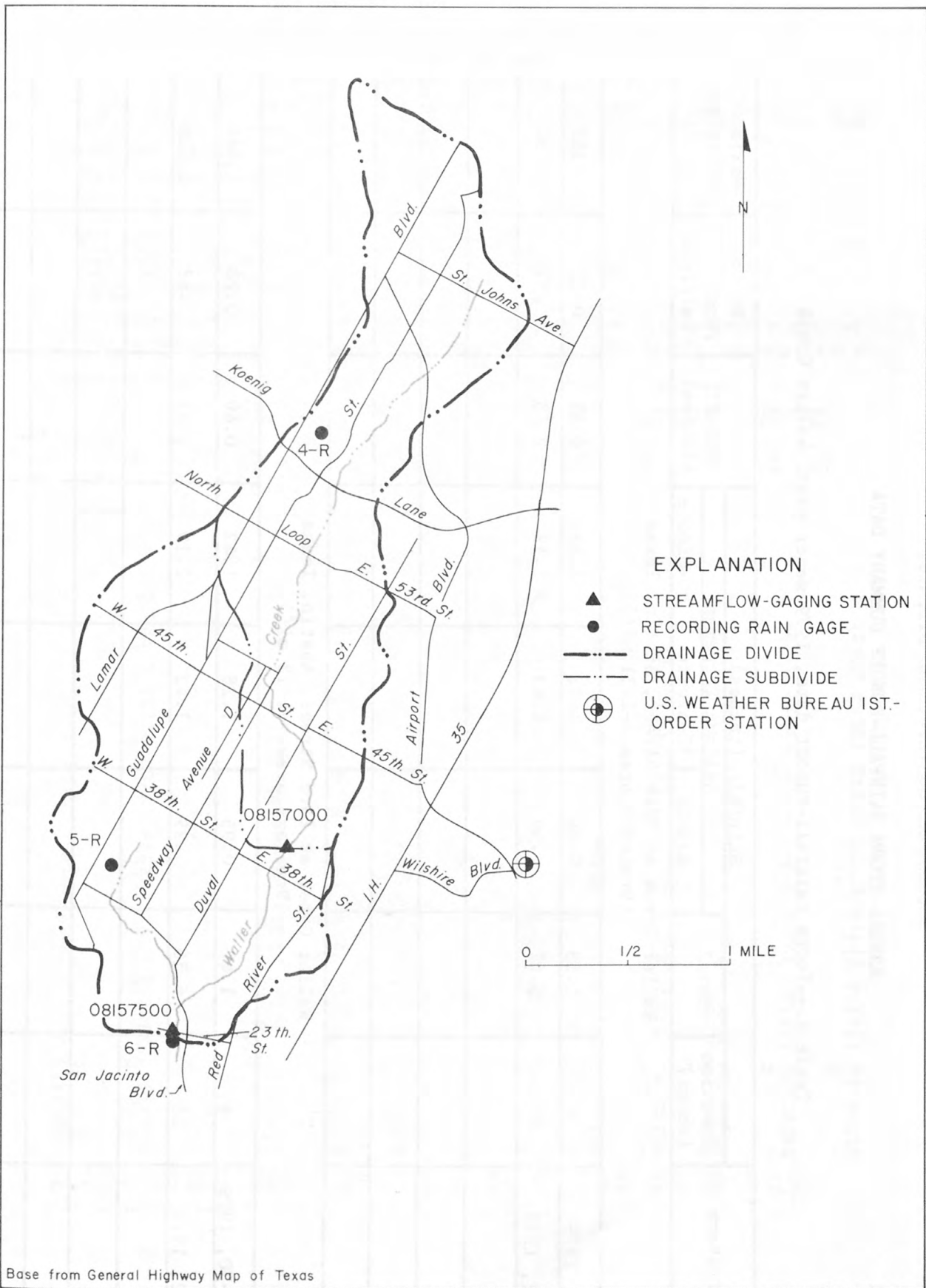


Figure 12.-Locations of surface -water data-collection sites in the Waller Creek drainage basin

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UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY-TEXAS DISTRICT

ANNUAL STORM RAINFALL-RUNOFF SUMMARY DATA

Table 8.--Storm rainfall-runoff data, 1979 water year, Waller Creek

Date of Storm	Rainfall (inches)					Runoff (inches)	Ratio runoff to rainfall	Maximum discharge (ft ³ /s)
	Duration (hours)	Total	Maximum increment					
			15-minute	30-minute	60-minute			

Waller Creek at 38th Street, Austin, Texas
(Drainage area.--2.31 mi²)

April 29, 1979	6	1.33	0.95	1.28	1.38	0.33	0.25	389
May 21-22, 1979	16	5.62	.99	1.43	2.19	2.83	.50	1,830

Waller Creek at 23rd Street, Austin, Texas
(Drainage area.--4.13 mi²)

April 29-30, 1979	6	1.42	0.95	1.28	1.42	0.40	0.28	1,060
May 21-22, 1979	16	6.36	.99	1.43	2.19	2.72	.43	2,620

COLORADO RIVER BASIN

08157000 WALLER CREEK AT 38TH STREET, AUSTIN, TX

LOCATION.--Lat 30°17'49", long 97°43'36", Travis County, Hydrologic Unit 12090205, on right bank 200 ft (61 m) upstream from bridge at East 38th Street in Austin, 1.1 mi (1.8 km) upstream from West Branch of Waller Creek, and 3.3 mi (5.3 km) upstream from Colorado River.

DRAINAGE AREA.--2.31 mi² (5.98 km²).

PERIOD OF RECORD.--April 1955 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 555.44 ft (169.298 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Flow slightly regulated at times by a small reservoir at the Perry School (formerly Holy Cross High School) on East 41st Street and a small swimming pool at the school which is drained into the creek every week or two during the summer. Water from other swimming pools also drain into the creek. Station is part of hydrologic research project to study rainfall-runoff relation for small urban areas. Two recording rain gages are located in the watershed. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--24 years, 1.70 ft³/s (0.0481 m³/s), 9.99 in/yr (254 mm/yr), 1,230 acre-ft/yr (1.52 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,970 ft³/s (55.8 m³/s) Oct. 29, 1960, gage height, 7.77 ft (2.368 m); no flow for many days in 1955-57, 1964.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 300 ft³/s (8.50 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Nov. 5	1845	338 9.57	4.99 1.521	May 21	2015	*1,830 51.8	7.62 2.323
Dec. 31	0430	318 9.01	4.92 1.500	July 19	2000	605 17.1	5.72 1.743
Apr. 29	0730	389 11.0	5.15 1.570	July 27	0830	881 24.9	6.29 1.917
May 1	1115	341 9.66	5.00 1.524				

Minimum daily discharge, 0.05 ft³/s (0.001 m³/s) Oct. 31.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979 MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.35	.07	.14	7.3	.34	.27	2.6	18	1.2	.76	.89	.41
2	.10	.08	.13	.39	.73	.31	1.9	1.1	3.1	.51	.91	.45
3	.40	.06	1.1	.40	3.2	.65	.84	.86	.68	.75	.88	.44
4	.11	.06	.14	1.8	11	.25	.60	.72	.59	.78	.92	.67
5	.08	46	.13	1.1	13	.24	.53	.71	7.6	.83	.90	.79
6	.07	3.8	.13	2.9	15	.24	.48	.62	.80	30	.56	.79
7	.08	.12	.13	.38	1.9	.24	.69	.58	.66	.88	.88	.46
8	.09	.11	.13	.28	1.0	.24	.62	.58	.66	.85	.81	.44
9	.08	.10	.13	.28	.68	.24	.38	.53	.62	.54	.84	.47
10	.08	.10	.14	17	.66	1.1	.37	.34	3.8	.80	.81	.48
11	.08	.21	.13	2.6	.49	.27	.35	1.8	.31	.79	3.3	.50
12	.07	.46	.13	.80	.41	.23	.31	.32	.59	.80	.85	.49
13	.07	.11	.14	.39	.36	.24	.30	.27	.58	.72	.53	.44
14	.07	.10	.16	.31	.32	.24	.32	.29	.55	3.9	.77	.41
15	.07	4.2	.14	.32	.29	1.6	.33	.28	.53	.84	1.9	.38
16	.06	4.7	.14	.31	.27	8.5	.32	.26	.53	.49	.81	.40
17	.06	.19	.13	.34	.28	.44	13	.24	.53	.75	.80	.41
18	.07	.13	.14	1.4	.27	.52	4.8	.25	.31	.85	.82	5.1
19	.06	3.1	.13	.32	.26	.42	2.1	.27	.52	54	2.1	4.7
20	.06	.93	.14	.48	.26	3.0	.59	.26	.55	4.9	.84	.58
21	.07	1.1	.17	.23	.27	25	1.9	154	.52	1.2	.78	.48
22	.10	.85	.15	.23	.30	21	.42	19	.51	.98	.83	.46
23	.09	.15	.13	.22	15	1.8	.36	2.0	.49	.59	.80	.44
24	.07	.14	.14	.34	.52	.92	.32	1.1	.53	.85	.77	.44
25	.13	.14	.13	1.8	.32	.61	.32	.78	.19	.85	.77	.44
26	.10	1.6	.13	.90	.29	.55	.30	.59	.51	7.1	.91	.46
27	.07	1.0	.13	.42	.32	.43	.33	.50	.45	74	.54	.44
28	.06	.18	.15	.42	.28	.41	.34	1.2	.70	2.2	.45	.44
29	.06	.22	.15	.60	---	.41	20	.70	.76	1.2	.46	.44
30	.06	.17	.15	.63	---	10	.77	2.5	.80	.71	.47	.43
31	.05	---	47	.32	---	2.8	---	.63	---	.90	.45	---
TOTAL	2.97	70.18	52.11	45.21	68.02	83.17	56.49	211.28	30.17	195.32	28.35	23.28
MEAN	.096	2.34	1.68	1.46	2.43	2.68	1.88	6.82	1.01	6.30	.91	.78
MAX	.40	.46	.47	17	15	25	20	154	7.6	74	3.3	5.1
MIN	.05	.06	.13	.22	.26	.23	.30	.24	.19	.49	.45	.38
CFSM	.04	1.01	.73	.63	1.05	1.16	.81	2.95	.44	2.73	.39	.34
IN.	.05	1.13	.84	.73	1.09	1.34	.91	3.40	.49	3.14	.46	.37
AC-FT	5.9	139	103	90	135	165	112	419	60	387	56	46
(11)	.30	5.80	3.17	2.29	3.33	4.16	3.55	7.26	1.29	10.08	.81	1.75

CAL YR 1978 TOTAL 454.58 MEAN 1.25 MAX 47 MIN .05 CFSM .54 IN 7.32 AC-FT 902 †† 32.65
WTR YR 1979 TOTAL 866.55 MEAN 2.37 MAX 154 MIN .05 CFSM 1.03 IN 13.95 AC-FT 1720 †† 43.79

†† Weighted-mean rainfall, in inches, based on two rain gages.

STATION NO. 08157000									
STORM RAINFALL AND RUNOFF RECORD									
1979 WATER YEAR									
WALLER CREEK AT 34TH. STREET, AUSTIN, TEXAS									
STORM OF APRIL 29, 1979									
DATE & TIME	G A G E N U M B E R					ACCUM. WEIGHTED PRECIP.	DISCHARGE IN	ACCUM. RUNOFF	
	4-R	5-R				IN.	CFS	IN.	
APR. 29									
0000	0.0	0.0				0.0	0.3	0.0006	
0620	0.01	0.0				0.01	0.4	0.0015	
0625	0.04	0.0				0.03	0.4	0.0015	
0630	0.10	0.05				0.09	0.4	0.0015	
0635	0.36	0.26				0.34	11.0	0.0022	
0640	0.64	0.58				0.63	21.0	0.0033	
0645	0.90	1.00				0.92	31.0	0.0051	
0650	1.05	1.18				1.07	90.0	0.0101	
0655	1.10	1.27				1.13	148.0	0.0184	
0700	1.12	1.33				1.16	207.0	0.0299	
0705	1.14	1.36				1.18	259.0	0.0444	
0710	1.15	1.38				1.19	311.0	0.0618	
0715	1.16	1.39				1.20	363.0	0.0821	
0720	1.17	1.42				1.22	369.0	0.1130	
0730	1.19	1.43				1.24	369.0	0.1456	
0735	1.19	1.44				1.24	335.0	0.1737	
0745	1.21	1.46				1.26	246.0	0.2012	
0755	1.22	1.46				1.27	181.0	0.2214	
0805	1.23	1.48				1.28	133.0	0.2400	
0820	1.24	1.50				1.29	91.0	0.2578	
0840	1.25	1.51				1.30	68.0	0.2787	
0915	1.26	1.52				1.31	44.0	0.2947	
0945	1.27	1.52				1.32	24.0	0.3048	
1030	1.27	1.52				1.32	13.0	0.3102	
1100	1.27	1.52				1.32	9.0	0.3147	
1200	1.28	1.53				1.33	5.2	0.3182	
1300	1.28	1.53				1.33	3.5	0.3217	
1500	1.28	1.53				1.33	2.1	0.3253	
1800	1.28	1.53				1.33	1.3	0.3279	
2100	1.28	1.53				1.33	1.1	0.3301	
2400	1.28	1.53				1.33	0.9	0.3310	

SIA. NO.08157000				STORM RAINFALL AND RUNOFF RECORD				1979 WATER YEAR		
WALLER CREEK AT 30TH. STREET, AUSTIN, TEXAS				STORM OF MAY 21-22, 1979				ACCUM. WEIGHTED PRECIP.	DISCHARGE IN	ACCUM. RUNOFF
DATE & TIME	4-R	5-R	G A G E	N U M B E R				IN.	CFS	IN.
MAY 21										
0000	0.0	0.0						0.0	0.3	0.0015
1435	0.02	0.03						0.02	0.3	0.0029
1440	0.05	0.07						0.05	0.3	0.0030
1450	0.38	0.47						0.40	4.9	0.0035
1500	0.54	0.63						0.56	14.0	0.0055
1515	0.56	0.66						0.58	38.0	0.0118
1530	0.57	0.67						0.59	42.0	0.0189
1545	0.57	0.67						0.59	106.0	0.0367
1600	0.57	0.67						0.59	104.0	0.0628
1630	0.57	0.67						0.59	58.0	0.0774
1645	0.57	0.67						0.59	49.0	0.0856
1700	0.69	0.73						0.70	38.0	0.0920
1715	1.12	1.17						1.13	53.0	0.1009
1730	1.48	1.91						1.56	213.0	0.1366
1745	1.74	2.35						1.86	443.0	0.2109
1800	1.74	2.44						1.87	462.0	0.2884
1815	1.76	2.75						1.95	484.0	0.3425
1820	1.76	2.82						1.96	484.0	0.3696
1825	1.88	3.15						2.12	484.0	0.3966
1830	2.17	3.45						2.41	484.0	0.4237
1835	2.53	3.71						2.75	573.0	0.4557
1840	2.87	3.88						3.06	663.0	0.4928
1845	3.00	4.07						3.20	752.0	0.5348
1850	3.05	4.25						3.28	800.0	0.5795
1855	3.16	4.37						3.39	849.0	0.6270
1900	3.44	4.48						3.64	897.0	0.6771
1905	3.56	4.57						3.75	985.0	0.7322
1910	3.66	4.57						3.83	1070.0	0.7920
1915	3.76	4.57						3.91	1160.0	0.8569
1920	3.95	4.58						4.07	1130.0	0.9516
1930	4.08	4.60						4.18	1080.0	1.1025
1945	4.40	4.90						4.49	903.0	1.2540
2000	4.64	5.61						4.82	1350.0	1.4804
2015	4.87	6.25						5.13	1830.0	1.8384
2035	5.03	6.73						5.35	1330.0	2.0615
2045	5.03	6.74						5.35	925.0	2.1907
2100	5.03	6.75						5.36	507.0	2.2758
2115	5.03	6.77						5.36	301.0	2.3515
2145	5.04	6.79						5.37	148.0	2.4011

STA. NO.08157000				STORM RAINFALL AND RUNOFF RECORD				1979 WATER YEAR		
WALLER CREEK AT 3-TH. STREET, AUSTIN, TEXAS				STORM OF MAY 21-22, 1979				ACCUM.	DISCHARGE	ACCUM.
DATE & TIME				G A G E N U M B E R				WEIGHTED	IN	RUNOFF
								PRECIP.		
								IN.	CFS	IN.
=====										
MAY 21										
2215								5.42	85.0	2.4368
2300								5.44	54.0	2.4685
2400								5.47	61.0	2.4940
MAY 22										
0000								5.47	61.0	2.4940
0030								5.56	95.0	2.5230
0045								5.57	132.0	2.5452
0100								5.57	125.0	2.5766
0130								5.57	90.0	2.6068
0200								5.58	56.0	2.6350
0300								5.59	34.0	2.6692
0500								5.59	25.0	2.6985
0630								5.60	15.0	2.7212
0930								5.61	10.0	2.7430
1300								5.61	9.0	2.7656
1700								5.62	6.7	2.7814
2000								5.62	4.2	2.7912
2400								5.62	3.3	2.8001
MAY 23										
0000								5.62	3.3	2.8001
0800								5.62	2.2	2.8163
1600								5.62	1.7	2.8254
2400								5.62	1.4	2.8292

COLORADO RIVER BASIN

08157500 WALLER CREEK AT 23D STREET, AUSTIN, TX

LOCATION.--Lat 30°17'08", long 97°44'01", Travis County, Hydrologic Unit 12090205, on San Jacinto Boulevard, 50 ft (15 m) upstream from bridge on East 23d Street in Austin, and 2.1 mi (3.4 km) upstream from Colorado River.

DRAINAGE AREA.--4.13 mi² (10.70 km²).

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

Water-quality records: Periodic chemical, biochemical, and pesticide analyses: October 1970 to September 1971.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 509.95 ft (155.433 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Some regulation by small dam upstream. Diversion of city water into channel during the summer months from municipal and private swimming pools. Some diversions into and out of drainage area by storm sewers. Station is part of a hydrologic research project to study rainfall-runoff relation for small urban areas. Three recording rain gages are located in the watershed. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--24 years, 3.55 ft³/s (0.101 m³/s), 11.67 in/yr (296 mm/yr), 2,570 acre-ft/yr (3.17 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,020 ft³/s (114 m³/s) Oct. 11, 1973, gage height, 9.00 ft (2.743 m); minimum daily, 0.2 ft³/s (0.006 m³/s) at times in 1955-57.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum flood since 1885 occurred Apr. 22, 1915, stage unknown.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 800 ft³/s (22.7 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Apr. 29	0700	1,060 30.0	5.26 1.603	July 19	2015	1,600 45.3	6.14 1.871
May 1	1045	929 26.3	5.02 1.530	July 26	1630	1,030 29.2	5.20 1.585
May 21	2015	*2,620 74.2	7.47 2.277	July 27	0830	1,920 54.4	6.60 2.012

Minimum daily discharge, 0.25 ft³/s (0.007 m³/s) Nov. 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979												
DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.60	.35	.53	11	.53	.74	4.8	35	4.1	.89	1.4	.60
2	.60	.30	.51	.86	1.5	1.0	3.6	2.2	6.2	.77	1.4	.66
3	.86	.30	3.0	.81	6.1	1.5	1.6	1.6	1.2	.92	1.3	.61
4	.48	.25	.51	3.8	19	.65	1.2	1.3	1.6	.91	1.3	.89
5	.44	90	.56	2.5	21	.61	1.1	1.2	13	1.3	1.3	1.8
6	.35	6.3	.59	5.9	23	.67	1.0	1.1	1.6	53	1.2	2.0
7	.32	.55	.56	.85	3.2	.66	1.4	1.1	1.6	1.3	1.3	.75
8	.33	.50	.43	.65	1.9	.73	1.2	1.0	1.4	1.3	1.2	.56
9	.39	.47	.44	.64	1.3	.67	.89	1.0	1.1	1.2	1.2	.56
10	.40	.48	.48	28	1.2	2.5	.90	.85	10	.98	1.2	.61
11	.37	1.2	.54	4.8	1.1	.62	.85	3.4	.81	1.1	7.4	.63
12	.36	1.1	.57	1.5	.93	.71	.81	.79	.85	1.0	1.2	.55
13	.34	.57	.57	.90	.87	.70	.74	.65	.89	.97	1.0	.56
14	.28	.51	.58	.73	.81	.63	.71	.67	.89	5.9	1.0	.63
15	.27	7.7	.39	.73	.75	3.7	.73	.63	.92	1.1	6.4	.60
16	.31	9.3	.35	.69	.67	13	.81	.60	.85	.80	1.1	.67
17	.28	.73	.33	1.0	.70	.90	22	.64	.75	.89	1.1	.81
18	.28	.58	.38	2.9	.65	1.0	8.5	.61	.82	.94	1.1	7.5
19	.31	6.7	.39	.82	.70	.90	3.0	.59	.77	113	5.8	4.1
20	.30	2.5	.46	1.1	.66	7.8	1.5	.59	.86	13	1.3	.77
21	.29	3.1	.32	.56	.65	35	5.0	270	.84	2.0	1.0	.63
22	.30	2.2	.36	.57	.68	32	.94	29	.84	1.3	1.1	.60
23	.32	.65	.38	.67	28	2.9	.87	4.1	.77	1.1	1.1	.63
24	.34	.65	.34	.77	1.1	1.7	.79	2.5	.70	1.2	1.1	.67
25	.97	.60	.33	3.5	.78	1.2	.77	1.8	.65	1.4	1.0	.66
26	.89	4.1	.36	1.5	.77	1.2	.75	1.4	.70	26	1.0	.61
27	.35	1.9	.36	.53	.77	1.1	.69	1.3	.80	149	1.0	.63
28	.30	.83	.44	.55	.69	1.0	.68	2.1	1.2	4.3	.64	.65
29	.28	.76	.51	1.0	---	.95	43	1.7	.98	2.3	.64	.56
30	.33	.53	.64	1.1	---	18	1.3	5.1	.93	1.7	.64	.56
31	.34	---	82	.52	---	5.5	---	1.5	---	1.5	.64	---
TOTAL	12.58	145.71	98.21	81.45	120.01	140.24	112.13	376.02	58.62	393.07	50.06	32.06
MEAN	.41	4.86	3.17	2.63	4.29	4.52	3.74	12.1	1.95	12.7	1.61	1.07
MAX	.97	90	82	28	28	35	43	270	13	149	7.4	7.5
MIN	.27	.25	.32	.52	.53	.61	.68	.59	.65	.77	.64	.55
CFSM	.10	1.18	.77	.64	1.04	1.09	.91	2.93	.47	3.08	.39	.26
IN.	.11	1.31	.88	.73	1.08	1.26	1.01	3.39	.53	3.54	.45	.29
AC-FT	.25	289	195	162	238	278	222	746	116	780	99	64
(††)	.28	5.83	3.09	2.29	3.30	4.20	3.66	7.97	1.36	11.17	.92	1.76
CAL YR 1978 TOTAL	906.38											
MEAN 2.48												
MAX 90												
MIN .25												
CFSM .60												
IN 8.16												
AC-FT 1800												
†† 32.39												
WTR YR 1979 TOTAL	1620.16											
MEAN 4.44												
MAX 270												
MIN .25												
CFSM 1.08												
IN 14.59												
AC-FT 3210												
†† 45.83												

†† Weighted-mean rainfall, in inches, based on three rain gages.

STA. NO. 08157500				STORM RAINFALL AND RUNOFF RECORD				1979 WATER YEAR		
WALLER CREEK AT 23RD. STREET, AUSTIN, TEXAS				STORM OF APRIL 29-30, 1979				ACCUM. WEIGHTED PRECIP.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
DATE & TIME	4-R	5-R	6-R	G A G E N U M B E R				IN.		
APR. 29										
0000	0.0	0.0	0.0					0.0	0.6	0.0007
0020	0.01	0.0	0.0					0.00	0.7	0.0016
0025	0.04	0.0	0.0					0.02	0.7	0.0016
0030	0.10	0.05	0.0					0.07	0.7	0.0016
0035	0.26	0.26	0.10					0.29	28.0	0.0025
0040	0.64	0.58	0.29					0.98	56.0	0.0042
0045	0.90	1.00	0.60					0.91	84.0	0.0069
0050	1.05	1.18	0.91					1.09	393.0	0.0191
0055	1.10	1.27	1.04					1.16	701.0	0.0411
0700	1.12	1.33	1.13					1.20	1060.0	0.0742
0705	1.14	1.36	1.20					1.23	922.0	0.1030
0710	1.15	1.38	1.24					1.25	834.0	0.1291
0715	1.16	1.39	1.26					1.26	746.0	0.1524
0720	1.17	1.42	1.28					1.28	671.0	0.1734
0725	1.18	1.42	1.29					1.29	595.0	0.1920
0730	1.19	1.43	1.30					1.30	520.0	0.2245
0745	1.21	1.46	1.33					1.32	486.0	0.2701
0800	1.22	1.47	1.34					1.33	312.0	0.2994
0815	1.24	1.50	1.36					1.36	177.0	0.3160
0830	1.25	1.51	1.37					1.37	121.0	0.3273
0845	1.26	1.51	1.38					1.37	92.0	0.3360
0900	1.26	1.52	1.38					1.38	73.0	0.3462
0930	1.26	1.52	1.39					1.38	52.0	0.3560
1000	1.27	1.52	1.39					1.38	36.0	0.3627
1030	1.27	1.52	1.39					1.38	23.0	0.3671
1100	1.27	1.52	1.39					1.38	16.0	0.3716
1200	1.28	1.53	1.39					1.39	9.6	0.3770
1400	1.28	1.53	1.39					1.39	5.1	0.3808
1600	1.28	1.53	1.39					1.39	3.6	0.3835
1800	1.28	1.53	1.39					1.39	2.7	0.3860
2100	1.28	1.53	1.39					1.39	1.9	0.3882
2400	1.28	1.53	1.39					1.39	1.6	0.3900
APR. 30										
0000	1.28	1.53	1.39					1.39	1.6	0.3900
0600	1.28	1.53	1.39					1.39	1.2	0.3936
1200	1.32	1.54	1.39					1.41	1.2	0.3960
1700	1.33	1.54	1.39					1.42	1.5	0.3994
2400	1.33	1.54	1.39					1.42	1.1	0.4009

STA. NO.08157500										STORM RAINFALL AND RUNOFF RECORD										1979 WATER YEAR		
WALLER CREEK AT 23RD. STREET, AUSTIN, TEXAS										STORM OF MAY 21-22, 1979										ACCUM.	DISCHARGE	ACCUM.
																				WEIGHTED	IN	RUNOFF
DATE & TIME										G A G E N U M B E R										PRECIP.		
																				IN.	CFS	IN.
MAY 21																						
0000	0.0	0.0													0.0	0.5	0.0014					
1435	0.02	0.03													0.02	1.0	0.0041					
1445	0.15	0.21													0.18	2.0	0.0043					
1500	0.54	0.63													0.58	164.0	0.0197					
1515	0.56	0.66													0.61	179.0	0.0365					
1530	0.57	0.67													0.62	74.0	0.0434					
1545	0.57	0.67													0.62	70.0	0.0500					
1600	0.57	0.67													0.62	101.0	0.0594					
1615	0.57	0.67													0.62	95.0	0.0728					
1645	0.57	0.67													0.62	54.0	0.0804					
1700	0.69	0.73													0.71	50.0	0.0851					
1715	1.12	1.17													1.14	160.0	0.1001					
1730	1.48	1.91													1.69	881.0	0.1827					
1745	1.74	2.35													2.05	984.0	0.2750					
1800	1.74	2.44													2.09	804.0	0.3505					
1815	1.76	2.75													2.26	923.0	0.4082					
1820	1.76	2.82													2.29	1070.0	0.4416					
1825	1.88	3.15													2.51	1210.0	0.4795					
1830	2.17	3.45													2.81	1360.0	0.5220					
1835	2.53	3.71													3.12	1500.0	0.5689					
1840	2.87	3.88													3.37	1650.0	0.6205					
1845	3.00	4.07													3.53	1740.0	0.6765					
1850	3.05	4.25													3.65	1780.0	0.7321					
1855	3.16	4.37													3.76	1770.0	0.7874					
1900	3.44	4.48													3.96	1760.0	0.8425					
1905	3.56	4.57													4.06	1720.0	0.8963					
1910	3.66	4.57													4.11	1670.0	0.9485					
1915	3.76	4.57													4.16	1630.0	0.9994					
1920	3.95	4.58													4.26	1560.0	1.0726					
1930	4.08	4.60													4.34	1410.0	1.1828					
1945	4.40	4.90													4.65	1270.0	1.3019					
2000	4.64	5.61													5.12	1730.0	1.4642					
2015	4.87	6.25													5.56	2020.0	1.7100					
2030	5.02	6.64													5.83	2350.0	2.0406					
2100	5.03	6.75													5.89	1170.0	2.2052					
2115	5.03	6.77													5.90	633.0	2.2646					
2130	5.04	6.79													5.91	377.0	2.3000					
2145	5.04	6.79													5.91	241.0	2.3339					
2215	5.09	6.84													5.97	135.0	2.3655					

STORM RAINFALL AND RUNOFF RECORD									
STATION NO. 08157500				1979 WATER YEAR					
WALLER CREEK AT 23RD. STREET, AUSTIN, TEXAS				STORM OF MAY 21-22, 1979				ACCUM.	DISCHARGE
DATE & TIME				G A G E N U M B E R				WEIGHTED PRECIP.	IN
								IN.	CFS
									IN.
MAY 21									
2300	5.09	6.91						6.00	83.0
2315	5.09	7.02						6.06	98.0
2330	5.09	7.07						6.08	145.0
2400	5.09	7.11						6.10	109.0
MAY 22									
0000	5.09	7.11						6.10	109.0
0015	5.09	7.14						6.11	92.0
0030	5.14	7.37						6.25	202.0
0045	5.14	7.40						6.27	246.0
0100	5.14	7.40						6.27	182.0
0130	5.14	7.42						6.28	124.0
0200	5.14	7.45						6.29	95.0
0245	5.14	7.50						6.32	60.0
0300	5.14	7.52						6.33	62.0
0400	5.14	7.53						6.33	43.0
0600	5.14	7.54						6.34	27.0
0900	5.15	7.55						6.35	14.0
1200	5.15	7.55						6.35	13.0
1600	5.17	7.56						6.36	10.0
2000	5.17	7.56						6.36	7.8
2400	5.17	7.56						6.36	5.7
MAY 23									
0000	5.17	7.56						6.36	5.7
0600	5.17	7.56						6.36	4.6
1200	5.17	7.56						6.36	4.2
1800	5.17	7.56						6.36	3.5
2400	5.17	7.56						6.36	2.9

COLORADO RIVER BASIN

08157900 TOWN LAKE AT AUSTIN, TX

LOCATION.--Lat 30°14'56", long 97°43'03", Travis County, Hydrologic Unit 12090205, at Longhorn Dam on the Colorado River at Austin, 1.5 mi (2.4 km) downstream from Interstate Highway 35, and 2.3 mi (3.7 km) southeast of the State Capitol in Austin.

DRAINAGE AREA.--38,390 mi² (99,430 km²), approximately, of which 12,880 mi² (33,360 km²) probably is noncontributing.

PERIOD OF RECORD.--Chemical, biochemical, and pesticide analyses: February 1975 to current year.

301559097424801 TOWN LAKE (AUSTIN) AR

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
OCT							
16...	1040	1.0	543	7.6	26.5	6.0	76
16...	1042	10	543	7.6	25.5	6.3	79
16...	1044	20	543	7.2	25.0	2.9	36
16...	1046	30	543	7.2	25.0	1.9	23
FEB							
07...	1120	1.0	539	7.9	12.0	9.5	92
07...	1122	10	529	7.9	11.0	9.5	90
07...	1124	19	500	7.7	11.0	9.3	88
MAY							
29...	1122	1.0	523	7.6	21.0	7.0	78
29...	1124	10	523	7.5	20.5	5.8	64
29...	1126	21	523	7.4	20.0	4.6	51
JUL							
27...	1340	1.0	500	7.6	26.0	6.4	79
27...	1342	10	397	7.6	25.5	6.2	76
27...	1344	20	379	7.5	25.0	5.8	71
AUG							
22...	1110	1.0	544	7.6	24.5	6.9	83
22...	1112	10	544	7.6	23.0	6.4	75
22...	1114	24	544	7.5	22.5	6.2	72

301500097424801 TOWN LAKE (AUSTIN) AC

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TRANS- PAR- ENCY (SECCHI DISK) (M)	COLOR (PLAT- INUM COBALT UNITS)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)
OCT											
16...	1010	1.0	543	7.6	26.5	3.0	5	2.0	5.9	75	.5
16...	1013	10	543	7.7	25.5	--	--	--	6.4	80	--
16...	1015	20	543	7.5	25.0	--	--	--	5.2	64	--
16...	1018	24	543	7.6	25.0	--	5	2.0	5.6	69	.4
FEB											
07...	1055	1.0	539	7.9	12.5	1.90	0	3.0	9.5	93	.7
07...	1057	10	529	7.8	12.0	--	--	--	9.5	92	--
07...	1059	20	510	7.6	11.0	--	--	--	9.4	89	--
07...	1101	25	508	7.7	11.0	--	0	5.0	9.5	90	.6
MAY											
29...	1040	1.0	537	7.6	21.5	1.20	5	2.5	7.3	83	.5
29...	1042	10	537	7.6	20.5	--	--	--	7.6	84	--
29...	1044	20	545	7.6	20.0	--	--	--	7.8	87	--
29...	1046	26	547	7.6	20.0	--	5	3.5	7.9	87	.4
JUL											
27...	1300	1.0	344	7.5	25.0	.20	15	78	6.3	77	2.0
27...	1302	10	318	7.5	25.0	--	--	--	6.3	77	--
27...	1304	22	313	7.5	25.0	--	15	74	6.5	79	2.3
AUG											
22...	1050	1.0	544	7.6	23.5	--	3	.80	6.9	82	--
22...	1052	10	544	7.6	23.5	--	--	--	6.9	82	--
22...	1054	20	544	7.5	23.0	--	--	--	6.5	76	--
22...	1056	24	544	7.5	23.0	--	5	.90	6.2	73	.2

COLORADO RIVER BASIN
TOWN LAKE AT AUSTIN, TX--Continued

301500097424801 TOWN LAKE (AUSTIN) AC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	COLI-FORM, TOTAL, IMED. (COLS. PER 100 ML)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML)	STREP-TOCOCCHI, FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)
OCT										
16...	3200	6	1	190	40	42	20	32	1.0	3.9
16...	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	190	42	43	20	33	1.0	3.9
FEB										
07...	720	64	92	240	40	65	18	18	.5	1.9
07...	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	220	32	62	16	18	.5	1.8
MAY										
29...	5000	180	55	200	38	48	20	28	.9	3.3
29...	--	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--	--
29...	--	--	--	200	37	46	21	30	.9	3.4
JUL										
27...	43000	12000	15000	120	17	33	10	17	.7	2.9
27...	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	120	22	32	9.8	16	.2	2.8
AUG										
22...	--	--	--	200	37	46	21	29	.9	3.4
22...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	210	53	49	21	31	.9	3.3

DATE	BICAR-BONATE (MG/L AS HCO3)	CAR-BONATE (MG/L AS CO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS-PENDED (MG/L)	SOLIDS, VOLA-TILE, SUS-PENDED (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)
OCT										
16...	180	0	37	62	.2	9.9	296	1	0	.05
16...	--	--	--	--	--	--	--	--	--	.04
16...	--	--	--	--	--	--	--	--	--	--
16...	180	0	37	62	.2	10	298	2	1	.01
FEB										
07...	240	0	36	35	.2	7.6	300	4	1	.36
07...	--	--	--	--	--	--	--	--	--	.51
07...	--	--	--	--	--	--	--	--	--	--
07...	230	0	34	32	.2	7.1	285	6	2	.13
MAY										
29...	200	0	35	46	.2	8.0	287	3	0	.31
29...	--	--	--	--	--	--	--	--	--	.29
29...	--	--	--	--	--	--	--	--	--	--
29...	200	0	33	48	.2	8.1	288	8	6	.26
JUL										
27...	130	0	23	27	.2	5.5	183	92	16	.25
27...	--	--	--	--	--	--	--	--	--	.20
27...	120	0	21	24	.2	5.1	170	120	24	.13
AUG										
22...	200	0	37	53	.3	8.5	297	16	10	.22
22...	--	--	--	--	--	--	--	--	--	.22
22...	--	--	--	--	--	--	--	--	--	--
22...	190	0	38	53	.2	8.7	298	11	0	.23

COLORADO RIVER BASIN

TOWN LAKE AT AUSTIN, TX--Continued

301500097424801 TOWN LAKE (AUSTIN) AC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	PHOS- PHATE, TOTAL (MG/L AS PO4)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, TOTAL (MG/L AS PO4)	CARBON, ORGANIC TOTAL (MG/L AS C)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
OCT										
16...	.01	.06	.04	.35	--	.020	--	3.4	10	20
16...	.00	.04	.01	.43	--	.020	--	--	10	10
16...	--	--	--	--	--	--	--	--	--	--
16...	.01	.02	.05	1.5	--	.010	--	3.3	10	60
FEB										
07...	.02	.38	.02	.21	--	.030	--	2.1	0	0
07...	.00	.51	.04	.22	--	.030	--	--	0	0
07...	--	--	--	--	--	--	--	--	--	--
07...	.02	.15	.02	.24	--	.040	--	2.6	0	10
MAY										
29...	.02	.33	.05	.30	.06	.020	.06	2.9	<0	8
29...	.02	.31	.05	.27	.06	.020	.06	--	10	10
29...	--	--	--	--	--	--	--	--	--	--
29...	.02	.28	.05	.22	.09	.030	.09	3.1	10	10
JUL										
27...	.02	.27	.04	.57	--	.340	1.0	4.3	0	0
27...	.02	.22	.02	.36	--	.190	.58	--	30	10
27...	.02	.15	.02	.53	--	.190	.58	7.0	10	0
AUG										
22...	.02	.24	.11	.00	--	.000	.00	2.8	<10	7
22...	.02	.24	.02	.00	--	.010	.03	--	0	20
22...	--	--	--	--	--	--	--	--	--	--
22...	.02	.25	.03	.03	--	.000	.00	4.5	10	20

301503097424701 TOWN LAKE (AUSTIN) AL

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
OCT							
16...	1050	1.0	543	7.6	27.0	6.0	76
16...	1052	10	543	7.6	26.0	5.8	72
16...	1054	17	543	7.8	25.0	6.8	84
FEB							
07...	1040	1.0	539	7.8	12.0	9.7	92
07...	1042	10	510	7.6	11.0	9.7	94
07...	1044	19	500	7.6	11.0	10.0	94
MAY							
29...	1108	1.0	542	7.6	21.5	7.4	84
29...	1110	10	542	7.6	20.0	7.6	84
29...	1112	16	542	7.6	20.0	7.7	85
JUL							
27...	1330	1.0	344	7.5	25.5	6.2	76
27...	1332	10	318	7.5	25.0	6.4	78
27...	1334	16	313	7.5	25.0	6.3	77
AUG							
22...	1120	1.0	544	7.7	24.0	6.9	82
22...	1122	10	544	7.6	23.0	6.5	76
22...	1124	17	544	7.6	23.0	6.4	75

COLORADO RIVER BASIN
TOWN LAKE AT AUSTIN, TX--Continued

301500097440801 TOWN LAKE (AUSTIN) BR
WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
OCT							
16...	1115	1.0	543	7.9	25.0	7.9	98
16...	1117	10	543	7.9	25.0	7.7	95
16...	1119	14	543	7.9	24.5	7.6	93
FEB							
07...	1145	1.0	484	7.7	10.0	10.1	94
07...	1147	10	484	7.7	10.0	10.2	94
07...	1149	16	484	7.7	10.0	10.1	94
MAY							
29...	1203	1.0	542	7.7	20.5	7.9	88
29...	1205	10	542	7.7	20.0	7.9	87
29...	1207	16	542	7.7	20.0	7.9	87
JUL							
27...	1408	1.0	372	7.4	24.5	6.7	81
27...	1410	13	367	7.4	24.5	6.6	80
AUG							
22...	1140	1.0	544	7.6	22.5	6.4	74
22...	1142	10	544	7.6	22.5	6.3	73
22...	1144	14	544	7.6	22.5	6.2	72

301504097440901 TOWN LAKE (AUSTIN) BC
WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
OCT							
16...	1105	1.0	543	7.9	25.0	8.0	99
16...	1107	10	543	7.9	24.5	7.9	96
16...	1109	20	561	7.5	24.0	6.0	73
16...	1111	24	561	7.5	24.0	5.9	72
FEB							
07...	1135	1.0	484	7.7	10.0	10.1	94
07...	1137	10	484	7.7	10.0	10.1	94
07...	1139	20	484	7.7	10.0	10.2	94
07...	1141	28	484	7.7	10.0	10.4	96
MAY							
29...	1145	1.0	542	7.7	20.5	7.9	88
29...	1147	10	542	7.7	20.0	7.9	87
29...	1149	20	542	7.7	19.5	7.6	83
29...	1151	25	542	7.7	19.5	7.6	83
JUL							
27...	1400	1.0	324	7.4	24.5	6.9	83
27...	1402	10	324	7.4	24.5	6.9	83
27...	1404	21	322	7.4	24.5	6.7	81
AUG							
22...	1130	1.0	544	7.6	23.0	6.7	79
22...	1132	10	544	7.6	22.5	6.2	72
22...	1134	20	544	7.5	22.0	6.1	70

301544097445201 TOWN LAKE (AUSTIN) CR
WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
OCT							
16...	1140	1.0	574	7.7	25.0	8.1	100
16...	1142	7.0	574	7.7	24.0	8.3	101
FEB							
07...	1215	1.0	532	7.7	10.0	10.3	95
07...	1217	8.0	532	7.7	10.0	10.3	95
MAY							
29...	1230	1.0	544	7.6	20.0	7.7	85
29...	1232	10	544	7.6	20.0	7.7	85
JUL							
27...	1423	1.0	435	7.5	24.5	6.5	78
27...	1425	9.0	435	7.5	24.5	6.4	77
AUG							
22...	1200	1.0	554	7.5	21.5	5.9	67
22...	1202	8.0	554	7.5	21.5	5.8	66

COLORADO RIVER BASIN
TOWN LAKE AT AUSTIN, TX--Continued

301546097445101 TOWN LAKE (AUSTIN) CC
WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
OCT							
16...	1130	1.0	574	7.6	25.0	8.0	99
16...	1132	10	574	7.6	24.0	7.7	94
16...	1134	16	574	7.5	23.5	8.0	96
FEB							
07...	1200	1.0	532	7.7	10.0	10.3	95
07...	1202	10	532	7.7	10.0	10.6	98
07...	1204	16	532	7.7	10.0	11.2	104
MAY							
29...	1220	1.0	542	7.6	20.5	7.8	86
29...	1222	10	542	7.6	20.0	7.8	86
29...	1224	18	542	7.6	20.0	7.8	86
JUL							
27...	1415	1.0	333	7.6	24.5	7.1	86
27...	1417	10	323	7.6	24.5	7.1	86
27...	1419	18	323	7.6	24.5	7.1	86
AUG							
22...	1150	1.0	554	7.5	23.0	6.1	72
22...	1152	10	554	7.5	21.5	5.8	66
22...	1154	13	554	7.5	21.5	5.8	66

301556097452301 TOWN LAKE (AUSTIN) DR
WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
OCT							
16...	1210	1.0	600	7.7	23.5	8.7	105
16...	1212	13	600	7.3	22.0	7.9	93
FEB							
07...	1250	1.0	536	7.8	10.0	10.6	98
07...	1252	11	536	7.8	9.5	10.7	97
MAY							
29...	1305	1.0	544	7.5	20.5	7.5	83
29...	1307	11	544	7.6	20.0	7.5	83
JUL							
27...	1455	1.0	480	7.5	25.0	6.4	78
27...	1457	9.0	480	7.5	24.5	6.4	77
AUG							
22...	1220	1.0	554	7.4	22.5	6.0	70
22...	1222	11	554	7.3	21.5	5.8	66

301558097452201 TOWN LAKE (AUSTIN) DC
WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TRANS- PAR- ENCY (SECCHI DISK) (M)	COLOR (PLAT- INUM COBALT UNITS)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)
OCT											
16...	1150	1.0	600	7.6	23.0	3.0	0	2.0	8.9	106	1.0
16...	1152	10	600	7.4	22.5	--	--	--	8.6	101	--
16...	1155	20	657	7.1	21.5	--	0	2.0	6.0	70	.5
FEB											
07...	1230	1.0	536	7.8	9.5	2.10	0	3.0	11.1	101	.2
07...	1233	10	548	7.9	9.0	--	--	--	11.1	100	--
07...	1235	18	548	7.9	9.0	--	0	2.0	11.6	105	.5
MAY											
29...	1246	1.0	544	7.4	21.0	2.10	3	1.1	7.9	89	.6
29...	1248	10	544	7.7	20.0	--	--	--	7.7	86	--
29...	1250	18	544	7.7	20.0	--	5	2.5	7.7	86	.6
JUL											
27...	1430	1.0	462	7.5	25.0	.40	10	14	6.4	78	.8
27...	1432	10	473	7.5	24.5	--	--	--	6.3	76	--
27...	1434	20	477	7.4	24.5	--	10	10	6.0	72	1.0
AUG											
22...	1210	1.0	548	7.5	21.5	2.10	5	1.7	6.1	69	.0
22...	1212	10	546	7.5	21.5	--	--	--	5.9	67	--
22...	1214	20	544	7.5	21.5	--	5	1.0	5.7	65	.0

COLORADO RIVER BASIN
TOWN LAKE AT AUSTIN, TX--Continued

301558097452201 TOWN LAKE (AUSTIN) DC--Continued
WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	COLI-FORM, TOTAL, IMMEDIATE (COLS. PER 100 ML)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML)	STREP-TOCOCCHI, KF AGAR (COLS. PER 100 ML)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)
OCT										
16...	1400	31	1	230	42	56	22	34	1.0	3.2
16...	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	270	41	69	24	30	.8	2.3
FEB										
07...	K80	39	120	220	44	57	20	23	.7	2.4
07...	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	210	48	52	20	28	.8	2.7
MAY										
29...	950	140	79	220	28	57	20	24	.7	2.5
29...	--	--	--	--	--	--	--	--	--	--
29...	--	--	--	200	40	44	21	31	1.0	3.5
JUL										
27...	20000	9900	8800	180	45	44	18	23	.7	3.2
27...	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	190	39	45	18	23	.7	3.2
AUG										
22...	38	37	5	210	45	49	21	28	.8	3.4
22...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	200	48	47	21	29	.9	3.5

DATE	BICAR-BONATE (MG/L AS HCO3)	CAR-BONATE (MG/L AS CO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SI02)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS-PENDED (MG/L)	SOLIDS, VOLA-TILE, SUS-PENDED (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)
OCT										
16...	230	0	38	53	.3	11	331	1	0	.14
16...	--	--	--	--	--	--	--	--	--	.16
16...	280	0	39	47	.3	12	362	2	0	.28
FEB										
07...	220	0	38	42	.2	7.3	298	4	1	.19
07...	--	--	--	--	--	--	--	--	--	.04
07...	200	0	43	53	.2	7.1	305	2	1	.05
MAY										
29...	240	0	26	31	.2	9.0	288	7	5	.46
29...	--	--	--	--	--	--	--	--	--	.24
29...	190	0	31	50	.2	7.8	282	0	0	.22
JUL										
27...	170	0	31	39	.2	7.6	250	18	8	.38
27...	--	--	--	--	--	--	--	--	--	.16
27...	180	0	31	38	.2	7.7	255	13	7	.22
AUG										
22...	200	0	37	52	.3	8.6	298	9	26	.34
22...	--	--	--	--	--	--	--	--	--	.27
22...	190	0	38	54	.3	8.6	295	2	13	.23

DATE	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	PHOS-PHATE, TOTAL (MG/L AS PO4)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, TOTAL (MG/L AS PO4)	CARBON, ORGANIC TOTAL (MG/L AS C)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
OCT										
16...	.01	.15	.02	.37	--	.030	--	2.8	<0	6
16...	.01	.17	.01	.45	--	.020	--	--	10	0
16...	.01	.29	.06	.18	--	.010	--	1.6	<0	60
FEB										
07...	.02	.21	.02	.27	--	.020	--	2.8	0	20
07...	.02	.06	.01	.27	--	.010	--	--	0	0
07...	.02	.07	.02	.25	--	.020	--	2.5	0	30
MAY										
29...	.02	.48	.02	.25	.03	.010	.03	4.2	<0	9
29...	.02	.26	.03	.27	.03	.010	.03	--	10	0
29...	.02	.24	.03	.33	.06	.020	.06	6.4	10	7
JUL										
27...	.06	.44	.04	.75	--	.120	.37	3.4	10	20
27...	.02	.18	.02	.34	--	.130	.40	--	20	20
27...	.02	.24	.05	.29	--	.100	.31	3.2	20	20
AUG										
22...	.00	.34	.02	.03	--	.000	.00	3.1	<10	9
22...	.02	.29	.03	.01	--	.010	.03	--	0	10
22...	.02	.25	.02	.06	--	.000	.00	4.7	<10	9

COLORADO RIVER BASIN
TOWN LAKE AT AUSTIN, TX--Continued

301712097470701 TOWN LAKE (AUSTIN) EC
WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TRANS- PAR- ENCY (SECCHI DISK) (M)	COLOR (PLAT- INUM COBALT UNITS)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)
OCT											
16...	1245	1.0	534	7.6	23.0	2.30	0	3.0	6.9	82	.6
16...	1248	5.0	545	7.5	22.5	--	--	--	7.3	86	--
16...	1250	13	598	6.9	22.0	--	0	2.0	8.0	94	.4
FEB											
07...	1320	1.0	552	7.9	9.5	2.40	0	2.0	11.6	105	.9
07...	1323	10	549	8.2	9.0	--	--	--	12.0	108	--
07...	1325	19	546	8.3	8.0	--	2	2.0	12.4	109	.8
MAY											
29...	1330	1.0	539	7.9	20.5	1.30	3	.50	8.5	94	.5
29...	1332	10	540	7.9	20.5	--	--	--	8.5	94	--
29...	1335	18	540	7.9	20.0	--	5	.80	8.5	93	.4
JUL											
27...	1520	1.0	523	7.2	22.5	--	5	4.6	7.3	85	.4
27...	1522	12	531	7.6	21.5	--	5	3.3	7.0	80	.8
AUG											
22...	1250	1.0	539	7.6	21.5	1.40	3	1.4	6.2	70	.1
22...	1252	10	539	7.6	22.0	--	--	--	6.2	71	--
22...	1254	14	539	7.6	22.0	--	3	1.6	6.1	70	.1

DATE	COLI- FORM, TOTAL, IMMED. PER 100 ML)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
OCT										
16...	2300	20	<1	180	45	41	20	33	1.1	3.9
16...	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	290	39	78	22	13	.3	1.3
FEB										
07...	76	K9	22	210	50	51	21	30	.9	2.8
07...	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	210	59	48	21	31	.9	3.0
MAY										
29...	260	16	7	190	39	45	20	32	1.0	3.6
29...	--	--	--	--	--	--	--	--	--	--
29...	--	--	--	190	36	44	20	32	1.0	3.6
JUL										
27...	800	680	180	230	42	56	22	20	.6	2.5
27...	--	--	--	200	40	42	22	28	.9	3.6
AUG										
22...	15	8	3	200	43	45	21	30	.9	3.6
22...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	200	48	47	21	32	1.0	3.2

DATE	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDE (MG/L)	SOLIDS, VOLA- TILE, SUS- PENDE (MG/L)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)
OCT										
16...	170	0	37	63	.2	9.7	292	2	1	.04
16...	--	--	--	--	--	--	--	--	--	--
16...	300	0	33	24	.2	10	329	0	0	.51
FEB										
07...	200	0	43	56	.2	7.4	310	3	1	.13
07...	--	--	--	--	--	--	--	--	--	.08
07...	180	0	44	60	.3	7.2	303	2	1	.05
MAY										
29...	190	0	39	53	.3	7.3	294	5	4	.19
29...	--	--	--	--	--	--	--	--	--	.16
29...	190	0	39	53	.3	7.3	293	4	3	.18
JUL										
27...	230	0	31	35	.2	8.6	175	4	4	.32
27...	190	0	36	51	.3	7.9	191	5	5	.16
AUG										
22...	190	0	39	56	.3	8.3	297	21	15	.18
22...	--	--	--	--	--	--	--	--	--	--
22...	190	0	39	54	.2	8.5	299	4	5	.18

COLORADO RIVER BASIN
TOWN LAKE AT AUSTIN, TX--Continued

301712097470701 TOWN LAKE (AUSTIN) EC--Continued
WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	PHOS- PHATE, TOTAL (MG/L AS PO4)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, TOTAL (MG/L AS PO4)	CARBON, ORGANIC TOTAL (MG/L AS C)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
OCT										
16...	.01	.05	.01	.49	--	.010	--	3.4	10	10
16...	--	--	--	--	--	--	--	--	--	--
16...	.01	.52	.01	.88	--	.010	--	2.2	10	10
FEB										
07...	.02	.15	.01	.30	--	.020	--	3.4	0	0
07...	.00	.08	.01	.31	--	.010	--	--	0	0
07...	.02	.07	.01	.31	--	.020	--	2.9	0	0
MAY										
29...	.02	.21	.02	.26	.03	.010	.03	4.1	<0	<1
29...	.02	.18	.02	.27	.03	.010	.03	--	10	10
29...	.02	.20	.03	.24	.03	.010	.03	2.9	<0	<1
JUL										
27...	.02	.34	.00	.47	--	.060	.18	2.5	10	0
27...	.02	.18	.01	.45	--	.070	.21	2.1	10	0
AUG										
22...	.02	.20	.01	.01	--	.000	.00	7.6	<10	2
22...	--	--	--	--	--	--	--	--	--	--
22...	.02	.20	.01	.56	--	.000	.00	3.4	10	2

301601097454001 TOWN LAKE (AUSTIN) FC
WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
OCT							
16...	1225	1.0	694	7.2	21.5	9.1	106
FEB							
07...	1300	1.0	497	7.8	11.5	11.8	112
07...	1302	3.0	497	7.8	11.5	11.8	112
MAY							
29...	1410	1.0	519	7.6	23.5	11.5	134
29...	1412	7.0	540	7.8	21.0	8.5	96
JUL							
27...	1500	1.0	495	7.1	22.5	6.8	79
27...	1502	4.0	495	7.1	22.5	6.8	79
AUG							
22...	1225	1.0	610	7.1	23.0	9.4	111
22...	1227	5.0	610	7.1	23.0	9.2	108

301500097424801 TOWN LAKE (AUSTIN) AC
WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, DIS- SOLVED (UG/L AS CU)
OCT							
16...	1010	1.0	2	0	0	0	7
16...	1013	10	--	--	--	--	--
16...	1018	24	2	0	0	0	7
FEB							
07...	1055	1.0	1	0	0	0	4
07...	1057	10	--	--	--	--	--
07...	1101	25	1	0	0	0	4
MAY							
29...	1040	1.0	--	--	--	--	--
29...	1042	10	--	--	--	--	--
29...	1046	26	--	--	--	--	--
JUL							
27...	1300	1.0	2	0	1	0	0
27...	1302	10	--	--	--	--	--
27...	1304	22	2	0	0	0	1
AUG							
22...	1050	1.0	--	--	--	--	--
22...	1052	10	--	--	--	20	--
22...	1056	24	--	--	--	--	--

COLORADO RIVER BASIN
TOWN LAKE AT AUSTIN, TX--Continued

301500097424801 TOWN LAKE (AUSTIN) AC--Continued
WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, DIS- SOLVED (UG/L AS ZN)
OCT							
16...	10	0	20	.0	0	0	0
16...	10	--	10	--	--	--	--
16...	10	0	60	.0	0	0	10
FEB							
07...	0	0	0	.0	0	0	10
07...	0	--	0	--	--	--	--
07...	0	2	10	.0	0	0	10
MAY							
29...	<0	--	8	--	--	--	--
29...	10	--	10	--	--	--	--
29...	10	--	10	--	--	--	--
JUL							
27...	0	1	0	.0	0	0	20
27...	30	--	10	--	--	--	--
27...	10	2	0	.0	0	0	20
AUG							
22...	<10	--	7	--	--	--	--
22...	0	--	20	--	--	--	--
22...	10	--	20	--	--	--	--

DATE	TIME	SAMP- LING DEPTH (FT)	PCB, TOTAL (UG/L)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLOR- DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)
OCT								
16...	1010	1.0	.0	.00	.00	.0	.00	.00
16...	1018	24	.0	.00	.00	.0	.00	.00
FEB								
07...	1055	1.0	.0	--	.00	.0	.00	.00
07...	1101	25	.0	--	.00	.0	.00	.00
JUL								
27...	1300	1.0	.0	--	.00	.1	.01	.03
27...	1304	22	.0	--	.00	.1	.01	.04

DATE	DDT, TOTAL (UG/L)	DI- AZINON, TOTAL (UG/L)	DI- ELDRIN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	MALA- THION, TOTAL (UG/L)
OCT									
16...	.00	.00	.00	.00	.00	.00	.00	.00	.00
16...	.00	.00	.00	.00	.00	.00	.00	.00	.00
FEB									
07...	.00	.01	.00	.00	.00	.00	.00	.00	.00
07...	.01	.03	.00	.00	.00	.00	.00	.00	.00
JUL									
27...	.00	.20	.00	.00	.00	.00	.00	.00	.00
27...	.07	.24	.00	.00	.00	.00	.00	.00	.00

DATE	METHYL PARA- THION, TOTAL (UG/L)	METHYL TRI- THION, TOTAL (UG/L)	PARA- THION, TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOTAL TRI- THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
OCT								
16...	.00	.00	.00	0	.00	.00	.00	.00
16...	.00	.00	.00	0	.00	.05	.00	.00
FEB								
07...	.00	.00	.00	0	.00	.09	.00	.00
07...	.00	.00	.00	0	.00	.09	.00	.00
JUL								
27...	.03	.00	.00	0	.00	.00	.01	.00
27...	.04	.00	.00	0	.00	.00	.01	.00

COLORADO RIVER BASIN
TOWN LAKE AT AUSTIN, TX--Continued
301712097470701 TOWN LAKE (AUSTIN) SITE EC
WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	PCB, TOTAL (UG/L)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLOR- DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)
OCT 16...	1245	1.0	.0	.00	.00	.0	.00	.00
FEB 07...	1320	1.0	.0	--	.00	.0	.00	.00
07...	1325	19	.0	--	.00	.0	.00	.00
JUL 27...	1520	1.0	.0	--	.00	.0	.00	.00
27...	1522	12	.0	--	.00	.0	.00	.00

DATE	DDT, TOTAL (UG/L)	DI- AZINON, TOTAL (UG/L)	DI- ELDRIN TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	MALA- THION, TOTAL (UG/L)
OCT 16...	.00	.00	.00	.00	.00	.00	.00	.00	.00
FEB 07...	.00	.00	.00	.00	.00	.00	.00	.00	.00
07...	.00	.00	.00	.00	.00	.00	.00	.00	.00
JUL 27...	.00	.01	.00	.00	.00	.00	.00	.00	.00
27...	.00	.00	.00	.00	.00	.00	.00	.00	.00

DATE	METHYL PARA- THION, TOTAL (UG/L)	METHYL TRI- THION, TOTAL (UG/L)	PARA- THION, TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOTAL TRI- THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
OCT 16...	.00	.00	.00	0	.00	.03	.00	.00
FEB 07...	.00	.00	.00	0	.00	.08	.00	.00
07...	.00	.00	.00	0	.00	.11	.00	.00
JUL 27...	.00	.00	.00	0	.00	.15	.00	.00
27...	.00	.00	.00	0	.00	.29	.00	.00

COLORADO RIVER BASIN

08158000 COLORADO RIVER AT AUSTIN, TX
(National stream-quality accounting network)

LOCATION.--Lat 30°14'40", long 97°41'39", Travis County, Hydrologic Unit 12090205, on right bank 1,000 ft (305 m) upstream from upstream bridge on U.S. Highway 183 in Austin, 1.4 mi (2.3 km) downstream from Longhorn Dam, and at mile 290.3 (467.1 km).

DRAINAGE AREA.--38,400 mi² (99,500 km²), approximately, of which 12,880 mi² (33,360 km²) probably is noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--February 1898 to current year. Records of daily discharge for Dec. 13-26, 1914, and Feb. 9-17, 1915, published in WSP 408, have been found unreliable and should not be used.

REVISED RECORDS.--WSP 508: 1915(m). WSP 528: 1900(M), 1918(m). WSP 548: 1901-16. WSP 1342: Drainage area. WSP 1562: 1908, 1929(M), 1936.

GAGE.--Water-stage recorder. Datum of gage is 402.27 ft (122.612 m) National Geodetic Vertical Datum of 1929. Prior to June 19, 1939, all records collected at or near Congress Avenue Bridge 3.9 mi (6.3 km) upstream at datum 19.6 ft (5.97 m) higher; prior to June 18, 1915, nonrecording gages, recording gages thereafter; June 20, 1939, to Oct. 16, 1963, at site 1,000 ft (305 m) downstream from present site at datum 5.0 ft (1.52 m) higher.

REMARKS.--Water-discharge records good except those for Aug. 6 to Sept. 13, which are fair. National Weather Service gage-height telemeter at station. Since 1937, at least 10 percent of drainage area regulated by reservoirs. Flow largely regulated by Lake Travis (station 08154500). The city of Austin reported that 70,780 acre-ft (87.3 hm³) was diverted for municipal use above station and 47,340 acre-ft (58.4 hm³) of treated sewage was returned below station. Many other diversions above Lake Buchanan for irrigation, municipal supplies, and oilfield operations.

AVERAGE DISCHARGE.--38 years (water years 1899-1936) unregulated, 2,711 ft³/s (76.78 m³/s), 1,964,000 acre-ft/yr (2.42 km³/yr); 43 years (water years 1937-79) regulated, 2,029 ft³/s (57.46 m³/s), 1,470,000 acre-ft/yr (1.81 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 481,000 ft³/s (13,600 m³/s) June 15, 1935, gage height, 50 ft (15.2 m), present site and datum, from floodmark; minimum daily, 10 ft³/s (0.28 m³/s) Dec. 17, 1972.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1833, 51 ft (15.5 m) July 7, 1869, present site and datum (adjusted to present site on basis of record for flood of June 15, 1935), determined from information concerning stage at former site furnished by Dean T. U. Taylor.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 17,200 ft³/s (487 m³/s) May 21, gage height, 15.07 ft (4.593 m); minimum daily, 6.7 ft³/s (0.19 m³/s) Oct. 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979 MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	747	41	135	132	132	174	399	3890	2800	2120	1440	1940
2	392	41	59	2380	150	198	1260	4080	4320	2020	1330	1900
3	956	34	84	307	182	538	1180	4130	5930	2140	1720	1820
4	970	35	92	123	291	180	1200	3860	10600	2160	1580	1760
5	525	790	51	150	626	168	647	3680	9970	2180	1610	1650
6	987	355	62	148	711	170	375	3580	9800	2670	1650	1600
7	18	44	53	125	732	168	580	2290	7910	2170	1850	1560
8	22	39	59	110	332	155	1690	3010	4070	2170	2050	1450
9	48	46	42	100	694	163	2080	3410	4020	2200	1820	1420
10	60	53	43	334	258	172	2140	2660	3500	1800	1940	1480
11	54	61	85	482	245	158	1850	545	3790	1790	2000	1540
12	43	58	65	329	249	149	1980	400	3480	1610	1960	1560
13	45	60	75	587	240	158	1900	353	3900	1540	1950	1640
14	35	52	61	216	237	148	1910	357	3930	1430	1920	1750
15	30	112	66	185	426	160	1130	1260	3460	1430	1880	2180
16	26	140	71	193	708	259	836	1750	3890	1420	1890	1980
17	40	65	61	185	198	151	946	1780	2720	1420	1960	1970
18	48	69	61	210	194	149	1180	1960	2090	1430	2050	2050
19	43	117	50	174	190	157	1080	2760	2220	2790	1960	371
20	35	88	47	168	192	270	1090	2460	1810	2430	1920	1280
21	39	85	60	153	194	1740	2690	4010	2420	1480	1910	1640
22	42	78	54	147	183	993	3900	3350	2430	1430	1900	1520
23	50	74	57	160	636	710	3870	682	2420	1190	1910	1570
24	445	72	69	140	259	693	3840	485	2430	1120	1920	1550
25	6.7	77	56	167	188	402	1990	1420	2510	1020	1970	1510
26	62	123	60	161	198	383	2180	1780	2370	661	1950	1110
27	44	75	42	122	200	356	1340	1560	2270	2580	1930	1090
28	45	97	56	136	198	610	1260	2190	2450	275	1950	1100
29	43	64	58	135	---	360	2520	2240	2110	240	1900	1120
30	29	75	57	430	---	873	3760	2270	2120	1150	1960	1100
31	38	---	1040	124	---	465	---	2140	---	1350	1920	---
TOTAL	5967.7	3120	2931	8513	9043	11430	52803	70342	117740	51416	57700	46211
MEAN	193	104	94.5	275	323	369	1760	2269	3925	1659	1861	1540
MAX	987	790	1040	2380	732	1740	3900	4130	10600	2790	2050	2180
MIN	6.7	34	42	100	132	148	375	353	1810	240	1330	371
AC-FT	11840	6190	5810	16890	17940	22670	104700	139500	233500	102000	114400	91660
CAL YR 1978 TOTAL	424344.7			1163	MAX	3520	MIN	6.7	AC-FT	841700		
WTR YR 1979 TOTAL	437216.7			1198	MAX	10600	MIN	6.7	AC-FT	867200		

COLORADO RIVER BASIN

08158000 COLORADO RIVER AT AUSTIN, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: October 1947 to October 1973. Chemical, biochemical, and pesticide analyses: October 1973 to current year. Sediment records: October 1974 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1947 to current year.

WATER TEMPERATURES: October 1947 to current year.

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 regression relationships between each chemical constituent and specific conductance. Regression equations developed for this station may be obtained from the Geological Survey District office upon request.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 737 micromhos Jan. 12, 1964; minimum daily, 243 micromhos Dec. 2, 1953. WATER TEMPERATURES: Maximum daily, 33.0°C July 25, 1979; minimum daily, 6.0°C Jan. 28, 1948, Feb. 4, 1949.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 625 micromhos Dec. 27; minimum daily, 270 micromhos Mar. 21. WATER TEMPERATURES: Maximum daily, 33.0 °C July 25; minimum daily, 9.0 °C on several days during January.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM COBALT UNITS)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)
OCT												
16...	0915	36	568	7.7	22.0	0	1.0	5.0	59	.7	200	K36
NOV												
13...	0945	64	500	7.5	24.0	5	1.0	5.3	65	.8	190	K30
DEC												
04...	0950	148	532	7.7	17.0	5	4.0	9.1	97	.7	640	200
JAN												
02...	1030	3170	520	7.9	13.0	1	7.0	10.6	104	.9	2300	640
FEB												
06...	0910	639	511	7.6	9.0	5	20	11.5	103	.7	3100	330
MAR												
05...	1010	76	496	7.7	18.0	0	2.0	12.1	132	1.0	720	80
APR												
02...	1110	3010	520	7.2	17.0	5	10	9.5	102	.7	5300	700
MAY												
08...	1115	3670	540	7.4	17.0	3	1.7	10.6	110	.0	1700	64
JUN												
11...	1110	3960	530	7.4	18.0	5	1.5	9.1	96	.2	2500	440
JUL												
09...	0935	115	560	7.2	23.0	0	1.0	7.3	85	.2	680	160
AUG												
06...	1000	64	560	7.1	26.0	5	1.4	7.7	94	1.0	600	140
SEP												
24...	1000	185	540	7.4	22.0	5	.30	9.6	110	.3	260	44

DATE	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	SULFATE DIS- SOLVED (MG/L AS SO4)
OCT											
16...	K12	200	41	46	20	34	1.1	3.7	190	0	39
NOV											
13...	K24	180	28	44	16	27	.9	3.5	180	0	32
DEC											
04...	260	200	33	51	17	26	.8	3.9	200	0	34
JAN											
02...	2200	200	28	52	17	25	.8	2.9	210	0	35
FEB											
06...	4000	240	51	68	17	15	.4	2.0	230	0	36
MAR											
05...	6	240	39	68	18	17	.5	1.9	250	0	35
APR											
02...	480	210	26	58	17	17	.5	1.9	230	0	29
MAY											
08...	38	210	59	48	21	30	.9	3.4	180	0	41
JUN											
11...	92	190	46	43	21	31	1.0	3.5	180	0	37
JUL											
09...	40	190	39	45	20	30	.9	3.5	190	0	39
AUG											
06...	100	210	64	50	21	28	.8	3.0	180	0	36
SEP											
24...	51	210	58	51	21	27	.8	3.4	190	0	36

COLORADO RIVER BASIN
08158000 COLORADO RIVER AT AUSTIN, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	SOLIDS, VOLA- TILE, SUS- PENDED (MG/L)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)
OCT 16...	63	.2	8.7	308	308	1	0	.06	.01	.07	.01
NOV 13...	48	.2	8.3	278	268	2	0	.11	.01	.12	.02
DEC 04...	49	.2	10	295	290	5	0	.37	.04	.41	.03
JAN 02...	43	.2	8.5	293	287	14	2	.37	.02	.39	.01
FEB 06...	30	.2	7.7	294	289	27	2	.49	.02	.51	.05
MAR 05...	33	.2	5.9	295	302	2	0	.52	.02	.54	.02
APR 02...	26	.2	8.0	293	270	17	2	.22	.04	.26	.04
MAY 08...	52	.2	6.9	302	291	0	0	.11	.00	.11	.00
JUN 11...	50	.3	8.3	309	283	0	0	.27	.02	.29	.04
JUL 09...	50	.3	8.1	317	290	0	0	.29	.02	.31	.04
AUG 06...	48	.2	9.0	315	284	6	4	.20	.04	.24	.01
SEP 24...	48	.3	8.2	294	289	8	4	.58	.00	.58	.03

DATE	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC DIS. (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 16...	1.1	1.1	.51	.010	.060	--	4.4	.4	2	.19	82
NOV 13...	.48	.50	.42	.040	.050	3.3	--	--	14	2.4	74
DEC 04...	.52	.55	.34	.050	.060	2.7	--	--	8	3.2	88
JAN 02...	.39	.40	.32	.060	.060	2.4	--	--	35	300	43
FEB 06...	.25	.30	.31	.060	.160	--	1.9	.8	63	109	83
MAR 05...	.28	.30	.25	.010	.010	1.9	--	--	14	2.9	57
APR 02...	.49	.53	.33	.040	.010	2.7	--	--	32	260	85
MAY 08...	.27	.27	.17	.020	.010	27	--	--	95	941	35
JUN 11...	.25	.29	.26	.000	.000	--	4.5	.4	310	3320	2
JUL 09...	.06	.10	.08	.000	.000	2.4	--	--	3	.93	100
AUG 06...	.19	.20	.27	.020	.050	--	3.9	.1	4	.69	75
SEP 24...	.70	.73	.47	.000	.000	2.5	--	--	1	.50	67

COLORADO RIVER BASIN

08158000 COLORADO RIVER AT AUSTIN, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	ARSENIC TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BARIUM, SUS- PENDE RECOV- ERABLE (UG/L AS BA)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM SUS- PENDE RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)
OCT 16...	0915	2	1	0	0	100	0	0	0	0
FEB 06...	0910	1	1	100	100	0	2	2	0	0
JUN 11...	1110	1	1	0	0	70	1	0	<1	0
AUG 06...	1000	1	1	0	0	80	0	0	<1	0

DATE	CHRO- MIUM, SUS- PENDE RECOV. (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, SUS- PENDE RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, SUS- PENDE RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)
OCT 16...	0	0	0	0	0	7	3	4	20	10
FEB 06...	0	10	0	0	0	8	6	2	340	340
JUN 11...	0	0	1	0	<3	5	5	0	70	70
AUG 06...	0	10	0	0	<3	3	0	3	60	50

DATE	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, SUS- PENDE RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDE RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY SUS- PENDE RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)
OCT 16...	10	0	0	0	30	10	20	.0	.0	.0
FEB 06...	0	10	10	0	20	0	20	.0	.0	.0
JUN 11...	<0	14	14	0	0	0	6	.0	.0	.1
AUG 06...	<10	5	5	0	30	10	20	.2	.1	.1

DATE	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, SUS- PENDE TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	SILVER, SUS- PENDE RECOV- ERABLE (UG/L AS AG)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDE RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)
OCT 16...	0	0	0	0	0	0	80	80	0
FEB 06...	1	0	1	0	0	0	20	10	10
JUN 11...	0	0	0	0	0	0	20	20	<3
AUG 06...	0	0	0	0	0	0	0	0	<3

DATE	LENGTH OF EXPO- SURE (DAYS)	PERI- PHYTON BIOMASS ASH WEIGHT G/SQ M	PERI- PHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M	CHLOR-A PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)	CHLOR-B PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)	BIOMASS CHLORO- PHYLL RATIO PERI- PHYTON (UNITS)
JUN 11...	34	16.5	17.3	6.30	.890	127
SEP 24...	49	12.5	18.0	65.1	16.2	84.5

COLORADO RIVER BASIN

08158000 COLORADO RIVER AT AUSTIN, TX--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1978 TO SEPTEMBER 1979

DATE TIME	DEC 4,78 0950	MAR 5,79 1010	MAY 8,79 1115	JUN 11,79 1110
TOTAL CELLS/ML	580	350	220	64
DIVERSITY: DIVISION	1.7	1.6	1.0	0.0
..CLASS	1.7	1.6	1.2	0.0
..ORDER	1.9	1.9	2.2	1.0
...FAMILY	2.5	2.5	2.4	1.0
....GENUS	2.5	2.5	2.7	1.0

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)								
..CHLOROPHYCEAE								
...CHLOROCOCCALES								
...CHARACIACEAE								
...SCHROEDERIA	42	7	--	-	--	-	--	-
...COELASTRACEAE								
...COELASTRUM	--	-	--	-	--	-	--	-
...SCENEDESMACEAE								
...CRUCIGENIA	--	-	--	-	56#	25	--	-
...SCENEDESMUS	--	-	--	-	--	-	26#	40
...VOLVOCALES								
...CHLAMYDOMONADACEAE								
...CARTERIA	--	-	--	-	28	13	--	-
...CHLAMYDOMONAS	--	-	55#	16	42#	19	39#	60
CHRYSOPHYTA								
..BACILLARIOPHYCEAE								
...CENTRALES								
...COSCINODISCACEAE								
...CYCLOTELLA	28	5	28	8	42#	19	--	-
...PENNALES								
...CYMBELLACEAE								
...CYMBELLA	14	2	--	-	14	6	--	-
...FRAGILARIACEAE								
...SYNEDRA	14	2	--	-	--	-	--	-
...GOMPHONEMACEAE								
...GOMPHONEMA	42	7	14	4	--	-	--	-
...NAVICULACEAE								
...NAVICULA	28	5	55#	16	28	13	--	-
...NITZSCHIA	83	14	97#	28	--	-	--	-
..CHRYSOPHYCEAE								
...CHRYSONOMADALES								
...OCHROMONADACEAE								
...OCHROMONAS	--	-	--	-	14	6	--	-
CRYPTOPHYTA (CRYPTOMONADS)								
..CRYPTOPHYCEAE								
...CRYPTOMONADALES								
...CRYPTOMONADACEAE								
...CRYPTOMONAS	42	7	14	4	--	-	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)								
..CYANOPHYCEAE								
...CHROOCOCCALES								
...CHROOCOCCACEAE								
...ANACYSTIS	--	-	--	-	--	-	--	-
...HORMOGONALES								
...OSCILLATORIA	280#	48	--	-	--	-	--	-
...OSCILLATORIA								
EUGLENOPHYTA (EUGLENOIDS)								
..EUGLENOPHYCEAE								
...EUGLENALES								
...EUGLENACEAE								
...EUGLENA	--	-	83#	24	--	-	--	-
PYRRHOPHYTA (FIRE ALGAE)								
..DINOPHYCEAE								
...PERIDINIALES								
...GLENODINIACEAE								
...GLENODINIUM	14	2	--	-	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
 * - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

COLORADO RIVER BASIN

08158000 COLORADO RIVER AT AUSTIN, TX--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1978 TO SEPTEMBER 1979

DATE TIME	JUL 9,79 0935	AUG 6,79 1000	SEP 24,79 1000			
TOTAL CELLS/ML	26	140	26			
DIVERSITY: DIVISION	0.0	0.5	0.0			
..CLASS	0.0	0.5	0.0			
...ORDER	0.0	0.5	0.0			
...FAMILY	0.0	0.9	0.0			
...GENUS	0.0	0.9	0.0			
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)						
..CHLOROPHYCEAE						
...CHLOROCOCCALES						
...CHARACIACEAE						
...SCHROEDERIA	--	-	14	10	--	-
...COELASTRACEAE						
...COELASTRUM	--	-	110#	80	--	-
...SCENEDESMACEAE						
...CRUCIGENIA	--	-	--	-	--	-
...SCENEDESMUS	26#	100	--	-	--	-
...VOLVOCALES						
...CHLAMYDOMONADACEAE						
...CARTERIA	--	-	--	-	--	-
...CHLAMYDOMONAS	--	-	--	-	--	-
CHRYSTOPHYTA						
..BACILLARIOPHYCEAE						
..CENTRALES						
...COSCINODISCACEAE						
...CYCLOTELLA	--	-	--	-	--	-
..PENNALES						
...CYMBELLACEAE						
...CYMBELLA	--	-	--	-	--	-
...FRAGILARIACEAE						
...SYNEDRA	--	-	--	-	--	-
...GOMPHONEMACEAE						
...GOMPHONEMA	--	-	--	-	--	-
...NAVICULACEAE						
...NAVICULA	--	-	--	-	--	-
...NITZSCHIA						
...NITZSCHIA	--	-	14	10	--	-
..CHRYSTOPHYCEAE						
..CHRYSONOMADALES						
..OCHROMONADACEAE						
...OCHROMONAS	--	-	--	-	--	-
CRYPTOPHYTA (CRYPTOMONADS)						
..CRYPTOPHYCEAE						
..CRYPTOMONADALES						
...CRYPTOMONADACEAE						
...CRYPTOMONAS	--	-	--	-	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)						
..CYANOPHYCEAE						
...CHROOCOCCALES						
...CHROOCOCCACEAE						
...ANACYSTIS	--	-	--	-	26#	100
...HORMOGONALES						
...OSCILLATORIA	--	-	--	-	--	-
EUGLENOPHYTA (EUGLENOIDS)						
..EUGLENOPHYCEAE						
..EUGLENALES						
...EUGLENACEAE						
...EUGLENA	--	-	--	-	--	-
PYRRHOPHYTA (FIRE ALGAE)						
..DINOPHYCEAE						
...PERIDINIALES						
...GLENODINIACEAE						
...GLENODINIUM	--	-	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

COLORADO RIVER BASIN

08158000 COLORADO RIVER AT AUSTIN, TX--Continued

MONTHLY AND ANNUAL MEANS AND LOADS FOR WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

MONTH	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCT- ANCE (MICRO- MHOS)	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. 1978.....	5967.7	539	300	4760	49	788	35	562	210
NOV. 1978.....	3120	565	310	2600	51	432	36	307	220
DEC. 1978.....	2931	534	290	2310	49	384	34	271	210
JAN. 1979.....	8513	515	280	6500	47	1070	33	763	200
FEB. 1979.....	9043	490	270	6560	44	1080	32	771	190
MAR. 1979.....	11430	463	250	7810	42	1300	30	919	180
APR. 1979.....	52803	533	290	41600	48	6900	34	4890	210
MAY 1979.....	70342	535	290	55700	49	9220	34	6540	210
JUNE 1979.....	117740	549	300	95400	50	15800	36	11300	210
JULY 1979.....	51416	539	290	40800	49	6790	35	4830	210
AUG. 1979.....	57700	548	300	46700	50	7750	35	5500	210
SEPT 1979.....	46211	519	280	35300	47	5870	33	4170	200
TOTAL	437216.64	**	**	346000	**	57400	**	40800	**
WTD.AVG.	1200	536	290	**	49	**	35	**	210

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	524	569	601	475	485	528	400	544	540	560	541	538
2	543	584	560	540	502	567	543	541	543	556	541	539
3	524	598	570	541	472	559	486	536	545	543	540	508
4	521	593	566	541	544	570	469	541	551	548	540	519
5	530	588	567	535	456	573	500	529	546	555	547	530
6	531	514	502	541	462	547	518	550	539	556	560	516
7	539	450	550	550	390	553	536	547	545	553	555	518
8	559	496	603	553	447	570	507	544	553	555	520	509
9	553	525	596	546	454	575	521	547	551	560	547	518
10	545	534	573	562	544	576	532	547	551	550	553	516
11	550	538	604	485	409	588	502	541	540	557	545	505
12	556	533	548	466	451	518	521	540	539	552	553	524
13	552	553	535	410	511	576	530	547	548	552	552	529
14	565	556	603	498	561	570	536	541	550	550	550	532
15	584	613	610	454	489	573	507	483	552	555	547	525
16	594	549	592	556	467	572	515	532	552	536	544	530
17	561	543	615	553	497	570	556	555	551	528	550	522
18	580	557	606	468	561	420	547	552	556	555	549	501
19	598	570	500	546	564	490	545	550	560	547	553	521
20	588	558	556	493	568	468	549	550	552	494	544	535
21	579	577	595	501	612	270	526	544	560	529	547	501
22	609	576	614	462	564	392	551	450	546	534	549	516
23	601	576	610	509	541	456	549	400	552	540	547	518
24	582	560	615	513	489	437	546	466	551	552	550	501
25	623	572	615	559	523	450	545	509	559	536	551	517
26	571	605	622	482	539	449	542	535	555	546	563	523
27	585	570	625	442	552	483	546	540	551	475	555	516
28	595	580	601	574	554	479	549	547	559	454	548	510
29	577	587	596	532	---	504	549	545	559	448	552	523
30	584	583	593	523	---	518	542	541	558	456	546	510
31	602	---	441	527	---	536	---	536	---	525	545	---
MEAN	568	560	580	514	507	514	526	530	550	534	548	519

COLORADO RIVER BASIN
08158000 COLORADO RIVER AT AUSTIN, TX--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24.5	---	17.0	12.0	11.0	15.0	18.0	16.5	21.0	20.0	24.0	21.5
2	24.5	22.0	17.0	10.5	10.5	15.0	17.0	16.0	20.0	20.0	23.5	22.0
3	24.5	---	17.0	9.0	11.0	16.0	16.5	---	18.5	19.5	23.5	21.5
4	---	---	17.0	---	11.0	15.0	16.5	---	15.5	20.0	23.5	23.0
5	---	---	17.0	11.0	11.0	15.0	17.0	---	19.0	20.5	24.0	22.0
6	---	---	17.0	11.0	10.0	15.0	17.0	---	13.5	20.5	24.0	22.0
7	24.5	21.5	17.0	11.0	10.0	15.0	18.0	15.0	14.0	20.5	24.0	22.0
8	---	21.0	15.5	11.0	10.0	15.5	18.0	16.0	14.5	20.5	24.0	23.0
9	24.0	18.5	14.5	10.5	10.5	15.5	18.0	16.0	14.5	21.0	24.0	23.0
10	24.0	18.5	13.0	10.0	10.5	16.5	18.5	16.0	16.5	20.5	22.0	22.0
11	23.5	18.5	12.0	10.0	10.5	16.0	18.0	18.0	16.5	20.5	22.0	23.0
12	24.0	18.5	12.0	9.0	10.5	15.5	18.5	16.5	19.0	21.0	23.0	23.0
13	24.5	18.5	12.0	9.0	11.5	15.5	18.5	18.0	16.0	20.5	22.0	22.0
14	24.0	18.5	12.0	9.0	12.0	16.5	18.5	18.5	16.0	20.5	21.5	22.0
15	23.5	20.5	12.0	9.0	13.0	16.0	18.0	19.5	16.5	20.5	21.5	22.0
16	---	19.5	13.0	9.0	14.0	16.0	18.0	18.5	17.0	20.5	21.0	21.5
17	---	19.5	13.5	9.0	11.5	16.0	18.0	18.5	17.0	22.0	21.5	21.0
18	23.0	18.5	13.0	10.0	11.0	16.0	18.0	18.5	17.0	23.0	21.5	21.0
19	23.5	18.5	13.0	11.5	11.0	17.0	17.0	20.5	18.5	23.5	21.0	21.0
20	---	18.5	13.0	13.5	10.0	17.0	18.0	19.0	19.5	23.5	21.0	21.5
21	---	18.5	15.5	13.5	10.0	18.0	18.0	18.5	19.5	23.5	21.5	21.0
22	23.0	---	15.0	13.5	11.5	17.0	18.5	19.5	20.0	23.5	21.5	21.0
23	23.5	18.0	14.5	12.0	13.5	---	18.5	19.5	20.0	23.5	21.0	21.0
24	23.0	18.5	15.0	12.0	11.5	18.0	17.0	20.5	20.0	21.5	21.5	21.0
25	23.0	18.5	14.5	12.0	13.5	16.5	16.5	21.0	20.5	33.0	22.0	23.0
26	---	19.0	14.0	12.0	14.0	16.5	16.5	21.5	20.5	24.5	21.5	21.5
27	---	19.5	14.0	---	14.0	18.0	17.0	22.0	21.0	24.5	21.5	21.5
28	---	18.0	14.0	12.0	14.0	17.0	17.0	19.0	19.5	24.5	22.0	21.5
29	---	18.0	14.0	12.0	---	18.0	17.0	19.0	20.0	23.5	---	21.5
30	---	17.0	14.0	12.0	---	18.0	16.0	20.5	20.0	24.0	21.0	21.5
31	21.5	---	11.0	11.5	---	18.0	---	19.5	---	24.0	21.5	---
MEAN	23.5	19.0	14.5	11.0	11.5	16.5	17.5	18.5	18.0	22.0	22.5	22.0

BOGGY CREEK DRAINAGE BASIN

The locations of data-collection sites in the Boggy Creek drainage basin are shown in figure 13.

A summary of storm rainfall and runoff for the basin is shown in table 9.

The peak discharges associated with the water-quality samples collected during storms at the Boggy Creek at U.S. Highway 183 site are shown in table 3.

Daily and monthly rainfall totals for the 1979 water year are given in table 13.

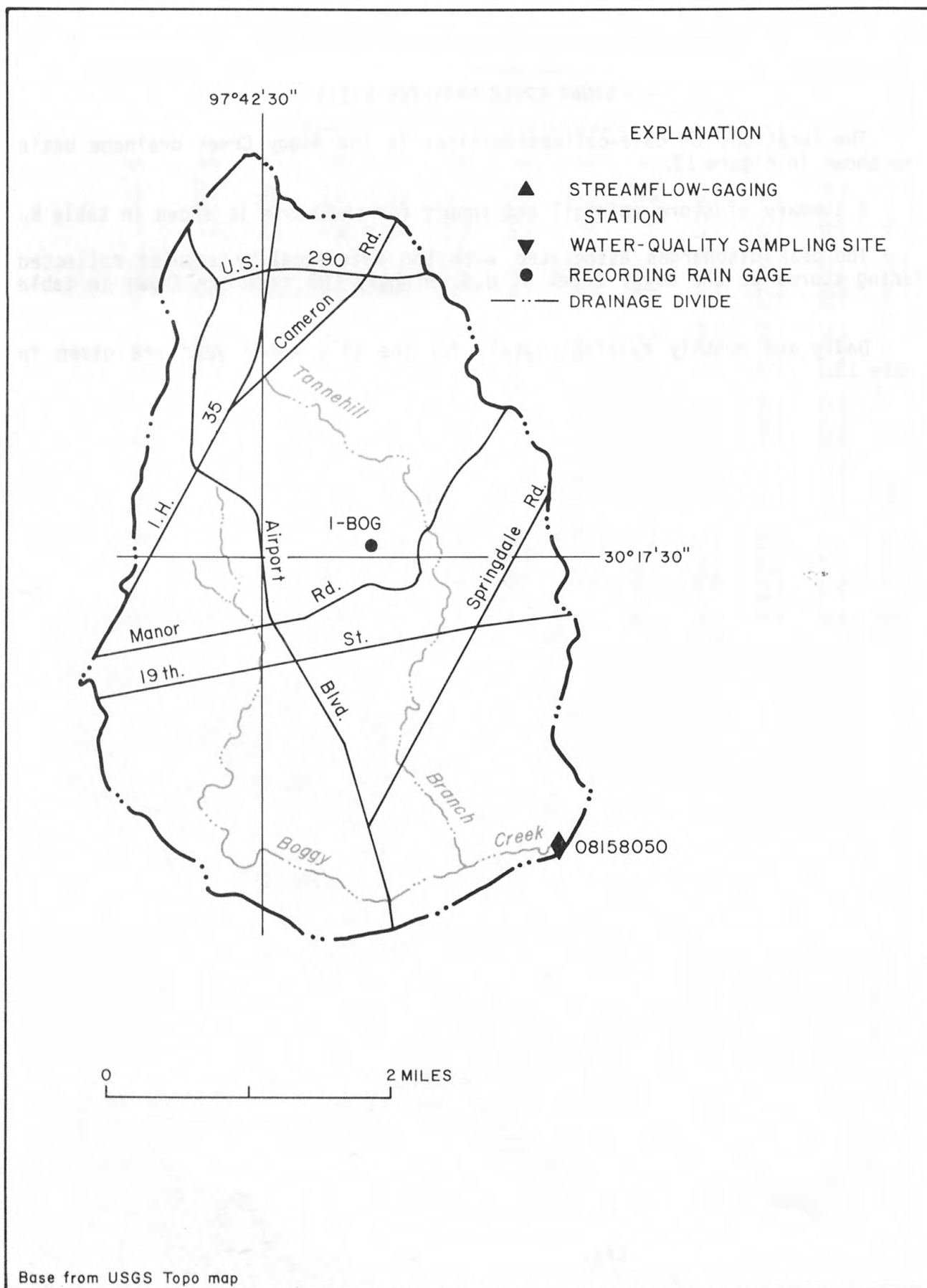


Figure 13.-Locations of surface-water data-collection sites in the Boggy Creek drainage basin

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GEOLOGICAL SURVEY-TEXAS DISTRICT

ANNUAL STORM RAINFALL-RUNOFF SUMMARY DATA

Table 9.--Storm rainfall-runoff data, 1979 water year, Boggy Creek

Date of Storm	Rainfall (inches)					Runoff (inches)	Ratio runoff to rainfall	Maximum discharge (ft ³ /s)
	Duration (hours)	Total	Maximum increment					
			15-minute	30-minute	60-minute			

(Drainage area.--13.1 mi²)

May 21-22, 1979	15	5.81	0.71	1.32	1.89	3.29	0.57	5,630
July 19, 1979	10	4.91	.89	1.66	2.81	2.05	.42	4,780

[illegible]

COLORADO RIVER BASIN

08158050 BOGGY CREEK AT U.S. HIGHWAY 183, AUSTIN, TX

LOCATION.--Lat 30°15'47", long 97°40'20", Travis County, Hydrologic Unit 12090205, on U.S. Highway 183, 1.6 mi (2.6 km) south of the intersection of Webberville Road and U.S. Highway 183, and 4.1 mi (6.6 km) east of the State Capitol Building in Austin.

DRAINAGE AREA.--13.1 mi² (33.9 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January to July 1975 (periodic discharge measurements only), August 1975 to June 1977 (operated as a flood-hydrograph partial-record station only), June 1977 to current year.

GAGE.--Water-stage recorder. Datum of gage is 411.29 ft (125.361 m) National Geodetic Vertical Datum of 1929 (levels from city of Austin bench mark).

REMARKS.-- Water-discharge records poor. No known regulation or diversions. There is a recording rain gage in the watershed above station. The station is part of a hydrologic research project to study the rainfall-runoff relationship for the Austin urban area.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,100 ft³/s (173 m³/s) May 23, 1975, gage height, 17.03 ft (5.191 m), from floodmark, from rating curve extended above 500 ft³/s (14.2 m³/s) on basis of slope-area measurement of peak flow; no flow at times each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,500 ft³/s (42.5 m³/s), revised, and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Nov. 5	2000	1,840 52.1	10.88 3.316	July 19	2115	4,780 135	15.59 4.752
Feb. 23	1200	2,460 69.7	11.76 3.584	July 27	0945	3,740 106	14.18 4.322
May 21	2015	*5,630 159	16.79 5.118				

Minimum discharge, no flow for several days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.40	22	.34	3.3	6.0	262	4.8	.73	1.9	.14
2	.00	.01	.34	1.5	1.2	3.5	4.9	10	14	1.1	1.6	.12
3	1.6	.01	3.3	1.0	6.0	5.3	3.5	2.5	2.3	.91	1.6	.12
4	.15	.00	.46	3.5	39	2.5	2.5	2.3	1.4	2.1	1.2	.79
5	.03	269	.25	2.7	29	3.0	2.2	2.0	50	2.4	1.2	.29
6	.00	62	.19	5.6	74	3.7	2.0	1.7	6.6	104	.80	.53
7	.00	3.3	.17	1.5	5.8	6.1	1.8	1.5	4.0	8.1	1.2	.45
8	.00	1.6	.14	.73	3.6	2.8	2.6	1.3	2.9	4.5	1.0	.18
9	.00	1.1	.12	.65	2.3	1.6	1.8	1.1	2.3	4.2	.92	.17
10	.00	1.2	.09	62	2.2	6.9	1.9	1.0	22	4.9	.80	.15
11	.00	1.1	.08	16	1.8	3.4	1.8	15	1.6	7.5	7.8	.21
12	.00	4.9	.06	2.6	1.9	3.7	1.4	1.0	1.3	11	1.8	.28
13	.00	1.0	.06	1.5	1.4	4.2	1.3	.93	1.1	10	.60	.36
14	.00	.86	.05	.94	1.3	3.9	1.3	.88	1.1	22	.55	.43
15	.00	18	.04	.92	1.1	12	1.3	.83	.70	19	8.1	.55
16	.00	46	.04	.82	.97	41	1.3	.80	.40	13	1.7	.70
17	.00	3.3	.03	.80	.86	7.7	41	.72	.40	13	.80	.86
18	.00	1.3	.02	3.8	.80	7.2	10	.67	.31	20	1.1	17
19	.00	20	.03	1.4	.80	13	13	.62	.31	560	1.9	24
20	.00	17	.04	1.0	.80	9.8	3.2	.60	1.1	162	.98	.51
21	.00	9.4	.04	.56	.80	190	5.0	956	1.3	45	.60	.04
22	.00	9.3	.06	.51	.87	94	2.2	188	1.6	27	.70	.02
23	.00	2.7	.09	.45	164	18	2.0	13	2.9	17	.55	.01
24	.00	.79	.12	.37	4.3	13	1.7	9.1	4.2	17	.75	.00
25	6.3	.72	.14	1.9	4.4	7.5	1.4	7.6	.40	17	.55	.00
26	5.3	7.9	.21	2.8	3.7	5.9	1.2	5.5	.15	69	.55	.00
27	.05	2.2	.28	.54	3.7	3.9	1.0	4.7	.67	510	.40	.00
28	.03	.80	.38	.40	3.5	3.3	.87	5.4	1.2	8.4	.26	.00
29	.01	2.3	.58	.72	---	2.4	257	6.2	.67	3.6	.17	.00
30	.00	.53	.75	1.0	---	46	5.2	3.7	1.0	2.2	.18	.00
31	.02	---	169	.44	---	6.6	---	3.3	---	2.0	.13	---
TOTAL	13.49	488.32	177.56	140.65	360.44	530.0	382.37	1509.95	132.71	1688.64	42.39	47.91
MEAN	.44	16.3	5.73	4.54	12.9	17.1	12.7	48.7	4.42	54.5	1.37	1.60
MAX	6.3	269	169	62	164	190	257	956	50	560	8.1	24
MIN	.00	.00	.02	.37	.34	1.6	.87	.60	.15	.73	.13	.00
CFSM	.03	1.24	.44	.35	.99	1.31	.97	3.72	.34	4.16	.11	.12
IN.	.04	1.39	.50	.40	1.02	1.50	1.09	4.29	.38	4.79	.12	.14
AC-FT	.27	969	352	279	715	1050	758	2990	263	3350	.84	.95
(ft)	1.48	5.29	2.71	1.81	3.43	3.68	3.00	7.53	.85	12.50	.59	1.38

CAL YR 1978 TOTAL 2057.93 MEAN 5.64 MAX 269 MIN .00 CFSM .43 IN 5.84 AC-FT 4080 †† 30.86
WTR YR 1979 TOTAL 5514.43 MEAN 15.1 MAX 956 MIN .00 CFSM 1.15 IN 15.66 AC-FT 10940 †† 44.25

†† Rainfall, in inches, based on one rain gage.
NOTE.--No gage-height record Apr. 29 to May 20.

COLORADO RIVER BASIN

08158050 BOGGY CREEK AT U.S. HIGHWAY 183, AUSTIN, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Periodic chemical, biochemical, and pesticide analyses: January 1975 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM- COBALT UNITS)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)
NOV 06...	1540	12	287	7.8	17.0	30	50	9.0	96	2.2
DEC 19...	0910	.05	590	7.9	14.0	0	2.0	9.8	98	.9
FEB 26...	1445	5.7	830	8.0	14.0	5	5.0	10.8	108	1.2
MAR 21...	0915	34	323	7.2	16.5	30	200	8.9	94	3.2
MAR 22...	1220	52	266	7.7	20.5	40	240	8.5	97	3.8
APR 23...	1400	2.1	648	8.1	25.0	5	7.0	9.2	114	.8
JUN 11...	1345	1.3	560	7.7	24.5	5	8.6	9.2	112	.2
SEP 10...	1155	.10	589	8.2	27.5	5	1.6	10.6	132	.3

DATE	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO
NOV 06...	>34000	34000	26000	110	22	39	3.6	10	.4
DEC 19...	800	180	180	220	27	70	12	35	1.0
FEB 26...	680	580	110	370	130	130	10	36	.8
MAR 21...	120000	51000	210000	130	35	48	3.4	10	.4
MAR 22...	110000	51000	130000	120	26	42	2.7	7.9	.3
APR 23...	1600	190	1000	--	--	--	--	--	--
JUN 11...	>6100	6100	88	200	18	67	7.5	28	.9
SEP 10...	1100	250	76	--	--	--	--	--	--

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDE (MG/L)
NOV 06...	4.3	110	0	28	15	.2	7.4	162	72
DEC 19...	2.8	240	0	47	45	.3	9.3	340	5
FEB 26...	3.8	290	0	110	59	.3	12	504	4
MAR 21...	4.0	120	0	39	11	.2	8.5	183	314
MAR 22...	3.4	110	0	26	9.3	.2	8.2	154	436
APR 23...	--	--	--	--	--	--	--	--	7
JUN 11...	2.8	220	0	49	31	.4	12	306	8
SEP 10...	--	--	--	--	--	--	--	--	7

COLORADO RIVER BASIN
08158050 BOGGY CREEK AT U.S. HIGHWAY 183, AUSTIN, TX--Continued
WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	SOLIDS, VOLA- TILE, SUS- PENDE (MG/L)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
NOV 06...	6	.38	.01	.39	.01	.42	.43	.26	8.1
DEC 19...	1	.00	.00	.00	.00	.16	.16	.03	2.5
26...	1	.74	.02	.76	.01	.19	.20	.03	4.4
MAR 21...	34	.82	.04	.86	.09	.81	.90	.25	12
22...	44	.70	.06	.76	.15	.85	1.0	.30	11
APR 23...	1	.14	.00	.14	.04	.16	.20	.03	3.9
JUN 11...	0	.31	.02	.33	.00	.46	.46	.02	10
SEP 10...	3	.00	.02	.01	.01	.91	.92	.00	5.8

DATE	TIME	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)
NOV 06...	1540	6	50	<1	0	4	30
FEB 26...	1445	4	100	0	0	0	10
MAR 21...	0915	4	0	0	0	2	20
22...	1220	5	0	0	0	2	20
JUN 11...	1345	3	90	1	0	0	<0

DATE	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, DIS- SOLVED (UG/L AS ZN)
NOV 06...	0	1	.0	2	0	<3
FEB 26...	0	10	.0	1	0	20
MAR 21...	0	0	.1	0	0	10
22...	0	0	.1	0	0	10
JUN 11...	0	6	.0	0	0	<3

COLORADO RIVER BASIN

08158050 BOGGY CREEK AT U.S. HIGHWAY 183, AUSTIN, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	PCB, TOTAL (UG/L)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLOR- DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI- AZINON, TOTAL (UG/L)
NOV 06...	1540	.0	.00	.00	.0	.01	.02	.02	.09
FEB 26...	1445	.0	--	.00	.0	.00	.00	.01	.03
MAR 21...	0915	.0	--	.00	.1	.03	.03	.10	.20
22...	1220	.0	--	.00	.0	.03	.02	.07	.19
JUN 11...	1345	.0	--	.00	.0	.02	.00	.01	.07

DATE	DI- ELDRIN TOTAL (UG/L)	ENDO- SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	MALA- THION, TOTAL (UG/L)	METHYL PARA- THION, TOTAL (UG/L)
NOV 06...	.00	.00	.00	.00	.00	.00	.00	.00	.00
FEB 26...	.01	.00	.00	.00	.00	.00	.00	.00	.00
MAR 21...	.01	.00	.00	.00	.00	.01	.01	.00	.00
22...	.01	.00	.00	.00	.00	.00	.00	.01	.00
JUN 11...	.00	.00	.00	.00	.00	.00	.00	.01	.00

DATE	METHYL TRI- THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	PARA- THION, TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOTAL TRI- THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
NOV 06...	.00	.00	.00	0	.00	.04	.10	.00
FEB 26...	.00	.00	.00	0	.00	.00	.00	.00
MAR 21...	.00	.00	.00	0	.00	.13	.02	.00
22...	.00	.00	.00	0	.00	.08	.01	.01
JUN 11...	.00	.00	.00	0	.00	.01	.00	.00

STA. NO.08158050		STORM RAINFALL AND RUNOFF RECORD					1979 WATER YEAR		
BUGGY CREEK AT U.S. HWY. 183, AUSTIN, TEXAS		STORM OF MAY 21-22, 1979					ACCUM.	DISCHARGE	ACCUM.
DATE & TIME		G A G E N U M B E R					WEIGHTED PRECIP.	IN	RUNOFF
	ROG						IN.	CFS	IN.
MAY 21									
0000	0.0						0.0	0.6	0.0004
1235	0.02						0.02	0.6	0.0009
1300	0.03						0.03	0.9	0.0010
1400	0.04						0.04	1.0	0.0011
1430	0.07						0.07	1.0	0.0011
1500	0.46						0.46	2.7	0.0014
1600	0.48						0.48	12.0	0.0025
1635	0.48						0.48	67.0	0.0055
1645	0.48						0.48	193.0	0.0102
1700	0.51						0.51	284.0	0.0186
1715	0.76						0.76	247.0	0.0259
1730	1.47						1.47	128.0	0.0297
1745	2.08						2.08	282.0	0.0381
1800	2.40						2.40	1030.0	0.0685
1815	2.53						2.53	2130.0	0.1315
1830	3.01						3.01	2850.0	0.2158
1845	3.51						3.51	3460.0	0.3181
1900	4.20						4.20	4020.0	0.4964
1930	4.25						4.25	4720.0	0.7058
1945	4.48						4.48	4950.0	0.8522
2000	4.75						4.75	5260.0	1.0077
2015	5.07						5.07	5630.0	1.1742
2030	5.22						5.22	5440.0	1.4155
2100	5.28						5.28	4880.0	1.6320
2115	5.33						5.33	4770.0	1.7731
2130	5.37						5.37	5220.0	1.9274
2145	5.37						5.37	5090.0	2.0779
2200	5.38						5.38	4470.0	2.2101
2215	5.38						5.38	3910.0	2.3258
2230	5.38						5.38	3180.0	2.4198
2245	5.38						5.38	2710.0	2.5400
2315	5.45						5.45	1770.0	2.6709
2400	5.56						5.56	1150.0	2.7559
MAY 22									
0000	5.56						5.56	1150.0	2.7559
0100	5.69						5.69	987.0	2.9358
0230	5.75						5.75	845.0	3.0358
0300	5.79						5.79	594.0	3.0709
0330	5.80						5.80	426.0	3.0961
0400	5.80						5.80	327.0	3.1155

STA. NO. 08158050		STORM RAINFALL AND RUNOFF RECORD						1979 WATER YEAR		
BUGGY CREEK AT U.S. HWY. 143, AUSTIN, TEXAS		STORM OF MAY 21-22, 1979						ACCUM.	DISCHARGE	ACCUM.
DATE & TIME		G A G E N U M B E R						WEIGHTED	IN	RUNOFF
								PRECIP.		
								IN.	CFS	IN.
MAY 22										
0430	5.80							5.80	250.0	3.1376
0530	5.80							5.80	186.0	3.1651
0700	5.80							5.80	106.0	3.1871
0900	5.80							5.80	67.0	3.2029
1100	5.80							5.80	49.0	3.2203
1500	5.81							5.81	32.0	3.2355
1900	5.81							5.81	26.0	3.2493
2400	5.81							5.81	21.0	3.2580
MAY 23										
0000	5.81							5.81	21.0	3.2580
0400	5.81							5.81	17.0	3.2725
1200	5.81							5.81	13.0	3.2848
2000	5.81							5.81	10.0	3.2919
2400	5.81							5.81	6.6	3.2935

STA. NO.08158050							STORM RAINFALL AND RUNOFF RECORD			1979 WATER YEAR		
BUGGY CREEK AT U.S. H&Y. 143, AUSTIN, TEXAS							STORM OF JULY 19, 1979			ACCUM.	DISCHARGE	ACCUM.
DATE & TIME							G A G E N U M B E R			WEIGHTED	IN	RUNOFF
										PRECIP.		
										IN.	CFS	IN.
JULY 19												
0000	0.0									0.0	42.0	0.0315
1240	0.01									0.01	17.0	0.0500
1825	0.01									0.01	15.0	0.0552
1830	0.09									0.09	15.0	0.0555
1845	0.68									0.68	15.0	0.0557
1850	0.86									0.86	20.0	0.0559
1855	1.02									1.02	24.0	0.0562
1900	1.19									1.19	29.0	0.0565
1905	1.41									1.41	39.0	0.0569
1910	1.65									1.65	50.0	0.0573
1915	1.83									1.83	60.0	0.0579
1920	2.15									2.15	168.0	0.0596
1925	2.39									2.39	275.0	0.0623
1930	2.60									2.60	383.0	0.0661
1935	2.88									2.88	649.0	0.0725
1940	3.23									3.23	914.0	0.0815
1945	3.49									3.49	1180.0	0.1048
2000	3.93									3.93	2240.0	0.1710
2015	4.26									4.26	2920.0	0.2573
2030	4.48									4.48	3290.0	0.3546
2045	4.59									4.59	4290.0	0.4815
2100	4.72									4.72	4640.0	0.6187
2115	4.77									4.77	4780.0	0.7601
2130	4.79									4.79	4520.0	0.9606
2200	4.85									4.85	3860.0	1.1889
2230	4.90									4.90	3020.0	1.3675
2300	4.90									4.90	2010.0	1.4864
2330	4.90									4.90	1310.0	1.5638
2400	4.91									4.91	963.0	1.6208
JULY 20												
0000	4.91									4.91	963.0	1.6208
0100	4.91									4.91	537.0	1.7128
0200	4.91									4.91	354.0	1.7651
0330	4.91									4.91	239.0	1.8217
0600	4.91									4.91	157.0	1.8728
0900	4.91									4.91	116.0	1.9276
1400	4.91									4.91	97.0	1.9907
2000	4.91									4.91	74.0	2.0345
2400	4.91									4.91	71.0	2.0513

WALNUT CREEK DRAINAGE BASIN

The locations of data-collection sites in the Walnut Creek basin are shown on figure 14.

A summary of storm rainfall and runoff is shown in table 10.

The peak discharges associated with the water-quality samples collected during storms at the Walnut Creek at Webberville Road site are shown in table 3.

Daily and monthly rainfall totals for the 1979 water year are shown in table 13.

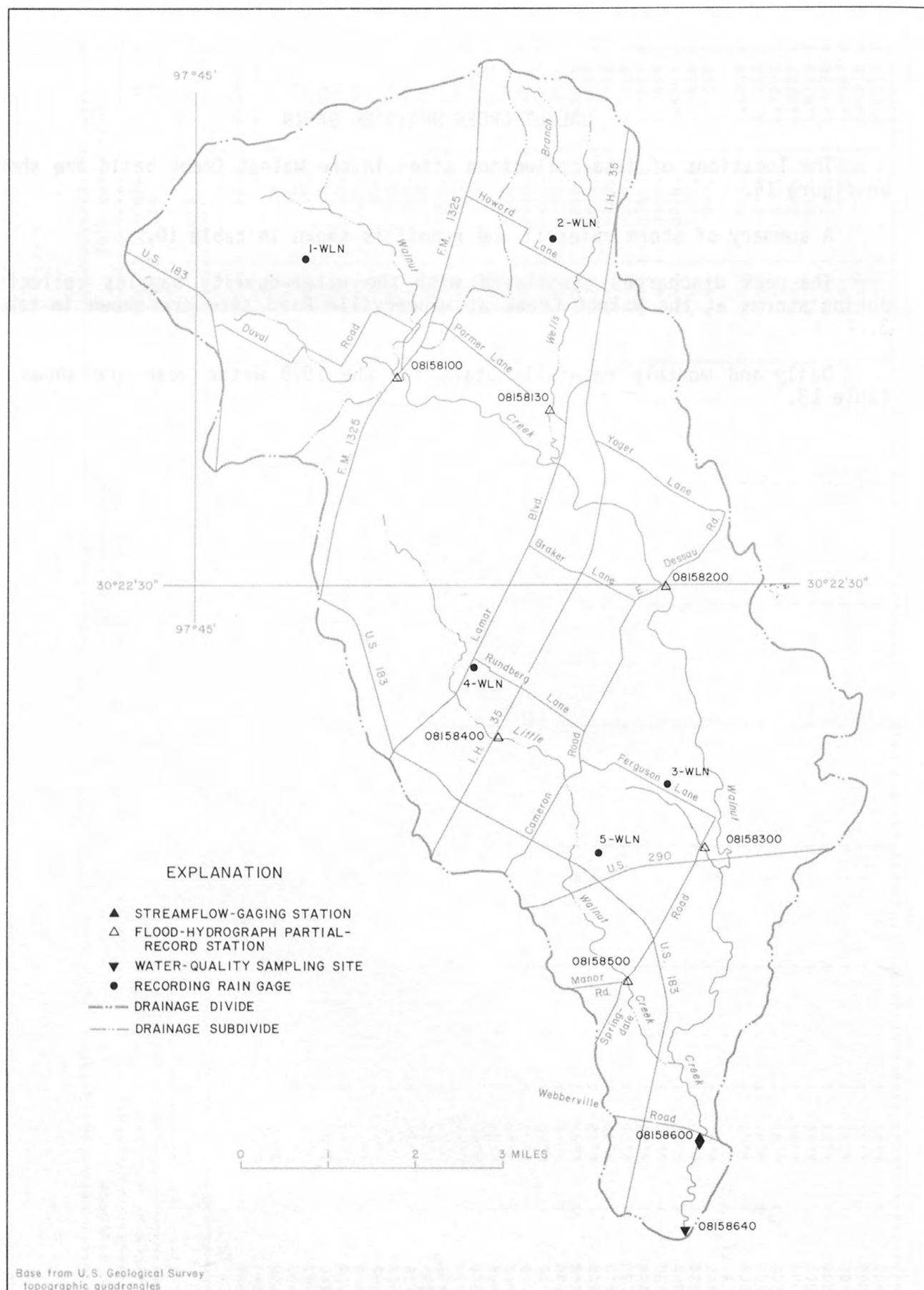


Figure 14.- Locations of surface-water data-collection sites in the Walnut Creek drainage basin

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UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY-TEXAS DISTRICT

ANNUAL STORM RAINFALL-RUNOFF SUMMARY DATA

Table 1Q--Storm rainfall-runoff data, 1979 water year, Walnut Creek

Date of Storm	Rainfall (inches)					Runoff (inches)	Ratio runoff to rainfall	Maximum discharge (ft ³ /s.)
	Duration (hours)	Total	Maximum increment					
			15-minute	30-minute	60-minute			

Walnut Creek at F.M. Rd. 1325, Austin, Texas
(Drainage area.--12.6 mi²)

December 31, 1978	16	2.61	0.58	1.03	1.48	0.10	0.03	233
March 20-21, 1979	6	1.74	.90	.95	1.05	.09	.05	111

Walnut Creek at Dessau Road, Austin, Texas
(Drainage area.--26.2 mi²)

December 31, 1978	5	2.60	0.58	1.03	1.48	0.19	0.07	858
May 21, 1979	10	1.69	.44	.74	.92	.15	.09	1,200

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UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY-TEXAS DISTRICT

ANNUAL STORM RAINFALL-RUNOFF SUMMARY DATA

Table 10.--Storm rainfall-runoff data, 1979 water year, Walnut Creek--Continued

Date of Storm	Rainfall (inches)					Runoff (inches)	Ratio runoff to rainfall	Maximum discharge (ft ³ /s)
	Duration (hours)	Total	Maximum increment					
			15-minute	30-minute	60-minute			
Little Walnut Creek at I.H. 35, Austin, Texas (Drainage area.--5.57 mi ²)								
May 21-22, 1979	13	3.51	0.80	1.26	1.76	1.50	0.43	2,090
July 19-20, 1979	7	2.36	.90	1.34	1.57	.71	.30	1,750
Little Walnut Creek at Manor Road, Austin, Texas (Drainage area.--12.1 mi ²)								
May 21-22, 1979	13	4.96	1.00	1.81	2.83	2.11	0.43	5,640
July 19-20, 1979	7	2.44	.90	1.34	1.57	.61	.25	1,500

TX-35
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UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY-TEXAS DISTRICT

ANNUAL STORM RAINFALL-RUNOFF SUMMARY DATA

Table 10.--Storm rainfall-runoff data, 1979 water year, Walnut Creek--Continued

[illegible]

08158100 WALNUT CREEK AT FARM ROAD 1325 NEAR AUSTIN, TEX.
(Flood-hydrograph partial-record station)

LOCATION.--Lat 30°24'35", long 97°42'41", Travis County, on downstream side of bridge on Farm Road 1325 and 9.5 mi north of the State Capitol Building in Austin.

DRAINAGE AREA.--12.6 mi².

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

GAGE.--Digital water-stage recorder and crest-stage gage. Datum of gage is 670.62 ft NGVD.

REMARKS.--Records poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 533 ft³/s Apr. 18, 1976 (gage height, 6.63 ft).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 233 ft³/s Dec. 31 (gage height, 4.57 ft).

STA. NO. 08158100		STORM RAINFALL AND RUNOFF RECORD					1979 WATER YEAR		
WALNUT CREEK AT FARM ROAD 1325 NEAR AUSTIN, TEXAS		STORM OF DECEMBER 31, 1978					ACCUM.	DISCHARGE	ACCUM.
DATE & TIME		G A G E N U M B E R					WEIGHTED PRECIP.	IN	RUNOFF
							IN.	CFS	IN.
DEC. 31									
0000	0.0						0.0	0.1	0.0000
0200	0.08						0.08	0.1	0.0000
0230	0.29						0.29	0.2	0.0000
0255	0.32						0.32	0.3	0.0000
0300	0.42						0.42	0.4	0.0001
0305	0.49						0.49	0.5	0.0001
0310	0.58						0.58	0.5	0.0001
0315	0.63						0.63	0.5	0.0001
0320	0.72						0.72	0.5	0.0001
0325	0.89						0.89	0.5	0.0001
0330	1.06						1.06	0.5	0.0001
0335	1.28						1.28	0.6	0.0001
0340	1.47						1.47	0.8	0.0001
0345	1.62						1.62	1.0	0.0001
0350	1.75						1.75	3.0	0.0001
0355	1.80						1.80	5.0	0.0002
0400	1.86						1.86	12.0	0.0004
0415	1.94						1.94	66.0	0.0025
0430	2.01						2.01	72.0	0.0047
0445	2.05						2.05	84.0	0.0073
0500	2.13						2.13	129.0	0.0112
0515	2.23						2.23	213.0	0.0178
0530	2.29						2.29	233.0	0.0237
0540	2.33						2.33	229.0	0.0343
0615	2.39						2.39	198.0	0.0505
0700	2.50						2.50	147.0	0.0664
0800	2.50						2.50	102.0	0.0789
0900	2.50						2.50	57.0	0.0859
1000	2.50						2.50	32.0	0.0918
1200	2.51						2.51	13.0	0.0950
1400	2.51						2.51	8.0	0.0980
1800	2.61						2.61	4.0	0.0999
2200	2.61						2.61	2.0	0.1007

STA. NO.08158100		STORM RAINFALL AND RUNOFF RECORD					1979 WATER YEAR		
WALNUT CREEK AT FARM ROAD 1325 NEAR AUSTIN, TEXAS					STORM OF MARCH 20-21, 1979		ACCUM.	DISCHARGE	ACCUM.
DATE & TIME		G A G E N U M B E R					WEIGHTED PRECIP.	IN	RUNOFF
	WLN						IN.	CFS	IN.
MAR. 20									
0000	0.0						0.0	1.0	0.0004
0555	0.01						0.01	1.0	0.0017
2135	0.01						0.01	1.0	0.0027
2235	0.16						0.16	1.5	0.0028
2240	0.17						0.17	1.5	0.0028
2245	0.44						0.44	2.0	0.0029
2250	0.84						0.84	4.0	0.0029
2255	1.07						1.07	8.0	0.0030
2300	1.10						1.10	12.0	0.0031
2305	1.11						1.11	14.0	0.0032
2310	1.12						1.12	17.0	0.0034
2315	1.13						1.13	19.0	0.0036
2320	1.16						1.16	19.0	0.0038
2325	1.16						1.18	19.0	0.0040
2330	1.19						1.19	19.0	0.0042
2335	1.20						1.20	18.0	0.0045
2345	1.21						1.21	16.0	0.0049
2400	1.23						1.23	22.0	0.0056
MAR. 21									
0000	1.23						1.23	22.0	0.0056
0030	1.23						1.23	104.0	0.0107
0045	1.23						1.23	111.0	0.0158
0115	1.25						1.25	108.0	0.0208
0130	1.43						1.43	104.0	0.0256
0200	1.60						1.60	103.0	0.0351
0300	1.74						1.74	84.0	0.0454
0400	1.74						1.74	97.0	0.0544
0430	1.74						1.74	89.0	0.0626
0530	1.74						1.74	59.0	0.0680
0600	1.74						1.74	43.0	0.0720
0700	1.74						1.74	26.0	0.0768
0900	1.74						1.74	12.0	0.0805
1200	1.74						1.74	8.0	0.0839
1600	1.74						1.74	4.0	0.0859
2000	1.74						1.74	2.0	0.0869
2400	1.74						1.74	1.0	0.0871

08158130 WELLS BRANCH AT PARMER LANE NEAR AUSTIN, TEX.
(Flood-hydrograph partial-record station)

LOCATION.--Lat 30°24'31", long 97°40'52", Travis County, on downstream side of bridge on Parmer Lane and 10 mi north of State Capitol Building in Austin.

DRAINAGE AREA.--3.85 mi².

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

GAGE.--Digital water-stage recorder and crest-stage gage. Datum of gage is 654.77 ft NGVD.

REMARKS.--Because of insufficient data, no storms were analyzed for this station for the period of record.

08158200 WALNUT CREEK AT DESSAU ROAD, AUSTIN, TEX.
(Flood-hydrograph partial-record station)

LOCATION.--Lat 30°22'30", long 97°39'37", Travis County, on downstream side of bridge on Dessau Road and 8.4 mi northeast of the State Capitol Building in Austin.

DRAINAGE AREA.--26.2 mi².

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

GAGE.--Digital water-stage recorder and crest-stage gage. Datum of gage is 553.44 ft NGVD.

REMARKS.--Records fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, unknown June 10, 1975 (gage height, 15.48 ft).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,200 ft³/s May 21 (gage height 8.60 ft).

STORM RAINFALL AND RUNOFF RECORD										1979 WATER YEAR		
STA. NO. 08158200												
WALNUT CREEK AT DESSAU ROAD, AUSTIN, TEXAS										STORM OF DECEMBER 31, 1978		
DATE & TIME	G A G E N U M B E R							WEIGHTED PRECIP.	DISCHARGE IN	ACCUM. RUNOFF		
	1WLN	2WLN						IN.	CFS	IN.		
DEC. 31												
0000	0.0	0.0						0.0	0.5	0.0000		
0200	0.08	0.03						0.06	0.5	0.0001		
0230	0.29	0.36						0.32	1.0	0.0001		
0245	0.30	0.38						0.34	5.0	0.0002		
0255	0.32	0.40						0.36	9.0	0.0002		
0300	0.42	0.53						0.47	10.0	0.0003		
0305	0.49	0.65						0.57	12.0	0.0003		
0310	0.58	0.76						0.67	15.0	0.0004		
0315	0.63	0.85						0.74	20.0	0.0005		
0320	0.72	0.96						0.84	25.0	0.0006		
0325	0.89	1.10						0.99	30.0	0.0008		
0330	1.06	1.24						1.15	40.0	0.0010		
0335	1.28	1.38						1.33	55.0	0.0012		
0340	1.47	1.53						1.50	70.0	0.0016		
0345	1.62	1.66						1.64	83.0	0.0020		
0350	1.75	1.77						1.76	97.0	0.0025		
0355	1.80	1.85						1.82	112.0	0.0030		
0400	1.86	1.92						1.89	126.0	0.0046		
0420	1.95	2.00						1.97	219.0	0.0089		
0440	2.03	2.10						2.06	371.0	0.0162		
0500	2.13	2.20						2.16	474.0	0.0232		
0510	2.21	2.27						2.24	574.0	0.0289		
0520	2.26	2.33						2.29	691.0	0.0357		
0530	2.29	2.37						2.33	826.0	0.0459		
0545	2.35	2.41						2.38	858.0	0.0585		
0600	2.38	2.46						2.42	794.0	0.0762		
0630	2.43	2.51						2.47	694.0	0.1018		
0715	2.50	2.56						2.53	572.0	0.1230		
0745	2.50	2.56						2.53	435.0	0.1358		
0815	2.50	2.56						2.53	318.0	0.1476		
0900	2.50	2.56						2.53	224.0	0.1592		
1000	2.50	2.56						2.53	122.0	0.1664		
1100	2.50	2.56						2.53	87.0	0.1741		
1300	2.51	2.56						2.53	50.0	0.1800		
1500	2.51	2.56						2.53	30.0	0.1836		
1700	2.51	2.56						2.53	20.0	0.1859		
1900	2.61	2.59						2.60	15.0	0.1881		
2200	2.61	2.59						2.60	10.0	0.1896		

STORM RAINFALL AND RUNOFF RECORD										1979 WATER YEAR		
STATION NO. 08158200												
WALNUT CREEK AT DESSAU ROAD, AUSTIN, TEXAS										STORM OF MAY 21, 1979		
DATE & TIME	G A G E N U M B E R						WEIGHTED	DISCHARGE	ACCUM.	IN.	ACCUM.	IN.
							PRECIP.	IN	PRECIP.		RUNOFF	
	1WLN	2WLN					IN.	CFS				
MAY 21												
0000	0.0	0.0					0.0	1.0	0.0004			
1420	0.06	0.0					0.03	1.0	0.0009			
1425	0.07	0.0					0.04	1.0	0.0009			
1430	0.10	0.0					0.05	1.0	0.0009			
1435	0.13	0.01					0.07	1.5	0.0009			
1440	0.16	0.05					0.11	2.0	0.0009			
1445	0.26	0.07					0.17	2.5	0.0009			
1450	0.48	0.08					0.28	3.0	0.0009			
1455	0.51	0.22					0.37	4.0	0.0009			
1500	0.53	0.43					0.48	5.0	0.0009			
1505	0.60	0.51					0.56	10.0	0.0010			
1510	0.67	0.66					0.67	15.0	0.0011			
1515	0.78	0.80					0.79	20.0	0.0012			
1520	0.91	0.82					0.87	30.0	0.0013			
1525	0.99	0.85					0.92	40.0	0.0030			
1645	1.02	0.86					0.94	50.0	0.0053			
1700	1.20	1.25					1.22	85.0	0.0068			
1720	1.22	1.39					1.30	159.0	0.0095			
1735	1.22	1.39					1.30	323.0	0.0135			
1745	1.22	1.39					1.30	486.0	0.0231			
1815	1.26	1.44					1.35	329.0	0.0353			
1900	1.26	1.56					1.41	345.0	0.0455			
1915	1.27	1.56					1.41	494.0	0.0528			
1930	1.36	1.56					1.47	1110.0	0.0665			
1940	1.36	1.63					1.49	1120.0	0.0747			
1945	1.37	1.63					1.50	1200.0	0.0806			
1950	1.37	1.63					1.50	1060.0	0.0911			
2005	1.40	1.64					1.52	861.0	0.1017			
2015	1.42	1.65					1.53	704.0	0.1104			
2030	1.42	1.67					1.54	504.0	0.1178			
2045	1.43	1.67					1.55	371.0	0.1261			
2115	1.44	1.68					1.56	236.0	0.1348			
2200	1.45	1.68					1.56	155.0	0.1428			
2300	1.46	1.70					1.58	99.0	0.1472			
2330	1.52	1.85					1.68	96.0	0.1500			
2400	1.53	1.86					1.69	96.0	0.1515			

08158300 FERGUSON BRANCH AT SPRINGDALE ROAD, AUSTIN, TEX.
(Flood-hydrograph partial-record station)

LOCATION.--Lat 30°19'53", long 97°39'12", Travis County, on downstream side of culvert on Springdale Road and 6.5 mi northeast of the State Capitol Building in Austin.

DRAINAGE AREA.--1.63 mi².

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

GAGE.--Digital water-stage recorder and crest-stage gage. Datum of gage is 509.64 ft NGVD.

REMARKS.--Because of insufficient data, no storms were analyzed for this station for the period of record.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge 1,040 ft³/s May 21, 1979 (gage height, 8.60 ft).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,040 ft³/s May 21 (gage height, 8.60 ft).

08158400 LITTLE WALNUT CREEK AT INTERSTATE HIGHWAY 35, AUSTIN, TEX.
(Flood-hydrograph partial-record station)

LOCATION.--Lat 30°20'57", long 97°41'34", Travis County, on downstream front-age road bridge on Interstate Highway 35 and 5.9 mi north of the State Capitol Building in Austin.

DRAINAGE AREA.--5.57 mi².

PERIOD OF RECORD.--May 1975 to current year. Periodic measurements only, November 1974 to May 1975.

GAGE.--Digital water-stage recorder and crest-stage gage. Datum of gage is 628.75 ft NGVD.

REMARKS.--Records fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,700 ft³/s Nov. 23, 1974 (gage height, 9.46 ft).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,090 ft³/s May 21 (gage height 6.20 ft).

SIA. NO.08158400				STORM RAINFALL AND RUNOFF RECORD				1979 WATER YEAR		
LITTLE WALNUT CREEK AT I.H. 35, AUSTIN, TEXAS				STORM OF MAY 21-22, 1979				ACCUM.	DISCHARGE	ACCUM.
DATE & TIME				G A G E N U M B E R				WEIGHTED PRECIP.	IN	RUNOFF
								IN.	CFS	IN.
MAY 21										
0000	0.0	0.0						0.0	0.5	0.0010
1420	0.01	0.0						0.00	0.5	0.0020
1445	0.19	0.06						0.10	0.5	0.0021
1500	0.60	0.44						0.49	1.0	0.0021
1515	0.86	0.50						0.62	5.0	0.0025
1530	0.91	0.51						0.65	50.0	0.0054
1540	0.91	0.52						0.65	190.0	0.0142
1550	0.91	0.52						0.65	273.0	0.0269
1600	0.91	0.52						0.65	231.0	0.0402
1615	0.91	0.52						0.65	140.0	0.0532
1640	0.93	0.52						0.66	178.0	0.0718
1700	1.08	0.71						0.84	137.0	0.0813
1710	1.09	1.11						1.10	107.0	0.0888
1730	1.11	1.35						1.27	318.0	0.1109
1740	1.11	1.42						1.31	985.0	0.1566
1750	1.12	1.44						1.33	1260.0	0.2150
1800	1.18	1.44						1.35	1100.0	0.2787
1815	1.33	1.44						1.40	992.0	0.3592
1835	1.34	1.57						1.49	768.0	0.4037
1840	1.34	1.67						1.56	721.0	0.4205
1845	1.34	1.73						1.60	715.0	0.4370
1850	1.34	1.74						1.60	721.0	0.4537
1855	1.34	1.83						1.66	709.0	0.4702
1900	1.34	1.96						1.75	681.0	0.4860
1905	1.34	2.16						1.88	637.0	0.5007
1910	1.34	2.24						1.93	637.0	0.5155
1915	1.40	2.42						2.07	648.0	0.5305
1920	1.60	2.76						2.37	692.0	0.5466
1925	1.73	2.86						2.48	798.0	0.5651
1930	1.76	3.22						2.72	1040.0	0.5892
1935	1.76	3.33						2.80	1370.0	0.6527
1950	1.79	3.47						2.90	2040.0	0.7473
1955	1.80	3.47						2.90	2090.0	0.7957
2000	1.81	3.51						2.93	2000.0	0.8885
2015	1.89	3.60						3.02	1520.0	0.9942
2030	1.93	3.64						3.06	1140.0	1.1131
2100	1.93	3.65						3.07	774.0	1.2028
2120	1.93	3.65						3.07	538.0	1.2527
2140	1.93	3.65						3.07	361.0	1.2862

STA. NO.08158400			STORM RAINFALL AND RUNOFF RECORD					1979 WATER YEAR		
LITTLE WALNUT CREEK AT I.H. 35, AUSTIN, TEXAS					STORM OF MAY 21-22, 1979			ACCUM.	DISCHARGE	ACCUM.
DATE & TIME		G A G E N U M B E R					WEIGHTED	IN	RUNOFF	
							PRECIP.			
		1SHL	4WLN				IN.	CFS	IN.	
=====										
MAY 21										
2200	1.94	3.66					3.08	258.0	1.3161	
2230	1.98	3.69					3.11	127.0	1.3338	
2300	1.99	3.71					3.13	62.0	1.3467	
2400	2.21	3.78					3.25	30.0	1.3530	
MAY 22										
0000	2.21	3.78					3.25	30.0	1.3530	
0100	2.37	3.92					3.39	67.0	1.3690	
0130	2.38	3.93					3.40	114.0	1.3849	
0200	2.40	3.94					3.42	78.0	1.4120	
0400	2.47	4.01					3.49	40.0	1.4677	
1200	2.48	4.02					3.50	10.0	1.4955	
2400	2.49	4.03					3.51	1.0	1.4972	
=====										

STA. NO.08158400			STORM RAINFALL AND RUNOFF RECORD					1979 WATER YEAR		
LITTLE WALNUT CREEK AT I.H. 35, AUSTIN, TEXAS					STORM OF JULY 19-20, 1979			ACCUM.	DISCHARGE	ACCUM.
DATE & TIME		G A G E N U M B E R					WEIGHTED PRECIP.	IN	RUNOFF	
	1SHL	4WLN					IN.	CFS	IN.	
JULY 19										
0000	0.0	0.0					0.0	0.4	0.0008	
1515	0.01	0.0					0.00	0.4	0.0019	
1845	0.05	0.0					0.02	0.4	0.0021	
1900	0.50	0.02					0.18	1.0	0.0022	
1915	0.93	0.10					0.38	3.0	0.0024	
1930	1.16	0.15					0.49	5.0	0.0029	
2000	1.25	0.32					0.64	20.0	0.0050	
2015	1.28	0.44					0.73	62.0	0.0079	
2020	1.34	0.46					0.76	81.0	0.0097	
2025	1.38	0.48					0.79	123.0	0.0126	
2030	1.43	0.51					0.82	193.0	0.0171	
2035	1.44	0.64					0.91	273.0	0.0234	
2040	1.45	0.83					1.04	349.0	0.0315	
2045	1.47	1.09					1.22	466.0	0.0423	
2050	1.64	1.46					1.52	626.0	0.0568	
2055	1.75	1.73					1.74	871.0	0.0770	
2100	1.97	1.85					1.89	1180.0	0.1044	
2105	2.08	1.91					1.97	1520.0	0.1396	
2110	2.16	1.95					2.02	1690.0	0.1788	
2115	2.26	2.00					2.09	1750.0	0.2193	
2120	2.36	2.03					2.14	1690.0	0.2781	
2130	2.42	2.05					2.18	1390.0	0.3587	
2145	2.50	2.08					2.22	985.0	0.4272	
2200	2.53	2.09					2.24	792.0	0.4914	
2220	2.57	2.11					2.27	599.0	0.5470	
2240	2.57	2.11					2.27	435.0	0.5873	
2300	2.57	2.12					2.27	295.0	0.6215	
2330	2.57	2.12					2.27	137.0	0.6406	
2400	2.57	2.12					2.27	57.0	0.6525	
JULY 20										
0000	2.57	2.12					2.27	57.0	0.6525	
0200	2.57	2.12					2.27	20.0	0.6827	
0800	2.58	2.12					2.28	10.0	0.7021	
1600	2.59	2.12					2.28	5.0	0.7133	
2400	2.84	2.12					2.36	1.0	0.7144	

08158500 LITTLE WALNUT CREEK AT MANOR ROAD, AUSTIN, TEX.
(Flood-hydrograph partial-record station)

LOCATION.--Lat 30°18'34", long 97°40'04", Travis County, on downstream side of bridge on Manor Road and 4.9 mi northeast of the State Capitol Building in Austin.

DRAINAGE AREA.--12.1 mi².

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

GAGE.--Digital water-stage recorder and crest-stage gage. Datum of gage is 473.82 ft NGVD.

REMARKS.--Records fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,640 ft³/s May 21, 1979 (gage height, 12.10 ft).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,640 ft³/s May 21 (gage height 12.10 ft).

STA. NO.08158500					STORM RAINFALL AND RUNOFF RECORD					1979 WATER YEAR		
LITTLE WALNUT CREEK AT MANOR ROAD, AUSTIN, TEXAS					STORM OF MAY 21-22, 1979					ACCUM.	DISCHARGE	ACCUM.
DATE & TIME		G A G E			N U M B E R			WEIGHTED	IN	RUNOFF		
		1SHL	4WLN	5WLN				PRECIP.				
								IN.	CFS	IN.		
=====												
MAY 21												
0000		0.0	0.0	0.0				0.0	1.0	0.0009		
1415		0.0	0.0	0.01				0.00	1.0	0.0019		
1445		0.19	0.06	0.17				0.13	1.0	0.0019		
1500		0.60	0.44	0.58				0.52	4.0	0.0020		
1515		0.86	0.50	0.64				0.61	10.0	0.0027		
1600		0.91	0.52	0.69				0.65	50.0	0.0075		
1645		1.00	0.52	0.69				0.66	159.0	0.0177		
1700		1.08	0.71	0.71				0.77	186.0	0.0236		
1715		1.11	1.16	0.96				1.07	188.0	0.0296		
1730		1.11	1.35	1.36				1.32	302.0	0.0393		
1745		1.11	1.43	2.26				1.73	830.0	0.0703		
1805		1.21	1.44	2.34				1.78	1400.0	0.1077		
1810		1.27	1.44	2.56				1.88	1510.0	0.1238		
1815		1.33	1.44	2.76				1.98	1630.0	0.1412		
1820		1.33	1.44	2.78				1.99	1740.0	0.1597		
1825		1.34	1.45	3.05				2.11	1860.0	0.1796		
1830		1.34	1.54	3.45				2.31	1970.0	0.2006		
1835		1.34	1.57	3.74				2.45	2330.0	0.2255		
1840		1.34	1.67	4.05				2.62	2700.0	0.2543		
1845		1.34	1.73	4.34				2.77	3060.0	0.2869		
1850		1.34	1.74	4.59				2.88	3450.0	0.3238		
1855		1.34	1.83	4.73				2.97	3830.0	0.3646		
1900		1.34	1.96	4.94				3.12	4220.0	0.4097		
1905		1.34	2.16	5.17				3.30	4640.0	0.4592		
1910		1.34	2.24	5.22				3.36	5070.0	0.5133		
1915		1.40	2.42	5.22				3.44	5640.0	0.5735		
1920		1.60	2.76	5.22				3.62	5260.0	0.6577		
1930		1.76	3.22	5.29				3.87	4810.0	0.7860		
1945		1.77	3.42	5.45				4.03	3510.0	0.8984		
2000		1.81	3.51	5.67				4.16	2770.0	0.9871		
2015		1.89	3.60	6.10				4.39	3520.0	1.0998		
2030		1.93	3.64	6.24				4.48	4550.0	1.2455		
2045		1.93	3.65	6.32				4.51	4150.0	1.3783		
2100		1.93	3.65	6.32				4.51	3170.0	1.4798		
2115		1.93	3.65	6.33				4.52	2300.0	1.5535		
2130		1.93	3.65	6.35				4.53	1810.0	1.6404		
2200		1.94	3.66	6.37				4.54	1160.0	1.7147		
2230		1.98	3.69	6.38				4.56	727.0	1.7612		
2300		1.99	3.71	6.40				4.58	462.0	1.7908		

STA. NO.0H158500					STORM RAINFALL AND RUNOFF RECORD				1979 WATER YEAR			
LITTLE WALNUT CREEK AT MANOR ROAD, AUSTIN, TEXAS					STORM OF MAY 21-22, 1979				ACCUM.	DISCHARGE	ACCUM.	
									WEIGHTED	IN	RUNOFF	
DATE & TIME					G A G E N U M B E R				PRECIP.			
									IN.	CFS	IN.	
MAY 21												
2330					2.19	3.76	6.45			4.65	341.0	1.8126
2400					2.21	3.78	6.47			4.67	285.0	1.8309
MAY 22												
0000					2.21	3.78	6.47			4.67	285.0	1.8309
0100					2.37	3.92	6.67			4.84	310.0	1.8698
0130					2.38	3.93	6.70			4.86	346.0	1.8919
0200					2.40	3.94	6.72			4.88	295.0	1.9297
0330					2.47	4.01	6.78			4.94	254.0	1.9785
0500					2.47	4.01	6.78			4.94	194.0	2.0220
0700					2.47	4.01	6.78			4.94	100.0	2.0508
0930					2.48	4.02	6.78			4.95	60.0	2.0700
1200					2.48	4.02	6.78			4.95	40.0	2.0918
1800					2.49	4.03	6.79			4.96	20.0	2.1071
2400					2.49	4.03	6.79			4.96	10.0	2.1110

SIA. NO. 08158500				STORM RAINFALL AND RUNOFF RECORD				1979 WATER YEAR		
LITTLE WALNUT CREEK AT MANOR ROAD, AUSTIN, TEXAS				STORM OF JULY 19-20, 1979				ACCUM.	DISCHARGE	ACCUM.
DATE & TIME				G A G E N U M B E R				WEIGHTED PRECIP.	IN	RUNOFF
	1CHL	4WLN	5WLN					IN.	CFS	IN.
JULY 19										
0000	0.0	0.0	0.0					0.0	1.0	0.0010
1515	0.01	0.0	0.0					0.00	1.0	0.0022
1845	0.05	0.0	0.01					0.01	1.0	0.0024
1900	0.50	0.02	0.12					0.13	5.0	0.0026
1915	0.93	0.10	0.55					0.41	50.0	0.0042
1930	1.16	0.15	0.71					0.54	221.0	0.0113
1945	1.23	0.19	0.89					0.64	465.0	0.0261
2000	1.25	0.32	1.26					0.85	565.0	0.0472
2020	1.34	0.46	1.37					0.97	546.0	0.0618
2025	1.38	0.48	1.43					1.01	548.0	0.0677
2030	1.43	0.51	1.54					1.08	550.0	0.0735
2035	1.44	0.64	1.64					1.18	575.0	0.0797
2040	1.45	0.83	1.70					1.29	601.0	0.0861
2045	1.47	1.09	1.81					1.45	626.0	0.0928
2050	1.64	1.46	2.09					1.75	652.0	0.0997
2055	1.75	1.73	2.30					1.97	677.0	0.1069
2100	1.97	1.85	2.43					2.11	703.0	0.1144
2105	2.08	1.91	2.47					2.17	742.0	0.1224
2110	2.16	1.95	2.49					2.21	780.0	0.1307
2115	2.26	2.00	2.50					2.25	819.0	0.1394
2120	2.36	2.03	2.52					2.29	939.0	0.1545
2130	2.42	2.05	2.53					2.31	1180.0	0.1859
2145	2.50	2.08	2.55					2.34	1320.0	0.2282
2200	2.53	2.09	2.57					2.36	1500.0	0.2762
2215	2.57	2.10	2.58					2.37	1370.0	0.3420
2245	2.57	2.12	2.60					2.39	929.0	0.4164
2330	2.57	2.12	2.60					2.39	524.0	0.4583
2400	2.57	2.12	2.60					2.39	346.0	0.4749
JULY 20										
0000	2.57	2.12	2.60					2.39	346.0	0.4749
0030	2.57	2.12	2.60					2.39	240.0	0.4958
0100	2.57	2.12	2.60					2.39	188.0	0.5259
0300	2.58	2.12	2.60					2.39	100.0	0.5580
0600	2.58	2.12	2.60					2.39	50.0	0.5868
1200	2.58	2.12	2.61					2.39	20.0	0.6098
2400	2.84	2.12	2.62					2.44	5.0	0.6137

COLORADO RIVER BASIN

08158600 WALNUT CREEK AT WEBBERVILLE ROAD, AUSTIN, TX

LOCATION.--Lat 30°16'59", long 97°39'17", Travis County, Hydrologic Unit 12090205, on left bank 190 ft (58 m) downstream from bridge on Farm Road 969, 0.8 mi (1.3 km) downstream from Little Walnut Creek, 2.8 mi (4.5 km) upstream from Colorado River, and 5.2 mi (8.4 km) east of the State Capitol Building in Austin.

DRAINAGE AREA.--51.3 mi² (132.9 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1966 to current year.

GAGE.--Water-stage recorder. Datum of gage is 425.96 ft (129.833 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records fair. No known regulation or diversion. Station is part of hydrologic research project to study rainfall-runoff relation for urban areas. Five recording rain gages are located in the watershed above this station.

AVERAGE DISCHARGE.--13 years, 22.8 ft³/s (0.646 m³/s), 6.04 in/yr (153 mm/yr), 16,520 acre-ft/yr (20.4 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,500 ft³/s (297 m³/s) Nov. 23, 1974, gage height, 26.16 ft (7.974 m); no flow at times in 1967 and 1971.

Maximum stage since at least 1891, that of Nov. 23, 1974. Flood of Oct. 11, 1973, reached a stage of 25.56 ft (7.791 m), discharge 10,000 ft³/s (283 m³/s).

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 15, 1935, reached a stage of 24 ft (7.3 m), backwater from Colorado River. A flood in 1919 reached a stage of 22 ft (6.7 m), from information by local residents.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,500 ft³/s (42.5 m³/s), revised, and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 31	0700	2,430 68.8	13.83 4.215	July 19	2245	1,900 53.8	12.54 3.822
May 21	2115	*10,400 295	26.02 7.931	July 27	0945	2,300 65.1	13.52 4.121

Minimum daily discharge, 1.1 ft³/s (0.031 m³/s) Oct. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979 MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.2	1.2	4.9	106	13	18	61	218	28	4.7	7.1	4.3
2	1.2	1.2	4.7	26	15	18	58	44	33	4.5	6.6	4.5
3	1.4	1.3	9.6	21	25	21	46	33	19	4.3	6.4	4.5
4	1.4	1.3	5.8	23	84	16	42	28	17	4.3	5.9	4.9
5	1.2	174	5.0	27	140	15	37	25	56	4.5	5.4	21
6	1.1	73	4.7	33	309	15	34	24	21	106	5.2	33
7	1.2	3.9	4.5	24	78	14	32	22	16	19	5.0	7.6
8	1.2	2.8	4.3	19	56	14	35	20	16	12	4.8	5.8
9	1.2	2.6	4.3	18	42	13	30	19	14	10	5.0	5.2
10	1.3	2.3	4.3	89	38	18	28	19	17	9.3	5.0	5.2
11	1.3	2.3	4.3	102	34	15	26	49	12	9.0	14	5.2
12	1.3	5.2	4.1	37	31	14	23	25	11	8.7	8.5	5.0
13	1.2	2.4	4.1	28	29	13	22	17	10	8.2	6.3	4.8
14	1.2	2.3	4.1	21	27	12	20	15	9.6	14	5.7	4.7
15	1.2	18	4.1	20	24	15	20	15	9.3	9.8	7.7	4.5
16	1.2	23	4.1	20	21	67	19	13	8.5	7.9	6.1	4.5
17	1.3	7.0	3.9	19	21	22	73	12	8.1	7.2	5.5	4.5
18	1.2	3.9	3.9	23	20	18	52	12	7.7	6.9	6.9	21
19	1.2	18	3.9	20	20	18	92	11	7.4	191	6.3	20
20	1.2	11	3.8	18	19	17	47	10	6.9	86	5.3	4.1
21	1.3	12	4.0	15	18	306	31	1720	6.6	14	4.9	2.3
22	1.7	9.9	4.1	15	18	261	27	310	6.4	9.6	4.5	2.0
23	1.2	6.2	4.1	15	193	57	25	47	6.1	8.0	4.5	1.8
24	1.2	5.1	4.1	14	33	42	23	30	5.9	7.1	4.3	1.7
25	2.0	5.2	4.1	17	24	37	21	24	5.6	6.6	4.3	1.5
26	3.5	12	4.1	21	22	32	20	21	5.4	17	4.6	1.4
27	1.5	11	4.2	15	21	29	19	20	5.4	377	4.1	1.4
28	1.4	6.1	4.7	14	20	28	18	24	5.4	25	4.1	1.4
29	1.3	6.5	5.2	14	---	28	179	25	5.1	12	4.1	1.3
30	1.3	5.3	5.4	15	---	108	34	32	4.9	9.4	4.1	1.3
31	1.4	---	492	14	---	58	---	21	---	8.0	4.3	---
TOTAL	42.5	436.0	628.4	863	1395	1359	1194	2905	384.3	1021.0	176.5	190.4
MEAN	1.37	14.5	20.3	27.8	49.8	43.8	39.8	93.7	12.8	32.9	5.69	6.35
MAX	3.5	174	492	106	309	306	179	1720	56	377	14	33
MIN	1.1	1.2	3.8	14	13	12	18	10	4.9	4.3	4.1	1.3
CFSM	.03	.28	.40	.54	.97	.85	.78	1.83	.25	.64	.11	.12
IN.	.03	.32	.46	.63	1.01	.99	.87	2.11	.28	.74	.13	.14
AC-FT	84	865	1250	1710	2770	2700	2370	5760	762	2030	350	378
(ft)	.52	5.88	3.14	2.35	3.38	4.54	3.24	5.88	1.36	5.91	.51	2.65

CAL YR 1978	TOTAL	4185.89	MEAN 11.5	MAX 492	MIN .50	CFSM .22	IN 3.04	AC-FT 8300	†† 33.02
WTR YR 1979	TOTAL	10595.10	MEAN 29.0	MAX 1720	MIN 1.1	CFSM .57	IN 7.68	AC-FT 21020	†† 39.36

†† Weighted-mean rainfall, in inches, based on five rain gages.

COLORADO RIVER BASIN
08158600 WALNUT CREEK AT WEBBERVILLE ROAD, AUSTIN, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical and biochemical analyses: October 1975 to current year. Sediment records: October 1977 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM COBALT UNITS)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)
OCT 17...	1045	1.2	--	--	11.0	--	--	--	--	--
NOV 06...	1330	18	304	7.7	17.0	20	60	8.3	88	3.1
DEC 19...	1005	3.9	682	7.8	13.5	5	1.0	10.2	101	.7
FEB 26...	1250	22	693	7.9	11.0	0	3.0	11.6	108	.9
MAR 21...	1330	110	365	7.2	17.0	25	320	8.2	87	4.4
22...	1115	705	336	8.2	17.5	20	1500	8.4	90	6.3
APR 23...	1202	25	665	7.9	20.5	0	6.0	8.8	100	.5
JUN 11...	1035	12	629	7.5	21.0	5	1.5	7.8	90	.3
SEP 10...	1010	5.2	524	7.8	22.5	10	.70	7.8	90	.2
19...	0945	12	--	--	22.0	--	--	--	--	--

DATE	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
OCT 17...	--	--	--	--	--	--	--	--	--	--
NOV 06...	42000	18000	28000	120	37	43	2.9	10	.4	3.5
DEC 19...	300	72	60	280	80	100	6.5	31	.8	2.7
FEB 26...	820	320	260	--	--	--	--	--	--	--
MAR 21...	83000	33000	110000	160	40	60	3.3	10	.3	3.3
22...	140000	63000	180000	150	34	55	2.9	8.3	.3	3.1
APR 23...	3600	900	2300	300	57	110	5.0	23	.6	2.4
JUN 11...	8000	1100	740	270	60	100	5.6	24	.6	2.6
SEP 10...	1800	640	660	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--

DATE	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDE (MG/L)	SOLIDS, VOLA- TILE, SUS- PENDE (MG/L)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)
OCT 17...	--	--	--	--	--	--	--	--	--	--
NOV 06...	100	0	35	17	.2	5.3	166	86	14	.23
DEC 19...	240	0	64	57	.4	2.6	383	7	7	.13
FEB 26...	--	--	--	--	--	--	--	6	1	.97
MAR 21...	150	0	36	13	.3	8.0	208	588	74	3.1
22...	140	0	31	11	.3	7.4	188	2460	264	.56
APR 23...	290	0	51	40	.4	8.2	383	10	2	.97
JUN 11...	260	0	61	26	.4	8.1	356	4	4	.68
SEP 10...	--	--	--	--	--	--	--	2	4	.15
19...	--	--	--	--	--	--	--	--	--	--

COLORADO RIVER BASIN

08158600 WALNUT CREEK AT WEBBERVILLE ROAD, AUSTIN, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)
OCT 17...	--	--	--	--	--	--	--	18	.06
NOV 06...	.01	.24	.00	.40	.40	.120	7.3	--	--
DEC 19...	.02	.15	.01	.29	.30	.030	3.1	--	--
FEB 26...	.02	.99	.01	.39	.40	.000	2.9	--	--
MAR 21...	.25	3.3	.35	1.7	2.0	.190	13	--	--
22...	.04	.60	.12	1.6	1.7	.800	--	--	--
APR 23...	.02	.99	.02	.25	.27	.050	2.4	--	--
JUN 11...	.02	.70	.00	.44	.44	.010	9.5	--	--
SEP 10...	.02	.17	.02	.38	.40	.080	3.6	--	--
19...	--	--	--	--	--	--	--	5	.15

DATE	TIME	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)
NOV 06...	1330	2	40	<1	0	1	20
MAR 21...	1330	2	0	0	10	0	10
22...	1115	2	0	0	10	1	0
JUN 11...	1035	1	80	<1	0	0	<0

DATE	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, DIS- SOLVED (UG/L AS ZN)
NOV 06...	0	1	.0	0	0	3
MAR 21...	0	10	.0	0	0	10
22...	0	0	.0	0	0	10
JUN 11...	0	3	.1	0	0	<3

COLORADO RIVER BASIN

08158600 WALNUT CREEK AT WEBBERVILLE ROAD, AUSTIN, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	PCB, TOTAL (UG/L)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLOR- DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI- AZINON, TOTAL (UG/L)
NOV 06...	1330	.0	.00	.00	.0	.00	.00	.00	.10
MAR 21...	1330	.0	--	.00	.0	.00	.00	.00	.12
22...	1115	.0	--	.00	.0	.00	.01	.01	.15
JUN 11...	1035	.0	--	.00	.0	.00	.00	.00	.05

DATE	DI- ELDRIN TOTAL (UG/L)	ENDO- SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	MALA- THION, TOTAL (UG/L)	METHYL PARA- THION, TOTAL (UG/L)
NOV 06...	.00	.00	.00	.00	.00	.00	.00	.00	.00
MAR 21...	.00	.00	.00	.00	.00	.00	.00	.00	.00
22...	.00	.00	.00	.00	.00	.00	.01	.00	.00
JUN 11...	.00	.00	.00	.00	.00	.00	.00	.00	.00

DATE	METHYL TRI- THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	PARA- THION, TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOTAL TRI- THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
NOV 06...	.00	.00	.00	0	.00	.03	.13	.00
MAR 21...	.00	.00	.00	0	.00	.09	.03	.00
22...	.00	.00	.00	0	.00	.09	.02	.00
JUN 11...	.00	.00	.00	0	.00	.00	.00	.00

STORM RAINFALL AND RUNOFF RECORD							1979 WATER YEAR		
STA. NO.08158600									
WALNUT CREEK AT WEBBERVILLE ROAD, AUSTIN, TEXAS							ACCUM.	DISCHARGE	ACCUM.
STORM OF DEC. 31-JAN. 1, 1979							WEIGHTED	IN	RUNOFF
DATE & TIME	G A G E N U M B E R						PRECIP.		
	1WLN	2WLN	3WLN	4WLN	5WLN		IN.	CFS	IN.
DEC. 31									
0000	0.0	0.0	0.0	0.0	0.0		0.0	5.7	0.0000
0015	0.04	0.0	0.0	0.05	0.02		0.02	5.7	0.0002
0145	0.05	0.01	0.0	0.06	0.03		0.03	6.2	0.0003
0200	0.08	0.03	0.01	0.31	0.19		0.10	6.6	0.0004
0215	0.22	0.33	0.15	0.35	0.19		0.24	7.4	0.0004
0230	0.29	0.36	0.15	0.39	0.22		0.27	7.7	0.0005
0245	0.30	0.38	0.16	0.44	0.29		0.30	7.7	0.0005
0255	0.32	0.40	0.18	0.68	0.56		0.38	7.7	0.0006
0300	0.42	0.53	0.20	0.75	0.60		0.45	7.7	0.0006
0305	0.49	0.65	0.32	0.82	0.67		0.55	7.7	0.0006
0310	0.58	0.76	0.38	0.93	0.79		0.64	7.7	0.0006
0315	0.63	0.85	0.42	1.03	0.87		0.70	7.7	0.0007
0320	0.72	0.96	0.46	1.11	0.92		0.78	7.7	0.0007
0325	0.89	1.10	0.59	1.16	0.93		0.89	7.7	0.0007
0330	1.06	1.24	0.64	1.19	0.93		0.99	7.7	0.0007
0335	1.28	1.38	0.67	1.27	0.93		1.09	7.7	0.0007
0340	1.47	1.53	0.77	1.37	0.93		1.21	7.7	0.0008
0345	1.62	1.66	0.80	1.47	0.93		1.30	7.7	0.0008
0350	1.75	1.77	0.84	1.53	0.94		1.38	7.7	0.0008
0355	1.80	1.85	0.86	1.58	1.27		1.46	7.7	0.0008
0400	1.86	1.92	0.96	1.60	1.30		1.52	7.7	0.0008
0415	1.94	1.98	1.07	1.70	1.44		1.61	9.1	0.0009
0430	2.01	2.06	1.24	1.83	1.58		1.73	149.0	0.0026
0500	2.13	2.20	1.59	2.05	1.86		1.95	596.0	0.0094
0515	2.23	2.31	1.74	2.16	1.93		2.07	832.0	0.0156
0530	2.29	2.37	1.89	2.23	2.06		2.16	1110.0	0.0240
0545	2.35	2.41	1.98	2.28	2.11		2.22	1420.0	0.0347
0600	2.38	2.46	2.05	2.33	2.16		2.27	1730.0	0.0543
0630	2.43	2.51	2.12	2.38	2.20		2.33	2130.0	0.0785
0645	2.48	2.54	2.15	2.40	2.22		2.36	2340.0	0.0961
0700	2.50	2.56	2.17	2.41	2.23		2.38	2430.0	0.1145
0715	2.50	2.56	2.18	2.41	2.23		2.38	2410.0	0.1509
0800	2.50	2.56	2.18	2.41	2.23		2.38	2070.0	0.2056
0900	2.50	2.56	2.18	2.41	2.23		2.38	1600.0	0.2539
1000	2.50	2.56	2.18	2.41	2.23		2.38	1060.0	0.2859
1100	2.50	2.56	2.18	2.41	2.23		2.38	633.0	0.3051
1200	2.51	2.56	2.18	2.41	2.23		2.38	426.0	0.3179
1300	2.51	2.56	2.18	2.41	2.23		2.38	294.0	0.3268
1400	2.51	2.56	2.18	2.41	2.23		2.38	210.0	0.3363

SIA. NO.02158600						STORM RAINFALL AND RUNOFF RECORD				1979 WATER YEAR				
WALNUT CREEK AT WEBBERVILLE ROAD, AUSTIN, TEXAS						STORM OF DEC. 31-JAN. 1, 1979				ACCUM.	DISCHARGE	ACCUM.		
DATE & TIME						G A G E N U M B E R				WEIGHTED PRECIP.	IN	RUNOFF		
						1WLN	2WLN	3WLN	4WLN	5WLN		CFS	IN.	
=====														
DEC. 31														
1600						2.51	2.56	2.18	2.41	2.23		2.38	124.0	0.3438
1800						2.61	2.59	2.22	2.45	2.26		2.43	88.0	0.3491
2000						2.61	2.59	2.24	2.45	2.26		2.44	73.0	0.3535
2200						2.61	2.59	2.24	2.45	2.26		2.44	58.0	0.3562
2300						2.78	2.59	2.24	2.67	2.27		2.52	55.0	0.3578
2400						3.09	2.59	2.36	2.82	2.40		2.66	54.0	0.3591
JAN. 1														
0000						3.09	2.59	2.36	2.82	2.40		2.66	54.0	0.3591
0100						3.12	2.59	2.40	2.82	2.41		2.68	77.0	0.3618
0200						3.15	2.59	2.40	2.82	2.43		2.69	246.0	0.3674
0230						3.17	2.59	2.40	2.82	2.44		2.70	272.0	0.3756
0400						3.21	2.59	2.40	2.82	2.45		2.71	270.0	0.3878
0530						3.21	2.59	2.40	2.82	2.45		2.71	200.0	0.3969
0700						3.21	2.59	2.40	2.82	2.45		2.71	170.0	0.4059
0900						3.21	2.59	2.40	2.82	2.45		2.71	122.0	0.4151
1200						3.21	2.59	2.50	2.82	2.45		2.74	77.0	0.4221
1500						3.21	2.59	2.55	2.82	2.45		2.75	56.0	0.4271
1800						3.21	2.59	2.55	2.82	2.45		2.75	45.0	0.4312
2100						3.21	2.59	2.55	2.82	2.45		2.75	40.0	0.4348
2400						3.21	2.59	2.55	2.82	2.45		2.75	35.0	0.4385
JAN. 2														
0000						3.21	2.59	2.55	2.82	2.45		2.75	35.0	0.4385
0800						3.21	2.59	2.55	2.82	2.45		2.75	27.0	0.4472
1600						3.21	2.59	2.55	2.82	2.45		2.75	24.0	0.4530
2400						3.21	2.59	2.55	2.82	2.45		2.75	23.0	0.4558
=====														

STATION NO. 08158600							STORM RAINFALL AND RUNOFF RECORD			1979 WATER YEAR		
WALNUT CREEK AT WFBERVILLE ROAD, AUSTIN, TEXAS							STORM OF MAY 21-22, 1979			ACCUM.	DISCHARGE	ACCUM.
DATE & TIME							G A G E N U M B E R			WEIGHTED PRECIP.	IN	RUNOFF
							1WLN	2WLN	3WLN	4WLN	5WLN	
MAY 21												
0000	0.0	0.0	0.0	0.0	0.0	0.0				0.0	10.0	0.0019
1245	0.0	0.0	0.01	0.0	0.0	0.0				0.00	10.0	0.0041
1415	0.0	0.0	0.04	0.0	0.01					0.01	17.0	0.0045
1430	0.10	0.0	0.04	0.0	0.01					0.04	18.0	0.0047
1445	0.26	0.07	0.17	0.06	0.17					0.15	18.0	0.0048
1500	0.53	0.43	0.58	0.44	0.58					0.51	17.0	0.0049
1515	0.78	0.80	0.68	0.50	0.64					0.70	16.0	0.0050
1530	0.99	0.85	0.68	0.51	0.65					0.76	15.0	0.0052
1600	0.99	0.86	0.73	0.52	0.69					0.79	40.0	0.0058
1630	0.99	0.86	0.74	0.52	0.69					0.79	146.0	0.0075
1645	1.02	0.86	0.74	0.52	0.69					0.80	161.0	0.0087
1700	1.20	1.25	0.74	0.71	0.71					0.95	143.0	0.0098
1715	1.22	1.39	0.89	1.10	0.96					1.13	176.0	0.0111
1730	1.22	1.39	1.21	1.35	1.36					1.29	243.0	0.0129
1745	1.22	1.39	1.85	1.43	2.26					1.58	258.0	0.0149
1800	1.23	1.39	2.28	1.44	2.32					1.71	598.0	0.0179
1805	1.24	1.39	2.29	1.44	2.34					1.72	795.0	0.0199
1810	1.25	1.41	2.36	1.44	2.56					1.77	993.0	0.0224
1815	1.26	1.44	2.55	1.44	2.76					1.85	1190.0	0.0254
1820	1.26	1.52	2.90	1.44	2.78					1.97	1570.0	0.0293
1825	1.26	1.55	2.95	1.45	3.05					2.02	1940.0	0.0342
1830	1.26	1.55	3.14	1.54	3.45					2.13	2320.0	0.0401
1835	1.26	1.56	3.43	1.57	3.74					2.25	2540.0	0.0465
1840	1.26	1.56	3.66	1.67	4.05					2.36	2760.0	0.0534
1845	1.26	1.56	3.86	1.73	4.34					2.46	2980.0	0.0609
1850	1.26	1.56	4.13	1.74	4.59					2.56	3290.0	0.0692
1855	1.26	1.56	4.37	1.83	4.73					2.66	3610.0	0.0783
1900	1.26	1.56	4.52	1.96	4.94					2.75	3920.0	0.0881
1905	1.26	1.56	4.70	2.16	5.17					2.85	4310.0	0.1044
1915	1.27	1.56	4.86	2.42	5.22					2.94	5080.0	0.1364
1930	1.36	1.58	4.87	3.22	5.29					3.10	6460.0	0.1852
1945	1.37	1.63	4.97	3.42	5.45					3.19	7600.0	0.2426
2000	1.38	1.64	5.16	3.51	5.67					3.28	8300.0	0.3052
2015	1.42	1.65	5.53	3.60	6.10					3.46	8840.0	0.3720
2030	1.42	1.67	5.65	3.64	6.24					3.52	9280.0	0.4421
2045	1.43	1.67	5.71	3.65	6.32					3.55	9790.0	0.5160
2100	1.43	1.67	5.71	3.65	6.32					3.55	10200.0	0.5930
2115	1.44	1.68	5.71	3.65	6.33					3.56	10400.0	0.7108
2145	1.44	1.68	5.73	3.65	6.35					3.56	10100.0	0.8634

STA. NO.08158600				STORM RAINFALL AND RUNOFF RECORD					1979 WATER YEAR		
WALNUT CREEK AT WEBBERVILLE ROAD, AUSTIN, TEXAS						STORM OF MAY 21-22, 1979			ACCUM.	DISCHARGE	ACCUM.
DATE & TIME		G A G E N U M B E R					WEIGHTED	IN	RUNOFF		
		1WLN	2WLN	3WLN	4WLN	5WLN	PRECIP.				
							IN.	CFS	IN.		
=====											
MAY 21											
2215	1.45	1.68	5.73	3.66	6.38		3.57	9190.0	0.9906		
2240	1.45	1.69	5.73	3.70	6.39		3.58	7890.0	1.0800		
2300	1.46	1.70	5.73	3.71	6.40		3.59	6560.0	1.1460		
2320	1.50	1.72	5.73	3.72	6.44		3.61	5140.0	1.1978		
2340	1.52	1.86	5.79	3.78	6.47		3.67	3770.0	1.2357		
2400	1.53	1.86	5.79	3.78	6.47		3.67	2550.0	1.2582		
MAY 22											
0000	1.53	1.86	5.79	3.78	6.47		3.67	2550.0	1.2582		
0030	1.59	1.90	5.88	3.91	6.66		3.76	1520.0	1.2908		
0100	1.61	1.92	5.89	3.92	6.67		3.78	1090.0	1.3155		
0200	1.65	1.95	5.89	3.94	6.72		3.80	866.0	1.3416		
0300	1.73	2.02	5.89	4.00	6.77		3.85	720.0	1.3634		
0400	1.73	2.03	5.89	4.01	6.78		3.86	612.0	1.3819		
0500	1.73	2.03	5.89	4.01	6.78		3.86	472.0	1.3997		
0630	1.73	2.03	5.89	4.01	6.78		3.86	349.0	1.4155		
0800	1.73	2.03	5.89	4.01	6.78		3.86	253.0	1.4270		
0930	1.73	2.04	5.89	4.02	6.78		3.86	191.0	1.4356		
1100	1.73	2.04	5.89	4.02	6.78		3.86	155.0	1.4438		
1300	1.74	2.04	5.89	4.02	6.78		3.86	122.0	1.4530		
1600	1.74	2.18	5.90	4.03	6.78		3.90	96.0	1.4632		
2000	1.74	2.18	5.90	4.03	6.79		3.90	74.0	1.4721		
2400	1.74	2.18	5.90	4.03	6.79		3.90	62.0	1.4787		
MAY 23											
0000	1.74	2.18	5.90	4.03	6.79		3.90	62.0	1.4787		
0600	1.74	2.18	5.90	4.03	6.79		3.90	54.0	1.4913		
1200	1.74	2.18	5.90	4.03	6.79		3.90	47.0	1.4998		
1800	1.74	2.18	5.90	4.03	6.79		3.90	40.0	1.5070		
2400	1.74	2.18	5.90	4.03	6.79		3.90	34.0	1.5101		

COLORADO RIVER BASIN

08158640 WALNUT CREEK AT SOUTHERN PACIFIC RAILROAD BRIDGE, AUSTIN, TX
(Reconnaissance partial-record station)

LOCATION.--Lat 30°15'58", long 97°39'24", Travis County, Hydrologic Unit 12090205, at Southern Pacific Railroad bridge, 1.2 mi (1.9 km) south of Webberville Road, and 5.0 mi (8.0 km) east of the State Capitol in Austin.

DRAINAGE AREA.--53.5 mi² (138.6 km²).

PERIOD OF RECORD.--Periodic chemical, biochemical, and pesticide analyses: January 1975 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW- INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM- COBALT UNITS)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)
NOV 06...	1510	53	544	7.1	22.0	10	35	7.2	85	9.0
DEC 19...	1025	22	840	6.9	21.0	10	6.0	5.0	57	11
FEB 26...	1325	54	775	7.3	16.0	5	9.0	8.2	85	6.8
MAR 21...	1015	270	431	6.9	17.0	30	1100	6.9	73	13
APR 23...	1235	29	754	7.6	22.5	5	8.0	7.2	85	10
JUN 11...	1200	41	731	7.0	23.5	8	3.2	6.0	72	10
SEP 10...	1110	29	723	7.1	27.5	20	1.7	3.2	41	15

DATE	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO
NOV 06...	3600	140	1300	140	46	43	8.9	49	1.8
DEC 19...	2300	190	110	160	49	41	15	90	3.1
FEB 26...	2200	170	150	--	--	--	--	--	--
MAR 21...	82000	42000	120000	140	16	48	4.6	23	.9
APR 23...	2200	320	2000	260	75	89	10	51	1.4
JUN 11...	2100	250	260	210	43	63	12	62	1.9
SEP 10...	2600000	750000	22000	150	38	35	14	73	2.6

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)
NOV 06...	7.0	120	0	69	58	.7	8.9	304	44
DEC 19...	11	140	0	86	110	2.2	12	436	9
FEB 26...	--	--	--	--	--	--	--	--	17
MAR 21...	4.0	150	0	41	22	.7	9.0	226	1340
APR 23...	5.8	230	0	68	70	.9	9.2	417	16
JUN 11...	7.2	200	0	72	73	.9	12	401	9
SEP 10...	12	130	0	71	79	1.6	9.7	360	4

COLORADO RIVER BASIN

08158640 WALNUT CREEK AT SOUTHERN PACIFIC RAILROAD BRIDGE, AUSTIN, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	SOLIDS, VOLATILE, SUSPENDED (MG/L)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
NOV 06...	10	4.8	.02	4.8	1.3	1.9	3.2	2.8	9.9
DEC 19...	6	9.7	1.3	11	2.8	.50	3.3	6.9	10
FEB 26...	5	1.7	.49	2.2	.97	1.6	2.6	2.4	9.6
MAR 21...	156	1.2	.32	1.5	.59	2.3	2.9	1.2	60
APR 23...	3	2.4	.42	2.8	.22	.98	1.2	2.8	7.9
JUN 11...	9	2.3	.64	2.9	.23	1.3	1.5	1.0	8.5
SEP 10...	6	7.0	3.0	10	4.7	3.3	8.0	7.4	17

DATE	TIME	ARSENIC, DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM, DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)
NOV 06...	1510	3	20	<1	0	5	20
MAR 21...	1015	2	40	<1	0	3	20
JUN 11...	1200	2	40	<1	0	8	0
SEP 10...	1110	2	10	<1	0	18	40

DATE	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY, DIS- SOLVED (UG/L AS HG)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, DIS- SOLVED (UG/L AS ZN)
NOV 06...	0	10	.0	3	0	8
MAR 21...	0	<1	.0	0	0	<3
JUN 11...	0	8	.0	0	0	6
SEP 10...	0	30	.3	0	0	20

COLORADO RIVER BASIN

08158640 WALNUT CREEK AT SOUTHERN PACIFIC RAILROAD BRIDGE, AUSTIN, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	PCB, TOTAL (UG/L)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLOR- DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)
NOV 06...	1510	.0	.00	.00	.0	.00	.00	.00
MAR 21...	1015	.0	--	.00	.0	.00	.00	.01
JUN 11...	1200	.0	--	.01	.0	.00	.00	.00
SEP 10...	1110	.0	--	.00	.0	.00	.00	.00

DATE	DI- AZINON, TOTAL (UG/L)	DI- ELDRIN TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	MALA- THION, TOTAL (UG/L)	METH- OXY- CHLOR, TOTAL (UG/L)
NOV 06...	.25	.01	.00	.00	.00	.00	.06	.00	--
MAR 21...	.21	.00	.00	.00	.00	.00	.00	.01	--
JUN 11...	1.3	.00	.00	.00	.00	.00	.03	.30	--
SEP 10...	1.3	.02	.00	.00	.00	.01	.06	.09	.00

DATE	METHYL PARA- THION, TOTAL (UG/L)	METHYL TRI- THION, TOTAL (UG/L)	MIREX TOTAL (UG/L)	PARA- THION, TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOTAL TRI- THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
NOV 06...	.00	.00	.00	.00	0	.00	.09	.05	.00
MAR 21...	.00	.00	.00	.00	0	.00	.12	.04	.00
JUN 11...	.00	.00	.00	.00	0	.00	.10	.00	.00
SEP 10...	.00	.00	.00	.00	0	.00	<.05	<.05	<.05

COLORADO RIVER BASIN

08158650 COLORADO RIVER BELOW AUSTIN, TX
(Low-flow partial-record station)

LOCATION.--Lat 30°12'28", long 97°38'15", Travis County, Hydrologic Unit 12090205, at bridge on Farm Road 973, 0.3 mi (0.5 km) northeast of intersection of State Highway 71 and Farm Road 973, 8.8 mi (14.2 km) downstream from Govalle Sewage Treatment Plant outfall, and 9.6 mi (15.4 km) downstream from gaging station at Austin.

PERIOD OF RECORD.--Periodic chemical and biochemical analyses: February 1968 to current year. Pesticide analyses: October 1974 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SPECIFIC CONDUCTANCE (MICRO-MHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATURATION)	OXYGEN DEMAND, BIO-CHEMICAL, 5 DAY (MG/L)	COLIFORM, TOTAL, IMMEDIATE (COLS. PER 100 ML)	COLIFORM, FECAL, 0.7 UM-MF (COLS. PER 100 ML)	STREPTOCOCCI, KF AGAR (COLS. PER 100 ML)
OCT 16...	1100	704	7.5	21.0	5	3.0	7.6	87	>23	52	K2	K11
NOV 13...	1115	700	7.2	23.5	10	15	4.6	56	12	580	150	84
DEC 04...	1155	649	7.4	15.5	5	6.0	6.6	68	6.1	120	31	30
JAN 05...	1015	660	8.3	12.0	2	6.0	7.7	74	4.2	860	120	620
FEB 06...	1315	454	7.6	11.5	5	260	10.8	102	4.6	14000	1200	9200
MAR 05...	1205	620	7.7	16.5	5	10	9.0	95	2.6	300	60	50
APR 02...	1340	540	7.2	18.0	10	55	7.5	82	2.5	5700	900	400
MAY 08...	1320	560	7.6	18.5	5	6.6	9.8	105	1.0	2200	140	73
JUN 11...	1400	540	7.5	19.0	5	5.0	10.4	111	.2	270	170	30
JUL 09...	1205	560	7.2	24.0	10	2.1	8.0	94	.8	2800	200	32
AUG 06...	1310	560	7.3	28.0	5	4.5	8.4	106	1.2	90	31	26
SEP 24...	1220	540	7.6	23.5	5	.90	10.2	120	.6	200	26	42

DATE	HARDNESS (MG/L AS CaCO3)	HARDNESS, NONCARBONATE (MG/L CaCO3)	CALCIUM DIS-SOLVED (MG/L AS Ca)	MAGNESIUM, DIS-SOLVED (MG/L AS Mg)	SODIUM, DIS-SOLVED (MG/L AS Na)	SODIUM ADSORPTION RATIO	POTASSIUM, DIS-SOLVED (MG/L AS K)	BICARBONATE (MG/L AS HCO3)	CARBONATE (MG/L AS CO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLORIDE, DIS-SOLVED (MG/L AS Cl)	FLUORIDE, DIS-SOLVED (MG/L AS F)
OCT 16...	210	56	52	20	59	1.8	7.0	190	0	56	87	1.0
NOV 13...	--	--	--	--	--	--	--	--	--	--	--	--
DEC 04...	200	33	51	17	48	1.5	6.5	200	0	49	69	.8
JAN 05...	210	38	56	17	36	1.1	5.0	210	0	48	58	.5
FEB 06...	190	29	56	11	17	.5	2.9	190	0	37	26	.3
MAR 05...	--	--	--	--	--	--	--	--	--	--	--	--
APR 02...	210	25	59	16	18	.5	2.2	230	0	31	27	.2
MAY 08...	--	--	--	--	--	--	--	--	--	--	--	--
JUN 11...	190	40	42	20	32	1.0	3.7	180	0	40	52	.3
JUL 09...	190	34	43	20	32	1.0	3.9	190	0	40	56	.3
AUG 06...	200	57	49	20	31	.9	3.4	180	0	36	50	.3
SEP 24...	210	45	49	21	29	.9	4.0	200	0	37	50	.3

COLORADO RIVER BASIN

08158650 COLORADO RIVER BELOW AUSTIN, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	SOLIDS, VOLATILE, TILE, SUS- PENDED (MG/L)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 16...	9.0	385	2	0	2.4	.37	2.8	.69	.71	1.4	4.9	5.8
NOV 13...	--	--	20	4	1.1	.30	--	2.0	2.1	4.1	3.1	7.3
DEC 04...	9.3	349	8	0	2.1	.49	2.6	2.6	1.1	3.7	1.0	5.6
JAN 05...	9.7	334	14	3	2.1	.19	2.3	1.1	1.1	2.2	1.1	4.8
FEB 06...	7.9	252	486	57	1.2	.12	1.3	.52	.78	1.3	.31	9.8
MAR 05...	--	--	10	20	1.7	.43	2.1	.71	.59	1.3	.29	3.3
APR 02...	8.2	275	116	14	.27	.06	.33	.26	.60	.86	.34	5.2
MAY 08...	--	--	9	7	.14	.04	.18	.12	.54	.66	.27	3.3
JUN 11...	8.2	287	6	7	.31	.08	.39	.07	.42	.49	.07	4.8
JUL 09...	8.4	297	0	0	.39	.14	.53	.23	.16	.39	.29	3.8
AUG 06...	9.4	288	8	3	.19	.12	.31	.03	.27	.30	.23	3.6
SEP 24...	8.6	298	5	6	.52	.06	.58	.25	2.5	2.7	.28	4.1

DATE	TIME	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)
OCT 16...	1100	3	100	0	0	3	10
FEB 06...	1315	2	0	0	0	2	10
JUN 11...	1400	1	70	1	10	0	<0
AUG 06...	1310	2	70	<1	10	4	<10

DATE	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, DIS- SOLVED (UG/L AS ZN)
OCT 16...	0	20	.0	1	0	0
FEB 06...	1	0	.0	0	0	10
JUN 11...	0	6	.0	0	0	<3
AUG 06...	0	20	.2	0	0	<3

COLORADO RIVER BASIN

08158650 COLORADO RIVER BELOW AUSTIN, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	PCB, TOTAL (UG/L)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLOR- DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI- AZINON, TOTAL (UG/L)
OCT 16...	1100	.0	.00	.00	.0	.00	.00	.00	.13
FEB 06...	1315	.0	--	.00	.0	.01	.03	.03	.07
JUN 11...	1400	.0	--	.00	.0	.00	.00	.00	.00
AUG 06...	1310	.0	--	.00	.0	.01	.00	.00	.04

DATE	DI- ELDRIN TOTAL (UG/L)	ENDO- SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	MALA- THION, TOTAL (UG/L)	METHYL PARA- THION, TOTAL (UG/L)
OCT 16...	.00	.00	.00	.00	.00	.00	.00	.00	.00
FEB 06...	.00	.00	.00	.00	.00	.00	.00	.00	.00
JUN 11...	.00	.00	.00	.00	.00	.00	.00	.00	.00
AUG 06...	.00	.00	.00	.00	.00	.00	.00	.00	.00

DATE	METHYL TRI- THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	PARA- THION, TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOTAL TRI- THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
OCT 16...	.00	.00	.00	0	.00	.03	.00	.00
FEB 06...	.00	.00	.00	0	.00	.03	.00	.00
JUN 11...	.00	.00	.00	0	.00	.11	.00	.00
AUG 06...	.00	.00	.00	0	.00	--	--	--

ONION CREEK DRAINAGE BASIN

The locations of the data-collection sites in the Onion Creek drainage basin are shown in figure 1.

The peak discharges associated with the water-quality samples collected during storms at the Onion Creek at Buda and Onion Creek at U.S. Highway 183 sites are shown in table 3.

Daily and monthly rainfall totals for the 1979 water year are given in table 14.

COLORADO RIVER BASIN

08158700 ONION CREEK NEAR DRIFTWOOD, TX

LOCATION.--Lat 30°04'59", long 98°00'29", Hays County, Hydrologic Unit 12090205, on left bank at upstream side of low-water crossing on Farm Road 150, 3.2 mi (5.1 km) southeast of Driftwood, and 10 mi (16 km) west of Buda.

DRAINAGE AREA.--124 mi² (321 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1958, November 1961 to June 1979 (periodic discharge measurements only), July to September 1979.

GAGE.--Water-stage recorder. Datum of gage is 878.13 ft (267.654 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records fair above 300 ft³/s (8.50 m³/s) and good below. Station is part of a hydrologic research project to study rainfall-runoff relationship in the Austin urban-rural areas. There is a digital recording rain gage located in the drainage basin above the station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,900 ft³/s (53.8 m³/s) July 27, 1979, gage height, 7.15 ft (2.179 m); minimum daily, 2.3 ft³/s (0.065 m³/s) Sept. 15, 1979.
The flood of Mar. 20, 1979, reached a stage of 11.48 ft (3.499 m), discharge unknown.

EXTREMES OUTSIDE PERIOD OF RECORD.--The highest stage since 1938 probably occurred in 1940 or 1941, stage and discharge unknown.

EXTREMES FOR CURRENT YEAR.--Maximum discharge during period July to September, 1,900 ft³/s (53.8 m³/s) July 27, gage height, 7.15 ft (2.179 m), no other peak above base of 500 ft³/s (14.2 m³/s); minimum daily, 2.3 ft³/s (0.065 m³/s) Sept. 15.

DISCHARGE, IN CUBIC FEET PER SECOND, JULY TO SEPTEMBER 1979 MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1										14	4.4	5.2
2										14	5.4	5.2
3										14	6.1	5.6
4										14	9.0	5.2
5										13	8.6	5.2
6										14	8.2	5.2
7										18	8.2	5.2
8										16	8.6	5.2
9										13	8.6	4.8
10										13	8.6	4.3
11										14	9.4	3.8
12										13	12	3.8
13										13	11	3.7
14										12	11	3.2
15										12	10	2.3
16										12	9.8	2.5
17										12	9.0	4.3
18										11	9.0	4.3
19										11	8.6	4.0
20										12	7.9	3.5
21										13	7.5	3.2
22										12	7.5	3.8
23										11	6.5	3.8
24										11	6.5	3.8
25										11	6.5	3.8
26										11	6.1	3.8
27										216	5.2	3.8
28										42	5.2	3.2
29										7.8	5.2	3.2
30										9.3	5.2	2.7
31										3.7	5.2	---
TOTAL										612.8	240.0	121.6
MEAN										19.8	7.74	4.05
MAX										216	12	5.6
MIN										3.7	4.4	2.3
CFSM										.16	.06	.03
IN.										.18	.07	.04
AC-FT										1220	476	241
(††)												

WTR YR 1979 TOTAL - MEAN - MAX - MIN - CFSM - IN. - AC-FT - †† -

†† Rainfall, in inches, based on one rain gages.

COLORADO RIVER BASIN
08158700 ONION CREEK NEAR DRIFTWOOD, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Occasional water-quality data: January 1974 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW- INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM- COBALT UNITS)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)
NOV 06...	1350	8.0	450	7.7	17.0	0	1.0	8.0	85	.9
DEC 18...	1200	10	466	8.2	12.0	0	1.0	9.9	95	.3
FEB 27...	1250	155	513	7.9	13.0	0	2.0	10.4	102	.1
APR 24...	1000	125	498	8.0	19.5	0	3.0	9.4	106	.5
JUN 13...	1350	56	478	7.9	23.0	5	.50	8.8	105	.2
SEP 11...	1030	3.8	434	7.9	24.5	5	.30	7.7	92	.3

DATE	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO
NOV 06...	3500	360	400	220	31	60	17	7.4	.2
DEC 18...	1000	23	21	--	--	--	--	--	--
FEB 27...	1100	200	520	270	42	84	15	6.3	.2
APR 24...	500	300	2400	--	--	--	--	--	--
JUN 13...	280	29	19	230	22	66	17	8.7	.2
SEP 11...	150	57	56	220	30	61	16	8.2	.2

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)
NOV 06...	1.6	230	0	33	11	.2	9.3	253	1
DEC 18...	--	250	0	--	--	--	--	--	2
FEB 27...	1.4	230	0	32	14	.2	11	257	0
APR 24...	.9	280	0	21	17	.2	8.1	291	4
JUN 13...	--	--	--	--	--	--	--	--	9
SEP 11...	1.0	260	0	23	6.8	.2	9.8	261	0

DATE	SOLIDS, VOLATILE, SUS- PENDED (MG/L)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C),
NOV 06...	0	.00	.01	.01	.01	.25	.26	.00	2.6
DEC 18...	1	.18	.01	.19	.01	.13	.14	.01	1.6
FEB 27...	1	.26	.00	.26	.01	.09	.10	.01	1.2
APR 24...	2	.22	.00	.22	.01	.12	.13	.01	1.5
JUN 13...	0	.13	.02	.15	.01	.25	.26	.00	3.7
SEP 11...	2	.00	.00	.00	.00	.34	.34	.00	2.5

COLORADO RIVER BASIN

08158700 ONION CREEK NEAR DRIFTWOOD, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)
NOV 06...	1350	1	30	<1	0	0	10
FEB 27...	1250	1	0	0	0	0	10
JUN 13...	1350	0	30	<1	10	0	<0
SEPT 11...	1030	1	30	<1	0	0	<10

DATE	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, DIS- SOLVED (UG/L AS ZN)
NOV 06...	0	2	.0	1	0	<3
FEB 27...	0	10	.0	2	0	10
JUN 13...	0	3	.1	0	0	<3
SEP 11...	0	<1	.1	0	0	<3

DATE	TIME	PCB, TOTAL (UG/L)	NAPH- THA- LENES, POLY- CHLOR, TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLOR- DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)
NOV 06...	1350	.0	.00	.00	.0	.00	.00	.00
FEB 27...	1250	.0	--	.00	.0	.00	.00	.00
JUN 13...	1350	.0	--	.00	.0	.00	.00	.00
SEP 11...	1030	.0	--	.00	.0	.00	.00	.00

DATE	DI- AZINON, TOTAL (UG/L)	DI- ELDRIN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	MALA- THION, TOTAL (UG/L)	METH- OXY- CHLOR, TOTAL (UG/L)
NOV 06...	.00	.00	.00	.00	.00	.00	.00	.00	--
FEB 27...	.00	.00	.00	.00	.00	.00	.00	.00	--
JUN 13...	.00	.00	.00	.00	.00	.00	.00	.00	--
SEP 11...	.00	.00	.00	.00	.00	.00	.00	.00	.00

DATE	METHYL PARA- THION, TOTAL (UG/L)	METHYL TRI- THION, TOTAL (UG/L)	PARA- THION, TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOTAL TRI- THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
NOV 06...	.00	.00	.00	0	.00	.00	.00	.00
FEB 27...	.00	.00	.00	0	.00	.00	.00	.00
JUN 13...	.00	.00	.00	0	.00	.00	.00	.00
SEP 11...	.00	.00	.00	0	.00	.00	.00	.00

COLORADO RIVER BASIN

08158800 ONION CREEK AT BUDA, TX

LOCATION.--Lat 30°05'09", long 97°50'52", Hays County, Hydrologic Unit 12090205, on left bank at downstream side of bridge on Farm Road 967, and 0.4 mi (0.6 km) northwest of Buda.

DRAINAGE AREA.--166 mi² (430 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.-- November 1961 to September 1973, January 1978 to July 1979 (periodic discharge measurements only), July to September 1979.

GAGE.--Water-stage recorder. Datum of gage is 657.39 ft (200.372 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records good above 100 ft³/s (2.83 m³/s) and fair below. The station is part of a hydrologic-research project to study rainfall-runoff relation for the Austin urban-rural areas. There are two digital recording rain gages in watershed above station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,430 ft³/s (40.5 m³/s) July 27, 1979, gage height, 6.22 ft (1.929 m); no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 28, 1929, reached a stage of about 36.2 ft (11.03 m), present datum, discharge, 53,200 ft³/s (1,510 m³/s), from slope-area indirect measurement of peak flow. This is probably the highest flood since that date.

EXTREMES FOR CURRENT YEAR.--Maximum discharge during period July to September, 1,430 ft³/s (40.5 m³/s) July 27, gage height, 6.33 ft (1.929 m), no other peak above base of 1,000 ft³/s (28.3 m³/s); no flow Sept. 12-17, 22-30.

DISCHARGE, IN CUBIC FEET PER SECOND, JULY TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1										1.5	2.3	2.5
2										1.5	2.3	2.4
3										1.3	2.3	2.3
4										1.2	2.3	2.2
5										1.3	2.3	2.1
6										2.2	2.1	2.5
7										1.9	2.0	34
8										1.7	2.0	3.7
9										1.5	2.1	1.5
10										1.4	2.2	.92
11										1.5	3.2	.42
12										1.5	3.1	.00
13										1.5	2.6	.00
14										1.6	2.5	.00
15										1.7	2.8	.00
16										1.6	2.6	.00
17										1.5	2.6	.00
18										1.6	2.7	.31
19										1.8	2.6	.85
20										1.9	2.5	.72
21										1.9	2.3	.17
22										1.9	2.0	.00
23										1.8	2.4	.00
24										1.6	2.4	.00
25										1.6	2.5	.00
26										1.6	2.5	.00
27										297	2.4	.00
28										130	2.3	.00
29										12	2.3	.00
30										3.0	2.4	.00
31										2.4	2.4	---
TOTAL										486.5	75.0	56.59
MEAN										15.7	2.42	1.89
MAX										297	3.2	34
MIN										1.2	2.0	.00
AC-FT										965	149	112
(††)										5.85	1.64	1.55

WTR YR 1979 TOTAL - MEAN - MAX - MIN - AC-FT - †† -

†† Weighted-mean rainfall, in inches, based on two rain gages.

COLORADO RIVER BASIN

08158800 ONION CREEK AT BUDA, TX--Continued

WATER-QUALITY RECORDS

LOCATION---Lat 30°05'09", long 97°50'52", Hays County, Hydrologic Unit 12090205, on Farm Road 967, 0.5 mi (0.8 km) west of Buda.

PERIOD OF RECORD---Chemical, biochemical, and pesticide analyses: January 1978 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PERCENT SATURATION)	OXYGEN DEMAND, BIO-CHEMICAL, 5 DAY (MG/L)
NOV 06...	0945	2.0	352	7.7	18.0	10	30	7.3	79	1.2
DEC 19...	0800	.15	565	7.5	13.5	0	.00	8.6	85	.6
FEB 27...	1100	89	471	8.0	12.5	0	8.0	10.5	102	.1
MAR 20...	0930	610	225	7.6	18.5	40	950	10.2	112	4.4
APR 24...	0915	256	458	8.1	21.0	0	2.0	9.6	110	.6
JUN 13...	1205	16	369	7.9	25.0	3	.60	8.2	101	.4
SEP 11...	0837	.48	439	7.8	22.5	10	66	7.7	89	.4

DATE	COLIFORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLIFORM, FECA, UM-MF (COLS. / 100 ML)	STREPTOCOCCI, FECAL, KF AGAR (COLS. PER 100 ML)	HARDNESS (MG/L AS CaCO3)	HARDNESS, NONCARBONATE (MG/L AS CaCO3)	CALCIUM, DIS-SOLVED (MG/L AS Ca)	MAGNESIUM, DIS-SOLVED (MG/L AS Mg)	SODIUM, DIS-SOLVED (MG/L AS Na)	SODIUM ADSORPTION RATIO
NOV 06...	25000	3100	6500	160	17	55	6.6	4.2	.1
DEC 19...	1700	2	940	230	26	79	8.2	15	.4
FEB 27...	460	300	150	250	37	77	14	5.9	.2
MAR 20...	32000	30000	80000	99	1	31	5.3	2.7	.1
APR 24...	370	25	740	--	--	--	--	--	--
JUN 13...	320	20	290	170	15	42	16	8.6	.3
SEP 11...	1800	300	720	--	--	--	--	--	--

DATE	POTASSIUM, DIS-SOLVED (MG/L AS K)	BICARBONATE (MG/L AS HCO3)	CARBONATE (MG/L AS CO3)	SULFATE, DIS-SOLVED (MG/L AS SO4)	CHLORIDE, DIS-SOLVED (MG/L AS CL)	FLUORIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS-PENDED (MG/L)
NOV 06...	2.3	180	0	23	8.5	.1	.2	189	38
DEC 19...	4.0	250	0	44	22	.2	8.2	304	2
FEB 27...	1.1	260	0	20	16	.2	7.9	270	9
MAR 20...	1.9	120	0	9.0	4.4	.2	8.4	122	1290
APR 24...	--	--	--	--	--	--	--	--	2
JUN 13...	1.0	190	0	25	11	.2	8.2	206	0
SEP 11...	--	--	--	--	--	--	--	--	77

DATE	SOLIDS, VOLATILE, SUS-PENDED (MG/L)	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
NOV 06...	3	.30	.25	.55	.01	.79	.80	.04	4.4
DEC 19...	2	1.5	.01	1.5	.01	.37	.38	.01	1.7
FEB 27...	1	.34	.00	.34	.01	.09	.10	.01	2.7
MAR 20...	172	.24	.02	.26	.08	2.1	2.2	.15	23
APR 24...	0	.18	.00	.18	.01	.10	.11	.01	2.7
JUN 13...	0	.02	.00	.02	.01	.33	.34	.01	4.2
SEP 11...	33	.38	.08	.46	.07	.55	.62	.04	2.3

COLORADO RIVER BASIN
08158800 ONION CREEK AT BUDA, TX

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)
NOV 06...	0945	1	20	<1	0	0	<0
FEB 27...	1100	1	0	0	0	0	10
MAR 20...	0930	0	10	<1	0	1	40
JUN 13...	1205	1	20	<1	0	0	10

DATE	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, DIS- SOLVED (UG/L AS ZN)
NOV 06...	0	2	.0	1	0	<3
FEB 27...	0	0	.0	1	0	10
MAR 20...	0	<1	.0	0	0	<3
JUN 13...	0	<1	.0	0	0	<3

DATE	TIME	PCB, TOTAL (UG/L)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLOR- DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI- AZINON, TOTAL (UG/L)	DI- ELDRIN TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)
NOV 06...	0945	.0	.00	.00	.0	.00	.00	.00	.00	.00	.00	.00
FEB 27...	1100	.0	--	.00	.0	.00	.00	.00	.00	.00	.00	.00
MAR 20...	0930	.0	--	.00	.0	.00	.00	.00	.00	.00	.00	.00
JUN 13...	1205	.0	--	.00	.0	.00	.00	.00	.00	.00	.00	.00

DATE	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	MALA- THION, TOTAL (UG/L)	METHYL PARA- THION, TOTAL (UG/L)	METHYL TRI- THION, TOTAL (UG/L)	PARA- THION, TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOTAL TRI- THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
NOV 06...	.00	.00	.00	.00	.00	.00	.00	0	.00	.00	.00	.00
FEB 27...	.00	.00	.00	.00	.00	.00	.00	0	.00	.00	.00	.00
MAR 20...	.00	.00	.00	.00	.00	.00	.00	0	.00	.00	.00	.00
JUN 13...	.00	.00	.00	.00	.00	.00	.00	0	.00	.00	.00	.00

BEAR CREEK DRAINAGE BASIN

The locations of data-collection sites in the Bear Creek drainage basin are shown on figure 15.

The peak discharges associated with water-quality samples collected during storms for the Bear Creek below Farm Road 1826 and Little Bear Creek at Farm Road 1626 sites are shown in table 3.

Daily and monthly rainfall totals for the 1979 water year are given in table 14.



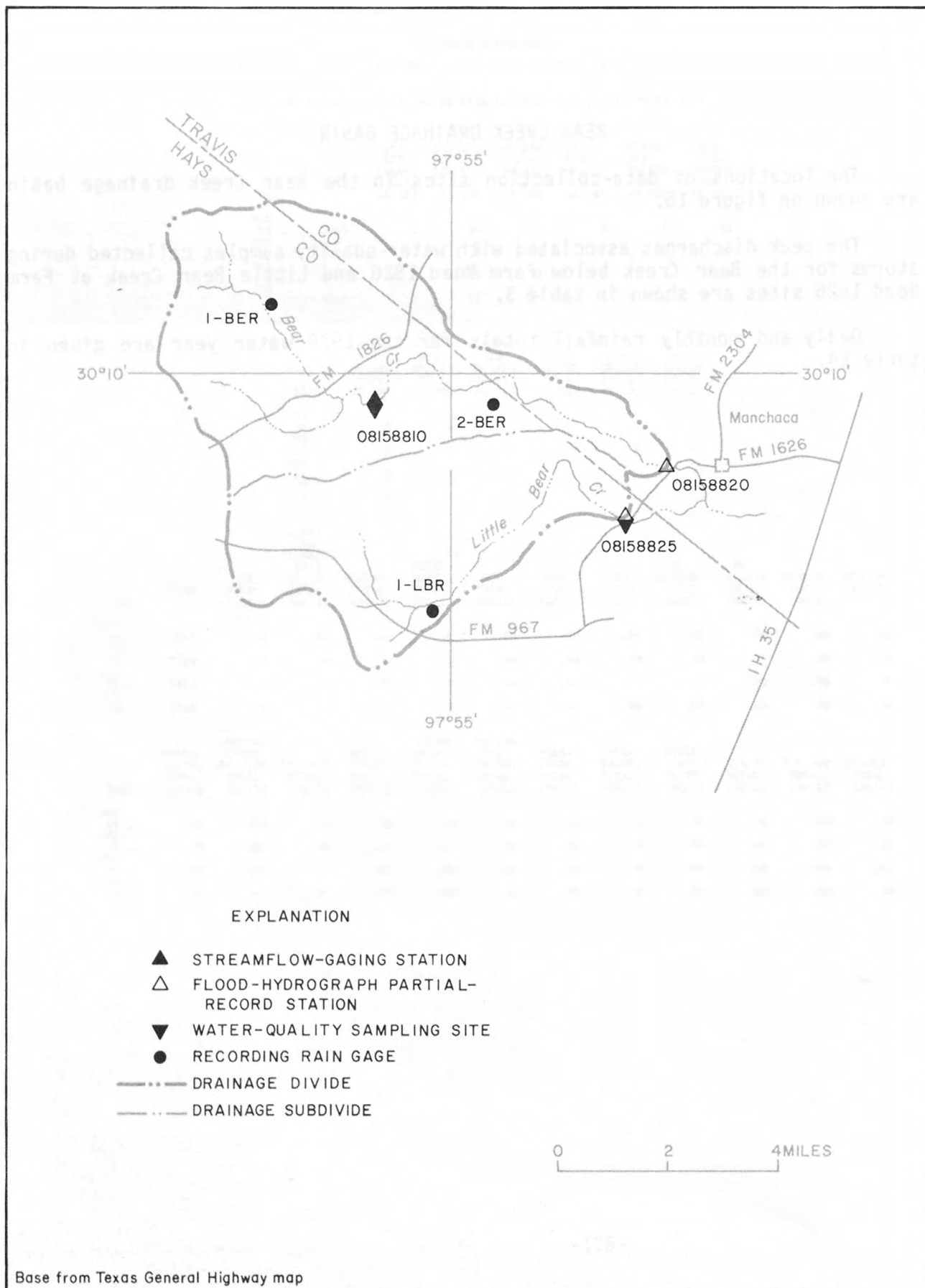


Figure 15.- Locations of surface-water data-collection sites in the Bear Creek drainage basin

COLORADO RIVER BASIN

08158810 BEAR CREEK BELOW FARM ROAD 1826 NEAR DRIFTWOOD, TX

LOCATION.--Lat 30°09'19", long 97°56'23", Hays County, Hydrologic Unit 12090205, 0.8 mi (1.3 km) southeast of Farm Road 1826 and 5.9 mi (9.5 km) northeast of Driftwood.

DRAINAGE AREA.--12.2 mi² (31.6 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1978 to July 1979 (periodic discharge measurements only), October 1978 to June 1979 (peak discharges above base only), July to September 1979.

GAGE.--Water-stage recorder. Altitude of gage is 860 ft (262.1 m), from topographic map.

REMARKS.--Water-discharge records good. Station is part of a hydrologic research project to study rainfall-runoff relation for the Austin urban-rural areas. There is a digital recording rain gage in the watershed above station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge 3,050 ft³/s (86.4 m³/s) Apr. 18, 1979, gage height, 9.24 ft (2.816 m) from floodmarks, from slope-area measurements of peak flow; minimum discharge unknown.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 9, 1939 reached a stage of 16.2 ft (4.938 m), discharge unknown, and was the highest since at least 1924, from information by local resident. A flood in 1915 was 2 ft (0.6 m) higher than the 1939 flood; from information by local residents.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 500 ft³/s (14.2 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Feb. 23	unknown	1,110 31.4	a6.57 2.003	Apr. 18	unknown	*3,050 86.4	a9.24 2.816
Mar. 20	unknown	1,040 29.5	a6.44 1.963	July 27	0930	1,800 51.0	7.60 2.316
Mar. 21	unknown	770 21.8	a5.9 1.80				

a From floodmark.

Minimum daily discharge, 0.70 ft³/s (0.020 m³/s) Sept. 25, 28-30.

DISCHARGE, IN CUBIC FEET PER SECOND, JULY TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1										---	7.5	1.4
2										---	7.2	1.3
3										---	6.6	1.3
4										---	5.7	1.3
5										---	5.2	2.9
6										---	4.6	1.9
7										2.6	4.3	1.6
8										2.5	4.1	1.4
9										2.4	4.1	1.3
10										2.3	3.6	1.2
11										2.2	7.2	1.2
12										2.1	5.2	1.2
13										2.0	4.3	1.0
14										1.9	4.9	1.0
15										1.9	4.1	.91
16										1.7	3.6	.91
17										1.6	3.6	.91
18										1.7	3.1	1.9
19										1.7	2.5	1.4
20										1.7	2.3	1.2
21										1.7	2.3	1.0
22										1.7	2.1	.91
23										1.6	1.9	.80
24										1.6	1.6	.80
25										1.6	1.9	.70
26										1.4	1.4	.91
27										156	1.3	.80
28										14	1.2	.70
29										10	1.2	.70
30										9.3	1.3	.70
31										8.7	1.4	---
TOTAL										---	111.3	35.25
MEAN										---	3.59	1.18
MAX										---	7.5	2.9
MIN										---	1.2	.70
AC-FT										---	221	.70
(††)										5.88	2.00	3.34

WTR YR 1979 TOTAL - MEAN - MAX - MIN - AC-FT - †† -

†† Rainfall, in inches, based on one rain gage.

COLORADO RIVER BASIN

08158810 BEAR CREEK BELOW FARM ROAD 1826 NEAR DRIFTWOOD, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical, biochemical, and pesticide analyses: March 1978 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM- COBALT UNITS)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)
NOV 06...	1310	1.3	472	7.8	18.0	5	3.0	8.8	96	.5
DEC 18...	1300	3.3	532	7.6	13.0	0	1.0	10.7	105	.1
JAN 12...	1415	30	516	7.4	11.0	5	6.0	10.4	97	.4
FEB 23...	1215	409	272	7.8	15.0	30	500	9.2	94	5.2
MAR 21...	1325	74	362	7.8	17.5	30	45	9.2	99	1.6
APR 25...	1145	30	523	8.0	21.5	5	2.0	9.0	105	.5
JUN 12...	1425	11	500	7.6	25.0	5	.50	9.2	114	.3
SEP 11...	1105	1.2	474	7.9	24.0	10	.80	8.2	96	.0

DATE	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCEI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO
NOV 06...	10000	500	1300	230	33	64	17	9.0	.3
DEC 18...	2200	6	32	280	47	81	18	8.1	.2
JAN 12...	2500	520	1000	260	28	80	14	6.3	.2
FEB 23...	--	--	--	130	19	40	6.2	3.7	.1
MAR 21...	8000	3900	28000	160	1	50	9.7	4.6	.2
APR 25...	1600	58	820	290	37	92	15	7.8	.2
JUN 12...	180	22	80	--	--	--	--	--	--
SEP 11...	420	330	18	--	--	--	--	--	--

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEC. C, SUS- PENDED (MG/L)
NOV 06...	1.7	240	0	27	17	.2	8.8	263	4
DEC 18...	1.0	280	0	30	18	.2	8.0	302	1
JAN 12...	1.4	280	0	22	13	.1	8.6	284	6
FEB 23...	2.1	130	0	13	8.9	.1	6.8	145	898
MAR 21...	1.9	200	0	12	8.2	.2	9.7	195	66
APR 25...	.9	310	0	19	15	.2	7.3	310	1
JUN 12...	--	--	--	--	--	--	--	--	0
SEP 11...	--	--	--	--	--	--	--	--	1

COLORADO RIVER BASIN

08158810 BEAR CREEK BELOW FARM ROAD 1826 NEAR DRIFTWOOD, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	SOLIDS, VOLATILE, SUSPENDED (MG/L)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
NOV 06...	0	.03	.01	.04	.01	.89	.90	.01	2.5
DEC 18...	1	.31	.01	.32	.05	.39	.44	.04	1.5
JAN 12...	1	1.3	.02	1.3	.00	.13	.13	.01	--
FEB 23...	160	.32	.02	.34	.06	2.6	2.7	.09	60
MAR 21...	5	.19	.02	.21	.01	.54	.55	.01	6.9
APR 25...	0	.45	.00	.45	.02	.14	.16	.02	1.9
JUN 12...	0	.15	.00	.15	.01	.28	.29	.01	3.3
SEP 11...	1	.00	.02	.01	.18	.18	.36	.00	2.7

DATE	TIME	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)
NOV 06...	1310	1	30	<1	0	0	10
JAN 12...	1415	1	20	<1	10	2	10
FEB 23...	1215	1	0	0	0	0	50
APR 25...	1145	0	0	0	0	0	10

DATE	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, DIS- SOLVED (UG/L AS ZN)
NOV 06...	0	2	.0	0	0	<3
JAN 12...	1	<1	.0	1	0	4
FEB 23...	0	0	.0	1	0	10
APR 25...	0	0	.0	1	0	20

COLORADO RIVER BASIN

08158810 BEAR CREEK BELOW FARM ROAD 1826 NEAR DRIFTWOOD, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	PCB, TOTAL (UG/L)	NAPH- THA- LENES, POLY- CHLOR, TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLOR- DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI- AZINON, TOTAL (UG/L)
NOV 06...	1310	.0	.00	.00	.0	.00	.00	.00	.03
JAN 12...	1415	.0	--	.00	.0	.00	.00	.00	.00
FEB 23...	1215	.0	--	.00	.0	.00	.00	.00	.00
APR 25...	1145	.0	.00	.00	.0	.00	.00	.00	.00

DATE	DI- ELDRIN TOTAL (UG/L)	ENDO- SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	MALA- THION, TOTAL (UG/L)	METHYL PARA- THION, TOTAL (UG/L)
NOV 06...	.00	.00	.00	.00	.00	.00	.00	.00	.00
JAN 12...	.00	.00	.00	.00	.00	.00	.00	.00	.00
FEB 23...	.00	.00	.00	.00	.00	.00	.00	.00	.00
APR 25...	.00	.00	.00	.00	.00	.00	.00	.00	.00

DATE	METHYL TRI- THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	PARA- THION, TOTAL (UG/L)	TOX- THION, APHENE, TOTAL (UG/L)	TOTAL TRI- THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
NOV 06...	.00	.00	.00	0	.00	.00	.00	.00
JAN 12...	.00	.00	.00	0	.00	.00	.00	.00
FEB 23...	.00	.00	.00	0	.00	.00	.00	.00
APR 25...	.00	.00	.00	0	.00	.00	.00	.00

08158820 BEAR CREEK AT FARM ROAD 1626 NEAR MANCHACA, TX
(Flood-hydrograph partial-record station)

LOCATION.--Lat 30°08'25", long 97°50'50", Travis County, at culvert on Farm Road 1626, 1 mile west of Manchaca, Texas.

DRAINAGE AREA.--24.0 mi².

PERIOD OF RECORD.--July to September 1979.

GAGE.--Digital water-stage recorder and crest-stage gage. Datum of gage is 643.63 ft NGVD.

REMARKS.--Records fair. Because of insufficient data, no storms were analyzed for this station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,900 ft³/s July 27, 1979 (gage height, 6.57 ft).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,900 ft³/s July 27 (gage height, 6.57 ft).

COLORADO RIVER BASIN

08158825 LITTLE BEAR CREEK AT FARM ROAD 1626 NEAR MANCHACA, TX
(Flood-hydrograph partial-record station)

LOCATION.--Lat 30°07'31", long 97°51'43", Hays County, Hydrologic Unit 12090205, at downstream side of culvert on Farm Road 1626 and 2.1 mi (3.4 km) southwest of Manchaca.

DRAINAGE AREA.--21.0 mi² (54.4 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July to September 1979.

GAGE.--Flood-hydrograph recorder and crest-stage gage. Datum of gage is 668.67 ft (203.811 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Additional storm rainfall-runoff data for this site can be obtained from the report "Hydrologic Data for Urban Studies in the Austin, Texas Metropolitan Area, 1979."

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 640 ft³/s (18.1 m³/s) July 27, 1979, gage height, 6.76 ft (2.060 m), from rating curve extended above 150 ft³/s (4.25 m³/s) on basis of culvert flow computation at gage height 7.23 ft (2.204 m).

EXTREMES FOR CURRENT YEAR.--Maximum discharge during period July to September, 640 ft³/s (18.1 m³/s) July 27, gage height, 6.76 ft (2.060 m), from rating curve extended as explained above.

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical, biochemical, and pesticide analyses: October 1978 to September 1979.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM- COBALT UNITS)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)
NOV 06...	0900	.11	409	7.7	17.0	50	190	8.0	85	3.4
JAN 11...	1645	11	175	7.7	5.0	170	120	--	--	2.8
FEB 07...	1124	.92	560	7.6	7.5	26	15	9.2	79	.7
MAR 21...	1045	120	143	7.8	15.0	100	65	9.3	95	3.6
APR 24...	0845	.22	523	7.4	20.0	30	20	8.0	91	1.9

DATE	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO
NOV 06...	51000	24000	26000	190	110	74	1.6	3.2	.1
JAN 11...	66000	5100	30000	80	9	28	2.4	1.5	.1
FEB 07...	25000	240	2300	280	88	110	2.4	5.0	.1
MAR 21...	33000	14000	110000	67	1	23	2.2	1.5	.1
APR 24...	1600	400	3000	--	--	--	--	--	--

COLORADO RIVER BASIN

08158825 LITTLE BEAR CREEK AT FARM ROAD 1626 NEAR MANCHACA, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, DIS- SUS- PENDED (MG/L)
NOV 06...	4.4	100	0	110	4.5	.2	10	257	254
JAN 11...	3.3	86	0	8.5	3.6	.1	11	101	114
FEB 07...	2.7	240	0	86	8.6	.2	12	345	16
MAR 21...	2.8	80	0	5.7	2.6	.1	13	90	126
APR 24...	--	--	--	--	--	--	--	--	19

DATE	SOLIDS, VOLA- TILE, SUS- PENDED (MG/L)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
NOV 06...	24	.77	.01	.78	.01	.74	.75	.25	10
JAN 11...	16	.44	.02	.46	.02	.66	.68	.11	--
FEB 07...	1	1.2	.02	1.2	.03	.37	.40	.05	4.6
MAR 21...	6	.10	.02	.12	.03	.92	.95	.04	10
APR 24...	2	.45	.02	.47	.03	.48	.51	.05	32

DATE	TIME	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)
NOV 06...	0900	1	20	<1	0	1	40
JAN 11...	1645	1	10	2	10	2	70

DATE	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, DIS- SOLVED (UG/L AS ZN)
NOV 06...	0	3	.0	2	0	<3
JAN 11...	0	4	.0	0	0	<3

DATE	TIME	PCB, TOTAL (UG/L)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLOR- DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI- AZINON, TOTAL (UG/L)
NOV 06...	0900	.0	.00	.00	.0	.00	.00	.00	.16
JAN 11...	1645	.0	--	.00	.0	.00	.00	.00	.00

DATE	DI- ELDRIN TOTAL (UG/L)	ENDO- SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	MALA- THION, TOTAL (UG/L)	METHYL PARA- THION, TOTAL (UG/L)
NOV 06...	.00	.00	.00	.00	.00	.00	.00	.00	.00
JAN 11...	.00	.00	.00	.00	.00	.00	.00	.00	.00

DATE	METHYL TRI- THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	PARA- THION, TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOTAL TRI- THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
NOV 06...	.00	.00	.00	0	.00	.00	.00	.00
JAN 11...	.00	.00	.00	0	.00	.00	.00	.00

SLAUGHTER CREEK DRAINAGE BASIN

The locations of data-collection sites in the Slaughter Creek drainage basin are shown on figure 16.

A summary of storm rainfall and runoff for the basin is shown in table 11.

The peak discharges associated with water-quality samples collected during storms at the Slaughter Creek at Farm Road 2304 site are shown in table 3.

Daily and monthly rainfall totals for the 1979 water year are given in table 14.

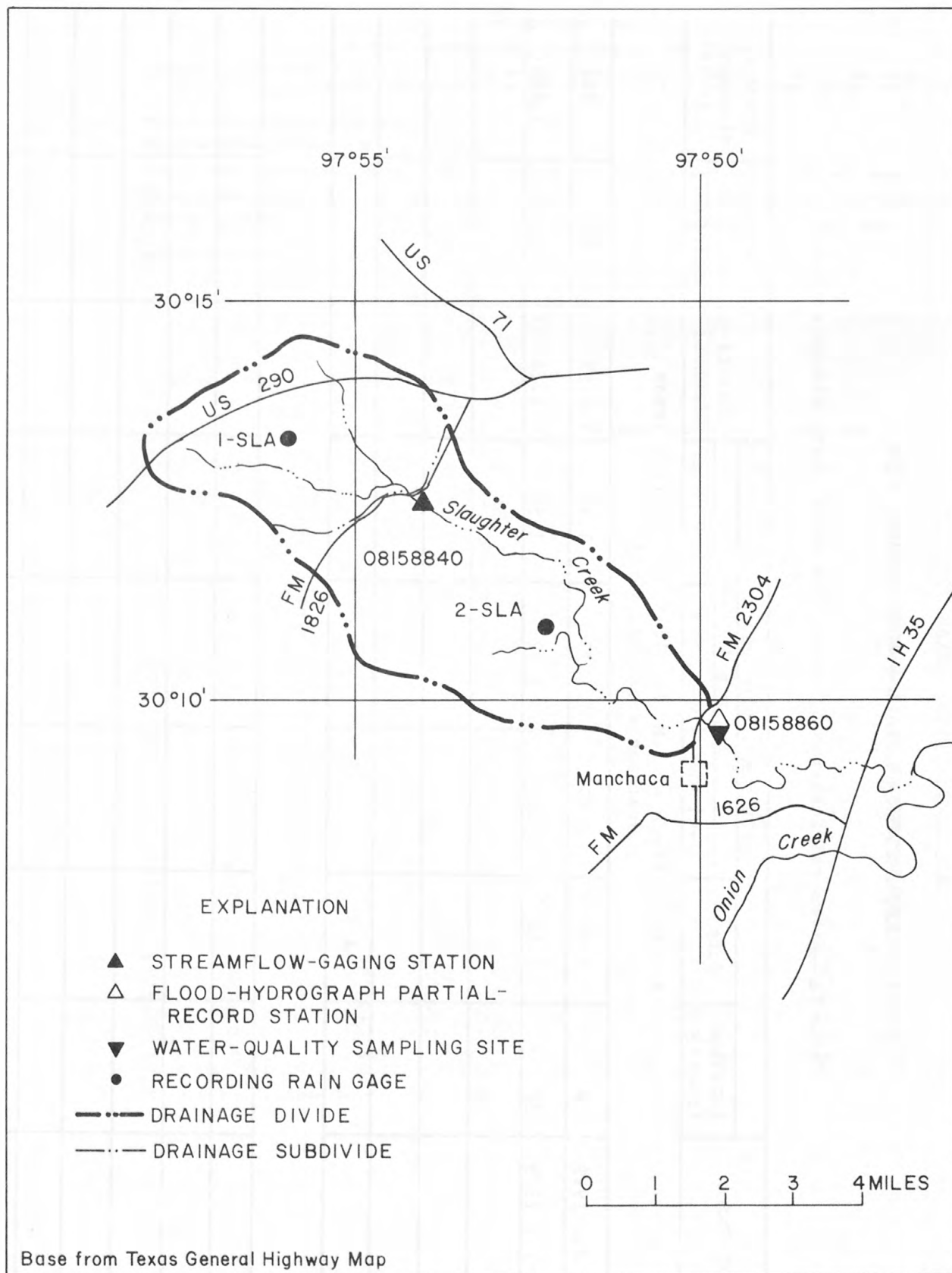


Figure 16.-Locations of surface-water data-collection sites in the Slaughter Creek drainage basin

TX-35
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UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY-TEXAS DISTRICT

ANNUAL STORM RAINFALL-RUNOFF SUMMARY DATA

Table 11--Storm rainfall-runoff data, 1979 water year, Slaughter Creek

[illegible]

Slaughter Creek at F.M. Rd. 1826 near Austin, Texas
(Drainage area.--8.24 mi²)

February 23, 1979	9	1.68	0.87	1.32	1.58	0.51	0.31	888
April 18-19, 1979	37	2.18	.67	1.02	1.53	1.18	.54	1,830

[illegible]

COLORADO RIVER BASIN

08158840 SLAUGHTER CREEK AT FARM ROAD 1826 NEAR AUSTIN, TX

LOCATION.--Lat 30°12'32", long 97°54'11", Travis County, Hydrologic Unit 12090205, 1.7 mi (2.7 km) south of the intersection of U.S. Highway 290 and Farm Road 1826 and 11.9 mi (19.1 km) southwest of the State Capitol Building in Austin.

DRAINAGE AREA.--8.24 mi² (21.3 km²).

PERIOD OF RECORD.--January 1978 to current year.

GAGE.--Water-stage recorder. Datum of gage is 876.14 ft (267.047 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair. No known regulation or diversion. There is a recording rain gage in the watershed.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,500 ft³/s (70.8 m³/s) May 21, 1979, gage height, 9.00 ft (2.743 m); no flow at times each year.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 500 ft³/s (14.22 m³/s) and maximum (*).

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Feb. 23	1100	888 25.1	6.79 2.070
Apr. 18	2015	1,830 51.8	8.25 2.515
May 21	2315	*2,500 70.8	9.00 2.743

Minimum discharge, no flow Oct. 15 to Nov. 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979 MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.27	.00	3.1	28	4.8	7.9	28	53	68	2.0	3.7	.52
2	.27	.00	3.1	12	4.4	7.3	26	33	41	1.8	3.1	.52
3	.27	.00	3.7	11	5.0	7.9	24	29	27	1.5	2.8	.52
4	.27	.00	3.2	11	13	6.2	19	22	23	1.5	2.6	.52
5	.27	1.5	3.1	12	48	5.7	16	18	28	1.6	2.3	.59
6	.21	1.6	3.1	14	91	5.6	13	15	22	4.7	2.0	.52
7	.21	.44	2.9	13	37	5.2	13	13	17	2.2	1.9	.52
8	.21	.38	2.7	10	26	4.8	14	11	15	1.9	1.8	.46
9	.21	.38	2.4	9.8	18	4.7	11	11	13	1.8	1.8	.38
10	.21	.38	2.4	69	16	4.1	11	10	10	1.9	1.8	.38
11	.21	.38	2.4	101	14	4.1	9.7	11	9.4	2.1	6.1	.38
12	.20	.46	2.4	42	12	4.1	8.1	9.4	8.3	1.4	2.9	.38
13	.16	.46	2.4	26	10	3.7	7.2	8.2	7.7	1.3	2.3	.34
14	.08	.46	2.4	17	9.7	3.5	6.7	7.2	7.1	1.1	1.9	.30
15	.00	.77	2.4	16	8.7	3.6	6.5	6.7	6.6	1.1	1.8	.30
16	.00	1.1	2.4	15	6.8	5.2	6.2	6.6	6.1	1.0	1.8	.30
17	.00	1.2	2.0	13	6.7	5.7	7.2	6.2	5.3	1.0	1.5	.27
18	.00	1.2	2.1	13	6.2	5.6	161	6.1	5.2	1.1	1.4	.44
19	.00	1.6	2.2	12	5.7	8.2	68	5.7	4.8	1.1	1.2	.44
20	.00	1.8	2.2	11	5.7	13	39	5.6	4.4	11	1.1	.42
21	.00	2.5	2.0	9.2	5.3	88	98	250	4.1	2.6	1.0	.38
22	.00	2.8	2.0	8.4	5.3	66	45	196	4.0	1.4	.98	.34
23	.00	2.9	2.0	7.8	90	33	30	43	3.7	1.3	1.0	.34
24	.00	2.9	2.0	6.8	22	23	23	27	3.4	1.1	.89	.34
25	.00	3.1	2.0	7.1	15	18	18	19	3.1	1.1	.82	.30
26	.00	3.3	1.9	7.8	13	15	15	16	2.9	1.1	.82	.30
27	.00	3.4	1.8	7.0	11	13	13	14	2.9	83	.72	.30
28	.00	3.4	1.8	6.3	9.6	12	11	13	2.8	13	.66	.30
29	.00	3.4	1.8	6.2	---	12	45	11	2.5	7.0	.66	.29
30	.00	3.2	1.8	6.2	---	20	20	16	2.0	5.5	.66	.29
31	.00	---	46	5.5	---	21	---	14	---	4.4	.59	---
TOTAL	3.05	45.01	117.7	534.1	519.9	437.1	812.6	906.7	360.3	164.6	54.60	11.68
MEAN	.098	1.50	3.80	17.2	18.6	14.1	27.1	29.2	12.0	5.31	1.76	.39
MAX	.27	3.4	46	101	91	88	161	250	68	83	6.1	.59
MIN	.00	.00	1.8	5.5	4.4	3.5	6.2	5.6	2.0	1.0	.59	.27
CFSM	.01	.18	.46	2.09	2.26	1.71	3.29	3.54	1.46	.64	.21	.05
IN.	.01	.20	.53	2.41	2.35	1.97	3.67	4.09	1.63	.74	.25	.05
AC-FT	6.0	89	233	1060	1030	867	1610	1800	715	326	108	23
(11)	.42	6.21	2.88	4.15	4.17	4.81	6.79	3.56	.43	7.04	2.15	2.48

CAL YR 1978	TOTAL	-	MEAN	-	MAX	-	MIN	-	CFSM	-	IN	-	AC-FT	-	††	-
WTR YR 1979	TOTAL	3967.34	MEAN	10.9	MAX	250	MIN	.00	CFSM	1.32	IN	17.91	AC-FT	7870	††	45.09

†† Rainfall, in inches, based on one rain gage.

SIA. NO.08158R40		STORM RAINFALL AND RUNOFF RECORD						1979 WATER YEAR		
SLAUGHTER CREEK AT F.M. ROAD 1826 NEAR AUSTIN, TEXAS		STORM OF FEBRUARY 23, 1979						ACCUM.	DISCHARGE	ACCUM.
DATE & TIME		G A G E N U M B E R						WEIGHTED PRECIP.	IN	RUNOFF
								IN.	CFS	IN.
FER. 23										
0000	0.0							0.0	5.3	0.0026
0515	0.01							0.01	5.3	0.0072
0915	0.05							0.05	5.3	0.0093
0930	0.06							0.06	5.3	0.0095
0935	0.12							0.12	5.9	0.0096
0940	0.24							0.24	6.6	0.0097
0945	0.37							0.37	7.2	0.0098
0950	0.53							0.53	17.0	0.0101
0955	0.71							0.71	26.0	0.0105
1000	1.17							1.17	36.0	0.0111
1005	1.40							1.40	70.0	0.0122
1010	1.56							1.56	104.0	0.0138
1015	1.63							1.63	138.0	0.0181
1030	1.64							1.64	514.0	0.0423
1045	1.64							1.64	883.0	0.0838
1100	1.65							1.65	888.0	0.1255
1115	1.65							1.65	855.0	0.1657
1130	1.65							1.65	660.0	0.1968
1145	1.65							1.65	479.0	0.2193
1200	1.65							1.65	389.0	0.2467
1230	1.66							1.66	246.0	0.2698
1300	1.66							1.66	149.0	0.2909
1400	1.67							1.67	138.0	0.3168
1500	1.68							1.68	99.0	0.3354
1600	1.68							1.68	73.0	0.3492
1700	1.68							1.68	59.0	0.3603
1800	1.68							1.68	50.0	0.3744
2000	1.68							1.68	40.0	0.3894
2200	1.68							1.68	33.0	0.4018
2400	1.68							1.68	31.0	0.4193
FER. 24										
0000	1.68							1.68	31.0	0.4193
0800	1.68							1.68	25.0	0.4686
1600	1.68							1.68	22.0	0.5017
2400	1.68							1.68	17.0	0.5145

SIA. NO.08158840							STORM RAINFALL AND RUNOFF RECORD			1979 WATER YEAR		
SLAUGHTER CREEK AT F.M. ROAD 1826 NEAR AUSTIN, TEXAS							STORM OF APRIL 18-19, 1979			ACCUM.	DISCHARGE	ACCUM.
DATE & TIME							G A G E N U M B E R			WEIGHTED	IN	RUNOFF
										PRECIP.		
										IN.	CFS	IN.
APR. 18												
0000	0.0									0.0	8.4	0.0043
0530	0.06									0.06	8.4	0.0091
0600	0.10									0.10	8.4	0.0190
1800	0.11									0.11	7.2	0.0272
1815	0.11									0.11	7.2	0.0276
1830	0.15									0.15	11.0	0.0281
1845	0.40									0.40	66.0	0.0302
1850	0.42									0.42	100.0	0.0317
1855	0.45									0.45	133.0	0.0338
1900	0.56									0.56	167.0	0.0364
1905	0.63									0.63	359.0	0.0421
1910	0.73									0.73	552.0	0.0507
1915	0.87									0.87	744.0	0.0624
1920	1.02									1.02	818.0	0.0752
1925	1.25									1.25	891.0	0.0892
1930	1.54									1.54	965.0	0.1043
1935	1.65									1.65	1140.0	0.1221
1940	1.74									1.74	1310.0	0.1427
1945	1.89									1.89	1480.0	0.1659
1950	1.95									1.95	1570.0	0.2028
2000	1.97									1.97	1760.0	0.2717
2015	2.03									2.03	1830.0	0.3578
2030	2.06									2.06	1700.0	0.4377
2045	2.06									2.06	1370.0	0.5021
2100	2.07									2.07	1030.0	0.5505
2115	2.07									2.07	831.0	0.5896
2130	2.07									2.07	664.0	0.6208
2145	2.07									2.07	510.0	0.6568
2215	2.07									2.07	298.0	0.6848
2245	2.07									2.07	205.0	0.6993
2300	2.07									2.07	139.0	0.7091
2330	2.07									2.07	121.0	0.7204
2400	2.07									2.07	139.0	0.7400
APR. 19												
0000	2.07									2.07	139.0	0.7400
0200	2.07									2.07	104.0	0.7922
0400	2.07									2.07	86.0	0.8407
0800	2.07									2.07	66.0	0.8904
1200	2.08									2.08	59.0	0.9459
1800	2.15									2.15	53.0	1.0057

STA. NO.08158840		STORM RAINFALL AND RUNOFF RECORD						1979 WATER YEAR		
SLAUGHTER CREEK AT F.M. ROAD 1826 NEAR AUSTIN, TEXAS						STORM OF APRIL 18-19, 1979		ACCUM. WEIGHTED	DISCHARGE IN	ACCUM. RUNOFF
DATE & TIME	G A G E N U M B E R						PRECIP. IN.		CFS	IN.
	1SLA									
APR. 19										
2400	2.15						2.15		45.0	1.0480
APR. 20										
0000	2.15						2.15		45.0	1.0480
0800	2.15						2.15		42.0	1.1281
1600	2.18						2.18		35.0	1.1807

COLORADO RIVER BASIN

08158860 SLAUGHTER CREEK AT FARM ROAD 2304 NEAR AUSTIN, TX
(Flood-hydrograph partial-record station)

LOCATION.--Lat 30°09'43", long 97°49'55", Travis County, Hydrologic Unit 12090205, at downstream side of bridge on Farm Road 2304 and 9.4 mi (15.1 km) southwest of the State Capitol Building in Austin.

DRAINAGE AREA.--23.1 mi² (59.8 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1978 to current year.

GAGE.--Flood-hydrograph recorder and crest-stage gage. Datum of gage is 654.80 ft (199.583 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Additional storm rainfall-runoff data for this site can be obtained from the report "Hydrologic Data for Urban Studies in the Austin, Texas Metropolitan Area, 1979."

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,000 ft³/s (85.0 m³/s) May 22, 1979, gage height, 10.20 ft (3.109 m), from rating curve extended above 100 ft³/s (2.83 m³/s) on basis of computation of flow over dam at gage height 9.64 ft (2.938 m).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,000 ft³/s (85.0 m³/s) May 22, gage height, 10.20 ft (3.109 m), from rating curve extended as explained above.

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical, biochemical, and pesticide analyses: October 1978 to September 1979.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM- COBALT UNITS)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)
DEC 18...	0815	.00	--	--	--	--	--	--	--	--
DEC 18...	0825	.00	--	--	--	--	--	--	--	--
JAN 11...	1445	53	403	8.0	5.0	30	55	12.4	100	1.8
JAN 12...	1330	21	544	8.0	7.0	20	15	11.4	97	.9
FEB 07...	1000	18	580	8.1	7.0	16	8.0	12.0	102	.6
MAR 21...	0845	230	327	7.7	15.5	40	100	9.3	96	3.1
APR 24...	0755	1.5	586	8.0	19.5	5	2.0	8.4	94	.6

DATE	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO
DEC 18...	--	--	--	--	--	--	--	--	--
DEC 18...	--	--	--	--	--	--	--	--	--
JAN 11...	80000	3200	22000	180	37	51	12	9.8	.3
JAN 12...	2500	1100	8000	250	55	71	18	14	.4
FEB 07...	8800	260	2100	270	57	77	19	11	.3
MAR 21...	48000	13000	78000	140	18	42	8.9	7.4	.3
APR 24...	2000	68	2000	--	--	--	--	--	--

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)
DEC 18...	--	--	--	--	--	--	--	--	--
DEC 18...	--	--	--	--	--	--	--	--	--
JAN 11...	2.4	170	0	28	21	.1	7.3	215	72
JAN 12...	2.1	240	0	38	31	.1	7.5	300	13
FEB 07...	1.4	260	0	44	31	.1	7.9	320	7
MAR 21...	2.2	150	0	19	15	.1	10	179	230
APR 24...	--	--	--	--	--	--	--	--	2

COLORADO RIVER BASIN

08158860 SLAUGHTER CREEK AT FARM ROAD 2304 NEAR AUSTIN, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	SOLIDS, VOLATILE, SUSPENDED (MG/L)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
DEC 18...	--	--	--	--	--	--	--	--	--
JAN 11...	9	.55	.02	.57	.00	.10	.10	.05	7.4
JAN 12...	2	.70	.02	.72	.00	.50	.50	.02	5.6
FEB 07...	2	.25	.02	.27	.02	.18	.20	.03	4.4
MAR 21...	22	.37	.04	.41	.07	.93	1.0	.10	14
APR 24...	0	.14	.02	.16	.02	.23	.25	.01	4.4

DATE	TIME	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)
JAN 11...	1445	1	20	1	10	0	30
JAN 12...	1330	0	30	2	0	0	10

DATE	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, DIS- SOLVED (UG/L AS ZN)
JAN 11...	0	1	.0	0	0	<3
JAN 12...	1	2	.0	0	0	<3

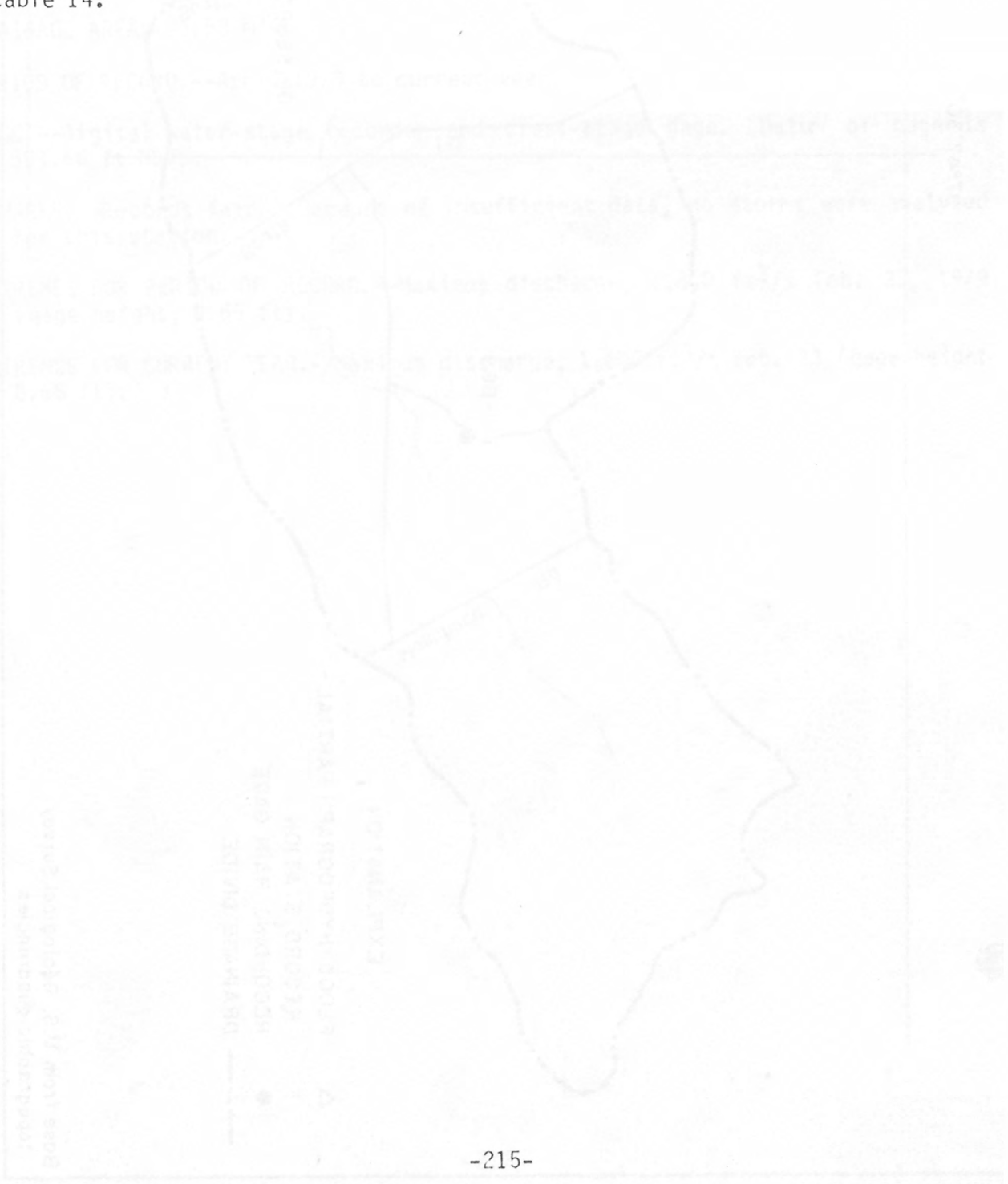
DATE	TIME	PCB, TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLOR- DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI- AZINON, TOTAL (UG/L)	DI- ELDRIN TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL (UG/L)
JAN 11...	1445	.0	.00	.0	.00	.00	.00	.00	.00	.00	.00	.00
JAN 12...	1330	.0	.00	.0	.00	.00	.00	.00	.00	.00	.00	.00

DATE	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	MALA- THION, TOTAL (UG/L)	METHYL PARA- THION, TOTAL (UG/L)	METHYL TRI- THION, TOTAL (UG/L)	PARA- THION, TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOTAL TRI- THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
JAN 11...	.00	.00	.00	.00	.00	.00	0	.00	.00	.00	.00
JAN 12...	.00	.00	.00	.00	.00	.00	0	.00	.00	.00	.00

BOGGY CREEK (SOUTH) DRAINAGE BASIN

The locations of data-collection sites in the Boggy Creek (south) drainage basin are shown on figure 17.

Daily and monthly rainfall totals for the 1979 water year are given in table 14.



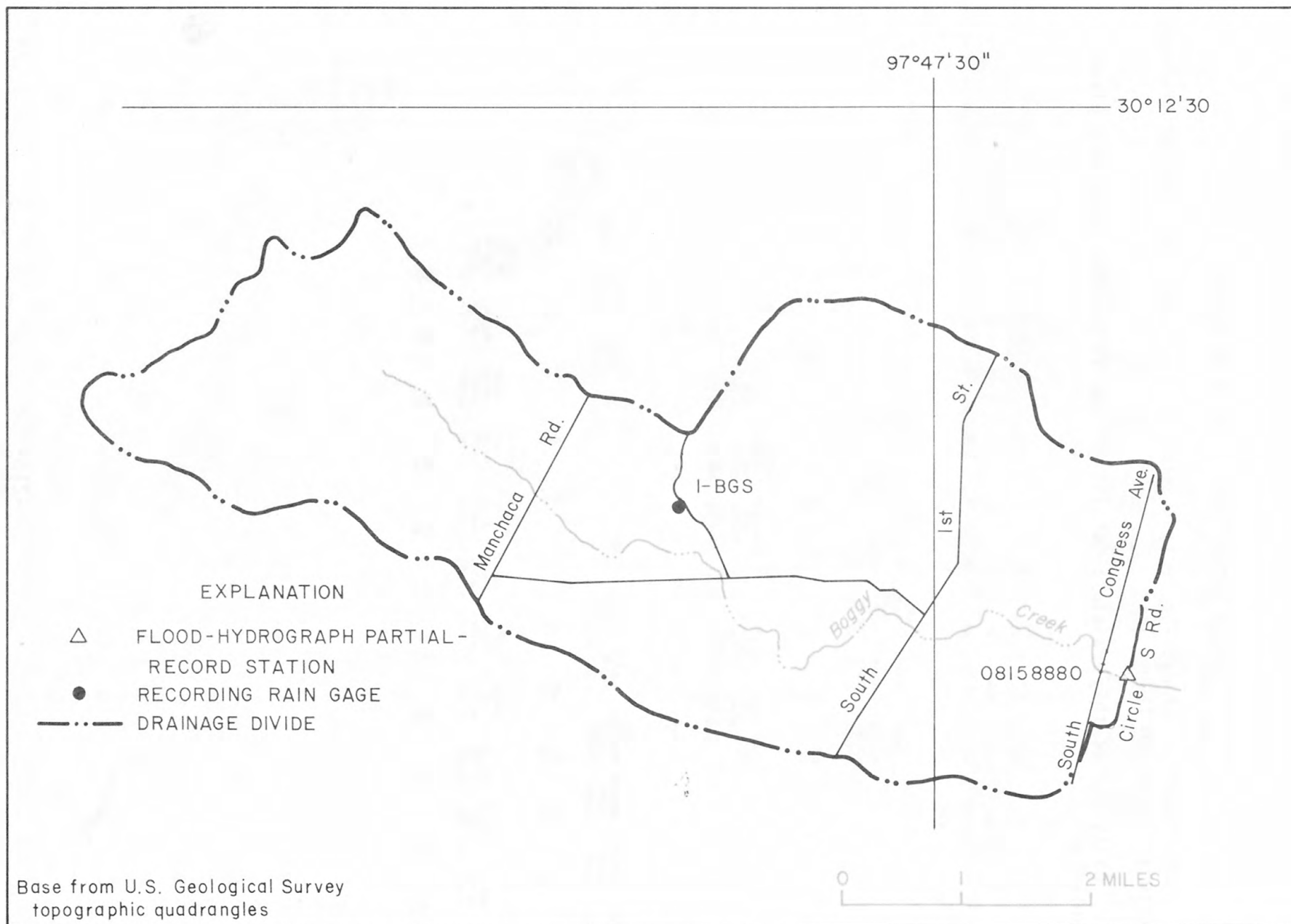


Figure 17.- Locations of surface-water data-collection sites in the Boggy Creek (south) drainage basin

08158880 BOGGY CREEK (SOUTH) AT CIRCLE S ROAD, AUSTIN, TEX.
(Flood-hydrograph partial-record station)

LOCATION.--Lat 30°10'50", long 97°46'55", Travis County, on downstream side of bridge on Circle S Road and 7.0 mi south of the State Capitol Building in Austin.

DRAINAGE AREA.--3.58 mi².

PERIOD OF RECORD.--April 1976 to current year.

GAGE.--Digital water-stage recorder and crest-stage gage. Datum of gage is 591.66 ft NGVD.

REMARKS.--Records fair. Because of insufficient data, no storms were analyzed for this station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,800 ft³/s Feb. 23, 1979 (gage height, 8.65 ft).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,800 ft³/s Feb. 23 (gage height 8.65 ft).

WILLIAMSON CREEK DRAINAGE BASIN

The locations of data-collection sites in the Williamson Creek drainage basin are shown in figure 18.

A summary of storm rainfall and runoff is shown in table 12.

The peak discharges associated with the water-quality samples collected during storms at the Williamson Creek at Oak Hill and Williamson Creek at Jimmy Clay Road sites are shown in table 3.

Daily and monthly rainfall totals for the 1979 water year are given in table 14.

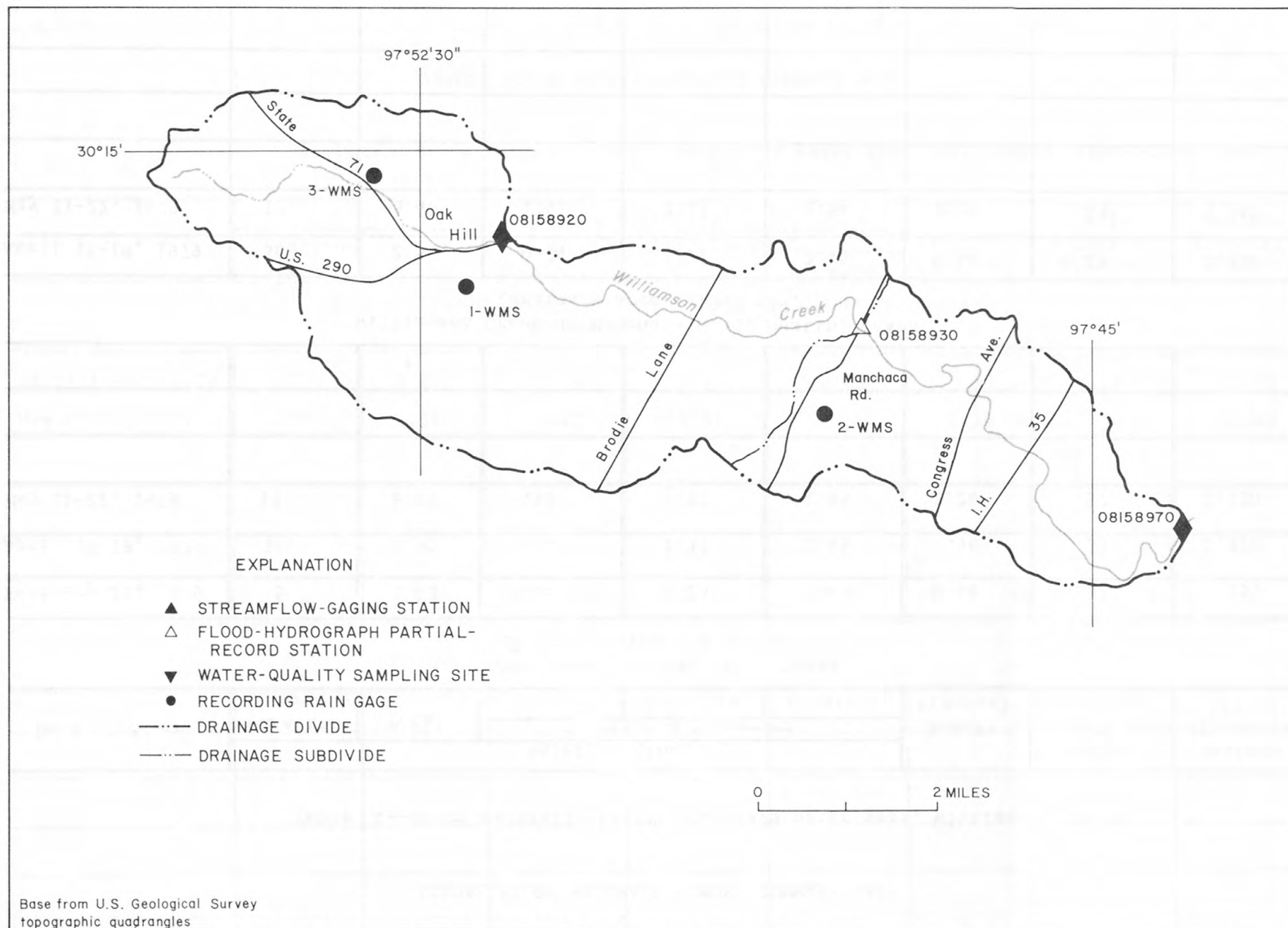


Figure 18.- Locations of surface-water data-collection sites in the Williamson Creek drainage basin

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UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY-TEXAS DISTRICT

ANNUAL STORM RAINFALL-RUNOFF SUMMARY DATA

Table 12--Storm rainfall-runoff data, 1979 water year, Williamson Creek

Date of Storm	Rainfall (inches)					Runoff (inches)	Ratio runoff to rainfall	Maximum discharge (ft ³ /s)
	Duration (hours)	Total	Maximum increment					
			15-minute	30-minute	60-minute			
Williamson Creek at Oak Hill, Texas (Drainage area.--6.30 mi ²)								
February 23, 1979	5	1.43	0.84	1.23	1.43	0.46	0.32	555
April 17-19, 1979	31	2.95	.74	1.37	2.45	.96	.33	1,370
May 21-22, 1979	13	6.08	.99	1.33	1.85	2.24	.37	2,130
Williamson Creek at Manchaca Road, Austin, Texas (Drainage area.--19.0 mi ²)								
April 18-19, 1979	36	2.56	0.74	1.37	2.45	0.64	0.25	2,950
May 21-22, 1979	13	6.48	1.42	2.33	2.84	2.79	.43	5,560

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UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY-TEXAS DISTRICT

ANNUAL STORM RAINFALL-RUNOFF SUMMARY DATA

Table 12.--Storm rainfall-runoff data, 1979 water year, Williamson Creek--Continued

Date of Storm	Rainfall (inches)					Runoff (inches)	Ratio runoff to rainfall	Maximum discharge (ft ³ /s)
	Duration (hours)	Total	Maximum increment					
			15-minute	30-minute	60-minute			
Williamson Creek at Jimmy Clay Road, Austin, Texas (Drainage area.--27.6 mi ²)								
April 18-19, 1979	17	2.22	0.74	1.37	2.45	0.41	0.19	2,070
May 21-22, 1979	13	6.31	1.42	2.33	2.84	2.16	.34	6,740

COLORADO RIVER BASIN

08158920 WILLIAMSON CREEK AT OAK HILL, TX

LOCATION.--Lat 30°14'06", long 97°51'36", Travis County, Hydrologic Unit 12090205, on downstream side of bridge on U.S. Highway 290 in Oak Hill, 0.8 mi (1.3 km) east of the intersection of U.S. Highway 290 and State Highway 71, and 7.7 mi (12.4 km) southwest of the State Capitol Building in Austin.

DRAINAGE AREA.--6.30 mi² (16.32 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1974 to February 1977 (periodic discharge measurements only), January 1978 to current year.

GAGE.--Water-stage recorder. Datum of gage is 798.68 ft (243.438 m) National Geodetic Vertical Datum of 1929 (levels from city of Austin bench mark).

REMARKS.--Water-discharge records good. Station is part of a hydrologic-research project to study rainfall-runoff relation for the Austin urban-rural areas. Two digital recording rain gages are in the watershed above station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,130 ft³/s (60.3 m³/s) May 21, 1979, gage height, 6.46 ft (1.969 m); no flow for many days each year.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 500 ft³/s (14.2 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s)	(m ³ /s)	Gage height (ft)	(m)
Feb. 23	1030	555	15.7	3.94	1.201
Apr. 18	1930	1,370	38.8	5.38	1.640
May 21	2300	*2,130	60.3	6.46	1.969

Minimum discharge, no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	2.0	35	2.3	4.0	18	25	33	.37	2.3	.10
2	.00	.00	1.7	12	2.3	3.9	17	16	26	.37	2.3	.06
3	.00	.00	2.7	9.0	2.4	3.5	15	13	20	.37	2.2	.02
4	.00	.00	1.7	7.7	10	2.7	12	8.1	18	.37	1.5	.64
5	.00	14	1.7	8.1	37	2.6	10	5.6	21	.31	1.2	1.2
6	.00	4.0	1.5	11	67	2.3	9.5	4.2	17	5.2	1.2	1.0
7	.00	.22	1.5	10	32	2.0	9.1	3.2	13	.52	1.0	.55
8	.00	.17	1.2	7.4	23	1.7	12	2.7	11	.43	.72	.20
9	.00	.16	1.0	6.4	17	1.7	12	2.7	8.8	.37	.34	.04
10	.00	.00	1.0	52	15	1.5	12	2.2	7.1	.87	.28	.01
11	.00	.00	1.0	67	12	1.5	14	2.1	6.2	.43	3.9	.01
12	.00	.19	1.0	32	10	1.3	14	1.7	5.1	.28	.95	.00
13	.00	.02	1.0	22	8.2	1.2	15	1.5	4.3	.23	.46	.00
14	.00	.00	.70	15	7.9	1.1	18	1.4	3.7	.22	.46	.00
15	.00	1.5	.85	12	6.7	1.3	19	2.0	3.2	.20	.46	.00
16	.00	1.9	.85	11	5.5	3.0	21	2.8	2.7	.19	.44	.00
17	.00	1.5	.78	9.2	5.3	2.7	26	4.0	2.5	.14	.46	.00
18	.00	1.3	.78	8.8	4.9	2.4	102	5.8	1.9	.17	.57	1.7
19	.00	2.5	.78	8.1	4.5	2.8	34	7.3	1.7	.20	.24	.68
20	.00	3.0	.78	7.1	4.3	6.6	26	8.3	1.5	6.9	.14	.13
21	.00	3.3	.78	5.9	4.4	51	81	238	1.4	1.6	.14	.02
22	.00	3.4	.78	5.4	4.0	45	26	140	1.2	.39	.12	.01
23	.00	3.3	.78	4.4	56	20	17	33	1.2	.28	1.8	.06
24	.00	2.7	.78	3.8	20	14	11	23	.92	.23	.25	.02
25	.00	2.7	.78	3.4	14	10	7.6	17	.83	.21	.35	.00
26	.00	2.7	.78	3.4	7.7	7.7	5.3	14	.70	.17	.11	.00
27	.00	2.7	.72	3.2	6.9	6.7	4.1	12	.79	.44	.05	.00
28	.00	2.4	.57	3.0	5.4	6.1	3.3	10	.67	12	.09	.00
29	.00	2.0	.51	3.0	---	5.5	24	8.9	.46	5.9	.10	.00
30	.00	2.0	.51	3.0	---	12	9.0	11	.42	3.7	.13	.00
31	.00	---	40	2.4	---	14	---	9.8	---	2.9	.11	---
TOTAL	.00	57.66	71.51	391.7	395.7	241.8	603.9	636.3	216.29	89.52	24.37	6.45
MEAN	.000	1.92	2.31	12.6	14.1	7.80	20.1	20.5	7.21	2.89	.79	.22
MAX	.00	14	40	67	67	51	102	238	33	44	3.9	1.7
MIN	.00	.00	.51	2.4	2.3	1.1	3.3	1.4	.42	.14	.05	.00
CFSM	.000	.31	.37	2.00	2.24	1.24	3.19	3.25	1.14	.46	.13	.04
IN.	.00	.34	.42	2.31	2.34	1.43	3.57	3.76	1.28	.53	.14	.04
AC-FT	.00	114	142	777	785	480	1200	1260	429	178	48	13
(††)	.34	6.68	3.25	3.30	3.69	4.83	6.09	7.69	1.99	6.53	1.80	3.17

CAL YR 1978 TOTAL - MEAN - MAX - MIN - CFSM - IN - AC-FT - †† -
WTR YR 1979 TOTAL 2735.20 MEAN 7.49 MAX 238 MIN .00 CFSM 1.19 IN 16.15 AC-FT 5430 †† 49.36

†† Weighted-mean rainfall, in inches, based on two rain gages.

COLORADO RIVER BASIN
08158920 WILLIAMSON CREEK AT OAK HILL, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Occasional discharge measurements and water-quality data: January 1974 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM- COBALT UNITS)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)
NOV 06...	1130	1.2	447	7.7	18.0	20	25	8.5	92	3.0
DEC 18...	1030	4.9	703	7.8	11.0	0	2.0	14.2	133	.6
FEB 28...	1050	4.3	659	8.1	14.0	0	2.0	10.6	106	.2
APR 24...	1155	11	632	7.8	22.0	0	2.0	9.7	114	.7
MAY 22...	1045	62	458	7.8	20.0	30	12	8.7	95	1.2
JUN 12...	0855	5.1	635	7.8	20.0	5	.70	10.0	114	.6
SEP 11...	1240	.01	390	8.6	29.0	10	.20	9.6	125	.3

DATE	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO
NOV 06...	74000	13000	16000	190	37	54	14	14	.4
DEC 18...	3600	100	45	350	58	97	27	20	.5
FEB 28...	5700	480	390	--	--	--	--	--	--
APR 24...	580	180	1900	350	50	97	25	12	.3
MAY 22...	22000	5000	13000	230	20	67	16	9.8	.3
JUN 12...	>560	560	600	330	24	90	25	12	.3
SEP 11...	200	130	120	180	36	36	22	14	.5

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDE (MG/L)
NOV 06...	3.0	190	0	31	25	.2	7.1	242	27
DEC 18...	1.1	360	0	34	38	.1	2.9	397	2
FEB 28...	--	--	--	--	--	--	--	--	2
APR 24...	.9	360	0	32	19	.2	6.5	370	2
MAY 22...	1.6	260	0	22	9.9	.2	6.9	262	15
JUN 12...	.7	370	0	25	8.7	.2	6.0	350	3
SEP 11...	1.2	160	8	35	24	.2	6.2	226	4

DATE	SOLIDS, VOLA- TILE, SUS- PENDE (MG/L)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
NOV 06...	2	.56	.01	.57	.26	.34	.60	.30	5.7
DEC 18...	2	.01	.00	.01	.00	.20	.20	.07	2.2
FEB 28...	0	.77	.02	.79	.02	.08	.10	.08	2.3
APR 24...	1	.42	.00	.42	.01	.16	.17	.03	2.5
MAY 22...	12	.52	.02	.54	.06	.37	.43	.04	6.5
JUN 12...	3	.13	.00	.13	.01	.34	.35	.01	10
SEP 11...	0	.01	.00	.01	.00	.54	.54	.00	4.4

COLORADO RIVER BASIN

08158920 WILLIAMSON CREEK AT OAK HILL, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)
NOV 06...	1130	2	30	<1	0	1	20
APR 24...	1155	0	0	0	0	0	10
MAY 22...	1045	1	0	0	0	0	10
JUN 12...	0855	0	30	<1	0	0	0
SEP 11...	1240	1	30	<1	0	0	<10

DATE	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, DIS- SOLVED (UG/L AS ZN)
NOV 06...	0	10	.0	2	0	<3
APR 24...	0	20	.0	0	0	10
MAY 22...	0	0	.0	0	0	10
JUN 12...	0	8	.0	0	0	<3
SEP 11...	0	<1	.4	0	0	<3

DATE	TIME	PCB, TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLOR- DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI- AZINON, TOTAL (UG/L)	DI- ELDRIN TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL (UG/L)
NOV 06...	1130	.0	.00	.0	.00	.00	.00	.00	.00	.00	.00	.00
APR 24...	1155	.0	.00	.0	.00	.00	.00	.00	.00	.00	.00	.00
MAY 22...	1045	.0	.00	.0	.00	.00	.00	.09	.00	.00	.00	.00
JUN 12...	0855	.0	.00	.0	.00	.00	.00	.00	.00	.00	.00	.00
SEP 11...	1240	.0	.00	.0	.00	.00	.00	.00	.00	.00	.00	.00

DATE	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	MALA- THION, TOTAL (UG/L)	METH- OXY- CHLOR, TOTAL (UG/L)	METHYL PARA- THION, TOTAL (UG/L)	METHYL TRI- THION, TOTAL (UG/L)	PARA- THION, TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOTAL TRI- THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
NOV 06...	.00	.01	.00	--	.00	.00	.00	0	.00	.01	.01	.00
APR 24...	.00	.00	.00	--	.00	.00	.00	0	.00	.00	.00	.00
MAY 22...	.00	.00	.00	--	.00	.00	.00	0	.00	.03	.01	.00
JUN 12...	.00	.00	.00	--	.00	.00	.00	0	.00	.00	.00	.00
SEP 11...	.00	.00	.00	.00	.00	.00	.00	0	.00	.00	.01	.00

STA. NO.08158920									
STORM RAINFALL AND RUNOFF RECORD									
1979 WATER YEAR									
WILLIAMSON CREEK AT OAK HILL, TEXAS									
STORM OF FEBRUARY 23, 1979									
DATE & TIME	G A G E N U M B E R						ACCUM. WEIGHTED PRECIP.	DISCHARGE IN	ACCUM. RUNOFF
	1WMS	3WMS					IN.	CFS	IN.
FEB. 23									
0000	0.0	0.0					0.0	2.3	0.0014
0500	0.01	0.0					0.00	2.3	0.0040
0900	0.02	0.02					0.02	2.3	0.0051
0910	0.05	0.02					0.02	2.3	0.0052
0915	0.06	0.03					0.03	2.3	0.0053
0920	0.07	0.04					0.04	2.3	0.0053
0925	0.08	0.05					0.05	2.3	0.0054
0930	0.11	0.06					0.07	2.3	0.0054
0935	0.17	0.11					0.12	2.4	0.0054
0940	0.28	0.21					0.22	2.6	0.0055
0945	0.40	0.31					0.32	2.7	0.0056
0950	0.56	0.41					0.43	6.8	0.0057
0955	0.81	0.62					0.65	11.0	0.0059
1000	1.18	0.89					0.94	15.0	0.0062
1005	1.40	1.11					1.16	37.0	0.0070
1010	1.48	1.29					1.32	59.0	0.0082
1015	1.48	1.38					1.40	81.0	0.0115
1030	1.49	1.40					1.41	555.0	0.0456
1045	1.49	1.40					1.41	443.0	0.0729
1100	1.49	1.40					1.41	404.0	0.0977
1115	1.50	1.40					1.42	474.0	0.1269
1130	1.50	1.40					1.42	452.0	0.1547
1145	1.50	1.40					1.42	326.0	0.1747
1200	1.50	1.40					1.42	254.0	0.1903
1215	1.50	1.41					1.42	195.0	0.2083
1245	1.50	1.41					1.42	138.0	0.2253
1315	1.50	1.41					1.42	103.0	0.2411
1400	1.51	1.41					1.43	73.0	0.2613
1530	1.51	1.41					1.43	49.0	0.2794
1700	1.51	1.41					1.43	41.0	0.3021
2000	1.51	1.41					1.43	31.0	0.3212
2200	1.51	1.41					1.43	27.0	0.3344
2400	1.51	1.41					1.43	24.0	0.3521
FEB. 24									
0000	1.51	1.41					1.43	24.0	0.3521
0800	1.51	1.41					1.43	21.0	0.4053
1600	1.51	1.41					1.43	18.0	0.4407
2400	1.51	1.41					1.43	16.0	0.4564

SIA. NO.08158920		STORM RAINFALL AND RUNOFF RECORD						1979 WATER YEAR		
WILLIAMSON CREEK AT OAK HILL, TEXAS		STORM OF APRIL 17-19, 1979						ACCUM.	DISCHARGE	ACCUM.
DATE & TIME		G A G E N U M B E R						WEIGHTED PRECIP.	IN	RUNOFF
		1WMS	3WMS					IN.	CFS	IN.
APR. 17										
0000		0.0	0.0					0.0	23.0	0.0368
1300		0.01	0.01					0.01	21.0	0.0781
1600		0.15	0.09					0.10	25.0	0.0904
1700		0.24	0.26					0.26	29.0	0.0975
1800		0.30	0.43					0.41	35.0	0.1061
1900		0.34	0.47					0.45	42.0	0.1165
2000		0.34	0.47					0.45	39.0	0.1404
2400		0.34	0.47					0.45	30.0	0.1626
APR. 18										
0000		0.34	0.47					0.45	30.0	0.1626
0400		0.35	0.48					0.46	25.0	0.1946
0800		0.38	0.56					0.53	24.0	0.2182
1200		0.38	0.56					0.53	24.0	0.2477
1800		0.39	0.57					0.54	28.0	0.2692
1815		0.44	0.59					0.57	29.0	0.2710
1830		0.74	1.26					1.18	37.0	0.2725
1835		0.98	1.35					1.29	46.0	0.2735
1840		1.29	1.57					1.53	56.0	0.2746
1845		1.48	1.72					1.68	65.0	0.2759
1850		1.70	1.76					1.75	138.0	0.2788
1855		1.86	1.93					1.92	211.0	0.2831
1900		2.09	2.22					2.20	284.0	0.2889
1905		2.35	2.40					2.39	507.0	0.2993
1910		2.56	2.43					2.45	729.0	0.3142
1915		2.76	2.43					2.48	952.0	0.3338
1920		2.87	2.46					2.53	1050.0	0.3553
1925		3.04	2.49					2.58	1160.0	0.3791
1930		3.19	2.63					2.72	1370.0	0.4071
1935		3.30	2.69					2.79	1200.0	0.4440
1945		3.42	2.72					2.83	1080.0	0.4994
2000		3.48	2.75					2.87	952.0	0.5579
2015		3.49	2.76					2.88	691.0	0.6004
2030		3.52	2.76					2.88	526.0	0.6489
2100		3.52	2.76					2.88	305.0	0.6864
2130		3.52	2.76					2.88	184.0	0.7091
2200		3.52	2.76					2.88	129.0	0.7289
2245		3.52	2.76					2.88	93.0	0.7432
2315		3.52	2.76					2.88	79.0	0.7553
2400		3.52	2.76					2.88	70.0	0.7661
APR. 19										
0000		3.52	2.76					2.88	70.0	0.7661

STORM RAINFALL AND RUNOFF RECORD										1979 WATER YEAR		
STATION NO. 08158920												
WILLIAMSON CREEK AT OAK HILL, TEXAS										STORM OF APRIL 17-19, 1979		
DATE & TIME										ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
G A G E N U M B E R												
1 WMS 3 WMS												
APR. 19												
0100	3.52	2.76								2.88	59.0	0.7994
0400	3.52	2.76								2.88	43.0	0.8417
0900	3.52	2.76								2.88	33.0	0.8904
1600	3.60	2.81								2.94	29.0	0.9439
2400	3.61	2.82								2.95	20.0	0.9636

STORM RAINFALL AND RUNOFF RECORD										1979 WATER YEAR		
STA. NO. 08158920												
WILLIAMSON CREEK AT OAK HILL, TEXAS										STORM OF MAY 21-22, 1979		
DATE & TIME	G A G E N U M B E R									WEIGHTED PRECIP.	DISCHARGE IN	ACCUM. RUNOFF
	1WMS	3WMS								IN.	CFS	IN.
MAY 21												
0000	0.0	0.0								0.0	8.8	0.0090
0420	0.01	0.0								0.00	8.8	0.0244
1415	0.02	0.0								0.00	8.8	0.0311
1430	0.08	0.21								0.19	8.8	0.0317
1445	0.37	0.35								0.35	28.0	0.0342
1515	0.43	0.36								0.37	12.0	0.0368
1630	0.45	0.41								0.42	21.0	0.0407
1645	0.79	0.75								0.76	27.0	0.0424
1700	1.78	1.12								1.23	76.0	0.0470
1715	1.91	1.14								1.26	281.0	0.0643
1730	1.99	1.14								1.28	326.0	0.0844
1745	1.99	1.14								1.28	209.0	0.0972
1800	1.99	1.14								1.28	136.0	0.1056
1815	2.00	1.14								1.28	92.0	0.1112
1830	2.14	1.62								1.70	78.0	0.1184
1900	2.52	1.72								1.85	192.0	0.1361
1915	2.55	2.21								2.26	242.0	0.1510
1930	2.81	2.42								2.48	261.0	0.1671
1945	2.87	2.79								2.80	470.0	0.1960
2000	3.29	3.27								3.27	582.0	0.2317
2015	3.81	3.32								3.40	857.0	0.2844
2030	3.96	3.44								3.52	1010.0	0.3466
2045	4.07	3.48								3.57	879.0	0.4186
2110	4.12	3.49								3.59	615.0	0.4564
2115	4.14	3.50								3.60	573.0	0.4682
2120	4.17	3.50								3.61	540.0	0.4793
2125	4.27	3.52								3.64	507.0	0.4896
2130	4.52	3.62								3.76	474.0	0.4994
2135	4.74	3.84								3.98	467.0	0.5089
2140	4.83	4.11								4.23	459.0	0.5183
2145	4.87	4.15								4.27	452.0	0.5276
2150	5.13	4.17								4.32	661.0	0.5412
2155	5.22	4.28								4.43	871.0	0.5590
2200	5.64	4.34								4.55	1080.0	0.5811
2205	5.83	4.39								4.62	1400.0	0.6098
2210	5.97	4.47								4.71	1730.0	0.6453
2215	5.99	4.65								4.86	2050.0	0.7293
2230	6.13	5.03								5.21	1710.0	0.8345
2245	6.30	5.21								5.38	1960.0	0.9550

STA. NO.08158920				STORM RAINFALL AND RUNOFF RECORD				1979 WATER YEAR			
WILLIAMSON CREEK AT OAK HILL, TEXAS				STORM OF MAY 21-22, 1979				ACCUM.	DISCHARGE	ACCUM.	
								WEIGHTED	IN	RUNOFF	
DATE & TIME				G A G E N U M B E R				PRECIP.			
								IN.	CFS	IN.	
MAY 21											
2300	6.63	5.28						5.50	2130.0	1.0860	
2315	6.74	5.30						5.53	1950.0	1.2059	
2330	6.74	5.34						5.56	1560.0	1.3018	
2345	6.75	5.36						5.58	1240.0	1.3781	
2400	6.82	5.65						5.84	918.0	1.4204	
MAY 22											
0000	6.82	5.65						5.84	918.0	1.4204	
0015	6.97	5.71						5.91	819.0	1.4849	
0030	6.98	5.71						5.91	874.0	1.5386	
0045	6.98	5.73						5.93	835.0	1.5900	
0100	6.99	5.75						5.95	720.0	1.6564	
0130	7.03	5.79						5.99	559.0	1.7251	
0200	7.05	5.81						6.01	413.0	1.7886	
0245	7.09	5.85						6.05	281.0	1.8491	
0345	7.10	5.85						6.05	190.0	1.9017	
0500	7.10	5.85						6.05	138.0	1.9568	
0700	7.10	5.85						6.05	101.0	2.0189	
1000	7.11	5.86						6.06	78.0	2.0957	
1500	7.12	5.88						6.08	58.0	2.1670	
2000	7.12	5.88						6.08	46.0	2.2179	
2400	7.12	5.88						6.08	42.0	2.2386	

08158930 WILLIAMSON CREEK AT MANCHACA ROAD, AUSTIN, TEX.
(Flood-hydrograph partial-record station)

LOCATION.--Lat 30°13'16", long 97°47'36", Travis County, on downstream side of bridge on Manchaca Road, 0.7 mi south of the intersection of Ben White Boulevard and Manchaca Road, and 4.9 mi southwest of the State Capitol Building in Austin.

DRAINAGE AREA.--19.0 mi².

PERIOD OF RECORD.--August 1975 to current year. Periodic measurements only, May to August 1975.

GAGE.--Digital water-stage recorder and crest-stage gage. Datum of gage is 618.39 ft NGVD.

REMARKS.--Records fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,900 ft³/s May 23, 1975 (gage height, 12.97 ft).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,560 ft³/s May 22 (gage height, 12.49 ft).

STATION NO. 08158930				STORM RAINFALL AND RUNOFF RECORD				1979 WATER YEAR		
WILLIAMSON CREEK AT MANCHACA ROAD, AUSTIN, TEXAS				STORM OF APRIL 18-19, 1979				ACCUM.	DISCHARGE	ACCUM.
DATE & TIME				G A G E N U M B E R				WEIGHTED PRECIP.	IN	RUNOFF
				1WMS	2WMS	3WMS		IN.	CFS	IN.
APR. 18										
0000	0.0	0.0	0.0					0.0	2.4	0.0002
0135	0.01	0.0	0.01					0.01	2.0	0.0006
0530	0.01	0.01	0.04					0.02	1.0	0.0008
0630	0.03	0.12	0.08					0.07	4.1	0.0011
0715	0.03	0.12	0.09					0.07	20.0	0.0031
0900	0.04	0.12	0.09					0.07	9.0	0.0038
0905	0.04	0.12	0.09					0.07	8.9	0.0049
1200	0.04	0.12	0.09					0.07	3.9	0.0060
1600	0.05	0.13	0.10					0.08	2.8	0.0067
1815	0.10	0.13	0.12					0.11	1.0	0.0068
1830	0.40	0.13	0.79					0.45	0.9	0.0068
1835	0.64	0.14	0.88					0.58	0.9	0.0068
1840	0.95	0.20	1.10					0.81	0.9	0.0068
1845	1.14	0.32	1.25					0.97	0.9	0.0068
1850	1.36	0.40	1.29					1.10	1.2	0.0069
1855	1.52	0.48	1.46					1.24	1.4	0.0069
1900	1.75	0.58	1.75					1.46	1.7	0.0069
1905	2.01	0.62	1.93					1.64	3.2	0.0069
1910	2.22	0.72	1.96					1.77	4.8	0.0069
1915	2.42	0.84	1.96					1.89	5.3	0.0070
1920	2.53	0.97	1.99					1.98	7.5	0.0070
1925	2.70	1.06	2.02					2.09	8.8	0.0071
1930	2.85	1.10	2.16					2.21	10.0	0.0072
1945	3.08	1.20	2.25					2.37	398.0	0.0153
2000	3.14	1.33	2.28					2.44	516.0	0.0259
2015	3.15	1.42	2.29					2.47	529.0	0.0366
2030	3.18	1.45	2.29					2.49	398.0	0.0448
2045	3.18	1.45	2.29					2.49	677.0	0.0586
2100	3.18	1.45	2.29					2.49	2340.0	0.1063
2115	3.18	1.45	2.29					2.49	2570.0	0.1587
2130	3.18	1.45	2.29					2.49	2800.0	0.2158
2145	3.18	1.45	2.29					2.49	2950.0	0.2759
2200	3.18	1.45	2.29					2.49	2750.0	0.3600
2230	3.18	1.45	2.29					2.49	2040.0	0.4432
2300	3.18	1.46	2.29					2.49	1340.0	0.4978
2330	3.18	1.46	2.29					2.49	879.0	0.5337
2400	3.18	1.46	2.29					2.49	586.0	0.5516
APR. 19										
0000	3.18	1.46	2.29					2.49	586.0	0.5516
0030	3.18	1.46	2.29					2.49	405.0	0.5741

SIA. NO.08158930										STORM RAINFALL AND RUNOFF RECORD										1979 WATER YEAR		
WILLIAMSON CREEK AT MANCHACA ROAD, AUSTIN, TEXAS										STORM OF APRIL 18-19, 1979										ACCUM.	DISCHARGE	ACCUM.
DATE & TIME										G A G E N U M B E R										WEIGHTED	IN	RUNOFF
																				PRECIP.		
																				IN.	CFS	IN.
APR. 19																						
0100		3.18		1.46		2.29										2.49	280.0	0.5855				
0130		3.18		1.46		2.29										2.49	180.0	0.5929				
0200		3.18		1.46		2.29										2.49	116.0	0.6000				
0300		3.18		1.46		2.29										2.49	63.0	0.6077				
0500		3.18		1.46		2.29										2.49	54.0	0.6165				
0700		3.18		1.46		2.29										2.49	46.0	0.6249				
0930		3.18		1.46		2.29										2.49	34.0	0.6318				
1200		3.19		1.47		2.29										2.50	22.0	0.6359				
1400		3.24		1.47		2.31										2.53	13.0	0.6380				
1600		3.26		1.49		2.34										2.55	9.0	0.6402				
2000		3.27		1.50		2.35										2.56	4.3	0.6416				
2400		3.27		1.50		2.35										2.56	2.6	0.6420				

STATION NO. 08158930										STORM RAINFALL AND RUNOFF RECORD										1979 WATER YEAR					
WILLIAMSON CREEK AT MANCHACA ROAD, AUSTIN, TEXAS										STORM OF MAY 21-22, 1979										ACCUM.	DISCHARGE	ACCUM.			
DATE & TIME										G A G E N U M B E R										WEIGHTED	IN	RUNOFF			
																				PRECIP.					
																				IN.	CFS	IN.			
MAY 21																									
0000		0.0		0.0		0.0											0.0		0.5		0.0002				
0810		0.0		0.01		0.0											0.00		0.5		0.0005				
1410		0.02		0.05		0.0											0.02		0.5		0.0006				
1425		0.07		0.28		0.09											0.13		1.0		0.0006				
1440		0.24		0.38		0.32											0.30		1.5		0.0006				
1510		0.43		0.51		0.36											0.43		7.2		0.0008				
1520		0.43		0.51		0.36											0.43		30.0		0.0013				
1530		0.43		0.51		0.36											0.43		74.0		0.0025				
1545		0.43		0.51		0.36											0.43		76.0		0.0041				
1600		0.43		0.51		0.36											0.43		71.0		0.0065				
1635		0.50		0.52		0.46											0.49		46.0		0.0079				
1645		0.79		0.52		0.75											0.71		40.0		0.0083				
1650		1.14		0.53		1.09											0.97		38.0		0.0085				
1655		1.51		0.57		1.12											1.16		35.0		0.0088				
1700		1.78		0.95		1.12											1.38		33.0		0.0090				
1705		1.82		1.54		1.12											1.55		38.0		0.0093				
1710		1.86		1.99		1.14											1.68		42.0		0.0096				
1715		1.91		2.33		1.14											1.79		47.0		0.0099				
1720		1.98		2.63		1.14											1.90		144.0		0.0108				
1725		1.99		2.90		1.14											1.97		241.0		0.0125				
1730		1.99		3.25		1.14											2.06		338.0		0.0148				
1735		1.99		3.30		1.14											2.07		775.0		0.0201				
1740		1.99		3.30		1.14											2.07		1210.0		0.0283				
1745		1.99		3.31		1.14											2.07		1650.0		0.0395				
1750		1.99		3.37		1.14											2.09		1750.0		0.0573				
1800		1.99		3.41		1.14											2.10		1950.0		0.0838				
1810		2.00		3.41		1.14											2.10		1840.0		0.1214				
1830		2.14		3.43		1.62											2.31		1540.0		0.1580				
1845		2.52		3.43		1.67											2.50		1720.0		0.1931				
1900		2.52		3.43		1.72											2.52		1760.0		0.2289				
1915		2.55		3.44		2.21											2.67		1720.0		0.2640				
1930		2.81		3.70		2.42											2.92		1510.0		0.2948				
1945		2.87		3.78		2.79											3.07		1410.0		0.3235				
2000		3.29		3.79		3.27											3.41		1990.0		0.3641				
2015		3.81		3.95		3.32											3.70		1790.0		0.4189				
2045		4.07		4.18		3.48											3.93		1910.0		0.4903				
2110		4.12		4.77		3.49											4.10		2460.0		0.5571				
2125		4.27		4.77		3.52											4.18		3180.0		0.6220				
2140		4.83		4.77		4.11											4.61		3690.0		0.7098				

STA. NO.08158930				STORM RAINFALL AND RUNOFF RECORD				1979 WATER YEAR		
WILLIAMSON CREEK AT MANCHACA ROAD, AUSTIN, TEXAS				STORM OF MAY 21-22, 1979				ACCUM.	DISCHARGE	ACCUM.
DATE & TIME				G A G E N U M B E R				WEIGHTED PRECIP.	IN	RUNOFF
				1WMS	2WMS	3WMS		IN.	CFS	IN.
MAY 21										
2200	5.64	4.78	4.34					5.05	4140.0	0.8082
2215	5.99	4.78	4.65					5.30	4170.0	0.8933
2230	6.13	4.78	5.03					5.47	3880.0	0.9856
2250	6.34	4.78	5.25					5.63	3420.0	1.0901
2315	6.74	5.39	5.30					5.98	3180.0	1.1766
2330	6.74	5.39	5.34					6.00	3690.0	1.2518
2345	6.75	5.41	5.36					6.01	4300.0	1.3395
2400	6.82	5.48	5.65					6.15	4800.0	1.4129
MAY 22										
0000	6.82	5.48	5.65					6.15	4800.0	1.4129
0015	6.97	5.79	5.71					6.31	5240.0	1.5442
0030	6.98	5.79	5.71					6.31	5560.0	1.7143
0100	6.99	5.85	5.75					6.35	5120.0	1.9230
0130	7.03	5.88	5.79					6.38	4020.0	2.0870
0200	7.05	5.91	5.81					6.41	3100.0	2.2134
0230	7.08	5.94	5.85					6.44	2430.0	2.3125
0300	7.10	5.95	5.85					6.45	1880.0	2.3891
0330	7.10	5.95	5.85					6.45	1480.0	2.4646
0415	7.10	5.95	5.85					6.45	1040.0	2.5282
0500	7.10	5.96	5.85					6.45	744.0	2.5737
0545	7.10	5.96	5.85					6.45	512.0	2.6050
0630	7.10	5.96	5.85					6.45	376.0	2.6319
0730	7.10	5.96	5.85					6.45	264.0	2.6534
0830	7.10	5.96	5.86					6.46	196.0	2.6734
1000	7.11	5.97	5.86					6.46	121.0	2.6857
1100	7.11	5.97	5.86					6.46	95.0	2.6935
1200	7.11	5.97	5.87					6.47	76.0	2.6989
1245	7.11	5.97	5.87					6.47	71.0	2.7039
1345	7.11	5.98	5.87					6.47	69.0	2.7131
1600	7.12	5.98	5.88					6.48	59.0	2.7257
1900	7.12	5.98	5.88					6.48	47.0	2.7353
2100	7.12	5.98	5.88					6.48	42.0	2.7439
2400	7.12	5.98	5.88					6.48	34.0	2.7508
MAY 23										
0000	7.12	5.98	5.88					6.48	34.0	2.7508
0400	7.12	5.98	5.88					6.48	29.0	2.7630
0800	7.12	5.98	5.88					6.48	24.0	2.7709
1200	7.12	5.98	5.88					6.48	23.0	2.7784
1600	7.12	5.98	5.88					6.48	19.0	2.7846
2000	7.12	5.98	5.88					6.48	10.0	2.7878
2400	7.12	5.98	5.88					6.48	9.0	2.7893

COLORADO RIVER BASIN

08158970 WILLIAMSON CREEK AT JIMMY CLAY ROAD, AUSTIN, TX

LOCATION.--Lat 30°11'21", long 97°43'56", Travis County, Hydrologic Unit 12090205, at Jimmy Clay Road, 0.5 mi (0.8 km) southeast of the intersection of Jimmy Clay and Nuckles Crossing Roads, and 5.9 mi (9.5 km) south of the State Capitol in Austin.

DRAINAGE AREA.--27.6 mi² (71.5 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--November 1974 to September 1975 (periodic discharge measurements only), September 1975 to current year.

GAGE.--Water-stage recorder. Datum of gage is 497.18 ft (151.540 m) National Geodetic Vertical Datum of 1929 (city of Austin bench mark).

REMARKS.--Water-discharge records fair. No known regulation or diversion above station. There are two recording rain gages located in the watershed. The station is part of a hydrologic research project to study the rainfall-runoff relationships for the Austin urban-rural areas.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,100 ft³/s (286 m³/s) Nov. 23, 1974, gage height, 15.2 ft (4.63 m), from floodmark, by slope-area measurement; minimum daily, 0.03 ft³/s (0.001 m³/s) Sept. 16, 24, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--The maximum flood since 1869 occurred on Sept. 9 or 10, 1921, stage and discharge not determined.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 500 ft³/s (14.2 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Nov. 5	1845	950 26.9	6.51 1.984	Apr. 19	0030	2,070 58.6	8.64 2.633
Dec. 31	0745	801 22.7	6.12 1.865	May 22	0245	*6,740 191	13.25 4.039
Feb. 23	1245	1,780 50.4	8.17 2.490	July 27	1115	1,870 53.0	8.32 2.536
Mar. 21	0215	667 18.9	5.73 1.747				

Minimum daily discharge, 0.54 ft³/s (0.015 m³/s) Aug. 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979 MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.83	1.1	2.2	39	3.7	4.4	13	74	13	1.0	1.1	3.2
2	.93	.99	2.4	10	4.2	3.8	14	23	25	1.0	.93	3.0
3	.94	1.0	3.1	5.7	7.9	4.2	11	16	7.9	.93	.84	2.9
4	.97	1.2	3.5	5.7	20	2.9	9.2	13	5.0	.91	.66	2.9
5	1.0	172	2.9	6.4	37	2.7	7.2	14	11	1.0	.72	3.4
6	.93	47	2.9	8.0	102	2.7	5.9	9.3	6.4	20	.66	5.5
7	.93	7.0	2.9	6.8	24	2.6	5.2	6.8	4.0	2.5	.54	2.2
8	.82	4.5	2.6	4.5	15	2.6	5.2	5.4	25	1.4	.77	1.7
9	.77	3.3	2.4	3.6	9.6	2.7	5.0	4.8	5.0	1.5	1.0	1.7
10	.72	2.7	2.6	31	7.8	3.1	4.6	4.5	2.0	1.4	.90	1.5
11	.72	2.5	2.6	90	6.7	3.1	4.0	11	1.4	1.3	3.0	1.7
12	.72	2.4	2.7	20	5.6	2.4	3.5	6.9	1.0	1.2	3.1	1.7
13	.75	2.3	2.7	12	4.7	2.4	3.3	4.0	1.1	1.3	1.2	1.7
14	.72	2.2	2.7	7.9	4.3	2.3	3.1	3.5	1.2	1.7	.89	1.7
15	.79	2.1	2.9	6.2	4.1	3.9	3.1	3.1	1.3	2.3	.82	1.1
16	.93	12	2.9	5.4	3.5	13	3.1	2.9	1.3	2.4	.89	.97
17	.82	1.4	2.7	4.6	3.3	6.0	16	2.9	1.3	2.3	.90	1.4
18	.70	3.0	2.7	4.9	3.3	3.7	87	3.1	1.4	2.0	.82	13
19	.82	2.8	2.4	5.7	3.3	3.1	222	2.9	1.6	2.5	.79	8.7
20	.83	2.5	2.6	4.5	3.4	3.8	30	2.9	1.6	3.4	1.0	4.7
21	.94	2.4	2.6	3.8	3.5	157	82	375	1.7	2.2	1.3	1.9
22	1.3	2.3	2.4	3.5	3.7	63	35	1190	1.8	2.1	1.7	1.2
23	1.4	2.2	2.4	3.7	230	22	26	22	1.7	2.0	2.0	1.2
24	1.6	2.1	2.4	3.6	26	14	21	18	1.7	1.9	2.5	1.2
25	1.7	2.0	2.4	4.5	13	11	18	15	1.7	1.9	2.5	.94
26	1.6	4.8	2.4	7.0	8.8	8.5	15	7.1	1.4	2.1	2.5	.82
27	1.1	5.0	2.4	5.2	7.2	6.9	13	6.1	1.3	317	2.7	.82
28	1.0	2.8	2.4	4.1	5.7	5.5	13	5.8	1.3	8.6	2.7	1.1
29	1.0	2.2	2.6	4.6	---	5.1	89	5.6	1.2	2.5	2.8	1.2
30	1.0	2.2	2.6	4.8	---	21	20	5.2	1.0	1.7	3.1	.96
31	1.0	---	176	4.1	---	15	---	7.8	---	1.4	3.1	---
TOTAL	30.28	301.99	255.0	330.8	571.3	404.4	787.4	1871.6	132.3	395.44	48.43	76.01
MEAN	.98	10.1	8.23	10.7	20.4	13.0	26.2	60.4	4.41	12.8	1.56	2.53
MAX	1.7	172	176	90	230	157	222	1190	25	317	3.1	13
MIN	.70	.99	2.2	3.5	3.3	2.3	3.1	2.9	1.0	.91	.54	.82
CFSM	.04	.37	.30	.39	.74	.47	.95	2.19	.16	.46	.06	.09
IN.	.04	.41	.34	.45	.77	.55	1.06	2.52	.18	.53	.07	.10
AC-FT	.60	.599	.506	.656	1130	.802	1560	3710	.262	.784	.96	151
(11)	.60	6.73	2.88	3.07	4.18	4.70	5.46	8.08	2.18	6.83	1.55	2.91

CAL YR 1978 TOTAL	1351.44	MEAN	3.70	MAX	176	MIN	.39	CFSM	.13	IN	1.82	AC-FT	2680	††	33.33
WTR YR 1979 TOTAL	5204.95	MEAN	14.3	MAX	1190	MIN	.54	CFSM	.52	IN	7.02	AC-FT	10320	††	49.17

†† Weighted-mean rainfall, in inches, based on three rain gages.

COLORADO RIVER BASIN
08158970 WILLIAMSON CREEK AT JIMMY CLAY ROAD, AUSTIN, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Periodic chemical, biochemical, and pesticide analyses: January 1975 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM- COBALT UNITS)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)
NOV 06...	0815	31	244	7.6	16.5	40	85	8.5	89	2.9
DEC 18...	1400	6.1	824	7.7	16.5	10	4.0	7.0	74	5.0
FEB 28...	1135	6.1	723	7.7	13.5	0	4.0	9.7	96	.4
APR 24...	1120	24	664	7.7	21.0	5	4.0	7.8	90	2.7
JUN 12...	0715	1.0	630	7.2	20.5	8	2.4	6.0	68	1.6
SEP 11...	0720	1.6	798	7.3	21.5	5	.50	3.7	42	1.5

DATE	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO
NOV 06...	76000	20000	35000	98	23	35	2.6	5.9	.3
DEC 18...	1200	300	100	300	0	100	11	50	1.3
FEB 28...	1600	310	400	--	--	--	--	--	--
APR 24...	3500	280	1600	310	47	99	15	23	.6
JUN 12...	1700	210	640	--	--	--	--	--	--
SEP 11...	1800	290	960	300	0	99	13	50	1.3

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)
NOV 06...	3.2	92	0	29	7.9	.1	5.9	135	147
DEC 18...	3.9	360	0	44	66	.4	13	466	5
FEB 28...	--	--	--	--	--	--	--	--	4
APR 24...	2.5	320	0	47	32	.3	9.1	386	3
JUN 12...	--	--	--	--	--	--	--	--	9
SEP 11...	4.4	370	0	34	60	.5	14	458	17

DATE	SOLIDS, VOLA- TILE, SUS- PENDED (MG/L)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
NOV 06...	19	.35	.01	.36	.06	.33	.39	.26	7.7
DEC 18...	3	.59	.15	.74	1.3	.70	2.0	.02	4.5
FEB 28...	0	1.2	.04	1.2	.32	.18	.50	.04	4.2
APR 24...	1	.41	.21	.62	.43	.40	.83	.39	9.3
JUN 12...	8	.40	.25	.65	.25	.58	.83	.01	5.9
SEP 11...	6	.89	.41	1.3	.56	.39	.95	.00	3.4

COLORADO RIVER BASIN

08158970 WILLIAMSON CREEK AT JIMMY CLAY ROAD, AUSTIN, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)
NOV 06...	0815	2	30	1	0	2	50
APR 24...	1120	2	100	0	0	1	20
SEP 11...	0720	3	200	<1	0	0	<10

DATE	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, DIS- SOLVED (UG/L AS ZN)
NOV 06...	0	5	.0	2	0	6
APR 24...	0	60	.0	0	0	10
SEP 11...	0	50	.3	0	0	<3

DATE	TIME	PCB, TOTAL (UG/L)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLOR- DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)
NOV 06...	0815	.0	.00	.00	.0	.00	.00	.01
APR 24...	1120	.0	--	.00	.0	.00	.00	.00
SEP 11...	0720	.0	--	.00	.0	.00	.00	.00

DATE	DI- AZINON, TOTAL (UG/L)	DI- ELDRIN TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	MALA- THION, TOTAL (UG/L)	METH- OXY- CHLOR, TOTAL (UG/L)
NOV 06...	.20	.00	.00	.00	.00	.00	.00	.01	--
APR 24...	.15	.00	.00	.00	.00	.00	.01	.14	--
SEP 11...	.00	.00	.00	.00	.00	.00	.00	.00	.00

DATE	METHYL PARA- THION, TOTAL (UG/L)	METHYL TRI- THION, TOTAL (UG/L)	PARA- THION, TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOTAL TRI- THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
NOV 06...	.00	.00	.00	0	.00	.02	.02	.00
APR 24...	.00	.00	.00	0	.00	.02	.01	.00
SEP 11...	.00	.00	.00	0	.00	.00	.00	.00

STA. NO.08158970				STORM RAINFALL AND RUNOFF RECORD				1979 WATER YEAR		
WILLIAMSON CREEK AT JIMMY CLAY ROAD, AUSTIN, TEXAS				STORM OF APRIL 18-19, 1979				ACCUM.	DISCHARGE	ACCUM.
DATE & TIME				G A G E N U M B E R				WEIGHTED PRECIP.	IN	RUNOFF
				1WMS	2WMS	3WMS		IN.	CFS	IN.
APR. 18										
0000	0.0	0.0	0.0					0.0	25.0	0.0005
0045	0.0	0.0	0.01					0.00	23.0	0.0043
0550	0.03	0.04	0.07					0.04	12.0	0.0062
0630	0.03	0.12	0.08					0.08	11.0	0.0072
0900	0.04	0.12	0.09					0.09	9.0	0.0086
1200	0.04	0.12	0.09					0.09	7.4	0.0098
1500	0.05	0.13	0.10					0.10	6.3	0.0109
1810	0.07	0.13	0.10					0.11	11.0	0.0120
1820	0.14	0.13	0.40					0.19	11.0	0.0121
1830	0.40	0.13	0.79					0.35	11.0	0.0121
1835	0.64	0.14	0.88					0.44	11.0	0.0122
1840	0.95	0.20	1.10					0.61	11.0	0.0122
1845	1.14	0.32	1.25					0.76	11.0	0.0123
1850	1.36	0.40	1.29					0.88	11.0	0.0123
1855	1.52	0.48	1.46					1.00	11.0	0.0124
1900	1.75	0.58	1.75					1.18	11.0	0.0125
1905	2.01	0.62	1.93					1.31	11.0	0.0125
1910	2.22	0.72	1.96					1.43	11.0	0.0126
1915	2.42	0.84	1.96					1.55	11.0	0.0126
1920	2.53	0.97	1.99					1.66	11.0	0.0127
1925	2.70	1.06	2.02					1.76	11.0	0.0127
1930	2.85	1.10	2.16					1.85	11.0	0.0128
1945	3.08	1.20	2.25					1.99	11.0	0.0130
2015	3.15	1.42	2.29					2.13	19.0	0.0134
2030	3.18	1.45	2.29					2.15	60.0	0.0147
2100	3.18	1.45	2.29					2.15	151.0	0.0189
2130	3.18	1.45	2.29					2.15	205.0	0.0247
2200	3.18	1.45	2.29					2.15	216.0	0.0308
2230	3.18	1.45	2.29					2.15	386.0	0.0389
2245	3.18	1.46	2.29					2.16	466.0	0.0454
2300	3.18	1.46	2.29					2.16	592.0	0.0537
2315	3.18	1.46	2.29					2.16	856.0	0.0658
2330	3.18	1.46	2.29					2.16	1180.0	0.0823
2345	3.18	1.46	2.29					2.16	1550.0	0.1041
2400	3.18	1.46	2.29					2.16	1890.0	0.1240
APR. 19										
0000	3.18	1.46	2.29					2.16	1890.0	0.1240
0015	3.18	1.46	2.29					2.16	2020.0	0.1590
0030	3.18	1.46	2.29					2.16	2070.0	0.2025
0100	3.18	1.46	2.29					2.16	1910.0	0.2428

STA. NO.08158970				STORM RAINFALL AND RUNOFF RECORD				1979 WATER YEAR		
WILLIAMSON CREEK AT JIMMY CLAY ROAD, AUSTIN, TEXAS				STORM OF APRIL 18-19, 1979				ACCUM.	DISCHARGE	ACCUM.
DATE & TIME				G A G E N U M B E R				WEIGHTED	IN	RUNOFF
				1WMS	2WMS	3WMS		PRECIP.		
								IN.	CFS	IN.
APR. 17										
0115	3.18	1.46	2.29					2.16	1630.0	0.2656
0130	3.18	1.46	2.29					2.16	1220.0	0.2828
0145	3.18	1.46	2.29					2.16	926.0	0.2958
0200	3.18	1.46	2.29					2.16	713.0	0.3108
0230	3.18	1.46	2.29					2.16	481.0	0.3243
0300	3.18	1.46	2.29					2.16	368.0	0.3372
0345	3.18	1.46	2.29					2.16	252.0	0.3478
0430	3.18	1.46	2.29					2.16	178.0	0.3590
0600	3.18	1.46	2.29					2.16	113.0	0.3701
0800	3.18	1.46	2.29					2.16	78.0	0.3811
1100	3.19	1.46	2.29					2.16	56.0	0.3905
1400	3.24	1.47	2.31					2.19	46.0	0.4008
1900	3.27	1.50	2.35					2.22	41.0	0.4124

STORM RAINFALL AND RUNOFF RECORD									
STA. NO.08158970				1979 WATER YEAR					
WILLIAMSON CREEK AT JIMMY CLAY ROAD, AUSTIN, TEXAS				STORM OF MAY 21-22, 1979				ACCUM.	DISCHARGE
DATE & TIME				G A G E N U M B E R				WEIGHTED	IN
								PRECIP.	IN
								IN.	CFS
								IN.	IN.
MAY 21									
0000	0.0	0.0	0.0					0.0	2.9
0010	0.0	0.01	0.0					0.00	2.9
1405	0.02	0.03	0.0					0.02	3.3
1425	0.07	0.28	0.09					0.18	3.3
1440	0.24	0.38	0.32					0.32	4.2
1450	0.41	0.50	0.36					0.44	4.6
1630	0.45	0.52	0.41					0.48	15.0
1645	0.79	0.52	0.75					0.65	17.0
1650	1.14	0.53	1.09					0.83	17.0
1655	1.51	0.57	1.12					0.97	17.0
1700	1.78	0.95	1.12					1.24	17.0
1705	1.82	1.54	1.12					1.54	17.0
1710	1.86	1.99	1.14					1.78	16.0
1715	1.91	2.33	1.14					1.96	16.0
1720	1.98	2.63	1.14					2.13	16.0
1725	1.99	2.90	1.14					2.27	15.0
1730	1.99	3.25	1.14					2.44	15.0
1735	1.99	3.30	1.14					2.46	15.0
1740	1.99	3.30	1.14					2.46	14.0
1745	1.99	3.31	1.14					2.47	14.0
1750	1.99	3.37	1.14					2.50	14.0
1815	2.00	3.41	1.14					2.52	40.0
1830	2.14	3.43	1.62					2.67	137.0
1845	2.52	3.43	1.67					2.80	312.0
1900	2.52	3.43	1.72					2.81	595.0
1915	2.55	3.44	2.21					2.92	974.0
1930	2.81	3.70	2.42					3.17	1480.0
1945	2.87	3.78	2.79					3.30	1770.0
2000	3.29	3.79	3.27					3.53	1890.0
2015	3.81	3.95	3.32					3.78	1950.0
2030	3.96	4.11	3.44					3.93	1910.0
2100	4.11	4.70	3.48					4.27	1640.0
2130	4.52	4.77	3.62					4.46	1360.0
2145	4.87	4.77	4.15					4.68	1400.0
2200	5.64	4.78	4.34					4.96	1490.0
2215	5.99	4.78	4.65					5.13	1580.0
2230	6.13	4.78	5.03					5.25	1640.0
2245	6.30	4.78	5.21					5.34	1740.0
2300	6.63	5.25	5.28					5.68	1850.0

STIA. NO.08158970				STORM RAINFALL AND RUNOFF RECORD				1979 WATER YEAR		
WILLIAMSON CREEK AT JIMMY CLAY ROAD, AUSTIN, TEXAS				STORM OF MAY 21-22, 1979				ACCUM.	DISCHARGE	ACCUM.
DATE & TIME				G A G E N U M B E R				WEIGHTED PRECIP.	IN	RUNOFF
				1WMS	2WMS	3WMS		IN.	CFS	IN.
MAY 21										
2330	6.74	5.39	5.34					5.80	2320.0	0.4625
2400	6.82	5.48	5.65					5.93	3350.0	0.5213
MAY 22										
0000	6.82	5.48	5.65					5.93	3350.0	0.5213
0015	6.97	5.79	5.71					6.14	4020.0	0.6459
0100	6.99	5.85	5.75					6.18	4700.0	0.8768
0200	7.05	5.91	5.81					6.24	5550.0	1.1105
0230	7.08	5.94	5.85					6.28	6470.0	1.2467
0245	7.09	5.94	5.85					6.28	6740.0	1.3413
0300	7.10	5.95	5.85					6.29	6720.0	1.4828
0330	7.10	5.95	5.85					6.29	5920.0	1.6490
0400	7.10	5.95	5.85					6.29	4670.0	1.7801
0430	7.10	5.96	5.85					6.29	2900.0	1.8615
0500	7.10	5.96	5.85					6.29	1990.0	1.9313
0545	7.10	5.96	5.85					6.29	1200.0	1.9734
0615	7.10	5.96	5.85					6.29	868.0	1.9978
0645	7.10	5.96	5.85					6.29	657.0	2.0208
0730	7.10	5.96	5.85					6.29	474.0	2.0408
0815	7.10	5.96	5.86					6.29	355.0	2.0558
0900	7.11	5.97	5.86					6.30	276.0	2.0693
1000	7.11	5.97	5.86					6.30	197.0	2.0804
1100	7.11	5.97	5.86					6.30	147.0	2.0907
1230	7.11	5.97	5.87					6.30	104.0	2.0994
1400	7.11	5.98	5.87					6.31	81.0	2.1097
1700	7.12	5.98	5.88					6.31	60.0	2.1181
1900	7.12	5.98	5.88					6.31	46.0	2.1233
2100	7.12	5.98	5.88					6.31	39.0	2.1287
2400	7.12	5.98	5.88					6.31	33.0	2.1343
MAY 23										
0000	7.12	5.98	5.88					6.31	33.0	2.1343
0600	7.12	5.98	5.88					6.31	25.0	2.1455
1200	7.12	5.98	5.88					6.31	20.0	2.1522
1800	7.12	5.98	5.88					6.31	18.0	2.1583
2400	7.12	5.98	5.88					6.31	15.0	2.1608

COLORADO RIVER BASIN

08159000 ONION CREEK AT U.S. HIGHWAY 183 NEAR AUSTIN, TX

LOCATION.--Lat 30°10'40", long 97°41'18", Travis County, Hydrologic Unit 12090205, on right bank at downstream side of downstream bridge on U.S. Highway 183, 2.4 mi (3.9 km) downstream from Williamson Creek, 3.2 mi (5.1 km) southwest of Del Valle, and 7.5 mi (11.7 km) southeast of the State Capitol Building in Austin.

DRAINAGE AREA.--321 mi² (831 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1924 to March 1930, March 1976 to current year. In 1924-30 station was published as "near Del Valle."

GAGE.--Water-stage recorder. Datum of gage is 442.85 ft (134.981 m) State Department of Highways and Public Transportation datum. May 15, 1924, to Mar. 15, 1930, nonrecording gage at highway bridge 1,700 ft (518 m) upstream at 6.42-foot (1.957 m) higher datum.

REMARKS.--Water-discharge records fair. Flow is slightly regulated by several small ponds on main channel and tributaries above station.

AVERAGE DISCHARGE.--8 years (water years 1925-29, 1977-79), 81.6 ft³/s (2.311 m³/s), 3.45 in/yr (88 mm/yr), 59,120 acre-ft/yr (72.9 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 76,000 ft³/s (2,150 m³/s) May 28, 1929, gage height, 30.5 ft (9.30 m), present datum; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1869 occurred about July 3, 1869, stage about 38 ft (11.6 m) from newspaper accounts, and Sept. 9, 1921, stage 38.0 ft (11.58 m) from floodmark, present site and datum.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,500 ft³/s (70.8 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)				
Dec. 31	0900	3,130	88.6	10.95	3.338	Mar. 21	1315	7,090	201	16.79	5.118
Feb. 23	1400	4,700	133	13.39	4.081	Apr. 19	0515	7,840	222	17.49	5.331
Mar. 20	0545	5,060	143	13.99	4.264	May 22	0530	*10,000	283	19.40	5.913

Minimum daily discharge, 1.0 ft³/s (0.028 m³/s) Sept. 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979 MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.9	3.5	8.2	214	27	120	414	856	183	7.6	20	6.4
2	4.3	3.5	8.0	63	25	108	516	485	405	7.3	15	5.4
3	3.7	3.0	8.0	36	32	105	448	370	204	7.0	12	4.5
4	3.6	2.9	8.0	28	64	99	404	310	141	7.1	11	4.3
5	3.6	136	8.0	30	196	87	355	267	166	7.1	9.6	3.5
6	3.5	388	8.0	31	783	82	323	242	176	53	8.0	9.1
7	3.0	31	8.0	37	429	79	295	221	137	34	8.0	6.1
8	3.0	12	7.7	28	322	74	297	194	171	18	6.3	8.2
9	3.0	7.5	7.1	22	250	70	277	182	133	14	6.3	19
10	3.0	5.3	8.0	39	206	68	250	169	92	11	6.1	8.3
11	3.0	4.8	8.0	895	181	69	240	196	78	9.8	10	5.5
12	2.9	4.8	8.0	339	148	66	210	184	69	9.8	28	3.8
13	2.9	4.8	8.0	228	127	62	184	139	64	9.7	16	2.8
14	2.4	4.8	8.0	149	101	59	169	121	56	8.9	10	2.0
15	2.1	6.4	8.0	104	90	55	153	108	50	13	8.2	1.6
16	2.0	26	8.0	94	78	68	144	98	44	13	7.9	1.2
17	2.0	25	8.0	83	70	72	157	92	39	9.0	6.4	1.0
18	2.0	13	8.0	73	70	73	230	86	34	8.0	7.1	23
19	2.0	9.9	8.0	65	72	70	2500	80	29	15	6.5	26
20	2.0	15	8.0	54	72	1290	336	74	24	24	6.4	30
21	2.0	18	8.0	43	74	3630	858	397	19	12	6.3	10
22	2.0	19	7.7	37	70	1280	467	3790	18	11	5.5	7.3
23	2.0	16	7.1	32	1150	719	313	542	15	8.9	4.1	5.7
24	2.0	13	7.1	28	422	596	254	327	14	8.1	4.2	5.0
25	2.3	11	7.1	27	231	527	217	259	13	7.2	5.0	4.7
26	3.8	10	7.1	33	177	464	188	210	11	7.3	5.0	4.0
27	3.8	13	7.1	33	157	408	165	185	11	2320	4.8	3.5
28	4.1	13	8.0	28	141	373	148	172	9.9	426	4.8	3.0
29	3.5	11	8.0	27	---	340	616	160	9.8	101	5.3	2.9
30	3.5	9.8	8.0	27	---	404	478	143	8.7	51	8.9	2.9
31	3.5	---	845	28	---	514	---	163	---	32	7.0	---
TOTAL	91.4	841.0	1079.2	2955	5765	12031	11606	10822	2424.4	3270.8	269.7	220.7
MEAN	2.95	28.0	34.8	95.3	206	388	387	349	80.8	106	8.70	7.36
MAX	4.9	388	845	895	1150	3630	2500	3790	405	2320	28	30
MIN	2.0	2.9	7.1	22	25	55	144	74	8.7	7.0	4.1	1.0
CFSM	.009	.09	.11	.30	.64	1.21	1.21	1.09	.25	.33	.03	.02
IN.	.01	.10	.13	.34	.67	1.39	1.34	1.25	.28	.38	.03	.03
AC-FT	181	1670	2140	5860	11430	23860	23020	21470	4810	6490	535	438

CAL YR 1978	TOTAL	4042.65	MEAN	11.1	MAX	845	MIN	.45	CFSM	.04	IN	.47	AC-FT	8020
WTR YR 1979	TOTAL	51376.20	MEAN	141	MAX	3790	MIN	1.0	CFSM	.44	IN	5.95	AC-FT	101900

COLORADO RIVER BASIN

08159000 ONION CREEK AT U.S. HIGHWAY 183 NEAR AUSTIN, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical and biochemical analyses: October 1976 to current year. Sediment analyses: October 1976 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM- COBALT UNITS)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)
OCT										
11...	1415	2.9	--	--	25.5	--	--	--	--	--
18...	1130	1.8	699	7.9	19.0	0	4.0	8.5	94	.7
NOV										
15...	0850	4.8	600	7.8	19.5	10	4.0	6.8	77	.6
30...	1300	9.9	--	--	16.0	--	--	--	--	--
DEC										
06...	1215	8.0	669	8.0	12.0	5	4.0	10.3	100	.4
JAN										
02...	1320	58	360	7.4	4.5	19	95	12.7	102	2.2
05...	1240	30	--	--	6.5	--	--	--	--	--
FEB										
07...	1340	370	482	7.9	10.0	5	30	11.3	104	.9
14...	1325	100	--	--	16.0	--	--	--	--	--
MAR										
07...	0915	81	524	8.0	14.0	5	10	9.0	90	1.8
29...	1446	333	--	--	19.0	--	--	--	--	--
APR										
05...	1230	311	500	7.8	17.0	5	7.0	9.7	103	.5
MAY										
02...	1558	454	--	--	21.5	--	--	--	--	--
10...	1305	172	460	7.5	23.5	0	6.4	9.0	107	.5
22...	1110	1500	--	--	21.0	--	--	--	--	--
JUN										
11...	1540	60	460	7.8	25.0	5	8.3	8.9	107	.3
21...	1202	20	--	--	30.5	--	--	--	--	--
JUL										
09...	1325	15	480	7.8	30.0	5	3.8	9.2	121	.5
31...	1400	30	--	--	29.5	--	--	--	--	--
AUG										
06...	1440	15	510	7.5	31.0	10	2.2	7.3	97	1.1
SEP										
13...	1440	5.6	--	--	29.0	--	--	--	--	--

DATE	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
OCT										
11...	--	--	--	--	--	--	--	--	--	--
18...	230	30	78	220	8	62	16	61	1.8	3.5
NOV										
15...	200	50	270	220	13	69	11	34	1.0	3.8
30...	--	--	--	--	--	--	--	--	--	--
DEC										
06...	56	K8	K9	260	24	85	12	34	.9	3.6
JAN										
02...	>20000	K20000	100000	140	22	46	5.3	15	.6	3.5
05...	--	--	--	--	--	--	--	--	--	--
FEB										
07...	3100	760	2400	220	22	68	12	10	.3	1.7
14...	--	--	--	--	--	--	--	--	--	--
MAR										
07...	360	15	110	260	53	82	13	15	.4	1.6
29...	--	--	--	--	--	--	--	--	--	--
APR										
05...	200	68	330	250	32	80	13	9.7	.3	1.2
MAY										
02...	--	--	--	--	--	--	--	--	--	--
10...	440	53	400	240	48	70	15	10	.3	1.2
22...	--	--	--	--	--	--	--	--	--	--
JUN										
11...	360	160	210	200	12	59	13	16	.5	1.8
21...	--	--	--	--	--	--	--	--	--	--
JUL										
09...	280	84	180	200	35	65	9.0	18	.6	2.8
31...	--	--	--	--	--	--	--	--	--	--
AUG										
06...	110	28	35	210	35	65	11	22	.7	2.5
SEP										
13...	--	--	--	--	--	--	--	--	--	--

COLORADO RIVER BASIN

08159000 ONION CREEK AT U.S. HIGHWAY 183 NEAR AUSTIN, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	BICARBONATE (MG/L AS HCO3)	CARBONATE (MG/L AS CO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLORIDE, DIS- SOLVED (MG/L AS CL)	FLUORIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	SOLIDS, VOLATILE, SUS- PENDED (MG/L)	NITROGEN, NITRATE TOTAL (MG/L AS N)
OCT										
11...	--	--	--	--	--	--	--	--	--	--
18...	260	0	38	81	.3	10	400	4	2	.06
NOV										
15...	250	0	40	45	.3	10	336	6	1	.27
30...	--	--	--	--	--	--	--	--	--	--
DEC										
06...	290	0	50	45	.3	7.6	380	6	1	.42
JAN										
02...	140	0	38	20	.2	8.1	205	166	18	.78
05...	--	--	--	--	--	--	--	--	--	--
FEB										
07...	240	0	31	18	.2	8.8	268	40	6	.41
14...	--	--	--	--	--	--	--	--	--	--
MAR										
07...	250	0	38	24	.2	6.1	303	12	0	.86
29...	--	--	--	--	--	--	--	--	--	--
APR										
05...	270	0	25	12	.2	9.2	283	11	2	.28
MAY										
02...	--	--	--	--	--	--	--	--	--	--
10...	230	0	25	14	.2	7.3	256	11	6	.18
22...	--	--	--	--	--	--	--	--	--	--
JUN										
11...	230	0	32	16	.3	11	263	14	9	.43
21...	--	--	--	--	--	--	--	--	--	--
JUL										
09...	200	0	38	22	.3	9.9	264	4	4	.48
31...	--	--	--	--	--	--	--	--	--	--
AUG										
06...	210	0	37	23	.3	12	276	13	7	.21
SEP										
13...	--	--	--	--	--	--	--	--	--	--

DATE	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	SEDIMENT, SUS- PENDED (MG/L)	SEDIMENT DIS- CHARGE, SUS- PENDED (T/DAY)
OCT									
11...	--	--	--	--	--	--	--	16	.13
18...	.01	.07	.01	.73	.74	.01	4.5	--	--
NOV									
15...	.02	.29	.03	.34	.37	.03	4.7	--	--
30...	--	--	--	--	--	--	--	25	.67
DEC									
06...	.01	.43	.01	.55	.56	.03	3.2	--	--
JAN									
02...	.03	.81	.03	.57	.60	.15	7.2	--	--
05...	--	--	--	--	--	--	--	50	4.0
FEB									
07...	.02	.43	.05	.25	.30	.06	3.1	--	--
14...	--	--	--	--	--	--	--	54	15
MAR									
07...	.02	.88	.12	.17	.29	.01	--	--	--
29...	--	--	--	--	--	--	--	35	31
APR									
05...	.00	.28	.01	.16	.17	.01	2.5	--	--
MAY									
02...	--	--	--	--	--	--	--	104	127
10...	.00	.18	.01	.26	.27	.02	1.7	--	--
22...	--	--	--	--	--	--	--	476	1930
JUN									
11...	.06	.49	.03	.37	.40	.01	11	--	--
21...	--	--	--	--	--	--	--	34	1.8
JUL									
09...	.06	.54	.04	.07	.11	.01	4.2	--	--
31...	--	--	--	--	--	--	--	72	5.8
AUG									
06...	.02	.23	.00	.24	.24	.01	--	--	--
SEP									
13...	--	--	--	--	--	--	--	22	.33

COLORADO RIVER BASIN

08159000 ONION CREEK AT U.S. HIGHWAY 183 NEAR AUSTIN, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)
OCT 18...	1130	2	100	0	0	0	0
FEB 07...	1340	1	100	0	0	0	20
JUN 11...	1540	1	50	<1	10	0	<0
AUG 06...	1440	2	60	<1	0	0	<10

DATE	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, DIS- SOLVED (UG/L AS ZN)
OCT 18...	0	10	.0	0	0	0
FEB 07...	0	0	.0	1	0	0
JUN 11...	0	7	.0	0	0	<3
AUG 06...	0	2	.2	0	0	<3

DATE	TIME	PCB, TOTAL (UG/L)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLOR- DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI- AZINON, TOTAL (UG/L)	DI- ELDRIN TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)
OCT 18...	1130	.0	.00	.00	.0	.00	.00	.00	.00	.00	.00	.00
FEB 07...	1340	.0	--	.00	.0	.00	.00	.00	.00	.00	.00	.00
JUN 11...	1540	.0	--	.00	.0	.00	.00	.00	.03	.00	.00	.00
AUG 06...	1440	.0	--	.00	.0	.00	.00	.00	.00	.00	.00	.00

DATE	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	MALA- THION, TOTAL (UG/L)	METHYL PARA- THION, TOTAL (UG/L)	METHYL TRI- THION, TOTAL (UG/L)	PARA- THION, TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOTAL TRI- THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
OCT 18...	.00	.00	.00	.00	.00	.00	.00	0	.00	.00	.00	.00
FEB 07...	.00	.00	.00	.00	.00	.00	.00	0	.00	.00	.00	.00
JUN 11...	.00	.00	.00	.00	.00	.00	.00	0	.00	.00	.00	.00
AUG 06...	.00	.00	.00	.00	.00	.00	.00	0	.00	--	--	--

WILBARGER CREEK DRAINAGE BASIN

The location of the data-collection site in the Wilbarger Creek drainage basin are shown in figure 1.

COLORADO RIVER BASIN

08159150 WILBARGER CREEK NEAR PFLUGERVILLE, TX

LOCATION.--Lat 30°27'16", long 97°36'02", Travis County, Hydrologic Unit 12090301, on left bank downstream from county road (Pfluger Lane), 800 ft (240 m) downstream from Farm Road 685, 1.6 mi (2.6 km) northeast of Pfluger-ville, and 1.9 mi (3.1 km) downstream from Missouri-Kansas-Texas Railroad.

DRAINAGE AREA.--4.61 mi² (11.9 km²).

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

Water-quality records: Chemical, biochemical, and pesticide analyses: October 1970 to September 1971.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 670.61 ft (204.402 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--16 years, 1.91 ft³/s (0.054 m³/s), 5.63 in/yr (143 mm/yr), 1,380 acre-ft/yr (1.70 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,760 ft³/s (49.8 m³/s) June 16, 1964, gage height, 6.92 ft (2.109 m); no flow at times most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1894, occurred in September 1921, stage unknown from information by local residents, discharge, 2,300 ft³/s (65.1 m³/s), from Corps of Engineers publication "Flood Plain Information, Williamson Creek, Austin, Texas".

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 940 ft³/s (26.6 m³/s) June 1, gage height, 5.24 ft (1.597 m), no other peak above base of 400 ft³/s (11.3 m³/s); no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.04	3.0	1.0	1.4	15	36	129	.15	.25	.00
2	.00	.00	.04	.91	1.6	1.5	9.1	10	17	.15	.21	.00
3	.00	.00	.04	1.0	2.8	1.8	7.9	7.9	8.5	.13	.15	.00
4	.00	.00	.04	2.3	12	.91	6.5	6.9	5.7	.13	.11	.00
5	.00	.03	.03	3.3	32	1.1	4.4	5.9	20	.13	.11	.00
6	.00	.01	.03	4.2	58	.99	3.3	5.0	12	.33	.09	.00
7	.00	.00	.04	2.8	12	.94	3.5	4.4	5.7	.21	.09	.00
8	.00	.00	.03	1.6	9.1	.79	4.3	3.9	3.8	.18	.09	.00
9	.00	.00	.03	1.7	6.4	.71	3.5	3.4	3.1	.15	.08	.00
10	.00	.00	.03	16	6.0	.83	4.0	3.1	2.9	.15	.06	.00
11	.00	.00	.03	17	5.1	1.1	2.9	2.7	2.0	.13	.05	.00
12	.00	.00	.03	6.0	3.8	.95	1.4	2.4	1.6	.11	.08	.00
13	.00	.00	.03	3.8	3.8	.71	1.1	2.2	1.5	.11	.06	.00
14	.00	.00	.03	2.6	3.6	.64	1.2	2.0	1.4	.11	.03	.00
15	.00	.00	.03	2.6	3.4	.60	.99	1.8	1.2	.09	.03	.00
16	.00	.05	.02	3.1	2.4	5.1	.99	1.7	1.0	.08	.03	.00
17	.00	.06	.02	3.4	1.8	2.5	5.4	1.6	.89	.08	.02	.00
18	.00	.05	.02	4.9	2.1	2.1	6.4	1.6	.79	.08	.01	.00
19	.00	.11	.02	4.2	2.3	1.8	14	1.8	.70	.33	.00	.00
20	.00	.07	.02	3.1	2.5	2.2	11	1.8	.62	.29	.00	.00
21	.00	.21	.02	1.9	2.5	16	4.3	12	.55	.15	.00	.00
22	.00	.25	.02	1.6	2.7	23	3.8	12	.55	.09	.00	.00
23	.00	.23	.02	1.6	4.2	5.4	3.1	4.6	.49	.08	.00	.00
24	.00	.13	.02	1.3	2.6	2.7	2.6	3.6	.43	.05	.00	.00
25	.00	.11	.02	2.0	1.7	2.6	2.2	3.0	.38	.05	.00	.00
26	.00	.08	.02	3.0	1.5	2.6	2.9	2.6	.38	.04	.00	.00
27	.00	.08	.02	1.8	1.6	2.6	2.4	5.4	.33	.28	.00	.00
28	.00	.07	.02	1.3	1.9	2.4	2.2	11	.29	2.7	.00	.00
29	.00	.07	.03	1.6	---	2.6	7.1	8.0	.25	.79	.00	.00
30	.00	.08	.04	1.8	---	12	3.7	6.0	.21	.43	.00	.00
31	.00	---	6.5	1.0	---	18	---	6.5	---	.38	.00	---
TOTAL	.00	1.69	7.33	106.41	190.4	118.57	141.18	180.8	223.26	35.88	1.55	.00
MEAN	.000	.056	.24	3.43	6.80	3.82	4.71	5.83	7.44	1.16	.050	.000
MAX	.00	.25	6.5	17	58	23	15	36	129	28	.25	.00
MIN	.00	.00	.02	.91	1.0	.60	.99	1.6	.21	.04	.00	.00
CFSM	.000	.01	.05	.74	1.48	.83	1.02	1.27	1.61	.25	.01	.000
IN	.00	.01	.06	.86	1.54	.96	1.14	1.46	1.80	.29	.01	.00
AC-FT	.00	3.4	15	211	378	235	280	359	443	71	3.1	.00
CAL YR 1978 TOTAL	50.51											
WTR YR 1979 TOTAL	1007.07											
MEAN	.14											
MAX	14											
MIN	.00											
CFSM	.03											
IN	.41											
AC-FT	100											
2000												

AUSTIN URBAN HYDROLOGY STUDY															
TABLE 13--DAILY AND MONTHLY RAINFALL SUMMARY FOR GAGES NORTH OF THE COLORADO RIVER										PERIOD : 1979 WATER YEAR					
G A G E N U M B E R															
DATE :	1BUL :	2BUL :	1SHL :	2SHL :	4-R :	5-R :	6-R :	1BOG :	1WLN :	2WLN :	3WLN :	4WLN :	5WLN :	1WBL :	
OCT :															
1 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.02 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :
2 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.05 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :
3 :	0.00 :	0.00 :	0.00 :	0.00 :	0.21 :	0.00 :	0.00 :	0.37 :	0.00 :	0.00 :	0.48 :	0.00 :	0.00 :	0.00 :	0.00 :
4 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.01 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :
8 :	0.00 :	0.02 :	0.01 :	0.02 :	0.00 :	0.00 :	0.00 :	0.00 :	0.01 :	0.01 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :
9 :	0.00 :	0.01 :	0.00 :	0.01 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :
11 :	0.00 :	0.01 :	0.00 :	0.00 :	0.01 :	0.00 :	0.00 :	0.00 :	0.00 :	0.04 :	0.00 :	0.00 :	0.00 :	0.00 :	0.08 :
25 :	0.40 :	0.22 :	0.30 :	0.33 :	0.09 :	0.09 :	0.23 :	0.91 :	0.71 :	0.44 :	0.12 :	0.22 :	0.10 :	0.21 :	0.21 :
26 :	0.02 :	0.02 :	0.01 :	0.01 :	0.01 :	0.04 :	0.16 :	0.20 :	0.02 :	0.04 :	0.02 :	0.02 :	0.02 :	0.06 :	0.06 :
27 :	0.01 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :
MTOT :	0.43 :	0.28 :	0.32 :	0.37 :	0.32 :	0.21 :	0.39 :	1.48 :	0.74 :	0.53 :	0.62 :	0.24 :	0.12 :	0.35 :	
NOV :															
5 :	3.31 :	2.97 :	3.01 :	3.50 :	3.47 :	3.70 :	3.56 :	3.34 :	3.33 :	2.99 :	3.16 :	3.11 :	3.13 :	3.17 :	
6 :	0.10 :	0.13 :	0.01 :	0.00 :	0.00 :	0.01 :	0.04 :	0.00 :	0.01 :	0.01 :	0.13 :	0.13 :	0.12 :	0.01 :	
7 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.01 :	0.01 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.01 :	0.00 :	
10 :	0.00 :	0.00 :	0.00 :	0.01 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	
11 :	0.19 :	0.06 :	0.18 :	0.10 :	0.19 :	0.11 :	0.11 :	0.16 :	0.19 :	0.16 :	0.08 :	0.20 :	0.16 :	0.21 :	
12 :	0.02 :	0.01 :	0.01 :	0.00 :	0.00 :	0.01 :	0.00 :	0.01 :	0.02 :	0.00 :	0.01 :	0.01 :	0.01 :	0.02 :	
13 :	0.03 :	0.06 :	0.07 :	0.07 :	0.04 :	0.04 :	0.02 :	0.03 :	0.08 :	0.03 :	0.05 :	0.03 :	0.02 :	0.01 :	
15 :	0.02 :	0.31 :	0.59 :	0.41 :	0.52 :	0.41 :	0.32 :	0.34 :	0.59 :	0.56 :	0.66 :	0.61 :	0.43 :	0.60 :	
16 :	0.01 :	0.53 :	0.44 :	0.45 :	0.44 :	0.48 :	0.34 :	0.50 :	0.51 :	0.37 :	0.45 :	0.44 :	0.39 :	0.58 :	
17 :	1.20 :	0.01 :	0.01 :	0.01 :	0.01 :	0.01 :	0.00 :	0.01 :	0.02 :	0.01 :	0.02 :	0.01 :	0.01 :	0.02 :	
19 :	0.58 :	0.59 :	0.53 :	0.46 :	0.37 :	0.42 :	0.32 :	0.25 :	0.56 :	0.50 :	0.37 :	0.47 :	0.42 :	*0.48 :	
20 :	0.22 :	0.10 :	0.13 :	0.12 :	0.12 :	0.12 :	0.11 :	0.09 :	0.15 :	0.13 :	0.09 :	0.14 :	0.08 :	*0.08 :	
21 :	0.13 :	0.07 :	0.28 :	0.17 :	0.13 :	0.20 :	0.13 :	0.14 :	0.28 :	0.16 :	0.24 :	0.15 :	0.16 :	*0.06 :	
22 :	0.09 :	0.07 :	0.08 :	0.07 :	0.06 :	0.08 :	0.09 :	0.04 :	0.11 :	0.07 :	0.07 :	0.08 :	0.03 :	*0.06 :	
23 :	0.01 :	0.00 :	0.01 :	0.00 :	0.01 :	0.01 :	0.00 :	0.01 :	0.01 :	0.02 :	0.01 :	0.01 :	0.02 :	0.00 :	
24 :	0.01 :	0.04 :	0.05 :	0.02 :	0.02 :	0.00 :	0.00 :	0.03 :	0.03 :	0.04 :	0.04 :	0.02 :	0.03 :	*0.04 :	
25 :	0.01 :	0.02 :	0.02 :	0.02 :	0.00 :	0.01 :	0.01 :	0.04 :	0.01 :	0.02 :	0.01 :	0.02 :	0.02 :	*0.02 :	
26 :	0.12 :	0.22 :	0.35 :	0.29 :	0.21 :	0.26 :	0.26 :	0.20 :	0.41 :	0.33 :	0.17 :	0.24 :	0.27 :	*0.18 :	
27 :	0.09 :	0.13 :	0.17 :	0.12 :	0.12 :	0.08 :	0.03 :	0.01 :	0.14 :	0.15 :	0.09 :	0.14 :	0.10 :	0.10 :	
28 :	0.01 :	0.01 :	0.00 :	0.01 :	0.02 :	0.07 :	0.09 :	0.09 :	0.01 :	0.01 :	0.10 :	0.01 :	0.07 :	0.01 :	
29 :	0.01 :	0.01 :	0.00 :	0.00 :	0.01 :	0.01 :	0.00 :	0.00 :	0.00 :	0.00 :	0.01 :	0.02 :	0.01 :	0.00 :	
30 :	0.00 :	0.00 :	0.00 :	0.01 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.01 :	0.00 :	
MTOT :	6.16 :	5.34 :	5.94 :	5.84 :	5.74 :	6.04 :	5.44 :	5.29 :	6.46 :	5.56 :	5.76 :	5.84 :	5.50 :	5.65 :	
MTOT=MONTHLY TOTALS															
*=ESTIMATED															

AUSTIN URBAN HYDROLOGY STUDY															
TABLE 13-- DAILY AND MONTHLY RAINFALL SUMMARY FOR GAGES NORTH OF THE COLORADO RIVER--CONTINUED PERIOD : 1979 WATER YEAR															
G A G E N U M B E R															
DATE :	18UL :	28UL :	1SHL :	2SHL :	4-R :	5-R :	6-R :	1BOG :	1WLN :	2WLN :	3WLN :	4WLN :	5WLN :	1WBL :	
DEC :															
1 :	0.00 :	0.01 :	0.00 :	0.00 :	0.01 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :
2 :	0.01 :	0.01 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.01 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :
3 :	0.66 :	0.20 :	0.17 :	0.16 :	0.18 :	0.21 :	0.15 :	0.17 :	0.20 :	0.12 :	0.24 :	0.19 :	0.14 :	0.34 :	
4 :	0.00 :	0.00 :	0.00 :	0.01 :	0.01 :	0.01 :	0.00 :	0.00 :	0.00 :	0.01 :	0.00 :	0.00 :	0.04 :	0.00 :	
5 :	0.00 :	0.01 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.01 :	0.01 :	0.00 :	0.00 :	
6 :	0.00 :	0.01 :	0.00 :	0.00 :	0.01 :	0.02 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	
7 :	0.01 :	0.00 :	0.00 :	0.00 :	0.01 :	0.00 :	0.00 :	0.00 :	0.03 :	0.00 :	0.00 :	0.00 :	0.00 :	0.01 :	
8 :	0.01 :	0.00 :	0.01 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.01 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	
9 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.01 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	
11 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.01 :	0.00 :	0.00 :	
12 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.01 :	0.00 :	0.00 :	0.00 :	0.00 :	0.01 :	
14 :	0.03 :	0.03 :	0.03 :	0.04 :	0.04 :	0.04 :	0.04 :	0.05 :	0.03 :	0.04 :	0.03 :	0.03 :	0.02 :	0.03 :	
15 :	0.01 :	0.01 :	0.01 :	0.01 :	0.00 :	0.01 :	0.00 :	0.01 :	0.01 :	0.00 :	0.00 :	0.01 :	0.02 :	0.01 :	
17 :	0.00 :	0.01 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	
27 :	0.01 :	0.03 :	0.06 :	0.00 :	0.02 :	0.00 :	0.00 :	0.00 :	0.04 :	0.04 :	0.02 :	0.05 :	0.01 :	0.03 :	
28 :	0.03 :	0.02 :	0.07 :	0.08 :	0.07 :	0.05 :	0.03 :	0.04 :	0.04 :	0.06 :	0.04 :	0.05 :	0.07 :	0.01 :	
29 :	0.02 :	0.03 :	0.03 :	0.03 :	0.06 :	0.03 :	0.03 :	0.02 :	0.03 :	0.02 :	0.01 :	0.02 :	0.01 :	0.04 :	
30 :	0.13 :	0.03 :	0.15 :	0.06 :	0.18 :	0.10 :	0.09 :	0.10 :	0.17 :	0.08 :	0.15 :	0.10 :	0.07 :	0.00 :	
31 :	2.55 :	2.77 :	2.84 :	2.76 :	2.60 :	2.59 :	* 2.37 :	2.32 :	3.09 :	2.59 :	2.36 :	2.82 :	2.40 :	2.73 :	
MTOT :	3.47 :	3.17 :	3.37 :	3.15 :	3.19 :	3.07 :	2.71 :	2.71 :	3.66 :	2.97 :	2.86 :	3.29 :	2.78 :	3.21 :	
CTOT :	31.02 :	32.46 :	33.11 :	32.88 :	32.45 :	33.41 :	28.12 :	30.86 :	35.85 :	30.61 :	32.72 :	33.12 :	31.69 :	34.16 :	
MTOT=MONTHLY TOTALS															
CTOT=CALENDAR YEAR TOTALS															
*=ESTIMATED															

A U S T I N U R B A N H Y D R O L O G Y S T U D Y															
TABLE 13-- DAILY AND MONTHLY RAINFALL SUMMARY FOR GAGES NORTH OF THE COLORADO RIVER--CONTINUED PERIOD : 1979 WATER YEAR															
G A G E N U M B E R															
DATE	1BUL	2BUL	ISHL	2SHL	4-R	5-R	6-R	1BOG	1WLN	2WLN	3WLN	4WLN	5WLN	1WBL	
JAN															
1	0.00	0.00	0.09	0.07	0.03	0.04	*0.03	0.00	0.12	0.00	0.19	0.00	0.05	0.02	
2	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
4	0.21	0.20	0.24	0.00	0.26	0.26	*0.20	0.25	0.27	0.58	0.23	0.32	0.05	0.21	
5	0.06	0.03	0.05	0.04	0.05	0.06	0.05	0.03	0.09	0.06	0.05	0.06	0.03	0.05	
6	0.10	0.17	0.24	0.15	0.17	0.21	0.18	0.17	0.27	0.05	0.24	0.19	0.24	0.10	
7	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.11	0.01	0.00	0.00	0.12	
10	1.32	1.39	1.13	1.07	1.06	1.13	0.98	0.81	1.35	0.97	0.90	1.07	0.85	1.51	
11	0.00	0.02	0.02	0.02	0.03	0.04	0.02	0.02	0.03	0.02	0.02	0.03	0.03	0.00	
12	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.02	
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	
16	0.01	0.01	0.02	0.00	0.01	0.01	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.01	
17	0.07	0.09	0.09	0.03	0.08	0.06	0.06	0.05	0.10	0.08	0.03	0.08	0.05	0.06	
18	0.05	0.03	0.06	0.09	0.13	0.12	0.12	0.15	0.07	0.08	0.13	0.10	0.13	0.05	
19	0.01	0.07	0.02	0.00	0.02	0.02	0.00	0.01	0.08	0.02	0.00	0.00	0.01	0.02	
20	0.02	0.02	0.03	0.04	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.03	0.03	0.03	
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	
22	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
25	0.14	0.17	0.20	0.17	0.24	0.26	*0.23	*0.19	0.26	0.19	0.17	0.22	0.26	0.16	
26	0.03	0.02	0.01	0.00	0.01	0.01	*0.01	*0.01	0.02	0.01	0.01	0.01	0.00	0.02	
27	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	*0.06	0.00	0.00	0.01	0.00	0.01	0.00	
29	0.09	0.09	0.07	0.07	0.09	0.08	*0.07	0.01	0.11	0.09	0.05	0.07	0.07	0.07	
30	0.02	0.02	0.02	0.05	0.04	0.06	0.05	0.02	0.04	0.01	0.07	0.04	0.05	0.03	
31	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
MTOT	2.23	2.35	2.29	1.80	2.27	2.38	2.02	1.81	2.91	2.30	2.14	2.23	1.90	2.48	
MTOT=MONTHLY TOTALS															
*=ESTIMATED															

AUSTIN URBAN HYDROLOGY STUDY

TABLE 13-- DAILY AND MONTHLY RAINFALL SUMMARY FOR GAGES NORTH OF THE COLORADO RIVER--CONTINUED PERIOD : 1979 WATER YEAR

		G A G E N U M B E R															
DATE		1BUL	2BUL	1SHL	2SHL	4-R	5-R	6-R	1BUG	1WLN	2WLN	3WLN	4WLN	5WLN	1WBL		
FEB																	
1	:	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01		
2	:	0.05	0.05	0.09	0.05	0.09	0.10	0.08	0.10	0.11	0.11	0.09	0.10	0.08	0.05		
3	:	0.31	0.29	0.30	0.32	0.30	0.31	0.28	0.27	0.20	0.26	0.30	0.30	0.28	0.31		
4	:	0.83	0.80	0.86	0.79	0.85	0.70	0.59	0.63	0.93	* 0.83	0.77	0.79	0.73	0.78		
5	:	1.08	0.98	0.99	0.76	0.73	0.72	0.47	0.48	1.14	* 1.01	0.69	0.86	0.58	0.93		
6	:	0.26	0.26	0.32	0.33	0.43	0.43	0.52	0.50	0.31	* 0.28	0.44	0.41	0.44	0.26		
7	:	0.00	0.00	0.00	0.01	0.00	0.00	0.12	0.00	0.00	0.00	0.01	0.00	0.00	0.00		
11	:	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
21	:	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.04	0.01		
22	:	0.01	0.01	0.02	0.01	0.01	0.01	0.00	0.03	0.02	0.01	0.01	0.00	0.04	0.00		
23	:	0.39	0.36	0.30	0.42	0.93	0.91	* 1.25	1.41	0.32	0.39	1.53	1.18	1.26	0.65		
24	:	0.03	0.01	0.00	0.01	0.00	0.02	0.00	0.00	0.03	0.00	0.01	0.00	0.00	0.02		
27	:	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
MTOT	:	2.97	2.77	2.88	2.70	3.35	3.22	3.32	3.43	3.06	2.89	3.85	3.65	3.45	3.02		
MAR																	
1	:	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
2	:	0.26	0.11	0.25	0.06	0.02	* 0.02	* 0.03	0.07	0.22	0.15	0.08	0.07	0.09	0.14		
3	:	0.01	0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01		
10	:	0.22	0.17	0.20	0.17	0.17	* 0.17	* 0.22	0.00	0.24	0.20	0.21	0.20	0.16	0.21		
11	:	0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00		
13	:	0.01	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
15	:	0.08	0.08	0.11	0.11	0.21	0.21	0.21	0.25	0.10	0.11	0.20	0.19	0.20	0.10		
16	:	0.80	0.77	0.56	0.51	0.57	0.50	0.44	0.47	0.96	0.75	0.77	0.63	0.69	0.77		
17	:	0.04	0.03	0.02	0.02	0.02	0.01	0.01	0.01	0.02	0.02	0.01	0.03	0.02	0.04		
18	:	0.01	0.01	0.03	0.02	0.04	0.03	0.00	0.03	0.06	0.04	0.03	0.06	0.04	0.01		
19	:	0.03	0.03	0.08	0.01	0.06	0.03	0.03	0.11	0.08	0.09	0.07	0.07	0.13	0.08		
20	:	0.80	0.76	0.76	0.74	0.53	0.78	0.09	0.57	1.23	0.68	0.54	0.61	0.54	0.82		
21	:	0.51	0.46	0.52	0.51	0.72	0.74	1.23	0.70	0.51	0.45	0.64	0.57	0.68	0.55		
22	:	0.58	0.64	0.69	0.77	0.90	0.93	0.68	0.59	0.75	0.81	0.87	0.81	0.81	0.66		
26	:	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
28	:	0.04	0.02	0.02	0.00	0.01	0.00	0.00	0.00	0.03	0.01	0.00	0.00	0.00	0.04		
29	:	0.12	0.07	0.04	0.00	0.01	0.01	0.00	0.00	0.03	0.01	0.00	0.03	0.01	0.10		
30	:	0.86	0.54	0.52	0.61	0.66	0.79	0.68	0.82	0.70	0.65	0.82	0.78	0.70	0.69		
31	:	0.30	0.28	0.28	0.21	0.18	0.20	0.18	0.06	0.21	0.25	0.20	0.24	0.09	0.26		
MTOT	:	4.71	3.99	4.09	3.76	4.10	4.42	3.80	3.68	5.15	4.23	4.44	4.31	4.18	4.48		

MTOT=MONTHLY TOTALS

*=ESTIMATED

AUSTIN URBAN HYDROLOGY STUDY

TABLE 13--DAILY AND MONTHLY RAINFALL SUMMARY FOR GAGES NORTH OF THE COLORADO RIVER--CONTINUED PERIOD : 1979 WATER YEAR

G A G E N U M B E R															
DATE	1BUL	2BUL	1SHL	2SHL	4-R	5-R	6-R	1BOG	1WLN	2WLN	3WLN	4WLN	5WLN	1WBL	
APR															
1	0.62	0.31	0.36	0.35	0.15	0.34	*0.30	0.14	0.41	0.25	0.18	0.21	0.21	0.44	
2	0.03	0.07	0.06	0.06	0.14	0.21	*0.11	0.08	0.03	0.04	0.08	0.15	0.11	0.05	
3	0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.00	0.01	0.00	
4	0.00	0.00	0.01	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	
6	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
7	0.21	0.13	0.08	*0.09	0.09	0.06	0.04	0.04	0.16	0.09	0.05	0.00	0.08	0.20	
8	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01	0.11	0.00	0.00	
10	0.00	0.00	0.00	*0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	
11	0.01	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01	0.01	0.00	0.02	0.00	0.00	
16	0.17	0.00	0.00	*0.02	0.02	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	
17	0.21	0.37	0.94	*1.04	0.99	1.05	0.98	0.69	0.66	1.04	0.78	0.94	1.13	0.14	
18	0.10	0.16	0.19	*0.47	0.44	0.37	0.30	0.36	0.06	0.04	0.29	0.20	0.21	0.17	
19	0.32	0.16	0.85	*0.13	0.12	0.03	0.01	0.35	0.50	0.81	0.45	0.33	0.59	0.38	
20	0.05	0.05	0.03	*0.15	0.14	0.28	0.32	0.08	0.02	0.00	0.03	0.04	0.04	0.14	
21	0.02	0.02	0.00	*0.02	0.02	0.03	0.04	0.02	0.00	0.00	0.00	0.01	0.01	0.03	
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	
24	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	
29	1.16	1.40	1.22	1.57	1.28	1.53	1.39	1.24	1.18	0.99	1.31	1.26	0.87	1.37	
30	0.03	0.05	0.04	0.06	0.05	0.01	0.00	0.00	0.01	0.01	0.04	0.07	0.07	0.07	
MTOT	2.94	2.74	3.79	3.97	3.46	3.97	3.51	3.00	3.07	3.30	3.24	3.34	3.33	3.01	
MAY															
1	0.86	0.80	0.63	0.52	0.91	1.03	1.02	1.13	0.92	0.70	1.14	0.76	1.05	0.74	
2	0.04	0.02	0.01	0.02	0.03	0.04	0.01	0.01	0.01	0.02	0.00	0.02	0.01	0.03	
3	0.01	0.01	0.02	0.01	0.00	0.00	0.00	0.01	0.02	0.01	0.02	0.01	0.00	0.03	
4	0.01	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
10	0.01	0.01	0.00	0.00	0.01	0.00	0.00	0.01	0.00	0.01	0.00	0.01	0.00	0.05	
11	0.30	0.25	0.67	0.20	0.22	0.20	0.15	0.26	0.64	0.87	0.37	0.26	0.32	0.12	
12	0.00	0.00	0.00	0.01	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
18	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
21	1.30	1.16	2.21	3.44	5.09	7.11	6.85	5.56	1.53	1.86	*5.79	3.78	*6.47	1.44	
22	0.15	0.22	0.28	0.32	0.08	0.45	0.44	0.25	0.21	0.32	0.11	0.25	0.32	0.23	
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.02	0.00	0.00	0.00	0.00	
28	0.25	*0.29	0.16	0.29	0.18	0.12	0.06	*0.08	0.41	0.38	0.29	0.30	0.28	0.27	
29	0.02	*0.02	0.02	0.02	0.01	0.01	0.00	*0.01	0.01	0.02	0.02	0.01	0.01	0.02	
30	0.55	*0.62	0.49	0.54	0.23	0.30	0.15	*0.20	0.42	0.22	0.17	0.47	0.20	0.29	
31	0.01	*0.01	0.01	0.01	0.02	0.01	0.00	*0.01	0.01	0.01	0.00	0.01	0.01	0.00	
MTOT	3.51	3.41	4.50	5.39	6.78	9.27	8.70	7.53	4.21	4.44	7.91	5.88	8.67	3.22	

MTOT=MONTHLY TOTALS

*=ESTIMATED

AUSTIN URBAN HYDROLOGY STUDY															
TABLE 13-- DAILY AND MONTHLY RAINFALL SUMMARY FOR GAGES NORTH OF THE COLORADO RIVER--CONTINUED PERIOD : 1979 WATER YEAR															
G A G E N U M B E R															
DATE :	1BUL :	2BUL :	1SHL :	2SHL :	4-R :	5-R :	6-R :	1BOG :	1WLN :	2WLN :	3WLN :	4WLN :	5WLN :	1WBL :	
JUN :															
1 :	0.68 :	*0.76 :	0.31 :	0.22 :	0.14 :	0.30 :	0.22 :	*0.20 :	0.77 :	0.72 :	0.21 :	0.33 :	0.17 :	0.73 :	
2 :	0.07 :	*0.08 :	0.24 :	0.31 :	0.25 :	0.27 :	0.19 :	*0.18 :	0.19 :	0.16 :	0.18 :	0.04 :	0.23 :	0.09 :	
3 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	*0.04 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	
4 :	0.03 :	*0.04 :	0.04 :	0.13 :	0.05 :	0.06 :	0.06 :	0.00 :	0.03 :	0.05 :	0.07 :	0.06 :	0.06 :	0.03 :	
5 :	0.35 :	*0.39 :	0.36 :	0.37 :	0.59 :	0.51 :	0.50 :	*0.42 :	0.40 :	0.53 :	0.48 :	0.44 :	0.46 :	0.21 :	
6 :	0.00 :	0.00 :	0.00 :	0.01 :	0.01 :	0.01 :	0.00 :	0.01 :	0.01 :	0.02 :	0.02 :	0.03 :	0.01 :	0.00 :	
7 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.01 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	
8 :	0.18 :	0.10 :	0.17 :	0.09 :	0.03 :	0.09 :	0.00 :	0.00 :	0.16 :	0.18 :	0.08 :	0.13 :	0.04 :	0.16 :	
9 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.01 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	
10 :	0.00 :	0.00 :	0.03 :	0.02 :	0.16 :	0.30 :	0.28 :	0.00 :	0.00 :	0.01 :	0.00 :	0.16 :	0.32 :	0.00 :	
25 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.01 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	
MTOT :	1.31 :	1.37 :	1.15 :	1.15 :	1.23 :	1.54 :	1.28 :	0.85 :	1.56 :	1.67 :	1.04 :	1.19 :	1.29 :	1.22 :	
JUL :															
4 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.10 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	
5 :	0.00 :	0.05 :	0.09 :	0.09 :	0.11 :	0.12 :	0.08 :	0.04 :	0.08 :	0.08 :	0.03 :	0.09 :	0.06 :	0.04 :	
6 :	0.35 :	0.47 :	0.94 :	1.30 :	2.23 :	1.98 :	2.67 :	1.65 :	1.25 :	1.88 :	0.81 :	1.97 :	1.32 :	0.33 :	
7 :	0.06 :	0.00 :	0.00 :	0.01 :	0.00 :	0.00 :	0.00 :	0.00 :	0.13 :	0.00 :	0.00 :	0.00 :	0.00 :	0.01 :	
8 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.01 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	
9 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.02 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	
10 :	0.30 :	0.36 :	0.22 :	0.04 :	0.02 :	0.00 :	0.00 :	0.00 :	0.49 :	0.22 :	0.02 :	0.02 :	0.01 :	0.17 :	
11 :	0.00 :	0.01 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.01 :	0.00 :	0.00 :	0.00 :	
14 :	0.04 :	0.15 :	0.15 :	0.05 :	0.39 :	0.31 :	0.25 :	*0.09 :	0.08 :	0.26 :	0.01 :	0.38 :	0.09 :	0.14 :	
18 :	0.04 :	0.02 :	0.00 :	0.00 :	0.01 :	0.02 :	0.00 :	0.00 :	0.06 :	0.00 :	0.00 :	0.00 :	0.00 :	0.08 :	
19 :	1.41 :	1.96 :	2.57 :	3.68 :	3.05 :	4.04 :	4.32 :	4.91 :	0.54 :	0.27 :	1.61 :	2.12 :	2.60 :	2.94 :	
20 :	0.01 :	0.13 :	0.27 :	0.00 :	0.12 :	0.38 :	0.37 :	0.00 :	0.38 :	0.02 :	0.01 :	0.00 :	0.02 :	0.06 :	
21 :	0.00 :	0.01 :	0.00 :	0.00 :	0.00 :	0.01 :	0.00 :	0.00 :	0.01 :	0.00 :	0.00 :	0.00 :	0.00 :	0.25 :	
22 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.01 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	
26 :	0.11 :	0.22 :	0.31 :	0.78 :	0.57 :	1.84 :	1.53 :	*1.80 :	*0.12 :	0.11 :	0.35 :	0.35 :	0.31 :	0.24 :	
27 :	2.23 :	2.22 :	1.88 :	2.42 :	2.95 :	4.07 :	4.09 :	*4.00 :	*2.25 :	1.99 :	2.81 :	2.35 :	3.30 :	1.84 :	
28 :	0.01 :	0.01 :	0.00 :	0.01 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	
31 :	0.00 :	0.04 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.00 :	0.01 :	0.00 :	0.00 :	0.00 :	
MTOT :	4.56 :	5.65 :	6.43 :	8.38 :	9.45 :	12.79 :	13.33 :	12.49 :	5.49 :	4.83 :	5.67 :	7.28 :	7.71 :	6.10 :	
MTOT=MONTHLY TOTALS															
*=ESTIMATED															

AUSTIN URBAN HYDROLOGY STUDY															
TABLE 13-- DAILY AND MONTHLY RAINFALL SUMMARY FOR GAGES NORTH OF THE COLORADO RIVER--CONTINUED PERIOD : 1979 WATER YEAR															
G A G E N U M B E R															
DATE	1BUL	2BUL	1SHL	2SHL	4-R	5-R	6-R	1BOG	1WLN	2WLN	3WLN	4WLN	5WLN	1WBL	
AUG															
1	0.04	0.12	0.00	0.00	0.00	0.00	0.00	0.00	*0.04	0.04	0.02	0.00	0.00	0.17	
2	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	
11	0.55	0.50	0.42	0.34	0.42	0.43	0.37	*0.25	0.49	0.48	0.39	0.41	*0.63	0.78	
12	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
15	0.00	0.01	0.00	0.09	0.22	0.44	0.35	*0.23	0.00	0.00	0.00	0.08	0.00	0.03	
16	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
17	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
18	0.00	0.00	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	
19	0.00	0.00	0.00	0.26	0.09	0.18	0.16	*0.11	0.00	0.00	0.00	0.01	0.00	0.00	
20	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
23	0.06	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	
25	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
27	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
29	0.00	0.00	0.00	0.00	0.00	0.05	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
31	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
MTOT	0.65	0.66	0.54	0.71	0.73	1.16	0.93	0.59	0.53	0.55	0.41	0.51	0.63	1.03	
SEPT															
3	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	
4	0.02	0.02	0.00	0.00	0.06	0.00	0.00	0.00	*0.63	0.48	0.00	0.00	0.05	0.01	
5	0.27	0.24	0.93	0.55	0.15	0.16	0.07	0.03	*1.78	1.36	0.02	0.52	0.01	0.30	
6	0.00	0.20	0.04	0.08	0.19	0.19	0.22	0.08	0.00	0.00	0.30	0.03	0.77	0.02	
7	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
17	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
18	0.77	0.58	0.85	0.74	0.83	0.89	0.83	0.75	*0.98	0.75	0.75	0.85	0.79	0.71	
19	0.40	0.41	0.47	0.47	0.48	0.54	0.57	0.52	*0.67	0.50	0.55	0.51	0.52	0.42	
20	0.00	0.00	0.01	0.00	0.01	0.00	0.00	0.00	*0.01	0.01	0.00	0.02	0.00	0.00	
21	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
MTOT	1.46	1.45	2.30	1.85	1.73	1.81	1.70	1.38	4.07	3.10	1.62	1.95	2.14	1.46	
WTOT	34.40	33.18	37.60	39.07	42.35	49.88	47.13	44.24	40.91	36.37	39.56	39.71	41.70	35.23	
MTOT=MONTHLY TOTALS															
WTOT=WATER YEAR TOTAL															
*=ESTIMATED															

AUSTIN URBAN HYDROLOGY STUDY

TABLE 14--DAILY AND MONTHLY RAINFALL SUMMARY FOR GAGES SOUTH OF THE COLORADO RIVER

PERIOD : 1979 WATER YEAR

GAGE NUMBER

DATE	1BEE	1BAR	2BAR	1BOL	1-ON	2-ON	1BER	2BER	1LBR	1SLA	2SLA	1BGS	1WMS	2WMS	3WMS
OCT															
3	0.00	0.00	0.00	0.00	*****	*****	*****	*****	*****	0.02	0.28	0.35	0.11	0.10	0.06
4	0.00	0.00	0.00	0.00	*****	*****	*****	*****	*****	0.00	0.01	0.01	0.01	0.00	0.01
11	0.00	0.02	0.00	0.00	*****	*****	*****	*****	*****	0.00	0.00	0.00	0.00	0.00	0.00
25	0.20	0.27	0.24	0.66	*****	*****	*****	*****	*****	0.35	0.27	0.39	0.22	0.71	0.22
26	0.04	0.18	0.06	0.18	*****	*****	*****	*****	*****	0.05	0.05	0.05	0.04	0.04	0.05
MTOT	0.24	0.47	0.30	0.84	*****	*****	*****	*****	*****	0.42	0.61	0.80	0.38	0.85	0.34
NOV															
5	3.52	3.13	3.67	4.62	*****	*****	*****	*****	*****	3.51	4.01	4.09	3.53	4.31	3.78
6	0.00	0.04	0.06	0.01	*****	*****	*****	*****	*****	0.08	0.02	0.02	0.07	0.09	0.02
7	0.01	0.00	0.00	0.00	*****	*****	*****	*****	*****	0.00	0.00	0.01	0.00	0.00	0.01
8	0.00	0.00	0.00	0.00	*****	*****	*****	*****	*****	0.01	0.00	0.00	0.01	0.02	0.00
11	0.12	0.12	0.15	0.10	*****	*****	*****	*****	*****	0.31	0.22	0.11	0.14	* 0.13	* 0.15
12	0.01	0.01	0.01	0.01	*****	*****	*****	*****	*****	0.01	0.00	0.01	0.01	* 0.01	* 0.01
13	0.06	0.00	0.04	0.03	*****	*****	*****	*****	*****	0.01	0.06	0.11	0.05	* 0.05	* 0.06
15	0.40	1.13	0.62	0.40	*****	*****	*****	*****	*****	0.43	0.65	0.46	0.74	* 0.73	* 0.82
16	0.51	0.36	0.51	0.45	*****	*****	*****	*****	*****	0.61	0.64	0.52	0.51	* 0.49	* 0.56
17	0.01	0.01	0.01	0.01	*****	*****	*****	*****	*****	0.01	0.01	0.01	0.01	* 0.01	* 0.01
19	0.41	0.27	0.42	0.37	*****	*****	*****	*****	*****	0.51	0.43	0.38	0.47	* 0.47	* 0.52
20	0.08	0.23	0.19	0.19	*****	*****	*****	*****	*****	0.23	0.18	0.18	0.23	* 0.23	* 0.26
21	0.12	0.11	0.09	0.19	*****	*****	*****	*****	*****	0.20	0.12	0.17	0.14	* 0.13	* 0.15
22	0.09	0.06	0.06	0.10	*****	*****	*****	*****	*****	0.05	* 0.07	0.09	0.07	* 0.08	* 0.08
23	0.01	0.01	0.01	0.00	*****	*****	*****	*****	*****	0.01	* 0.01	0.01	0.02	* 0.02	* 0.07
24	0.01	0.00	0.02	0.01	*****	*****	*****	*****	*****	0.01	* 0.01	0.00	0.04	* 0.05	* 0.04
25	0.01	0.02	0.02	0.04	*****	*****	*****	*****	*****	0.04	* 0.06	0.01	0.02	* 0.02	* 0.02
26	0.18	0.02	0.07	0.34	*****	*****	*****	*****	*****	0.07	* 0.10	0.26	0.10	* 0.10	* 0.11
27	0.17	0.20	0.13	0.01	*****	*****	*****	*****	*****	0.08	* 0.11	0.01	0.05	* 0.05	0.06
28	0.01	0.00	0.00	0.11	*****	*****	*****	*****	*****	0.00	0.13	0.10	0.01	* 0.02	0.01
29	0.00	0.00	0.02	0.00	*****	*****	*****	*****	*****	0.01	0.01	0.01	0.02	* 0.02	0.02
30	0.00	0.00	0.00	0.00	*****	*****	*****	*****	*****	0.02	0.00	0.00	0.00	0.00	0.00
MTOT	5.75	5.72	6.10	6.99	*****	*****	*****	*****	*****	6.21	6.84	6.56	6.24	7.03	6.76

MTOT=MONTHLY TOTALS

*=ESTIMATED

AUSTIN URBAN HYDROLOGY STUDY

TABLE 14-- DAILY AND MONTHLY RAINFALL SUMMARY FOR GAGES SOUTH OF THE COLORADO RIVER--CONTINUED

PERIOD : 1979 WATER YEAR

G A G E N U M B E R

DATE	1BEE	1BAR	2BAR	1BOL	1-ON	2-ON	1BER	2BER	1LBR	1SLA	2SLA	1BGS	1WMS	2WMS	3WMS
DEC															
2	0.00	0.01	0.01	0.00	*****	*****	*****	*****	*****	0.00	0.00	0.01	0.00	0.00	0.00
3	0.24	0.18	0.28	0.23	*****	*****	*****	*****	*****	0.33	0.18	0.21	0.21	0.26	0.36
4	0.00	0.00	0.00	0.01	*****	*****	*****	*****	*****	0.02	0.01	0.01	0.01	0.01	0.00
5	0.00	0.00	0.01	0.00	*****	*****	*****	*****	*****	0.00	0.01	0.00	0.00	0.00	0.00
6	0.04	0.00	0.00	0.02	*****	*****	*****	*****	*****	0.00	0.05	0.01	0.00	0.00	0.03
7	0.03	0.03	0.01	0.02	*****	*****	*****	*****	*****	0.06	0.02	0.02	0.04	0.05	0.04
8	0.00	0.01	0.00	0.00	*****	*****	*****	*****	*****	0.02	0.01	0.01	0.01	0.01	0.01
9	0.00	0.00	0.00	0.00	*****	*****	*****	*****	*****	0.01	0.00	0.00	0.00	0.00	0.01
13	0.00	0.00	0.01	0.01	*****	*****	*****	*****	*****	0.00	0.01	0.00	0.00	0.00	0.00
14	0.05	0.06	0.04	0.07	*****	*****	*****	*****	*****	0.06	0.08	0.08	0.06	0.06	0.06
15	0.00	0.00	0.01	0.00	*****	*****	*****	*****	*****	0.00	0.01	0.00	0.01	0.01	0.01
17	0.00	0.00	0.00	0.00	*****	*****	*****	*****	*****	0.01	0.00	0.00	0.00	0.00	0.00
27	0.00	0.02	0.01	0.00	*****	*****	*****	*****	*****	0.02	0.00	0.00	0.00	*0.02	0.00
28	0.05	0.05	0.03	0.09	*****	*****	*****	*****	*****	0.07	0.07	0.07	0.09	*0.04	*0.08
29	0.03	0.01	0.05	0.02	*****	*****	*****	*****	*****	0.03	0.04	0.02	0.04	*0.01	*0.02
30	0.09	0.14	0.01	0.07	*****	*****	*****	*****	*****	0.08	0.04	0.11	0.04	*0.14	*0.13
31	2.98	2.26	2.86	2.51	*****	*****	*****	*****	*****	2.17	2.43	2.09	2.80	*1.85	*2.49
MTOT	3.51	2.77	3.35	3.05	*****	*****	*****	*****	*****	2.88	2.96	2.64	3.31	2.46	3.24
CTOT	31.64	28.28	33.16	35.14	*****	*****	*****	*****	*****	*****	*****	29.84	32.09	33.83	*****
JAN															
1	0.14	0.10	0.09	0.29	*****	*****	*****	*****	*****	0.25	0.32	0.16	0.19	*0.08	*0.19
2	0.00	0.01	0.00	0.00	*****	*****	*****	*****	*****	0.00	0.00	0.00	*0.01	*0.01	0.00
4	0.20	0.15	0.19	0.24	*****	*****	*****	*****	*****	0.32	*0.20	0.24	*0.15	*0.12	*0.29
5	0.10	0.09	0.07	0.06	*****	*****	*****	*****	*****	0.13	*0.07	0.05	*0.10	*0.07	*0.06
6	0.24	0.09	0.24	0.24	*****	*****	*****	*****	*****	0.02	*0.12	0.27	*0.09	*0.08	*0.32
7	0.03	0.15	0.01	0.03	*****	*****	*****	*****	*****	0.15	*0.09	0.03	*0.15	*0.12	*0.04
10	1.29	1.78	*1.80	1.07	*****	*****	*****	*****	*****	*2.72	*1.45	1.17	*1.88	*1.46	*1.65
11	0.04	0.06	*0.10	0.04	*****	*****	*****	*****	*****	*0.08	0.01	0.01	0.07	0.04	*0.05
12	0.00	0.01	0.01	0.00	*****	*****	*****	*****	*****	0.02	0.02	0.00	0.02	0.01	*0.02
13	0.00	0.00	0.00	0.00	*****	*****	*****	*****	*****	0.02	0.00	0.00	0.00	0.00	0.00
16	0.01	0.01	0.00	0.02	*****	*****	*****	*****	*****	0.00	0.01	0.02	0.01	0.02	*0.01
17	0.06	0.01	0.06	0.06	*****	*****	*****	*****	*****	0.01	0.10	0.08	0.08	0.09	*0.07
18	0.04	0.03	0.03	0.15	*****	*****	*****	*****	*****	0.06	0.05	0.12	0.04	0.12	*0.03
19	0.00	0.01	0.02	0.00	*****	*****	*****	*****	*****	0.04	0.02	0.05	0.01	0.01	*0.01
20	0.02	0.00	0.02	0.02	*****	*****	*****	*****	*****	0.04	*0.01	0.01	0.02	0.02	*0.02
21	0.00	0.00	0.00	0.00	*****	*****	*****	*****	*****	0.02	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	*****	*****	*****	*****	*****	0.01	0.00	0.00	0.00	0.00	0.00
25	0.17	0.10	0.21	0.26	*****	*****	*****	*****	*****	0.00	*0.28	0.27	0.25	0.31	*0.22
26	0.02	0.01	0.03	0.02	*****	*****	*****	*****	*****	0.00	*0.01	0.01	0.03	0.02	*0.02
27	0.00	0.00	0.00	0.00	*****	*****	*****	*****	*****	0.22	0.00	0.00	0.00	0.00	0.00
29	0.10	0.13	0.10	0.13	*****	*****	*****	*****	*****	0.00	*0.13	0.13	0.14	0.14	*0.12
30	0.05	0.03	0.06	0.04	*****	*****	*****	*****	*****	0.04	*0.05	0.05	0.09	0.05	*0.08
31	0.00	0.00	0.00	0.00	*****	*****	*****	*****	*****	0.01	0.00	0.00	0.09	0.00	0.08
MTOT	2.51	2.77	3.04	2.67	*****	*****	*****	*****	*****	4.16	2.94	2.67	3.42	2.77	3.28

MTOT=MONTHLY TOTALS

CTOT=CALENDAR YEAR TOTALS

*=ESTIMATED

AUSTIN URBAN HYDROLOGY STUDY

TABLE 14-- DAILY AND MONTHLY RAINFALL SUMMARY FOR GAGES SOUTH OF THE COLORADO RIVER--CONTINUED

PERIOD : 1979 WATER YEAR

G A G E N U M B E R																
DATE	1BEE	1BAR	2BAR	1BOL	1-ON	2-ON	1BER	2BER	1LBR	1SLA	2SLA	1BGS	1WMS	2WMS	3WMS	
FEB																
2	0.06	0.08	0.07	0.13	*****	*****	*****	*****	*****	0.13	0.11	0.13	0.10	0.13	* 0.09	
3	0.32	0.36	0.33	0.34	*****	*****	*****	*****	*****	0.35	0.34	0.32	0.33	0.34	* 0.31	
4	0.80	0.78	0.81	0.73	*****	*****	*****	*****	*****	0.86	0.73	0.67	0.80	0.71	* 0.74	
5	0.85	0.95	0.82	0.71	*****	*****	*****	*****	*****	0.88	0.68	0.70	0.75	0.75	* 0.70	
6	0.32	0.21	0.33	0.56	*****	*****	*****	*****	*****	0.27	0.53	0.65	0.37	0.64	* 0.34	
17	0.00	0.00	0.00	0.06	*****	*****	*****	*****	*****	0.00	0.00	0.00	0.00	0.00	0.00	
20	0.01	0.00	0.00	0.00	*****	*****	*****	*****	*****	0.00	0.00	0.00	0.00	0.00	0.00	
21	0.00	0.00	0.00	0.01	*****	*****	*****	*****	*****	0.00	0.00	0.01	0.00	0.00	0.00	
22	0.03	0.00	0.00	0.01	*****	*****	*****	*****	*****	0.00	0.00	0.01	0.02	0.01	0.05	
23	0.95	0.74	1.20	1.93	*****	*****	*****	*****	*****	1.68	0.90	2.24	1.51	1.99	1.41	
MTOT	3.36	3.12	3.56	4.48	*****	*****	*****	*****	*****	4.17	3.29	4.73	3.88	4.57	3.64	
MAR																
2	0.11	0.24	0.15	0.13	*****	*****	*****	*****	*****	0.16	0.09	0.09	0.13	0.10	0.14	
10	0.19	0.16	0.15	0.20	*****	*****	*****	*****	*****	0.20	0.18	0.19	0.18	0.20	0.19	
11	0.00	0.00	0.00	0.01	*****	*****	*****	*****	*****	0.01	0.00	0.00	0.00	0.01	0.00	
13	0.01	0.00	0.00	0.00	*****	*****	*****	*****	*****	0.00	0.00	0.01	0.00	0.00	0.00	
15	0.10	0.20	0.23	0.25	*****	*****	*****	*****	*****	0.27	0.30	0.33	0.24	0.34	0.22	
16	0.43	0.62	0.54	0.42	*****	*****	*****	*****	*****	0.52	0.35	0.32	0.54	0.51	0.57	
17	0.02	0.03	0.04	0.00	*****	*****	*****	*****	*****	0.05	0.03	0.01	0.04	0.02	0.05	
18	0.01	0.00	0.01	0.04	*****	*****	*****	*****	*****	0.01	0.01	0.02	0.01	0.02	0.01	
19	0.03	1.14	0.10	0.10	*****	*****	*****	*****	*****	0.55	0.11	0.10	0.15	0.19	0.24	
20	0.89	1.13	0.77	0.92	*****	*****	*****	*****	*****	0.94	0.85	0.81	0.89	1.02	* 0.92	
21	0.57	0.47	0.55	0.71	*****	*****	*****	*****	*****	0.71	0.82	0.60	0.75	0.77	* 0.78	
22	0.75	0.36	0.74	0.74	*****	*****	*****	*****	*****	0.60	* 0.77	0.44	0.73	0.54	* 0.75	
28	0.03	0.00	0.02	0.00	*****	*****	*****	*****	*****	0.03	* 0.02	0.01	0.02	0.02	* 0.02	
29	0.06	0.02	0.05	0.01	*****	*****	*****	*****	*****	0.06	* 0.07	* 0.01	0.07	0.01	* 0.07	
30	0.54	0.61	0.63	0.87	*****	*****	*****	*****	*****	0.45	* 0.55	* 0.40	0.53	0.60	* 0.53	
31	0.29	0.28	0.33	0.27	*****	*****	*****	*****	*****	0.25	* 0.39	* 0.20	0.37	0.31	* 0.37	
MTOT	4.03	5.26	4.31	4.67	*****	*****	*****	*****	*****	4.81	4.54	3.54	4.65	4.66	4.86	

MTOT=MONTHLY TOTALS

*=ESTIMATED

AUSTIN URBAN HYDROLOGY STUDY

TABLE 14-- DAILY AND MONTHLY RAINFALL SUMMARY FOR GAGES SOUTH OF THE COLORADO RIVER--CONTINUED

PERIOD : 1979 WATER YEAR

DATE	1BEE	1BAR	2BAR	1BOL	1-ON	2-ON	1BER	2BER	1LBR	1SLA	2SLA	1BGS	1WMS	2WMS	3WMS
APR															
1	0.32	0.64	0.23	0.11	*****	*****	*****	*****	*****	0.61	*0.13	*0.10	0.12	0.15	*0.12
2	0.06	0.08	0.12	0.10	*****	*****	*****	*****	*****	0.11	*0.12	*0.08	0.12	0.12	*0.12
3	0.00	0.01	0.01	0.01	*****	*****	*****	*****	*****	0.00	0.00	0.00	0.00	0.00	0.00
4	0.01	0.00	0.00	0.00	*****	*****	*****	*****	*****	0.02	0.01	0.01	0.01	0.02	0.01
6	0.00	0.00	0.00	0.00	*****	*****	*****	*****	*****	0.00	0.00	0.00	0.02	0.00	0.00
7	0.14	0.09	0.17	0.07	*****	*****	*****	*****	*****	0.25	0.14	0.07	0.18	0.09	0.24
8	0.00	0.00	0.01	0.00	*****	*****	*****	*****	*****	0.00	0.01	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	*****	*****	*****	*****	*****	0.01	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	*****	*****	*****	*****	*****	0.00	0.00	0.01	0.00	0.00	0.00
16	0.00	0.28	0.22	*0.16	*****	*****	*****	*****	*****	0.37	*0.01	0.02	0.01	0.19	0.00
17	0.56	0.11	0.57	*0.52	*****	*****	*****	*****	*****	0.40	*0.28	0.59	0.34	0.62	0.47
18	0.29	0.55	1.28	*1.24	*****	*****	*****	*****	*****	2.07	*2.61	1.81	3.18	1.46	2.29
19	0.02	0.30	0.06	*0.02	*****	*****	*****	*****	*****	0.08	*0.08	0.04	0.09	0.04	0.06
20	0.69	1.40	1.64	*0.30	*****	*****	*****	*****	*****	0.73	*0.47	0.28	0.56	0.35	1.36
21	0.10	0.34	0.16	*0.25	*****	*****	*****	*****	*****	0.41	*0.22	0.31	0.27	0.29	0.22
22	0.00	0.00	0.00	0.00	*****	*****	*****	*****	*****	0.00	*0.01	0.00	0.01	0.00	0.01
29	1.07	1.44	1.27	1.77	*****	*****	*****	*****	*****	1.22	1.13	1.26	1.46	1.31	1.09
30	0.01	0.01	0.00	0.01	*****	*****	*****	*****	*****	0.01	0.00	0.00	0.01	0.00	0.01
MTOT	3.49	5.25	5.74	4.56	*****	*****	*****	*****	*****	6.29	5.22	4.58	6.38	4.64	6.00
MAY															
1	0.57	0.66	0.60	0.83	*****	*****	*****	*****	*****	0.82	0.92	0.90	0.86	0.82	0.64
2	0.02	0.02	0.02	0.03	*****	*****	*****	*****	*****	0.09	0.05	0.00	0.07	0.02	0.09
3	0.03	0.02	0.04	0.00	*****	*****	*****	*****	*****	0.04	0.00	0.07	0.01	0.02	0.05
10	0.04	0.00	0.02	0.01	*****	*****	*****	*****	*****	0.19	0.00	0.00	0.04	0.00	0.03
11	0.20	*0.45	0.19	0.27	*****	*****	*****	*****	*****	0.09	*0.49	0.54	0.12	0.32	0.14
12	0.00	0.00	0.01	0.00	*****	*****	*****	*****	*****	0.00	0.00	0.00	0.01	0.00	0.01
21	2.80	1.90	4.82	6.66	*****	0.33	*****	3.23	*****	*1.75	4.62	3.75	6.82	5.48	5.65
22	0.34	0.16	0.25	0.53	*****	0.00	*****	0.22	*****	*0.36	0.42	0.40	0.30	0.50	0.23
27	0.02	0.01	0.01	0.00	*****	0.00	*****	0.01	*****	0.00	0.01	0.01	0.00	0.00	0.01
28	0.15	0.04	0.13	0.07	*****	0.00	*****	0.08	*****	0.00	0.03	0.07	0.09	0.08	0.09
29	0.02	0.00	0.01	0.00	*****	0.00	*****	0.03	*****	*0.01	0.02	0.03	0.01	0.02	0.02
30	0.85	0.01	0.34	0.37	*****	0.00	*****	0.66	*****	*0.20	0.81	0.70	0.45	0.62	0.54
31	0.00	0.00	0.02	0.02	*****	0.00	*****	0.01	*****	0.00	0.00	0.01	0.01	0.01	0.01
MTOT	5.04	3.27	6.46	8.79	*****	*****	*****	*****	*****	3.55	7.37	6.48	8.79	7.89	7.51

MTOT=MONTHLY TOTALS

*=ESTIMATED

AUSTIN URBAN HYDROLOGY STUDY

TABLE 14-- DAILY AND MONTHLY RAINFALL SUMMARY FOR GAGES SOUTH OF THE COLORADO RIVER--CONTINUED

PERIOD : 1979 WATER YEAR

		G A G E N U M B E R														
DATE		1BEE	1BAR	2BAR	1BOL	1-ON	2-ON	1BER	2BER	1LBR	1SLA	2SLA	1BGS	1WMS	2WMS	3WMS
JUN																
1		0.54	0.91	0.09	1.28	*****	*1.20	*****	1.19	*****	*0.30	1.23	0.68	1.22	0.52	1.22
2		0.28	0.04	0.06	0.42	*****	*0.30	*****	0.31	*****	*0.02	0.40	0.45	0.27	0.49	0.18
3		0.00	0.00	0.00	0.00	*****	0.00	*****	0.00	*****	0.00	0.00	0.00	0.00	0.01	0.00
4		0.04	0.06	0.18	0.07	*****	*0.12	*****	0.12	*****	*0.01	0.13	0.07	0.08	0.08	0.20
5		*0.25	0.22	0.28	0.39	*****	0.50	*****	0.52	*****	*0.02	0.42	0.30	0.37	0.34	0.33
6		0.00	0.00	0.00	0.00	*****	0.00	*****	0.00	*****	0.00	0.00	0.00	0.02	0.00	0.01
8		0.44	0.38	0.12	0.78	0.07	*0.04	0.42	0.11	0.00	0.08	0.02	0.56	0.06	0.92	0.04
10		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26		0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MTOT		1.55	1.61	0.73	2.94	*****	2.16	*****	2.29	*****	0.43	2.20	2.06	2.02	2.36	1.98
JUL																
5		0.08	0.00	0.07	0.08	0.00	*0.12	0.03	0.08	0.12	0.03	0.07	0.06	0.05	0.00	0.07
6		0.67	1.14	0.76	1.21	0.81	*2.32	1.33	1.43	2.32	0.82	1.74	1.03	1.19	0.87	1.27
7		0.00	0.00	0.33	0.27	0.87	0.00	0.30	0.15	0.00	0.01	0.20	0.10	0.01	0.38	0.15
10		0.02	0.25	0.07	0.00	0.07	*0.06	0.17	0.10	0.06	0.86	0.03	0.00	0.06	0.00	0.73
11		0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00
13		0.00	0.00	0.00	0.00	0.00	*0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14		0.48	0.03	0.00	0.12	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.45	0.00	0.12	0.00
15		0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00
17		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00
18		0.08	1.00	0.15	0.00	0.54	*0.10	0.37	0.11	0.10	0.46	0.11	0.00	0.11	0.00	0.22
19		2.54	1.69	2.12	1.39	0.29	*0.09	0.57	0.07	0.09	0.40	0.14	0.22	0.22	0.28	0.45
20		0.08	0.18	0.35	0.30	0.74	*0.08	0.09	0.04	0.08	0.96	0.18	0.03	0.45	0.03	0.93
21		0.00	0.00	0.01	0.02	0.00	0.00	0.00	0.00	0.00	0.03	0.01	0.00	0.02	0.01	0.01
26		0.52	0.00	0.31	0.20	0.04	*0.03	0.02	0.00	0.03	0.00	0.07	0.06	0.17	0.11	0.22
27		*4.00	2.01	6.06	4.36	2.56	*2.56	*3.00	*3.47	*2.56	3.54	5.13	4.74	3.59	5.65	2.59
28		0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.01	0.04	0.00	0.02	0.00	0.00
31		*0.03	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.06	0.00	0.00
MTOT		8.51	6.30	10.30	7.96	6.00	5.40	5.88	5.45	5.36	7.12	7.78	6.69	5.97	7.45	6.64

MTOT=MONTHLY TOTALS

*=ESTIMATED

AUSTIN URBAN HYDROLOGY STUDY

TABLE 14-- DAILY AND MONTHLY RAINFALL SUMMARY FOR GAGES SOUTH OF THE COLORADO RIVER--CONTINUED

PERIOD : 1979 WATER YEAR

DATE		GAGE NUMBER														
		1BEE	1BAR	2BAR	1BOL	1-ON	2-ON	1BER	2BER	1LBR	1SLA	2SLA	1BGS	1WMS	2WMS	3WMS
AUG																
1		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.04
11		0.47	1.53	0.69	0.50	1.51	1.23	1.18	0.94	1.08	1.62	0.80	0.81	0.83	0.86	0.98
12		0.00	0.00	0.00	0.00	0.03	0.03	0.00	0.00	0.01	0.00	0.01	0.00	0.01	0.21	0.30
14		0.00	0.04	0.78	0.00	0.00	0.41	0.52	0.08	0.16	0.27	0.09	0.00	0.03	0.00	0.07
15		0.92	0.00	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01	0.56	0.00
16		0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18		0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.01	0.00	0.00	0.02	0.00	0.00	0.00
23		0.03	0.06	0.33	0.00	0.05	0.11	0.05	0.34	0.12	0.22	0.13	0.05	0.35	0.00	0.68
24		0.00	0.21	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00
25		0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27		0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29		0.04	0.00	0.11	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.24	0.07	0.14	0.12
MTOT		1.46	1.84	2.12	0.70	1.59	1.81	2.00	1.36	1.43	2.15	1.09	1.12	1.30	1.57	1.89
SEPT																
2		0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.01	0.01	0.02	0.00	0.00	0.00	0.00	0.00
4		0.00	1.18	0.06	0.00	0.00	0.00	0.04	0.00	0.00	0.54	0.00	0.00	0.00	0.00	0.97
5		0.00	0.27	0.13	0.58	0.06	0.08	1.65	0.94	0.00	0.37	0.85	0.38	0.10	1.01	0.59
6		0.02	0.00	0.00	0.01	0.00	0.00	0.24	0.00	0.02	0.00	0.00	0.00	0.04	0.00	0.02
7		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00
8		0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.00	0.00	0.08	0.01	0.02	0.00	0.12	0.01
18		1.00	*0.58	1.16	1.40	0.93	1.30	0.92	1.55	1.62	0.93	1.21	1.06	1.26	1.61	*1.30
19		0.45	*0.27	0.43	0.57	0.38	0.59	0.47	0.65	0.65	0.53	0.59	0.57	0.51	0.59	*0.52
20		0.00	0.00	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00
MTOT		1.47	2.30	1.78	2.57	1.37	2.08	3.34	3.15	2.30	2.48	2.67	2.03	1.91	3.33	3.41
WTOT		40.92	40.66	47.79	50.22	*****	*****	*****	*****	*****	44.67	47.51	43.90	48.25	49.58	49.55

MTOT=MONTHLY TOTALS

WTOT=WATER YEAR TOTAL

*=ESTIMATED

Table 15.--Records of wells, test holes, and springs in the Austin urban study area

Water-bearing units: Kea, Edwards and associated limestones; Kgru, Upper Glen Rose; Kgrl, Lower Glen Rose; Kho, Hosston.
 Method of lift and type of power: C, cylinder; cf, centrifugal; E, electric; G, natural gas, butane, or gasoline; H, hand
 J, Jet; N, none; S, submersible; T, turbine; W, windmill.
 Use of water: D, domestic; Ind, industrial; Irr, irrigation; N, none; P, public supply; S, livestock.

No.	Owner	Driller	Date completed	Depth of well (ft.)	Casing		Water-bearing unit	Altitude of land surface (ft.)	Water level		Method of lift	Use of water	Remarks
					Diameter (in.)	Depth (ft.)			Below land surface datum (ft.)	Date of latest measurement for annual water-level survey			
Travis County													
YD-58-34-503	Lemens		1964	206	7		Kgru	740	33.59	Jan. 24, 1979	N	N	Abandoned well.
601	J. R. McElroy		1935	85	6	30	Kgru	950	39.17	Jan. 24, 1979	N	N	<u>2/</u>
613	Dr. Mitchell Wong		1945	175	6		Kea	920	26.22	Jan. 24, 1979	N	N	<u>2/</u> , <u>3/</u>
902	S. D. Williams			53			Kea	902	31.2	Mar. 1, 1978	N	N	<u>4/</u>
904	Great Hills	J. M. Wright	1971	1,122	8-1/2	3	Kgru Kgrl	910	193.0			N	Reported yield 50 gal/min. Caved in to 932 feet before Oct. 31, 1972. <u>5/</u>
35-201	Lorene Bolt	A. Z. Daniels	1939	270	6	90	Kea	904	227.70	Mar. 15, 1978	S, E	D, S	<u>2/</u>
206	Joe Bailey	Glass	1945	700	6	650	Kea	820	209.22	Jan. 24, 1979	N	N	
210	Mrs. Leo Turner	Robertson & McBride	1894	362	5	318	Kea	860	265.33	Jan. 24, 1979	S, E	D, S	<u>6/</u>
212	Stuckey Candy Co.	C. T. Sterzing	1962	320	5	147	Kea	825	120		S, E	D	Reported yield 10 gal/min. <u>7/</u>
309	Edward Burklund	W. H. Glass	Aug. 8, 1970	515	7	377	Kea	810	232.0	Jan. 24, 1979	S, E	D, Irr	<u>6/</u>
407	Austin White Lime	Taylor Virdehl	1952	396	10	15	Kea Kgru	845	77.46	Aug. 9, 1978	S, E	P	<u>6/</u>
413	W. F. Morrow	L. Daniels	1929	336	5	3	Kea	855	74.15	Aug. 24, 1978	S, E	N	Pump inoperative.
415	Austin White Lime			112	6	12	Kea	830	94.22	Jan. 24, 1979	S, E	S, Irr	<u>6/</u>
418	Parker	Glass	1966	88	7	88	Kea	770	70.28	Mar. 1, 1978	S, E	D	Reported yield, 15 gal/min. <u>4/</u>
420	Albert Paul	Sterzing	1964	280	7	90	Kea	767	57.88	Jan. 25, 1979	S, E	D	<u>7/</u>
501	L. Robinson		1889	276	5		Kea	831	231.8	Mar. 1, 1978	C, W	S	<u>4/</u>
506	Capital Memorial Park			533	7	408	Kea	795			S, E	Irr, D	Reported yield, 250 gal/min. <u>6/</u>

See footnotes at end of table.

Table 15.--Records of wells, test holes, and springs in the Austin urban study area--Continued

No.	Owner	Driller	Date completed	Depth of well (ft.)	Casing		Water-bearing unit	Altitude of land surface (ft.)	Water level		Method of lift	Use of water	Remarks
					Diameter (in.)	Depth (ft.)			Below land surface datum (ft.)	Date of latest measurement for annual water-level survey			
Travis County--Continued													
YD-58-35-508	Mrs. Karl B. Wagner	Hunter	1939	465	6	165	Kea	740	136.25	Mar. 1, 1979	S, E	S	<u>5/ 3/</u>
509	Pamela Subdivision		1960	550	8	180	Kea	853	278	1971	S, E	P	Supplies 34 homes. <u>5/ 7/</u>
510	Tim's Airpark	Dick Sanders	1965	459	7	298	Kea	760	147.6	Jan. 25, 1979	S, E	N	Oily water.
511	Austin White Lime	C. T. Sterzing	1963	200	7	50	Kea	822	149.0	Mar. 1, 1979	S, E	D	Parmlee well. <u>6/ 3/</u>
513	Lamplighter Village	Thomas Arnold	1977	540	6	400	Kea	760	210		S, E	P	<u>7/</u>
514	C. M. Diseker	Thomas Arnold	1976	420	4	220	Kea	875	189.69	Feb. 23, 1978	S, E	D	Water level questionable. <u>4/</u>
607	William Kuempel	Cribbs & Davidson	1935	609	10	420	Kea	750	166.95	Jan. 29, 1979	N	N	Supplied CCC Camp; drawdown, 130 feet when pumped at 40 gal/min. <u>2/ 3/ 5/</u>
701	Balcones Research Center	Texas Water Wells, Inc.	1942	610	4	320	Kea	790			S, E	Ind, Irr	<u>7/</u>
702	Mrs. Tom Williams	Martin	1935	49	6	22	Kea	873	13.37	Jan. 24, 1979	N	N	<u>2/ 3/</u>
710	Koenig			272	6		Kgru	875	31.70	Mar. 1, 1978	N	N	Depth before 1949 was 100 feet.
713	Harold Strickland	Dick Sanders	1967	314	7	63	Kgru	880	118.4	Jan. 24, 1979	S, E,	Ind	Cemented from 0-63 feet. Reported yield, 200 gal/min. <u>6/</u>
802	Anton Von Berg	W. H. Glass	1948	465	7	307	Kea	715			N	N	Filled to 10 feet before Feb. 16, 1973. <u>4/ 7/</u>
804	G. F. Roberts	Robert Crouch	1970	416	4		Kea	735	170.54	Aug. 9, 1978	S, E	Irr	<u>5/ 6/</u>
806	John Mus		1932	459	6	203	Kea	690	110.66	Jan. 29, 1979	S, E	D	<u>6/</u>
808	Mrs. Richard Gracy	Roggenkamp	1976	460	5	300	Kea	762	192.75 193.73	Jan. 29, 1979 Aug. 9, 1978	S, E	D	<u>3/ 6/</u>
809	Mrs. Richard Gracy	A. C. Clements	1933	445	6		Kea	772	169.25	Mar. 1, 1979	N	N	Well destroyed June 6, 1980. <u>3/ 5/</u>
906	Baker	Arnold	1976	600	4	500	Kea	750	154.92	Jan. 25, 1979	S, E	D	<u>3/ 6/</u>

See footnotes at end of table.

Table 15.--Records of wells, test holes, and springs in the Austin urban study area--Continued

No.	Owner	Driller	Date completed	Depth of well (ft.)	Casing		Water-bearing unit	Altitude of land surface (ft.)	Water level		Method of lift	Use of water	Remarks
					Diameter (in.)	Depth (ft.)			Below land surface datum (ft.)	Date of latest measurement for annual water-level survey			
Travis County--Continued													
YD-58-36-205	G. Pruitt	Jimmy Calhoun	1950	800	8	600	Kea	652	75.66	May 8, 1978	N	N	4/
206	G. Pruitt	Jimmy Calhoun	1950	614	8	400	Kea	692	114.85	May 8, 1978	N	N	4/
402	George Pfluger	H. Robertson	1925	610	5	400	Kea	755	158.08	Jan. 29, 1979	S, E	S, Irr	2/ 6/
41-907	Helen Rice	Dick Sanders	1967	640	8	5	Kgrl, Kgru	970	200		S, E	D	Reported drawdown, 100 feet after bailing for 1.5 hours at 200 gal/min. 7/
42-306	W. H. Peterson	E. W. Glass	1970	431	7	6	Kgru, Kgrl	590	81.63	July 16, 1979	S, E	Irr	No drawdown when pumped at 20 gal/min. 6/
608	F. M. Pearce	J. R. Johnson	1939	145	10		Kea	565	101.05	Jan. 29, 1979	S, E	Pool	3/ 6/
703	Lost Creek Development Co.	Central Texas Drilling	1972	620	6-5/8	510	Kho	680	164.1		S, E	P	Measured yield, 75 gal/min. 5/
805	Eanes School	S. W. Glass	1954	876	7	705	Kgrl	770	228.0	Jan. 29, 1979	N	N	Reported drawdown, 190 feet at 22 gal/min in Nov. 1954. 3/ 5/ 7/
809	Carlisle Schnelle	Glass	1949	340	6	98	Kea	720	285.75	Mar. 10, 1978	S, E	D	6/
810	Swenson	Boston Furr	1912	295	6	80	Kea	700	189.75	Jan. 29, 1979	N	N	
812	W. F. Guyton	C. T. Sterzing	1958	375	7 5	140 336	Kea	745	284.0	Aug. 29, 1978	S, E	D	Cemented from 0-140 feet slotted from 237-236 feet. Measured drawdown, 1.5 feet after pumping one hour at 20 gal/min on June 5, 1969. 7/
813	G & J Water Co.	C. T. Sterzing		300	8		Kea	660	221.15	Aug. 28, 1978	S, E	P	This well supplies 15 families.
814	Dellano Hills	C. T. Sterzing		300	10		Kea	660	213.9	Mar. 15, 1978	S, E	P	This well supplies 24 families. 6/
817	U.S. Geological Survey	Tex. Dept. of Water Resources	1978	257	6	30	Kea	762	204.0	Feb. 8, 1979	N	N	U.S. Geological Survey test well #1. 5/ 3/
818	Swenson	C. T. Sterzing	1953	300	6		Kea	700	227.91	Mar. 8, 1978	S, E	D	6/
903	City of Austin		1920's	57	5	32	Kea	460	27.6	Jan. 29, 1979	S, E	D, Irr	Originally dug to 90 feet then drilled to 135 feet. 3/ 4/

See footnotes at end of table.

Table 15.--Records of wells, test holes, and springs in the Austin urban study area--Continued

No.	Owner	Driller	Date completed	Depth of well (ft.)	Casing		Water-bearing unit	Altitude of land surface (ft.)	Water level		Method of lift	Use of water	Remarks
					Diameter (in.)	Depth (ft.)			Below land surface datum (ft.)	Date of latest measurement for annual water-level survey			
Travis County--Continued													
YD-58-42-911	Bee Caves Properties	Charles Dellana	1920's	135	6	90	Kea	517	81.08	Feb. 8, 1979	S, E	D, Irr	Originally dug to 90 feet then drilled to 135 feet. <u>4/</u>
913	Park Hills Baptist Church	Richard Bible	1969	180	7	165	Kea	540	108.02	Feb. 8, 1979	S, E	D	<u>6/</u>
914	City of Austin			Spring			Kea	435			Flow	P	Barton Springs, main springs 1 and 2. <u>6/</u>
921	City of Austin			Spring			Kea	450			Flow	P	Elina or Park Springs near bathhouse. <u>6/</u>
922	City of Austin			Spring			Kea	465			Flow	P	Wash or Old Mill Springs. <u>6/</u>
925	Jimmy Shipwash	Richard Bible	1975	180	5	180	Kea	575	141.72	Jan. 29, 1979	S, E	Irr	<u>2/ 3/</u>
926	Eugene Jacobs	Hugh Glass	1963	190	6		Kea	600	159.62	Feb. 8, 1979	S, E	Irr	<u>6/</u>
43-101	Jefferson Chem. Co.	Layne-Tex. Co.	1940	458	10-3/4 6	406	Kea	721			N	N	<u>4/ 7/</u>
106	W. F. Robinson	W. Watson	1927	395	5	248	Kea	733			C, W	D	<u>7/</u>
205	Houston Instruments	Thomas Arnold	1976	563	411	520	Kea	630	87.10	Mar. 1, 1979	N	N	<u>3/ 5/ 6/</u>
206	H. M. Reese	E. A. Glass	1970	400	7	220	Kea	700	111.95	Jan. 29, 1979	S, E	D	<u>6/</u>
303	B. F. Payton	B. F. Payton	1940	1,456	6	460	Kea	633	57.70	Feb. 12, 1979	N	N	<u>5/</u>
401	North Austin State Hospital	Hugh McGilluray	1895	1,975			Kho Kgrl	635			N	N	<u>7/</u>
403	Tex. Dept. of Public Safety	Tex. Water Wells, Inc.	1962	353	10-3/4	300	Kea	680			S, E	Ind.	<u>7/</u>
705	University of Texas	Glass & Tucker	1972	445	7	205	Kea	599	55.34	Jan. 25, 1979	N	N	<u>3/ 5/</u>
49-309	Jack Mann	Richard Bible	1969	260	7	155	Kea	975	133.50	Mar. 24, 1978	S, E	D	Reported 0 drawdown when bailed at 20 gal/min. <u>2/ 5/</u>
314	W. E. McCullough	S. W. Glass	1967	375	7	178	Kgrl	850			S, E	D, S	Reported drawdown 15 feet when bailed at 40 gal/min for 1 hour. <u>7/</u>

See footnotes at end of table.

Table 15.--Records of wells, test holes, and springs in the Austin urban study area--Continued

No.	Owner	Driller	Date completed	Depth of well (ft.)	Casing		Water-bearing unit	Altitude of land surface (ft.)	Below land surface datum (ft.)	Water level 1/ Date of latest measurement for annual water-level survey	Method of lift	Use of water	Remarks
					Diameter (in.)	Depth (ft.)							
Travis County--Continued													
YD-58-49-316	Cecil Herrin	Richard Bible	1968	340	7	18	Kgrl Kgru	940	239.45	Feb. 12, 1979	S, E	D	
321	S. V. Water Corp.	Central Tex. Drilling	1977	440	5		Kgru Kgrl	920	256.70	Aug. 15, 1978	S, E	P	
322	Bill James	Frankie Glass	1972	480	7	42	Kgru Kgrl	970	123.5	Feb. 8, 1979	S, E	D	
507	Appaloosa Run	Red Sanders	1973	575	7	43	Kgru Kgrl	983	227.7	Feb. 8, 1979	N	N	Reported yield, 30 gal/min with 80 feet drawdown on Aug. 3, 1973. <u>5/</u>
603	O. B. McKown, Jr.	Dick Sanders	1949	92	8-6	92	Kgru	890	20.04	Feb. 8, 1979	S, E	D	
604	O. B. McKown, Jr.	C. T. Sterzing	1957	565	7	450	Kgrl	898	107.5	Feb. 8, 1979	S, E	Irr	Reported yield 28 gal/min. <u>2/ 6/ 7/</u>
605	Circle C Ranch	Hutchins	1922	1,000	5	1,000	Kgrl	785	151.45	June 9, 1978	S, E	S	<u>4/</u>
606	Circle C Ranch	Glass	1977	400	6	400	Kgru	881	131.70	Aug. 22, 1978	S, E	D	<u>4/</u>
50-101	T. A. Beckett, Jr.	Will Beckett	1921	217	7	12	Kea	810	171.10	Aug. 14, 1978	S, E	D	<u>6/</u>
102	T. A. Beckett, Jr.	T. A. Beckett, Sr.	1902	250	6	10	Kea	850	137.54	Feb. 8, 1979	S, E	S	
105	L. L. Hart	A. C. Clements		325	10		Kea	810	144.61	Mar. 14, 1978	C, E	N	<u>4/</u>
106	Payne Lewis		1898	100	6	12	Kgru	850	2.70	Feb. 8, 1979	N	N	
107	Elmo Pearson	C. T. Sterzing		615	7	155	Kgru	790	170		S, E	S, Irr	Reported yield, 10 gal/min. <u>7/</u>
110		Will Beckett	1901	217	6	10	Kea	755	132.00	Aug. 15, 1978	S, E	N	
117	Dahlstrom Corp	Electro Mechanics Co.	1972	767	9-5/8	207	Kgru	763	176.83	May 15, 1978	N	N	Well capped. <u>4/ 5/</u>
201	Elizabeth Jentsch	Gus Sanders	1917	290	4		Kea	655	174.5	Jan. 31, 1979	S, E	Irr	
206	Kenneth Wingfield	W. H. Glass	1968	257	7	53	Kea	680	222.55	Aug. 11, 1978	S, E	D	Reported yield, 10 gal/min. Cemented from 0-53 feet. <u>6/ 7/</u>

See footnotes at end of table.

Table 15.--Records of wells, test holes, and springs in the Austin urban study area--Continued

No.	Owner	Driller	Date completed	Depth of well (ft.)	Casing		Water-bearing unit	Altitude of land surface (ft.)	Water level		Date of latest measurement for annual water-level survey	Method of lift	Use of water	Remarks
					Diameter (in.)	Depth (ft.)			Below land surface datum (ft.)	1/				
Travis County--Continued														
YD-58-50-209	H. E. Brodie		1915	330	8	300	Kea	710	272.60	May	17, 1978	S, E	D	<u>4/</u>
211	Travis Country Estates	Richard Bible	1973	282	7	265	Kea	670	174.9	Feb.	9, 1979	S, E	Irr	<u>3/ 6/</u>
212	City of Sunset Valley	C. T. Sterzing	1955	336	7		Kea	672	256.25	May	16, 1978	S, E	P	Reported yield, 70 gal/min. <u>4/</u>
213	Bill Ashbaugh			300	7		Kea	705	219.35	Jan.	31, 1979	S, E	D	
214	Ray Brownlea	A. C. Clements	1935	302	5		Kea	710	228.75	Jan.	31, 1979	S, E	N	Pump inoperative.
215	City of Sunset Valley	Tom Arnold	1976	360	6-5/8	200	Kea	675				S, E	P	<u>6/</u>
216	U.S. Geological Survey	Texas Dept. of Water Resources	1978	582	4	580	Kea	692	224.85	Mar.	1, 1979	N	N	U.S. Geol. Survey test well #3. <u>3/ 5/</u>
217	U.S. Geological Survey	Texas Dept. of Water Resources	1978	214	4	144	Kea	567	77.85	Mar.	1, 1979	N	N	U.S. Geol. Survey test well #2A. <u>3/ 5/</u>
218	U.S. Geological Survey	Texas Dept. of Water Resources	1978	214	4	136	Kea	567	126	Aug.	1978	N	N	U.S. Geol. Survey test well #2. <u>5/</u>
219	Travis Country Estates			252	7		Kea	732	208.45	Jan.	29, 1979	N	N	<u>3/ 5/</u>
301	John Lovelady	Gus Sanders	1949	388	5	296	Kea	640	175.85	Jan.	30, 1979	N	N	<u>2/ 3/ 5/</u>
305	Ralph Lowry	Nance & Bailey	1923	780				640				N	N	Abandoned oil test. <u>7/</u>
401	Mrs. Travis Howard	Glass	1967	404	7	252	Kea	750	214.25	Feb.	12, 1979	S, E	D, S	<u>6/ 7/</u>
402	John Rehm	S. W. Glass	1967	355	7	198	Kea	750	206.5	Jan.	31, 1979	S, E	D	Reported drawdown 60 feet, when bailed for one hour at 45 gal/min. <u>7/</u>
406	George Slaughter	John Glass	1946	360	5	100	Kea	820	298.26	Aug.	11, 1978	S, E	D	<u>6/</u>
408	Donald Rogers	E. W. Glass	1971	439	7	125	Kea	772	179.77	Jan.	30, 1979	S, E	D	Reported drawdown 0 foot when pumped at 25 gal/min for one hour on Mar. 18, 1971. <u>6/</u>

See footnotes at end of table.

Table 15.--Records of wells, test holes, and springs in the Austin urban study area--Continued

No.	Owner	Driller	Date completed	Depth of well (ft.)	Casing		Water-bearing unit	Altitude of land surface (ft.)	Water level		Method of lift	Use of water	Remarks
					Diameter (in.)	Depth (ft.)			Below land surface datum (ft.)	Date of latest measurement for annual water-level survey			
Travis County--Continued													
YD-58-50-409	Circle C Ranch	W. H. Glass	1972	450	7	450	Kgru	796	184.89	Jan. 30, 1979	S, E	Irr	<u>6/</u>
411	Circle C Ranch	Glass	1940's	380	6		Kea	772	227.46	Aug. 18, 1978	S, E	D	
412	Circle C Ranch	Glass	1972	295	7	194	Kea	809	158.81	Jan. 30, 1979	N	N	<u>3/ 5/</u>
502	Mrs. R. W. Herndon	Glass	1937	300	5-5/16	168	Kea	740	229.35	Jan. 31, 1979	S, E	Irr, S	<u>4/ 6/</u>
505	Ted Swanson, Jr.	C. T. Sterzine	1963	390	4	290	Kea	710			S, E	D	Reported drawdown, 50 feet after bailing at 8 gal/min on Feb. 9, 1963. <u>7/</u>
517	Ted Swanson, Jr.	Central Tex. Drilling	1973	430	6-3/8	290	Kea	695	146.85	Feb. 8, 1979	S, E	Irr	Reported yield, 300 gal/min.
518	Stripling Blake Lumber Co.		1951	431	4		Kea	725	226.15	Jan. 30, 1979	N	N	<u>3/</u>
703	Marbridge Foundation	C. T. Sterzing	1966	455	7	232	Kea	680	189.90	Apr. 5, 1978	S, E	Irr	Reported 0 drawdown when bailed at 15 gal/min.
704	Marbridge Foundation	Central Tex. Drilling	1968	345	16 14	68 40	Kea	727	166.72	Jan. 31, 1979	S, E	Irr	Measured drawdown, 12 feet after pumping 72 hours at 942 gal/min, 2 feet at 578 gal/min, and 1 foot at 473 gal/min. <u>3/ 6/ 7/</u>
714	T. T. Denham	W. H. Glass	1969	190	7	188	Kea	710	160.5	Feb. 8, 1979	S, E	D	Cemented from 0-120 feet. <u>7/</u>
720	Robert Hejl	Hugh Glass	1968	230	7	125	Kea	660	80.55	Feb. 21, 1979	S, E	S	
801	C. H. Bird	Williamson & Adair	1939	277	5-1/4	200	Kea	662	72.4	Jan. 30, 1979	S, E	N	Reported yield, 10 gal/min. <u>2/ 3/</u>
810	A. L. Wunneburger	Emmett Glass	1969	359	7	205	Kea	625	24.37	Jan. 31, 1979	S, E	D	Reported drawdown, 20 feet after bailing 1 hour at 40 gal/min. <u>2/ 6/ 7/</u>
817	Manchaca Methodist Church	C. T. Sterzing	1956	400	7	167	Kea	700	130.38	Feb. 12, 1979	S, E	D	Reported yield, 30 gal/min. <u>7/</u>

See footnotes at end of table.

Table 15.--Records of wells, test holes, and springs in the Austin urban study area--Continued

No.	Owner	Driller	Date completed	Depth of well (ft.)	Casing		Water-bearing unit	Altitude of land surface (ft.)	Water level		Method of lift	Use of water	Remarks
					Diameter (in.)	Depth (ft.)			Below land surface datum (ft.)	Date of latest measurement for annual water-level survey			
Travis County--Continued													
YD-58-50-822	Max Ladusch	Owens	1970	356	7	187	Kea	655	94.40	Jan. 31, 1979	S, E	N	Reported drawdown, 70 feet when bailed at 40 gal/min.
836	Onion Creek Golf Course	Central Tex. Drilling	1973	500	8	222	Kea	660	71.5	Jan. 31, 1979	S, E	Irr	Estimated yield, 220 gal/min.
839	Maha Water Supply	Frank Glass	1977	450	12	160	Kea	625	77.36	Aug. 14, 1978	E, T	P	<u>4/</u>
903	R. B. Gault	S. W. Glass	--	302	-		Kea	631			C, E	Irr	<u>7/</u>
58-202	Mystic Oaks Estates	Central Tex. Drilling	1969	405	6-5/8	310	Kea	660			S, E	P	<u>5/</u>
203	Raymond Canon	W. H. Glass	1967	263	7	131	Kea	630	20.7	Feb. 8, 1979	S, E	D	<u>2/ 7/</u>
301	United Gas Pipeline		1943	703	6	639	Kea	734	151.75	Jan. 29, 1979	N	N	U.S. Geol Survey observation well. <u>2/ 3/</u>
304	R. C. Brown	Wells	1947	720	8	500	Kea	660	55.17	Jan. 31, 1979	S, E	N	
59-105	Arthur Johnson	Dixie Oil Co.	1925	745				655			N	N	Abandoned oil test. <u>7/</u>

See footnotes at end of table.

Table 15.--Records of wells, test holes, and springs in the Austin urban study area--Continued

No.	Owner	Driller	Date completed	Depth of well (ft.)	Casing		Water-bearing unit	Altitude of land surface (ft.)	Water level		Method of lift	Use of water	Remarks
					Diameter (in.)	Depth (ft.)			Below land surface datum (ft.)	Date of latest measurement for annual water-level survey			
Hays County													
LR-57-64-601	Joe Gonzales	Davis Drilling Co.	1976	192	6	20	Kgru	995	90.65	Nov. 30, 1977	S, E	D	Cemented 0-20 feet.
LR-58-49-508	Clara Calhoun	Richard Bible	1960	416	6	20	Kgru	901	125.5	Feb. 21, 1979	C, W	S	
701	Mike Rutherford			300	7	20	Kgru	1,079	115.17	Aug. 24, 1978	C, W	S	
702	Mike Rutherford			195	7	20	Kgru	1,020	52.34	Aug. 24, 1978	C, W	S	
801	Clara Calhoun	Tyler	1942	100	6	20	Kea	856	37.1	Feb. 1, 1979	S, E	S	3/ 6/
802	Mrs. Bliss Spillar		1940's	200	6		Kea	930	135.2	Feb. 12, 1979	C, E	S	
803	Clara Calhoun		1954	105	6	9	Kgru	920	92.06	Aug. 16, 1978	C, W	S	
804	Clara Calhoun			243	6	20	Kgru	880	36.41	May 15, 1978	S, E	D	
805	Mike Rutherford			315	7	315	Kgru	1,055	130.7	Feb. 21, 1979	C, W	S	
806	Mike Rutherford			200	7		Kgru	935	71.65	Feb. 12, 1979	C, W	N	
901	P. J. Brewington	Thomas Arnold	1972	400	4	200	Kgru	790	186.3	Jan. 31, 1979	S, E	D	7/
902	Mrs. Bliss Spillar			200	4		Kea	865	92.69	Apr. 25, 1978	C, W	S	
903	Mrs. Bliss Spillar			200	4		Kea	830	--	--	C, E	S	6/
57-101	M. O. Rogers	Harvey Harmon	1930's	125	6	120	Kgru	992.7	56.0	Feb. 1, 1979	S, E	D	6/
102	Rutherford Ranch			200	4		Kea	1,055	134.40	Feb. 1, 1979	C, W	S	
103	Rutherford Ranch			200	4		Kea	1,015	139.85	Feb. 1, 1979	C, W	S	
104	Joe Rogers	James Tucker, Jr.	1976	527	6	62	Kgru	1,020	260		S, E	D	7/
201	Mike Rutherford		1945	320	6		Kea	925	161.1	Jan. 30, 1979	C, W	S	2/ 3/
202	Farris	Scarly Glass		200	7	200	Kea	905	17.25	Feb. 1, 1979	S, E	S	6/
203	Jack Dahlstrom	Raymond Whisenant	1970	225	7	25	Kea	835	79.77	Feb. 12, 1979	C, W	S	7/
204	Cecil Ruby	Hugh Glass	1950	245	6		Kea	800	136.2	Jan. 10, 1978	S, E	S	
301	Cecil Ruby	T. E. Owens	1937	312	6	83	Kea	882.4	259.20	Jan. 9, 1978	S, E	S	2/

See footnotes at end of table.

Table 15.--Records of wells, test holes, and springs in the Austin urban study area--Continued

No.	Owner	Driller	Date completed	Depth of well (ft.)	Casing		Water-bearing unit	Altitude of land surface (ft.)	Water level		Date of latest measurement for annual water-level survey	Method of lift	Use of water	Remarks
					Diameter (in.)	Depth (ft.)			Below land surface datum (ft.)	1/				
Hays County--Continued														
LR-58-57-302	Jack Dahlstrom	W. H. Glass	1973	415	12	158	Kea	809	184.55	Feb.	12, 1979	S, E	S	<u>5/ 7/</u>
303	W. D. Turner	W. H. Glass	1973	315	7	315	Kea	870	242.12	May	25, 1978	S, E	D	<u>6/ 7/</u>
402	Tom Fairey	James B. Tucker	1976	380	6	55	Kea	880	94.85	Jan.	30, 1979	S, E.	D	<u>3/ 6/</u>
403	Rutherford Ranch		1952	350	10		Kea	982	232.29	Nov.	28, 1977	S, E	D	
502	Hoskins	Smith	1938	385	5		Kea	885	203.0	Feb.	1, 1979	S, E	D	Deepened to 385 feet by Ed Welge in 1963. <u>6/</u>
503	Michaelis Ranch		Before 1900	180	4		Kea	812	141.10	Aug.	30, 1978	C, W	S	
601	Cecil Ruby	E. B. Kutscher	1971	390	8-5/8	160	Kea	792	157.49	Apr.	20, 1978	S, E	S	<u>7/</u>
602	Cecil Ruby			150	6-1/2		Kea	792	127.00	Jan.	10, 1978	S, E	S	<u>2/</u>
801	J. C. Ruby, Jr.	C. L. Tyler	1941	365	6	260	Kea	938.2	235.89	Jan.	11, 1978	S, E	D	Deepened from 300-365 feet in 1969 by Kutscher. <u>7/</u>
802	Tom Johnson Estate			242	6		Kea	838	164.70	Jan.	11, 1978	C, E	S	<u>2/</u>
901	Hays Consolidated School District	E. A. Glass	1968	575	10	235	Kea	821				S, E		<u>6/ 7/</u>
902	Gregg Ranch		Before 1943	450	6		Kea	821.55	209.55	Jan.	30, 1979	N	N	Originally an oil test well. <u>2/ 5/</u>
903	Mountain City Ranch	C. L. Tyler	1943	400	6		Kea	822	223.65	Jan.	30, 1979	C, W	S	<u>2/ 3/</u>
904	Pedernales Electric	James B. Tucker	1975	428	5-5/8	290	Kgru	825	235.06	Aug.	21, 1978	S, E	Ind	<u>7/</u>
58-101	Franklin		1907	243	5	230	Kea	707.2	91.88	Jan.	30, 1979	N	N	<u>2/ 3/ 5/</u>
104	Henry Armbruster	T. E. Owens	1937	248	6		Kea	730.3	160.25	Aug.	16, 1978	N	N	<u>2/ 5/</u>
105	Joe Lowke	Tom Arnold	1978	477	4	480	Kea	773	227	Jan.	7, 1978	S, E	D	<u>5/ 6/</u>
106	City of Buda	Tom Arnold	1977	450	8		Kea	706	148	Mar.	2, 1979	S, E	P	<u>6/</u>
108	Jim Ruby	Kutscher	1971	548	10-3/4	271	Kgru	757	217.25	Aug.	17, 1978	N	N	<u>5/</u>

See footnotes at end of table.

Table 15.--Records of wells, test holes, and springs in the Austin urban study area--Continued

No.	Owner	Driller	Date completed	Depth of well (ft.)	Casing		Water-bearing unit	Altitude of land surface (ft.)	Water level		Method of lift	Use of water	Remarks
					Diameter (in.)	Depth (ft.)			Below land surface datum (ft.)	Date of latest measurement for annual water-level survey			
Hays County--Continued													
LR-58-58-109	Jack Giberson	Frankie A. Glass	1971	270	7	215	Kea	755			S, E	D	<u>7/</u>
110	Julius Eddleman	Thomas Arnold	1976	280	4	200	Kea	745			S, E	D	<u>7/</u>
206	H. B. Granberry	E. A. Glass	1971	415	12	190	Kea	668	87.85	Feb. 12, 1979	N	N	Cementd 0-45 feet. <u>5/ 7/</u>
403	City of Buda	J. B. Virdell	1954	390	10	222	Kea	710			T, E	P	<u>6/</u>
406	Texas Cement	F. S. Tatum	1966	525	10	310	Kea	743	131.65	Jan. 31, 1979	S, E	P	Cemented 0-310 feet. <u>2/</u>
407	Texas Cement	J. T. Johnson	1960	634	12	153	Kea	750			T, E	Ind	<u>6/</u>
408	Texas Cement	Forrest S. Tatum	1966	565	7	375	Kea	786			S, E	D	<u>7/</u>
410	D. J. Simon	Sanders Drilling Co.	1978	584	10		Kea	762	149.20	Feb. 21, 1979	N	N	<u>5/</u>
411	W. I. Dismukes	E. B. Kutscher	1971	510	7	435	Kea	735	159.09	Aug. 17, 1978	S, E	D	Cemented, 0-435 feet.
501	Goforth Water Supply	J. M. Wright	1970	649	8	500	Kea	721			S, E	P	<u>7/</u>
502	D. J. Simon	C. L. Tyler	1944	650	6	562	Kea	742	155.96	Jan. 30, 1979	N	N	<u>3/ 5/</u>
503	Paul Keller	Dick Sanders	1966	540	7	481.5	Kea	745	137.9	Feb. 8, 1979	N	N	
504	Elmer Israel	C. T. Sterzing	1962	640	7	514	Kea	778	177.8	Jan. 31, 1979	S, E	N	
701	D. A. Dacy		1950	492	8		Kea	711	115.67	Feb. 1, 1979	S, E	S	
704	O. H. Cullen	E. R. Ownes	1972	532	7	368	Kea	746	148.67	Feb. 1, 1979	S, E	D	<u>2/ 6/ 7/</u>
705	Ted Edwards	C. T. Sterzing	1964	667	7	548	Kea	725	127.98	Jan. 9, 1978	S, E	D	<u>7/</u>
706	Lex Word	Glass	1959	520	7	300	Kea	695	107.0	Feb. 1, 1979	S, E	N	Pump inoperative.
801	A. W. Whitten	C. L. Tyler	1943	502	7	431	Kea	712	126.65	Jan. 30, 1979	S, E	N	
902	David Shubert	Woodward & Co.	1955	3,338	6							N	Oil test. <u>5/ 7/</u>
LR-67-01-201	David Allen	Kutscher		300			Kea	672					<u>5/</u>

See footnotes at end of table.

Table 15.--Records of wells, test holes, and springs in the Austin urban study area--Continued

No.	Owner	Driller	Date completed	Depth of well (ft.)	Casing		Water-bearing unit	Altitude of land surface (ft.)	Water level		Date of latest measurement for annual water-level survey	Method of lift	Use of water	Remarks
					Diameter (in.)	Depth (ft.)			Below land surface datum (ft.)	1/				
Hays County--Continued														
LR-67-01-304	R. Selvera	Fleming Adair	1934	372	5	340	Kea	718	147.2		Jan. 30, 1979	N	N	
305	A. A. Hale	J. W. Glass	1959	500	8	310	Kea	705.32	133.99		Aug. 21, 1978	C, E	D, S	2/

1/ Selected wells are included in monthly water-level surveys (see table 17).

2/ Texas Department of Water Resources observation well.

3/ Monthly water-level measurements available in table 17.

4/ Discontinued observation well.

5/ Geophysical log (radioactivity or electric log).

6/ Well or spring sampled for quality of water.

7/ Driller's log, sample log, or core data.

TABLE 16.--WATER-QUALITY DATA FROM WELLS AND SPRINGS IN THE AUSTIN URBAN STUDY AREA

LOCAL IDENT- IFIER	DATE OF SAMPLE	TIME	PUMP OR FLOW PERIOD PRIOR TO SAM- PLING (MIN) (72004)	DEPTH OF WELL, TOTAL (FEET) (72008)	FLOW RATE, INSTAN- TANEOUS (GPM) (00059)	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) (72019)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE, WATER (DEG C) (00010)
TRAVIS COUNTY									
YD 58-35-210	79-07-02	0800	--	362	--	217.00	580	7.1	24.0
	79-07-03	1345	20	362	--	217.00	580	7.0	24.0
YD 58-35-309	79-07-02	0945	20	515	15	--	800	7.1	24.0
YD 58-35-407	79-07-03	0715	--	396	--	--	639	7.4	22.5
YD 58-35-415	79-07-03	0815	60	112	--	94.45	762	6.8	22.0
YD 58-35-506	79-07-02	1030	--	533	250	--	760	7.0	24.0
YD 58-35-508	79-07-02	1245	20	465	15	--	685	6.9	23.5
YD 58-35-511	79-07-03	0950	20	200	--	148.80	730	7.0	23.0
YD 58-35-713	79-07-16	0830	20	314	--	--	795	6.9	24.0
YD 58-35-804	79-07-17	1010	210	416	--	--	760	6.8	24.0
YD 58-35-808	79-07-03	1000	20	460	15	137.00	840	7.1	24.0
YD 58-35-906	79-07-02	1335	--	600	--	92.24	1120	7.0	23.5
YD 58-36-402	79-07-02	1120	20	610	15	120.00	520	6.9	--
YD 58-42-306	79-07-16	0930	20	461	--	81.63	5700	6.9	24.0
YD 58-42-608	79-07-16	1340	20	145	--	100.00	570	6.8	18.0
YD 58-42-809	79-07-10	0900	20	340	--	--	525	6.8	21.0
YD 58-42-814	79-07-10	0950	20	300	--	--	521	6.7	21.5
YD 58-42-913	79-07-10	1120	20	180	--	--	620	6.5	24.0
YD 58-42-914	79-07-10	0700	--	--	--	--	580	7.5	22.5
	79-09-19	1005	--	--	--	--	593	7.0	21.0
YD 58-42-926	79-07-16	1440	60	190	--	153.90	580	6.7	21.5
YD 58-43-206	79-07-16	1100	20	400	15	68.90	860	6.8	24.0
YD 58-49-604	79-07-17	1330	20	565	--	104.00	620	6.9	23.0
YD 58-50-101	79-07-17	1230	20	217	15	--	630	6.6	24.5
YD 58-50-206	79-07-17	1415	20	257	--	--	520	6.9	21.5
YD 58-50-211	79-07-12	0900	20	282	--	196.70	620	6.9	22.0
YD 58-50-215	79-07-17	1200	60	360	25	--	580	6.8	23.0
YD 58-50-216	78-10-12	1205	180	582	--	256.00	820	7.1	23.5
	79-07-18	1230	--	582	--	198.60	445	6.8	22.0
YD 58-50-217	78-10-13	1300	150	214	7.5	129.10	500	6.6	21.5
	79-07-17	0715	--	214	--	90.45	480	6.8	19.0
YD 58-50-401	79-07-09	1310	20	404	--	--	560	7.1	22.5
YD 58-50-406	79-07-10	1300	20	360	--	--	620	6.6	23.0
YD 58-50-408	79-07-10	1340	20	439	--	180.60	620	6.6	24.0
YD 58-50-409	79-07-12	0930	20	450	--	--	780	7.0	24.0
YD 58-50-502	79-07-11	1400	20	300	--	184.00	580	6.6	23.0
YD 58-50-704	79-07-05	0745	20	345	750	132.00	540	7.0	22.0
YD 58-50-810	79-07-05	1005	20	359	15	--	799	7.4	23.0

TABLE 16.--WATER-QUALITY DATA FROM WELLS AND SPRINGS IN THE AUSTIN URBAN STUDY AREA--CONTINUED

LOCAL IDENT- IFIER	DATE OF SAMPLE	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML) (31501)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS (MG/L AS CAC03) (00900)	HARD- NESS, NONCAR- BONATE (MG/L AS CA03) (00902)	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)
TRAVIS COUNTY--CONTINUED										
YD 58-35-210	79-07-02	5100	240	460	--	--	--	--	--	--
	79-07-03	680	58	160	260	0	54	30	16	.4
YD 58-35-309	79-07-02	1	<1	<1	250	25	59	26	75	2.0
YD 58-35-407	79-07-03	100	<1	1	290	32	75	26	14	.4
YD 58-35-415	79-07-03	520	<1	3	390	9	120	23	8.7	.2
YD 58-35-506	79-07-02	5	<1	<1	310	0	83	25	34	.8
YD 58-35-508	79-07-02	1000	14	1700	350	29	100	24	10	.4
YD 58-35-511	79-07-03	2500	<1	13	390	42	120	21	9.6	.2
YD 58-35-713	79-07-16	130	<1	1	400	37	90	42	10	.2
YD 58-35-804	79-07-17	8	<1	<1	270	0	86	14	50	1.3
YD 58-35-808	79-07-03	<1	<1	<1	260	0	61	26	70	1.9
YD 58-35-906	79-07-02	<1	<1	<1	290	0	74	25	120	3.1
YD 58-36-402	79-07-02	60	3	1	260	21	100	2.2	12	.3
YD 58-42-306	79-07-16	30	<1	<1	1200	930	230	160	970	12
YD 58-42-608	79-07-16	92	<1	2	200	27	47	20	31	1.0
YD 58-42-809	79-07-10	42	<1	<1	260	44	70	20	8.4	.2
YD 58-42-814	79-07-10	2	<1	<1	260	24	72	20	7.1	.2
YD 58-42-913	79-07-10	<1	<1	<1	320	23	96	19	5.1	.1
YD 58-42-914	79-07-10	--	--	--	290	30	84	20	12	.3
	79-09-19	--	--	--	290	32	85	20	13	.3
YD 58-42-926	79-07-16	18000	92	1800	310	45	90	20	8.0	.2
YD 58-43-206	79-07-16	1	<1	1	270	3	65	27	74	1.9
YD 58-49-604	79-07-17	20	<1	<1	340	33	82	32	5.9	.1
YD 58-50-101	79-07-17	24	<1	<1	300	22	66	33	5.9	.2
YD 58-50-206	79-07-17	<1	<1	<1	260	19	73	20	7.5	.2
YD 58-50-211	79-07-12	<1	<1	<1	280	2	73	24	21	.5
YD 58-50-215	79-07-17	<1	<1	<1	280	10	71	25	9.1	.2
YD 58-50-216	78-10-12	220	17	15	--	--	--	--	--	--
	79-07-18	>6	K6	K3	220	39	58	18	11	.3
YD 58-50-217	78-10-13	K880	<1	K100	--	--	--	--	--	--
	79-07-17	80	<1	6	250	36	70	18	6.8	.2
YD 58-50-401	79-07-09	<1	<1	<1	280	12	77	22	6.0	.2
YD 58-50-406	79-07-10	<1	<1	<1	310	49	82	26	13	.4
YD 58-50-408	79-07-10	68	<1	11	340	49	77	35	7.6	.2
YD 58-50-409	79-07-12	16	<1	<1	440	180	80	58	6.5	.1
YD 58-50-502	79-07-11	1	<1	1	310	44	88	21	7.8	.2
YD 58-50-704	79-07-05	20	<1	1	280	20	85	17	8.3	.2
YD 58-50-810	79-07-05	<1	<1	<1	300	84	63	34	44	1.1

K-COLONY COUNT NOT IDEAL.

TABLE 16.--WATER-QUALITY DATA FROM WELLS AND SPRINGS IN THE AUSTIN URBAN STUDY AREA--CONTINUED

LOCAL IDENT- IFIER	DATE OF SAMPLE	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE (MG/L AS HCO3) (00440)	CAR- BONATE (MG/L AS CO3) (00445)	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 TOTAL (MG/L AS N) (00620)
TRAVIS COUNTY--CONTINUED										
YD 58-35-210	79-07-02	--	340	0	--	--	--	--	--	.23
	79-07-03	1.7	340	0	24	13	2.4	13	322	.20
YD 58-35-309	79-07-02	3.9	280	0	120	38	3.2	13	476	.05
YD 58-35-407	79-07-03	3.8	320	0	44	13	.5	10	344	6.4
YD 58-35-415	79-07-03	.6	470	0	21	14	.2	13	432	2.4
YD 58-35-506	79-07-02	1.6	400	0	45	27	.5	12	425	2.0
YD 58-35-508	79-07-02	1.0	390	0	27	18	.4	12	388	3.3
YD 58-35-511	79-07-03	1.0	420	0	25	14	.2	12	410	4.8
YD 58-35-713	79-07-16	3.0	440	0	52	17	1.6	13	446	.03
YD 58-35-804	79-07-17	6.1	340	0	52	48	.4	11	435	.01
YD 58-35-808	79-07-03	2.2	350	0	66	33	.8	13	445	.08
YD 58-35-906	79-07-02	3.7	380	0	120	120	1.2	13	664	.07
YD 58-36-402	79-07-02	.8	290	0	22	12	.4	7.3	300	2.7
YD 58-42-306	79-07-16	62	370	0	2200	590	3.7	11	4410	.02
YD 58-42-608	79-07-16	3.6	210	0	37	54	.3	8.8	305	.41
YD 58-42-809	79-07-10	1.0	260	0	33	15	.2	8.5	284	.45
YD 58-42-814	79-07-10	1.0	290	0	23	13	.2	9.4	289	1.1
YD 58-42-913	79-07-10	1.0	360	0	18	12	.2	9.4	338	1.4
YD 58-42-914	79-07-10	1.3	320	0	24	20	.2	10	329	1.4
	79-09-19	1.1	320	0	31	26	.3	11	345	1.6
YD 58-42-926	79-07-16	1.2	320	0	32	14	.2	10	333	1.7
YD 58-43-206	79-07-16	2.8	330	0	70	73	1.1	12	488	.00
YD 58-49-604	79-07-17	3.2	370	0	27	10	.7	9.9	353	.42
YD 58-50-101	79-07-17	2.1	340	0	66	8.1	.5	12	361	.26
YD 58-50-206	79-07-17	1.4	300	0	15	11	.2	11	287	1.5
YD 58-50-211	79-07-12	1.0	340	0	14	32	.2	10	343	1.7
YD 58-50-215	79-07-17	1.2	330	0	17	11	.2	14	311	4.0
YD 58-50-216	78-10-12	--	--	--	--	--	--	--	--	--
	79-07-18	2.9	220	0	42	14	.7	12	267	1.0
YD 58-50-217	78-10-13	--	--	--	--	--	--	--	--	--
	79-07-17	1.4	260	0	25	11	.2	9.1	270	.27
YD 58-50-401	79-07-09	.9	330	0	17	12	.2	10	308	1.5
YD 58-50-406	79-07-10	1.0	320	0	40	18	.4	12	350	6.4
YD 58-50-408	79-07-10	1.2	350	0	36	15	.2	13	358	1.1
YD 58-50-409	79-07-12	4.6	320	0	200	7.6	1.1	12	528	.02
YD 58-50-502	79-07-11	1.1	320	0	22	15	.3	11	324	2.1
YD 58-50-704	79-07-05	1.0	320	0	18	11	.2	12	310	1.1
YD 58-50-810	79-07-05	3.8	260	0	140	23	2.1	12	450	.09

TABLE 16.--WATER-QUALITY DATA FROM HELLS AND SPRINGS IN THE AUSTIN URBAN STUDY AREA--CONTINUED

LOCAL IDENT- IFIER	DATE OF SAMPLE	NITRO- GEN, NITRITE TOTAL (MG/L AS N) (00615)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)
TRAVIS COUNTY--CONTINUED					
YD 58-35-210	79-07-02	.00	.04	.00	.020
	79-07-03	.00	.02	.00	.020
YD 58-35-309	79-07-02	.00	.16	.11	.010
YD 58-35-407	79-07-03	.00	.00	.04	.010
YD 58-35-415	79-07-03	.00	.01	.11	.010
YD 58-35-506	79-07-02	.00	.04	.00	.000
YD 58-35-508	79-07-02	.00	.02	.04	.000
YD 58-35-511	79-07-03	.00	.00	.03	.020
YD 58-35-713	79-07-16	.02	.01	.05	.010
YD 58-35-804	79-07-17	.00	.02	.24	.030
YD 58-35-808	79-07-03	.00	.01	.00	.000
YD 58-35-906	79-07-02	.00	.15	.20	.000
YD 58-36-402	79-07-02	.00	.00	.00	.000
YD 58-42-306	79-07-16	.02	2.9	.10	.010
YD 58-42-608	79-07-16	.02	.01	.13	.010
YD 58-42-809	79-07-10	.02	.01	.13	.010
YD 58-42-814	79-07-10	.00	.01	.16	.010
YD 58-42-913	79-07-10	.00	.01	.03	.000
YD 58-42-914	79-07-10	.00	.02	.23	.010
	79-09-19	.00	.07	.11	.000
YD 58-42-926	79-07-16	.02	.02	.12	.010
YD 58-43-206	79-07-16	.02	.06	.09	.010
YD 58-49-604	79-07-17	.00	.09	.03	.010
YD 58-50-101	79-07-17	.00	.01	.05	.020
YD 58-50-206	79-07-17	.00	.01	.09	.010
YD 58-50-211	79-07-12	.00	.03	.05	.010
YD 58-50-215	79-07-17	.02	.01	.09	.030
YD 58-50-216	78-10-12	--	--	--	--
	79-07-18	.10	.11	.02	.340
YD 58-50-217	78-10-13	--	--	--	--
	79-07-17	.02	.01	.13	.030
YD 58-50-401	79-07-09	.00	.01	.00	.020
YD 58-50-406	79-07-10	.00	.00	.02	.020
YD 58-50-408	79-07-10	.02	.03	.07	.010
YD 58-50-409	79-07-12	.00	.10	.01	.000
YD 58-50-502	79-07-11	.02	.03	.12	.010
YD 58-50-704	79-07-05	.00	.01	.00	.010
YD 58-50-810	79-07-05	.00	.05	.00	.010

TABLE 16.--WATER-QUALITY DATA FROM WELLS AND SPRINGS IN THE AUSTIN URBAN STUDY AREA--CONTINUED

LOCAL IDENT- IFIER	DATE OF SAMPLE	TIME	PUMP OR FLOW PERIOD PRIOR TO SAM- PLING (MIN) (72004)	DEPTH OF WELL, TOTAL (FEET) (72008)	FLOW RATE, INSTAN- TANEOUS (GPM) (00059)	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) (72019)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE, WATER (DEG C) (00010)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML) (31501)
HAYS COUNTY										
LR 58-49-801	79-07-05	1225	20	100	15	36.00	650	7.0	21.5	64
LR 58-49-903	79-07-05	0845	20	200	10	--	630	6.9	22.5	460
LR 58-57-101	79-07-09	0900	20	125	--	56.45	619	7.2	20.5	23000
LR 58-57-202	79-07-09	0950	20	200	15	--	670	7.2	23.0	2
LR 58-57-303	79-07-09	1215	20	--	--	--	580	6.9	23.0	<1
LR-58-57-402	79-07-09	0805	20	380	--	95.00	560	7.2	22.5	110
LR 58-57-502	79-07-09	1045	60	385	--	176.40	580	6.8	22.5	230
LR-58-57-901	79-07-11	0820	60	575	--	--	480	6.9	23.0	<1
LR-58-58-106	79-07-18	1030	30	450	--	165.00	570	7.1	23.0	<1
LR 58-58-105	79-07-11	1225	20	477	--	--	499	6.9	22.0	600
LR 58-58-407	79-07-11	0730	20	634	--	--	650	6.8	24.0	<1
LR-58-58-704	79-07-11	0950	20	532	25	127.80	1060	7.0	23.0	<1

TABLE 16.--WATER-QUALITY DATA FROM WELLS AND SPRINGS IN THE AUSTIN URBAN STUDY AREA--CONTINUED

LOCAL IDENT- IFIER	DATE OF SAMPLE	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS (MG/L AS CAC03) (00900)	HARD- NESS, NONCAR- BONATE (MG/L CAC03) (00902)	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 AU- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)
HAYS COUNTY--CONTINUED										
LR 58-49-801	79-07-05	1	<1	380	20	100	20	6.4	.2	1.7
LR 58-49-903	79-07-05	72	<1	330	0	100	19	5.6	.1	.5
LR 58-57-101	79-07-09	3	45	320	4	95	19	5.7	.1	1.5
LR 58-57-202	79-07-09	<1	<1	350	16	80	37	6.4	.2	1.6
LR 58-57-303	79-07-09	<1	<1	310	11	78	27	5.7	.1	.9
LR-58-57-402	79-07-09	<1	4	300	8	59	36	5.7	.2	2.2
LR 58-57-502	79-07-09	<1	1	310	45	90	20	6.2	.2	.8
LR-58-57-901	79-07-11	<1	<1	220	42	48	25	4.8	.1	1.2
LR-58-58-106	79-07-18	<1	<1	290	33	69	28	6.3	.2	1.4
LR 58-58-105	79-07-11	<1	1	240	23	60	23	6.4	.2	1.3
LR 58-58-407	79-07-11	<1	<1	310	50	74	31	5.8	.1	1.1
LR-58-58-704	79-07-11	<1	<1	280	46	51	36	82	2.1	4.3

TABLE 16.--WATER-QUALITY DATA FROM WELLS AND SPRINGS IN THE AUSTIN URBAN STUDY AREA--CONTINUED

LOCAL IDENT- I- FIER	DATE OF SAMPLE	BICAR- BONATE	CAR- BONATE	SULFATE	CHLO- RIDE,	FLUO- RIDE,	SILICA,	SOLIDS, SUM OF	NITRO- GEN,
		(MG/L	(MG/L	DIS- SOLVED	DIS- SOLVED	DIS- SOLVED	DIS- SOLVED	CONSTI- TUENTS,	GEN, NITRATE
		AS HCO3) (00440)	AS CO3) (00445)	(MG/L AS SO4) (00945)	(MG/L AS CL) (00940)	(MG/L AS F) (00950)	(MG/L AS SiO2) (00955)	DIS- SOLVED (MG/L) (70301)	TOTAL (MG/L AS N) (00620)
HAYS COUNTY--CONTINUED									
LR 58-49-801	79-07-05	380	0	30	12	.3	10	368	1.2
LR 58-49-903	79-07-05	400	0	7.2	8.8	.2	12	350	.32
LR 58-57-101	79-07-09	380	0	26	9.4	.3	11	355	.08
LR 58-57-202	79-07-09	410	0	19	13	.3	12	371	1.0
LR 58-57-303	79-07-09	360	0	12	11	.2	11	323	1.3
LR-58-57-402	79-07-09	350	0	24	9.1	.4	12	321	.05
LR 58-57-502	79-07-09	320	0	17	15	.2	11	318	4.1
LR-58-57-901	79-07-11	220	0	21	8.0	.5	11	228	.44
LR-58-58-106	79-07-18	310	0	39	9.3	1.0	11	318	.82
LR 58-58-105	79-07-11	270	0	24	12	.4	9.8	270	1.6
LR 58-58-407	79-07-11	320	0	68	10	1.1	10	359	.13
LR-58-58-704	79-07-11	280	0	200	88	3.2	12	615	.02

TABLE 16.--WATER-QUALITY DATA FROM WELLS AND SPRINGS IN THE AUSTIN URBAN STUDY AREA--CONTINUED

LOCAL IDENT- I- FIER	DATE OF SAMPLE	NITRO- GEN, NITRITE TOTAL (MG/L AS N) (00615)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)
HAYS COUNTY--CONTINUED					
LR 58-49-801	79-07-05	.00	.01	.00	.000
LR 58-49-903	79-07-05	.02	.00	.08	.000
LR 58-57-101	79-07-09	.00	.00	.00	.010
LR 58-57-202	79-07-09	.00	.01	.00	.000
LR 58-57-303	79-07-09	.00	.00	.00	.050
LR-58-57-402	79-07-09	.00	.01	.00	.000
LR 58-57-502	79-07-09	.00	.01	.00	.000
LR-58-57-901	79-07-11	.02	.01	.08	.000
LR-58-58-106	79-07-18	.02	.00	.03	.040
LR 58-58-105	79-07-11	.00	.04	.01	.010
LR 58-58-407	79-07-11	.02	.04	.00	.010
LR-58-58-704	79-07-11	.00	.53	.08	.010

Table 17.--Monthly water-level measurements of observation wells in the Austin urban study area, 1979 water year

Well number	Distance below land-surface datum (feet)											
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
YD-58-34-613	36.30	29.06	27.91	26.22	24.97	23.43	22.99	23.13	23.99	26.38	33.35	33.33
35-508	178.50	177.59			136.25	114.10	91.92	86.78	93.82		124.54	137.04
511	152.77	169.80	159.20		149.00	149.85	148.75	148.35	148.85		150.85	151.05
607			180.58	166.95	138.08	121.10	103.10	97.15	101.60	115.25	130.15	149.20
702	14.37	14.52	14.18	13.37	11.92	11.04	10.26	9.58	9.84	10.67	11.08	11.70
808	198.00	190.68	196.90	192.75								
809					169.25	156.15	139.67	133.20	137.40	147.15	160.55	176.25
906	177.80	175.80	167.10	154.92	125.50	108.58	90.67	86.15		92.24	118.09	137.70
42-608	102.95	101.15	105.92	101.05	102.36	101.95	101.01	103.95	100.97	100.75	103.25	100.50
805	235.27	233.81	230.53	228.00	225.29	219.85	219.20	228.30	225.70	228.60	228.90	230.00
817	217.52	218.03	218.53	204.00	217.80	217.40	217.45		217.10			
903	29.09	28.46	28.01	27.60	29.37	26.00	25.36	24.95	26.78	25.53	25.84	26.45
925	144.28	144.28	143.44	141.72	140.10	138.94	137.80	136.13	135.95	136.10	136.86	137.55
43-205	93.84	94.34			87.10	79.20	70.30	61.10	56.15	52.61	55.20	84.17
705	58.90	58.53	58.65	55.34	49.45	44.35	37.82	31.42	30.38	30.28	32.45	37.85
LR-58-49-801	37.80			37.10	27.70	25.40	26.65	28.44	35.83	34.91	36.50	39.94
YD-58-50-211	226.27	220.20		174.90								
216	256.24	254.35	250.98	236.10	224.85	217.30	209.00	196.30	192.70	203.30	209.85	216.10
217	131.35	131.00	102.08	85.90	77.85	75.58	70.70	65.60	71.80	90.55	103.25	111.35
219	226.27	220.20	210.60	208.45	207.87	207.75	205.65	207.15	215.65	226.05	227.80	228.45
301	190.56	188.45	186.19	175.85	165.75	155.44	144.96	144.65	128.98	126.82	127.40	130.78
412	162.02	162.44	162.18	158.81	156.57	154.20	152.65	149.07	150.00	150.90	152.29	153.60
518	262.00	255.82	240.90	226.15	204.35	193.25	181.90	175.35	177.35	184.50	193.80	206.60
704		193.97	188.18	166.71	151.73	144.35		132.3	132.9	132.35		153.65
801	120.45	102.28	106.16	72.40		57.54	53.12	54.09	65.95	59.33	72.27	73.40
LR-58-57-201	174.34	162.00	163.48	161.10	168.55	168.35	159.80	159.60	160.15		161.30	161.60
402	94.64	91.00	95.10	94.85	94.20	94.30		96.95	95.00	95.35	95.85	95.50
903	250.66	224.60	222.95	223.65	220.42	209.56	200.50	182.80	186.10	192.03	202.65	197.75
58-101	128.05	118.93	133.80	91.88	83.60	78.40	73.20	71.38	74.85	82.65	83.90	112.40
301	159.02	154.15	153.67	151.75	149.65	144.14	142.68	141.20	132.86	142.70	139.78	133.35
502	158.72	159.41	158.60	155.96	152.85	150.66	144.00	144.45	137.75	136.23	139.41	136.70

*All measurements were made during the last week of the month. See table 15 for a listing of water-level measurements of additional wells made for the annual water-level survey.

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