

HYDROLOGIC DATA FOR URBAN STUDIES IN THE AUSTIN METROPOLITAN AREA, TEXAS, 1986

By J.D. Gordon, D.L. Pate, and D.L. Slagle

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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:

Multiply	By	To Obtain
inch	25.4	millimeter
foot	.3048	meter
mile	1.609	kilometer
square mile (mi ²)	2.590	square kilometer
cubic foot per second (ft ³ /s)	.02832	cubic meter per second
foot per mile (ft/mi)	.189	meter per kilometer
acre-foot	1233	cubic meter
	.001233	cubic hectometer

Sea Level: In this report "sea Level" refers to the National Geodetic Vertical datum of 1929 (NGVD of 1929)--a geodetic datum derived from a general adjustment of the first-order level nets of both the United States and Canada, formerly called "Mean Sea Level of 1929".

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INTRODUCTION

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 and flow conditions in representative watersheds with various types of urban development.
4. To quantitatively appraise the ground-water resources of the Edwards aquifer in hydraulic circulation with Barton Springs, the effect of urbanization on the quality and quantity of recharge and discharge, and the extent of contamination in the aquifer.

This report presents the basic hydrologic data collected in the Austin urban area for the 1986 water year (Oct. 1, 1985 to Sept. 30, 1986). 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-85-3, 1986.

Analyses of "Hydrologic data for urban studies in the Austin, Texas, metropolitan area" from 1975 to 1982 are presented in a report by Veenhuis and Gannett (1986). Two analyses were made to determine the effects of urbanization on flood peaks in streams in the Austin metropolitan area. The first analysis compares flood recurrence intervals of urban drainage basins to rural drainage basins. In the second analysis, data from one drainage basin in which considerable urban development occurred during the study period, were used. The data were analyzed for changes in rainfall-runoff and flood frequency relations due to urbanization.

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 in an eastward direction from the Hill Country at the eastern edge of the Edwards Plateau across the Balcones escarpment to the Blackland Prairie of Texas. The land surface decreases in altitude from about 1,000 feet above sea level in the northwest to about 420 feet above 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 generally are 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 to 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 are presented by the U.S. Dept. of Agriculture (1974). Additional geologic information of the Austin study area can be found in publications by the University of Texas Bureau of Economic Geology. A list of some of these geologic reports is given in the section "Selected references."

The major streams in the study area are Onion Creek, Barton Creek, Walnut Creek, Bull Creek, Boggy Creek, Shoal Creek, Williamson Creek, Slaughter Creek, Bear Creek, and Waller Creek. All streams in the area are within the Colorado River Basin. Throughout the year, low flow for some of the smaller streams in the predominantly urban area 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 for July is 95°F; and the mean minimum temperature for January is 41°F. The average growing season is about 270 days.

The average rainfall (based on the period 1951-80) is 31.50 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 ACTIVITIES

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 data-collection sites for Lake Austin, and Town Lake are shown in figures 2 and 3.

Precipitation Data

Precipitation data are based on 17 recording rain gages. The gages are distributed throughout the drainage basins to measure total precipitation and to define rainfall intensities. The locations of these rain gages are given in table 1 and shown in figure 1.

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 2. 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 Williamson Creek at Jimmy Clay Road streamflow-gaging station could be computed as follows: Multiply the recorded precipitation at rain-gage 1-WMS by 0.39 and to that value, add the recorded precipitation at rain-gage 2-WMS multiplied by 0.61.

Rainfall for the current year was unevenly distributed over the area. Individual station totals ranged from 25.12 inches at gage 2-WMS in the Williamson Creek basin to 46.30 inches at gage 2-WLN in the Walnut Creek basin. The mean water-year total of all rain gages is 34.62 inches as compared with the 30-year average (1951-80) of 31.50 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 3 and 4 at the end of this report (Supplemental Data section).

Storm Data

Seven storms occurred during the year which produced rainfall greater than 3.00 inches. These storms occurred on Oct. 14 and 19, Nov. 27, Feb. 3, Apr. 30, May 9, and Sept. 6. The maximum rainfall recorded over a 24-hour period was 4.50 inches at 3-BAR on Sept. 6. Storms were selected for analysis based on rainfall distribution, discharge, magnitude, and quality of data.

Several storms were selected for which incremental values of rainfall and runoff are presented. The largest storms were selected for analysis if the quality of recorded data was sufficient and if the rainfall was uniformly distributed over the watershed. The characteristics of the analyzed storms are presented in table 5 (Supplemental Data section).

Runoff Data

Runoff data are based on discharge measurements and stage records at 12 continuous-record streamflow stations and 5 flood-hydrograph, partial-record streamflow stations. Streamflow data for continuous-record gaging stations,

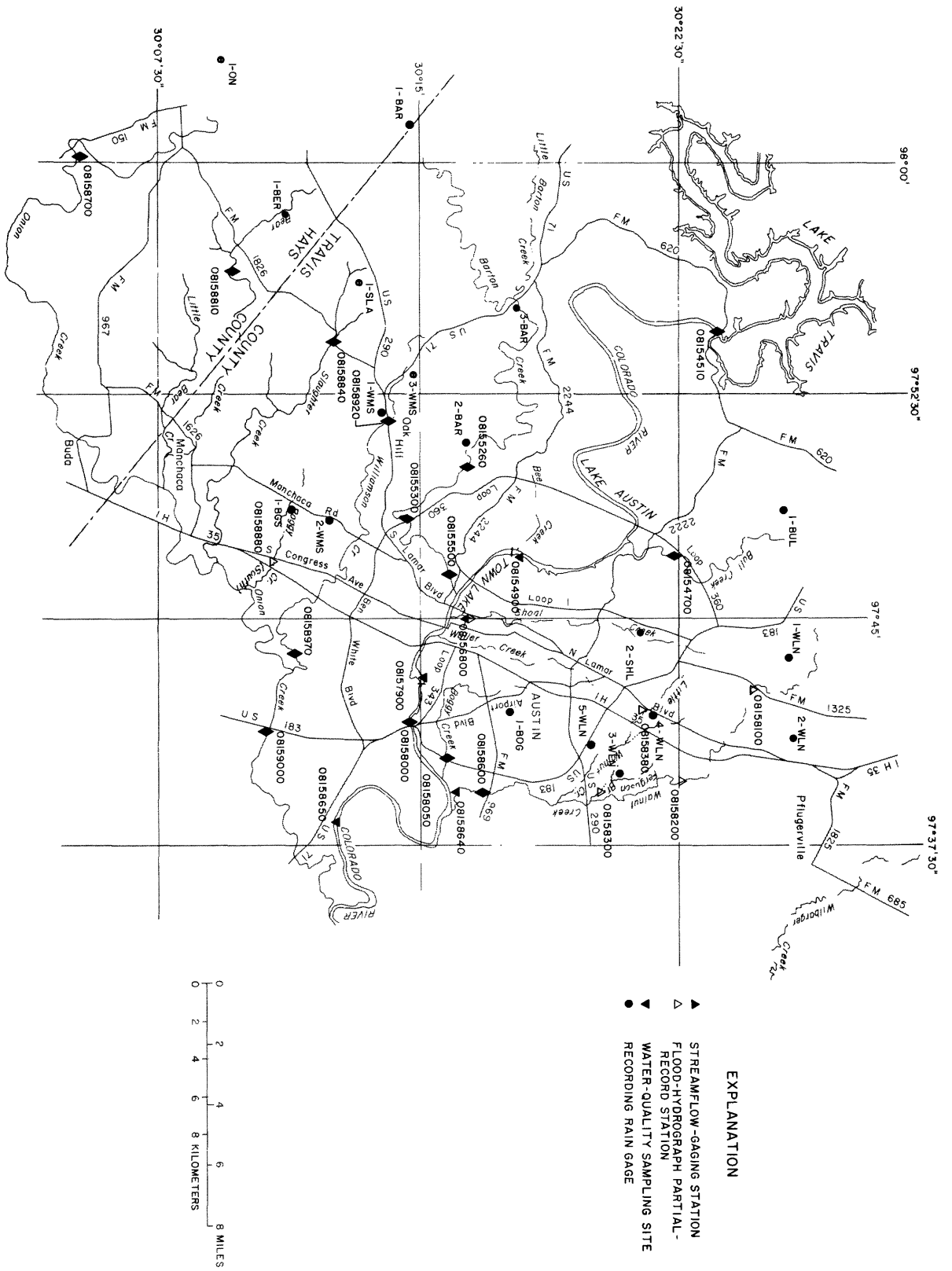


Figure 1.—Location of surface-water hydrologic-instrument installations and stream-flow water-quality sampling site.

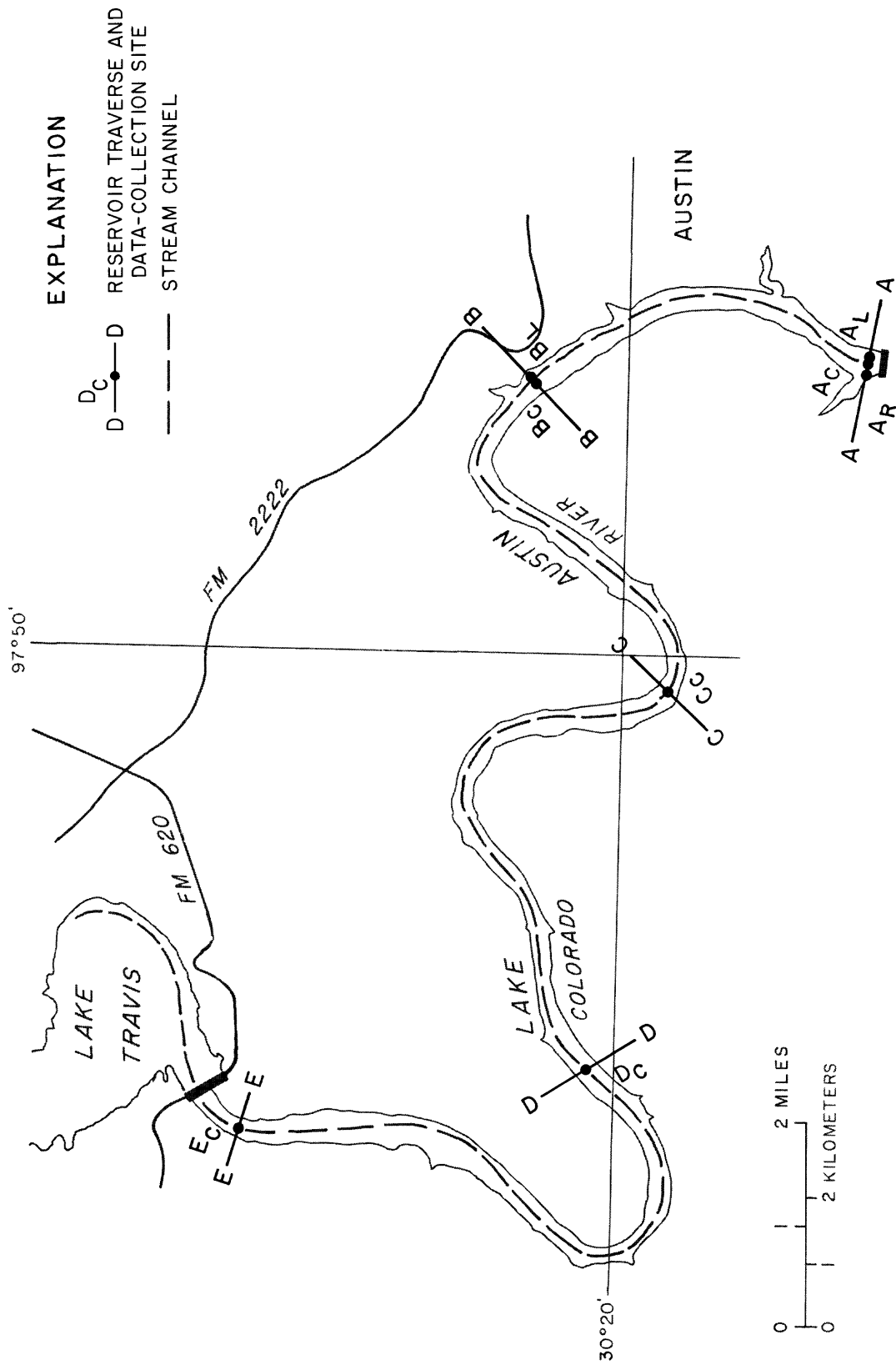


Figure 2.-Location of the water-quality data-collection sites on Lake Austin

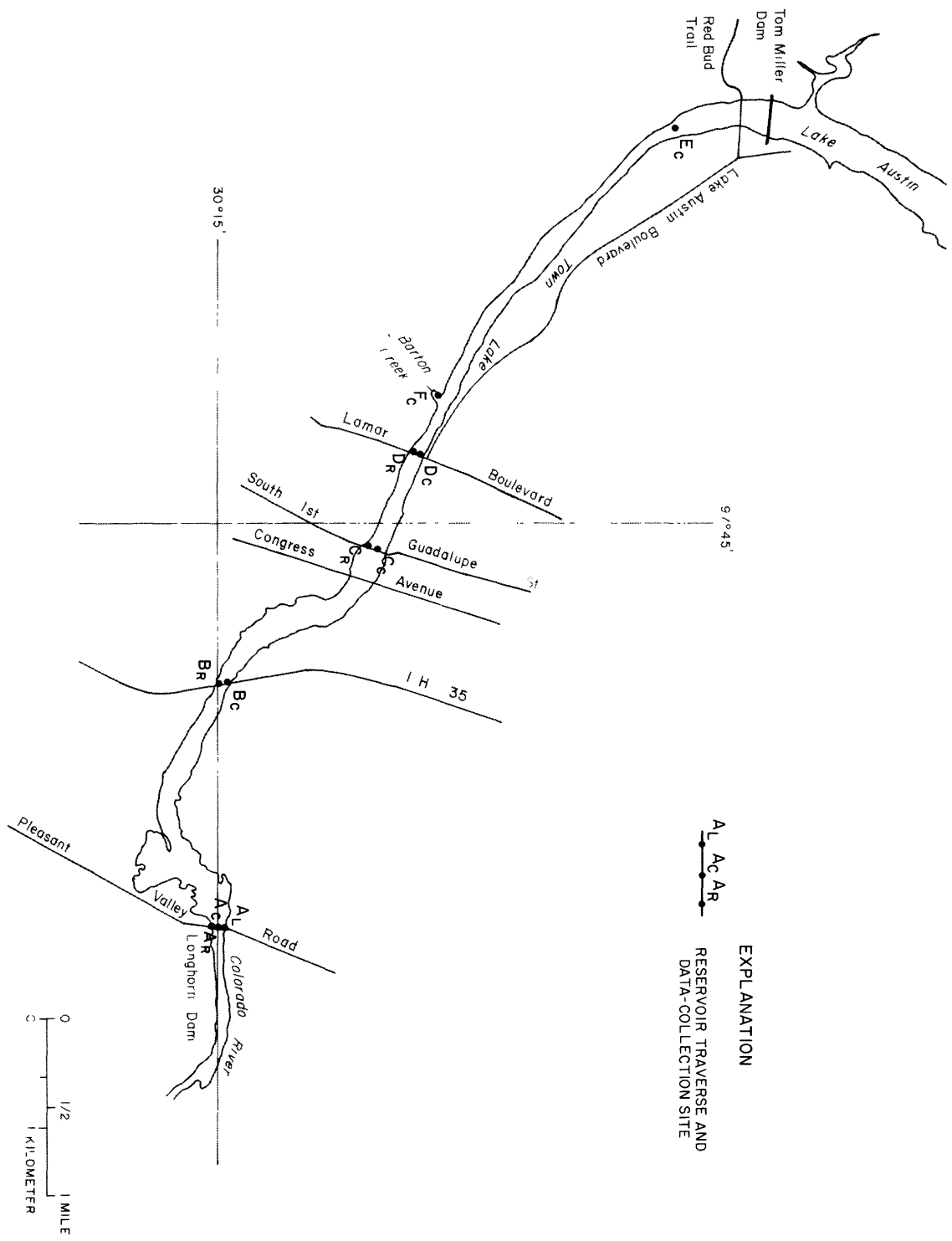


Figure 3.-Location of the water-quality data-collection sites on Town Lake

Table 1.--Location of rain gages in the Austin area

Rain gage	Location
1-BUL	Lat 30°25'37", long 97°48'53", at David Hutton residence (relocated), 1.1 miles west of the intersection of Spicewood Springs Road and gravel dirt road, which starts 800 ft north of Oak Grove Church on Spicewood Springs Road. Elevation, 775 ft (approximate).
1-BAR	Lat 30°14'37", long 98°01'17", 25 ft north of centerline of Fitzhugh Road at Mr. Ben Crumley's residence, 4.9 miles west of the intersection of U.S. Hwy. 290 and Fitzhugh Road. Elevation, 1,058 ft (approximate).
2-BAR	Lat 30°16'24", long 97°50'55", at Lost Creek Country Club, 150 ft northwest of maintenance building, 1.7 miles southwest of intersection of Lost Creek Blvd. and Loop 360. Elevation, 638 ft (approximate).
3-BAR	Lat 30°17'48", long 97°55'31", on H.T. Hamrick property (relocated) on Barton Creek at Hwy. 71, 5.8 miles northwest of Oak Hill. Elevation, 781 ft (approximate).
2-SHL	Lat 30°20'49", long 97°44'39" on Shoal Creek at Northwest Park (relocated), on left bank of drainage ditch, 60 ft east of Shoal Creek Blvd. between 6903 and 6905 Shoal Creek Blvd. Elevation 680 ft (approximate).
1-BOG	Lat 30°17'31", long 97°41'54", 50 ft behind National Weather Service building at 3724 Manor Road. Elevation, 630 ft (approximate).
1-WLN	Lat 30°25'18", long 97°43'42", at Textruss, Inc. (relocated), 200 ft east of Dorsett Road, 0.5 mile north of the intersection of Duval and Dorsett Roads. Elevation, 835 ft (approximate).
2-WLN	Lat 30°25'48", long 97°40'49", at Turbine West Supply Company at the intersection of Hydro and Turbine Streets, 0.7 mile northwest of the intersection of Interstate Highway 35 and Howard Lane. Elevation, 790 ft (approximate).
3-WLN	Lat 30°20'34", long 97°39'52", at Ferguson Lane at Loredo Manufacturing Company, 0.9 mile northwest at the intersection of Ferguson Lane and Springdale Road. Elevation, 595 ft (approximate).
4-WLN	Lat 30°21'39", long 97°41'49", at Mollie Barrington School on Cooper Drive, 0.1 mile east of the intersection of Lamar Blvd. and Cooper Drive. Elevation, 690 ft (approximate).
5-WLN	Lat 30°20'09", long 97°41'03", at entrance road to the Showtown Drive-In Theater, 0.25 mile north of the intersection of Cameron Road and U.S. Hwy. 183. Elevation, 664 ft (approximate).

Table 1.--Location of rain gages in the Austin area--Continued

Rain gage	Location
1-ON	Lat 30°08'57", long 98°03'23", at Bullard Ranch, 2.7 miles northwest of Driftwood on FM 150, on the north side of road in fenceline. Elevation, 1,060 ft (approximate).
1-BER	Lat 30°11'08", long 97°58'11", at Mr. Lowden's residence (revised) on Nutty Brown Road, 1.6 mile south of U.S. Hwy. 290. Gage located left of driveway to house. Elevation, 1,067 ft (approximate).
1-SLA	Lat 30°13'10", long 97°56'09", at the entrance of Mr. O.D. Miller's property on Derecho Road, 0.8 mile south of the intersection Derecho Road and U.S. Hwy. 290. Elevation, 1,055 ft (approximate).
1-BGS	Lat 30°11'18", long 97°48'26", at the Brown School about 50 ft south and 200 ft west of the administration building and 20 ft of the fence line, about 3,000 ft northwest of the intersection of Manchaca Road and Dittmar Lane. Elevation, 725 ft (approximate).
1-WMS	Lat 30°13'42", long 97°52'00", at the entrance of Mr. Welty E. McCullough's property at 7101 Convict Hill Road, Oak Hill, 0.4 mile south of the intersection of Convict Hill Road and U.S. Hwy. 290. Elevation, 835 ft (approximate).
2-WMS	Lat 30°12'25" long 97°48'01", at the rear of Mr. Wilson's property at 1809 Stanley Avenue, 0.3 mile east of the intersection of Berkeley Avenue and Manchaca Road. Elevation, 700 ft (approximate).

Table 2.--Weighted-mean precipitation factors for drainage basins of the streamflow stations

Streamflow Station Number	Name (abbreviated)	Rain gage a/	Weighted-mean precipitation factor b/
08154700	Bull Creek at Loop 360	1-BUL	1.00
08155300	Barton Creek at Loop 360	1-BAR 2-BAR 3-BAR	.59 .15 .26
08156800	Shoal Creek at 12th Street	2-SHL	1.00
08158050	Boggy Creek at U.S. Highway 183	1-BOG	1.00
08158100	Walnut Creek at Farm Road 1325	1-WLN	1.00
08158200	Walnut Creek at Dessau Road	1-WLN 2-WLN	.51 c/ -- d/ .49 <u>c/</u> 1.00 <u>d/</u>
08158300	Ferguson Branch at Springdale Road	3-WLN	1.00
08158380	Little Walnut Creek at Georgian Drive	4-WLN	1.00
08158600	Walnut Creek at Webberville Road	1-WLN 2-WLN 3-WLN 4-WLN 5-WLN	.25 .21 .28 .15 .11
08158700	Onion Creek near Driftwood	1-ON	1.00
08158810	Bear Creek below Farm Road 1826	1-BER	1.00
08158840	Slaughter Creek at Farm Road 1826	1-SLA	1.00

See footnotes at end of table.

Table 2.--Weighted-mean precipitation factors for drainage basins of the streamflow stations--Continued

Number	Streamflow Station Name (abbreviated)	Rain gage a/	Weighted-mean precipitation factor b/
08158880	Boggy Creek (South) at Circle S Road	1-BGS	1.00
08158920	Williamson Creek at Oak Hill	1-WMS	1.00
08158970	Williamson Creek at Jimmy Clay Road	1-WMS 2-WMS	.39 .61

a/ Rain gage designations are: BUL-Bull Creek; BAR-Barton Creek; BOL-Bouldin Creek; SHL-Shoal Creek; BOG-Boggy Creek; WLN-Walnut Creek; ON-Onion Creek; BER-Bear Creek; SLA-Slaughter Creek; BGS-Boggy Creek (South); and WMS-Williamson Creek. See locations of rain gages on figure 1.

b/ See section on "Precipitation Data" for explanation of use of weighted-mean precipitation factors

c/ Used for Feb. 3-4 storm.

d/ Used for May 17 storm.

and for flood-hydrograph partial-record stations for the 1986 water year are presented generally in downstream order in the section "Compilation of data."

Rainfall and runoff for the 1986 water year for the continuous-record stations in the Austin urban study area are summarized in table 6. Runoff varied from 5.33 inches for the Bear Creek below Farm Road 1826 near Driftwood gage, to 14.83 inches for the Williamson Creek at Oak Hill gage, which was 17 percent and 37 percent of the basins annual weighted-mean rainfall, respectively. Detailed storm rainfall and runoff records for each gaging station are shown in the section "Compilation of data."

Surface-Water-Quality Data

Water-quality data were collected at 16 streamflow locations during the 1986 water-year. The locations of the streamflow water-quality data-collection sites are shown on figure 1. Water-quality samples were collected and analyzed during various flow and seasonal conditions so that the variations in the water quality may be documented for future analysis. Six of these water-quality data-collection sites are equipped with automated samplers that collect discrete samples during storms. These six automated samplers are located at the gaging stations Barton Creek at Loop 360, Barton Creek at Camp Craft Road, Shoal Creek at 12th Street, Boggy Creek at Highway 183, Bull Creek at Loop 360, and Williamson Creek at Oak Hill. The peak discharges associated with the water-quality samples collected during storms at all the gaging stations are shown in table 7.

Analyses for these sites include nutrients (ammonia, nitrogen, organic nitrogen, nitrate nitrogen, nitrite nitrogen, and phosphorus), physical organics and inorganics (specific conductance, pH, temperature, color, turbidity, dissolved oxygen, suspended and dissolved solids, biochemical oxygen demand, and total organic carbon), indicator bacteria (total coliform, fecal coliform, and fecal streptococci), and inorganic-chemical constituents (calcium, magnesium, sodium, potassium, alkalinity, sulfate, chloride, fluoride, and silica). Analyses are also done for 12 selected trace elements (arsenic, barium, cadmium, chromium, copper, iron, lead, manganese, mercury, selenium, silver, and zinc), 14 insecticides and herbicides, and 19 volatile organic compounds.

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 2 and 3 respectively, and the analyses of these samples are given in the "Compilation of data" section in this report.

Ground-Water-Quality Data

From 1978-83, ground-water-quality data were collected from 38 wells completed in the part of the Edwards aquifer that is in hydrologic circulation with Barton Springs. These data were collected as part of the ground-water study of the Austin urban hydrology project (see Introduction). The data are published in the annual hydrologic data reports from this study.

Beginning in 1985, the Geological Survey began a cooperative study with the Planning and Growth Management Department of the city of Austin to resume collection of ground-water-quality from 15 of the original 38 wells. The

Geological Survey collects 4 samples per year, one sample during dry periods in the winter, spring, and summer; and one sample after a runoff event in late spring.

Analyses for these sites include nutrients (ammonia, nitrogen, organic nitrogen, nitrate nitrogen, nitrite nitrogen, and phosphorus), physical organics and inorganics (specific conductance, ph, temperature, and total organic carbon), inorganic-chemical constituents (calcium magnesium, sodium, potassium, alkalinity, sulfate, chloride, fluoride, and silica), and 19 volatile organic compounds.

Multiple samples were collected by city of Austin personnel from the same wells following each of 4 runoff events. They collect three samples at two-day intervals after each of the four storms. The purpose of their sampling program is to determine the change in ground-water quality due to the influence of recharge from storm runoff. The locations of the sampled wells are shown in figures 4 and 5. Selected characteristics of the 15 wells are given in table 9 (Supplemental Data section).

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 one-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 is 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 4 and 5; 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.

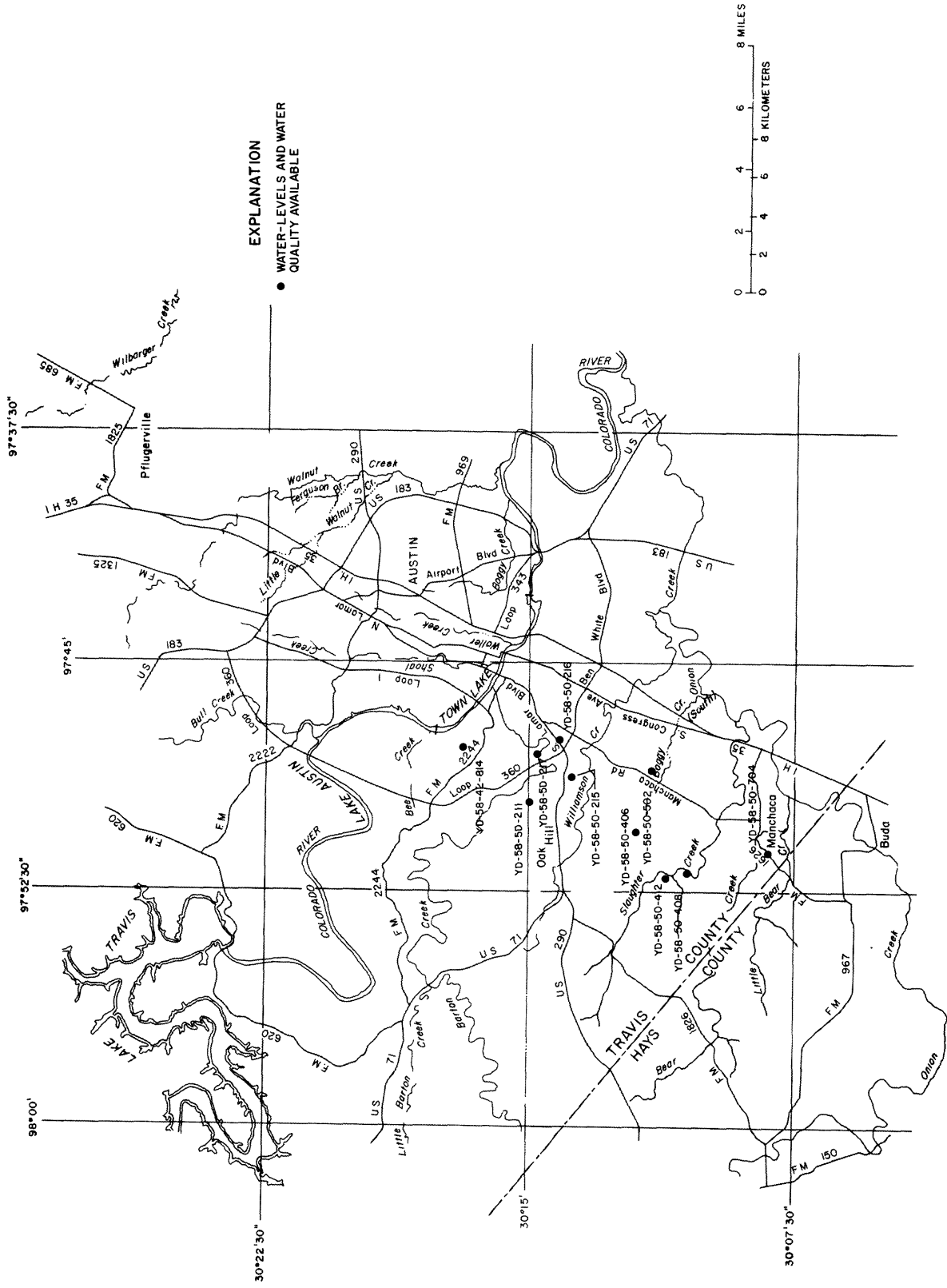


Figure 4.—Location of ground-water data collection sites in Travis County.

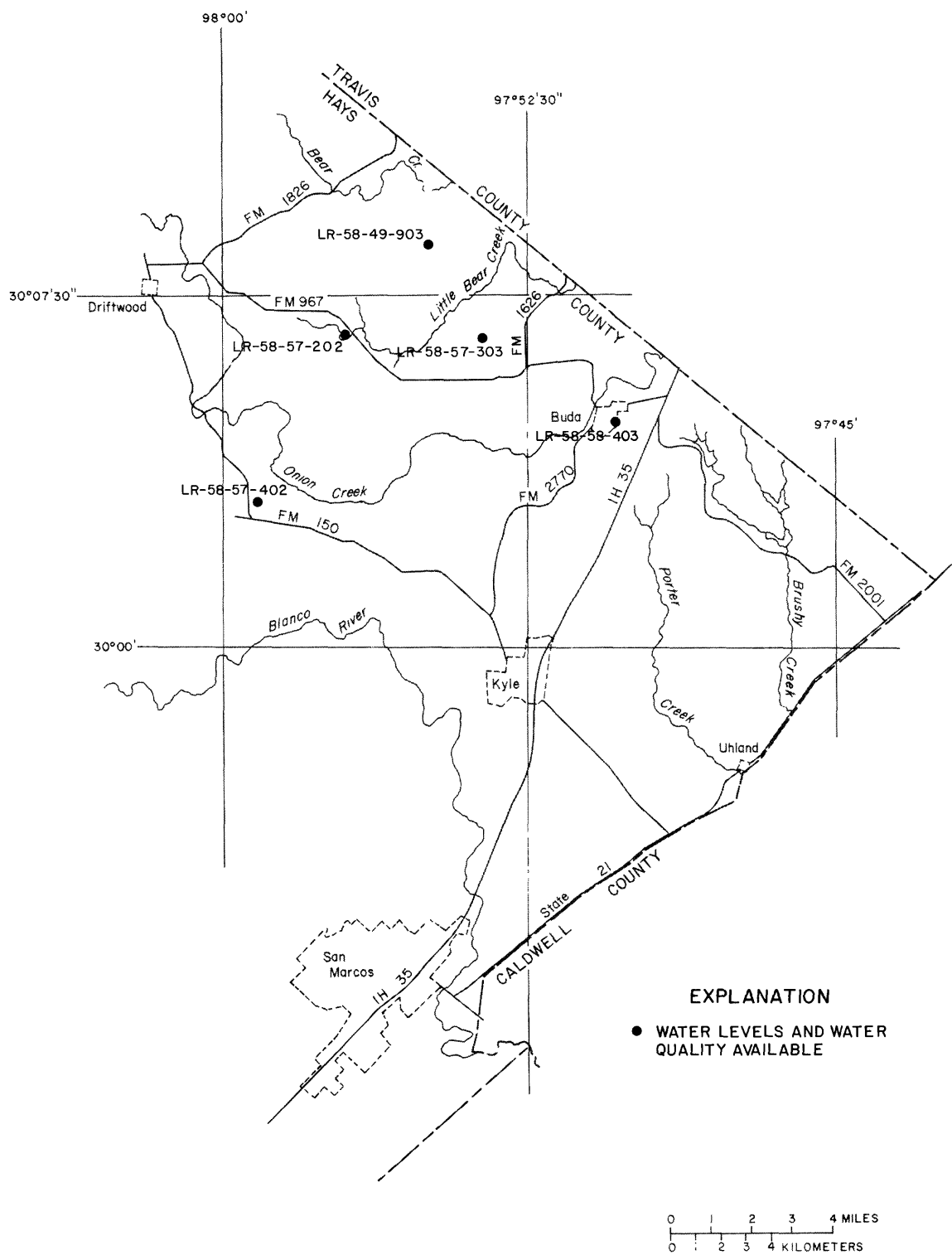


Figure 5.--Location of ground-water data collection sites in Hays County.

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C O M P I L A T I O N O F D A T A

COLORADO RIVER MAIN STEM

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 northwest of the State Capitol at Austin, and at mile 318.0.

DRAINAGE AREA.--38,755 mi², approximately, of which 11,403 mi² probably is noncontributing.

WATER-DISCHARGE RECORDS

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

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

REMARKS.--No estimated daily discharges. Records fair.

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

AVERAGE DISCHARGE.--12 years 1,438 ft³/s (1,042,000 acre-ft/yr).

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

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 4,950 ft³/s June 14, 15; no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	879	281	.00	963	.00	3300	766	.00	1110	3170	1760	1310
2	638	.00	.00	1060	.00	3160	821	1840	1280	1600	1490	1380
3	403	.00	.00	799	.00	2110	845	1640	1010	1660	1360	1770
4	489	.00	.00	709	.00	435	1820	1690	1780	1760	1720	1200
5	.00	.00	.00	783	.00	794	1690	1610	1520	2100	1860	1660
6	487	276	.00	910	.00	.00	1500	1840	1460	1820	1340	.00
7	494	336	.00	1280	.00	428	1630	1820	1720	1900	1550	.00
8	494	244	.00	1170	.00	.00	1400	1650	2620	1870	1610	1680
9	86	.00	.00	1070	.00	387	1500	1610	3170	2070	1560	1380
10	333	287	.00	342	.00	1620	1500	1450	3360	2000	1630	1430
11	917	.00	.00	440	.00	1350	1500	1760	3070	2040	1940	1270
12	847	149	147	533	.00	1190	1340	1740	3130	1680	1710	1530
13	464	187	192	761	.00	1820	1340	1430	4500	1500	1720	1090
14	.00	.00	179	571	.00	968	1420	1720	4950	1640	1680	1560
15	589	.00	.00	856	.00	251	1280	388	4950	1540	1680	1090
16	584	.00	.00	319	.00	189	1340	1640	3980	1460	1720	1220
17	531	.00	306	.00	.00	312	1280	529	4420	1500	1610	1500
18	399	.00	405	.00	.00	.00	1380	1740	4840	1530	1710	1320
19	.00	.00	360	.00	202	960	1200	1350	4770	1570	1720	1240
20	.00	.00	82	.00	211	198	1350	1360	3800	1500	1730	1380
21	.00	.00	.00	.00	211	337	1380	1660	3360	1310	1740	1410
22	.00	.00	.00	1500	211	275	1240	1350	3260	1460	1820	748
23	398	.00	.00	998	211	198	1450	1410	3440	1500	1670	1380
24	.00	.00	.00	717	211	.00	1450	1400	3320	1600	1200	1300
25	.00	.00	592	.00	211	.00	1840	981	3260	1520	1650	1070
26	265	.00	926	.00	211	542	1580	1500	3460	1380	1840	1340
27	.00	.00	663	.00	873	451	1810	1420	3320	1530	1560	1040
28	.00	.00	952	.00	2350	299	1640	1450	3250	1520	1530	1590
29	.00	.00	1030	.00	---	306	1850	1630	2640	1600	1440	910
30	.00	.00	1100	.00	---	306	1710	1430	1860	1410	1410	940
31	149	---	1120	.00	---	694	---	1560	---	1550	1520	---
TOTAL	9446.00	1760.00	8054.00	15781.00	4902.00	22880.00	42852	44598.00	92610	52290	50480	36738.00
MEAN	305	58.7	260	509	175	738	1428	1439	3087	1687	1628	1225
MAX	917	336	1120	1500	2350	3300	1850	1840	4950	3170	1940	1770
MIN	.00	.00	.00	.00	.00	.00	766	.00	1010	1310	1200	.00
AC-FT	18740	3490	15980	31300	9720	45380	85000	88460	183700	103700	100100	72870
CAL YR 1985	TOTAL	324889.00		MEAN	890	MAX	2300	MIN	.00	AC-FT	644400	
WTR YR 1986	TOTAL	382391.00		MEAN	1048	MAX	4950	MIN	.00	AC-FT	758500	

COLORADO RIVER MAIN STEM

08154510 COLORADO RIVER BELOW MANSFIELD DAM, AUSTIN, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical and biochemical analyses: June 1980 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PERCENT SATURATION)	OXYGEN DEMAND, BIO-CHEMICAL, 5 DAY (MG/L)	HARDNESS (MG/L AS CaCO3)	HARDNESS NDNCARB WH WAT TDT FLD (MG/L AS CaCO3)
MAR 27...	0925	478	7.70	12.5	9.1	85	0.4	190	43
MAY 02...	1150	483	7.40	14.0	6.2	60	0.9	180	32
JUL 16...	1455	483	7.20	17.5	2.7	28	0.2	190	45
AUG 26...	1245	459	7.30	20.0	2.6	29	0.2	180	29

DATE	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)	ALKALINITY WH WAT TOTAL (MG/L AS CaCO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLORIDE, DIS-SOLVED (MG/L AS CL)	FLUORIDE, DIS-SOLVED (MG/L AS F)
MAR 27...	43	19	25	0.8	3.6	143	29	42	0.2
MAY 02...	42	18	24	0.8	3.5	147	25	48	0.2
JUL 16...	44	19	24	0.8	3.5	143	29	40	0.2
AUG 26...	43	17	21	0.7	3.4	148	28	38	0.2

DATE	SILICA, DIS-SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED (MG/L)	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)
MAR 27...	7.1	250	<0.01	0.30	0.03	0.27	0.3	<0.01
MAY 02...	6.8	260	<0.01	0.30	0.04	0.26	0.3	0.01
JUL 16...	7.0	250	<0.01	0.20	0.02	0.28	0.3	<0.01
AUG 26...	6.8	250	<0.01	<0.10	0.10	0.2	0.3	0.02

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 upstream from Tom Miller Dam on the Colorado River at Austin.

DRAINAGE AREA.--38,846 mi², of which 11,403 mi² probably is noncontributing.

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

301739097471601 - LAKE AUSTIN SITE AR

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PERCENT SATURATION)
JAN							
15...	1012	1.00	481	8.10	11.0	9.9	91
15...	1013	10.0	482	8.10	11.0	9.8	90
15...	1014	20.0	485	8.10	11.0	9.7	89
15...	1015	31.0	486	8.10	11.0	9.6	88

301739097471201 - LAKE AUSTIN SITE AC

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	TRANSPARENCY (SECCHI DISK (M))	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PERCENT SATURATION)	OXYGEN DEMAND, BIO-CHEMICAL, 5 DAY (MG/L)	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML)
JAN												
15...	0945	1.00	481	8.30	11.0	2.00	3	2.0	9.8	90	0.1	K3
15...	0950	10.0	481	8.30	11.0	--	--	--	9.8	90	--	--
15...	0955	20.0	487	8.30	11.0	--	--	--	9.8	90	--	--
15...	1000	30.0	483	8.30	11.0	--	--	--	9.8	90	--	--
15...	1005	40.0	484	8.30	11.0	--	--	--	9.7	89	--	--
15...	1010	54.0	484	8.60	11.0	--	7	2.6	9.8	90	0.1	--
MAY												
16...	0725	1.00	467	8.00	19.5	1.10	5	3.2	7.5	84	0.6	130
16...	0727	10.0	467	8.00	18.5	--	--	--	7.3	80	--	--
16...	0729	20.0	467	7.80	18.0	--	--	--	7.0	76	--	--
16...	0731	30.0	467	7.80	17.5	--	--	--	7.0	75	--	--
16...	0733	40.0	467	7.70	17.5	--	--	--	7.0	75	--	--
16...	0735	52.0	467	7.70	17.5	--	5	42	6.0	64	0.7	--
AUG												
18...	1015	1.00	481	8.00	27.5	2.10	5	2.3	6.5	--	0.3	<4
18...	1017	10.0	478	7.70	24.5	--	--	--	5.6	68	--	--
18...	1019	20.0	478	7.60	23.0	--	--	--	4.6	55	--	--
18...	1021	30.0	478	7.60	23.0	--	--	--	4.3	51	--	--
18...	1023	40.0	478	7.50	22.5	--	--	--	3.5	41	--	--
18...	1025	50.0	478	7.40	22.5	--	5	18	2.9	34	0.4	--

DATE	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	POTASSIUM, DIS-SOLVED (MG/L AS K)	ALKALINITY, WH WAT TOTAL FIELD (MG/L AS CaCO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLORIDE, DIS-SOLVED (MG/L AS Cl)	FLUORIDE, DIS-SOLVED (MG/L AS F)
JAN												
15...	K1	200	51	47	20	26	0.8	3.1	149	25	47	0.2
15...	--	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--	--
15...	--	200	53	48	20	26	0.8	3.1	149	24	46	0.2
MAY												
16...	300	180	34	43	18	24	0.8	3.8	148	30	39	0.2
16...	--	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--	--
16...	--	180	29	41	18	22	0.7	3.4	148	30	43	0.2
AUG												
18...	58	180	29	42	19	20	0.7	3.3	154	25	41	0.1
18...	--	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--	--
18...	--	180	25	42	18	20	0.7	3.3	154	25	40	0.3

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

301739097471201 - LAKE AUSTIN SITE AC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	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)	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												
15...	6.4	260	1	<1	0.19	0.01	0.20	0.01	0.39	0.4	0.01	3.7
15...	--	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	0.19	0.01	0.20	0.02	0.38	0.4	0.01	--
15...	--	--	--	--	--	--	--	--	--	--	--	--
15...	6.5	260	5	5	0.19	0.01	0.20	0.04	0.46	0.5	0.01	4.5
MAY												
16...	7.2	250	7	5	--	<0.01	0.20	0.02	0.28	0.3	0.01	2.3
16...	--	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	<0.01	0.20	0.03	0.37	0.4	0.03	--
16...	--	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--	--
16...	7.6	250	59	15	--	<0.01	0.30	0.06	0.34	0.4	<0.01	3.0
AUG												
18...	7.1	250	9	4	--	<0.01	<0.10	0.01	0.29	0.3	0.04	3.6
18...	--	--	--	--	--	<0.01	<0.10	0.03	0.27	0.3	0.02	--
18...	--	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	<0.01	<0.10	0.03	0.37	0.4	0.03	--
18...	--	--	--	--	--	--	--	--	--	--	--	--
18...	7.6	250	12	6	--	<0.01	<0.10	0.08	0.32	0.4	0.23	4.4

DATE	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)	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												
15...	1	66	<1	<10	<1	<3	<1	3	<0.1	<1	<1	16
15...	--	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	40	--	<10	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--	--
15...	1	66	<1	<10	<1	6	<1	3	<0.1	<1	<1	16
MAY												
16...	<1	66	<1	<10	1	3	<1	<1	<0.1	<1	<1	8
16...	--	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	<10	--	<10	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--	--
16...	<1	64	<1	<10	1	7	1	44	<0.1	<1	<1	7
AUG												
18...	--	--	--	--	--	<20	--	<10	--	--	--	--
18...	--	--	--	--	--	10	--	<10	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	20	--	<10	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	<20	--	50	--	--	--	--

DATE	AME- TRYNE TOTAL	ATRA- ZINE, TOTAL (UG/L)	CYAN- AZINE TOTAL (UG/L)	METHO- MYL TOTAL (UG/L)	PROME- TONE TOTAL (UG/L)	PROME- TRYNE TOTAL (UG/L)	PRO- PAZINE TOTAL (UG/L)	PROPHAM TOTAL (UG/L)	SEVIN, TOTAL (UG/L)	SIMA- ZINE TOTAL (UG/L)	SIME- TRYNE TOTAL (UG/L)
JAN											
15...	<0.1	<0.1	<0.1	<2.0	<0.1	<0.1	<0.1	<2.0	<2.0	<0.1	<0.1
15...	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--
15...	<0.1	<0.1	<0.1	<2.0	<0.1	<0.1	<0.1	<2.0	<2.0	<0.1	<0.1
MAY											
16...	<0.1	<0.1	<0.1	<0.5	<0.1	<0.1	<0.1	<0.5	<0.5	<0.1	<0.1
16...	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--
16...	<0.1	<0.1	<0.1	<0.5	<0.1	<0.1	<0.1	<0.5	<0.5	<0.1	<0.1
AUG											
18...	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--

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

301739097470901 - LAKE AUSTIN SITE AL
WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	SAM-PLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PERCENT SATURATION)
JAN							
15...	1020	1.00	482	8.10	11.0	9.7	89
15...	1025	10.0	483	8.10	11.0	9.7	89
15...	1030	13.0	484	8.10	11.0	9.6	88
AUG							
18...	1000	1.00	478	8.00	27.0	6.5	83
18...	1002	10.0	478	7.80	25.0	5.7	70
18...	1004	20.0	478	7.60	23.0	4.8	57
18...	1006	24.0	478	7.60	23.0	4.5	53

302043097472401 - LAKE AUSTIN SITE BC
WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	SAM-PLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	TRANSPARANCY (SECCHI DISK) (M)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PERCENT SATURATION)	NITROGEN, NITRATE TOTAL (MG/L AS N)
JAN									
15...	1055	1.00	467	8.10	12.0	2.40	9.7	91	--
15...	1100	10.0	467	8.10	11.5	--	9.7	90	--
15...	1105	20.0	478	8.10	11.5	--	9.6	89	--
15...	1110	31.0	506	8.30	11.5	--	9.7	90	0.29
MAY									
16...	0800	1.00	464	8.00	20.5	0.7	7.7	87	--
16...	0802	10.0	464	8.00	20.0	--	7.7	86	--
16...	0804	20.0	478	7.80	18.0	--	7.4	80	--
16...	0806	26.0	478	7.60	17.0	--	7.4	78	--
AUG									
18...	0930	1.00	482	8.00	27.5	2.30	6.5	--	--
18...	0932	10.0	477	7.60	23.5	--	5.3	64	--
18...	0934	20.0	477	7.60	23.0	--	5.1	61	--
18...	0936	27.0	477	7.60	23.0	--	4.8	57	--

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)	IRON, DIS-SOLVED (UG/L AS FE)	MANGANESE, DIS-SOLVED (UG/L AS MN)
JAN								
15...	<0.01	0.20	0.02	0.38	0.4	0.01	30	<10
15...	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--
15...	0.01	0.30	0.04	0.66	0.7	0.03	20	<10
MAY								
16...	<0.01	0.20	0.03	0.37	0.4	0.03	30	<10
16...	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--
16...	<0.01	0.20	0.02	0.28	0.3	0.03	20	<10
AUG								
18...	<0.01	<0.10	0.02	0.38	0.4	0.03	10	<10
18...	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--
18...	<0.01	<0.10	0.05	0.25	0.3	0.02	20	10

302044097472301 - LAKE AUSTIN SITE BL
WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	SAM-PLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PERCENT SATURATION)
JAN							
15...	1115	1.00	471	8.00	11.5	9.6	89
15...	1120	12.0	473	8.00	11.5	9.5	88
AUG							
18...	0940	1.00	482	8.00	27.5	6.6	--
18...	0942	10.0	477	7.60	23.5	5.0	60
18...	0944	12.0	477	7.60	23.5	5.2	62

COLORADO RIVER BASIN

LAKE AUSTIN AT AUSTIN, TX--Continued

301926097502201 - LAKE AUSTIN SITE CC

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	TRANSPARANCY (SECCHI DISK) (M)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (NTU)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DEMAND, BIO-CHEMICAL, 5 DAY (MG/L)	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML)	
JAN												
15...	1150	1.00	471	8.60	12.5	2.40	5	1.5	10.6	101	0.1	K1
15...	1155	10.0	479	8.60	12.5	--	--	--	10.6	101	--	--
15...	1200	20.0	473	8.60	12.5	--	--	--	10.4	99	--	--
15...	1205	27.0	473	8.50	12.5	--	5	2.1	10.1	96	0.3	--
MAY												
16...	0820	1.00	467	8.10	21.0	1.70	5	3.2	8.1	93	1.3	120
16...	0822	10.0	467	7.90	16.5	--	--	--	7.4	77	--	--
16...	0824	20.0	467	7.90	16.5	--	--	--	7.2	75	--	--
16...	0826	27.0	467	7.70	16.5	--	5	4.5	7.2	75	0.4	--
AUG												
18...	1057	1.00	476	7.80	25.5	1.80	5	1.8	6.1	76	0.5	K4
18...	1059	10.0	472	7.60	22.5	--	--	--	5.1	60	--	--
18...	1101	20.0	472	7.50	22.0	--	--	--	4.7	55	--	--
18...	1103	27.0	472	7.50	22.0	--	5	17	4.7	55	0.3	--

DATE	STREPTOCOCCI, FECAL, KF AGAR (COLS. PER 100 ML)	HARDNESS (MG/L AS CaCO3)	HARDNESS, NONCARBONATE (MG/L AS CaCO3)	CALCIUM, DISSOLVED (MG/L AS Ca)	MAGNESIUM, DISSOLVED (MG/L AS Mg)	SODIUM, DISSOLVED (MG/L AS Na)	SODIUM, ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY, TOTAL (MG/L AS CaCO3)	SULFATE, DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS Cl)	FLUORIDE, DISSOLVED (MG/L AS F)
JAN												
15...	K7	190	48	44	20	26	0.8	3.1	144	27	49	0.2
15...	--	--	--	--	--	--	--	--	--	--	--	--
15...	--	190	48	44	20	26	0.8	3.1	144	27	51	0.2
MAY												
16...	100	180	34	43	18	23	0.8	3.6	148	29	37	0.2
16...	--	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--	--
16...	--	180	33	41	18	22	0.7	3.4	144	30	44	0.2
AUG												
18...	K31	190	34	44	19	23	0.8	3.4	154	25	40	0.4
18...	--	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--	--
18...	--	180	30	44	18	23	0.8	3.4	154	24	39	0.42

DATE	SILICA, DISSOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUSPENDED (MG/L)	SOLIDS, VOLATILE, SUSPENDED (MG/L)	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)	ARSENIC, DISSOLVED (MG/L AS AS)
JAN												
15...	6.0	260	4	3	<0.01	0.10	0.03	0.27	0.3	0.01	2.6	1
15...	--	--	--	--	--	--	--	--	--	--	--	--
15...	6.1	260	9	8	<0.01	0.10	0.02	0.38	0.4	0.01	1.9	1
MAY												
16...	7.1	250	2	1	<0.01	0.20	0.02	0.38	0.4	0.03	2.6	1
16...	--	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	<0.01	0.30	0.03	0.47	0.5	0.03	--	--
16...	6.9	250	10	8	<0.01	0.30	0.04	0.26	0.3	0.01	4.1	<1
AUG												
18...	7.0	250	30	4	<0.01	<0.10	0.04	0.26	0.3	0.02	3.5	--
18...	--	--	--	--	<0.01	<0.10	0.04	0.26	0.3	0.01	--	--
18...	--	--	--	--	<0.01	<0.10	0.04	0.26	0.3	0.01	--	--
18...	7.4	250	29	11	--	--	--	--	--	--	3.4	--

DATE	BARIUM, DISSOLVED (UG/L AS Ba)	CADMIUM, DISSOLVED (UG/L AS Cd)	CHROMIUM, DISSOLVED (UG/L AS Cr)	COPPER, DISSOLVED (UG/L AS Cu)	IRON, DISSOLVED (UG/L AS Fe)	LEAD, DISSOLVED (UG/L AS Pb)	MANGANESE, DISSOLVED (UG/L AS Mn)	MERCURY, DISSOLVED (UG/L AS Hg)	SELENIUM, DISSOLVED (UG/L AS Se)	SILVER, DISSOLVED (UG/L AS Ag)	ZINC, DISSOLVED (UG/L AS Zn)
JAN											
15...	65	4	<10	<1	<3	<1	5	<0.1	<1	<1	5
15...	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	40	--	<10	--	--	--	--
15...	65	<1	<10	3	<3	1	5	<0.1	<1	<1	6
MAY											
16...	63	<1	<10	1	<3	<1	<1	<0.1	<1	<1	4
16...	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	30	--	<10	--	--	--	--
16...	61	<1	<10	1	11	<1	6	<0.1	<1	<1	4
AUG											
18...	--	--	--	--	<7	--	<4	--	--	--	--
18...	--	--	--	--	40	--	<10	--	--	--	--
18...	--	--	--	--	30	--	10	--	--	--	--
18...	--	--	--	--	<7	--	8	--	--	--	--

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

301926097502201 - LAKE AUSTIN SITE CC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	AME- TRYNE TOTAL	ATRA- ZINE, TOTAL (UG/L)	CYAN- AZINE TOTAL (UG/L)	METHO- MYL TOTAL (UG/L)	PROME- TONE TOTAL (UG/L)	PROME- TRYNE TOTAL (UG/L)	PRO- PAZINE TOTAL (UG/L)	PROPHAM TOTAL (UG/L)	SEVIN, TOTAL (UG/L)	SIMA- ZINE TOTAL (UG/L)	SIME- TRYNE TOTAL (UG/L)
JAN											
15...	<0.1	<0.1	<0.1	<2.0	<0.1	<0.1	<0.1	<2.0	<2.0	<0.1	<0.1
15...	--	--	--	--	--	--	--	--	--	--	--
15...	<0.1	<0.1	<0.1	<2.0	<0.1	<0.1	<0.1	<2.0	<2.0	<0.1	<0.1
MAY											
16...	<0.1	<0.1	<0.1	<0.5	<0.1	<0.1	<0.1	<0.5	<0.5	<0.1	<0.1
16...	--	--	--	--	--	--	--	--	--	--	--
16...	<0.1	<0.1	<0.1	<0.5	<0.1	<0.1	<0.1	<0.5	<0.5	<0.1	<0.1
AUG											
18...	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--

302021097540001 - LAKE AUSTIN SITE DC

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	SAM- PLING DEPTH (FEET)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	TRANS- PAR- ENCY (SECCHI DISK) (M)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
JAN								
15...	1310	1.00	464	8.50	13.5	2.40	10.3	100
15...	1315	10.0	466	8.50	13.5	--	10.3	100
15...	1320	18.0	468	8.50	13.5	--	10.2	99
MAY								
16...	0848	1.00	470	7.90	15.5	1.10	7.6	78
16...	0850	10.0	470	7.80	14.0	--	7.2	71
16...	0852	16.0	470	7.80	14.0	--	7.2	71
AUG								
18...	1135	1.00	472	7.60	22.0	3.00	4.5	52
18...	1137	10.0	472	7.60	21.5	--	4.5	52
18...	1139	15.0	472	7.60	21.5	--	4.5	52

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)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
JAN								
15...	<0.01	0.10	0.02	0.28	0.3	0.01	30	<10
15...	--	--	--	--	--	--	--	--
15...	<0.01	0.10	0.03	0.27	0.3	0.01	50	20
MAY								
16...	<0.01	0.30	0.02	0.38	0.4	0.03	<10	10
16...	--	--	--	--	--	--	--	--
16...	<0.01	0.30	0.03	0.37	0.4	0.03	10	10
AUG								
18...	<0.01	<0.10	0.02	0.38	0.4	0.02	20	<10
18...	--	--	--	--	--	--	--	--
18...	<0.01	<0.10	0.02	0.58	0.6	0.04	20	10

302314097544901 - LAKE AUSTIN SITE EC

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	SAM- PLING DEPTH (FEET)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD 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)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)
JAN												
15...	1415	1.00	460	8.30	14.5	--	5	1.3	10.3	102	0.2	K7
15...	1420	7.00	478	8.30	14.5	--	--	--	10.3	102	2.6	--
MAY												
16...	0910	1.00	481	7.80	14.0	2.20	5	2.0	7.0	69	0.5	110
16...	0912	8.00	481	7.70	14.0	--	--	--	7.0	69	--	--
AUG												
18...	1205	1.00	469	7.50	20.5	3.10	5	1.0	2.9	33	0.3	K4
18...	1207	10.0	469	7.50	20.5	--	--	--	2.9	33	--	--

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

302314097544901 - LAKE AUSTIN SITE EC--Continued

WATER QUALITY OATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	STREP- TOCOC FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CAC03)	HARD- NESS NONCARB WH WAT TOT FLD MG/L AS 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)	ALKA- LINITY WH WAT TOTAL FIELD MG/L AS CAC03	SULFATE DIS- SOLVED (MG/L AS S04)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
JAN 15...	K1	190	49	44	20	26	0.8	3.3	143	43	48	0.2
15...	--	--	--	--	--	--	--	--	--	--	--	--
MAY 16...	140	190	34	44	19	24	0.8	3.6	154	30	39	0.2
16...	--	--	--	--	--	--	--	--	--	--	--	--
AUG 18...	K13	180	31	43	18	22	0.7	3.4	151	25	40	0.46
18...	--	--	--	--	--	--	--	--	--	--	--	--

DATE	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, 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)	ARSENIC DIS- SOLVED (UG/L AS AS)
JAN 15...	6.0	280	5	3	<0.01	0.20	0.03	0.27	0.3	0.01	9.6	1
15...	--	--	--	--	--	--	--	--	--	--	--	--
MAY 16...	7.2	260	2	2	<0.01	0.30	0.02	0.28	0.3	<0.01	2.8	<1
16...	--	--	--	--	--	--	--	--	--	--	--	--
AUG 18...	6.8	250	1	1	<0.01	<0.10	0.03	0.97	1.0	0.02	3.1	--
18...	--	--	--	--	--	--	--	--	--	--	--	--

DATE	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)	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 15...	66	<1	<10	<1	4	6	4	<0.1	<1	<1	5
15...	--	--	--	--	--	--	--	--	--	--	--
MAY 16...	65	<1	<10	1	<3	<1	3	<0.1	<1	<1	4
16...	--	--	--	--	--	--	--	--	--	--	--
AUG 18...	--	--	--	--	<7	--	43	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--

DATE	AME- TRYNE TOTAL	ATRA- ZINE, TOTAL (UG/L)	CYAN- AZINE TOTAL (UG/L)	METHO- MYL TOTAL (UG/L)	PROME- TONE TOTAL (UG/L)	PROME- TRYNE TOTAL (UG/L)	PRO- PAZINE TOTAL (UG/L)	PROPHAM TOTAL (UG/L)	SEVIN, TOTAL (UG/L)	SIMA- ZINE TOTAL (UG/L)	SIME- TRYNE TOTAL (UG/L)
JAN 15...	<0.1	<0.1	<0.1	<2.0	<0.1	<0.1	<0.1	<2.0	<2.0	<0.1	<0.1
15...	--	--	--	--	--	--	--	--	--	--	--
MAY 16...	<0.1	<0.1	<0.1	<0.5	<0.1	<0.1	<0.1	<0.5	<0.5	<0.1	<0.1
16...	--	--	--	--	--	--	--	--	--	--	--
AUG 18...	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--

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 downstream from Interstate Highway 35, and 2.3 mi southeast of the State Capitol in Austin.

DRAINAGE AREA.--39,003 mi², approximately, of which 11,403 mi² probably is noncontributing.

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

301559097424801 - TOWN LAKE AR

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	SAM-PLING DEPTH (FEET)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)
FEB							
13...	1020	1.00	525	8.00	14.0	8.5	83
13...	1022	10.0	524	8.00	13.5	8.3	80
13...	1024	21.0	531	7.90	13.0	8.2	78
MAY							
16...	1225	1.00	413	7.70	20.0	6.4	72
16...	1227	10.0	428	7.60	19.5	6.2	69
16...	1229	22.0	413	7.60	19.0	5.9	65
AUG							
19...	0945	1.00	480	7.70	27.5	6.4	--
19...	0947	10.0	480	7.70	26.5	6.1	77
19...	0949	22.0	480	7.40	25.0	3.6	44

301500097424801 - TOWN LAKE AC

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	SAM-PLING DEPTH (FEET)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD 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)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML)
FEB												
13...	0950	1.00	525	8.00	14.0	1.80	7	2.0	8.0	78	0.3	26
13...	0952	10.0	524	8.00	13.5	--	--	--	8.2	79	--	--
13...	0954	21.0	531	7.90	13.0	--	10	14	8.1	77	0.2	--
MAY												
16...	1150	1.00	414	7.70	20.5	0.4	--	22	6.6	75	1.9	K4200
16...	1152	5.00	410	7.70	20.5	--	--	--	6.5	74	--	--
16...	1154	10.0	400	7.60	19.0	--	--	--	6.1	67	--	--
16...	1156	15.0	410	7.60	19.0	--	--	--	6.2	68	--	--
16...	1158	20.0	415	7.60	19.0	--	--	--	6.3	70	--	--
16...	1200	26.0	413	7.60	19.0	--	--	40	6.1	67	1.0	--
AUG												
19...	0920	1.00	480	7.60	28.0	1.70	10	2.0	5.6	--	0.2	100
19...	0922	10.0	480	7.60	26.0	--	--	--	5.7	71	--	--
19...	0924	20.0	480	7.50	25.0	--	--	--	4.8	59	--	--
19...	0925	24.0	483	7.40	25.0	--	5	13	3.6	44	0.2	--

DATE	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS (MG/L AS CAC03)	HARD-NESS NONCARB WH WAT TOT FLD (MG/L AS 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)	ALKA-LINITY WH WAT TOTAL FIELD (MG/L AS CAC03)	SULFATE DIS-SOLVED (MG/L AS S04)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
FEB												
13...	30	240	38	63	19	19	0.6	2.3	198	20	32	0.2
13...	--	--	--	--	--	--	--	--	--	--	--	--
13...	--	240	49	64	19	18	0.5	2.3	189	20	31	0.2
MAY												
16...	K5500	160	27	40	15	18	0.6	3.2	135	27	34	0.2
16...	--	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--	--
16...	--	160	24	39	14	18	0.6	3.2	131	26	33	0.2
AUG												
19...	20	190	30	46	18	23	0.8	3.2	159	26	40	0.4
19...	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	190	30	46	18	23	0.8	3.2	159	26	41	0.4

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

301500097424801 - TOWN LAKE AC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	SILICA, DIS- SOLVED (MG/L AS SI02)	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)	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)
FEB												
13...	7.9	280	7	4	0.49	0.01	0.50	0.11	0.39	0.5	0.02	6.2
13...	--	--	--	--	0.49	0.01	0.50	0.11	0.29	0.4	0.02	--
13...	8.0	280	15	2	0.59	0.01	0.60	0.13	0.37	0.5	0.04	7.5
MAY												
16...	6.9	230	19	--	0.39	0.01	0.40	--	--	0.4	0.04	3.7
16...	--	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--	--
16...	6.8	220	39	--	0.29	<0.01	0.30	0.06	0.54	0.6	0.07	--
16...	--	--	--	--	0.01	0.01	0.30	--	--	0.5	0.04	18
AUG												
19...	7.9	260	2	2	--	<0.01	0.20	0.04	0.26	0.3	0.03	3.0
19...	--	--	--	--	--	<0.01	0.10	0.02	0.38	0.4	0.02	--
19...	--	--	--	--	--	<0.01	0.10	0.06	0.34	0.4	0.01	--
19...	8.2	260	11	3	--	<0.01	0.20	0.07	0.23	0.3	0.02	5.3

DATE	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)	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)
FEB												
13...	<1	57	<1	<10	3	<3	<1	11	<0.1	<1	<1	10
13...	--	--	--	--	--	20	--	10	--	--	--	--
13...	<1	57	<1	<10	2	4	<1	16	<0.1	<1	<1	11
MAY												
16...	<1	52	<1	<10	2	20	1	2	<0.1	<1	<1	4
16...	--	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--	--
16...	<1	51	<1	<10	1	25	2	5	<0.1	<1	6	<3
AUG												
19...	--	--	--	--	--	<7	--	<4	--	--	--	--
19...	--	--	--	--	--	10	--	<10	--	--	--	--
19...	--	--	--	--	--	10	--	<10	--	--	--	--
19...	--	--	--	--	--	<7	--	<4	--	--	--	--

DATE	AME- TRYNE TOTAL	ATRA- ZINE, TOTAL (UG/L)	CYAN- AZINE TOTAL (UG/L)	METHO- MYL TOTAL (UG/L)	PROME- TONE TOTAL (UG/L)	PROME- TRYNE TOTAL (UG/L)	PRO- PAZINE TOTAL (UG/L)	PROPHAM TOTAL (UG/L)	SEVIN, TOTAL (UG/L)	SIMA- ZINE TOTAL (UG/L)	SIME- TRYNE TOTAL (UG/L)
FEB											
13...	<0.1	<0.1	<0.1	<2.0	<0.1	<0.1	<0.1	<2.0	<2.0	<0.1	<0.1
13...	--	--	--	--	--	--	--	--	--	--	--
13...	<0.1	<0.1	<0.1	<2.0	<0.1	<0.1	<0.1	<2.0	<2.0	<0.1	<0.1
MAY											
16...	<0.1	<0.1	<0.1	<0.5	<0.1	<0.1	<0.1	<0.5	<0.5	<0.1	<0.1
16...	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--
16...	<0.1	<0.1	<0.1	<0.5	<0.1	<0.1	<0.1	<0.5	<0.5	<0.1	<0.1
AUG											
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--

301503097424701 - TOWN LAKE AL

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	SAM- PLING DEPTH (FEET)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
FEB							
13...	0930	1.00	525	8.00	15.0	9.0	90
13...	0932	10.0	524	8.00	14.5	8.9	88
13...	0934	18.0	531	8.00	12.5	9.1	86
MAY							
16...	1240	1.00	413	7.70	20.0	6.7	76
16...	1242	10.0	405	7.60	19.0	6.4	71
16...	1244	17.0	390	7.60	19.0	6.1	67
AUG							
19...	0910	1.00	480	7.50	28.0	5.3	--
19...	0912	10.0	480	7.60	26.0	5.6	70
19...	0913	15.0	480	7.50	26.0	5.5	69

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

301500097440801 - TOWN LAKE BR

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	SAM- PLING DEPTH (FEET)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
FEB							
13...	1045	1.00	522	8.00	13.0	8.3	79
13...	1047	12.0	542	7.80	12.0	8.5	80
MAY							
16...	1310	1.00	428	7.70	21.0	6.5	75
16...	1312	10.0	428	7.60	20.5	6.3	72
16...	1314	13.0	428	7.60	20.5	6.3	72
AUG							
19...	1015	1.00	479	7.70	27.5	6.2	--
19...	1017	13.0	474	7.70	26.0	5.9	74

301504097440901 - TOWN LAKE BC

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	SAM- PLING DEPTH (FEET)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
FEB							
13...	1035	1.00	522	8.00	13.5	8.8	85
13...	1037	10.0	528	7.90	13.0	8.8	84
13...	1039	22.0	542	7.80	12.0	8.8	82
MAY							
16...	1300	1.00	428	7.70	21.0	6.6	76
16...	1302	10.0	428	7.60	20.5	6.3	72
16...	1303	20.0	428	7.60	20.5	6.3	72
16...	1304	27.0	428	7.60	20.5	6.2	71
AUG							
19...	1000	1.00	480	7.70	27.0	6.1	78
19...	1002	10.0	480	7.60	26.0	5.6	70
19...	1004	20.0	480	7.50	25.5	5.3	66
19...	1006	29.0	480	7.50	25.5	4.9	61

301544097445201 - TOWN LAKE CR

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	SAM- PLING DEPTH (FEET)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
FEB							
13...	1105	1.00	542	7.80	12.0	8.8	82
13...	1107	9.00	542	7.80	12.0	8.8	82
MAY							
16...	1325	1.00	460	7.70	20.5	6.6	75
16...	1327	10.0	455	7.70	20.5	6.5	74
16...	1329	17.0	460	7.60	20.5	6.2	71
AUG							
20...	0845	1.00	479	7.70	27.0	5.3	68
20...	0847	8.00	479	7.60	26.5	5.1	65

301546097445101 - TOWN LAKE CC

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	SAM- PLING DEPTH (FEET)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
FEB							
13...	1055	1.00	542	7.80	12.0	8.8	82
13...	1057	10.0	542	7.80	12.0	8.8	82
13...	1059	15.0	542	7.80	12.0	8.8	82
MAY							
16...	1235	1.00	452	7.70	20.5	6.6	75
16...	1237	10.0	460	7.70	20.5	6.6	75
16...	1239	20.0	460	7.70	20.5	6.5	74
AUG							
20...	0835	1.00	487	7.70	26.5	5.5	70
20...	0837	10.0	487	7.70	26.5	5.2	66
20...	0838	15.0	487	7.60	26.0	5.3	66

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

301556097452301 - TOWN LAKE DR
WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	SAM-PLING DEPTH (FEET)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)
FEB							
13...	1130	1.00	559	7.70	13.0	8.9	85
13...	1132	12.0	540	7.80	12.5	9.1	86
MAY							
16...	1350	1.00	470	7.70	20.5	6.6	75
16...	1352	11.0	470	7.70	20.0	6.4	72
AUG							
20...	0920	1.00	484	7.70	26.5	5.2	66
20...	0922	13.0	557	7.20	25.0	4.6	57

301558097452201 - TOWN LAKE DC
WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	SAM-PLING DEPTH (FEET)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD 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)
FEB										
13...	1110	1.00	559	7.70	13.0	1.20	5	2.1	9.0	86
13...	1112	10.0	540	7.80	12.0	--	--	--	9.1	85
13...	1114	17.0	546	7.80	12.0	--	10	2.1	8.8	82
MAY										
16...	1400	1.00	469	7.60	20.0	0.8	--	6.5	6.9	78
16...	1402	10.0	480	7.60	20.0	--	--	--	6.8	77
16...	1404	19.0	480	7.60	20.0	--	--	25	6.8	77
AUG										
20...	0900	1.00	485	7.80	26.5	1.50	10	2.7	5.3	67
20...	0902	10.0	536	7.30	25.0	--	--	--	5.2	64
20...	0904	18.0	561	7.20	24.5	--	5	2.4	4.8	59

DATE	OXYGEN DEMAND, BID-CHEMICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, UM-MF (COLS./100 ML)	STREP-TOCOCCI, FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS (MG/L AS CaCO3)	HARD-NESS NONCARB WH WAT TOT FLD (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)
FEB										
13...	0.1	K560	230	250	47	69	20	18	0.5	2.0
13...	--	--	--	--	--	--	--	--	--	--
13...	0	--	--	250	46	64	21	20	0.6	2.5
MAY										
16...	0.7	1200	1400	200	35	50	18	20	0.6	3.0
16...	--	--	--	--	--	--	--	--	--	--
16...	0.6	--	--	190	34	47	18	22	0.7	3.1
AUG										
20...	0.4	250	200	190	30	45	18	24	0.8	3.2
20...	--	--	--	--	--	--	--	--	--	--
20...	0.5	--	--	240	30	66	19	19	0.5	2.3

DATE	ALKA-LINITY WH WAT TOTAL FIELD (MG/L AS CaCO3)	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)
FEB									
13...	208	19	30	0.2	8.5	290	4	1	--
13...	--	--	--	--	--	--	--	--	0.49
13...	200	27	36	0.2	8.3	300	1	<1	--
MAY									
16...	164	28	36	0.3	7.5	260	8	--	--
16...	--	--	--	--	--	--	--	--	--
16...	157	30	41	0.2	7.2	260	30	--	--
AUG									
20...	156	26	41	0.39	7.7	260	1	1	--
20...	--	--	--	--	--	--	--	--	--
20...	213	24	32	0.42	9.8	300	1	1	--

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

301558097452201 - TOWN LAKE DC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

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)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
FEB									
13...	<0.01	0.70	0.07	0.33	0.4	0.01	2.0	4	5
13...	0.01	0.50	0.12	0.38	0.5	0.01	--	30	20
13...	<0.01	0.60	0.11	0.29	0.4	0.01	5.2	<3	18
MAY									
16...	<0.01	0.30	--	--	0.4	0.01	2.6	38	6
16...	<0.01	0.30	0.04	0.26	0.3	0.01	--	20	10
16...	<0.01	0.30	--	--	0.6	0.03	3.2	15	8
AUG									
20...	<0.01	<0.10	0.04	0.36	0.4	0.02	3.5	<7	<4
20...	<0.01	0.60	0.05	0.35	0.4	0.02	--	10	<10
20...	<0.01	0.80	0.05	0.35	0.4	0.02	2.0	<7	11

301712097470701 - TOWN LAKE EC

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	SAM- PLING DEPTH (FEET)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD 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)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)
FEB												
13...	1145	1.00	558	7.70	13.0	1.20	5	2.0	9.2	88	0.6	K10
13...	1147	10.0	557	7.60	13.0	--	--	--	9.2	88	--	--
13...	1149	19.0	535	8.00	12.5	--	7	3.1	8.7	82	0	--
MAY												
16...	1430	1.00	473	7.90	18.5	0.9	--	6.5	7.1	78	0.6	150
16...	1432	10.0	473	7.90	18.0	--	--	--	7.0	76	--	--
AUG												
20...	0930	1.00	485	7.60	24.5	1.30	5	3.4	4.6	56	0.5	33
20...	0932	10.0	489	7.60	24.5	--	--	--	4.6	56	--	--
20...	0934	17.0	504	7.40	24.5	--	5	7.0	4.9	60	0.5	--

DATE	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CAC03)	HARD- NESS NONCARB WH WAT TOT FLD MG/L AS CAC03	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AO- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY WH WAT TOTAL FIELD MG/L AS CAC03	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
FEB												
13...	26	240	49	63	21	21	0.6	2.7	195	24	40	0.2
13...	--	--	--	--	--	--	--	--	--	--	--	--
13...	--	230	50	59	20	22	0.7	3.0	180	20	41	0.2
MAY												
16...	280	180	31	42	18	22	0.7	3.4	148	30	43	0.2
16...	--	--	--	--	--	--	--	--	--	--	--	--
AUG												
20...	28	190	32	45	18	23	0.8	3.3	154	25	41	0.39
20...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	190	32	45	18	23	0.8	3.2	154	25	41	0.39

DATE	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDEO (MG/L)	SOLIDS, VOLA- TILE, SUS- PENDEO (MG/L)	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)	ARSENIC DIS- SOLVED (UG/L AS AS)
FEB												
13...	7.4	300	3	1	<0.01	0.60	0.08	0.32	0.4	0.02	3.7	<1
13...	--	--	--	--	<0.01	0.60	0.09	0.41	0.5	0.01	--	--
13...	7.2	280	7	2	<0.01	0.50	0.12	0.38	0.5	0.01	6.1	<1
MAY												
16...	7.1	250	3	--	<0.01	0.20	--	--	0.3	<0.01	2.8	<1
16...	--	--	--	--	--	--	--	--	--	--	--	--
AUG												
20...	7.6	260	4	3	<0.01	0.10	0.01	0.19	0.2	0.01	5.6	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
20...	7.4	260	8	3	<0.01	0.20	0.03	0.27	0.3	0.01	4.2	--

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

301712097470701 - TOWN LAKE EC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	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)	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)
FEB											
13...	66	<1	<10	<1	<3	<1	3	<0.1	<1	<1	8
13...	--	--	--	--	30	--	<10	--	--	--	--
13...	67	<1	<10	1	<3	<1	5	<0.1	<1	<1	6
MAY											
16...	61	<1	<10	1	8	3	<1	<0.1	<1	<1	7
16...	--	--	--	--	--	--	--	--	--	--	--
AUG											
20...	--	--	--	--	<7	--	<4	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	<7	--	<4	--	--	--	--

DATE	AME- TRYNE TOTAL	ATRA- ZINE, TOTAL (UG/L)	CYAN- AZINE TOTAL (UG/L)	METHO- MYL TOTAL (UG/L)	PROME- TONE TDOTAL (UG/L)	PROME- TRYNE TOTAL (UG/L)	PRO- PAZINE TOTAL (UG/L)	PROPHAM TOTAL (UG/L)	SEVIN, TOTAL (UG/L)	SIMA- ZINE TOTAL (UG/L)	SIME- TRYNE TOTAL (UG/L)
FEB											
13...	<0.1	<0.1	<0.1	<2.0	<0.1	<0.1	<0.1	<2.0	<2.0	<0.1	<0.1
13...	--	--	--	--	--	--	--	--	--	--	--
13...	<0.1	<0.1	<0.1	<2.0	<0.1	<0.1	<0.1	<2.0	<2.0	<0.1	<0.1
MAY											
16...	<0.1	<0.1	<0.1	<0.5	<0.1	<0.1	<0.1	<0.5	<0.5	<0.1	<0.1
16...	--	--	--	--	--	--	--	--	--	--	--
AUG											
20...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--

301601097454001 - TOWN LAKE FC

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	SAM- PLING DEPTH (FEET)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
FEB							
13...	1215	1.00	555	7.40	16.5	8.2	85
13...	1217	4.00	555	7.40	16.5	8.2	85
MAY							
16...	1420	1.00	470	7.50	21.0	7.0	80
16...	1422	5.00	470	7.50	21.0	7.0	80
AUG							
20...	1010	1.00	474	7.70	26.5	6.0	76
20...	1011	4.00	625	7.20	22.5	6.0	70

COLORADO RIVER MAIN STEM
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 upstream from upstream bridge on U.S. Highway 183 in Austin, 1.4 mi downstream from Longhorn Dam, and at mile 290.3.

DRAINAGE AREA.--39,009 mi², approximately, of which 11,403 mi² 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 above National Geodetic Vertical Datum of 1929. Prior to June 19, 1939, all records collected at or near Congress Avenue Bridge 3.9 mi upstream at datum 19.6 ft higher; prior to June 18, 1915, nonrecording gages, recording gages thereafter; June 20, 1939, to Oct. 16, 1963, at site 1,000 ft downstream from present site at datum 5.0 ft higher.

REMARKS.--No estimated daily discharge. Records fair. Since 1937, at least 10 percent of drainage area has been regulated by upstream reservoirs. Flow largely regulated by Lake Travis (station 08154500). The city of Austin diverts water for municipal use upstream from station and returns sewage effluent downstream. There are many other diversions above Lake Buchanan for irrigation, municipal supplies, and oilfield operations. Gage-height telemeter at station.

AVERAGE DISCHARGE.--38 years (water years 1899-1936) unregulated, 2,711 ft³/s (1,964,000 acre-ft/yr); 50 years (water years 1937-86) regulated, 1,932 ft³/s (1,400,000 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 481,000 ft³/s June 15, 1935 (gage height, 50 ft, present site and datum, from floodmark); minimum daily, 2.4 ft³/s Feb. 28, 1984.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 12,600 ft³/s May 9 at 2300 hours (gage height, 12.13 ft); minimum daily, 13 ft³/s Feb. 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	533	65	309	1100	129	109	633	3290	1970	1980	1550	1550
2	396	90	254	1260	127	1380	878	1820	1750	1640	1730	1650
3	369	230	242	909	622	2520	862	2020	1450	1630	1090	1560
4	288	272	232	826	486	1020	1750	1870	1930	1870	1660	1470
5	270	99	142	1010	235	692	1610	1880	1690	1900	1830	1480
6	384	115	202	1110	434	95	1730	1880	1670	1920	1590	2570
7	279	290	223	1230	186	492	1600	1960	2030	1900	1600	139
8	274	194	187	1100	142	91	1510	1950	3010	1900	1570	1450
9	98	91	200	1290	166	266	1490	2920	3670	1910	1660	1480
10	96	403	432	572	168	1390	1500	4280	3580	1940	1670	1480
11	717	147	1900	649	75	1420	1540	2170	3740	1920	1670	1610
12	554	128	553	638	13	1480	1390	1960	3620	1620	1780	1480
13	510	108	468	772	115	1650	1360	1890	4570	1610	1660	1500
14	572	97	587	679	167	553	1460	1860	5930	1610	1680	1480
15	1220	122	325	876	133	794	1380	2740	5560	1490	1870	1170
16	431	112	302	521	125	270	1360	2020	4810	1480	1690	1210
17	454	126	605	172	150	337	1360	2780	5100	1460	1680	1440
18	305	125	560	77	123	125	1690	2730	5640	1480	1440	1760
19	1890	174	540	544	124	784	1620	2090	5530	1480	1740	1450
20	290	146	325	3640	323	359	1420	1860	4430	1360	1910	986
21	162	138	254	3720	309	316	1360	1970	3510	1330	1900	1240
22	116	85	211	1620	335	74	1360	1790	3530	1310	1920	1350
23	106	16	225	910	338	412	1560	1760	3550	1360	1530	1250
24	114	477	229	729	329	94	1510	1740	3520	1330	1550	1250
25	75	348	798	490	319	84	1780	1910	3520	1470	1620	1240
26	14	197	844	134	303	348	1770	1750	3520	1480	1690	1270
27	193	2480	1140	126	104	355	1770	1770	3490	1480	1700	1240
28	96	584	1070	131	100	333	1660	1730	3510	1490	1690	1270
29	107	405	1120	133	---	338	1730	2020	3250	1540	1470	1250
30	116	528	1100	132	---	342	2130	1760	1950	1550	1460	1020
31	71	---	1080	127	---	608	---	1920	---	1560	1480	---
TOTAL	11100	8392	16659	27227	6180	19131	44773	66090	105030	50000	51080	41295
MEAN	358	280	537	878	221	617	1492	2132	3501	1613	1648	1377
MAX	1890	2480	1900	3720	622	2520	2130	4280	5930	1980	1920	2570
MIN	14	16	142	77	13	74	633	1730	1450	1310	1090	139
AC-FT	22020	16650	33040	54000	12260	37950	88810	131100	208300	99180	101300	81910
CAL YR 1985	TOTAL	380432		MEAN	1042	MAX	4350	MIN	14	AC-FT	754600	
WTR YR 1986	TOTAL	446957		MEAN	1225	MAX	5930	MIN	13	AC-FT	886500	

COLORADO RIVER MAIN STEM

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

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: September 1932 to March 1944, October 1947 to October 1973. Chemical and biochemical analyses: October 1973 to current year. Sediment analyses: March 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, 795 microsiemens Mar. 10, 1984; minimum daily, 243 microsiemens Dec. 2, 1953.
WATER TEMPERATURES: Maximum daily, 33.0°C July 25, 1979; minimum daily, 5.0°C Jan. 3, 1984.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 592 microsiemens Nov. 1; minimum daily, 403 microsiemens Oct. 15.
WATER TEMPERATURES: Maximum daily, 25.5°C Sept. 28; minimum daily, 10.0°C Jan. 10.

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	TURBIDITY (NTU)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DEMAND, BIO-CHEMICAL, 5 DAY (MG/L)	COLIFORM, FECAL, UM-MF (COLS./100 ML)	STREPTOCOCCI, FECAL, KF AGAR (COLS. PER 100 ML)	HARDNESS (MG/L AS CaCO3)	
OCT 09...	0955	77	568	7.50	23.0	3.0	6.8	80	0.6	K27	K330	220
MAR 24...	1346	124	510	7.80	22.5	0.9	10.8	125	0.2	44	46	220
JUL 15...	0920	17	553	7.50	25.5	--	8.2	100	0.2	K660	4500	230
AUG 27...	0935	33	527	7.00	25.5	--	7.4	91	0.2	400	540	--

DATE	HARDNESS NONCARBONIC WH WAT TOT FLD (MG/L AS CaCO3)	CALCIUM DISSOLVED (MG/L AS Ca)	MAGNESIUM, DISSOLVED (MG/L AS Mg)	SODIUM, DISSOLVED (MG/L AS Na)	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY WH WAT TOTAL FIELD (MG/L AS CaCO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS Cl)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)
OCT 09...	50	53	21	30	0.9	3.5	170	34	50	0.2	7.6	307
MAR 24...	41	54	20	23	0.7	3.1	177	30	39	0.2	7.1	292
JUL 15...	44	57	20	24	0.7	5.2	181	35	42	0.2	8.6	298
AUG 27...	--	--	--	--	--	--	--	--	--	--	--	--

DATE	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRATE DISSOLVED (MG/L AS N)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (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)	PHOSPHORUS, DISSOLVED (MG/L AS P)	PHOSPHORUS, ORTHO, DISSOLVED (MG/L AS P)	PHOSPHATE, ORTHO, DISSOLVED (MG/L AS PO4)
OCT 09...	300	0.14	0.01	0.15	0.05	0.07	0.35	0.4	<0.01	0.01	0.01	0.03
MAR 24...	270	--	<0.01	0.31	0.04	0.04	0.36	0.4	0.01	0.01	<0.01	--
JUL 15...	300	--	<0.01	0.25	0.05	0.02	0.35	0.4	0.02	0.01	0.02	0.06
AUG 27...	--	--	<0.01	0.20	0.10	0.04	0.4	0.5	0.03	--	<0.01	--

DATE	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)	SED. SIEVE, % FINER THAN .062 MM	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC, DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	BERYLLIUM, DISSOLVED (UG/L AS BE)	CADMIUM, DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)
OCT 09...	1	0.21	25	<10	1	78	<0.5	<1	<1	<3	1	<3
MAR 24...	6	2.0	77	<10	1	66	<0.5	<1	<1	<3	2	<3
JUL 15...	5	0.22	69	<10	1	79	<0.6	<1	<1	<3	2	6
AUG 27...	10	0.89	88	--	--	--	--	--	--	--	--	--

COLORADO RIVER MAIN STEM

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	LEAD, DIS- SOLVED (UG/L AS PB)	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, DIS- SOLVED (UG/L AS ZN)
OCT 09...	<1	11	15	<0.1	<10	4	<1	<1	540	<6	4
MAR 24...	3	12	4	<0.1	<10	2	<1	<1	480	<6	7
JUL 15...	<5	<4	30	0.1	<10	1	<1	<1	480	<6	<3
AUG 27...	--	--	--	--	--	--	--	--	--	--	--

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1985 TO SEPTEMBER 1986

MONTH YEAR	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. 1985	11100	512	280	8400	45	1350	34	1010	200
NOV. 1985	8392	528	288	6540	47	1070	35	790	210
DEC. 1985	16659	531	290	13000	48	2140	35	1580	210
JAN. 1986	27227	511	280	20600	45	3300	34	2470	200
FEB. 1986	6180	546	298	4970	49	824	36	604	210
MAR. 1986	19131	503	276	14200	44	2260	33	1700	200
APR. 1986	44773	492	270	32600	42	5120	32	3880	200
MAY 1986	66090	468	257	45900	39	7040	30	5410	190
JUNE 1986	105030	486	267	75600	42	11800	32	8970	190
JULY 1986	50000	492	270	36500	42	5730	32	4340	200
AUG. 1986	51080	489	269	37000	42	5800	32	4400	200
SEPT 1986	41295	470	259	28800	40	4430	30	3400	190
TOTAL	446957	**	**	324000	**	50900	**	38500	**
WTD.AVG.	1225	490	269	**	42	**	32	**	200

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
EQUIVALENT MEAN

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	545	592	537	533	571	535	497	456	487	493	493	490
2	541	575	518	525	575	493	481	445	486	490	489	483
3	535	530	472	523	550	490	500	476	485	495	510	472
4	538	582	434	520	510	506	499	478	486	490	492	484
5	539	586	570	489	515	501	495	480	488	494	489	487
6	540	534	524	545	530	521	485	470	487	493	479	464
7	536	544	520	466	559	525	493	469	491	503	490	435
8	530	581	570	532	565	519	512	480	461	487	507	453
9	544	550	466	496	500	495	486	477	484	487	512	458
10	560	565	519	513	562	490	492	450	487	490	492	474
11	565	549	458	533	491	485	493	437	492	487	491	478
12	533	580	457	543	500	494	495	469	497	489	490	464
13	532	564	490	535	545	514	490	473	481	490	485	469
14	530	560	555	543	520	498	488	464	483	488	492	460
15	403	559	529	524	479	496	492	468	483	490	493	466
16	524	564	545	539	554	495	488	438	483	491	497	462
17	542	552	520	541	533	515	493	476	480	490	497	470
18	537	581	571	559	559	512	492	450	489	491	489	476
19	475	584	568	540	570	515	491	440	485	492	487	469
20	496	588	567	491	550	501	485	444	481	490	484	474
21	536	590	569	475	548	508	488	452	492	535	482	470
22	502	581	528	500	554	527	490	483	489	490	497	473
23	525	574	543	539	581	520	492	485	484	491	486	470
24	516	563	515	504	579	525	493	483	490	496	479	461
25	530	515	579	558	574	507	495	486	494	491	484	466
26	539	518	566	548	524	535	491	498	487	493	479	469
27	525	499	559	555	576	525	494	473	486	495	482	466
28	556	443	553	564	578	530	490	479	484	485	485	466
29	570	495	546	577	---	526	489	487	487	495	483	471
30	560	523	549	584	---	520	490	489	495	487	479	475
31	589	---	545	553	---	519	---	489	---	492	480	---
MEAN	532	554	530	531	545	511	492	469	486	493	489	469

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 northeast of intersection of State Highway 71 and Farm Road 973, 8.8 mi downstream from Govalle Sewage Treatment Plant outfall, and 9.6 mi downstream from gaging station at Austin.

PERIOD OF RECORD.--Chemical and biochemical analyses: February 1968 to current year. Pesticide analyses: February 1975 to September 1986.

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	SPE-CIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN DEMAND, BIO-CHEMICAL, 5 DAY (MG/L)	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML)	STREPTOCOCCI, FECAL, KF AGAR (COLS. PER 100 ML)	HARDNESS (MG/L AS CaCO3)	
OCT 09...	1300	615	7.30	24.0	5	1.0	4.8	57	0.9	K14	150	210
DEC 10...	0930	603	7.30	18.5	5	36	3.4	37	2.0	K14	540	200
MAR 24...	1020	546	7.70	20.0	5	1.4	11.4	126	0.7	K5	32	210
MAY 01...	1055	401	7.30	20.0	40	200	6.7	74	3.7	23000	51000	150
JUL 15...	1155	510	8.20	26.5	3	3.0	8.6	107	0.1	320	3300	200
AUG 27...	1200	492	7.60	27.0	5	2.7	7.2	91	0.1	320	K1300	200

DATE	HARDNESS NONCARB WH WAT TOT FLD (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	POTASSIUM, DIS-SOLVED (MG/L AS K)	ALKALINITY WH WAT TOTAL FIELD (MG/L AS CaCO3)	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 09...	51	51	20	40	1	4.8	159	41	61	0.6	8.0	320
DEC 10...	54	55	16	32	1	4.4	149	46	52	0.4	10	310
MAR 24...	44	53	19	31	1	4.0	167	40	46	0.4	6.3	300
MAY 01...	23	39	13	18	0.7	3.9	128	20	36	0.2	5.7	210
JUL 15...	41	48	19	25	0.8	3.4	157	32	42	0.3	7.2	270
AUG 27...	38	49	18	25	0.8	3.4	159	30	40	0.3	8.1	270

DATE	SOLIDS, RESIDUE AT 105 DEG. C, SUSPENDED (MG/L)	SOLIDS, VOLATILE, SUSPENDED (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)	ARSENIC DIS-SOLVED (UG/L AS AS)
OCT 09...	3	1	1.08	0.42	1.50	0.68	0.52	1.2	0.78	3.3	1
DEC 10...	6	1	1.97	0.33	2.30	0.58	0.72	1.3	1.10	4.0	--
MAR 24...	2	1	1.56	0.14	1.70	0.06	0.64	0.7	0.80	3.3	1
MAY 01...	332	48	0.61	0.09	0.70	0.33	0.67	1.0	0.45	11	--
JUL 15...	7	4	0.68	0.02	0.70	0.04	0.46	0.5	0.22	3.3	1
AUG 27...	5	3	0.59	0.01	0.60	0.10	0.2	0.3	0.19	37	1

DATE	BARIUM, DIS-SOLVED (UG/L AS Ba)	CADMIUM, DIS-SOLVED (UG/L AS Cd)	CHROMIUM, DIS-SOLVED (UG/L AS Cr)	COPPER, DIS-SOLVED (UG/L AS Cu)	IRON, DIS-SOLVED (UG/L AS Fe)	LEAD, DIS-SOLVED (UG/L AS Pb)	MANGANESE, DIS-SOLVED (UG/L AS Mn)	MERCURY, DIS-SOLVED (UG/L AS Hg)	SELENIUM, DIS-SOLVED (UG/L AS Se)	SILVER, DIS-SOLVED (UG/L AS Ag)	ZINC, DIS-SOLVED (UG/L AS Zn)
OCT 09...	78	<1	<10	1	<3	<1	9	<0.1	<1	<1	9
DEC 10...	--	--	--	--	--	--	--	--	--	--	--
MAR 24...	59	2	<10	1	6	3	6	<0.1	<1	<1	18
MAY 01...	--	--	--	--	--	--	--	--	--	--	--
JUL 15...	63	<1	<10	1	5	<5	5	<0.1	<1	<1	<3
AUG 27...	62	<1	<10	<1	5	<5	4	<0.1	<1	<1	4

COLORADO RIVER BASIN

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	AME- TRYNE TOTAL	ATRA- ZINE, TOTAL (UG/L)	CYAN- AZINE TOTAL (UG/L)	METHO- MYL TOTAL (UG/L)	PROME- TONE TOTAL (UG/L)	PROME- TRYNE TOTAL (UG/L)	PRO- PAZINE TOTAL (UG/L)	PROPHAM TOTAL (UG/L)	SEVIN, TOTAL (UG/L)	SIMA- ZINE TOTAL (UG/L)	SIME- TRYNE TOTAL (UG/L)
OCT 09...	--	--	--	--	--	--	--	--	--	--	--
DEC 10...	--	--	--	--	--	--	--	--	--	--	--
MAR 24...	<0.1	<0.1	<0.1	<0.5	0.1	<0.1	<0.1	<0.5	<0.5	<0.1	<0.1
MAY 01...	--	--	--	--	--	--	--	--	--	--	--
JUL 15...	--	--	--	--	--	--	--	--	--	--	--
AUG 27...	--	--	--	--	--	--	--	--	--	--	--

COLORADO RIVER BASIN

08154700 BULL CREEK AT LOOP 360 NEAR AUSTIN, TX

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

DRAINAGE AREA.--22.3 mi².

WATER-DISCHARGE RECORDS

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

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

REMARKS.--Estimated daily discharges: Dec. 10, 11, May 18-23, Aug. 12-25, and Sept. 22. Records good except those for estimated daily discharges, which are poor. No known regulation or diversion above station. There are two recording rain gages in the watershed. This station is part of a hydrologic research project to study the rainfall-runoff relationship for the Austin urban-rural areas.

AVERAGE DISCHARGE.--8 years, 10.9 ft³/s (6.64 in/yr), 7,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,700 ft³/s May 13, 1982 (gage height, 11.96 ft); no flow for several days in 1984.

EXTREMES FOR CURRENT YEAR.--Peak discharge greater than base discharge of 200 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct. 19	1130	*3250	*7.20	May 15	0900	2360	6.48
Nov. 24	1015	256	3.95	May 17	1500	971	5.30
Nov. 27	0645	484	4.53	May 25	0430	821	5.12
Dec. 10	2400	259	3.96	June 2	2345	218	6.17
Feb. 3	1645	786	5.07	June 11	1015	715	4.95
May 9	2215	358	4.22	Sept. 6	0930	1450	5.82

Minimum daily discharge, 0.02 ft³/s Aug. 2-4, 19-22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	1.5	6.9	32	8.9	8.5	7.5	5.6	72	67	5.6	.03	.37		
2	1.2	22	28	9.5	7.8	6.8	6.2	20	52	3.4	.02	15		
3	1.2	8.9	28	8.8	187	6.8	6.2	13	117	2.8	.02	9.4		
4	1.2	7.4	27	9.1	59	6.2	6.8	11	60	2.3	.02	.38		
5	1.2	6.8	24	9.0	34	5.6	6.8	9.6	51	1.5	.71	.14		
6	1.2	6.3	22	8.9	29	4.8	6.8	8.6	42	3.0	1.6	213		
7	1.1	5.9	20	9.1	27	4.8	8.9	7.0	36	2.5	.10	18		
8	1.0	6.1	20	9.8	24	4.8	9.7	5.4	33	2.0	.13	7.0		
9	1.1	6.1	18	10	24	4.8	4.8	31	36	1.8	.06	2.8		
10	1.5	6.1	40	10	22	4.8	3.5	44	31	1.2	.03	3.1		
11	1.1	15	84	9.8	18	4.8	3.0	13	172	.63	.80	1.8		
12	1.0	9.7	38	9.7	18	5.6	3.7	8.7	57	.75	.25	1.0		
13	1.0	8.4	30	9.7	17	5.6	4.3	8.6	45	.21	.09	.91		
14	2.8	8.4	25	9.7	16	6.2	3.3	7.2	32	.20	.07	.97		
15	14	14	24	9.7	14	6.8	3.3	305	27	.11	.06	.39		
16	4.3	18	24	9.7	14	6.8	3.7	38	23	.06	.05	.30		
17	8.4	13	23	9.7	13	6.8	4.3	215	45	.11	.04	.29		
18	6.7	11	21	9.0	11	8.9	5.1	98	27	.03	.04	.29		
19	387	18	17	7.5	10	6.8	6.1	59	26	.04	.02	.09		
20	37	18	17	7.9	9.7	8.2	7.2	43	21	.13	.02	.14		
21	21	13	17	8.2	9.7	6.8	6.2	33	16	.17	.02	.18		
22	18	12	17	8.2	9.7	6.2	4.5	25	14	.18	.02	.40		
23	14	11	17	7.7	8.9	6.2	4.7	18	12	.14	.10	1.2		
24	12	48	14	7.5	8.2	6.2	5.2	15	11	.08	.35	1.1		
25	10	24	13	7.5	8.9	4.8	4.3	240	9.7	.07	.40	.60		
26	8.7	19	12	7.8	8.9	4.1	3.9	44	9.8	.11	.03	.33		
27	7.4	315	12	8.2	8.9	4.1	3.7	34	8.4	.10	.04	.33		
28	6.2	95	12	9.3	8.1	4.1	4.1	29	6.3	.14	.04	.28		
29	6.0	58	11	10	---	4.1	5.5	24	6.4	.05	.05	.24		
30	5.7	45	11	11	---	4.1	12	20	6.3	.03	.04	.21		
31	5.7	---	9.9	9.6	---	4.1	---	61	---	.03	.05	---		
TOTAL	590.2	856.0	707.9	280.5	634.3	178.2	163.4	1560.1	1099.9	29.47	5.30	280.24		
MEAN	19.0	28.5	22.8	9.05	22.7	5.75	5.45	50.3	36.7	.95	.17	9.34		
MAX	387	315	84	11	187	8.9	12	305	172	5.6	1.6	213		
MIN	1.0	5.9	9.9	7.5	7.8	4.1	3.0	5.4	6.3	.03	.02	.09		
CFSM	.85	1.28	1.02	.41	1.02	.26	.24	2.26	1.65	.04	.01	.42		
IN.	.98	1.43	1.18	.47	1.06	.30	.27	2.60	1.83	.05	.01	.47		
AC-FT	1170	1700	1400	556	1260	353	324	3090	2180	58	11	556		
CAL YR 1985	TOTAL	6393.59	MEAN	17.5	MAX	728	MIN	.34	CFSM	.78	IN.	10.67	AC-FT	12680
WTR YR 1986	TOTAL	6385.51	MEAN	17.5	MAX	387	MIN	.02	CFSM	.78	IN.	10.65	AC-FT	12670

COLORADO RIVER BASIN

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

WATER-QUALITY RECORDS

PERIOD OF RECORD---Chemical and biochemical analyses: April 1978 to current year. Pesticide analyses: June 1978 to September 1986. Radiochemical analyses: January to April 1980.

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (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)	COLIFORM, 0.7 UM-MF (COLS./100 ML)	STREPTOCOCCI, FECAL, KF AGAR (COLS. PER 100 ML)
OCT												
19...	1015	148	334	--	--	60	420	--	--	2.8	35000	55000
19...	1045	1090	318	7.60	--	30	140	--	--	--	--	--
19...	1115	2970	278	--	--	--	--	--	--	4.6	70000	88000
19...	1145	2970	245	7.50	--	80	2800	--	--	--	--	--
19...	1215	2660	241	--	--	4000	2200	--	--	--	--	--
19...	1245	1900	326	--	--	--	--	--	--	5.0	57000	84000
NOV												
24...	1000	227	426	--	--	25	2900	--	--	2.9	58000	48000
24...	1030	193	532	--	--	--	--	--	--	2.8	K190000	22000
24...	1100	109	498	7.80	--	30	1000	--	--	--	--	--
24...	1130	87	446	--	--	45	190	--	--	--	--	--
24...	1200	107	429	--	--	--	--	--	--	2.4	K16000	37000
JAN												
28...	0745	2.8	627	8.80	7.5	7	0.60	11.6	98	0.1	K9	K12
FEB												
03...	1315	180	360	--	--	--	--	--	--	3.6	K11000	24000
03...	1345	225	323	--	--	30	760	--	--	--	--	--
03...	1415	490	422	--	--	30	360	--	--	--	--	--
03...	1445	750	460	--	--	--	--	--	--	3.6	K18000	K14000
03...	1515	698	366	--	--	30	130	--	--	--	--	--
03...	1545	665	309	7.80	--	--	--	--	--	6.1	K14000	K12000
APR												
07...	0835	5.0	594	7.80	21.0	5	0.60	8.4	95	1.4	160	2600
MAY												
09...	2130	171	355	--	--	100	230	--	--	5.0	74000	57000
09...	2200	241	402	--	--	--	--	--	--	--	--	--
09...	2230	241	373	--	--	--	--	--	--	3.6	41000	52000
09...	2300	177	350	--	--	--	--	--	--	--	--	--
09...	2330	146	364	7.90	--	--	--	--	--	--	--	--
09...	2400	112	426	--	--	100	250	--	--	--	8000	28000
JUN												
17...	0815	58	672	8.10	24.5	5	5.5	7.8	95	0.8	1200	1100
AUG												
25...	0950	0.03	711	7.50	26.0	5	5.4	4.5	56	0.6	3700	1100
DATE	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	POTASSIUM DIS-SOLVED (MG/L AS K)	ALKALINITY TOTAL (MG/L AS CaCO3)	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)
OCT												
19...	--	--	--	--	--	--	--	--	--	--	--	--
19...	130	33	38	8.2	13	0.5	2.4	96	31	22	0.10	6.0
19...	--	--	--	--	--	--	--	--	--	--	--	--
19...	100	23	31	5.4	10	0.5	2.8	77	24	14	0.10	5.0
19...	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--	--
NOV												
24...	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--
24...	210	48	60	15	22	0.7	2.4	164	42	35	0.20	8.3
24...	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--
JAN												
28...	290	83	81	22	31	0.8	1.5	210	60	52	0.20	6.3
FEB												
03...	--	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--	--
03...	130	24	37	8.1	14	0.6	2.7	102	26	17	0.20	5.7
APR												
07...	250	56	67	19	32	0.9	2.1	190	57	51	0.30	8.0
MAY												
09...	--	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--	--
09...	140	24	41	9.6	17	0.6	2.3	118	32	19	0.20	7.3
09...	--	--	--	--	--	--	--	--	--	--	--	--
JUN												
17...	280	42	78	21	28	0.8	2.0	239	47	37	0.20	9.6
AUG												
25...	260	100	71	21	45	1	4.2	162	100	66	0.30	11

COLORADO RIVER BASIN

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	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)	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)	ARSENIC DIS- SOLVED (UG/L AS AS)
OCT												
19...	--	1150	68	0.38	0.02	0.400	0.110	0.89	1.0	0.160	29	--
19...	180	5750	408	0.13	0.07	0.200	0.290	4.1	4.4	0.680	72	--
19...	--	--	--	0.30	0.10	0.400	0.360	1.0	1.4	0.550	130	--
19...	140	2210	200	0.30	0.20	0.500	0.600	4.5	5.1	0.720	55	--
19...	--	2340	536	0.58	0.12	0.700	0.300	1.3	1.6	0.430	52	--
19...	--	--	--	0.60	0.10	0.700	0.240	2.0	2.2	0.420	32	--
NOV												
24...	--	4500	372	--	<0.01	0.400	0.040	3.3	3.3	0.610	>140	--
24...	--	--	--	--	<0.01	0.500	0.050	2.0	2.1	0.310	36	--
24...	280	394	162	--	<0.010	0.500	0.070	1.1	1.2	0.160	12	--
24...	--	298	62	0.490	0.010	0.500	0.060	1.2	1.3	0.150	11	--
24...	--	--	--	0.490	0.010	0.500	0.050	1.0	1.1	0.130	9.7	--
JAN												
28...	380	2	2	--	<0.010	0.400	0.010	0.29	0.30	<0.010	1.7	<1
FEB												
03...	--	--	--	0.370	0.030	0.400	0.030	0.67	0.70	0.060	110	--
03...	--	1040	92	0.480	0.020	0.500	0.020	1.2	1.2	0.050	56	--
03...	--	882	70	0.470	0.030	0.500	0.040	3.3	3.3	0.020	39	--
03...	--	--	--	0.570	0.030	0.600	0.040	0.86	0.90	0.020	110	--
03...	--	1100	136	0.670	0.030	0.700	0.040	1.5	1.5	0.060	20	--
03...	170	--	--	0.680	0.020	0.700	0.020	0.68	0.70	0.090	21	--
APR												
07...	350	2	1	--	<0.010	0.200	0.010	0.29	0.30	<0.010	7.1	--
MAY												
09...	--	512	58	0.370	0.030	0.400	0.060	1.1	1.2	0.130	20	--
09...	--	--	--	0.280	0.020	0.300	0.040	1.5	1.5	0.120	26	1
09...	--	--	--	0.380	0.020	0.400	0.070	1.0	1.1	0.100	19	--
09...	--	--	--	0.480	0.020	0.500	0.060	1.0	1.1	0.130	17	2
09...	200	--	--	0.480	0.020	0.500	0.070	1.1	1.2	0.120	13	--
09...	--	370	54	0.470	0.030	0.500	0.070	0.83	0.90	0.080	12	--
JUN												
17...	370	20	9	--	<0.010	0.500	0.030	0.27	0.30	0.020	4.4	--
AUG												
25...	420	9	4	0.090	0.010	0.100	0.060	0.34	0.40	0.080	5.0	--

DATE	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)	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											
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
NOV											
24...	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--
JAN											
28...	51	<1	<10	<1	<3	<1	4	<0.1	<1	<1	6
FEB											
03...	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--
APR											
07...	--	--	--	--	--	--	--	--	--	--	--
MAY											
09...	--	--	--	--	--	--	--	--	--	--	--
09...	33	<1	<10	5	6	<1	<1	<0.1	<1	<1	7
09...	--	--	--	--	--	--	--	--	--	--	--
09...	24	<1	<10	11	10	3	<1	<0.1	<1	<1	7
09...	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--
JUN											
17...	--	--	--	--	--	--	--	--	--	--	--
AUG											
25...	--	--	--	--	--	--	--	--	--	--	--

STORM RAINFALL AND RUNOFF RECORD

08154700 Bull Creek at Loop 360, Austin, Texas

Date and time	Rainfall at gage 1-BUL (inches)	Accumulated weighted rainfall (inches)	Discharge (cubic feet per second)	Accumulated runoff (inches)
Storm Of October 19, 1985				
Oct. 19				
0000	0.0	0.0	5.0	0.0005
0245	.01	.01	8.9	.0018
0415	.01	.01	13.0	.0026
0430	.01	.01	13.0	.0036
0630	.02	.02	12.0	.0045
0645	.02	.02	11.0	.0049
0730	.02	.02	11.0	.0053
0745	.02	.02	11.0	.0055
0800	.02	.02	9.5	.0057
0815	.02	.02	9.5	.0058
0830	.02	.02	9.5	.0060
0845	.02	.02	8.9	.0061
0900	1.08	1.08	8.9	.0063
0915	1.16	1.16	8.9	.0066
1000	1.60	1.60	37.0	.0079
1015	2.13	2.13	148.0	.0105
1030	2.39	2.39	416.0	.0177
1045	2.52	2.52	1090.0	.0366
1100	2.57	2.57	1960.0	.0707
1115	2.59	2.59	2970.0	.1223
1130	2.60	2.60	3250.0	.1787
1145	2.66	2.66	2970.0	.2303
1200	2.69	2.69	2740.0	.3017
1230	2.70	2.70	2260.0	.4195
1330	2.72	2.72	1160.0	.5001
1430	2.74	2.74	614.0	.5321
1500	2.76	2.76	476.0	.5528
1545	2.77	2.77	353.0	.5988
1845	2.85	2.85	151.0	.6421
2400	2.88	2.88	76.0	.6559

STORM RAINFALL AND RUNOFF RECORD

08154700

Bull Creek at Loop 360, Austin, Texas

Date and time	Rainfall at gage 1-BUL (inches)	Accumulated weighted rainfall (inches)	Discharge (cubic feet per second)	Accumulated runoff (inches)
Storm of February 3, 1986				
Feb. 3				
0000	0.0	0.0	8.2	0.0010
0330	.02	.02	8.2	.0029
0645	.10	.10	8.2	.0041
0745	.21	.21	11.0	.0053
0945	.26	.26	22.0	.0076
1045	.31	.31	23.0	.0086
1100	.46	.46	27.0	.0090
1115	.64	.64	29.0	.0095
1130	.70	.70	29.0	.0108
1230	.79	.79	29.0	.0121
1245	.92	.92	31.0	.0126
1300	.98	.98	130.0	.0149
1315	1.07	1.07	180.0	.0211
1400	1.54	1.54	315.0	0.0321
1415	1.86	1.86	490.0	.0406
1430	2.13	2.13	738.0	0.0534
1445	2.18	2.18	750.0	.0664
1500	2.23	2.23	710.0	.0973
1600	2.35	2.35	595.0	.1231
1615	2.37	2.37	698.0	.1352
1630	2.38	2.38	762.0	.1485
1645	2.40	2.40	786.0	.1621
1700	2.43	2.43	744.0	.1815
1730	2.45	2.45	648.0	.2040
1800	2.46	2.46	514.0	.2353
1915	2.47	2.47	315.0	.2626
2030	2.48	2.48	231.0	.2847
2200	2.50	2.50	171.0	.3055
2400	2.50	2.50	132.0	.3147

COLORADO RIVER BASIN

08155260 BARTON CREEK NEAR CAMP CRAFT ROAD, AUSTIN, TX

LOCATION.--Lat 30 16'12", long 97 49'43", Travis County, Hydrologic Unit 12090205, on left bank about 0.5 mi south of Camp Craft Road, 1.0 mi downstream from bridge on Lost Creek Blvd., and 5 mi west of the State Capitol Building in Austin.

DRAINAGE AREA.--109 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1982 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 570 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records fair above 10 ft³/s and poor below. Daily discharges are not published above 250 ft³/s. Station is equipped with an automatic water-quality sampler. Discharge records for samples collected by the automatic sampler are poor. There are three recording rain gages in the watershed upstream from the gage.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 12.94 ft June 6, 1985 (discharge not determined); no flow at times each year.

EXTREMES FOR CURRENT YEAR.--Maximum gage height 11.56 ft, May 10 (discharge not determined); no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.02	10	187	49	24	28	10	---	101	21	.01	.00
2	.00	13	156	49	24	27	9.8	35	91	19	.00	.00
3	.00	13	143	47	---	27	9.6	20	85	16	.00	.00
4	.00	13	133	45	---	27	9.9	15	83	14	.00	.00
5	.00	13	119	43	96	25	9.9	12	83	13	.00	.00
6	.00	12	112	42	85	25	9.7	11	68	11	.01	4.1
7	.00	11	108	41	77	23	9.8	9.5	---	9.9	.01	23
8	.00	11	103	41	70	23	9.7	8.8	---	9.4	.00	12
9	.00	10	99	42	69	22	9.9	---	105	8.7	.00	5.7
10	.00	9.9	---	41	73	21	9.5	---	101	7.7	.00	1.9
11	.00	12	---	40	66	21	9.4	140	91	6.4	.00	.96
12	.00	13	---	38	61	21	9.8	89	87	4.5	.00	.97
13	.00	13	---	37	52	21	8.9	74	---	2.5	.00	.78
14	.01	12	194	36	56	20	8.4	58	89	1.0	.00	.67
15	6.6	13	180	35	49	19	7.4	---	77	.61	.00	.60
16	2.2	14	162	34	46	19	6.8	---	60	.45	.00	.56
17	.35	13	145	33	45	17	6.1	---	88	.34	.00	.55
18	.25	17	131	33	43	18	6.7	---	84	.26	.00	.51
19	35	25	116	32	42	17	7.3	---	90	.20	.00	.49
20	64	78	108	30	40	16	6.7	212	65	.14	.00	.51
21	30	45	102	30	38	16	6.3	180	47	.11	.00	.50
22	19	35	99	29	37	14	5.7	152	43	.09	.00	.49
23	14	33	95	27	36	14	4.4	131	41	.07	.00	.47
24	12	---	91	27	35	14	3.1	114	39	.05	.00	.43
25	11	142	86	27	35	14	1.8	103	38	.05	.00	.40
26	11	106	84	26	34	13	.90	106	36	.04	.00	.33
27	9.9	---	84	25	31	13	.71	101	33	.03	.00	.25
28	9.6	---	80	25	29	13	.69	93	29	.02	.00	.24
29	9.6	---	72	24	---	13	.57	88	27	.02	.00	.24
30	9.8	220	64	24	---	10	.52	84	23	.01	.00	.42
31	9.6	---	58	24	---	10	---	94	---	.01	.00	---
TOTAL	253.93	---	---	1076	---	581	199.99	---	---	146.60	.03	57.07
MEAN	8.19	---	---	34.7	---	18.7	6.67	---	---	4.73	.00	1.90
MAX	64	---	---	49	---	28	10	---	---	21	.01	23
MIN	.00	---	---	24	---	10	.52	---	---	.01	.00	.00
CFSM	.08	---	---	.32	---	.17	.06	---	---	.04	.00	.02
IN.	.09	---	---	.37	---	.20	.07	---	---	.05	.00	.02
AC-FT	504	---	---	2130	---	1150	397	---	---	291	.06	113
CAL YR 1985	TOTAL -	MEAN -	MAX -	MIN -	CFSM -	IN. -	AC-FT					
WTR YR 1986	TOTAL -	MEAN -	MAX -	MIN -	CFSM -	IN. -	AC-FT					

COLORADO RIVER BASIN

08155260 BARTON CREEK NEAR CAMP CRAFT ROAD, AUSTIN, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical, biochemical, and pesticide analyses: February 1983 to September 1986.

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTANTANEDUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD 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, FECAL, 0.7 UM-MF (COLS./100 ML)	STREP-TOCOCCI, FECAL, KF AGAR (COLS. PER 100 ML)	
JAN	27...	0935	30	445	7.90	10.0	5	1.5	9.5	86	0.1	K14	K19
FEB	03...	2400	440	397	--	--	--	--	--	2.3	6600	5100	
	04...	0030	664	396	--	--	15	160	--	--	--	--	
	04...	0100	692	409	8.00	--	--	--	--	--	--	--	
	04...	0130	673	412	--	--	--	--	--	1.9	20000	6600	
	04...	0200	641	423	--	--	10	150	--	--	--	--	
	04...	0230	601	420	--	--	15	80	--	--	--	--	
APR	08...	1050	11	428	8.00	24.0	5	1.1	9.8	119	0.5	K2	60
MAY	01...	1345	490	--	--	--	--	--	--	2.4	12000	29000	
	01...	1415	510	--	--	--	--	--	--	2.3	11000	26000	
	01...	1445	470	--	--	20	330	--	--	--	--	--	
	01...	1515	410	333	8.30	--	--	--	--	--	--	--	
	01...	1545	280	--	--	--	--	--	--	1.9	K4900	K6000	
	09...	2145	420	408	--	--	--	--	--	1.3	K1000	9600	
	09...	2215	990	302	--	--	--	--	--	--	--	--	
	09...	2245	1060	304	--	--	100	250	--	3.2	16000	38000	
	09...	2315	880	270	--	--	--	--	--	--	--	--	
	09...	2345	750	256	7.80	--	--	--	--	--	--	--	
	10...	0015	710	261	--	--	50	750	--	3.5	17000	59000	
JUN	16...	0830	67	443	8.00	27.5	5	2.8	6.8	--	0.5	84	120

DATE	HARD-NESS (MG/L AS CAC03)	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS 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)	ALKA-LINITY WH WAT TOTAL FIELD (MG/L AS CAC03)	SULFATE DIS-SOLVED (MG/L AS S04)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SI02)	
JAN	27...	240	40	65	19	9.2	0.3	0.9	201	20	15	0.2	7.4
FEB	03...	--	--	--	--	--	--	--	--	--	--	--	--
	04...	--	--	--	--	--	--	--	--	--	--	--	--
	04...	210	40	58	15	8.9	0.3	1.4	167	21	22	0.2	7.5
	04...	--	--	--	--	--	--	--	--	--	--	--	--
	04...	--	--	--	--	--	--	--	--	--	--	--	--
APR	08...	200	23	53	17	9.1	0.3	1.1	179	19	15	0.2	8.9
MAY	01...	--	--	--	--	--	--	--	--	--	--	--	--
	01...	--	--	--	--	--	--	--	--	--	--	--	--
	01...	--	--	--	--	--	--	--	--	--	--	--	--
	01...	150	27	43	11	7.4	0.3	2.0	126	25	13	0.2	8.7
	01...	--	--	--	--	--	--	--	--	--	--	--	--
	09...	--	--	--	--	--	--	--	--	--	--	--	--
	09...	--	--	--	--	--	--	--	--	--	--	--	--
	09...	--	--	--	--	--	--	--	--	--	--	--	--
	09...	--	--	--	--	--	--	--	--	--	--	--	--
	09...	120	23	36	6.9	4.9	0.2	2.8	95	23	7.5	0.1	5.9
	10...	--	--	--	--	--	--	--	--	--	--	--	--
JUN	16...	210	12	57	16	6.8	0.2	1.2	196	17	10	0.2	8.8

COLORADO RIVER BASIN

08155260 BARTON CREEK NEAR CAMP CRAFT ROAD, AUSTIN, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	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)	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)	ARSENIC DIS- SOLVED (UG/L AS AS)
JAN 27...	260	2	2	--	<0.01	0.10	0.02	0.18	0.2	0.01	1.0	<1
FEB 03...	--	--	--	0.57	0.03	0.60	0.07	0.93	1.0	0.04	4.2	--
04...	--	252	60	0.58	0.02	0.60	0.01	0.79	0.8	0.04	4.6	--
04...	230	--	--	0.48	0.02	0.50	0.02	0.88	0.9	0.02	5.7	--
04...	--	--	--	0.28	0.02	0.30	0.02	0.48	0.5	0.01	5.4	--
04...	--	238	46	0.19	0.01	0.20	<0.01	--	0.8	0.02	4.0	--
04...	--	138	18	0.17	0.03	0.20	0.01	0.59	0.6	0.02	3.7	--
APR 08...	230	6	1	--	<0.01	<0.10	<0.01	--	<0.2	<0.01	3.9	--
MAY 01...	--	--	--	0.37	0.03	0.40	0.15	0.65	0.8	0.14	20	--
01...	--	--	--	0.45	0.05	0.50	0.21	0.79	1.0	0.07	8.5	--
01...	--	482	62	0.64	0.06	0.70	0.13	1.1	1.2	0.17	9.8	--
01...	190	--	--	0.45	0.05	0.50	0.09	1.2	1.3	--	7.4	--
01...	--	--	--	0.46	0.04	0.50	0.09	0.51	0.6	0.05	5.0	--
09...	--	--	--	0.19	0.01	0.20	0.08	0.52	0.6	0.04	6.1	--
09...	--	--	--	0.28	0.02	0.30	0.12	0.88	1.0	0.11	8.0	2
09...	--	404	72	0.38	0.02	0.40	0.12	1.5	1.6	0.27	16	--
09...	--	--	--	0.47	0.03	0.50	0.11	2.1	2.2	0.18	34	2
09...	140	--	--	0.47	0.03	0.50	0.09	4.2	4.3	0.68	41	--
10...	--	604	140	0.48	0.02	0.50	0.09	2.3	2.4	0.38	30	--
JUN 16...	230	28	17	--	<0.01	0.10	0.03	0.27	0.3	0.01	2.0	--

DATE	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)	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 27...	25	<1	<10	<1	<3	1	3	<0.1	<1	<1	6
FEB 03...	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--
APR 08...	--	--	--	--	--	--	--	--	--	--	--
MAY 01...	--	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--
09...	22	6	<10	5	20	<1	<1	<0.1	<1	<1	7
09...	--	--	--	--	--	--	--	--	--	--	--
09...	23	<1	<10	5	26	1	<1	<0.1	<1	<1	<3
09...	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--
JUN 16...	--	--	--	--	--	--	--	--	--	--	--

COLORADO RIVER BASIN

OB155300 BARTON CREEK AT LOOP 360, AUSTIN, TX

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

DRAINAGE AREA.--116 mi².

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 and crest-stage gage. Datum of gage is 510.32 ft above National Geodetic Vertical Datum of 1929 (State Department of Highways and Public Transportation bench mark).

REMARKS.-- Estimated daily discharges: Mar. 28 to Apr. 29. Records fair except those below 5 ft³/s, which are poor. No known regulation or diversions. There are three recording rain gages located in the watershed above station.

AVERAGE DISCHARGE.--9 years, 36.7 ft³/s (4.30 in/yr), 26,590 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,100 ft³/s May 25, 1981 (gage height, 15.03 ft); 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), based on a slope-area measurement of peak flow at a site about 2 mi upstream.

EXTREMES FOR CURRENT YEAR.--Peak discharge greater than base discharge of 1,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 27	1215	1,900	6.57	May 9	2345	2,360	6.87
Dec. 11	0030	1,800	6.50	May 10	0700	*7,620	*9.77
Dec. 11	1745	1,580	6.34	May 18	0115	4,260	8.02

Minimum discharge, no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP			
1	.00	.00	162	45	2.0	16	.00	120	108	1.3	.00	.00			
2	.00	.00	134	45	1.9	17	.00	68	91	.60	.00	.00			
3	.00	.00	123	42	37	16	.00	20	79	.36	.00	.00			
4	.00	.00	114	38	264	15	.00	3.3	74	.26	.00	.00			
5	.00	.00	102	34	78	13	.00	.55	73	.21	.00	.00			
6	.00	.00	94	32	59	13	.00	.42	63	.02	.00	4.8			
7	.00	.00	86	31	51	12	.00	.42	70	.00	.00	.01			
8	.00	.00	79	32	47	12	.00	.42	176	.00	.00	.00			
9	.00	.00	72	34	47	12	.00	91	106	.00	.00	.00			
10	.00	.00	128	32	48	11	.00	1720	98	.00	.00	.00			
11	.00	.00	852	27	46	10	.00	156	85	.00	.00	.00			
12	.00	.00	320	24	44	11	.00	99	74	.00	.00	.00			
13	.00	.00	220	22	43	12	.00	79	130	.00	.00	.00			
14	7.4	.00	183	20	43	11	.00	66	80	.00	.00	.00			
15	7.0	.00	165	18	41	9.5	.00	301	63	.00	.00	.00			
16	.00	.00	150	17	38	8.4	.00	201	53	.00	.00	.00			
17	.00	.00	136	15	36	7.9	.00	370	74	.00	.00	.00			
18	.00	.00	126	13	33	7.5	.00	1020	64	.00	.00	.00			
19	53	.86	115	12	31	7.7	.00	276	75	.00	.00	.00			
20	47	59	108	10	29	5.6	.00	213	53	.00	.00	.00			
21	8.1	34	101	9.0	27	4.5	.00	179	42	.00	.00	.00			
22	.07	11	95	6.5	25	3.2	.00	154	35	.00	.00	.00			
23	.00	3.7	89	5.6	24	3.3	.00	136	31	.00	.00	.00			
24	.00	103	82	4.9	24	2.6	.00	123	27	.00	.00	.00			
25	.00	151	74	4.2	23	1.8	.00	111	23	.00	.00	.00			
26	.00	103	70	3.8	22	.76	.00	113	20	.00	.00	.00			
27	.00	959	67	3.7	20	.64	.00	109	15	.00	.00	.00			
28	.00	449	63	3.5	18	.30	.00	97	9.8	.00	.00	.00			
29	.00	248	57	3.2	---	.12	.00	86	5.7	.00	.00	.00			
30	.00	197	55	2.9	---	.02	2.8	79	2.9	.00	.00	.00			
31	.00	---	49	2.4	---	.00	---	92	---	.00	.00	---			
TOTAL	122.57	2318.56	4271	592.7	1201.9	244.84	2.80	6084.11	1900.4	2.75	.00	4.81			
MEAN	3.95	77.3	138	19.1	42.9	7.90	.09	196	63.3	.09	.00	.16			
MAX	53	959	852	45	264	17	2.8	1720	176	1.3	.00	4.8			
MIN	.00	.00	49	2.4	1.9	.00	.00	.42	2.9	.00	.00	.00			
CFSM	.03	.67	1.19	.16	.37	.07	.00	1.69	.55	.00	.00	.00			
IN.	.04	.74	1.37	.19	.39	.08	.00	1.95	.61	.00	.00	.00			
AC-FT	243	4600	8470	1180	2380	486	5.6	12070	3770	5.5	.00	9.5			
CAL YR 1985	TOTAL	28146.77		MEAN	77.1	MAX	2990	MIN	.00	CFSM	.66	IN.	9.03	AC-FT	55830
WTR YR 1986	TOTAL	16746.44		MEAN	45.9	MAX	1720	MIN	.00	CFSM	.40	IN.	5.37	AC-FT	33220

COLORADO RIVER BASIN

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDEO (MG/L)	SOLIDS, VOLA- TILE, SUS- PENDEO (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)	ARSENIC DIS- SOLVED (UG/L AS AS)
JAN 27...	270	2	1	--	<0.010	0.100	0.010	0.29	0.30	0.010	1.8	<1
FEB 04...	--	--	--	0.180	0.020	0.200	<0.010	--	0.40	0.030	6.1	--
04...	--	128	12	0.280	0.020	0.300	<0.010	--	0.60	0.020	4.3	--
04...	--	--	--	0.470	0.030	0.500	<0.010	--	0.90	0.030	6.0	--
04...	230	--	--	0.470	0.030	0.500	<0.010	--	0.70	0.030	6.8	--
04...	--	382	48	0.280	0.020	0.300	<0.010	--	0.90	0.050	6.7	--
04...	--	--	--	0.180	0.020	0.200	<0.010	--	0.60	0.020	5.7	--
MAR 27...	230	3	1	--	<0.010	<0.100	0.020	0.28	0.30	0.010	1.7	--
MAY 01...	--	--	--	0.360	0.040	0.400	0.060	1.0	1.1	0.140	11	--
01...	180	--	--	0.370	0.030	0.400	0.050	1.2	1.3	0.170	7.3	--
01...	--	664	58	0.310	0.090	0.400	0.230	0.87	1.1	0.140	12	--
01...	--	--	--	0.440	0.060	0.500	0.210	0.79	1.0	0.160	9.3	--
01...	--	452	66	0.450	0.050	0.500	0.060	0.74	0.80	0.080	12	--
01...	--	--	--	0.550	0.050	0.600	0.060	1.1	1.2	0.100	15	--
09...	--	--	--	0.860	0.040	0.900	0.010	2.3	2.3	0.490	18	--
09...	--	--	--	0.460	0.040	0.500	0.090	1.9	2.0	0.400	36	1
09...	--	620	70	0.380	0.020	0.400	0.080	1.6	1.7	0.280	19	--
09...	--	--	--	0.360	0.040	0.400	0.100	1.3	1.4	0.220	21	2
10...	--	928	104	0.470	0.030	0.500	0.100	2.5	2.6	0.190	26	--
10...	--	--	--	0.570	0.030	0.600	0.080	2.8	2.9	0.410	33	--
10...	100	1240	152	0.180	0.020	0.200	0.040	1.6	1.6	0.090	33	<1
JUN 16...	220	8	6	--	<0.010	0.100	0.020	0.18	0.20	0.010	2.1	--

DATE	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)	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 27...	25	<1	10	<1	<3	<1	2	<0.1	<1	<1	3
FEB 04...	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--
MAR 27...	--	--	--	--	--	--	--	--	--	--	--
MAY 01...	--	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--
09...	25	<1	<10	5	10	1	<1	<0.1	<1	<1	5
09...	--	--	--	--	--	--	--	--	--	--	--
09...	21	<1	<10	3	20	1	<1	<0.1	<1	<1	7
10...	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--
10...	13	<1	<10	2	51	3	1	<0.1	<1	<1	<3
JUN 16...	--	--	--	--	--	--	--	--	--	--	--

COLORADO RIVER BASIN

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

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical and biochemical analyses: January 1979 to current year. Pesticide analyses: January 1979 to September 1986. Radiochemical analyses: April 1980.

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (NTU)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DEMAND, BIO-CHEMICAL, 5 DAY (MG/L)	COLIFORM, FECAL, UM-MF (COLS./100 ML)	STREPTOCOCCI, FECAL, KF AGAR (COLS. PER 100 ML)		
JAN	27...	0900	14	430	9.00	9.5	5	0.70	10.6	94	0	K9	K15
FEB	04...	0115	393	391	--	--	--	--	--	2.8	--	--	--
	04...	0145	757	363	--	--	20	74	--	--	8800	18000	--
	04...	0215	786	390	--	--	--	--	--	2.9	11000	11000	--
	04...	0245	728	404	8.00	--	--	--	--	--	--	--	--
	04...	0315	683	412	--	--	7	210	--	--	--	--	--
	04...	0345	602	421	--	--	--	--	--	2.1	22000	K4000	--
MAR	27...	1000	0.68	403	8.10	19.5	5	1.0	8.9	97	1.0	K9	K10
MAY	01...	1515	460	--	--	--	--	--	--	5.5	20000	23000	--
	01...	1545	460	--	8.20	--	--	--	--	--	--	--	--
	01...	1615	398	--	--	30	300	--	--	--	25000	29000	--
	01...	1645	344	--	--	--	--	--	--	3.3	--	--	--
	01...	1715	296	--	--	30	250	--	--	--	--	--	--
	01...	1745	260	--	--	--	--	--	--	2.5	9600	22000	--
	09...	2230	360	185	--	--	--	--	--	4.5	K95000	49000	--
	09...	2300	434	206	--	--	--	--	--	--	--	--	--
	09...	2330	2020	297	--	45	230	--	--	4.1	22000	51000	--
	09...	2400	2360	271	--	--	--	--	--	--	--	--	--
	10...	0030	1860	266	--	50	500	--	--	--	--	--	--
	10...	0100	1390	248	--	--	--	--	--	4.6	31000	58000	--
	10...	0845	3500	171	8.00	200	450	--	--	5.0	K26000	57000	--
JUN	16...	0905	54	413	8.20	28.0	5	2.5	8.1	106	0.6	K64	100

DATE	HARDNESS (MG/L AS CAC03)	HARDNESS NONCARBONATE (MG/L AS CAC03)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM DISSOLVED (MG/L AS MG)	SODIUM DISSOLVED (MG/L AS NA)	SODIUM ADSORPTION RATIO	POTASSIUM DISSOLVED (MG/L AS K)	ALKALINITY TOTAL (MG/L AS CAC03)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE DISSOLVED (MG/L AS CL)	FLUORIDE DISSOLVED (MG/L AS F)	SILICA DISSOLVED (MG/L AS SI02)	
JAN	27...	230	19	62	19	9.5	0.3	1.0	214	23	17	0.20	7.2
FEB	04...	--	--	--	--	--	--	--	--	--	--	--	--
	04...	--	--	--	--	--	--	--	--	--	--	--	--
	04...	200	40	57	15	8.9	0.3	1.5	164	21	24	0.20	7.8
	04...	--	--	--	--	--	--	--	--	--	--	--	--
	04...	--	--	--	--	--	--	--	--	--	--	--	--
MAR	27...	200	42	51	18	9.5	0.3	1.1	159	30	17	0.20	7.3
MAY	01...	--	--	--	--	--	--	--	--	--	--	--	--
	01...	140	23	41	10	6.9	0.3	2.0	121	23	13	0.10	7.5
	01...	--	--	--	--	--	--	--	--	--	--	--	--
	01...	--	--	--	--	--	--	--	--	--	--	--	--
	01...	--	--	--	--	--	--	--	--	--	--	--	--
	01...	--	--	--	--	--	--	--	--	--	--	--	--
	09...	--	--	--	--	--	--	--	--	--	--	--	--
	09...	--	--	--	--	--	--	--	--	--	--	--	--
	09...	--	--	--	--	--	--	--	--	--	--	--	--
	10...	--	--	--	--	--	--	--	--	--	--	--	--
	10...	--	--	--	--	--	--	--	--	--	--	--	--
	10...	85	8	26	4.9	2.3	0.1	2.2	77	8.6	3.7	0.10	6.1
JUN	16...	190	11	53	15	6.4	0.2	1.2	183	16	9.7	0.20	8.5

STORM RAINFALL AND RUNOFF RECORD

08155300 Barton Creek at Loop 360, Austin, Texas

Date and time	Rainfall at gage 1-BAR (inches)	Rainfall at gage 2-BAR (inches)	Rainfall at gage 3-BAR (inches)	Accumulated weighted rainfall (inches)	Discharge (cubic feet per second)	Accumulated runoff (inches)
Storm of May 9-11, 1986						
May 9						
0000	0.0	0.0	0.0	0.0	0.4	0.0001
1800	.0	.0	.01	.00	.4	.0001
1845	.36	.08	.09	.25	.4	.0001
1900	.50	.21	.19	.38	.4	.0001
1915	.66	.33	.50	.57	.4	.0001
1930	.92	.33	.99	.85	.4	.0001
1945	.92	.33	1.23	.91	.4	.0001
2000	.92	.44	1.23	.93	.4	.0001
2015	.94	.77	1.36	1.02	98.0	.0005
2030	.97	1.05	1.80	1.20	87.0	.0008
2045	.99	1.41	2.30	1.39	57.0	.0010
2100	1.00	1.82	2.62	1.54	73.0	.0012
2115	1.05	1.90	2.63	1.59	97.0	.0016
2130	1.11	1.91	2.63	1.63	109.0	.0029
2300	1.17	1.91	2.63	1.66	434.0	.0083
2315	1.20	1.91	2.63	1.68	901.0	.0131
2345	1.28	1.92	2.63	1.73	2360.0	.0257
2400	1.32	1.92	2.63	1.75	2360.0	.0382
May 10						
0000	1.32	1.92	2.63	1.75	2340.0	.0382
0100	1.41	1.92	2.63	1.80	1390.0	.0663
0200	1.41	1.92	2.63	1.80	1050.0	.0831
0315	1.51	1.92	2.63	1.86	2050.0	.1305
0515	1.51	1.92	2.63	1.86	3800.0	.2115
0615	1.51	1.92	2.63	1.86	6650.0	.2824
0645	1.51	1.92	2.63	1.86	7410.0	.3219
0700	1.51	1.92	2.63	1.86	7620.0	.3490
0715	1.51	1.92	2.63	1.86	7600.0	.3760
0730	1.51	1.92	2.63	1.86	7150.0	.4776
0915	1.52	1.92	2.63	1.87	2660.0	.5249
1000	1.96	1.96	2.63	2.13	1780.0	.5407
1030	2.48	1.96	2.63	2.44	1410.0	.5507
1100	2.48	1.99	2.63	2.45	1210.0	.5615
1145	2.48	2.00	2.63	2.45	957.0	.5819
1400	2.48	2.00	2.64	2.45	610.0	.6133
1900	2.49	2.02	2.65	2.46	334.0	.6371
2400	2.49	2.02	2.65	2.46	226.0	.6499
May 11						
0000	2.49	2.02	2.65	2.46	226.0	.6499
0600	2.49	2.02	2.65	2.46	177.0	.6849
2400	2.49	2.03	2.65	2.46	116.0	.6998

STORM RAINFALL AND RUNOFF RECORD

08155300 Barton Creek at Loop 360, Austin, Texas

Date and time	Rainfall at gage 1-BAR (inches)	Rainfall at gage 2-BAR (inches)	Rainfall at gage 3-BAR (inches)	Accumulated weighted rainfall (inches)	Discharge (cubic feet per second)	Accumulated runoff (inches)
Storm of May 15-19, 1986						
May 15						
0000	0.0	0.0	0.0	0.0	63.0	0.0022
0500	.02	.0	.04	.02	63.0	.0046
0515	.07	.0	.05	.05	63.0	.0048
0530	.15	.02	.08	.11	63.0	.0050
0545	.16	.05	.10	.13	63.0	.0053
0600	.18	.13	.10	.15	65.0	.0055
0615	.18	.17	.10	.16	66.0	.0057
0630	.20	.18	.32	.23	66.0	.0060
0645	.20	.18	.95	.39	66.0	.0062
0700	.26	.20	1.33	.53	66.0	.0064
0715	.45	.79	1.34	.73	83.0	.0067
0730	.89	1.92	1.34	1.16	300.0	.0078
0745	1.46	1.99	1.34	1.51	236.0	0.0086
0800	1.46	2.00	1.34	1.51	223.0	0.0118
0945	1.47	2.00	1.34	1.52	602.0	0.0364
1345	1.47	2.01	1.35	1.52	286.0	0.0476
1515	1.47	2.01	1.35	1.52	500.0	.0671
1915	1.47	2.01	1.35	1.52	416.0	0.0930
2400	1.47	2.01	1.35	1.52	334.0	.1185
May 16						
0000	1.47	2.01	1.35	1.52	334.0	.1185
1200	1.47	2.01	1.35	1.52	186.0	.1645
2400	1.48	2.14	1.40	1.56	153.0	.1384
May 17						
0000	1.48	2.14	1.40	1.56	153.0	.1384
1330	1.52	2.14	1.40	1.58	138.0	.1256
1345	1.75	2.14	1.53	1.75	138.0	.1261
1400	2.18	2.14	1.82	2.08	134.0	.1266
1415	2.44	2.16	1.97	2.28	134.0	.1270
1430	2.50	2.32	2.10	2.37	210.0	.1278
1445	2.66	2.57	2.20	2.53	256.0	.1287
1500	2.98	2.66	2.28	2.75	233.0	.1295
1515	3.00	2.74	2.30	2.78	226.0	.1303
1530	3.00	2.87	2.32	2.80	277.0	.1313
1545	3.00	2.92	2.33	2.81	305.0	.1324
1600	3.03	2.94	2.33	2.83	324.0	.1335
1615	3.07	2.94	2.33	2.86	365.0	.1348
1630	3.07	2.94	2.33	2.86	387.0	.1362
1645	3.07	2.95	2.33	2.86	393.0	.1376
1700	3.07	2.95	2.33	2.86	404.0	.1391
1715	3.07	2.95	2.33	2.86	473.0	.1407

STORM RAINFALL AND RUNOFF RECORD

08155300 Barton Creek at Loop 360, Austin, Texas

Date and time	Rainfall at gage 1-BAR (inches)	Rainfall at gage 2-BAR (inches)	Rainfall at gage 3-BAR (inches)	Accumulated weighted rainfall (inches)	Discharge (cubic feet per second)	Accumulated runoff (inches)
Storm of May 15-19, 1986--Continued						
May 17						
1730	3.07	2.95	2.33	2.86	542.0	.1427
1745	3.07	2.95	2.33	2.86	564.0	.1447
1800	3.07	2.95	2.33	2.86	571.0	0.1467
1815	3.07	2.95	2.33	2.86	571.0	.1487
1830	3.07	2.95	2.33	2.86	586.0	.1581
2030	3.07	2.95	2.33	2.86	500.0	.1776
2400	3.09	2.95	2.34	2.87	2770.0	.2515
May 18						
0000	3.09	2.95	2.34	2.87	2770.0	.2515
0030	3.09	2.95	2.34	2.87	3630.0	.2887
0115	3.09	2.95	2.34	2.87	4260.0	.3492
0230	3.09	2.95	2.34	2.87	3000.0	.4292
0500	3.09	2.95	2.34	2.87	1320.0	.4808
0800	3.09	2.95	2.34	2.87	737.0	.5175
1200	3.09	2.96	2.34	2.88	535.0	.5783
2400	3.09	2.96	2.35	2.88	329.0	.6204
May 19						
0000	3.09	2.96	2.35	2.88	329.0	.6204
1200	3.09	2.96	2.35	2.88	277.0	.6817
2400	3.09	3.28	2.35	2.93	233.0	.7016

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 upstream from Barton Springs Road bridge over Barton Creek, 0.7 mi upstream from mouth, and 1.8 mi southwest of the State Capitol Building in Austin.

DRAINAGE AREA.--Not applicable. Only springflow is published for this station.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--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 above National Geodetic Vertical Datum of 1929. May 1917 to September 1918, nonrecording gage at site 1,000 ft downstream at different datum.

REMARKS.--Estimated daily discharges: July 14 to Aug. 18. Records poor. Only springflow from the Edwards and associated limestones in the Balcones Fault Zone are published for this station. This station is part of an urban hydrologic project to study the ground-water resources in the Austin urban area.

AVERAGE DISCHARGE.--9 years (water years 1918, 1979-86), 54.7 ft³/s (39,630 acre-ft/yr).

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

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

EXTREMES FOR CURRENT YEAR.--Maximum daily spring discharge, 85 ft³/s June 26; minimum daily, 42 ft³/s Oct. 12, 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	47	55	82	78	75	74	67	60	82	83	53	58
2	47	55	83	78	75	74	67	61	82	83	52	58
3	46	56	80	78	77	74	67	62	82	82	51	57
4	46	55	77	78	79	74	66	62	82	82	50	57
5	45	54	77	78	80	74	66	62	81	81	50	57
6	45	54	78	78	78	73	65	61	81	81	50	58
7	44	53	78	78	78	73	65	61	80	80	52	58
8	44	53	78	78	78	73	65	60	81	79	53	58
9	43	52	78	78	78	73	65	60	80	78	55	58
10	43	52	77	78	78	73	64	62	79	78	57	59
11	43	54	76	78	78	73	64	64	83	78	58	58
12	42	57	80	78	77	73	64	67	82	78	59	57
13	42	57	79	77	77	72	64	69	82	78	60	57
14	45	57	79	78	76	72	64	71	83	78	61	56
15	50	57	79	78	76	72	64	73	83	76	62	56
16	60	57	79	78	77	72	64	76	75	74	63	55
17	68	58	79	78	75	72	63	78	64	73	63	55
18	72	58	79	77	73	71	63	79	58	71	64	55
19	71	58	79	77	72	71	63	79	53	70	64	54
20	70	60	79	77	71	71	62	79	65	69	64	54
21	67	61	79	77	69	70	62	79	84	67	63	53
22	65	62	79	77	68	70	62	79	84	65	63	53
23	61	63	79	77	73	70	62	79	74	64	62	52
24	60	64	79	77	74	69	61	79	78	63	62	51
25	58	67	79	76	74	69	61	79	84	62	61	51
26	57	70	79	76	75	69	60	79	85	60	61	51
27	57	63	79	76	75	68	60	79	84	59	61	51
28	56	54	79	76	75	68	60	79	83	58	60	51
29	55	69	78	76	---	67	60	79	84	57	60	50
30	55	77	78	75	---	67	59	79	84	55	60	50
31	55	---	78	76	---	67	---	79	---	54	59	---
TOTAL	1659	1762	2442	2395	2111	2208	1899	2215	2362	2216	1813	1648
MEAN	53.5	58.7	78.8	77.3	75.4	71.2	63.3	71.5	78.7	71.5	58.5	54.9
MAX	72	77	83	78	80	74	67	79	85	83	64	59
MIN	42	52	76	75	68	67	59	60	53	54	50	50
AC-FT	3290	3490	4840	4750	4190	4380	3770	4390	4690	4400	3600	3270
CAL YR 1985	TOTAL	24814	MEAN	68.0	MAX	90	MIN	42	AC-FT	49220		
WTR YR 1986	TOTAL	24730	MEAN	67.8	MAX	85	MIN	42	AC-FT	49050		

COLORADO RIVER BASIN

OB155500 BARTON SPRINGS AT AUSTIN, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: October 1903, June 1941 to February 1959. Chemical, biochemical, and pesticide analyses: December 1978 to current year. Radiochemical analyses: January to September 1980.

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD 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)	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
JAN 27...	0800	76	575	6.90	20.0	10	1.0	7.3	82	0	35	K3
APR 09...	0805	63	597	6.80	20.0	5	0.6	7.7	85	0.1	K9	K4
MAY 02...	1130	61	589	7.00	21.0	5	4.6	6.1	69	1.0	960	K3200
JUN 23...	1245	74	448	7.90	28.0	5	2.0	8.0	--	0.3	K44	48
AUG 25...	1055	61	567	7.50	25.5	5	0.5	5.3	66	0.2	210	820

DATE	HARDNESS (MG/L AS CaCO3)	HARDNESS NONCARBONIC (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	POTASSIUM, DIS-SOLVED (MG/L AS K)	ALKALINITY (WH WAT TOTAL FIELD) (MG/L AS CaCO3)	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)
JAN 27...	300	33	86	20	14	0.4	1.1	264	22	22	0.2	11
APR 09...	280	23	78	20	14	0.4	1.2	254	17	22	0.2	10
MAY 02...	280	39	82	19	13	0.3	1.3	244	25	23	0.2	11
JUN 23...	210	28	55	17	7.7	0.2	1.8	179	19	12	0.2	9.4
AUG 25...	300	52	85	22	9.1	0.2	1.4	251	25	32	0.2	12

DATE	SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUSPENDED (MG/L)	SOLIDS, VOLATILE, SUSPENDED (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)	ARSENIC, DIS-SOLVED (UG/L AS AS)
JAN 27...	330	1	1	--	<0.01	1.30	0.01	0.29	0.3	0.01	0.9	<1
APR 09...	310	2	1	--	<0.01	1.30	<0.01	--	<0.2	0.01	<0.1	--
MAY 02...	320	3	1	--	<0.01	1.50	<0.01	--	0.3	0.02	0.7	--
JUN 23...	230	1	1	--	<0.01	0.20	<0.01	--	0.2	<0.01	1.8	--
AUG 25...	340	1	1	1.29	0.01	1.30	0.05	0.45	0.5	0.03	1.5	--

DATE	BARIUM, DIS-SOLVED (UG/L AS Ba)	CADMIUM, DIS-SOLVED (UG/L AS Cd)	CHROMIUM, DIS-SOLVED (UG/L AS Cr)	COPPER, DIS-SOLVED (UG/L AS Cu)	IRON, DIS-SOLVED (UG/L AS Fe)	LEAD, DIS-SOLVED (UG/L AS Pb)	MANGANESE, DIS-SOLVED (UG/L AS Mn)	MERCURY, DIS-SOLVED (UG/L AS Hg)	SELENIUM, DIS-SOLVED (UG/L AS Se)	SILVER, DIS-SOLVED (UG/L AS Ag)	ZINC, DIS-SOLVED (UG/L AS Zn)
JAN 27...	47	<1	<10	<1	<3	<1	1	<0.1	<1	<1	8
APR 09...	--	--	--	--	--	--	--	--	--	--	--
MAY 02...	--	--	--	--	--	--	--	--	--	--	--
JUN 23...	--	--	--	--	--	--	--	--	--	--	--
AUG 25...	--	--	--	--	--	--	--	--	--	--	--

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

08155500 BARTON SPRINGS AT AUSTIN, TX.

[µg/L, micrograms per liter]

Date	Time	Di-chloro-bromethane total (µg/L)	Carbon-tetra-chloride total (µg/L)	1,2-Di-chloro-ethane total (µg/L)	Bromo-form total (µg/L)	Chloro-di-bromo-methane total (µg/l)	Chloro-form total (µg/l)	Toluene total (µg/L)	Benzene total	Chloro-Benzene total
Jan. 27 ...	0800	--	--	--	--	--	--	--	--	--
Apr. 09 ...	0805	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
May 02 ...	1130	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
June 23 ...	1245	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
Aug. 25 ...	1055	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0

Date	Chloro-ethane total (µg/L)	Ethyl-benzene total (µg/L)	Methyl-bromide total (µg/L)	Methyl-ene-chloride total (µg/L)	Tetra-coloro-ethylene total (µg/L)	Tri-coloro-fluoro-methane total (µg/L)	1,1-Di-chloro-ethane total (µg/L)	1,1-Di-chloro-ethylene total (µg/L)	1,1,1-Tri-chloro-ethane total (µg/L)	1,1,2-Tri-chloro-ethane total (µg/L)
Jan. 27 ...	--	--	--	--	--	--	--	--	--	--
Apr. 09 ...	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
May 02 ...	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
June 23 ...	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
Aug. 25 ...	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0

COLORADO RIVER BASIN

08156800 SHOAL CREEK AT 12TH STREET, AUSTIN, TX

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

DRAINAGE AREA.--12.3 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1984 to Current year. Periodic discharge measurements, periodic QM sample collection and associated peak discharges along with annual maximum, November 1974 to Current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 455.33 ft above National Geodetic Vertical Datum of 1929 (City of Austin bench mark). Apr. 2 1975 to Nov. 14, 1984, operated as a flood-hydrograph partial-record site at same location and datum.

REMARKS.--Estimated daily discharges: May 17-23. Records good except those for estimated daily discharges, which are fair. There is no known regulation or diversion. This station is part of a hydrologic research project to study the rainfall-runoff relationship for the Austin urban area. The station is equipped with an automatic water-quality sampler. There are two recording rain gages in the watershed.

EXTREMES FOR PERIOD OF RECORD.-- Maximum discharge, 16,000 ft³/s May 24, 1981 (gage height, 23.22 ft); no flow at times.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct. 19	1200	*2,850	*11.73	May 9	2100	1,880	9.77
Apr. 30	2145	2,580	11.23	Sep.6	0915	1,840	9.67
May 1	0730	1,010	7.54				

Minimum discharge, no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	.14	8.2	2.7	.73	.06	.06	.06	115	38	.27	.00	8.2		
2	.00	44	1.8	1.1	.07	.06	.06	6.1	4.1	.22	.00	40		
3	.00	3.6	1.8	1.0	71	.04	.07	3.5	28	.20	.00	15		
4	.00	1.4	1.7	.79	10	.05	.06	2.1	5.3	.14	.03	1.7		
5	.00	.94	1.5	.82	2.1	.06	.05	1.6	4.8	.14	7.9	.36		
6	.00	.72	1.2	.56	1.1	.06	.04	1.5	2.7	.10	.33	225		
7	.00	.50	1.1	.20	.66	.06	.04	1.4	1.0	.09	.00	7.1		
8	.00	.35	1.2	2.2	.48	.06	2.7	1.3	.94	.06	.04	2.8		
9	.00	.23	1.3	4.9	.85	.09	3.0	181	11	.03	.03	2.2		
10	.00	.24	47	2.0	1.7	.09	.18	41	1.0	.04	.00	1.7		
11	.00	8.2	34	.50	1.1	1.3	.11	16	27	.02	3.3	11		
12	.00	2.7	5.7	.19	.26	4.6	.26	12	1.8	.02	1.4	3.3		
13	.00	1.6	3.3	.14	.12	.94	.15	9.6	.59	.01	.12	2.7		
14	49	1.2	2.7	.14	.09	1.3	.18	8.6	.41	.00	.09	2.8		
15	76	3.1	2.5	.09	.09	1.2	.11	99	.35	.00	.06	2.1		
16	1.6	28	2.1	.09	.09	1.1	.09	11	.26	.00	.06	1.9		
17	7.3	5.4	2.1	.09	.40	.94	.08	10	61	.00	.05	1.7		
18	2.8	2.8	1.7	.09	.12	5.6	.07	6.7	1.5	.00	.04	1.6		
19	203	36	1.6	.09	.09	1.2	.06	5.7	6.9	.00	.04	16		
20	9.4	11	1.7	.09	.07	.40	1.8	4.2	2.4	.00	.03	5.1		
21	2.2	3.1	1.4	.09	.04	.31	.10	2.7	.69	.00	.00	3.7		
22	3.0	2.1	1.1	.09	.04	.29	.06	1.6	.56	.00	.00	2.5		
23	.84	3.7	1.2	.09	.05	.09	.05	1.2	.42	.00	.03	2.2		
24	.44	97	1.1	.09	.06	.09	.04	.72	.37	.00	.45	2.1		
25	.30	7.0	.97	.06	.06	.08	.04	66	.35	.00	.55	2.0		
26	.20	3.3	.91	.06	.06	.06	.04	3.2	.35	.00	.10	1.9		
27	.11	154	1.1	.08	.06	.10	.06	1.7	.35	.00	.10	1.7		
28	.04	8.1	1.0	.07	.06	.07	.06	.83	.35	.00	.09	1.6		
29	.09	4.5	.83	.07	---	.07	.04	.73	.35	.00	.09	2.4		
30	.09	3.5	.76	.06	---	.06	109	.60	.34	.00	.09	1.8		
31	.12	---	.65	.06	---	.07	---	21	---	.00	.07	---		
TOTAL	356.67	446.48	129.72	16.63	90.88	20.50	118.66	637.58	203.18	1.34	15.09	374.16		
MEAN	11.5	14.9	4.18	.54	3.25	.66	3.96	20.6	6.77	.04	.49	12.5		
MAX	203	154	47	4.9	71	5.6	109	181	61	.27	7.9	225		
MIN	.00	.23	.65	.06	.04	.04	.04	.60	.26	.00	.00	.36		
CFSM	.93	1.21	.34	.04	.26	.05	.32	1.67	.55	.00	.04	1.02		
IN.	1.08	1.35	.39	.05	.27	.06	.36	1.93	.61	.00	.05	1.13		
AC-FT	707	886	257	33	180	41	235	1260	403	2.7	30	742		
CAL YR 1985	TOTAL	2201.84	MEAN	6.03	MAX	203	MIN	.00	CFSM	.49	IN.	6.66	AC-FT	4370
WTR YR 1986	TOTAL	2410.89	MEAN	6.61	MAX	225	MIN	.00	CFSM	.54	IN.	7.29	AC-FT	4780

COLORADO RIVER BASIN

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

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical, biochemical, and pesticide analyses: January 1975 to current year. Water temperatures: January 1975 to current year. Radiochemical analyses: October 1979 to September 1980.

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD 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)	COLIFORM, FECA, 0.7 UM-MF (COLS./100 ML)	STREPTOCOCCI, KF AGAR (COLS. PER 100 ML)
OCT												
14...	2200	148	196	--	--	--	--	--	--	15	K1700000	75000
14...	2215	289	146	--	--	120	270	--	--	--	--	--
14...	2230	165	146	--	--	--	--	--	--	9.1	680000	78000
14...	2245	121	128	7.50	--	120	200	--	--	--	--	--
14...	2300	534	130	7.50	--	100	450	--	--	--	--	--
14...	2315	758	191	--	--	--	--	--	--	12	680000	86000
MAY												
09...	2000	233	142	--	--	--	--	--	--	10	600000	300000
09...	2030	470	217	--	--	--	--	--	--	--	--	--
09...	2100	764	214	--	--	200	350	--	--	4.6	70000	210000
09...	2130	1670	--	--	--	--	--	--	--	--	94000	320000
JUN												
01...	1355	195	273	--	--	60	550	--	--	6.4	K150000	92000
01...	1451	224	199	--	--	--	--	--	--	6.2	84000	88000
01...	1530	130	172	--	--	100	1300	--	--	5.0	70000	90000
11...	1130	195	--	--	--	--	--	--	--	7.8	K170000	42000
11...	1200	153	289	7.60	--	--	--	--	--	--	--	--
11...	1230	149	--	--	--	--	--	--	--	--	260000	86000
16...	1040	0.02	636	7.60	26.0	3	1.3	7.5	94	0.5	K300	K400

DATE	HARDNESS (MG/L AS CaCO3)	HARDNESS NONCARBONIC (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	POTASSIUM, DIS-SOLVED (MG/L AS K)	ALKALINITY WH WAT TOTAL FIELD (MG/L AS CaCO3)	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)
OCT												
14...	--	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--	--
14...	45	8	16	1.3	3.3	0.2	3.0	37	14	5.1	<0.1	2.0
14...	44	8	16	1.0	3.0	0.2	2.8	36	14	3.9	<0.1	2.0
14...	--	--	--	--	--	--	--	--	--	--	--	--
MAY												
09...	--	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--	--
JUN												
01...	--	--	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--	--	--	--
11...	120	44	41	3.2	9.1	0.4	2.8	72	41	16	0.3	4.5
11...	--	--	--	--	--	--	--	--	--	--	--	--
16...	240	98	87	6.5	26	0.8	3.4	146	91	44	0.3	6.3

DATE	SOLIDS, SAND OF CONSTITUENTS, DIS-SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUSPENDED (MG/L)	SOLIDS, VOLATILE, SUSPENDED (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)	ARSENIC, DIS-SOLVED (UG/L AS AS)
OCT												
14...	--	--	--	0.36	0.04	0.40	0.11	2.9	3.0	0.72	21	--
14...	--	620	128	0.35	0.05	0.40	0.18	3.2	3.4	0.97	37	--
14...	--	--	--	0.35	0.05	0.40	0.15	2.8	2.9	0.76	37	--
14...	67	308	52	--	--	--	--	--	--	--	--	--
14...	64	1260	172	--	--	--	--	--	--	--	--	--
14...	--	--	--	0.15	0.15	0.30	0.63	3.0	3.6	1.80	28	--
MAY												
09...	--	--	--	0.54	0.06	0.60	0.36	2.0	2.4	0.32	34	--
09...	--	--	--	0.75	0.05	0.80	0.10	1.2	1.3	0.34	25	4
09...	--	796	94	0.75	0.05	0.80	0.10	1.3	1.4	0.52	20	--
09...	--	--	--	0.75	0.05	0.80	0.09	1.6	1.7	0.62	--	--
JUN												
01...	--	1700	232	0.67	0.03	0.70	0.02	2.2	2.2	0.75	23	--
01...	--	--	--	0.37	0.03	0.40	0.04	3.5	3.5	0.33	78	--
01...	--	2480	684	0.38	0.02	0.40	0.01	1.3	1.3	0.17	51	--
11...	--	--	--	0.56	0.04	0.60	0.06	1.2	1.3	2.80	55	--
11...	160	--	--	0.56	0.04	0.60	0.02	1.8	1.8	2.80	58	--
11...	--	--	--	0.56	0.04	0.60	0.03	6.2	6.2	0.15	59	--
16...	350	4	4	--	<0.01	<0.10	0.05	0.15	0.2	0.02	2.3	--

COLORADO RIVER BASIN

OB156B00 SHOAL CREEK AT 12TH STREET, AUSTIN, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	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)	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											
14...	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--
MAY											
09...	--	--	--	--	--	--	--	--	--	--	--
09...	24	<1	<10	4	35	<1	<1	<0.1	<1	<1	3
09...	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--
JUN											
01...	--	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--

STORM RAINFALL AND RUNOFF RECORD

08156800

Shoal Creek at 12th, Austin, Texas

Date and time	Rainfall at gage 2-SHL (inches)	Accumulated weighted rainfall (inches)	Discharge (cubic feet per second)	Accumulated runoff (inches)
Storm of April 30-May 1, 1986				
Apr. 30				
0000	0.0	0.0	0.0	0.0
0215	.02	.02	.0	.0
2000	.12	.12	.0	.0
2015	.43	.43	.0	.0
2030	.92	.92	1.3	.0000
2045	1.63	1.63	120.0	.0038
2100	2.19	2.19	195.0	.0100
2115	2.29	2.29	700.0	.0320
2130	2.30	2.30	1880.0	.0912
2145	2.30	2.30	2580.0	.1725
2200	2.30	2.30	1710.0	.2263
2215	2.30	2.30	1010.0	.2581
2230	2.31	2.31	636.0	.2782
2245	2.31	2.31	450.0	.2924
2300	2.32	2.32	339.0	.3030
2315	2.33	2.33	289.0	.3167
2345	2.35	2.35	213.0	.3267
2400	2.35	2.35	181.0	.3381
May 1				
0000	2.35	2.35	181.0	.3381
0130	2.35	2.35	94.0	.3689
0345	2.37	2.37	60.0	.3784
0400	2.45	2.45	56.0	.3801
0415	2.64	2.64	54.0	.3852
0530	2.68	2.68	44.0	.3901
0600	2.72	2.72	38.0	.3919
0615	2.81	2.81	190.0	.4038
0700	3.08	3.08	621.0	.4429
0715	3.10	3.10	857.0	.4699
0730	3.12	3.12	1010.0	.5018
0745	3.17	3.17	837.0	.5413
0815	3.23	3.23	490.0	.5722
0845	3.27	3.27	287.0	.5902
0915	3.29	3.29	238.0	.6315
1130	3.35	3.35	109.0	.6641
1400	3.36	3.36	45.0	.6995
2400	3.37	3.37	7.7	.7044

STORM RAINFALL AND RUNOFF RECORD

08156800

Shoal Creek at 12th, Austin, Texas

Date and time	Rainfall at gage 2-SHL (inches)	Accumulated weighted rainfall (inches)	Discharge (cubic feet per second)	Accumulated runoff (inches)
Storm of September 6, 1986				
Sept. 6				
0000	0.0	0.0	0.3	0.0000
0130	.0	.0	11.0	.0014
0200	.08	.08	37.0	.0055
0315	.50	.50	94.0	.0144
0330	.54	.54	106.0	.0177
0345	.60	.60	174.0	.0232
0400	.76	.76	204.0	.0296
0415	.89	.89	273.0	.0382
0430	.93	.93	263.0	.0465
0445	.99	.99	277.0	.0639
0530	1.10	1.10	344.0	.0910
0600	1.18	1.18	380.0	.1329
0715	1.40	1.40	258.0	.1573
0730	1.45	1.45	254.0	.1653
0745	1.60	1.60	303.0	.1748
0800	1.89	1.89	454.0	.1891
0815	2.21	2.21	621.0	.2087
0830	2.65	2.65	778.0	.2332
0845	2.73	2.73	894.0	.2614
0900	2.80	2.80	1380.0	.3048
0915	2.87	2.87	1840.0	.3628
0930	2.92	2.92	1790.0	.4192
0945	2.97	2.97	1410.0	.4636
1000	3.00	3.00	1000.0	.4951
1015	3.01	3.01	747.0	.5186
1030	3.01	3.01	611.0	.5667
1130	3.02	3.02	318.0	.6068
1230	3.03	3.03	156.0	.6264
1330	3.03	3.03	84.0	.6529
1730	3.04	3.04	30.0	.6727
2400	3.05	3.05	24.0	.6825

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 south of the intersection of Webberville Road and U.S. Highway 183, 4.1 mi east of the State Capitol Building in Austin, and 0.7 mi upstream from mouth.

DRAINAGE AREA.--13.1 mi².

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 September 1986 (converted to crest-stage gage).

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

REMARKS.-- Estimated daily discharges: Oct. 4-15, Feb. 27 to Mar. 24, and Apr. 8 to May 1. Records fair except those for estimated daily discharges, which are poor. No known regulation or diversion. This station is part of a hydrologic research project to study the rainfall-runoff relationship for the Austin urban area. The station is equipped with an automatic water-quality sampler. There are two recording rain gages in the watershed.

AVERAGE DISCHARGE.--9 years (water years 1978-86), 6.30 ft³/s (6.53 in/yr) 4,560 acre-ft/yr.

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

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct. 15	Unknown	2,900	12.58	May 15	0815	3,090	12.87
Oct. 19	1215	3,260	13.47	May 17	1545	2,630	12.09
May 1	0915	2,820	a12.43	Sept 6	0945	2,110	11.13
May 9	2200	*3,680	a*13.79				

a From floodmarks.

Minimum discharge, no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	.15	8.9	.32	.37	.37	.09	.21	201	30	.07	.00	32		
2	.11	45	.24	.51	.35	.08	.26	1.3	1.7	.07	.00	.11		
3	.11	5.9	.20	.40	45	.09	.27	.27	18	.07	.00	.09		
4	.07	4.5	.21	.37	1.6	.11	.34	.16	4.1	.07	.33	.01		
5	.05	4.0	.13	.39	.27	.12	.30	.16	.13	.07	23	.00		
6	.05	4.0	.05	.32	.18	.11	.30	.13	.10	.07	.10	268		
7	.05	4.2	.04	.25	.14	.10	.35	.13	.11	.07	.03	.24		
8	.04	4.2	.04	1.4	.15	.09	.30	.13	.13	.09	.00	.11		
9	.03	4.6	.03	1.5	.61	.08	.20	286	1.5	.07	.00	.08		
10	.03	4.9	28	.48	.32	.13	.15	62	.11	.07	.00	.07		
11	.03	6.2	56	.41	.18	.60	.14	6.0	25	.04	3.0	16		
12	.03	10	1.1	.34	.15	2.0	.13	.92	.11	.00	.06	.21		
13	.03	6.9	.65	.38	.16	.90	.12	.23	.10	.00	.00	.06		
14	.03	5.8	.54	3.9	.19	.30	.11	.18	.09	.00	.00	.04		
15	244	7.2	.53	.52	.18	.70	.10	238	.08	.00	.00	.02		
16	1.0	21	.51	.58	.20	.20	.35	23	.07	.00	.00	.01		
17	1.2	5.1	.48	1.1	.20	.50	.24	203	34	.00	.00	.01		
18	1.7	4.0	.48	.94	.19	1.3	.17	8.9	.10	.00	.00	.00		
19	274	24	.45	.71	.18	.60	.12	1.3	.09	.00	.00	.00		
20	9.7	7.2	.47	.59	.22	.30	.55	.58	.08	.00	.00	4.8		
21	9.0	3.8	.50	.61	.16	.15	.14	.34	.07	.00	.00	1.6		
22	6.5	3.2	.45	.46	.16	.12	.12	.26	.08	.00	.00	4.0		
23	4.1	4.1	.44	.49	.18	.10	.11	.18	.07	.00	.00	.09		
24	3.1	103	.42	.51	.17	.09	.10	.16	.07	.00	3.8	.02		
25	3.2	13	.37	.47	.19	.11	.09	.53	.07	.00	.03	.00		
26	3.1	.80	.40	.47	.19	.10	.08	.73	.07	.00	.00	.02		
27	3.8	185	.37	.40	.17	.10	.07	.34	.07	.00	.00	.04		
28	4.3	1.5	.29	.44	.12	.10	.06	.19	.07	.00	.00	.00		
29	5.2	.62	.31	.38	---	.12	.05	.18	.07	.00	.00	.02		
30	5.1	.48	.33	.27	---	.19	.04	.16	.07	.00	.00	.00		
31	5.2	---	.33	.33	---	.16	---	14	---	.00	.00	---		
TOTAL	585.01	503.10	94.68	20.29	52.18	9.74	5.57	1050.46	116.31	.76	30.35	327.65		
MEAN	18.9	16.8	3.05	.65	1.86	.31	.19	33.9	3.88	.02	.98	10.9		
MAX	274	185	56	3.9	45	2.0	.55	286	34	.09	23	268		
MIN	.03	.48	.03	.25	.12	.08	.04	.13	.07	.00	.00	.00		
CFSM	1.44	1.28	.23	.05	.14	.02	.01	2.59	.30	.00	.07	.83		
IN.	1.66	1.43	.27	.06	.15	.03	.02	2.98	.33	.00	.09	.93		
AC-FT	1160	998	188	40	103	19	11	2080	231	1.5	60	650		
CAL YR 1985	TOTAL	2539.11	MEAN	6.96	MAX	274	MIN	.00	CFSM	.53	IN.	7.21	AC-FT	5040
WTR YR 1986	TOTAL	2796.10	MEAN	7.66	MAX	286	MIN	.00	CFSM	.58	IN.	7.94	AC-FT	5550

COLORADO RIVER BASIN

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

WATER QUALITY RECORDS

PERIOD OF RECORD.--Chemical, biochemical, and pesticide analyses: January 1975 to September 1986. Radiochemical analyses: January 1980.

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (NTU)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	COLIFORM, FECA, D.7 UM-MF (COLS./100 ML)	STREPTOCOCCI, FECA, KF AGAR (COLS./100 ML)
OCT												
19...	1130	477	188	--	--	--	--	--	--	7.6	490000	270000
19...	1145	2140	167	7.60	--	60	2200	--	--	--	--	--
19...	1200	2970	126	--	--	80	3300	--	--	--	--	--
19...	1215	3260	132	--	--	--	--	--	--	8.0	K680000	250000
19...	1230	3190	107	7.60	--	100	1800	--	--	--	--	--
19...	1245	2670	92	--	--	140	2300	--	--	9.8	480000	280000
NOV												
24...	0945	884	149	--	--	--	--	--	--	2.9	K150000	220000
24...	1000	799	142	--	--	150	690	--	--	--	--	--
24...	1015	611	145	7.70	--	--	--	--	--	--	--	--
24...	1030	518	145	--	--	150	3000	--	--	5.9	360000	150000
24...	1045	357	141	7.70	--	--	--	--	--	--	--	--
24...	1100	273	130	--	--	--	--	--	--	3.1	200000	76000
JAN												
28...	1105	0.03	598	8.80	12.0	10	1.0	12.6	119	0.7	K72	300
MAR												
28...	1000	0.09	531	8.30	23.5	5	0.70	12.9	152	0.5	K1400	760
MAY												
09...	2045	782	173	--	--	--	--	--	--	16	600000	330000
09...	2100	1360	172	--	--	--	--	--	--	--	--	--
09...	2115	2110	147	--	--	--	--	--	--	16	450000	K210000
09...	2130	2860	178	--	--	--	--	--	--	--	--	--
09...	2145	3490	147	7.80	--	400	950	--	--	--	--	--
09...	2200	3680	128	--	--	150	900	--	--	--	100000	130000
JUN												
24...	1000	0.08	591	7.80	28.5	3	1.5	7.6	99	0.3	K3500	480
SEP												
06...	0345	418	159	--	--	--	--	--	--	5.7	680000	300000
06...	0400	712	138	--	--	--	--	--	--	--	--	--
06...	0415	698	189	--	--	--	--	--	--	7.7	500000	220000
06...	0430	624	181	--	--	--	--	--	--	--	--	--
06...	0445	539	135	--	--	--	740	--	--	--	--	--
06...	0500	474	144	--	--	--	--	--	--	5.8	390000	110000

DATE	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	POTASSIUM, DIS-SOLVED (MG/L AS K)	ALKALINITY TOTAL (MG/L AS CaCO3)	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)
OCT												
19...	--	--	--	--	--	--	--	--	--	--	--	--
19...	66	10	23	2.2	5.0	0.3	2.7	56	19	6.3	0.1	5.0
19...	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--	--
19...	47	4	17	1.2	3.2	0.2	2.4	43	9.6	3.5	0.1	5.0
19...	--	--	--	--	--	--	--	--	--	--	--	--
NOV												
24...	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--
24...	65	1	23	1.8	4.9	0.3	3.3	64	13	3.6	0.2	9.7
24...	--	--	--	--	--	--	--	--	--	--	--	--
24...	67	0	24	1.8	3.4	0.2	3.4	67	11	3.5	0.2	7.3
24...	--	--	--	--	--	--	--	--	--	--	--	--
JAN												
28...	270	57	91	11	34	0.9	2.3	216	66	43	0.40	12
MAR												
28...	220	46	70	9.8	31	1	2.3	169	48	40	0.40	12
MAY												
09...	--	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--	--
09...	57	6	20	1.7	3.6	0.2	3.1	51	14	4.4	0.20	4.2
09...	--	--	--	--	--	--	--	--	--	--	--	--
JUN												
24...	250	51	84	9.4	27	0.8	3.4	197	52	33	0.30	13
SEP												
06...	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--

COLORADO RIVER BASIN

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	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)	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 TDTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	ARSENIC DIS-SOLVED (UG/L AS AS)
OCT												
19...	--	--	--	0.20	0.10	0.30	0.21	1.9	2.1	2.90	100	--
19...	97	5800	464	0.07	0.13	0.20	0.24	3.0	3.2	4.00	90	--
19...	--	1200	376	0.21	0.09	0.30	0.17	2.4	2.6	3.10	55	--
19...	--	--	--	0.15	0.15	0.30	0.27	0.63	0.9	0.56	65	--
19...	68	2650	280	0.15	0.15	0.30	0.28	4.6	4.9	2.50	50	--
19...	--	2920	120	0.04	0.16	0.20	0.28	3.2	3.5	2.30	61	--
NOV												
24...	--	--	--	--	<0.01	0.20	0.02	4.7	4.7	2.20	51	--
24...	--	1850	236	--	<0.01	0.20	0.03	3.7	3.7	0.98	58	--
24...	98	--	--	--	<0.01	0.20	0.02	8.3	8.3	1.90	52	--
24...	--	3480	296	--	<0.01	0.20	0.02	7.7	7.7	2.80	56	--
24...	95	--	--	0.27	0.03	0.30	0.02	7.7	7.7	2.40	60	--
24...	--	--	--	0.29	0.01	0.30	0.02	4.7	4.7	3.20	64	--
JAN												
28...	390	1	1	--	<0.01	0.20	0.02	0.28	0.3	0.01	1.3	1
MAR												
28...	310	2	<1	--	<0.01	<0.10	0.03	0.27	0.3	0.01	18	--
MAY												
09...	--	--	--	0.36	0.04	0.40	0.11	1.5	1.6	0.34	51	--
09...	--	--	--	0.55	0.05	0.60	0.17	1.6	1.8	0.55	57	2
09...	--	--	--	0.46	0.04	0.50	0.17	2.4	2.6	0.62	53	--
09...	--	--	--	0.45	0.05	0.50	0.16	2.1	2.3	0.65	55	2
09...	82	2800	260	--	--	--	--	--	--	--	--	--
09...	--	3350	188	0.46	0.04	0.50	0.11	2.9	3.0	0.96	44	--
JUN												
24...	340	1	1	--	<0.01	<0.10	0.02	0.18	0.2	0.03	2.4	--
SEP												
06...	--	--	--	0.25	0.05	0.30	0.05	2.0	2.1	0.86	21	--
06...	--	--	--	--	--	--	--	--	--	--	--	3
06...	--	--	--	0.46	0.04	0.50	0.08	1.6	1.7	1.90	49	--
06...	--	--	--	--	--	--	--	--	--	--	--	3
06...	--	1650	--	0.26	0.04	0.30	0.05	1.5	1.5	1.30	32	--
06...	--	--	--	0.23	0.07	0.30	0.07	0.53	0.6	0.44	22	--

DATE	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)	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											
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
NOV											
24...	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--
JAN											
28...	94	<1	<10	<1	<3	<1	7	<0.1	<1	<1	11
MAR											
28...	--	--	--	--	--	--	--	--	--	--	--
MAY											
09...	--	--	--	--	--	--	--	--	--	--	--
09...	29	<1	<10	7	43	<1	<1	<0.1	<1	<1	<3
09...	--	--	--	--	--	--	--	--	--	--	--
09...	30	<1	<10	5	42	3	<1	<0.1	<1	<1	5
09...	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--
JUN											
24...	--	--	--	--	--	--	--	--	--	--	--
SEP											
06...	--	--	--	--	--	--	--	--	--	--	--
06...	25	<1	<10	2	89	<5	5	<0.1	<1	<1	5
06...	--	--	--	--	--	--	--	--	--	--	--
06...	30	<1	<10	3	47	<5	3	<0.1	<1	<1	5
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--

STORM RAINFALL AND RUNOFF RECORD

08158050 Boggy Creek at U.S Hwy 183, Austin, Texas

Date and time	Rainfall at gage 1-BOG (inches)	Accumulated weighted rainfall (inches)	Discharge (cubic feet per second)	Accumulated runoff (inches)
Storm of May 9-10, 1986				
May 9				
0000	0.0	0.0	0.1	0.0001
1900	.03	.03	.1	.0002
2000	.51	.51	.8	.0003
2015	.89	.89	19.0	.0009
2030	1.25	1.25	77.0	.0031
2045	1.43	1.43	782.0	.0263
2100	1.57	1.57	1360.0	.0665
2115	1.65	1.65	2110.0	.1289
2130	1.84	1.84	2860.0	.2134
2145	1.89	1.89	3490.0	.3167
2200	1.93	1.93	3680.0	.4255
2215	1.95	1.95	3400.0	.5260
2230	1.97	1.97	2980.0	.6142
2245	1.97	1.97	2380.0	.6845
2300	1.97	1.97	1570.0	.7310
2315	1.98	1.98	1100.0	.7635
2330	1.98	1.98	805.0	.7873
2345	1.98	1.98	578.0	.8044
2400	1.98	1.98	459.0	.8146
May 10				
0000	1.98	1.98	459.0	.8146
0015	1.98	1.98	390.0	.8410
0100	1.98	1.98	240.0	.8623
0145	1.98	1.98	152.0	.8781
0245	1.98	1.98	94.0	.8850
0300	1.98	1.98	91.0	.9200
0915	1.98	1.98	35.0	.9635
2400	2.08	2.08	14.0	.9757

STORM RAINFALL AND RUNOFF RECORD

08158050 Boggy Creek at U.S Hwy 183, Austin, Texas

Date and time	Rainfall at gage 1-BOG (inches)	Accumulated weighted rainfall (inches)	Discharge (cubic feet per second)	Accumulated runoff (inches)
Storm of September 6, 1986				
Sept. 6				
0000	0.0	0.0	0.0	0.0
0115	.07	.07	.0	.0
0130	.29	.29	.1	.0000
0145	.50	.50	.1	.0000
0215	.65	.65	5.6	.0003
0230	.70	.70	33.0	.0012
0245	.78	.78	126.0	.0050
0300	.88	.88	211.0	.0112
0315	.97	.97	301.0	.0201
0330	1.02	1.02	390.0	.0316
0345	1.09	1.09	548.0	.0478
0400	1.13	1.13	712.0	.0689
0415	1.13	1.13	698.0	.0895
0430	1.14	1.14	624.0	.1172
0500	1.18	1.18	474.0	.1382
0515	1.21	1.21	413.0	.1505
0530	1.23	1.23	374.0	.1615
0545	1.26	1.26	345.0	.1717
0600	1.29	1.29	306.0	.1943
0700	1.42	1.42	200.0	.2121
0730	1.51	1.51	200.0	.2210
0745	1.57	1.57	220.0	.2275
0800	1.67	1.67	264.0	.2353
0815	1.91	1.91	311.0	.2445
0830	2.15	2.15	462.0	.2581
0845	2.23	2.23	705.0	.2790
0900	2.33	2.33	1140.0	.3127
0915	2.41	2.41	1510.0	.3573
0930	2.47	2.47	1890.0	.4132
0945	2.50	2.50	2110.0	.4756
1000	2.53	2.53	1770.0	.5280
1015	2.55	2.55	1400.0	.5694
1030	2.56	2.56	1100.0	.6182
1100	2.57	2.57	687.0	.6588
1130	2.57	2.57	441.0	.6849
1200	2.57	2.57	306.0	.7120
1300	2.58	2.58	164.0	.7411
1500	2.58	2.58	60.0	.7802
2400	2.58	2.58	1.3	.7809

08158100 WALNUT CREEK AT FARM ROAD 1325 NEAR AUSTIN, TX
(Flood-hydrograph partial-record gage)

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 September 1986 (converted to crest-stage gage).

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

REMARKS.--Records fair. Storms analyzed for periods Oct. 19 and Sept. 6.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,000 ft³/s May 24, 1981 (gage height, 19.46 ft).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 758 ft³/s, Oct. 19 (gage height, 7.94 ft).

STORM RAINFALL AND RUNOFF RECORD

08158100

Walnut Creek at F.M. 1325, Austin, Texas

Date and time	Rainfall at gage 1-WLN (inches)	Accumulated weighted rainfall (inches)	Discharge (cubic feet per second)	Accumulated runoff (inches)
Storm of October 19, 1985				
Oct. 19				
0000	0.0	0.0	3.7	0.0022
0930	.02	.02	3.7	.0044
0945	.13	.13	3.9	.0045
1000	.34	.34	3.9	.0046
1015	.54	.54	3.9	.0047
1030	1.00	1.00	6.2	.0049
1045	2.10	2.10	38.0	.0061
1100	2.56	2.56	125.0	.0099
1115	2.81	2.81	182.0	.0155
1130	2.85	2.85	203.0	.0218
1145	2.87	2.87	386.0	.0336
1200	2.89	2.89	517.0	.0495
1215	2.92	2.92	647.0	.0694
1230	2.94	2.94	556.0	.0865
1245	2.95	2.95	598.0	.1049
1300	2.96	2.96	758.0	.1282
1315	2.98	2.98	604.0	.1561
1345	3.00	3.00	460.0	.1773
1400	3.00	3.00	372.0	.1887
1415	3.00	3.00	311.0	.1983
1430	3.00	3.00	261.0	.2063
1445	3.01	3.01	228.0	.2133
1500	3.01	3.01	201.0	.2195
1515	3.01	3.01	177.0	.2249
1530	3.02	3.02	156.0	.2297
1545	3.04	3.04	137.0	.2340
1600	3.04	3.04	125.0	.2378
1615	3.04	3.04	110.0	.2412
1630	3.04	3.04	97.0	.2442
1645	3.04	3.04	87.0	.2508
1745	3.04	3.04	59.0	.2590
1900	3.04	3.04	35.0	.2660
2100	3.10	3.10	18.0	.2715
2400	3.10	3.10	8.3	.2731

STORM RAINFALL AND RUNOFF RECORD

08158100 Walnut Creek at F.M. 1325, Austin, Texas

Date and time	Rainfall at gage 1-WLN (inches)	Accumulated weighted rainfall (inches)	Discharge (cubic feet per second)	Accumulated runoff (inches)
Storm of September 6, 1986				
Sept. 6				
0000	0.0	0.0	16.0	0.0025
0230	.06	.06	18.0	.0055
0245	.21	.21	20.0	.0058
0300	.26	.26	24.0	.0065
0315	.29	.29	27.0	.0074
0330	.32	.32	31.0	.0083
0345	.36	.36	34.0	.0094
0400	.38	.38	38.0	.0105
0415	.41	.41	43.0	.0119
0430	.45	.45	59.0	.0137
0515	.74	.74	176.0	.0191
0600	.90	.90	207.0	.0255
0630	1.05	1.05	232.0	.0326
0700	1.21	1.21	315.0	.0423
0715	1.29	1.29	331.0	.0525
0730	1.37	1.37	337.0	.0628
0745	1.45	1.45	339.0	.0784
0800	1.50	1.50	340.0	.0941
0815	1.55	1.55	347.0	.1048
0830	1.69	1.69	371.0	.1162
0845	2.21	2.21	391.0	.1282
0915	3.06	3.06	350.0	.1390
0945	3.07	3.07	447.0	.1527
1000	3.12	3.12	455.0	.1667
1015	3.15	3.15	443.0	.1803
1115	3.21	3.21	361.0	.1914
1215	3.22	3.22	296.0	.2005
1230	3.22	3.22	312.0	.2101
1245	3.22	3.22	309.0	.2196
1315	3.22	3.22	280.0	.2412
1345	3.22	3.22	252.0	.2760
1600	3.23	3.23	182.0	.3124
1700	3.30	3.30	270.0	.3954
1745	3.30	3.30	322.0	.4548
1900	3.30	3.30	209.0	.4677
2100	3.30	3.30	130.0	.4796
2300	3.30	3.30	84.0	.4951
2400	3.30	3.30	72.0	.5438

COLORADO RIVER BASIN

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

LOCATION.--Lat 30°22'30", long 97°39'37", Travis County, Hydrologic Unit 12090205, 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.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1975 to September 1986 (converted to crest-stage gage).

GAGE.--Digital water-stage recorder and crest-stage gage. Datum of gage is 553.44 ft above National Geodetic Vertical Datum of 1979.

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, 1984". Two recording rain gages in the watershed. Storms analyzed for periods Feb. 3-4 and May 17.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 21,600 ft³/s May 25, 1981 (gage height, 26.20 ft).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,240 ft³/s May 17 (gage height, 11.48 ft).

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical, biochemical, and pesticide analyses: October 1979 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	COLOR (PLAT- INUM- COBALT UNITS)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	DXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	
JAN 28...	0830	5.7	697	8.90	7.0	10	1.8	10.0	84	0.4	100	K52	
DATE	TIME	HARD- NESS (MG/L AS CACO3)	HARD- NESS NONCARB WH WAT TOT FLD 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)	ALKA- LINITY WH WAT TOTAL FIELD MG/L AS CACO3	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- SDLVED (MG/L AS SiO2)
JAN 28...	330	75	120	7.0	39	1	2.4	254	64	51	0.40	4.1	
DATE	TIME	SOLIDS, SUM OF CONSTITU- ENTS, DIS- SDLVED (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)	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)	ARSENIC DIS- SDLVED (UG/L AS AS)
JAN 28...	440	7	2	2.65	0.050	2.70	0.030	0.87	0.90	0.780	2.9	1	
DATE	TIME	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)	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- SDLVED (UG/L AS ZN)	
JAN 28...	80	<1	<10	<1	25	1	10	<0.1	<1	<1	13		

STORM RAINFALL AND RUNOFF RECORD

08158200

Walnut Creek at Dessau Road, Austin, Texas

Date and time	Rainfall at gage 1-WLN (inches)	Rainfall at gage 2-WLN (inches)	Accumulated weightd rainfall (inches)	Discharge (cubic feet per second)	Accumulated runoff (inches)
Storm of February 3-4, 1986					
Feb. 3					
0000	0.0	0.0	0.0	2.5	0.0005
0700	.04	.03	.04	2.5	.0011
0715	.14	.11	.13	2.5	.0011
0730	.26	.23	.25	2.5	.0011
0745	.31	.29	.30	2.5	.0012
0800	.35	.31	.33	2.5	.0012
0815	.37	.33	.35	3.0	.0012
0830	.40	.35	.38	3.5	.0013
0845	.43	.38	.41	4.5	.0014
0900	.49	.42	.46	5.0	.0014
0915	.49	.42	.46	7.0	.0016
1000	.50	.54	.52	12.0	.0020
1015	.53	.54	.53	13.0	.0022
1030	.59	.54	.57	16.0	.0027
1115	.59	.55	.57	25.0	.0043
1245	.60	.58	.59	52.0	.0070
1300	.80	.68	.74	58.0	.0079
1315	1.27	.94	1.11	67.0	.0089
1330	1.42	1.32	1.37	75.0	.0100
1345	1.65	1.53	1.59	78.0	.0111
1400	1.98	1.65	1.82	91.0	.0125
1415	2.00	1.82	1.91	110.0	.0141
1430	2.12	2.05	2.09	122.0	.0186
1530	2.37	2.57	2.47	303.0	.0321
1600	2.40	2.61	2.50	303.0	.0477
1715	2.52	2.98	2.75	303.0	.0657
1800	2.55	3.05	2.79	305.0	.0814
1900	2.55	3.06	2.80	305.0	.1017
2015	2.55	3.08	2.81	292.0	.1320
2230	2.59	3.12	2.85	137.0	.1421
2245	2.59	3.12	2.85	127.0	.1458
2330	2.59	3.20	2.89	108.0	.1498
2400	2.59	3.22	2.90	101.0	.1521
Feb. 4					
0000	2.59	3.22	2.90	101.0	.1521
0030	2.59	3.22	2.90	101.0	.1558
0100	2.59	3.23	2.90	99.0	.2246
2400	2.62	3.28	2.94	.0	.2246

STORM RAINFALL AND RUNOFF RECORD

08158200 Walnut Creek at Dessau Road, Austin, Texas

Date and time	Rainfall at gage 2-WLN (inches)	Accumulated weighted rainfall (inches)	Discharge (cubic feet per second)	Accumulated runoff (inches)
Storm of May 17, 1986				
May 17				
0000	0.0	0.0	0.0	0.0
1330	.07	.07	.0	.0
1345	.46	.46	37.0	.0005
1400	1.11	1.11	718.0	.0112
1415	1.46	1.46	1040.0	.0265
1430	1.81	1.81	1650.0	.0509
1445	1.97	1.97	2000.0	.0805
1500	2.05	2.05	2190.0	.1129
1515	2.11	2.11	2240.0	.1460
1530	2.12	2.12	2180.0	.1782
1545	2.16	2.16	1990.0	.2077
1600	2.20	2.20	1760.0	.2337
1615	2.22	2.22	1630.0	.2578
1630	2.24	2.24	1480.0	.2797
1645	2.25	2.25	1340.0	.3391
1800	2.25	2.25	738.0	.3719
1815	2.26	2.26	649.0	.3815
1830	2.26	2.26	530.0	.3893
1845	2.26	2.26	427.0	.3956
1900	2.26	2.26	343.0	.4007
1915	2.26	2.26	279.0	.4048
1930	2.26	2.26	224.0	.4081
1945	2.26	2.26	174.0	.4107
2000	2.26	2.26	137.0	.4127
2015	2.26	2.26	104.0	.4142
2030	2.26	2.26	76.0	.4154
2045	2.26	2.26	56.0	.4162
2100	2.26	2.26	37.0	.4167
2115	2.26	2.26	20.0	.4170
2130	2.26	2.26	9.7	.4172
2145	2.26	2.26	5.4	.4173
2200	2.26	2.26	3.2	.4173
2215	2.26	2.26	1.9	.4173
2230	2.26	2.26	1.2	.4174
2245	2.26	2.26	.6	.4174
2300	2.26	2.26	.3	.4174
2315	2.26	2.26	.2	.4174
2330	2.26	2.26	.1	.4174
2400	2.26	2.26	.0	.4174

08158300 FERGUSON BRANCH AT SPRINGDALE ROAD, AUSTIN, TX
(Flood-hydrograph partial-record gage)

LOCATION.--Lat 30°19'53", long 97°39'12", Travis County, on upstream 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 September 1986 (converted to crest-stage gage).

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 178 ft³/s, Oct. 19 (gage height, 6.00 ft).

08158380 LITTLE WALNUT CREEK AT GEORGIAN DRIVE, AUSTIN, TX
(Flood-hydrograph partial-record gage)

LOCATION.--Lat 30°21'15", long 97°41'52", Travis County, on upstream side of bridge on Georgian Drive and 6.0 miles north of the State Capital Building in Austin.

DRAINAGE AREA.--5.22 mi².

PERIOD OF RECORD.--February 1983 to September 1986 (converted to crest-stage gage).

GAGE.--Digital water-stage recorder and crest-stage gage. Datum of gage is 637.23 ft NGVD.

REMARKS.--Records fair. Storms analyzed for periods Oct. 19 and Apr. 30 - May 1. Two recording rain gages are located in the watershed.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge 3,490 ft³/s, Sept. 14, 1985 (gage height, 11.90 ft).

EXTREMES FOR CURRENT YEAR.--Maximum discharge 2,890 ft³/s May 17 (gage height, 10.80 ft).

STORM RAINFALL AND RUNOFF RECORD

08158380 Little Walnut Creek at Georgian Drive, Austin, Texas

Date and time	Rainfall at gage 4-WLN (inches)	Accumulated weighted rainfall (inches)	Discharge (cubic feet per second)	Accumulated runoff (inches)
Storm of October 19, 1985				
Oct. 19				
0000	0.0	0.0	2.6	0.0037
0930	.01	.01	2.6	.0075
1000	.04	.04	2.9	.0078
1015	.06	.06	6.8	.0084
1030	.06	.06	59.0	.0127
1045	.48	.48	450.0	.0461
1100	.88	.88	1210.0	.1359
1115	1.02	1.02	1730.0	.2643
1130	1.07	1.07	1590.0	.3823
1145	1.07	1.07	1240.0	.4743
1200	1.08	1.08	983.0	.5473
1215	1.17	1.17	736.0	.6019
1230	1.21	1.21	555.0	.6637
1300	1.23	1.23	351.0	.7028
1315	1.24	1.24	233.0	.7287
1345	1.28	1.28	150.0	.7454
1400	1.29	1.29	136.0	.7555
1415	1.30	1.30	114.0	.7724
1500	1.31	1.31	61.0	.7883
1600	1.34	1.34	41.0	.8004
1700	1.35	1.35	25.0	.8079
1800	1.35	1.35	15.0	.8123
1900	1.36	1.36	11.0	.8156
2000	1.38	1.38	10.0	.8185
2100	1.38	1.38	9.8	.8215
2200	1.38	1.38	8.8	.8241
2300	1.38	1.38	7.7	.8264
2400	1.39	1.39	6.8	.8274

STORM RAINFALL AND RUNOFF RECORD

08158380 Little Walnut Creek at Georgian Drive, Austin, Texas

Date and time	Rainfall at gage 4-WLN (inches)	Accumulated weighted rainfall (inches)	Discharge (cubic feet per second)	Accumulated runoff (inches)
Storm of April 30-May 1, 1986				
Apr. 30				
0000	0.0	0.0	4.0	0.0116
1930	.28	.28	4.0	.0236
2015	.28	.28	4.0	.0242
2030	2.68	2.68	4.0	.0246
2100	2.69	2.69	5.2	.0252
2115	2.69	2.69	112.0	.0335
2130	2.69	2.69	660.0	.0825
2145	2.69	2.69	2010.0	.2317
2200	2.70	2.70	2720.0	.4335
2215	2.70	2.70	2410.0	.7018
2245	2.73	2.73	1090.0	.8232
2300	2.73	2.73	690.0	.8744
2315	2.73	2.73	521.0	.9130
2330	2.73	2.73	343.0	.9512
2400	2.73	2.73	177.0	1.0070
May 1				
0000	2.73	2.73	177.0	1.0070
0315	2.77	2.77	17.0	1.0586
0330	2.92	2.92	15.0	1.0630
0515	2.96	2.96	20.0	1.0690
0530	3.01	3.01	46.0	1.0724
0545	3.27	3.27	77.0	1.0781
0600	3.42	3.42	76.0	1.0922
0700	3.58	3.58	59.0	1.1031
0715	3.70	3.70	60.0	1.1076
0730	3.71	3.71	128.0	1.1171
0745	3.73	3.73	231.0	1.1342
0800	3.73	3.73	359.0	1.1742
0830	3.78	3.78	504.0	1.2303
0845	3.80	3.80	420.0	1.2615
0900	3.81	3.81	441.0	1.2942
0915	3.81	3.81	411.0	1.3247
0930	3.82	3.82	333.0	1.4112
1100	3.82	3.82	117.0	1.4633
1230	3.83	3.83	42.0	1.5194
2000	3.83	3.83	5.6	1.5290
2400	3.87	3.87	6.0	1.5325

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 downstream from bridge on Farm Road 969, 0.8 mi downstream from Little Walnut Creek, 2.8 mi upstream from Colorado River, 5.2 mi east of the State Capitol Building in Austin, and 2.8 mi upstream from mouth.

DRAINAGE AREA.--51.3 mi².

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 425.96 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records fair. No known regulation or diversion. Station is part of hydro-logic research project to study the rainfall-runoff relation for urban areas. Five recording rain gages are located in the watershed above this station.

AVERAGE DISCHARGE.--20 years, 24.4 ft³/s (6.46 in/yr), 17,680 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,300 ft³/s May 25, 1981 (gage height, 27.24 ft); no flow at times in 1967, 1971, and 1982-84. Maximum stage since at least 1891, that of May 25, 1981.

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

EXTREMES FOR CURRENT YEAR.--Peak discharge greater than base discharge of 1,500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct. 14	2400	2,410	13.79	May 9	2245	2,120	13.08
Oct. 19	1245	3,170	15.45	May 17	1630	*4,810	*18.52
Apr. 30	2330	3,070	15.25	Sept. 6	1000	2,250	13.42
May 1	1015	1,520	11.51				

Minimum daily discharge, no flow July 23, 27 to Aug 3, 9, 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	16	23	24	11	8.9	6.2	4.8	452	40	5.1	.00	50		
2	14	50	21	12	8.5	6.6	4.3	18	14	4.8	.00	27		
3	13	12	20	11	169	6.5	5.8	11	152	4.5	.00	21		
4	12	9.1	19	11	43	6.4	4.5	8.5	25	4.2	2.9	8.9		
5	12	8.3	17	11	17	6.8	4.1	8.4	26	3.6	6.1	4.7		
6	12	8.2	16	11	14	6.8	3.8	7.5	17	3.3	3.0	519		
7	12	7.7	16	11	14	6.3	3.8	6.9	13	5.3	.05	32		
8	11	7.9	16	15	14	6.4	3.9	7.4	17	4.7	.01	16		
9	11	7.7	14	17	16	6.4	3.7	198	14	3.6	.00	18		
10	12	7.6	102	11	14	6.4	3.0	188	9.0	2.6	.00	13		
11	11	18	126	11	13	7.6	3.0	15	140	2.0	34	9.0		
12	10	12	29	9.5	12	12	3.0	11	24	1.7	8.8	8.6		
13	9.6	9.8	24	9.6	11	5.0	3.0	10	18	2.2	2.8	7.1		
14	89	8.3	22	9.8	11	4.5	2.6	9.3	16	3.3	1.8	5.4		
15	233	14	20	9.6	10	5.8	2.4	340	13	3.5	1.6	5.4		
16	11	50	19	9.6	11	4.8	3.3	30	10	2.5	2.0	8.0		
17	9.0	17	18	12	12	4.2	2.7	830	194	1.6	2.2	6.0		
18	11	12	17	9.7	11	10	2.7	75	23	.60	.93	5.1		
19	590	22	17	9.5	8.8	5.4	2.7	32	19	.28	.60	4.8		
20	27	23	16	9.1	7.9	4.5	4.4	24	17	.15	.72	71		
21	16	13	16	9.1	7.7	4.5	2.7	20	14	.13	.85	43		
22	14	12	15	9.0	7.6	4.7	2.7	15	12	.02	.95	15		
23	10	12	14	8.5	7.7	5.0	2.7	11	10	.00	1.6	11		
24	8.7	185	14	8.7	7.6	5.8	2.6	9.0	9.2	.01	10	7.2		
25	7.9	28	13	8.8	7.6	6.4	2.7	116	8.9	1.2	3.9	5.8		
26	7.4	18	13	8.0	7.6	7.1	2.5	11	8.0	.32	2.9	6.7		
27	6.8	556	13	8.3	7.1	7.8	2.3	7.8	7.6	.00	1.2	7.0		
28	9.3	51	13	8.6	6.2	7.7	2.3	6.2	8.5	.00	5.3	7.5		
29	16	35	13	8.7	---	7.3	2.0	5.6	6.6	.00	2.6	6.4		
30	19	30	12	8.8	---	5.8	135	5.4	5.7	.00	1.8	4.7		
31	19	---	12	9.1	---	5.3	---	25	---	.00	1.6	---		
TOTAL	1259.7	1267.6	721	316.0	485.2	196.0	229.0	2514.0	891.5	61.21	100.21	954.3		
MEAN	40.6	42.3	23.3	10.2	17.3	6.32	7.63	81.1	29.7	1.97	3.23	31.8		
MAX	590	556	126	17	169	12	135	830	194	5.3	34	519		
MIN	6.8	7.6	12	8.0	6.2	4.2	2.0	5.4	5.7	.00	.00	4.7		
CFSM	.79	.82	.45	.20	.34	.12	.15	1.58	.58	.04	.06	.62		
IN.	.91	.92	.52	.23	.35	.14	.17	1.82	.65	.04	.07	.69		
AC-FT	2500	2510	1430	627	962	389	454	4990	1770	121	199	1890		
CAL YR 1985	TOTAL	9951.27	MEAN	27.3	MAX	590	MIN	.15	CFSM	.53	IN.	7.22	AC-FT	19740
WTR YR 1986	TOTAL	8995.72	MEAN	24.6	MAX	830	MIN	.00	CFSM	.48	IN.	6.52	AC-FT	17840

COLORADO RIVER BASIN

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

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical and biochemical analyses: April 1976 to current year. Sediment records: December 1977 to July 1982. Radiochemical analyses: January 1980.

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (NTU)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	COLIFORM, FECAL, UM-MF (COLS./100 ML)	STREPTOCOCCI, FECAL, KF AGAR (COLS. PER 100 ML)
JAN 28...	0955	9.2	634	9.00	7.0	7	1.7	12.0	--	0.5	2800	120
APR 07...	0935	1.4	653	7.70	22.0	10	0.6	8.4	97	1.3	77	1300
JUN 24...	1110	9.2	577	7.80	27.0	3	1.5	13.9	177	0.3	1100	140
AUG 21...	0735	0.15	483	7.60	27.0	5	6.6	5.3	67	0.5	300	560
SEP 06...	1125	1520	159	7.80	25.0	--	1500	--	--	5.6	110000	110000

DATE	HARDNESS (MG/L AS CaCO3)	HARDNESS NONCARBONIC (MG/L AS CaCO3)	CALCIUM, DISSOLVED (MG/L AS Ca)	MAGNESIUM, DISSOLVED (MG/L AS Mg)	SODIUM, DISSOLVED (MG/L AS Na)	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY, WHOLE WATER TOTAL (MG/L AS CaCO3)	SULFATE, DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS Cl)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SiO2)
JAN 28...	280	80	100	7.4	33	0.9	2.6	200	74	52	0.4	2.3
APR 07...	270	78	93	8.0	34	1	3.8	187	75	54	0.5	6.3
JUN 24...	230	67	83	6.4	27	0.8	3.1	167	56	41	0.4	7.1
AUG 21...	180	61	62	5.6	25	0.9	4.0	117	47	45	0.4	6.2
SEP 06...	80	19	29	1.9	5.0	0.3	2.7	61	24	5.7	0.2	4.2

DATE	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUSPENDED (MG/L)	SOLIDS, VOLATILE, SUSPENDED (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)	ARSENIC, DISSOLVED (UG/L AS AS)
JAN 28...	390	9	1	0.98	0.02	1.00	0.05	0.55	0.6	0.04	1.8	<1
APR 07...	390	10	1	0.08	0.02	0.10	0.27	0.43	0.7	0.02	5.0	--
JUN 24...	320	1	<1	0.59	0.01	0.60	0.03	0.37	0.4	0.04	2.8	--
AUG 21...	270	19	2	--	<0.01	<0.10	0.03	0.17	0.2	0.01	4.7	--
SEP 06...	110	--	--	0.35	0.05	0.40	0.10	0.8	0.9	2.30	47	2

DATE	BARIUM, DISSOLVED (UG/L AS Ba)	CADMIUM, DISSOLVED (UG/L AS Cd)	CHROMIUM, DISSOLVED (UG/L AS Cr)	COPPER, DISSOLVED (UG/L AS Cu)	IRON, DISSOLVED (UG/L AS Fe)	LEAD, DISSOLVED (UG/L AS Pb)	MANGANESE, DISSOLVED (UG/L AS Mn)	MERCURY, DISSOLVED (UG/L AS Hg)	SELENIUM, DISSOLVED (UG/L AS Se)	SILVER, DISSOLVED (UG/L AS Ag)	ZINC, DISSOLVED (UG/L AS Zn)	
JAN 28...		71	<1	<10	3	<3	<1	9	<0.1	<1	<1	9
APR 07...		--	--	--	--	--	--	--	--	--	--	--
JUN 24...		--	--	--	--	--	--	--	--	--	--	--
AUG 21...		--	--	--	--	--	--	--	--	--	--	--
SEP 06...		22	<1	<10	<1	48	<5	7	0.1	<1	<1	5

STORM RAINFALL AND RUNOFF RECORD

08158600

Walnut Creek at Webberville Road, Austin, Texas

Date and time	Rainfall at gage 1-WLN (inches)	Rainfall at gage 2-WLN (inches)	Rainfall at gage 3-WLN (inches)	Rainfall at gage 4-WLN (inches)	Rainfall at gage 5-WLN (inches)	Accumulated rainfall (inches)	Dis-charge (cubic feet per second)	Accumulated runoff (inches)
Storm of October 19, 1985								
Oct. 19								
0000	0.0	0.0	0.0	0.0	0.0	0.0	10.0	0.0014
0930	.02	.0	.01	.01	.0	.01	8.3	.0027
0945	.13	.01	.02	.02	.01	.04	8.3	.0027
1000	.34	.07	.03	.04	.02	.12	8.3	.0028
1015	.54	.15	.08	.06	.04	.20	8.3	.0028
1030	1.00	.29	.17	.06	.09	.38	8.3	.0029
1045	2.10	.77	.42	.48	.20	.90	13.0	.0030
1100	2.56	1.26	.97	.88	.43	1.36	33.0	.0033
1115	2.81	1.59	1.51	1.02	.91	1.71	34.0	.0035
1130	2.85	1.71	1.62	1.07	1.36	1.84	406.0	.0066
1145	2.87	1.75	1.65	1.07	1.42	1.86	1170.0	.0154
1200	2.89	1.77	1.65	1.08	1.42	1.87	2070.0	.0310
1215	2.92	1.79	1.68	1.17	1.42	1.91	2990.0	.0536
1230	2.94	1.82	1.72	1.21	1.42	1.94	3150.0	.0774
1245	2.95	1.84	1.74	1.22	1.42	1.95	3170.0	.1014
1300	2.96	1.86	1.78	1.23	1.42	1.97	3100.0	.1248
1315	2.98	1.86	1.80	1.24	1.42	1.98	3100.0	.1482
1330	2.98	1.87	1.81	1.27	1.42	1.99	2770.0	.1691
1345	3.00	1.88	1.83	1.28	1.42	2.01	2560.0	.1884
1400	3.00	1.89	1.85	1.29	1.42	2.01	2420.0	.2067
1415	3.00	1.89	1.86	1.30	1.42	2.02	2280.0	.2239
1430	3.00	1.89	1.86	1.30	1.42	2.02	2220.0	.2407
1445	3.01	1.89	1.87	1.31	1.42	2.03	2150.0	.2569
1500	3.01	1.91	1.87	1.31	1.42	2.03	2090.0	.2727
1515	3.01	1.91	1.87	1.31	1.42	2.03	2050.0	.2882
1530	3.02	1.91	1.87	1.33	1.42	2.04	1910.0	.3026
1545	3.04	1.92	1.89	1.34	1.42	2.05	1820.0	.3163
1600	3.04	1.94	1.90	1.34	1.42	2.06	1660.0	.3477
1700	3.04	1.95	1.90	1.35	1.42	2.06	1080.0	.3721
1730	3.04	1.95	1.90	1.35	1.42	2.06	905.0	.3858
1800	3.04	1.95	1.90	1.35	1.42	2.06	625.0	.3953
1830	3.04	1.95	1.90	1.35	1.42	2.06	438.0	.4019
1900	3.04	1.96	1.91	1.36	1.42	2.07	344.0	.4097
2000	3.10	1.98	1.92	1.38	1.42	2.09	223.0	.4164
2100	3.10	1.99	1.92	1.38	1.42	2.09	152.0	.4210
2200	3.10	1.99	1.93	1.38	1.42	2.10	114.0	.4244
2300	3.10	1.99	1.94	1.38	1.42	2.10	87.0	.4271
2400	3.10	1.99	1.94	1.39	1.42	2.10	71.0	.4281

STORM RAINFALL AND RUNOFF RECORD

08158600

Walnut Creek at Webberville Road, Austin, Texas

Date and time	Rainfall at gage 1-WLN (inches)	Rainfall at gage 2-WLN (inches)	Rainfall at gage 3-WLN (inches)	Rainfall at gage 4-WLN (inches)	Rainfall at gage 5-WLN (inches)	Accumulated rainfall (inches)	Discharge (cubic feet per second)	Accumulated runoff (inches)
Storm of February 3-4, 1986								
Feb. 3								
0000	0.0	0.0	0.0	0.0	0.0	0.0	8.0	0.0008
0645	.0	.01	.0	.02	.0	.01	7.6	.0016
0700	.04	.03	.0	.07	.0	.03	7.6	.0017
0715	.14	.11	.01	.20	.0	.09	7.6	.0017
0730	.26	.23	.03	.21	.03	.16	8.0	.0018
0745	.31	.29	.04	.25	.07	.19	8.0	.0019
0800	.35	.31	.05	.26	.08	.21	8.0	.0019
0815	.37	.33	.05	.26	.08	.22	8.0	.0020
0830	.40	.35	.05	.28	.08	.24	8.0	.0020
0845	.43	.38	.05	.29	.08	.25	8.0	.0021
0900	.49	.42	.07	.30	.08	.28	8.0	.0022
1000	.50	.54	.07	.32	.08	.31	9.1	.0024
1015	.53	.54	.07	.32	.08	.32	10.0	.0025
1030	.59	.54	.07	.32	.08	.34	10.0	.0029
1245	.60	.58	.10	.36	.09	.36	52.0	.0048
1300	.80	.68	.10	.36	.09	.43	51.0	.0052
1315	1.27	.94	.10	.40	.09	.61	49.0	.0056
1330	1.42	1.32	.10	.47	.09	.74	47.0	.0061
1400	1.98	1.65	.22	.60	.20	1.02	42.0	.0066
1415	2.00	1.82	.30	.75	.40	1.12	39.0	.0069
1430	2.12	2.05	.36	.76	.48	1.23	37.0	.0072
1445	2.34	2.20	.40	.82	.50	1.34	35.0	.0074
1500	2.36	2.29	.52	.89	.59	1.41	43.0	.0079
1530	2.37	2.57	.67	.91	.72	1.54	63.0	.0086
1545	2.38	2.59	.67	.92	.72	1.54	162.0	.0105
1615	2.40	2.61	.67	.92	.72	1.55	479.0	.0177
1645	2.43	2.76	.75	.99	.72	1.62	602.0	.0268
1715	2.52	2.98	.79	1.04	.84	1.73	501.0	.0381
1815	2.55	3.06	.84	1.05	.88	1.77	684.0	.0511
1830	2.55	3.06	.84	1.05	.88	1.77	674.0	.0562
1845	2.55	3.06	.84	1.05	.88	1.77	684.0	.0613
1900	2.55	3.06	.84	1.05	.88	1.77	679.0	.0767
2015	2.55	3.08	.84	1.05	.88	1.77	481.0	.1130
2400	2.59	3.22	.90	1.10	.93	1.84	164.0	.1248
Feb. 4								
0000	2.59	3.22	.90	1.10	.93	1.84	164.0	.1248
0200	2.59	3.24	.90	1.10	.93	1.85	76.0	.1342
0600	2.59	3.24	.90	1.11	.93	1.85	56.0	.1451
1500	2.61	3.25	.92	1.12	.95	1.87	30.0	.1533
2400	2.62	3.28	.92	1.12	.95	1.87	19.0	.1559

COLORADO RIVER BASIN

0815B640 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 south of Webberville Road, and 5.0 mi east of the State Capitol in Austin.

DRAINAGE AREA.--53.5 mi².

PERIOD OF RECORD.--Chemical, biochemical, and pesticide analyses: January 1975 to September 1986. Radiochemical analyses: January 1980 to September 1986 (discontinued).

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD 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)	COLIFORM, FECAL, 0.7 UM-WF (COLS./100 ML)	STREPTOCOCCI, FECAL, KF AGAR (COLS. PER 100 ML)
JAN 28...	1030	45	721	7.40	18.0	30	6.0	7.3	78	8.4	K28	150
APR 07...	1025	70	672	6.90	24.5	15	2.4	5.7	69	>7.7	K4	K19
JUN 24...	1345	55	688	7.30	29.0	5	2.2	12.7	--	0.9	240	K56
AUG 25...	1230	24	616	7.30	30.0	5	3.9	7.4	--	0.6	220	96

DATE	HARDNESS (MG/L AS CaCO3)	HARDNESS NONCARBONIC (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	POTASSIUM DIS-SOLVED (MG/L AS K)	ALKALINITY (MG/L AS CaCO3)	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)
JAN 28...	180	50	47	15	74	2	9.7	129	79	91	1.3	9.0
APR 07...	150	20	36	14	67	2	9.4	128	68	76	1.0	9.9
JUN 24...	180	86	50	14	70	2	9.1	97	86	78	1.1	8.9
AUG 25...	150	80	36	15	61	2	10	72	59	78	0.8	9.7

DATE	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)	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)	ARSENIC DIS-SOLVED (UG/L AS AS)
JAN 28...	400	13	4	4.70	1.10	5.80	4.70	2.7	7.4	5.60	14	1
APR 07...	360	11	8	1.20	1.60	2.80	3.40	1.3	4.7	7.20	14	--
JUN 24...	380	3	3	11.0	0.02	11.0	0.04	1.4	1.4	0.15	7.0	--
AUG 25...	310	8	6	13.0	0.02	13.0	0.05	1.7	1.7	0.08	7.7	--

DATE	BARIUM, DIS-SOLVED (UG/L AS Ba)	CADMIUM, DIS-SOLVED (UG/L AS Cd)	CHROMIUM, DIS-SOLVED (UG/L AS Cr)	COPPER, DIS-SOLVED (UG/L AS Cu)	IRON, DIS-SOLVED (UG/L AS Fe)	LEAD, DIS-SOLVED (UG/L AS Pb)	MANGANESE, DIS-SOLVED (UG/L AS Mn)	MERCURY, DIS-SOLVED (UG/L AS Hg)	SELENIUM, DIS-SOLVED (UG/L AS Se)	SILVER, DIS-SOLVED (UG/L AS Ag)	ZINC, DIS-SOLVED (UG/L AS Zn)	
JAN 28...		27	<1	<10	<1	38	2	20	<0.1	<1	<1	23
APR 07...		--	--	--	--	--	--	--	--	--	--	--
JUN 24...		--	--	--	--	--	--	--	--	--	--	--
AUG 25...		--	--	--	--	--	--	--	--	--	--	--

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 southeast of Driftwood, and 10 mi west of Buda.

DRAINAGE AREA.--124 mi².

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage 878.13 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records fair. Station is part of a hydrologic research project to study rainfall-runoff relationship in the Austin urban-rural areas. There is a recording rain gage located in the watershed above station.

AVERAGE DISCHARGE.--7 years 41.2 ft³/s (4.51 in/yr) 29,850 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,990 ft³/s June 6, 1985 (gage height, 16.38 ft); no flow for several days in August and September 1984 and Oct. 1-10, 1984.

Flood of Mar. 20, 1979, reached a stage of 11.48 ft (discharge, 4,980 ft³/s), on basis of peak flow over dam, 1.5 mi downstream.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 27	0600	1,230	6.42	May 10	0215	*8,420	*15.72
Dec. 10	1830	566	5.51	May 17	1930	3,140	9.00
Dec. 11	1045	893	5.98	June 12	1945	2,150	7.37
Feb. 3	2015	1,180	6.37	June 17	0115	711	5.74

Minimum daily discharge, 2.2 ft³/s Sept. 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	3.6	25	212	71	15	45	15	26	109	53	10	2.9		
2	3.7	29	190	72	15	45	14	38	112	48	9.5	3.6		
3	3.6	28	173	66	223	48	13	21	101	44	9.5	2.6		
4	3.3	25	161	61	213	44	14	17	104	41	8.8	2.2		
5	3.0	24	187	54	121	42	12	16	103	39	8.6	2.3		
6	3.3	25	143	53	104	42	12	15	89	37	8.5	21		
7	3.5	26	140	52	94	41	10	15	133	36	7.8	5.8		
8	3.4	26	132	53	89	41	9.4	14	137	35	8.2	7.4		
9	3.6	26	128	54	87	39	11	242	138	33	8.4	8.0		
10	3.7	26	211	49	87	38	11	1500	114	31	6.9	7.1		
11	3.5	27	409	44	82	36	11	143	122	29	7.9	13		
12	3.2	25	244	41	80	39	12	105	350	27	8.8	8.6		
13	2.9	20	218	37	77	36	12	76	200	26	7.5	6.4		
14	3.2	21	196	36	79	35	10	68	143	25	6.8	5.4		
15	21	25	186	35	77	34	10	84	139	24	6.2	4.6		
16	31	25	172	33	75	32	11	78	129	23	5.6	4.6		
17	20	31	167	34	73	31	10	546	216	21	5.6	4.6		
18	18	30	157	32	70	32	9.6	263	153	22	4.9	4.3		
19	123	30	145	29	65	29	9.4	160	142	22	4.2	4.3		
20	120	40	141	26	62	27	11	141	127	20	3.9	4.4		
21	49	27	135	26	58	26	10	132	116	19	4.4	4.4		
22	41	25	137	24	56	29	12	116	106	18	4.4	4.2		
23	39	24	132	21	55	26	12	112	94	17	4.7	4.0		
24	35	107	124	22	54	26	15	102	84	16	5.2	3.6		
25	30	133	116	21	53	26	11	95	78	15	5.8	3.4		
26	29	112	102	18	51	24	11	121	73	14	4.3	3.4		
27	30	787	99	16	50	23	10	119	70	13	3.6	3.4		
28	26	326	95	16	46	21	11	102	64	12	3.4	3.5		
29	25	263	89	16	---	20	11	101	61	12	3.3	3.6		
30	34	238	81	14	---	19	11	115	56	12	2.8	3.4		
31	30	---	77	15	---	18	---	103	---	11	2.7	---		
TOTAL	748.5	2576	4899	1141	2211	1014	341.4	4786	3663	795	192.2	160.0		
MEAN	24.1	85.9	158	36.8	79.0	32.7	11.4	154	122	25.6	6.20	5.33		
MAX	123	787	409	72	223	48	15	1500	350	53	10	21		
MIN	2.9	20	77	14	15	18	9.4	14	56	11	2.7	2.2		
CFSM	.19	.69	1.27	.30	.64	.26	.09	1.24	.98	.21	.05	.04		
IN.	.22	.77	1.47	.34	.66	.30	.10	1.44	1.10	.24	.06	.05		
AC-FT	1480	5110	9720	2260	4390	2010	677	9490	7270	1580	381	317		
CAL YR 1985	TOTAL	34477.2	MEAN	94.5	MAX	2850	MIN	1.2	CFSM	.76	IN.	10.34	AC-FT	68390
WTR YR 1986	TOTAL	22527.1	MEAN	61.7	MAX	1500	MIN	2.2	CFSM	.50	IN.	6.76	AC-FT	44680

COLORADO RIVER BASIN

0B158700 ONION CREEK NEAR DRIFTWOOD, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical and biochemical analyses: January 1974 to current year. Pesticide analyses: January 1978 to September 1986. Radiochemical analyses: January 1980.

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (NTU)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DEMAND, 5 DAY (MG/L)	COLIFORM, FECAL, UM-MF (CDLS./100 ML)	STREPTOCOCCI, FECAL, KF AGAR (COLS. PER 100 ML)	
JAN 29...	0940	24	494	8.70	13.0	7	0.4	10.0	98	0.4	21	20
APR 08...	0900	9.5	450	7.90	22.0	5	0.7	8.5	100	0.9	130	160
JUN 17...	1210	145	287	7.80	24.0	40	55	8.8	107	1.7	12000	K5200
JUN 23...	0920	98	485	8.00	25.0	3	2.0	8.1	101	0.3	150	140
AUG 21...	0958	24	463	7.80	29.0	5	0.4	6.7	--	0.3	36	66

DATE	HARDNESS (MG/L AS CaCO3)	HARDNESS NONCARBONIC (MG/L AS CaCO3)	CALCIUM, DISSOLVED (MG/L AS Ca)	MAGNESIUM, DISSOLVED (MG/L AS Mg)	SODIUM, DISSOLVED (MG/L AS Na)	SODIUM, ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY, WH WAT TOTAL FIELD (MG/L AS CaCO3)	SULFATE, DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS Cl)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SiO2)
JAN 29...	250	31	73	17	8.9	0.3	0.9	221	27	12	0.2	7.8
APR 08...	230	25	64	16	8.3	0.2	1.1	201	19	11	0.2	7.9
JUN 17...	140	15	43	7.9	3.9	0.1	2.2	125	11	5.6	0.1	8.5
JUN 23...	260	27	77	16	6.9	0.2	1.2	231	18	9.5	0.2	9.4
AUG 21...	230	40	62	18	8.7	0.3	1.3	189	32	14	0.2	12

DATE	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUSPENDED (MG/L)	SOLIDS, VOLATILE, SUSPENDED (MG/L)	NITROGEN, NITRATE (MG/L AS N)	NITROGEN, NITRITE (MG/L AS N)	NITROGEN, NO2+NO3 (MG/L AS N)	NITROGEN, AMMONIA (MG/L AS N)	NITROGEN, ORGANIC (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC (MG/L AS C)	ARSENIC, DISSOLVED (UG/L AS AS)
JAN 29...	280	1	<1	0.19	0.01	0.20	0.01	0.29	0.3	<0.01	1.1	<1
APR 08...	250	1	1	--	<0.01	<0.10	<0.01	--	0.3	<0.01	1.3	--
JUN 17...	160	128	28	0.18	0.02	0.20	0.03	0.67	0.7	0.07	8.1	<1
JUN 23...	280	3	2	--	<0.01	0.20	0.04	0.16	0.2	0.01	1.5	--
AUG 21...	260	1	1	--	<0.01	<0.10	0.03	0.77	0.8	0.01	1.8	--

DATE	BARIIUM, DISSOLVED (UG/L AS Ba)	CADMIUM, DISSOLVED (UG/L AS Cd)	CHROMIUM, DISSOLVED (UG/L AS Cr)	COPPER, DISSOLVED (UG/L AS Cu)	IRON, DISSOLVED (UG/L AS Fe)	LEAD, DISSOLVED (UG/L AS Pb)	MANGANESE, DISSOLVED (UG/L AS Mn)	MERCURY, DISSOLVED (UG/L AS Hg)	SELENIUM, DISSOLVED (UG/L AS Se)	SILVER, DISSOLVED (UG/L AS Ag)	ZINC, DISSOLVED (UG/L AS Zn)
JAN 29...	32	<1	<10	<1	<3	<1	4	<0.1	<1	<1	<3
APR 08...	--	--	--	--	--	--	--	--	--	--	--
JUN 17...	100	<1	<10	1	40	<5	<10	<0.1	<1	<1	<10
JUN 23...	--	--	--	--	--	--	--	--	--	--	--
AUG 21...	--	--	--	--	--	--	--	--	--	--	--

STORM RAINFALL AND RUNOFF RECORD

08158700 Onion Creek near Driftwood, Texas

Date and time	Rainfall at gage 1-ON (inches)	Accumulated weighted rainfall (inches)	Discharge (cubic feet per second)	Accumulated runoff (inches)
Storm of November 27-29, 1985				
Nov. 27				
0000	0.0	0.0	109.0	0.0002
0015	.07	.07	109.0	.0005
0030	.26	.26	114.0	.0009
0045	.42	.42	119.0	.0012
0100	.58	.58	125.0	.0016
0115	.64	.64	135.0	.0023
0145	.67	.67	170.0	.0033
0215	.71	.71	215.0	.0053
0315	.80	.80	230.0	.0071
0330	.82	.82	246.0	.0079
0345	.84	.84	287.0	.0101
0445	.96	.96	1010.0	.0180
0500	1.02	1.02	1120.0	.0233
0530	1.11	1.11	1220.0	.0309
0600	1.11	1.11	1230.0	.0405
0645	1.13	1.13	1090.0	.0524
0745	1.26	1.26	930.0	.0597
0800	1.27	1.27	930.0	.0670
0900	1.39	1.39	1040.0	.0767
0930	1.47	1.47	1180.0	.0859
1015	1.60	1.60	1070.0	.0943
1045	1.63	1.63	1140.0	.1014
1115	1.64	1.64	1070.0	.1081
1145	1.64	1.64	1070.0	.1198
1300	1.64	1.64	1200.0	.1329
1330	1.64	1.64	1200.0	.1423
1415	1.64	1.64	1170.0	.1569
1530	1.64	1.64	1020.0	.1792
1745	1.64	1.64	775.0	.2058
2100	1.64	1.64	555.0	.2275
2400	1.64	1.64	454.0	.2445
Nov. 28				
0000	1.64	1.64	454.0	.2445
0600	1.64	1.64	346.0	.2790
1200	1.64	1.64	314.0	.3025
1800	1.64	1.64	291.0	.3244
2400	1.64	1.64	278.0	.3452
Nov. 29				
0000	1.64	1.64	278.0	.3452
1200	1.64	1.64	264.0	.3952
2400	1.64	1.64	253.0	.4142

STORM RAINFALL AND RUNOFF RECORD

08158700

Onion Creek near Driftwood, Texas

Date and time	Rainfall at gage 1-0N (inches)	Accumulated weighted rainfall (inches)	Discharge (cubic feet per second)	Accumulated runoff (inches)
Storm of May 9-12, 1986				
May 9				
0000	0.0	0.0	14.0	0.0016
1815	.01	.01	13.0	.0031
1830	.19	.19	15.0	.0031
1845	.57	.57	15.0	.0032
1900	.73	.73	15.0	.0032
1915	.85	.85	18.0	.0033
1930	1.15	1.15	23.0	.0034
1945	1.63	1.63	25.0	.0034
2000	1.86	1.86	29.0	.0036
2030	2.05	2.05	36.0	.0038
2045	2.50	2.50	110.0	.0041
2100	2.64	2.64	224.0	.0058
2200	2.67	2.67	1340.0	.0184
2230	2.67	2.67	1480.0	.0369
2400	2.67	2.67	4010.0	.0870
May 10				
0000	2.67	2067	401 .0	.0870
0100	2.67	2.67	6590.0	.1819
0200	2.67	2.67	8380.0	.2473
0215	2.67	2.67	8420.0	.2736
0230	2.67	2.67	8300.0	.2996
0245	2.67	2.67	7980.0	.3370
0315	2.67	2.67	6760.0	.4003
0415	2.67	2.67	2590.0	.4246
0445	2.67	2.67	1560.0	.4319
0500	2.67	2.67	1280.0	.4359
0515	2.67	2.67	1130.0	.4412
0545	2.67	2.67	930.0	.4515
0700	2.67	2.67	664.0	.4649
0900	2.67	2.67	478.0	.4829
1300	2.69	2.69	310.0	.4984
1700	2.70	2.70	252.0	.5157
2400	2.70	2.70	182.0	.5270
May 11				
0000	2.70	2.70	182.0	.5270
0600	2.70	2.70	150.0	.5417
1200	2.70	2.70	141.0	.5576
2400	2.70	2.70	119.0	.5710
May 12				
0000	2.70	2.70	119.0	.5710
1200	2.70	2.70	127.0	.5945
2400	2.70	2.70	119.0	.6034

COLORADO RIVER BASIN

OB158810 BEAR CREEK BELOW FARM ROAD 1826 NEAR DRIFTWOOD, TX

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

DRAINAGE AREA.--12.2 mi².

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 1979 to current year.

GAGE.--Water-stage recorder. Datum of gage is 860 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges: Records good. Station is part of hydrographic research project to study rain-fall-runoff relationship for the Austin urban-rural areas. There is a recording rain gage located in the watershed.

AVERAGE DISCHARGE.--7 years 5.75 ft³/s (6.40 in/yr) 4,170 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,330 ft³/s June 11, 1981 (gage height, 13.05 ft, from floodmarks), from slope-area measurements of peak flow; no flow in 1980 and 1983-84.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 9, 1919, reached a stage of 16.2 ft (discharge unknown) and was the highest since at least 1924, from information by local resident. A flood in 1915 was 2 ft higher than the 1939 flood, from information by local resident.

EXTREMES FOR CURRENT YEAR.--Peak discharge greater than base discharge of 500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
May 9	2215	*636	*5.59	No other peak greater than base discharge.			

Minimum discharge, 0.02 ft³/s Sept. 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	.97	2.5	17	6.3	3.1	2.9	1.6	6.4	11	5.9	1.3	.28		
2	.77	3.8	15	6.3	3.1	3.0	1.5	1.8	9.8	5.6	1.2	.35		
3	.62	2.8	15	6.1	7.4	3.3	1.5	1.3	9.1	5.5	.97	.30		
4	.55	2.5	15	5.7	8.2	2.9	1.6	1.2	9.5	5.1	.96	.28		
5	.50	2.5	13	5.2	5.8	2.9	1.4	1.2	9.1	4.7	.99	.36		
6	.48	2.5	13	5.2	5.4	2.9	1.4	1.1	8.6	4.1	1.0	2.8		
7	.50	2.3	12	5.2	5.2	2.7	1.4	1.2	12	3.8	.97	1.2		
8	.45	2.3	11	5.2	4.7	2.7	1.4	1.2	12	3.5	.91	.83		
9	.48	2.3	11	5.2	4.6	2.7	1.2	.47	11	3.4	.88	.66		
10	.51	2.3	12	5.2	4.6	2.7	1.2	16	9.9	3.2	.77	.61		
11	.51	4.8	15	4.9	4.6	2.5	1.2	8.0	9.9	2.9	.79	.55		
12	.49	3.3	13	4.6	4.3	2.5	1.2	7.0	10	2.8	.82	.53		
13	.45	3.3	12	4.3	4.3	2.3	1.1	6.5	9.8	2.5	.70	.55		
14	.56	3.3	11	4.3	4.4	2.3	.94	6.3	9.1	2.5	.68	.49		
15	1.3	3.6	11	4.1	4.2	2.1	.70	9.0	8.6	2.3	.61	.45		
16	1.0	3.5	11	4.1	4.3	1.9	.70	7.3	8.3	2.3	.57	.47		
17	.92	3.5	11	4.1	4.3	2.0	.70	44	14	2.1	.57	.51		
18	1.1	3.7	9.9	4.1	4.1	2.0	.74	18	16	2.1	.53	.51		
19	9.9	5.0	9.6	3.9	3.8	1.7	.80	16	13	2.1	.42	.51		
20	6.2	4.8	9.4	3.8	3.5	1.7	.71	15	12	2.0	.38	.52		
21	4.4	4.3	9.0	3.8	3.3	1.7	.63	14	11	1.7	.38	.51		
22	4.1	4.3	9.0	3.5	3.1	1.7	.57	13	11	1.7	.37	.51		
23	3.6	4.3	8.7	3.3	3.1	1.7	.57	12	11	1.7	.37	.51		
24	3.3	7.2	8.2	3.3	3.1	1.7	.57	12	11	1.7	.41	.50		
25	3.0	11	7.6	3.4	3.2	1.7	.57	11	9.9	1.7	.44	.45		
26	2.9	9.9	7.5	3.2	3.1	1.7	.51	11	9.5	1.6	.39	.49		
27	2.6	68	7.5	3.1	3.1	1.8	.51	11	8.7	1.6	.36	.43		
28	2.5	23	7.2	3.1	3.1	1.7	.51	9.9	8.0	1.4	.33	.39		
29	2.5	20	6.9	3.2	---	1.7	.62	9.4	7.4	1.4	.34	.40		
30	2.5	19	6.9	3.1	---	1.6	.57	9.1	6.7	1.3	.30	.40		
31	2.3	---	6.7	3.1	---	1.6	---	10	---	1.3	.29	---		
TOTAL	61.96	235.6	332.1	133.9	119.0	68.3	28.62	337.9	306.9	85.5	20.00	17.35		
MEAN	2.00	7.85	10.7	4.32	4.25	2.20	.95	10.9	10.2	2.76	.65	.58		
MAX	9.9	68	17	6.3	8.2	3.3	1.6	47	16	5.9	1.3	2.8		
MIN	.45	2.3	6.7	3.1	3.1	1.6	.51	1.1	6.7	1.3	.29	.28		
CFSM	.16	.64	.88	.35	.35	.18	.08	.89	.84	.23	.05	.05		
IN.	.19	.72	1.01	.41	.36	.21	.09	1.03	.94	.26	.06	.05		
AC-FT	123	467	659	266	236	135	57	670	609	170	40	34		
CAL YR 1985	TOTAL	3062.00	MEAN	8.39	MAX	360	MIN	.09	CFSM	.69	IN.	9.34	AC-FT	6070
WTR YR 1986	TOTAL	1747.13	MEAN	4.79	MAX	68	MIN	.28	CFSM	.39	IN.	5.33	AC-FT	3470

COLORADO RIVER BASIN

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

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical and biochemical analyses: March 1978 to current year. Pesticide analyses: June 1978 to September 1986. Radiochemical analyses: January 1980.

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD 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)	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML)	STREPTOCOCCI, FECAL, KF AGAR (COLS. PER 100 ML)
JAN 29...	1010	3.3	552	8.70	12.0	7	0.8	9.8	94	0	84	K24
APR 09...	0915	1.2	521	7.70	20.5	5	1.2	9.0	100	0.5	26	780
MAY 01...	1105	28	447	7.60	22.0	10	25	7.9	92	2.1	13000	26000
01...	1246	16	433	7.80	21.5	10	12	7.8	90	2.1	11000	24000
JUN 23...	1015	14	534	8.00	25.0	3	1.8	7.9	98	0.3	100	100
AUG 21...	0930	0.45	488	7.50	28.0	5	0.4	4.4	--	0.4	K81	180

DATE	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	POTASSIUM, DIS-SOLVED (MG/L AS K)	ALKALINITY, WH WAT TOTAL FIELD (MG/L AS CaCO3)	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)
JAN 29...	290	52	86	18	10	0.3	0.8	237	34	17	0.2	7.8
APR 09...	250	34	73	17	9.4	0.3	1.1	218	36	15	0.2	9.4
MAY 01...	220	43	64	15	8.4	0.3	1.2	179	38	17	0.2	9.6
01...	210	41	63	14	8.2	0.3	1.3	174	38	15	0.2	9.4
JUN 23...	280	37	84	17	8.3	0.2	0.9	243	25	12	0.2	9.2
AUG 21...	240	37	66	18	10	0.3	1.1	202	28	18	0.2	16

DATE	SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUSPENDED (MG/L)	SOLIDS, VOLATILE, SUSPENDED (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)	ARSENIC, DIS-SOLVED (UG/L AS AS)
JAN 29...	320	7	5	--	<0.01	0.30	0.03	0.37	0.4	<0.01	1.9	<1
APR 09...	290	1	1	--	<0.01	<0.10	0.02	0.18	0.2	<0.01	2.7	--
MAY 01...	260	28	10	--	0.01	<0.10	0.03	0.47	0.5	0.03	8.0	--
01...	250	14	4	0.09	0.01	0.10	0.02	0.38	0.4	0.02	6.6	--
JUN 23...	300	1	1	--	<0.01	0.20	0.05	0.15	0.2	0.08	1.8	--
AUG 21...	280	1	1	--	<0.01	<0.10	0.02	0.18	0.2	0.02	2.6	--

DATE	BARIUM, DIS-SOLVED (UG/L AS Ba)	CADMIUM, DIS-SOLVED (UG/L AS Cd)	CHROMIUM, DIS-SOLVED (UG/L AS Cr)	COPPER, DIS-SOLVED (UG/L AS Cu)	IRON, DIS-SOLVED (UG/L AS Fe)	LEAD, DIS-SOLVED (UG/L AS Pb)	MANGANESE, DIS-SOLVED (UG/L AS Mn)	MERCURY, DIS-SOLVED (UG/L AS Hg)	SELENIUM, DIS-SOLVED (UG/L AS Se)	SILVER, DIS-SOLVED (UG/L AS Ag)	ZINC, DIS-SOLVED (UG/L AS Zn)
JAN 29...	31	<1	<10	<1	<3	<1	8	<0.1	<1	<1	15
APR 09...	--	--	--	--	--	--	--	--	--	--	--
MAY 01...	--	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--	--	--
JUN 23...	--	--	--	--	--	--	--	--	--	--	--
AUG 21...	--	--	--	--	--	--	--	--	--	--	--

STORM RAINFALL AND RUNOFF RECORD

08158810 Bear Creek Below F.R. 1826 Near Driftwood, Texas

Date and time	Rainfall at gage 1-BER (inches)	Accumulated weighted rainfall (inches)	Discharge (cubic feet per second)	Accumulated runoff (inches)
Storm of November 27, 1985				
Nov. 27				
0000	0.0	0.0	13.0	0.0002
0015	.02	.02	13.0	.0006
0030	.10	.10	14.0	.0011
0045	.21	.21	16.0	.0016
0100	.36	.36	20.0	.0022
0115	.50	.50	22.0	.0029
0130	.52	.52	24.0	.0037
0145	.53	.53	28.0	.0046
0200	.54	.54	56.0	.0063
0215	.56	.56	93.0	.0093
0230	.59	.59	36.0	.0110
0300	.72	.72	36.0	.0127
0315	.78	.78	41.0	.0147
0345	.94	.94	92.0	.0191
0400	.98	.98	103.0	.0223
0415	1.01	1.01	106.0	.0257
0430	1.04	1.04	106.0	.0291
0445	1.09	1.09	106.0	.0324
0500	1.15	1.15	106.0	.0358
0515	1.21	1.21	111.0	.0393
0530	1.24	1.24	118.0	.0431
0545	1.26	1.26	118.0	.0468
0600	1.26	1.26	120.0	.0506
0615	1.26	1.26	125.0	.0546
0630	1.26	1.26	125.0	.0586
0645	1.28	1.28	125.0	.0625
0700	1.32	1.32	123.0	.0664
0715	1.36	1.36	122.0	.0703
0730	1.38	1.38	118.0	.0797
0830	1.48	1.48	98.0	.0906
0915	1.58	1.58	88.0	.0962
0930	1.60	1.60	84.0	.1028
1030	1.75	1.75	84.0	.1188
1230	1.76	1.76	100.0	.1442
1430	1.76	1.76	68.0	.1626
1645	1.76	1.76	42.0	.1746
1900	1.76	1.76	33.0	.1898
2400	1.77	1.77	21.0	.1964

STORM RAINFALL AND RUNOFF RECORD

08158810 Bear Creek Below F.R. 1826 Near Driftwood, Texas

Date and time	Rainfall at gage 1-BER (inches)	Accumulated weighted rainfall (inches)	Discharge (cubic feet per second)	Accumulated runoff (inches)
Storm of May 9-10, 1986				
May 9				
0000	0.0	0.0	1.2	0.0014
1830	.02	.02	1.2	.0030
2045	1.64	1.64	44.0	.0100
2100	2.06	2.06	134.0	.0142
2115	2.11	2.11	233.0	.0216
2130	2.11	2.11	369.0	.0333
2145	2.13	2.13	469.0	.0482
2200	2.14	2.14	620.0	.0679
2215	2.14	2.14	636.0	.0881
2230	2.14	2.14	538.0	.1052
2245	2.14	2.14	396.0	.1178
2300	2.14	2.14	291.0	.1270
2315	2.14	2.14	228.0	.1343
2330	2.14	2.14	186.0	.1402
2345	2.14	2.14	150.0	.1449
2400	2.14	2.14	120.0	.1478
May 10				
0000	2.14	2.14	120.0	.1478
0015	2.14	2.14	102.0	.1520
0030	2.14	2.14	84.0	.1546
0045	2.14	2.14	68.0	.1568
0100	2.14	2.14	56.0	.1586
0115	2.14	2.14	47.0	.1616
0200	2.14	2.14	30.0	.1649
0300	2.14	2.14	23.0	.1722
0700	2.15	2.15	14.0	.1793
1100	2.17	2.17	11.0	.1863
1700	2.10	2.10	9.0	.1937
2400	2.19	2.19	8.7	.1976

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 south the intersection of U.S. Highway 290 and Farm Road 1826 and 11.9 mi southwest of the State Capitol Building in Austin.

DRAINAGE AREA.--8.24 mi².

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 876.14 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. No known regulation or diversion. There is a recording rain gage in the watershed.

AVERAGE DISCHARGE.--8 years (water years 1979-86), 5.57 ft³/s (9.18 in/yr), 4,040 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,080 ft³/s June 11, 1981 (gage height, 10.79 ft); no flow at times most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
May 9	2145	*1,640	(a)*8.00	May 17	1530	1,300	7.53
May 15	0800	843	6.73				

a From floodmark.

Minimum discharge, no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	.07	.32	71	3.4	.73	.69	.46	11	97	2.2	.05	.00		
2	.06	1.4	50	3.4	.73	.73	.46	.85	50	2.1	.04	.00		
3	.05	.45	45	3.1	9.1	.73	.42	.56	34	1.7	.03	.00		
4	.06	.34	39	2.9	7.3	.67	.42	.42	34	1.6	.02	.00		
5	.04	.30	28	2.4	2.8	.73	.42	.42	32	1.4	.03	.00		
6	.04	.30	24	2.4	2.0	.72	.42	.42	23	1.1	.02	28		
7	.04	.24	22	2.3	2.1	.66	.42	.42	119	1.0	.01	.29		
8	.04	.24	19	2.3	1.9	.67	.40	.42	133	1.1	.01	.13		
9	.04	.24	17	2.4	1.8	.76	.48	164	104	.68	.01	.08		
10	.04	.24	21	2.4	1.8	.81	.48	98	61	.55	.00	.06		
11	.04	13	58	2.2	1.7	.71	.46	17	44	.44	.00	.06		
12	.03	1.0	32	2.0	1.6	.86	.41	9.2	38	.36	.00	.05		
13	.03	.92	25	1.8	1.5	.73	.32	6.4	32	.38	.00	.10		
14	.24	.89	21	1.8	1.5	.73	.22	4.9	24	.27	.00	.09		
15	.86	1.0	19	1.6	1.5	.70	.18	214	20	.24	.00	.09		
16	.21	1.5	17	1.6	1.5	.79	.18	100	15	.22	.00	.07		
17	.19	1.5	15	1.5	1.4	.82	.18	272	52	.19	.00	.06		
18	.21	1.5	13	1.5	1.2	.82	.18	236	23	.18	.00	.05		
19	32	30	11	1.3	1.1	.51	.18	139	23	.15	.00	3.7		
20	1.4	8.6	11	1.3	1.1	.44	.13	80	16	.19	.00	.53		
21	.87	7.0	8.8	1.2	1.0	.46	.10	56	13	.12	.00	.33		
22	.85	5.9	8.3	1.0	.95	.46	.08	41	11	.13	.00	.31		
23	.62	5.7	7.7	1.0	.91	.48	.07	31	9.2	.11	.00	.27		
24	.49	138	6.3	1.0	.91	.52	.07	22	7.2	.09	.00	.23		
25	.41	126	5.1	.99	.91	.52	.07	18	7.0	.08	.00	.19		
26	.33	81	4.8	.91	.93	.59	.07	18	5.5	.09	.00	.14		
27	.27	401	4.8	.82	.81	.58	.07	18	4.5	.08	.00	.12		
28	.23	211	4.5	.82	.66	.58	.07	14	3.6	.08	.00	.10		
29	.20	149	4.1	.77	---	.46	.06	11	3.3	.07	.00	.10		
30	.20	112	4.1	.73	---	.46	.15	18	2.7	.06	.00	.10		
31	.13	---	3.7	.73	---	.46	---	28	---	.05	.00	---		
TOTAL	40.29	1300.58	620.2	53.57	51.44	19.91	7.63	1630.01	1041.0	17.01	.22	35.25		
MEAN	1.30	43.4	20.0	1.73	1.84	.64	.25	52.6	34.7	.55	.01	1.17		
MAX	.32	401	71	3.4	9.1	.86	.48	272	133	2.2	.05	.28		
MIN	.03	.24	3.7	.73	.66	.44	.06	.42	2.7	.05	.00	.00		
CFSM	.16	5.27	2.43	.21	.22	.08	.03	6.38	4.21	.07	.00	.14		
IN.	.18	5.87	2.80	.24	.23	.09	.03	7.36	4.70	.08	.00	.16		
AC-FT	80	2580	1230	106	102	39	15	3230	2060	34	.4	70		
CAL YR 1985	TOTAL	4041.57	MEAN	11.1	MAX	401	MIN	.00	CFSM	1.35	IN.	18.25	AC-FT	8020
WTR YR 1986	TOTAL	4817.11	MEAN	13.2	MAX	401	MIN	.00	CFSM	1.60	IN.	21.75	AC-FT	9550

COLORADO RIVER BASIN

08158840 SLAUGHTER CREEK AT FARM ROAD 1826 NEAR AUSTIN, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical and biochemical analyses: June 1983 to current year. Pesticide analyses: June 1983 to September 1986.

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD 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)	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML)	STREP-TOCOCCKI FECAL, KF AGAR (COLS. PER 100 ML)
JAN 29...	1030	0.82	736	8.40	13.5	5	0.7	9.8	97	0	K12	K3
APR 08...	1002	1.2	714	7.50	22.5	5	1.1	9.9	118	1.3	K0	120
MAY 01...	1017	36	683	7.30	21.5	10	3.5	6.8	78	2.7	14000	14000
JUN 16...	0936	13	750	7.80	26.0	3	1.1	7.8	99	0.5	140	110
SEP 06...	1015	180	314	7.70	24.0	--	79	--	--	2.1	18000	43000

DATE	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	POTASSIUM, DIS-SOLVED (MG/L AS K)	ALKALINITY WH WAT TOTAL FIELD (MG/L AS CaCO3)	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)
JAN 29...	360	96	100	26	26	0.6	0.7	261	68	51	0.2	6.5
APR 08...	310	81	87	23	24	0.6	0.5	231	68	56	0.2	5.8
MAY 01...	300	89	83	23	24	0.6	1.0	213	60	63	0.2	8.1
JUN 16...	320	69	88	24	27	0.7	0.8	250	60	45	0.2	7.3
SEP 06...	130	44	34	10	13	0.5	2.2	82	37	21	0.2	5.0

DATE	SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUSPENDED (MG/L)	SOLIDS, VOLATILE, SUSPENDED (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, TOTAL (MG/L AS C)	ARSENIC DIS-SOLVED (UG/L AS AS)
JAN 29...	430	1	1	0.29	0.01	0.30	0.03	0.27	0.3	0.01	1.2	<1
APR 08...	400	5	1	--	<0.01	<0.10	0.02	0.28	0.3	0.01	4.0	--
MAY 01...	390	2	2	--	0.01	<0.10	0.05	0.35	0.4	0.02	10	--
JUN 16...	400	14	5	--	<0.01	0.30	0.05	0.15	0.2	0.01	2.2	--
SEP 06...	170	--	--	0.16	0.04	0.20	0.08	0.62	0.7	0.01	9.7	3

DATE	BARIIUM, DIS-SOLVED (UG/L AS Ba)	CADMIUM, DIS-SOLVED (UG/L AS Cd)	CHROMIUM, DIS-SOLVED (UG/L AS Cr)	COPPER, DIS-SOLVED (UG/L AS Cu)	IRON, DIS-SOLVED (UG/L AS Fe)	LEAD, DIS-SOLVED (UG/L AS Pb)	MANGANESE, DIS-SOLVED (UG/L AS Mn)	MERCURY, DIS-SOLVED (UG/L AS Hg)	SELENIUM, DIS-SOLVED (UG/L AS Se)	SILVER, DIS-SOLVED (UG/L AS Ag)	ZINC, DIS-SOLVED (UG/L AS Zn)
JAN 29...	38	<1	<10	<1	<3	<1	12	<0.1	<1	<1	10
APR 08...	--	--	--	--	--	--	--	--	--	--	--
MAY 01...	--	--	--	--	--	--	--	--	--	--	--
JUN 16...	--	--	--	--	--	--	--	--	--	--	--
SEP 06...	22	<1	<10	<1	32	<5	4	<0.1	<1	<1	8

STORM RAINFALL AND RUNOFF RECORD

08158840 Slaughter Creek at F.R. 1826 near Austin, Texas

Date and time	Rainfall at gage 1-SLA (inches)	Accumulated weighted rainfall (inches)	Discharge (cubic feet per second)	Accumulated runoff (inches)
Storm of November 26-28, 1985				
Nov. 26				
0000	0.0	0.0	31.0	0.0386
1315	.02	.02	25.0	.0927
2300	.02	.02	23.0	.1143
2315	.05	.05	23.0	.1154
2330	.14	.14	23.0	.1165
2345	.31	.31	24.0	.1176
2400	.48	.48	28.0	.1186
Nov. 27				
0000	.48	.48	28.0	.1186
0015	.51	.51	40.0	.1227
0100	.93	.93	147.0	.1469
0200	.98	.98	248.0	.1760
0215	1.02	1.02	281.0	.2024
0300	1.21	1.21	243.0	.2310
0330	1.30	1.30	243.0	.2539
0400	1.40	1.40	281.0	.2935
0500	1.60	1.60	332.0	.3325
0515	1.65	1.65	360.0	.3664
0600	1.67	1.67	433.0	.4173
0630	1.68	1.68	417.0	.4565
0700	1.77	1.77	385.0	.5108
0800	1.85	1.85	306.0	.5611
0845	1.96	1.96	257.0	.5913
0915	2.03	2.03	271.0	.6295
1015	2.17	2.17	306.0	.6799
1100	2.18	2.18	354.0	.7381
1200	2.18	2.18	311.0	.7966
1300	2.18	2.18	222.0	.8384
1400	2.18	2.18	177.0	.8883
1600	2.18	2.18	154.0	.9462
1800	2.18	2.18	136.0	.9974
2000	2.18	2.18	129.0	1.0459
2200	2.18	2.18	117.0	1.0899
2400	2.18	2.18	108.0	1.1559
Nov. 28				
0000	2.18	2.18	108.0	1.1559
0900	2.19	2.19	79.0	1.3130
1500	2.19	2.19	69.0	1.4104
2400	2.19	2.19	58.0	1.4594

STORM RAINFALL AND RUNOFF RECORD

08158840

Slaughter Creek at F.R. 1826 near Austin, Texas

Date and time	Rainfall at gage 1-SLA (inches)	Accumulated weighted rainfall (inches)	Discharge (cubic feet per second)	Accumulated runoff (inches)
Storm of May 9-10, 1986				
May 9				
0000	0.0	0.0	0.5	0.0007
1415	.01	.01	.5	.0015
1815	.03	.03	.5	.0017
1830	.09	.09	.5	.0018
1845	.22	.22	.5	.0018
1900	.30	.30	.9	.0018
1915	.31	.31	7.0	.0021
1930	.43	.43	24.0	.0033
1945	.75	.75	64.0	.0063
2000	1.05	1.05	198.0	.0156
2015	1.34	1.34	311.0	.0302
2030	1.64	1.64	646.0	.0758
2100	2.39	2.39	955.0	.1431
2115	2.40	2.40	1330.0	.2056
2130	2.40	2.40	1560.0	.2790
2145	2.40	2.40	1640.0	.3561
2200	2.41	2.41	1520.0	.4276
2215	2.41	2.41	1380.0	.4924
2230	2.41	2.41	1150.0	.5465
2245	2.41	2.41	829.0	.5855
2300	2.41	2.41	571.0	.6123
2315	2.41	2.41	417.0	.6319
2330	2.41	2.41	301.0	.6461
2345	2.41	2.41	235.0	.6571
2400	2.41	2.41	230.0	.6652
May 10				
0000	2.41	2.41	230.0	.6652
0015	2.41	2.41	206.0	.6776
0030	2.41	2.41	198.0	.6869
0045	2.41	2.41	194.0	.6961
0100	2.41	2.41	177.0	.7044
0115	2.41	2.41	165.0	.7121
0130	2.41	2.41	154.0	.7375
0300	2.41	2.41	93.0	.7681
0500	2.41	2.41	56.0	.7944
0800	2.41	2.41	32.0	.8094
1000	2.41	2.41	22.0	.8198
1300	2.46	2.46	22.0	.8343
1700	2.48	2.48	18.0	.8529
2400	2.48	2.48	12.0	.8608

08158880 BOGGY CREEK (SOUTH) AT CIRCLE S ROAD, AUSTIN, TX
(Flood-hydrograph partial-record gage)

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 September 1986 (converted to crest-stage gage).

REVISED RECORDS.--Open-File Report 82-506: 1979 maximum.

GAGE.--Digital water-stage recorder and crest-stage gage. Datum of gage is 591.66 ft NGVD.

REMARKS.--Records fair. Storms analyzed for periods Oct. 14-15 and May 15.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,920 ft³/s (gage height, 10.56 ft).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,970 ft³/s, May 9 (gage height 8.71 ft).

STORM RAINFALL AND RUNOFF RECORD

08158880 Boggy Creek (South) at Circle S Road, Austin, Texas

Date and time	Rainfall at gage 1-BGS (inches)	Accumulated weighted rainfall (inches)	Discharge (cubic feet per second)	Accumulated runoff (inches)
Storm of October 14-15, 1985				
Oct. 14				
0000	0.0	0.0	2.0	0.0091
2100	.04	.04	2.5	.0206
2115	.35	.35	60.0	.0271
2130	.53	.53	110.0	.0390
2145	.82	.82	170.0	.0574
2200	1.89	1.89	265.0	.0861
2215	2.51	2.51	428.0	.1324
2230	2.83	2.83	1360.0	.2795
2245	3.01	3.01	1540.0	.4462
2300	3.08	3.08	1280.0	.5847
2315	3.10	3.10	1230.0	.7178
2330	3.12	3.12	1320.0	.8606
2345	3.13	3.13	1220.0	.9926
2400	3.14	3.14	950.0	1.0702
Oct. 15				
0000	3.14	3.14	955.0	1.0702
0015	3.14	3.14	668.0	1.1683
0030	3.15	3.15	469.0	1.2190
0045	3.18	3.18	322.0	1.2539
0100	3.19	3.19	223.0	1.2780
0115	3.22	3.22	171.0	1.2965
0130	3.26	3.26	137.0	1.3187
0200	3.37	3.37	101.0	1.3351
0215	3.44	3.44	99.0	1.3458
0230	3.51	3.51	99.0	1.3780
0345	3.80	3.80	101.0	1.4162
0415	3.85	3.85	109.0	1.4457
0500	3.88	3.88	105.0	1.4684
0515	3.88	3.88	99.0	1.4792
0530	3.88	3.88	91.0	1.4890
0545	3.89	3.89	83.0	1.4980
0600	3.89	3.89	77.0	1.5063
0615	3.89	3.89	70.0	1.5139
0630	3.89	3.89	63.0	1.5207
0645	3.89	3.89	57.0	1.5269
0700	3.89	3.89	51.0	1.5324
0715	3.89	3.89	49.0	1.5377
0730	3.89	3.89	39.0	1.5419
0745	3.89	3.89	37.0	1.6740
2400	3.94	3.94	36.0	1.8006

STORM RAINFALL AND RUNOFF RECORD

08158880 Bogy Creek (South) at Circle S Road, Austin, Texas

Date and time	Rainfall at gage 1-BGS (inches)	Accumulated weighted rainfall (inches)	Discharge (cubic feet per second)	Accumulated runoff (inches)
Storm of May 15, 1986				
May 15				
0000	0.0	0.0	0.2	0.0002
0500	.02	.02	.3	.0006
0515	.06	.06	1.5	.0007
0530	.15	.15	3.0	.0010
0545	.16	.16	5.0	.0016
0600	.16	.16	22.0	.0040
0615	.17	.17	30.0	.0072
0630	.17	.17	65.0	.0142
0645	.44	.44	100.0	.0251
0700	1.31	1.31	160.0	.0425
0715	1.41	1.41	701.0	.1183
0730	1.41	1.41	815.0	.2065
0745	1.41	1.41	633.0	.2750
0800	1.41	1.41	417.0	.3202
0815	1.41	1.41	559.0	.3806
0830	1.41	1.41	646.0	.4506
0845	1.41	1.41	505.0	.5052
0900	1.41	1.41	350.0	.5431
0915	1.41	1.41	248.0	.5699
0930	1.41	1.41	166.0	.5879
0945	1.41	1.41	119.0	.6008
1000	1.42	1.42	90.0	.6105
1015	1.42	1.42	72.0	.6183
1030	1.42	1.42	62.0	.6250
1045	1.42	1.42	53.0	.6307
1100	1.42	1.42	46.0	.6357
1115	1.42	1.42	43.0	.6404
1130	1.42	1.42	39.0	.6446
1145	1.42	1.42	36.0	.6485
1200	1.42	1.42	36.0	.7439
2400	1.43	1.43	36.0	.8374

COLORADO RIVER BASIN

08158920 WILLIAMSON CREEK AT OAK HILL, TX

LOCATION.--Lat 30°06'06", long 97°51'36", Travis County, Hydrologic Unit 12090205, at downstream side of bridge on U.S. Highway 290 in Oak Hill, 0.8 mi east of the intersection of U.S. Highway 290 and State Highway 71, and 7.7 mi southwest of the State Capitol Building in Austin.

DRAINAGE AREA.--6.30 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1974 to February 1977 (periodic discharge measurements only), January 1978 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 798.68 ft above National Geodetic Vertical Datum of 1929 (levels from city of Austin bench mark).

REMARKS.--Estimated daily discharges: Nov. 25 to Dec. 10. Records fair except those for estimated daily discharges, which are poor. Station is part of hydrologic-research project to study rainfall-runoff relations for the Austin urban-rural areas. Station is equipped with an automatic water-quality sampler. There are two recording rain gages located in the watershed above this station.

AVERAGE DISCHARGE.--8 years, 4.52 ft³/s (9.74 in/yr), 3,270 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,170 ft³/s June 11, 1981 (gage height, 8.55 ft); no flow for many days each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct. 19	1100	814	4.47	May 9	2130	2,220	6.58
Nov. 19	1700	852	4.54	May 15	0715	1,370	5.38
Nov. 24	0915	633	4.11	May 17	1530	1,020	4.84
Nov. 27	unknown	*unknown	*unknown	Sept. 6	0815	1,040	4.87
May 1	0815	1,380	5.39				

Minimum daily discharge, no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	1.6	27	1.6	.56	.93	.02	59	18	.75	.00	.00
2	.00	4.5	20	1.6	.68	.73	.02	.07	11	.60	.00	.00
3	.00	.22	16	1.2	23	.66	.01	.01	8.3	.50	.00	.00
4	.00	.14	12	1.2	5.1	.54	.02	.01	10	.40	.00	.00
5	.00	.16	10	.89	2.9	.51	.01	.01	7.1	.38	.00	.00
6	.00	.10	9.0	.85	2.3	.54	.06	.01	5.4	.37	.00	94
7	.00	.07	8.0	.86	2.0	.46	.01	.01	15	.36	.00	.39
8	.00	.08	7.2	1.5	1.6	.46	.01	.01	13	.26	.00	.10
9	.00	.07	6.5	1.3	1.7	.44	.22	202	18	.23	.00	.02
10	.00	.04	12	.93	1.7	.37	.11	41	9.8	.17	.00	.00
11	.00	6.5	18	.85	1.6	.41	.01	16	8.5	.16	.00	.00
12	.00	.38	11	.78	1.1	.59	.01	7.9	15	.13	.00	.00
13	.00	.26	9.3	.70	.92	.29	.01	4.5	9.6	.10	.00	.00
14	16	.14	8.0	.52	.89	.29	.00	3.0	7.4	.09	.00	.00
15	14	.72	6.9	.47	.75	.29	.00	119	6.1	.06	.00	.00
16	.08	1.2	6.5	.41	.84	.28	.00	31	4.9	.05	.00	.00
17	.06	.64	5.4	.37	.80	.20	.00	137	13	.02	.00	.00
18	.30	.56	4.7	.37	.69	.34	.00	46	6.5	.02	.00	.00
19	46	47	4.4	.37	.68	.12	.00	29	5.5	.01	.00	9.0
20	2.4	15	4.0	.37	.73	.10	.00	21	3.7	.01	.00	.36
21	.92	8.0	3.4	.37	.74	.10	.00	16	3.0	.00	.00	.01
22	.33	5.5	3.0	.34	.78	.11	.00	13	2.5	.00	.00	.00
23	.19	4.6	2.8	.29	.84	.11	.00	9.9	2.3	.00	.00	.00
24	.14	60	2.6	.35	.92	.12	.00	8.7	2.7	.00	.00	.00
25	.09	25	2.3	.37	.97	.12	.00	7.6	1.7	.00	.00	.00
26	.07	20	2.3	.37	.96	.12	.00	8.3	1.4	.00	.00	.00
27	.03	450	2.2	.40	.96	.13	.00	6.5	.97	.00	.00	.00
28	.02	200	1.6	.45	.93	.13	.00	5.3	.90	.00	.00	.00
29	.06	80	1.5	.45	---	.04	.00	4.7	.72	.00	.00	.00
30	.05	40	1.5	.46	---	.02	5.3	5.1	.70	.00	.00	.00
31	.02	---	1.5	.50	---	.04	---	9.8	---	.00	.00	---
TOTAL	80.76	972.48	230.6	21.49	57.64	9.59	5.82	811.43	212.69	4.67	.00	103.88
MEAN	2.61	32.4	7.44	.69	2.06	.31	.19	26.2	7.09	.15	.00	3.46
MAX	46	450	27	1.6	23	.93	5.3	202	18	.75	.00	94
MIN	.00	.04	1.5	.29	.56	.02	.00	.01	.70	.00	.00	.00
CFSM	.41	5.14	1.18	.11	.33	.05	.03	4.16	1.13	.02	.00	.55
IN.	.48	5.74	1.36	.13	.34	.06	.03	4.79	1.26	.03	.00	.61
AC-FT	160	1930	457	43	114	19	12	1610	422	9.3	.00	206

CAL YR 1985	TOTAL	2403.27	MEAN	6.58	MAX	450	MIN	.00	CFSM	1.04	IN.	14.19	AC-FT	4770
WTR YR 1986	TOTAL	2511.05	MEAN	6.88	MAX	450	MIN	.00	CFSM	1.09	IN.	14.83	AC-FT	4980

COLORADO RIVER BASIN

08158920 WILLIAMSON CREEK AT OAKHILL, TX--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Occasional discharge measurements: January 1974 to current year. Chemical and biochemical analyses: January 1974 to current year. Pesticide analyses: June 1978 to September 1986. Radiochemical analyses: April 1978.

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (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, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
NOV												
19...	1630	40	260	--	--	--	--	--	--	9.9	340000	46000
19...	1645	384	220	--	--	80	240	--	--	--	--	--
19...	1700	852	193	--	--	--	--	--	--	11	K130000	220000
19...	1715	814	217	7.80	--	--	--	--	--	--	--	--
19...	1730	573	230	--	--	70	350	--	--	--	--	--
19...	1745	349	223	--	--	--	--	--	--	9.0	K130000	380000
24...	0830	25	375	--	--	--	--	--	--	4.2	22000	26000
24...	0845	179	209	7.70	--	--	--	--	--	--	--	--
24...	0900	614	179	--	--	90	380	--	--	--	--	--
24...	0915	633	169	--	--	--	--	--	--	2.7	K79000	100000
24...	0930	461	185	--	--	100	350	--	--	--	--	--
24...	0945	315	258	--	--	--	--	--	--	3.1	K86000	100000
JAN												
27...	1010	0.37	658	8.20	8.0	5	0.40	14.1	121	0	K64	K56
FEB												
03...	1400	36	179	--	--	--	--	--	--	>9.1	K13000	K45000
03...	1415	195	121	--	--	70	410	--	--	--	--	--
03...	1430	203	131	--	--	--	--	--	--	7.6	K14000	50000
03...	1445	195	143	7.70	--	--	--	--	--	--	--	--
03...	1500	136	148	--	--	70	320	--	--	--	--	--
03...	1515	99	147	--	--	--	--	--	--	4.7	25000	61000
MAR												
28...	0855	0.14	690	7.50	18.0	10	0.60	6.4	68	0.4	K7	92
MAY												
01...	1020	70	267	6.90	20.0	70	250	7.8	87	6.4	50000	290000
09...	1945	154	262	--	--	100	130	--	--	13	22000	58000
09...	2000	782	153	--	--	--	--	--	--	--	--	--
09...	2015	766	124	7.80	--	--	--	--	--	--	--	--
09...	2030	1020	121	--	--	--	--	--	--	6.7	K250000	150000
09...	2045	1460	131	--	--	100	200	--	--	--	--	--
09...	2100	1870	138	--	--	--	--	--	--	15	100000	160000
JUN												
16...	1000	4.9	695	8.10	25.0	5	1.5	9.2	115	0.7	900	640
SEPT												
06...	0200	60	230	--	--	--	--	--	--	18	--	96000
06...	0230	497	128	--	--	--	--	--	--	10	98000	160000
06...	0300	301	123	--	--	--	--	--	--	--	--	--
06...	0330	111	156	--	--	--	240	--	--	--	--	--
06...	0400	68	241	--	--	--	--	--	--	4.0	59000	200000
06...	0430	30	118	--	--	--	--	--	--	--	--	--

COLORADO RIVER BASIN

08158920 WILLIAMSON CREEK AT OAK HILL, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	HARD- NESS (MG/L AS CACO3)	HARD- NESS NONCARB WH WAT TOT FLD 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)	ALKA- LINITY WH WAT TOTAL FIELD MG/L AS CACO3	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)
NOV												
19...	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--	--
19...	95	11	28	6.1	5.5	0.3	2.8	84	13	7.8	0.2	6.5
19...	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--
24...	110	18	31	6.7	4.6	0.2	2.0	87	17	7.0	0.1	3.9
24...	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--
JAN												
27...	360	58	98	28	22	0.5	1.0	302	40	33	0.3	1.8
FEB												
03...	--	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--	--
03...	65	9	20	3.7	3.3	0.2	2.3	56	11	4.7	<0.1	3.6
03...	--	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--	--
MAR												
28...	340	47	92	26	21	0.5	1.2	290	41	33	0.3	3.5
MAY												
01...	100	12	29	6.9	14	0.6	4.1	89	21	14	0.2	5.7
09...	--	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--	--
09...	50	4	16	2.5	2.4	0.2	2.8	46	10	3.7	<0.1	3.7
09...	--	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--	--
JUN												
16...	330	38	90	26	17	0.4	1.0	294	36	23	0.2	7.3
SEP												
06...	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--
DATE	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDEO (MG/L)	SOLIDS, VOLLA- TILE, SUS- PENDEO (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)	ARSENIC DIS- SOLVED (UG/L AS AS)
NOV												
19...	--	--	--	--	--	<0.01	0.30	0.04	1.7	1.7	0.29	47
19...	--	1330	148	--	--	<0.01	0.50	0.02	3.5	3.5	0.47	57
19...	--	--	--	--	--	<0.01	0.30	0.03	4.7	4.7	0.75	72
19...	120	--	--	0.28	0.02	0.30	0.06	4.0	4.1	0.74	40	--
19...	--	830	144	0.38	0.02	0.40	0.06	3.3	3.4	0.80	33	--
19...	--	--	--	0.48	0.02	0.50	0.06	2.5	2.6	0.54	23	--
24...	--	--	--	--	--	<0.01	0.20	0.02	2.5	2.5	0.64	28
24...	120	--	--	0.49	0.01	0.50	0.02	2.0	2.0	0.56	34	--
24...	--	644	136	--	--	<0.01	0.30	0.02	2.2	2.2	0.51	37
24...	--	--	--	--	--	<0.01	0.20	0.02	2.6	2.6	0.47	39
24...	--	536	80	--	--	<0.01	0.20	0.02	2.4	2.4	0.34	29
24...	--	--	--	--	--	<0.01	0.30	0.03	1.4	1.4	0.35	22
JAN												
27...	410	1	1	0.39	0.01	0.40	0.02	0.28	0.3	0.19	1.5	1
FEB												
03...	--	--	--	0.18	0.02	0.20	0.04	0.76	0.8	0.42	57	--
03...	--	1070	106	0.27	0.03	0.30	0.02	1.1	1.1	0.19	31	--
03...	--	--	--	0.26	0.04	0.30	0.03	0.87	0.9	0.18	25	--
03...	82	--	--	0.35	0.05	0.40	0.03	1.4	1.4	0.21	20	--
03...	--	634	62	0.37	0.03	0.40	0.03	1.6	1.6	0.18	21	--
03...	--	--	--	0.36	0.04	0.40	0.03	0.57	0.6	0.17	18	--
MAR												
28...	390	2	<1	--	<0.01	<0.10	0.03	0.27	0.3	0.21	3.6	--
MAY												
01...	150	480	72	0.55	0.05	0.60	0.87	1.6	2.5	0.97	23	--
09...	--	370	76	0.56	0.04	0.60	0.19	2.2	2.4	0.59	39	--
09...	--	--	--	0.47	0.03	0.50	0.16	3.2	3.4	0.69	44	1
09...	69	--	--	0.57	0.03	0.60	0.13	2.7	2.8	0.58	50	--
09...	--	--	--	0.56	0.04	0.60	0.14	1.8	1.9	0.41	34	--
09...	--	1040	176	0.47	0.03	0.50	0.12	2.0	2.1	0.26	38	--
09...	--	--	--	0.46	0.04	0.50	0.09	4.6	4.7	0.97	63	2
JUN												
16...	380	2	1	--	<0.01	0.40	0.04	0.26	0.3	0.15	2.7	--
SEP												
06...	--	--	--	0.18	0.02	0.20	0.07	1.6	1.7	0.85	46	--
06...	--	--	--	0.15	0.05	0.20	0.06	0.94	1.0	0.76	45	--
06...	--	--	--	--	--	--	--	--	--	--	--	2
06...	--	392	--	0.33	0.07	0.40	0.09	1.7	1.8	0.43	16	--
06...	--	--	--	0.65	0.05	0.70	0.06	1.1	1.2	0.44	14	--
06...	--	--	--	--	--	--	--	--	--	--	--	2

COLORADO RIVER BASIN

08158920 WILLIAMSON CREEK AT OAK HILL, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	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)	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											
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--
JAN											
27...	38	<1	<10	<1	<3	<1	2	<0.1	<1	<1	11
FEB											
03...	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--
MAR											
28...	--	--	--	--	--	--	--	--	--	--	--
MAY											
01...	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--
09...	15	<1	<10	6	42	4	1	<0.1	<1	<1	<3
09...	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--
09...	14	<1	<10	5	25	1	<1	<0.1	<1	<1	<3
JUN											
16...	--	--	--	--	--	--	--	--	--	--	--
SEP											
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	12	<1	<10	1	67	<5	3	<0.1	<1	<1	8
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	11	<1	<10	1	45	<5	2	<0.1	<1	<1	7

STORM RAINFALL AND RUNOFF RECORD

08158920

Williamson Creek at Oak Hill, Texas

Date and time	Rainfall at gage 1-WMS (inches)	Accumulated weighted rainfall (inches)	Discharge (cubic feet per second)	Accumulated runoff (inches)
Storm Of May 9-10, 1986				
May 9				
0000	0.0	0.0	0.0	0.0
1400	.01	.01	.0	.0
1830	.04	.04	.0	.0
1845	.14	.14	.0	.0
1900	.34	.34	.0	.0
1915	.50	.50	.4	.0000
1930	.50	.50	4.4	.0003
1945	.59	.59	154.0	.0098
2000	1.01	1.01	782.0	.0579
2015	1.57	1.57	766.0	.1050
2030	1.85	1.85	1020.0	.1677
2045	2.18	2.18	1460.0	.2575
2100	2.53	2.53	1870.0	.3724
2115	2.59	2.59	2140.0	.5040
2130	2.60	2.60	2220.0	.6405
2145	2.60	2.60	2070.0	.7678
2200	2.61	2.61	1760.0	.8761
2215	2.61	2.61	1330.0	.9578
2230	2.61	2.61	1020.0	1.0206
2245	2.61	2.61	830.0	1.0716
2300	2.61	2.61	676.0	1.1132
2315	2.61	2.61	540.0	1.1464
2330	2.61	2.61	392.0	1.1705
2345	2.61	2.61	284.0	1.1879
2400	2.61	2.61	221.0	1.1981
May 10				
0000	2.61	2.61	221.0	1.1981
0015	2.61	2.61	169.0	1.2119
0030	2.61	2.61	140.0	1.2205
0045	2.61	2.61	109.0	1.2440
0215	2.61	2.61	70.0	1.2956
0645	2.61	2.61	40.0	1.3485
1300	2.68	2.68	33.0	1.3901
1700	2.69	2.69	25.0	1.4116
2000	2.69	2.69	22.0	1.4306
2400	2.69	2.69	20.0	1.4404

STORM RAINFALL AND RUNOFF RECORD

08158920 Williamson Creek at Oak Hill, Texas

Date and time	Rainfall at gage 1-WMS (inches)	Accumulated weighted rainfall (inches)	Discharge (cubic feet per second)	Accumulated runoff (inches)
Storm of May 15-16, 1986				
May 15				
0000	0.0	0.0	3.9	0.0023
0445	.01	.01	3.0	.0041
0500	.06	.06	3.0	.0043
0515	.13	.13	4.9	.0046
0530	.21	.21	5.5	.0049
0545	.27	.27	8.8	.0055
0600	.28	.28	18.0	.0066
0615	.28	.28	20.0	.0078
0630	.29	.29	21.0	.0091
0645	.78	.78	56.0	.0126
0700	1.83	1.83	809.0	.0623
0715	2.03	2.03	1370.0	.1465
0730	2.04	2.04	1260.0	.2240
0745	2.04	2.04	1150.0	.2947
0800	2.04	2.04	964.0	.3540
0815	2.04	2.04	772.0	.4015
0830	2.04	2.04	623.0	.4398
0845	2.04	2.04	483.0	.4695
0900	2.04	2.04	349.0	.4910
0915	2.04	2.04	258.0	.5068
0930	2.04	2.04	187.0	.5183
0945	2.04	2.04	140.0	.5269
1000	2.04	2.04	109.0	.5336
1015	2.04	2.04	95.0	.5395
1030	2.04	2.04	88.0	.5449
1045	2.04	2.04	81.0	.5499
1100	2.05	2.05	78.0	.5547
1115	2.05	2.05	73.0	.5592
1130	2.05	2.05	70.0	.5699
1230	2.05	2.05	62.0	.5890
1400	2.05	2.05	52.0	.6337
1930	2.05	2.05	40.0	.6829
2400	2.05	2.05	35.0	.7217
May 16				
0000	2.05	2.05	35.0	.7217
0900	2.05	2.05	30.0	.7872
1230	2.05	2.05	29.0	.8407
2400	2.15	2.15	27.0	.8789

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 south-east of the intersection of Jimmy Clay and Nuckles Crossing Roads, and 5.9 mi south of the State Capitol in Austin.

DRAINAGE AREA.--27.6 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--November 1974 to September 1975 (periodic discharge measurements only), September 1975 to September 1986 (converted to low-flow partial-record station).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 493.88 ft above National Geodetic Vertical Datum of 1929 (city of Austin bench mark). Prior to Oct. 1, 1982, at datum 3.30 ft higher.

REMARKS.--Estimated daily discharges: Nov. 11-14. Records good except for period of estimated daily discharges, which are fair. No known regulation or diversion. There are three recording rain gages located in the watershed above station. This station is part of a hydrologic research project to study the rainfall-runoff relationships for the Austin urban-rural areas.

AVERAGE DISCHARGE.--11 years, 9.51 ft³/s (4.68 in/yr), 6,890 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,100 ft³/s June 11, 1981 (gage height, 20.55 ft), present datum; no flow Aug. 16, 1984.

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 greater than base discharge of 500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct. 15	0100	2,550	12.62	May 9	2315	*2,670	a*12.78
Oct. 19	1345	1,430	10.82	May 15	0900	1,210	10.28
Nov. 24	1015	561	8.16	May 17	1615	966	9.61
Nov. 27	0645	607	8.34	Sept. 6	0245	507	8.01
May 1	0045	595	8.28	Sept. 6	0945	1,240	10.36
May 1	1100	1,060	9.90				

a From floodmark.

Minimum daily discharge, 0.01 ft³/s Aug. 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	6.6	9.1	18	11	9.7	12	11	231	10	.56	.25	.97		
2	6.2	38	15	11	9.4	12	10	12	6.0	.53	.22	.33		
3	6.2	12	13	10	30	12	11	4.4	4.5	.46	.19	.29		
4	6.3	9.5	13	11	25	12	11	3.2	12	.46	.23	.30		
5	6.7	8.7	12	11	14	12	11	3.7	5.3	.37	.41	.30		
6	6.6	10	11	10	12	12	11	3.6	2.4	.36	.12	280		
7	7.0	12	12	10	10	12	5.7	2.9	3.6	.43	.14	7.1		
8	6.9	11	12	14	12	12	5.4	3.0	7.5	.37	.19	2.3		
9	6.9	11	12	13	13	12	12	267	7.3	.41	.20	1.9		
10	7.2	12	24	11	11	12	13	377	4.0	.34	.19	2.4		
11	6.9	12	46	9.7	9.3	12	12	14	33	.33	.24	1.2		
12	6.6	12	16	8.9	9.1	13	12	5.0	5.1	.32	.12	1.1		
13	6.0	12	13	8.6	9.0	11	11	3.4	2.2	.31	.11	1.3		
14	46	12	13	8.5	9.0	11	11	1.6	1.6	.29	.10	1.9		
15	293	12	12	9.0	9.3	12	10	235	1.4	.29	.09	.93		
16	15	14	12	9.0	9.3	13	10	22	1.2	.40	.10	.74		
17	21	14	12	8.2	9.4	13	10	221	19	.50	.09	.65		
18	15	12	12	9.0	8.8	14	11	39	3.3	.54	.07	.69		
19	273	15	11	8.8	8.9	13	11	14	2.1	.54	.04	.80		
20	34	29	11	8.8	8.9	12	10	6.7	1.4	.55	.02	.76		
21	21	12	9.9	8.7	8.5	12	10	3.7	1.6	.54	.01	.70		
22	17	9.7	12	8.9	9.0	11	4.0	2.7	1.4	.51	.33	1.8		
23	11	11	12	8.6	8.9	11	3.0	2.4	1.1	.48	.41	.71		
24	9.5	117	11	8.4	9.0	11	2.9	2.1	1.1	.48	2.3	.41		
25	8.5	56	10	9.3	11	11	3.2	2.3	.92	.45	.55	.58		
26	8.5	20	11	9.1	12	11	3.4	2.9	.85	.37	.31	.44		
27	8.2	282	11	8.8	12	11	3.5	2.7	.78	.36	.33	.33		
28	8.3	52	11	8.8	11	11	3.4	1.9	.72	.33	.29	.34		
29	10	31	11	9.1	---	10	3.3	1.9	.67	.32	.29	.37		
30	10	24	11	9.1	---	10	26	3.4	.62	.29	.25	.36		
31	8.7	---	11	9.2	---	11	---	8.1	---	.26	.23	---		
TOTAL	903.8	892.0	420.9	298.5	318.5	364	271.8	1503.6	142.66	12.75	8.42	312.00		
MEAN	29.2	29.7	13.6	9.63	11.4	11.7	9.06	48.5	4.76	.41	.27	10.4		
MAX	293	282	46	14	30	14	26	377	33	.56	2.3	280		
MIN	6.0	8.7	9.9	8.2	8.5	10	2.9	1.6	.62	.26	.01	.29		
CFSM	1.06	1.08	.49	.35	.41	.42	.33	1.76	.17	.01	.01	.38		
IN.	1.22	1.20	.57	.40	.43	.49	.37	2.03	.19	.02	.01	.42		
AC-FT	1790	1770	835	592	632	722	539	2980	283	25	17	619		
CAL YR 1985	TOTAL	5305.18	MEAN	14.5	MAX	338	MIN	.23	CFSM	.53	IN.	7.15	AC-FT	10520
WTR YR 1986	TOTAL	5448.93	MEAN	14.9	MAX	377	MIN	.01	CFSM	.54	IN.	7.34	AC-FT	10810

COLORADO RIVER BASIN

08158970 WILLIAMSON CREEK AT JIMMY CLAY ROAD, AUSTIN, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical and biochemical analyses: January 1975 to current year. Pesticide analyses: January 1975 to September 1986. Radiochemical analyses: January 1980.

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN DEMAND, BIO-CHEMICAL, 5 DAY (MG/L)	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML)	STREPTOCOCCI, KF AGAR (COLS. PER 100 ML)	
JAN 29...	0730	7.7	715	7.60	17.0	7	2.9	7.5	80	1.4	>110	K52
APR 09...	1110	11	655	7.00	22.5	10	2.1	9.2	107	1.4	100	190
JUN 11...	1215	106	200	7.80	24.0	50	550	7.6	92	6.6	66000	74000
JUN 11...	1400	77	238	7.70	25.0	50	190	7.4	91	4.8	K100000	66000
JUN 23...	1130	1.0	632	7.60	25.5	5	1.4	7.1	88	0.4	580	380
AUG 21...	0840	0.01	883	7.70	25.0	5	--	5.8	72	0.4	680	1600
SEP 06...	1220	405	115	7.30	24.0	160	550	--	--	2.7	200000	150000

DATE	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	POTASSIUM DIS-SOLVED (MG/L AS K)	ALKALINITY TOTAL FIELD (MG/L AS CaCO3)	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)
JAN 29...	200	92	54	15	61	2	8.9	105	85	74	0.7	10
APR 09...	140	76	34	14	65	2	11	67	63	72	0.9	10
JUN 11...	85	15	30	2.4	5.3	0.3	2.4	70	12	7.6	0.3	5.4
JUN 11...	99	14	35	2.7	7.5	0.3	3.2	85	15	11	0.2	5.6
JUN 23...	280	43	93	11	27	0.7	3.2	235	36	36	0.3	11
AUG 21...	320	30	98	18	51	1	4.1	289	40	71	0.4	12
SEP 06...	52	4	19	1.1	2.4	0.2	2.6	48	10	3.1	0.2	4.9

DATE	SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUSPENDED (MG/L)	SOLIDS, VOLATILE, SUSPENDED (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)	ARSENIC DIS-SOLVED (UG/L AS AS)
JAN 29...	370	2	1	16.9	0.08	17.0	0.25	1.5	1.8	6.70	6.0	2
APR 09...	310	6	3	16.0	0.04	16.0	0.09	1.6	1.7	9.00	10	--
JUN 11...	110	1190	125	0.38	0.02	0.40	0.07	0.93	1.0	0.63	30	2
JUN 11...	130	388	56	0.36	0.04	0.40	0.06	4.1	4.2	0.31	13	1
JUN 23...	360	3	2	0.87	0.03	0.90	0.05	0.35	0.4	0.18	2.7	--
AUG 21...	470	--	--	--	<0.01	1.40	0.04	0.36	0.4	0.28	5.7	--
SEP 06...	72	1210	96	0.41	0.09	0.50	0.10	0.6	0.7	0.50	9.8	2

DATE	BARIUM, DIS-SOLVED (UG/L AS Ba)	CADMIUM, DIS-SOLVED (UG/L AS Cd)	CHROMIUM, DIS-SOLVED (UG/L AS Cr)	COPPER, DIS-SOLVED (UG/L AS Cu)	IRON, DIS-SOLVED (UG/L AS Fe)	LEAD, DIS-SOLVED (UG/L AS Pb)	MANGANESE, DIS-SOLVED (UG/L AS Mn)	MERCURY, DIS-SOLVED (UG/L AS Hg)	SELENIUM, DIS-SOLVED (UG/L AS Se)	SILVER, DIS-SOLVED (UG/L AS Ag)	ZINC, DIS-SOLVED (UG/L AS Zn)
JAN 29...	40	<1	<10	<1	160	<1	45	<0.1	<1	<1	72
APR 09...	--	--	--	--	--	--	--	--	--	--	--
JUN 11...	32	<1	<10	<1	84	<1	<1	<0.1	<1	<1	4
JUN 11...	37	<1	<10	1	53	<1	2	<0.1	<1	<1	8
JUN 23...	--	--	--	--	--	--	--	--	--	--	--
AUG 21...	--	--	--	--	--	--	--	--	--	--	--
SEP 06...	15	<1	<10	2	54	<5	10	<0.1	<1	<1	6

STORM RAINFALL AND RUNOFF RECORD

08158970 Williamson Creek at Jimmy Clay Road, Austin, Texas

Date and time	Rainfall at gage 1-WMS (inches)	Rainfall at gage 2-WMS (inches)	Accumulated weighted rainfall (inches)	Discharge (cubic feet per second)	Accumulated runoff (inches)
Storm Of November 26-28, 1985					
Nov. 26					
0000	0.0	0.0	0.0	28.0	0.0037
0445	.0	.01	.01	21.0	.0105
1130	.0	.06	.04	21.0	.0148
1200	.0	.45	.27	21.0	.0154
1230	.0	.68	.41	21.0	.0160
1300	.0	.78	.48	21.0	.0164
1315	.0	.86	.52	21.0	.0170
1400	.03	.91	.57	20.0	.0180
1500	.05	1.04	.65	19.0	.0196
1700	.05	1.41	.88	19.0	.0221
1945	.05	1.59	.99	18.0	.0236
2000	.05	1.65	1.03	18.0	.0248
2200	.05	1.85	1.15	18.0	.0265
2330	.07	1.86	1.16	18.0	.0274
2345	.16	1.86	1.20	18.0	.0277
2400	.31	1.86	1.26	18.0	.0279
Nov. 27					
0000	.31	1.86	1.26	18.0	.0279
0030	.56	1.86	1.35	23.0	.0285
0045	.66	1.86	1.39	27.0	.0289
0100	.77	1.86	1.43	27.0	.0293
0115	.88	1.86	1.48	36.0	.0298
0130	.92	1.86	1.49	57.0	.0306
0145	.93	1.86	1.50	82.0	.0317
0200	.94	1.86	1.50	96.0	.0344
0245	1.02	1.86	1.53	169.0	.0439
0400	1.34	1.86	1.66	284.0	.0559
0415	1.39	1.86	1.68	284.0	.0599
0430	1.41	1.86	1.68	281.0	.0638
0445	1.45	1.86	1.70	266.0	.0676
0500	1.51	1.86	1.72	195.0	.0758
0615	1.68	1.86	1.79	507.0	.1007
0645	1.70	1.86	1.80	607.0	.1135
0700	1.73	1.86	1.81	574.0	.1255
0730	1.79	1.86	1.83	563.0	.1413
0800	1.79	1.86	1.83	549.0	.1683
0915	1.99	1.86	1.91	489.0	.1992
1015	2.11	1.86	1.96	535.0	.2180
1030	2.13	1.86	1.97	526.0	.2254

STORM RAINFALL AND RUNOFF RECORD

08158970

Williamson Creek at Jimmy Clay Road, Austin, Texas

Date and time	Rainfall at gage 1-WMS (inches)	Rainfall at gage 2-WMS (inches)	Accumulated weighted rainfall (inches)	Discharge (cubic feet per second)	Accumulated runoff (inches)
Storm Of November 26-28, 1985--Continued					
Nov. 27					
1045	2.13	1.86	1.97	539.0	.2329
1100	2.14	1.86	1.97	532.0	.2665
1300	2.16	1.86	1.98	415.0	.3248
1600	2.16	1.86	1.98	277.0	.3695
1845	2.16	1.86	1.98	40.0	.3891
2100	2.16	1.87	1.98	100.0	.4039
2400	2.16	1.87	1.98	80.0	.4173
Nov. 28					
0000	2.16	1.87	1.98	80.0	.4173
0600	2.16	1.87	1.98	57.0	.4433
1200	2.17	1.87	1.99	50.0	.4686
2400	2.18	1.87	1.99	39.0	.4817

STORM RAINFALL AND RUNOFF RECORD

08158970

Williamson Creek at Jimmy Clay Road, Austin, Texas

Date and time	Rainfall at gage 1-WMS (inches)	Rainfall at gage 2-WMS (inches)	Accumulated weighted rainfall (inches)	Discharge (cubic feet per second)	Accumulated runoff (inches)
Storm Of April 30-May 1, 1986					
Apr. 30					
0000	0.0	0.0	0.0	2.4	0.0002
0215	.05	.0	.02	1.4	.0009
1915	.06	.01	.03	.8	.0013
1930	.06	.23	.16	.8	.0013
1945	.06	.93	.59	.8	.0013
2000	.06	1.44	.90	.8	.0013
2015	.14	1.56	1.01	.8	.0013
2030	.45	1.74	1.24	.8	.0014
2045	.74	1.74	1.35	.8	.0014
2100	.77	1.76	1.37	.8	.0014
2145	.80	1.78	1.40	5.1	.0016
2230	.80	1.79	1.40	13.0	.0020
2245	.80	1.79	1.40	126.0	.0055
2330	.80	1.79	1.40	565.0	.0214
2345	.80	1.79	1.40	574.0	.0294
2400	.80	1.79	1.40	535.0	.5037
May 1					
0000	.80	1.79	1.40	535.0	.5037
0030	.80	1.79	1.40	577.0	.6721
0045	.80	1.79	1.40	595.0	.6679
0100	.80	1.79	1.40	561.0	.6522
0145	.80	1.79	1.40	252.0	.6433
0215	.80	1.79	1.40	146.0	.6382
0300	.80	1.79	1.40	90.0	.6325
0430	.82	1.80	1.42	53.0	.6255
0745	2.96	2.74	2.83	25.0	.6230
0800	2.98	2.74	2.83	27.0	.6223
0845	3.05	2.77	2.88	73.0	.6202
0900	3.06	2.79	2.90	163.0	.6111
1045	3.11	2.82	2.93	976.0	.5563
1100	3.11	2.82	2.93	1060.0	.5414
1115	3.11	2.82	2.93	1060.0	.5265
1130	3.11	2.82	2.93	957.0	.5064
1200	3.12	2.82	2.94	683.0	.4872
1230	3.12	2.82	2.94	709.0	.4673
1300	3.12	2.85	2.96	651.0	.4353
1415	3.12	2.85	2.96	276.0	.4140
1545	3.13	2.85	2.96	128.0	.4005
1800	3.13	2.85	2.96	71.0	.3841
2400	3.13	2.85	2.96	27.0	.3795

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 downstream from Williamson Creek, 3.2 mi southwest of Del Valle, and 7.5 mi southeast of the State Capitol Building in Austin.

DRAINAGE AREA.--321 mi².

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 State Department of Highways and Public Transportation datum. May 15, 1924, to Mar. 15, 1930, nonrecording gage at highway bridge 1,700 ft upstream at 6.42-foot higher datum.

REMARKS.--Estimated daily discharges: Nov. 24-27, and May 4-13. Records fair except for estimated daily discharges, which are poor. Flow is slightly regulated by several small ponds on main channel and tributaries above station. There are eleven recording rain gages located in the watershed.

AVERAGE DISCHARGE.--15 years (water years 1925-29, 1977-86), 79.2 ft³/s (3.35 in/yr), 57,380 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 76,000 ft³/s May 28, 1929 (gage height, 30.5 ft), present datum; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1869 occurred about July 3, 1869, stage about 38 ft from newspaper accounts, and Sept. 9, 1921, stage 38.0 ft, from floodmark, present site and datum.

EXTREMES FOR CURRENT YEAR.--Peak discharge greater than base discharge of 2,500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct. 15	0215	3,800	a11.98	May 10	1200	*7,680	a*17.89
Oct. 19	1500	2,810	10.47	May 18	0545	2,850	11.56
Nov. 24	1300	3,870	a12.1	Sept. 6	1200	4,340	14.42
Nov. 27	1545	3,960	12.23				

a From floodmark.

Minimum discharge, no flow on several days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	9.7	13	354	73	21	24	15	536	99	34	.00	2.6		
2	8.1	58	267	72	20	24	15	43	84	28	.00	3.4		
3	7.0	23	234	70	47	23	15	12	69	24	.00	.33		
4	6.5	17	220	67	369	32	16	8.7	81	20	.00	.00		
5	5.9	15	194	58	140	29	16	7.2	89	17	.00	.00		
6	5.4	14	172	54	98	22	14	5.8	67	15	.00	1190		
7	5.7	15	160	51	82	21	14	4.9	55	14	.00	41		
8	6.1	15	149	55	75	20	12	4.5	87	13	.00	11		
9	6.3	15	137	59	70	20	14	4.1	111	11	.00	7.0		
10	6.6	15	141	60	69	20	17	2560	95	11	.00	7.0		
11	6.8	39	705	56	69	19	17	384	171	9.6	.00	5.2		
12	6.6	64	509	50	67	20	16	168	148	8.6	.00	5.2		
13	6.0	26	289	46	64	18	16	91	586	8.1	.00	11		
14	5.9	19	237	41	63	17	15	66	155	7.7	.00	19		
15	641	15	215	39	61	19	15	421	107	7.2	.00	13		
16	36	15	201	22	57	19	14	103	89	7.2	.00	9.5		
17	27	18	187	13	55	19	14	646	682	7.2	.00	7.8		
18	29	16	169	26	50	20	14	1070	204	6.1	.00	6.7		
19	623	15	157	34	47	18	14	282	189	5.4	.00	5.8		
20	166	40	146	29	42	16	14	185	137	5.0	.00	5.7		
21	65	18	138	27	35	16	14	139	110	4.6	.00	6.0		
22	46	15	132	24	32	15	10	109	96	4.4	.00	8.8		
23	24	14	125	21	32	15	6.8	91	87	3.7	.00	26		
24	17	1300	115	19	31	15	6.8	76	70	3.7	.08	14		
25	15	554	106	19	31	15	6.8	70	62	3.7	4.1	8.5		
26	15	244	98	20	31	16	6.8	66	55	3.5	1.3	6.9		
27	14	1970	97	20	29	16	6.6	88	50	2.8	.19	5.5		
28	13	1260	93	20	25	16	5.8	80	45	1.9	.00	5.3		
29	13	653	87	20	---	15	5.8	68	38	.17	.00	4.1		
30	14	445	81	21	---	15	11	60	36	.01	.00	4.1		
31	14	---	76	22	---	15	---	77	---	.00	.00	---		
TOTAL	1864.6	6940	5991	1208	1812	589	377.4	7526.2	3954	287.58	5.67	1440.43		
MEAN	60.1	231	193	39.0	64.7	19.0	12.6	243	132	9.28	.18	48.0		
MAX	641	1970	705	73	369	32	17	2560	682	34	4.1	1190		
MIN	5.4	13	76	13	20	15	5.8	4.1	36	.00	.00	.00		
CFSM	.19	.72	.60	.12	.20	.06	.04	.76	.41	.03	.00	.15		
IN.	.22	.80	.69	.14	.21	.07	.04	.87	.46	.03	.00	.17		
AC-FT	3700	13770	11880	2400	3590	1170	749	14930	7840	570	11	2860		
CAL YR 1985	TOTAL	47494.26	MEAN	130	MAX	3930	MIN	.00	CFSM	.40	IN.	5.50	AC-FT	94200
WTR YR 1986	TOTAL	31995.88	MEAN	87.7	MAX	2560	MIN	.00	CFSM	.27	IN.	3.71	AC-FT	63460

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. Pesticide analyses: October 1976 to September 1986. Sediment analyses: October 1976 to September 1982. Radiochemical analyses: January 1980.

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (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)	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML)	STREPTOCOCCI, FECAL, KF AGAR (COLS. PER 100 ML)
JAN 29...	0815	7.2	617	8.80	12.5	10	2.2	10.1	96	1.2	56	47
APR 09...	1025	16	639	8.00	22.0	10	0.70	9.5	109	0.7	56	4600
MAY 10...	1335	3760	190	7.80	--	140	200	--	--	5.6	25000	100000
JUN 17...	1030	1230	242	7.90	25.0	60	130	8.1	100	3.2	22000	29000
18...	0655	197	232	7.80	24.5	60	37	8.2	100	1.6	8800	K4400
24...	0900	63	440	7.80	28.0	3	2.5	6.9	89	0.4	K80	140
SEP 06...	1140	4360	159	7.80	24.0	--	820	--	--	5.0	84000	100000

DATE	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	POTASSIUM, DIS-SOLVED (MG/L AS K)	ALKALINITY, WH WAT TOTAL FIELD (MG/L AS CaCO3)	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)
JAN 29...	230	65	69	15	41	1	4.4	169	57	45	0.40	4.7
APR 09...	190	59	54	14	53	2	7.1	134	65	61	0.60	11
MAY 10...	89	12	29	4.0	3.5	0.2	3.4	77	13	4.5	0.10	8.7
JUN 17...	110	18	37	5.1	4.4	0.2	3.4	95	15	6.5	0.10	10
18...	100	5	34	4.2	5.5	0.2	3.3	97	15	6.3	0.10	10
24...	210	23	64	13	10	0.3	1.9	190	22	14	0.20	9.8
SEP 06...	66	9	23	2.1	5.7	0.3	4.0	57	17	5.7	0.20	7.9

DATE	SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUSPENDED (MG/L)	SOLIDS, VOLATILE, SUSPENDED (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)	ARSENIC, DIS-SOLVED (UG/L AS AS)
JAN 29...	340	4	3	6.45	0.050	6.50	0.040	0.86	0.90	2.60	3.0	1
APR 09...	350	4	4	9.66	0.140	9.80	0.020	0.78	0.80	4.80	10	--
MAY 10...	110	920	148	0.460	0.040	0.500	0.080	3.0	3.1	0.280	34	<1
JUN 17...	140	333	57	0.370	0.030	0.400	0.040	0.86	0.90	0.300	17	2
18...	140	43	12	0.380	0.020	0.400	0.070	0.63	0.70	0.110	8.3	1
24...	250	31	11	--	<0.010	0.300	0.030	0.27	0.30	0.030	2.6	--
SEP 06...	100	--	--	0.600	0.100	0.700	0.120	1.2	1.3	0.520	52	2

DATE	BIARIUM, DIS-SOLVED (UG/L AS Ba)	CADMIUM, DIS-SOLVED (UG/L AS Cd)	CHROMIUM, DIS-SOLVED (UG/L AS Cr)	COPPER, DIS-SOLVED (UG/L AS Cu)	IRON, DIS-SOLVED (UG/L AS Fe)	LEAD, DIS-SOLVED (UG/L AS Pb)	MANGANESE, DIS-SOLVED (UG/L AS Mn)	MERCURY, DIS-SOLVED (UG/L AS Hg)	SELENIUM, DIS-SOLVED (UG/L AS Se)	SILVER, DIS-SOLVED (UG/L AS Ag)	ZINC, DIS-SOLVED (UG/L AS Zn)
JAN 29...	43	<1	<10	<1	15	<1	5	<0.1	<1	<1	24
APR 09...	--	--	--	--	--	--	--	--	--	--	--
MAY 10...	17	<1	<10	4	130	1	2	<0.1	<1	<1	3
JUN 17...	23	<1	<10	2	79	<5	1	<0.1	<1	<1	5
18...	23	<1	<10	2	91	<5	2	<0.1	<1	<1	5
24...	--	--	--	--	--	--	--	--	--	--	--
SEP 06...	21	<1	<10	<1	53	<5	6	0.1	<1	<1	4

S U P P L E M E N T A L D A T A

Table 3.--Daily rainfall for gages north of the Colorado River
1986 water year

[BUL, Bull Creek; SH Shoal Creek; B, Boggy Creek; WLN, Walnut Creek;
 MTOT, monthly totals; CTOT, Calendar year totals; WTOT, water year totals]

Month	Gage name							
	1-BUL	2-SHL	1-BOG	1-WLN	2-WLN	3-WLN	4-WLN	5-WLN
Oct.								
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
7	.00	.00	.00	.00	.00	.00	.00	.01
9	.02	.00	.00	.03	.00	.00	.07	.02
10	.98	.00	.00	.00	.04	.02	.07	.00
11	.00	.00	.00	.03	.00	.00	.00	.00
14	.77	1.36	2.82	.49	.76	2.18	1.65	a/ .18
15	.28	.17	.78	.48	.75	.72	.66	a/ .72
16	.00	.00	.00	.01	.01	.00	.00	.00
17	.27	.21	.13	.05	.26	.12	.11	.10
18	.30	.10	.08	.04	.11	.01	.18	.03
19	2.88	1.01	1.68	3.10	1.99	1.94	1.39	.93
20	.01	.00	.01	.02	.00	.01	.01	.02
21	.04	.16	.21	.21	.14	.17	.14	.00
22	.00	.02	.03	.00	.01	.04	.01	.02
23	.00	.00	.00	.01	.01	.00	.01	.01
24	.00	.00	.00	.00	.01	.00	.01	.01
28	.00	.00	.00	.00	.01	.00	.01	.00
29	.00	.07	.05	.10	.05	.04	.05	.04
30	.00	.01	.01	.00	.01	.00	.01	.01
31	.00	.00	.00	.02	.00	.00	.00	.00
MTOT	5.55	3.11	5.80	4.59	4.16	5.25	4.38	4.11

See footnote at end of table.

Table 3.--Daily rainfall for gages north of the Colorado River
1986 water year--Continued

Month	Gage name							
	1-BUL	2-SHL	1-BOG	1-WLN	2-WLN	3-WLN	4-WLN	5-WLN
Nov.								
1	0.00	0.56	0.38	0.57	0.49	0.32	0.47	0.37
2	.00	.41	.23	.58	.55	.31	.45	.35
3	.00	.01	.00	.03	.01	.00	.00	.02
8	.00	.00	.00	.00	.01	.00	.01	.01
9	.00	.00	.00	.00	.01	.00	.00	.00
10	.00	.03	.05	.00	.03	.01	.09	.09
11	.00	.24	.09	.00	.39	.06	.13	.08
12	.00	.06	.04	.00	.04	.01	.06	.06
13	.00	.01	.00	.00	.00	.00	.00	.00
15	.00	.16	.22	.00	.21	.11	.15	.26
16	.00	.36	.23	.00	.67	.30	.57	.37
17	.00	.03	.07	.00	.06	.04	.05	.08
18	.00	.01	.01	.00	.02	.02	.02	.01
19	.00	.86	.47	.00	.33	.14	.43	.25
23	.00	.24	.21	.00	.37	.32	.37	.38
24	.00	1.08	1.06	.00	1.14	.60	.86	.71
25	.00	.05	.24	.00	.04	.11	.09	.20
26	.00	.04	.01	.00	.03	.00	.02	.01
27	.00	.90	1.56	.00	3.81	1.81	1.32	1.76
29	.01	.01	.01	.01	.00	.00	.01	.00
30	.03	.03	.03	.03	.04	.05	.03	.04
MTOT	0.04	5.09	4.91	1.22	8.25	4.21	5.13	5.04
Dec.								
2	0.00	0.00	0.00	0.00	0.18	0.00	0.00	0.00
3	.00	.00	.01	.00	.00	.00	.00	.00
4	.01	.00	.02	.02	.01	.00	.04	.05
5	.00	.00	.00	.00	.00	.01	.00	.00
9	.01	.00	.00	.00	.00	.00	.00	.00
10	.86	1.04	.96	1.31	1.86	1.21	1.21	1.17
11	.27	.13	.08	.18	.30	.07	.09	.06
12	.00	.01	.00	.02	.00	.00	.01	.00
13	.00	.00	.00	.02	.01	.01	.00	.02
14	.00	.00	.00	.03	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	.01
30	.00	.00	.00	.00	.00	.00	.01	.00
MTOT	1.15	1.18	1.07	1.58	2.36	1.30	1.36	1.31
CTOT	31.87	29.28	32.34	29.42	38.31	32.09	36.20	34.48

See footnote at end of table.

Table 3.--Daily rainfall for gages north of the Colorado River
1986 water year--Continued

Month	Gage name							
	1-BUL	2-SHL	1-BOG	1-WLN	2-WLN	3-WLN	4-WLN	5-WLN
Jan.								
1	0.04	0.02	0.06	0.00	0.04	0.03	0.05	0.01
2	.00	.02	.01	.01	.01	.00	.01	.03
5	.00	.00	.00	.00	.01	.00	.00	.00
7	.10	.08	.09	.06	.09	.06	.09	.08
8	.08	.10	.14	.03	.10	.11	.15	.20
9	.02	.08	.04	.10	.03	.01	.08	.03
10	.01	.02	.00	.10	.00	.03	.01	.02
11	.00	.00	.00	.00	.01	.00	.00	.00
12	.00	.00	.01	.00	.00	.00	.00	.00
16	.00	.00	.06	.00	.05	.16	.03	.09
17	.00	.00	.03	.00	.01	.04	.02	.02
18	.00	.00	.00	.00	.01	.00	.00	.01
19	.00	.00	.00	.00	.00	.00	.00	.01
28	.00	.00	.00	.00	.00	.00	.00	.01
MTOT	0.25	0.32	0.44	0.30	0.36	0.44	0.44	0.51
Feb.								
1	0.00	0.00	0.00	0.00	0.03	0.00	0.02	0.00
2	.01	.00	.00	.00	.01	.00	.00	.00
3	2.50	1.32	.91	2.59	3.22	.90	1.10	.93
4	.01	.02	.02	.03	.06	.02	.02	.02
5	.02	.00	.00	.00	.00	.00	.00	.00
8	.01	.00	.04	.00	.00	.04	.00	.03
9	.11	.05	.12	.11	.12	.09	.06	.06
10	.01	.01	.01	.03	.01	.00	.01	.01
11	.00	.01	.02	.01	.01	.00	.01	.02
12	.00	.00	.00	.03	.00	.01	.00	.00
13	.00	.00	.02	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.01	.00	.01	.02
15	.00	.00	.00	.00	.00	.00	.01	.00
19	.00	.00	.00	.00	.01	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	.01
24	.00	.01	.00	.00	.00	.00	.00	.01
25	.00	.00	.00	.00	.00	.00	.00	.01
26	.00	.00	.00	.00	.00	.01	.00	.00
MTOT	2.67	1.42	1.14	2.80	3.48	1.07	1.24	1.12

See footnote at end of table.

Table 3.--Daily rainfall for gages north of the Colorado River
1986 water year--Continued

Month	Gage name							
	1-BUL	2-SHL	1-BOG	1-WLN	2-WLN	3-WLN	4-WLN	5-WLN
Mar.								
3	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	.00	.00	.00	.00	.00	.01	.00	.00
11	.19	.15	.18	.03	.13	.22	.28	.26
12	.00	.01	.01	.04	.01	.00	.00	.00
14	.00	.00	.01	.01	.01	.00	.00	.00
15	.00	.03	.07	.03	.02	.07	.06	.06
18	.00	.24	.15	.33	.27	.10	.12	.15
MTOT	0.21	0.43	0.42	0.44	0.44	0.40	0.46	0.47
Apr.								
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
3	<u>a/</u> .05	.04	.02	<u>a/</u> .03	.03	.01	.04	.00
4	<u>a/</u> .03	.02	.02	<u>a/</u> .01	.01	.01	.03	.03
5	.00	.00	.00	<u>a/</u> .01	.01	.00	.00	.00
7	.00	.00	.01	.00	.00	.00	.01	.01
8	<u>a/</u> .10	.07	.33	.00	.00	.03	.03	.04
10	.00	.00	.00	<u>a/</u> .06	.06	.00	.00	.00
11	<u>a/</u> .02	.01	.03	<u>a/</u> .02	.02	.01	.03	.01
12	.00	.00	.00	.00	.00	.00	.00	.01
17	.00	.00	.01	<u>a/</u> .01	.01	.00	.00	.00
18	<u>a/</u> .02	.01	.01	<u>a/</u> .06	.06	.00	.01	.00
19	<u>a/</u> .29	.17	.04	<u>a/</u> .01	.01	.13	.09	.17
20	.00	.00	.00	.00	.00	.01	.01	.01
29	.00	.00	.00	.00	.00	.02	.01	.00
30	<u>a/</u> 3.40	2.35	.96	<u>a/</u> .41	1.48	1.98	2.73	1.89
MTOT	3.91	2.67	1.43	1.62	1.69	2.20	2.99	2.18

See footnote at end of table.

Table 3.--Daily rainfall for gages north of the Colorado River
1986 water year--Continued

Month	Gage name							
	1-BUL	2-SHL	1-BOG	1-WLN	2-WLN	3-WLN	4-WLN	5-WLN
May								
1	<u>a/</u> 1.45	1.02	2.05	<u>a/</u> 2.67	2.73	1.20	1.14	1.18
2	.16	.11	.04	<u>a/</u> .14	.14	.05	.05	.09
3	.03	.02	.00	.00	.00	.01	.02	.02
4	.00	.00	.02	<u>a/</u> .02	.02	.00	.02	.00
5	.02	.01	.02	<u>a/</u> .02	.02	.02	.04	.03
7	.00	.00	.00	<u>a/</u> .01	.01	.00	.00	.00
8	.04	.03	.05	<u>a/</u> .10	.10	.08	.08	.07
9	3.16	2.19	1.98	<u>a/</u> 2.39	2.46	<u>a/</u> 1.60	<u>a/</u> .04	<u>a/</u> 1.78
10	.06	.04	.10	<u>a/</u> .07	.08	.00	.00	.02
11	.00	.00	.10	.00	.00	.00	.00	.00
12	.00	.00	.01	.00	.00	.00	.00	.00
14	<u>a/</u> .06	.06	.12	.00	.21	.05	.08	.07
15	<u>a/</u> .89	.85	1.42	.00	2.55	.85	.95	.89
16	<u>a/</u> .10	.10	.10	.00	.12	.07	.10	.10
17	<u>a/</u> 2.09	2.03	1.28	.00	2.26	1.31	<u>a/</u> 1.55	1.39
18	<u>a/</u> .01	.01	.00	.00	.01	.02	.01	.02
19	<u>a/</u> .01	.01	.01	.00	.00	.00	.00	.00
20	.01	.00	.00	.00	.00	.00	.00	.00
24	.07	.00	.00	.00	.00	.00	.00	.00
25	1.65	1.08	.05	1.02	.87	.55	1.05	.50
26	.09	.07	.11	.09	.07	.04	.06	.05
27	.00	.00	.01	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	.00	.01	.00	.00
30	.17	.03	.03	.01	.00	.00	.00	.00
31	.62	.89	.38	.51	.59	.15	.44	.37
MTOT	10.69	8.55	7.88	7.05	12.24	6.01	5.63	6.58

See footnote at end of table.

Table 3.--Daily rainfall for gages north of the Colorado River
1986 water year--Continued

Month	Gage name							
	1-BUL	2-SHL	1-BOG	1-WLN	2-WLN	3-WLN	4-WLN	5-WLN
June								
1	0.45	0.58	0.62	0.31	0.74	0.49	0.15	0.28
2	.91	.49	.36	.77	1.71	.28	.57	.35
3	.02	.01	.00	.08	.02	.00	.01	.02
4	.07	.18	.26	.12	.09	.14	.13	.17
5	.14	.06	.00	.18	.04	.02	.10	.02
7	.06	.06	.09	.99	.04	.03	.03	.04
8	.01	.01	.00	.02	.01	.00	.01	.02
9	.17	.37	.13	.06	.02	.04	.06	.09
11	.65	.80	a/.20	1.89	1.05	.43	1.02	.35
12	.00	.00	.00	.00	.00	.00	.04	.00
16	.78	.26	.00	.15	.47	.12	.47	.13
17	.54	.92	.00	.96	.61	.00	.61	.57
18	.02	.02	.00	.01	.05	.45	.00	.00
19	.00	.53	.00	.61	.05	.00	.00	.00
22	.00	.00	.00	.00	.00	.01	.00	.00
26	.01	.00	.00	.00	.00	.00	.01	.00
27	.00	.00	.01	.00	.00	.00	.00	.00
MTOT	3.83	4.29	1.67	6.15	4.90	2.01	3.21	2.04

See footnote at end of table.

Table 3.--Daily rainfall for gages north of the Colorado River
1986 water year--Continued

Month	Gage name							
	1-BUL	2-SHL	1-BOG	1-WLN	2-WLN	3-WLN	4-WLN	5-WLN
July								
7	0.00	0.00	0.48	0.00	0.31	0.07	0.00	0.12
8	.00	.00	.00	.00	.00	.00	.00	.01
13	.02	.00	.00	.00	.00	.00	.00	.00
15	.03	.00	.00	.00	.00	.02	.00	.00
MTOT	0.05	0.00	0.48	0.00	0.31	0.09	0.00	0.13
Aug.								
3	0.00	0.06	0.12	0.00	0.07	0.05	0.03	0.10
4	.05	.00	.07	.04	.03	.08	.29	.14
5	.44	.22	.10	.11	.00	.00	.43	.01
6	.01	.00	.00	.01	.00	.00	.01	.01
10	.00	.22	.00	.00	.01	.00	.04	.00
11	.00	.01	.13	.05	.01	.87	1.23	1.22
12	.00	.00	.00	.00	.00	.01	.01	.01
16	.00	.00	.00	.00	.03	.00	.01	.08
20	.00	.00	.00	.00	.00	.00	.01	.00
22	.08	.00	.01	.00	.00	.00	.01	.00
23	.08	.04	.08	.12	.18	.07	.07	.02
24	.19	.30	.63	.26	.04	.33	.22	.48
25	.10	.02	.00	.00	.24	.22	.01	.02
26	.01	.01	.00	.01	.00	.01	.00	.02
28	.22	.10	.11	.27	.30	.15	.18	.15
29	.00	.00	.00	.00	.00	.00	.00	.02
MTOT	1.18	0.98	1.25	0.87	0.91	1.79	2.55	2.28

See footnote at end of table.

Table 3.--Daily rainfall for gages north of the Colorado River
1986 water year--Continued

Month	Gage name							
	1-BUL	2-SHL	1-BOG	1-WLN	2-WLN	3-WLN	4-WLN	5-WLN
Sept.								
1	0.62	0.33	0.80	0.72	1.16	0.63	1.04	0.81
2	1.26	.97	.03	.79	.17	.28	.38	.27
3	.01	.01	.00	.01	.02	.13	.06	.30
4	.00	.00	.01	.00	.00	.01	.00	.03
6	a/2.28	3.05	2.58	3.30	2.87	2.24	a/1.29	1.57
7	.01	.01	.00	.07	.04	.00	.00	.00
8	.02	.00	.00	.01	.13	.00	.00	.00
9	.01	.01	.04	.04	.24	.34	.19	.00
11	.00	.05	.15	.28	.18	.00	.14	.00
12	.00	.00	.00	.00	.01	.00	.00	.00
13	.00	.03	.00	.12	.00	.08	.00	.00
15	.00	.00	.00	.00	.25	.00	.03	.00
16	.00	.00	.00	.00	.00	.00	.01	.00
17	.00	.00	.01	.00	.00	.00	.02	.00
19	.00	.48	.01	.37	.21	.11	.00	.02
20	.40	.11	.26	.23	.67	1.80	.35	1.19
21	.11	.01	.21	.04	.72	.42	.13	.47
22	.03	.00	.20	.01	.16	.14	.06	.17
25	.00	.00	.00	.00	.01	.01	.00	.00
26	.05	.00	.10	.01	.29	.04	.19	.07
27	.00	.00	.04	.00	.01	.00	.00	.01
28	.00	.04	.00	.13	.03	.15	.03	.16
29	.08	.00	.00	.01	.00	.01	.00	.01
30	.00	.00	.01	.00	.03	.00	.01	.00
MTOT	4.88	5.10	4.45	6.14	7.20	6.39	3.93	5.08
WTOT	34.41	33.14	30.94	32.76	46.30	31.16	31.30	30.85

a/ Estimated.

Table 4.--Daily Rainfall for gages south of the Colorado River
1986 water year

[BAR, Barton Creek; ON, Onion Creek; BER, Bear Creek; SLA, Slaughter Creek;
 BGS, Boggy Creek (South); WMS, Williamson Creek]

Month	Gage name								
	1-BAR	2-BAR	3-BAR	1-ON	1-BER	1-SLA	1-BGS	1-WMS	2-WMS
Oct.									
1	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00
9	.04	.02	.06	.04	.08	.07	.03	.06	.00
10	.00	.00	.26	.00	.00	.02	.00	.00	.01
11	.17	.09	.03	.00	.00	.02	.00	.00	.00
14	1.47	2.01	1.09	1.15	1.41	1.38	3.14	1.96	.05
15	.84	.86	.73	.81	.82	.87	.80	.93	.00
16	.01	.01	.01	.00	.01	.00	.00	.00	.00
17	.03	.13	.04	.06	.03	.06	.16	.11	.00
18	.29	.28	.38	.14	.18	.28	.12	.31	.01
19	2.48	2.31	2.09	2.21	1.88	1.95	1.78	2.20	.05
20	.02	.01	.01	.00	.01	.01	.01	.01	.00
21	.25	.18	.35	.35	.26	.23	.26	.23	.00
22	.03	.01	.02	.02	.02	.03	.07	.03	.00
23	.00	.00	.00	.00	.01	.00	.01	.00	.00
24	.00	.00	.00	.01	.00	.00	.01	.01	.00
25	.00	.00	.00	.01	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	.00	.14
28	.00	.00	.00	.00	.00	.00	.00	.00	2.68
29	.04	.18	.19	.00	.08	.18	.29	.21	.33
30	.02	.03	.00	.01	.00	.01	.00	.00	.01
31	.00	.62	.00	.01	.00	.06	.00	.00	.01
MTOT	5.69	6.74	5.26	4.82	4.80	5.17	6.68	6.06	3.29

See footnote at end of tables.

Table 4.--Daily Rainfall for gages south of the Colorado River
1986 water year--Continued

Month	Gage name								
	1-BAR	2-BAR	3-BAR	1-ON	1-BER	1-SLA	1-BGS	1-WMS	2-WMS
Nov.									
1	0.45	0.71	0.45	0.26	0.50	0.00	0.65	0.93	0.64
2	.53	.36	.46	.00	.35	.00	.38	.47	.39
3	.00	.30	.01	.00	.01	.00	.00	.00	.00
4	.00	.13	.00	.00	.00	.01	.00	.00	.00
5	.00	.18	.00	.00	.00	.00	.00	.00	.00
6	.00	.18	.00	.00	.00	.00	.00	.00	.00
7	.00	.07	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.03	.01	.01	.01	.00	.01	.00
11	.60	.60	.90	a/1.14	1.14	.78	.34	.73	.34
12	.50	.07	.08	<u>a/</u> .09	.09	.10	.02	.10	.04
13	.00	.00	.00	.00	.00	.01	.00	.00	.00
14	.00	.00	.00	.00	.00	.02	.00	.00	.00
15	.21	.21	.47	.10	.28	.25	.11	.31	.10
16	.53	.30	.36	.18	.08	.07	.26	.20	.34
17	.02	.07	.02	.02	.00	.03	.07	.12	.07
18	.04	.04	.01	.03	.01	.10	.07	.07	.00
19	.99	.92	.16	.10	.30	.95	.39	1.28	.00
20	.01	.00	.02	.02	.01	.01	.00	.00	.00
21	.02	.01	.02	.02	.04	.05	.01	.03	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.02
23	.08	.23	.08	.12	.10	.07	.27	.34	1.65
24	1.14	1.21	.99	.85	.99	1.44	.87	.97	.56
25	.20	.10	.08	.37	.47	.28	.48	.12	.00
26	.78	.46	.43	.67	.29	.48	.17	.31	1.86
27	1.71	1.91	1.54	1.64	1.77	1.70	1.44	1.85	.01
28	.02	.00	.00	.00	.01	.01	.00	.02	.05
29	.00	.00	.00	.00	.01	.01	.02	.01	.00
30	.03	.04	<u>a/</u> .03	.01	.04	.04	.02	.04	.00
MTOT	7.41	8.10	6.14	5.63	6.47	6.43	5.57	7.92	3.29

See footnote at end of tables.

Table 4.--Daily rainfall for gages south of the Colorado River
1986 water year--Continued

Month	Gage name								
	1-BAR	2-BAR	3-BAR	1-ON	1-BER	1-SLA	1-BGS	1-WMS	2-WMS
Dec.									
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
2	.00	.00	.00	.00	.00	.00	.00	.00	.01
4	.05	.02	.01	.02	.02	.05	.01	.02	.00
8	.00	.01	a/ .01	.00	.00	.00	.00	.00	.00
9	.00	.13	a/ .08	.00	.00	.00	.00	.00	.00
10	2.27	1.07	a/ .67	1.32	.66	.83	.86	1.01	1.04
11	.48	.17	a/ .11	.16	.14	.17	.09	.13	.00
12	.01	.00	.00	.01	.00	.03	.00	.01	.00
13	.02	.00	.00	.00	.04	.00	.04	.00	.00
14	.01	.02	a/ .01	.02	.00	.03	.00	.00	.00
15	.00	.00	.00	.01	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.01	.00	.00
23	.00	.00	.00	.00	.00	.00	.02	.00	.01
26	.00	.00	.00	.00	.00	.00	.01	.00	.00
27	.01	.00	.00	.00	.00	.01	.00	.00	.00
28	.01	.00	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	.00	.00	.00	.00	.01
MTOT	2.86	1.42	0.89	1.54	0.86	1.12	1.04	1.17	1.10
CTOT	40.25	38.38	36.98	34.12	39.34	38.05	38.23	40.28	34.98
Jan.									
1	0.09	0.08	a/0.05	0.11	0.12	0.13	0.09	0.11	0.08
2	.03	.17	.00	.00	.01	.01	.01	.01	.02
7	.07	.08	.13	.06	.09	.09	.15	.12	.16
8	.09	.09	.08	.03	.04	.06	.22	.18	.17
9	.12	.02	.08	.11	.15	.21	.05	.05	.00
10	.00	.01	.02	.01	.01	.01	.00	.01	.17
15	.00	.01	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.02	.02	.00	.01	.00	.00
17	.00	.01	.00	.00	.02	.01	.04	.02	.03
18	.00	.00	.00	.01	.00	.01	.01	.01	.03
23	.00	.09	.00	.00	.00	.00	.00	.00	.00
24	.08	.00	.00	.00	.00	.00	.00	.00	.00
31	.00	.01	.00	.00	.00	.00	.00	.00	.00
MTOT	0.40	0.65	0.36	0.35	0.46	0.53	0.58	0.51	0.66

See footnote at end of table.

Table 4.--Daily rainfall for gages south of the Colorado River
1986 water year--Continued

Month	Gage name								
	1-BAR	2-BAR	3-BAR	1-ON	1-BER	1-SLA	1-BGS	1-WMS	2-WMS
Feb.									
1	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00
2	.00	.01	.00	.01	.03	.05	.02	.01	.00
3	2.70	1.51	1.26	1.97	1.51	1.35	.96	2.28	1.12
4	.03	.01	.02	.02	.02	.02	.01	.00	.03
5	.06	.00	.08	.00	.02	.03	.00	.00	.00
6	.01	.00	.01	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.01	.00	.00
8	.02	.00	.01	.03	.00	.00	.10	.00	.05
9	.10	.05	.07	.07	.06	.08	.13	.04	.04
10	.01	.01	.00	.00	.01	.01	.02	.01	.00
11	.02	.00	.00	.00	.00	.02	.01	.01	.07
12	.00	.01	.00	.00	.00	.00	.00	.00	.03
14	.00	.01	.00	.00	.01	.00	.01	.01	.03
16	.00	.00	.00	.00	.00	.01	.00	.00	.00
MTOT	2.95	1.61	1.45	2.10	1.66	1.60	1.27	2.36	1.37
Mar.									
3	0.00	0.00	0.00	0.05	0.00	a/0.00	0.00	0.00	0.00
11	.21	.09	.08	.13	.11	a/ .11	.10	.09	.16
12	.00	.01	.01	.00	.00	a/ .00	.00	.00	.01
13	.00	.00	.00	.00	.02	a/ .02	.01	.02	.00
14	.00	.00	.00	.00	.01	a/ .01	.01	.00	.00
15	.06	.04	.03	.03	.02	a/ .02	.04	.04	.06
18	.15	.06	.26	.16	.15	a/ .15	.14	.11	.15
21	.00	.58	.00	.00	.00	.00	.00	.00	.00
22	.00	.01	.00	.00	.00	.00	.00	.00	.00
24	.00	.06	.00	.00	.00	.00	.00	.00	.00
27	.00	.30	.00	.00	.00	.00	.00	.00	.00
MTOT	0.42	1.15	0.38	0.37	0.31	0.31	0.30	0.26	0.38

See footnote at end of table.

Table 4.--Daily rainfall for gages south of the Colorado River
1986 water year--Continued

Month	Gage name								
	1-BAR	2-BAR	3-BAR	1-ON	1-BER	1-SLA	1-BGS	1-WMS	2-WMS
Apr.									
2	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	.01	.01	.03	.02	.10	.10	.00	.01	.00
4	.02	.02	.03	.02	.04	.04	.02	.02	.02
5	.00	.00	.01	.00	.00	.01	.01	.00	.02
6	.07	.03	.03	.02	.09	.07	.00	.10	.00
7	.01	.00	.00	.01	.01	.01	.01	.01	.00
8	.24	.10	.28	.00	.00	.02	.00	.02	.00
9	.22	.02	.04	.51	.37	.43	.26	.37	.36
10	.01	.00	.00	.01	.02	.16	.05	.18	.10
11	.01	.02	.01	.03	.04	.03	.04	.04	.04
12	.01	.01	.01	.00	.00	.00	.00	.00	.01
16	.00	.23	.00	.00	.00	.00	.00	.00	.00
17	.03	.01	.06	.12	.05	.02	.02	.03	.02
18	.00	.01	.01	.02	.06	.05	.00	.05	.01
19	.00	.09	.18	.03	.01	.02	.01	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	.01
21	.00	.01	.00	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	.02	.00	.00
28	.00	.09	.00	.00	.00	.00	.01	.00	.00
29	.04	.48	.20	.13	.15	.24	.00	.06	.06
30	.11	1.41	.10	.06	.27	.86	1.75	.81	.80
MTOT	0.78	2.64	0.99	0.98	1.21	2.06	2.20	1.70	1.69

See footnote at end of table.

Table 4.--Daily rainfall for gages south of the Colorado River
1986 water year--Continued

Month	Gage name								
	1-BAR	2-BAR	3-BAR	1-ON	1-BER	1-SLA	1-BGS	1-WMS	2-WMS
May									
1	2.36	1.96	2.33	1.84	2.21	2.21	1.99	2.33	1.06
2	.03	.04	.09	.06	.09	.14	.02	.08	.01
3	.07	.00	.02	.05	.01	.04	.01	.01	.06
4	.00	.03	.01	.03	.05	.08	.04	.05	.02
5	.01	.01	.02	.02	.01	.01	.02	.01	.02
6	.00	.00	.00	.00	.00	.00	.00	.00	.02
7	.00	.00	.00	.00	.01	.00	.00	.00	.00
8	.05	.02	.06	.06	.06	.05	.07	.04	.04
9	1.32	1.92	2.63	2.67	2.14	2.41	1.55	2.61	.47
10	1.17	.10	.02	.03	.05	.07	.15	.08	.08
11	.00	.01	.00	.00	.00	.01	.00	.00	.00
13	.02	.00	.00	.00	.00	.00	.00	.01	.00
14	.06	.26	.05	.04	.11	.08	.12	.12	.02
15	1.47	2.01	1.35	.63	1.02	1.92	1.43	2.05	.07
16	.01	.13	.05	.00	.05	.06	.08	.10	.00
17	1.61	.81	.94	1.25	1.55	1.81	1.42	1.58	.00
18	.00	.01	.01	.00	.02	.01	.00	.01	.92
19	.00	.31	.00	.01	.00	.00	.00	.00	.00
20	.01	.00	.00	.00	.00	.00	.00	.00	.00
22	.00	.29	.00	.00	.00	.00	.00	.00	.00
25	.80	.00	.00	.08	.05	.03	.00	.01	.00
26	.25	.14	.16	.40	.28	.24	.21	.20	.23
27	.02	.01	.00	.03	.04	.03	.06	.02	.02
28	.00	.00	.00	.01	.00	.00	.00	.00	.00
29	.02	.01	.00	.00	.00	.00	.01	.00	.00
30	.05	.10	.07	.81	.48	.35	.13	.09	.09
31	.48	.36	.30	.32	.78	.63	.42	.48	.43
MTOT	9.81	8.54	8.11	8.34	8.95	10.18	7.73	9.87	3.56

See footnote at end of table.

Table 4.--Daily rainfall for gages south of the Colorado River
1986 water year--Continued

Month	Gage name								
	1-BAR	2-BAR	3-BAR	1-ON	1-BER	1-SLA	1-BGS	1-WMS	2-WMS
June									
1	0.00	0.83	0.42	0.00	0.06	0.59	0.23	0.24	0.10
2	.00	.09	.04	.00	.00	.01	.01	.01	.02
3	.00	.01	.01	.00	.00	.01	.01	.00	.03
4	.31	.28	.18	.48	.44	.35	.54	.39	.05
7	.71	.17	1.25	1.42	.12	1.48	.30	.57	.00
8	.02	.01	.02	.04	.00	.04	.09	.01	.00
9	.12	.22	.03	.23	.00	.22	.30	.30	.00
10	.00	.00	.00	.00	.00	.00	.01	.00	.00
11	.00	.07	.20	.14	.00	.00	.96	.40	.00
12	.01	.00	.01	.65	.00	.02	.03	.39	.00
13	.00	.00	.01	.01	.00	.00	.00	.00	.00
14	.00	.29	.00	.00	.00	.00	.00	.00	.00
16	.35	.68	1.76	1.38	.00	.30	.02	.00	.00
17	.41	.79	.45	.19	.00	.35	.85	.79	.00
18	.67	.01	.00	.03	.00	.06	.04	.20	.00
19	.20	.02	.00	.09	.00	.00	.01	.42	.00
21	.00	.00	.00	.01	.00	.00	.02	.00	.00
22	.01	.00	.00	.00	.00	.00	.00	.03	.02
23	.01	.00	.00	.01	.00	.00	.00	.01	.00
24	.00	.27	.00	.00	.00	.00	.01	.00	.01
MTOT	2.82	3.74	4.38	4.68	0.62	3.43	3.43	3.76	0.23
July									
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
8	.00	.00	.00	.00	.00	.00	.00	.00	.15
15	.00	.00	.00	.03	.00	.00	.00	.00	.01
MTOT	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.20

See footnote at end of table.

Table 4.--Daily rainfall for gages south of the Colorado River
1986 water year-Continued

Month	Gage name								
	1-BAR	2-BAR	3-BAR	1-ON	1-BER	1-SLA	1-BGS	1-WMS	2-WMS
Aug.									
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
4	.08	.05	.00	.00	.00	.00	a/ .11	.03	.09
5	.00	.61	.10	.17	.00	.00	a/ .32	.00	.03
6	.00	.01	.01	.00	.01	.02	.00	.00	.00
7	.00	.01	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.17	.00	.00	.00	.00	.00	.00
11	.02	.24	.04	.11	.53	.00	a/ .45	.20	.13
12	.00	.00	.00	.00	.01	.00	.00	.00	.02
14	.00	.29	.00	.00	.01	.00	.00	.00	.00
15	.00	.26	.00	.00	.02	.00	.00	.00	.00
17	.00	.00	.00	.00	.01	.00	.00	.00	.00
20	.06	.53	.01	.12	a/ .15	.02	a/ .20	.00	.00
21	.00	.00	.00	.00	.00	.01	a/ .13	.01	.00
22	.00	.01	.00	.00	.00	.00	a/ .28	.00	.04
23	.06	.05	.02	.54	a/ .70	.13	.00	.08	.14
24	.14	.30	.15	.04	a/ .05	.22	a/ .43	.49	.76
25	.00	.00	.00	.01	a/ .02	.01	.00	.04	.03
26	.00	.00	.01	.00	.00	.00	.00	.00	.00
29	.00	.02	.00	.00	.00	.00	.00	.00	.00
MTOT	0.36	2.38	0.51	0.99	1.51	0.41	1.92	0.85	1.27

See footnote at end of table.

Table 4.--Daily rainfall for gages south of the Colorado River
1986 water year--Continued

Month	Gage name								
	1-BAR	2-BAR	3-BAR	1-ON	1-BER	1-SLA	1-BGS	1-WMS	2-WMS
Sept.									
1	0.17	0.18	0.47	0.02	a/0.03	0.09	a/0.33	0.36	0.22
2	.00	.01	.15	.01	a/ .02	.05	.00	.01	.00
4	.10	.11	.00	.03	a/ .05	.00	a/ .13	.00	.02
5	.05	.02	.00	.07	a/ .10	.27	a/ .26	.17	.02
6	4.13	2.56	4.50	2.90	a/3.87	3.85	a/4.02	3.40	3.67
7	.01	.00	.02	.00	.00	.00	a/ .13	.00	.08
8	.01	.01	.00	.00	.00	.00	.00	.02	.00
9	.08	.01	.14	.04	.15	.04	.22	.00	.37
11	.26	.07	.17	.93	.00	.02	.00	.00	.00
12	.00	.01	.00	.03	.08	.09	.04	.00	.00
13	.00	.00	.01	.00	.00	.03	.11	.01	.09
14	.01	.00	.00	.00	.00	.16	.00	.00	.00
15	.00	.00	.01	.00	.00	.01	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.01	.00	.00
18	.00	.00	.00	.00	.00	.03	.09	.00	.00
19	.00	.20	.10	.04	.05	.68	.05	1.36	.02
20	.00	.04	.01	.02	.04	.04	.05	.13	.01
21	.01	.00	.00	.23	.02	.05	.01	.09	.00
22	.00	.00	.00	.00	.00	.00	.00	.02	.02
23	.00	.00	.01	.00	.00	.00	.22	.01	.00
24	.00	.00	.00	.00	.00	.00	.01	.00	.00
25	.04	.01	.01	.00	.00	.00	.00	.06	.00
26	.00	.00	.00	.00	.00	.00	.00	.01	.00
28	.16	.01	.00	.42	.01	.17	.00	.05	.00
29	.04	.10	.00	.22	.01	.03	.08	.04	.00
MTOT	5.07	3.34	5.60	4.96	4.43	5.61	5.76	5.74	4.52
WTOT	38.57	40.31	34.07	34.79	31.28	36.85	36.48	40.20	25.12

a/ Estimated.

Table 5.--Summary of storm rainfall-runoff, 1986 water year

Date of Storm	Duration (hours)	Total	Rainfall (inches)			Runoff (inches)	Ratio Runoff to Rainfall	Maximum Discharge (ft ³ /s)
			15-minute	30-minute	60-minute			
		08154700	Bull Creek at Loop 360, Austin, Texas					
October 19, 1985	17	2.88	1.06	1.14	1.14	0.66	0.23	3250
February 3, 1986	15	2.50	0.32	0.59	0.90	0.31	0.13	786
		08155300	Barton Creek at Loop 360, Austin, Texas					
May 9, 1986	29	2.46	0.50	0.94	1.39	0.70	0.28	7620
May 15, 1986	5	2.93	1.13	1.72	1.81	0.70	0.24	4260
		08156800	Shoal Creek at 12th Street, Austin, Texas					
April 30, 1986	12	3.37	0.71	1.27	2.07	0.70	0.21	2580
September 6, 1986	46	3.05	0.44	0.76	1.20	0.68	0.22	1840
		08158050	Boggy Creek at U.S. Hwy 183, Austin, Texas					
May 9, 1986	4	2.08	0.38	0.74	1.06	0.98	0.47	3680
September 6, 1986	8	2.58	0.24	0.48	0.66	0.78	0.30	2110
		08158100	Walnut Creek at F.M. 1325, Austin, Texas					
October 19, 1985	5	3.10	1.10	1.56	2.27	0.27	0.09	758
September 6, 1986	9	3.30	0.52	0.85	1.51	0.54	0.16	455
		08158200	Walnut Creek at Dessau Road, Austin, Texas					
February 3, 1986	13	2.94	0.47	0.67	1.18	0.27	0.09	305
May 17, 1986	5	2.26	0.65	1.04	1.74	0.42	0.18	2240
		08158380	Little Walnut Creek at Georgian Drive, Austin, Texas					
October 19, 1985	13	1.39	0.42	0.82	1.01	0.83	0.60	1730
April 30, 1986	7	3	2.40	2.40	2.41	153	0.40	2720
		08158600	Walnut Creek at Webberville Road, Ausitn, Texas					
October 19, 1985	4	2.10	1.10	1.56	2.27	0.43	0.20	3170
February 3, 1986	11	1.87	0.47	0.67	1.18	0.16	0.08	684
		08158700	Onion Creek near Driftwood, Texas					
November 27, 1985	11	1.64	0.19	0.35	0.57	0.41	0.25	1230
May 9, 1986	3	2.70	0.48	0.78	1.13	0.60	0.22	8420
		08158810	Bear Creek below F.R. 1826 near Driftwood, Texas					
November 27, 1985	12	1.77	0.15	0.29	0.48	0.20	0.11	125
May 9, 1986	4	2.19	0.42	0.60	0.96	0.20	0.09	636
		08158840	Slaughter Creek at F.R. 1826 near Austin, Texas					
November 26, 1985	12	2.19	0.17	0.34	0.46	1.46	0.67	433
May 9, 1986	3	2.48	0.38	0.75	1.34	0.86	0.35	1640

Table 5.--Summary of storm rainfall-runoff, 1986 water year--Continued

Date of storm	Duration (hours)	Total	Rainfall (inches) Maximum Increment			Runoff (inches)	Ratio Runoff to Rainfall	Maximum Discharge (ft 3/s)
			15-minute	30-minute	60-minute			
		08158880	Boggy Creek (South) at Circle S Road, Austin, Texas					
October 14, 1985	7	3.94	1.07	1.69	2.30	1.80	0.46	1540
May 15, 1986	3	1.43	0.87	1.14	1.24	0.84	0.59	815
		01858920	Williamson Creek at Oak Hill, Texas					
May 9, 1986	3	2.69	0.56	0.98	1.59	1.44	0.54	2220
May 15, 1986	2	2.15	1.05	1.54	1.75	0.88	0.41	1370
		08158970	Williamson Creek at Jimmy Clay Road, Austin, Texas					
November 26, 1985	22	1.99	0.20	0.39	0.62	0.48	0.24	607
April 30, 1986	9	2.96	0.70	1.21	1.55	-0.38	0.13	1060

Table 6.--Rainfall and runoff data for selected continuous-record gaging stations in the Austin urban study area, 1985 water year

Station	Weighted-mean rainfall (inches)	Total runoff (inches)	Ratio of runoff to rainfall
Bull Creek at Loop 360, near Austin, Tex. (08154700)	34.41	10.65	0.31
Barton Creek at Loop 360, Austin, Tex. (08155300)	37.66	5.37	.14
Shoal Creek at 12th Street, Austin, TX (08156800)	33.14	7.29	.22
Boggy Creek at U.S. Hwy. 183, Austin, TX (08158050)	30.94	7.94	.26
Walnut Creek at Webberville Road, Austin, TX (08158600)	34.72	6.52	.19
Onion Creek near Driftwood, TX (08158700)	34.79	6.76	.19
Bear Creek below Farm Road 1826 near Driftwood, TX (08158810)	31.28	5.33	.17
Slaughter Creek at Farm Road 1826 near Austin, Tex. (08158840)	36.85	10.74	.29
Williamson Creek at Oak Hill, Austin, Tex. (08158920)	40.20	14.83	.37
Williamson Creek at Jimmy Clay Road, Austin, Tex. (08158970)	31.00	7.34	.24

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

Table 7.--Peak discharges associated with water-quality samples collected during storms
[ft³/s, cubic feet per second]

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.	Oct. 19	(6 samples)	--	Oct. 19	1130	3,250
		Nov. 24	(5 samples)	--	Nov. 24	1015	256
		Feb. 3	(6 samples)	--	Feb. 3	1645	786
		May 9	(6 samples)	--	May 9	2215	358
08155260	Barton Creek near Camp Craft Rd., Austin, Tex.	Feb. 3-4	(6 samples)	--	Feb. 4	0100	1,120
		May 1	(5 samples)	--	May 1	1600	512
		May 9-10	(6 samples)	--	May 10	0615	4,010
08155300	Barton Creek at Loop 360, Austin, Tex.	Feb. 4	(6 samples)	--	Feb. 4	0145	806
		May 1	(6 samples)	--	May 1	1600	473
		May 9-10	(7 samples)	--	May 10	0700	7,620
08156800	Shoal Creek at 12th Street, Austin, Tex.	Oct. 14	(6 samples)	--	Oct. 14	2330	834
		May 9	(4 samples)	--	May 9	2100	1,880
		June 1	(3 samples)	--	June 1	1400	421
		June 11	(3 samples)	--	June 11	1115	251
08158050	Boggy Creek at U.S. Hwy. 183, Austin, Tex.	Oct. 19	(6 samples)	--	Oct. 19	1215	3,260
		Nov. 24	(6 samples)	--	Nov. 24	0945	884
		May 9	(6 samples)	--	May 9	2200	3,680
		Sept. 6	(6 samples)	--	Sept. 6	0945	2,110
08158600	Walnut Creek at Webberville Road, Austin, Tex.	Sept. 6	1125	1,520	Sept. 6	1000	2,250
08158700	Onion Creek near Driftwood, Tex.	June 17	1210	145	June 17	0115	711

Table 7.--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)
08158810	Bear Creek below F.M. 1826 near Driftwood, Tex.	May 1	(2 samples)	--	May 1	1045	29
08158840	Slaughter Creek at F.M. 1826 near Austin, Tex.	May 1	1017	36	May 1	0830	44
		Sept. 6	1015	25	Sept. 6	0845	161
08158920	Williamson Creek at Oak Hill, Tex.	Nov. 19	(6 samples)	--	Nov. 19	1700	852
		Nov. 24	(6 samples)	--	Nov. 24	0915	633
		Feb. 3	(6 samples)	--	Feb. 3	1430	203
		May 1	1020	70	May 1	0815	1,380
		May 9	(6 samples)	--	May 9	2130	2,220
		Sept. 6	(6 samples)	--	Sept. 6	0815	1,040
08158970	Williamson Creek at Jimmy Clay Road, Austin, Tex.	June 11	(2 samples)	--	June 11	1045	252
		Sept. 6	1220	405	Sept. 6	0945	1,240
08159000	Onion Creek at U.S. Highway 183 near Austin, Tex.	May 10	1335	3,760	May 10	1200	7,680
		June 17-18	(2 samples)	--	June 17	0845	2,490
		Sept. 6	1140	4,340	Sept. 6	1200	4,340

Table 8.--Records of wells, in the Austin urban study area

Water-bearing units: Kea, Edwards and associated limestones; Kgr1, Upper Glen Rose; Kgr1, 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; M, none; S, submersible; T, turbine; W, windmill.
 Use of water: D, domestic; Ind, industrial; Irr, irrigation; N, none; P, public supply; S, livestock.

Well number	Owner	Driller	Date completed	Depth of well (ft)	Casing		Water-bearing unit	Altitude of land surface (ft)	Below land surface datum (ft)	Date of latest annual water-level survey	Method of lift	Use of water	Remarks
					Outer (in)	Inner (ft)							
<u>Travis County</u>													
YD-58-42-813	G & J Water Co.	C. T. Sterzling	--	300	8	--	Kea	660	211.6	June 23, 1986	S, E	Irr, P	1/
YD-58-50-211	Travis Country Estates	Richard Bible	1973	282	7	265	Kea	670	202.2	Aug. 29, 1986	S, E	Irr	1/
215	City of Sunset Valley	Tom Arnold	1976	360	6-5/8	200	Kea	675	218.8	Aug. 29, 1986	S, E	P	1/
216	U.S. Geological Survey	Texas Dept. of Water Resources	1978	582	4	580	Kea	692	238.1	Aug. 29, 1986	N	N	U.S. Geol. Survey test well A3. 1/ 2/ 3/
217	U.S. Geological Survey	Texas Dept. of Water Resources	1978	126	4	126	Kea	567	122.2	Aug. 29, 1986	N	N	U.S. Geol. Survey test well A2A. 1/ 2/ 3/
406	Mash Phillips, Copus	John Glass	1946	360	5	100	Kea	820	300.0	Aug. 29, 1986	S, E	D	1/
408	Ben Buchanan	E. W. Glass	1971	439	7	125	Kea	772	178.3	Sept. 3, 1986	S, E	D	Reported drawdown 0 foot when pumped at 25 gal/min for one hour on Mar. 18, 1971. 1/ 2/
412	Circle C Ranch	Glass	1972	295	7	194	Kea	809	156.3	Sept. 3, 1986	S, E	D	1/ 2/
502	Mrs. R. W. Herndon	Glass	1937	300	5-5/16	168	Kea	740	227.8	Sept. 3, 1986	S, E	Irr, S	1/ 4/
704	Marbridge Foundation	Central Tex. Drilling	1968	345	16 14	68 40	Kea	727	166.4	Sept. 2, 1986	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. 1/ 3/
<u>Hays County</u>													
LR-58-49-903	Mrs. Bliss Spillar	--	1953	133	6	--	Kea	828	--	Sept. 2, 1986	C, E	S	1/ 5/
LR-58-57-202	Daphna Greenhaw	Scarly Glass	--	200	7	200	Kea	905	24.9	Sept. 2, 1986	S, E	S	1/
303	W. D. Turner	W. H. Glass	1973	315	7	315	Kea	870	231.6	June 25, 1986	S, E	D	1/ 3/
402	Tom Fairey	James B. Tucker	1976	380	6	55	Kea	880	97.3	Sept. 2, 1986	S, E.	D, S	1/
LR-58-58-403	City of Buda	J. B. Virdell	1954	390	10	222	Kea	710	90.4	June 25, 1986	T, E	P	1/

1/ Well or spring sampled for quality of water.
 2/ Driller's log, sampling log, or core data.
 3/ Geophysical log (radioactivity or electric log).
 4/ Discontinued observation well.
 5/ Unable to measure water level.

Table 9.--Water quality data from wells in the Austin urban study area, 1986

[min, minutes; $\mu\text{s}/\text{cm}$, micromhos per centimeter; deg C, degree Celsius; mg/L, milligrams per liter; $\mu\text{g}/\text{L}$, micrograms per liter]

Well number	Date	Time	Depth below land surface (water level) (feet)	Pump or flow period prior to sampling (min)	Depth of well, total (feet)	specific conductance ($\mu\text{s}/\text{cm}$)	pH (standard units)	Temperature water (deg C)
Travis County								
YD-58-42-813	01-15-86	1000	213.10	60	300	610	7.10	21.0
	05-02-86	1420	214.30	60	300	571	7.20	21.0
	06-23-86	0920	211.60	30	300	585	7.20	21.5
	09-03-86	1300	---	30	300	586	7.40	22.0
YD-58-50-211	01-15-86	1130	195.50	30	282	622	7.00	21.0
	05-02-86	1345	---	30	282	623	7.00	21.0
	06-23-86	1030	183.00	60	282	638	7.00	22.0
	08-29-86	1200	202.20	1440	282	659	7.00	22.0
YD-58-50-215	01-13-86	0830	216.00	60	360	589	7.00	23.0
	05-02-86	1320	223.10	60	360	606	7.00	23.0
	06-23-86	1100	213.40	60	360	608	7.10	23.5
	08-29-86	1300	218.80	--	360	596	7.20	24.0
YD-58-50-216	01-15-86	1430	216.00	--	582	913	7.10	22.5
	05-02-86	0830	230.80	--	582	897	7.10	22.0
	06-24-86	0805	213.40	--	582	1010	7.10	22.5
	08-29-86	0900	238.10	--	582	874	7.10	22.5
YD-58-50-217	01-15-86	0900	78.00	--	125	466	7.40	13.0
	05-02-86	0930	96.50	--	125	389	7.20	18.5
	06-24-86	0845	76.30	--	125	442	7.20	25.0
	08-29-86	1000	122.20	--	125	514	6.80	21.5
YD-58-50-406	05-01-86	1120	---	--	360	676	7.10	23.0
	06-24-86	1020	284.60	20	360	651	7.10	23.5
	08-29-86	1400	300.00	30	360	674	7.30	24.0

Table 9.--Water quality data from wells in the Austin urban area, 1986--Continued

Well number	Hardness (mg/L as CaCO ₃)	Hardness noncarbonate whole water total field (mg/L as CaCO ₃)	Calcium dissolved (mg/L as Ca)	Magnesium dissolved (mg/L as Mg)	Sodium dissolved (mg/L as Na)	Sodium adsorption ratio	Potassium dissolved (mg/L as K)	Alkalinity whole water total field (mg/L CaCO ₃)	Sulfate dissolved (mg/L as SO ₄)	Chloride dissolved (mg/L as Cl)
Travis County--Continued										
YD-58-42-813	300	50	84	23	8.6	0.2	1.0	254	32	22
	--	--	--	--	--	--	--	--	--	--
	300	42	83	22	8.8	0.2	1.1	256	31	17
YD-58-50-211	320	44	85	25	13	0.3	0.80	271	20	32
	--	--	--	--	--	--	--	--	--	--
	330	32	91	24	12	0.3	1.0	294	22	22
YD-58-50-215	300	10	73	29	9.1	0.2	1.0	292	9.4	14
	--	--	--	--	--	--	--	--	--	--
	310	15	75	29	10	0.3	1.2	292	8.1	13
YD-58-50-216	380	110	92	37	48	1	3.2	274	160	46
	--	--	--	--	--	--	--	--	--	--
	370	110	92	35	44	1	3.0	261	130	45
YD-58-50-217	240	31	66	19	7.9	0.2	1.0	212	21	17
	--	--	--	--	--	--	--	--	--	--
	260	28	72	19	7.5	0.2	1.2	230	24	12
YD-58-50-406	--	--	--	--	--	--	--	--	--	--
	330	56	89	25	15	0.4	0.80	269	42	19

Table 9.--Water quality data from wells in the Austin urban study area, 1986--Continued

Well number	Solids,									
	Fluoride, dissolved (mg/L as F)	Silica, dissolved (mg/L as SiO ₂)	sum of constituents, dissolved (mg/L)	Nitrogen, nitrate total (mg/L as N)	Nitrogen, nitrite total (mg/L as N)	Nitrogen, NO ₂ +NO ₃ 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)
YD-58-42-813	0.20	10	330	--	<0.010	1.30	0.030	0.37	0.40	<0.010
	--	--	--	--	<0.010	1.10	<0.010	--	0.30	0.030
	--	--	--	--	<0.010	1.30	0.020	0.18	0.20	<0.010
	0.20	10	330	--	<0.010	1.20	<0.010	--	0.20	0.010
YD-58-50-211	0.20	9.9	350	--	<0.010	1.60	0.020	0.28	0.30	<0.010
	--	--	--	--	<0.010	1.90	0.030	0.37	0.40	0.020
	--	--	--	--	<0.010	1.10	0.010	0.29	0.30	0.010
	0.20	12	360	--	<0.010	2.00	0.010	0.29	0.30	0.010
YD-58-50-215	0.20	14	320	2.99	0.010	3.00	0.010	0.19	0.20	0.010
	--	--	--	--	<0.010	3.00	<0.010	--	0.40	0.010
	--	--	--	--	<0.010	3.90	<0.010	--	0.40	0.020
	0.20	15	330	--	<0.010	3.10	0.010	--	<0.20	0.020
YD-58-50-216	0.60	11	560	1.39	0.010	1.40	0.040	0.46	0.50	0.120
	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	<0.010	1.30	0.030	0.87	0.90	0.100
	0.70	11	520	1.39	0.010	1.40	<0.010	--	1.2	0.420
YD-58-50-217	0.20	6.9	270	0.290	0.010	0.300	0.040	0.16	0.20	0.010
	--	--	--	0.590	0.010	0.600	0.040	0.46	0.50	0.040
	--	--	--	--	<0.010	0.200	<0.010	--	0.30	0.040
	0.20	8.9	280	--	<0.010	0.400	0.020	0.28	0.30	0.050
YD-58-50-406	--	--	--	--	<0.010	4.50	<0.010	--	0.40	0.010
	--	--	--	--	<0.010	4.70	0.040	0.26	0.30	<0.010
	0.30	13	370	--	<0.010	4.50	0.020	0.28	0.30	0.010

Travis County--Continued

Table 9.--Water Quality data from wells in the Austin urban study area, 1986--Continued

Well number	Carbon-organic total (mg/L as C)		Di-Chloro-bromo-methane total (µg/L)		Carbon-tetra-chloride total (µg/L)		1,2-Di-chloro-ethane total (µg/L)		Bromo-form total (µg/L)		Chloro-Di-bromo-methane total (µg/L)		Chloro-form total (µg/L)		Toluene total (µg/L)		Benzene total (µg/L)		Chlor-benzene total (µg/L)		
YD-58-42-813	0.4		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	0.4		<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
	0.4		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	0.4		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
YD-58-50-211	0.5		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4.7		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	1.0		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	1.1		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
YD-58-50-215	0.6		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	0.5		<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
	0.4		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	0.2		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
YD-58-50-216	6.1		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	7.5		<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
	5.5		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	2.6		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
YD-58-50-217	5.9		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	6.8		<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
	1.0		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4.1		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
YD-58-50-406	3.9		<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
	<0.1		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	0.4		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Travis County--Continued

Table 9.--Water quality data from wells in the Austin urban study area, 1986--Continued

Well number	Chloro-ethane total (µg/L)		Ethyl-benzene total (µg/L)		Methyl-bromide total (µg/L)		Methyl-chloride total (µg/L)		Tetra-ethyl-ene total (µg/L)		Tri-chloro-fluoro-methane total (µg/L)		1,1-Di-chloro-ethyl-ene total (µg/L)		1,1,1-Tri-chloro-ethane total (µg/L)		1,1,2-Tri-chloro-ethane total (µg/L)		
	<3.0	--	<3.0	--	<3.0	--	<3.0	--	<3.0	--	<3.0	--	<3.0	--	<3.0	--	<3.0	--	
YD-58-42-813	<3.0	--	<3.0	--	<3.0	--	<3.0	--	<3.0	--	<3.0	--	<3.0	--	<3.0	--	<3.0	--	<3.0
YD-58-50-211	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
YD-58-50-215	<3.0	--	<3.0	--	<3.0	--	<3.0	--	<3.0	--	<3.0	--	<3.0	--	<3.0	--	<3.0	--	<3.0
YD-58-50-216	<3.0	--	<3.0	--	<3.0	--	<3.0	--	<3.0	--	<3.0	--	<3.0	--	<3.0	--	<3.0	--	<3.0
YD-58-50-217	<3.0	--	<3.0	--	<3.0	--	<3.0	--	<3.0	--	<3.0	--	<3.0	--	<3.0	--	<3.0	--	<3.0
YD-58-50-406	<3.0	--	<3.0	--	<3.0	--	<3.0	--	<3.0	--	<3.0	--	<3.0	--	<3.0	--	<3.0	--	<3.0

Travis County--Continued

Table 9.--Water quality data from wells in the Austin urban study area, 1986--Continued

Well number	Date	Time	Depth below land surface (water level) (feet)	Pump or flow period prior to sampling (min)	Depth of well, total (feet)	Specific conductance ($\mu\text{s}/\text{cm}$)	pH (standard units)	Temperature water (deg C)
Travis County--Continued								
YD-58-50-408	01-14-86	0700	--	30	439	624	7.10	22.5
	05-01-86	1515	--	30	439	635	7.20	23.0
	06-25-86	0800	173.30	30	439	748	7.20	23.5
	09-03-86	0700	178.30	30	439	610	7.20	23.5
YD-58-50-412	01-15-86	1235	154.70	30	295	545	7.10	22.0
	05-03-86	1145	157.10	30	295	568	7.10	22.0
	06-25-86	0950	154.90	20	295	564	7.30	22.5
	09-03-86	1020	156.30	30	295	568	7.20	22.5
YD-58-50-502	01-13-86	1020	199.20	30	300	575	7.00	22.0
	05-02-86	1730	--	30	300	559	7.20	21.0
	06-23-86	1230	198.40	30	300	563	7.10	22.0
	09-03-86	1140	227.80	30	300	600	7.20	22.0
YD-58-50-704	01-13-86	1345	168.00	10	345	537	7.10	20.0
	05-01-86	1402	--	10	345	521	7.20	21.0
	06-24-86	1230	150.60	5	345	555	7.10	22.0
	09-02-86	1020	166.40	5	345	550	7.20	22.5

Table 9.--Water quality data from wells in the Austin urban study area, 1986--Continued

Well number	Hardness (mg/L as CaCO ₃)	Hardness noncarbonate whole water		Calcium dissolved (mg/L as Ca)	Magnesium, Dissolved (mg/L as Mg)	Sodium dissolved (mg/L as Na)	Sodium adsorption ratio	Potassium dissolved (mg/L as K)	Alkalinity whole water total field (mg/L as CaCO ₃)	Sulfate dissolved (mg/L as SO ₄)	Chloride dissolved (mg/L as Cl)
		(mg/L as CaCO ₃)	(mg/L as CaCO ₃)								
YD-58-50-408	320	20	75	33	8.0	0.2	0.70	303	16	20	
	--	--	--	--	--	--	--	--	--	--	
	310	25	75	31	8.9	0.2	0.80	290	7.9	17	
YD-58-50-412	290	9	81	22	5.4	0.1	0.50	284	6.2	12	
	--	--	--	--	--	--	--	--	--	--	
	290	5	83	21	5.7	0.2	0.60	289	6.4	10	
YD-58-50-502	300	19	83	22	7.8	0.2	1.3	279	17	14	
	--	--	--	--	--	--	--	--	--	--	
	300	27	84	23	8.1	0.2	1.2	277	20	14	
YD-58-50-704	270	3	79	18	6.9	0.2	0.90	268	14	12	
	--	--	--	--	--	--	--	--	--	--	
	300	22	85	21	6.7	0.2	3.3	277	15	12	

Travis County--Continued

Table 9.--Water quality data from wells in the Austin urban study area, 1986--Continued

Well number	Fluoride, dissolved (mg/L as F)	Silica, dissolved (mg/L as SiO ₂)	Solids, sum of constituents, dissolved (mg/L)	Nitrogen, nitrate total (mg/L as N)	Nitrogen, nitrite total (mg/L as N)	Nitrogen, No ₂ +No ₃ 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)
YD-58-50-408	0.20	13	350	0.990	0.010	1.00	0.020	0.28	0.30	<0.010
	--	--	--	--	<0.010	1.10	<0.010	--	0.20	<0.010
	--	--	--	--	<0.010	0.200	0.030	--	<0.20	<0.010
	0.30	14	330	--	<0.010	1.10	<0.010	--	0.20	0.010
YD-58-50-412	0.10	12	310	--	<0.010	1.70	0.020	0.28	0.30	<0.010
	--	--	--	--	<0.010	1.80	<0.010	--	0.30	<0.010
	--	--	--	--	<0.010	1.80	0.010	0.29	0.30	0.010
	0.20	12	310	--	<0.010	1.70	0.010	--	<0.20	0.010
YD-58-50-502	0.30	11	320	--	<0.010	1.50	0.020	0.38	0.40	<0.010
	--	--	--	--	<0.010	1.20	<0.010	--	0.20	<0.010
	--	--	--	--	<0.010	1.10	0.020	--	<0.20	<0.010
	0.30	11	330	--	<0.010	2.10	<0.010	--	0.20	0.010
YD-58-50-704	0.20	9.9	300	--	<0.010	0.900	0.020	--	<0.20	<0.010
	--	--	--	--	<0.010	0.800	0.010	0.29	0.30	0.010
	--	--	--	--	<0.010	0.800	0.030	--	<0.20	0.200
	0.20	12	320	--	<0.010	1.10	<0.010	--	0.30	0.010

Table 9.--Water quality data from wells in the Austin urban study area, 1986--Continued

Well number	Carbon, organic total (mg/L as C)		Di-chloro-bromo-methane total (µg/L)		Carbon-tetra-chloride total (µg/L)		1,2-Di-chloro-ethane total (µg/L)		Bromo-form total (µg/L)		Chloro-bromo-methane total (µg/L)		Chloro-form total (µg/L)		Toluene total (µg/L)		Benzene total (µg/L)		Chloro-benzene total (µg/L)		
YD-58-50-408	0.9	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	<0.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	0.3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	0.9	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
YD-58-50-412	0.9	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	0.2	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
	0.4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	0.2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
YD-58-50-502	0.9	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	0.3	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
	0.7	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	0.4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
YD-58-50-704	0.4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	0.3	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
	5.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	0.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Travis County--Continued

Table 9.--Water quality data from wells in the Austin urban study area, 1986--Continued

Well number	Chloro-ethane total (µg/L)		Ethyl-benzene total (µg/L)		Methyl-bromide total (µg/L)		Methyl-chloride total (µg/L)		Tetra-chloro-ethene total (µg/L)		Tri-chloro-fluoro-methane total (µg/L)		1,1-Di-chloro-ethane total (µg/L)		1,1,1-Tri-chloro-ethane total (µg/L)		1,1,2-Tri-chloro-ethane total (µg/L)		
	<3.0	--	<3.0	--	<3.0	--	<3.0	--	<3.0	--	<3.0	--	<3.0	--	<3.0	--	<3.0	--	
YD-58-50-408	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
YD-58-50-412	<3.0	--	<3.0	--	<3.0	--	<3.0	--	<3.0	--	<3.0	--	<3.0	--	<3.0	--	<3.0	--	<3.0
YD-58-50-502	<3.0	--	<3.0	--	<3.0	--	<3.0	--	<3.0	--	<3.0	--	<3.0	--	<3.0	--	<3.0	--	<3.0
YD-58-50-704	<3.0	--	<3.0	--	<3.0	--	<3.0	--	<3.0	--	<3.0	--	<3.0	--	<3.0	--	<3.0	--	<3.0

Travis County--Continued

Table 9.--Water quality data from wells in the Austin urban study area, 1986

Well number	Date	Time	Depth below land surface (water level) (feet)	Pump or flow period prior to sampling (min)	depth of well total (feet)	Specific conductance ($\mu\text{s}/\text{cm}$)	pH (standard units)	Temperature water (deg C)
Hays County								
LR-58-49-903	05-01-86	1330	--	30	133	656	7.00	21.0
	06-24-86	1250	--	30	133	640	7.00	22.0
	09-02-86	1130	--	30	133	655	7.10	23.0
LR-58-57-202	01-13-86	1210	17.20	30	200	644	7.00	23.0
	05-01-86	1635	--	30	200	677	7.10	23.0
	06-25-86	1345	17.40	15	200	676	7.10	23.0
	09-02-86	1320	24.90	30	200	671	7.30	24.0
LR-58-57-303	01-13-86	1310	264.85	30	315	576	7.00	23.0
	05-03-86	1040	235.00	30	315	592	7.10	23.0
	06-25-86	1030	231.60	60	315	646	7.10	23.5
	09-02-86	1215	--	30	315	607	7.20	23.5
LR-58-57-402	01-14-86	1030	84.30	30	380	1040	7.00	23.0
	05-03-86	0845	92.00	30	380	1140	7.10	23.0
	06-25-86	0930	88.40	40	380	730	7.10	23.0
	09-02-86	1440	97.30	30	380	1400	6.90	23.5
LR-58-58-403	01-14-86	0845	85.20	30	390	579	7.20	22.0
	05-03-86	0855	100.50	30	390	500	7.10	22.5
	06-24-86	1420	--	--	390	591	7.40	22.5
	06-25-86	1240	90.40	30	390	592	7.20	23.0
	09-03-86	0849	--	30	390	589	7.20	23.0

Table 9.--Water quality data from wells in the Austin urban study area, 1986--Continued

Well number	Hardness		Calcium dissolved (mg/L as Ca)	Magnesium, dissolved (mg/L as Mg)	Sodium, dissolved (mg/L as Na)	Sulfate dissolved (mg/L as SO ₄)	Chloride dissolved (mg/L as Cl)
	Hardness (mg/L as CaCO ₃)	noncarbonate whole water total field (mg/L as CaCO ₃)					
LR-58-49-903	--	--	--	--	--	--	--
	--	--	--	--	--	--	--
	360	22	110	21	5.5	0.1	0.60
LR-58-57-202	350	5	76	38	7.0	0.2	1.4
	--	--	--	--	--	--	--
	350	10	81	36	7.0	0.2	1.3
LR-58-57-303	300	0	73	29	7.7	0.2	0.80
	--	--	--	--	--	--	--
	320	15	89	23	7.3	0.2	0.80
LR-58-57-402	550	190	95	75	11	0.2	5.8
	--	--	--	--	--	--	--
	750	440	120	110	18	0.3	10
LR-58-58-403	290	17	75	26	6.6	0.2	1.1
	--	--	--	--	--	--	--
	290	23	75	25	6.4	0.2	1.2
LR-58-58-403	--	--	--	--	--	--	--
	290	18	75	26	6.7	0.2	1.1

Hays County--Continued

Table 9.--Water quality data from wells in the Austin urban study area, 1986--Continued

Well number	Solids,										Nitro- gen, ammonia + organic total (mg/L as N)	Nitro- gen, organic total (mg/L as N)	Phos- phorus, total (mg/L as P)	Carbon, organic total (mg/L as C)
	Fluo- ride, dis- solved (mg/L as F)	Silica, dis- solved (mg/L as SiO ₂)	sum of consti- tuents, dis- solved (mg/L)	Nitro- gen, nitrite total (mg/L as N)	Nitro- gen, No ₂ +No ₃ total (mg/L as N)	Nitro- gen, ammonia total (mg/L as N)	Nitro- gen, organic total (mg/L as N)	Nitro- gen, ammonia + organic total (mg/L as N)	Phos- phorus, total (mg/L as P)	Carbon, organic total (mg/L as C)				
LR-58-49-903	--	--	--	<0.010	1.20	0.020	0.28	0.30	<0.010	1.5				
	--	--	--	<0.010	1.10	0.030	0.17	0.20	0.010	1.0				
	0.20	12	370	<0.010	1.10	0.030	0.17	0.20	0.010	0.9				
LR-58-57-202	0.30	13	370	<0.010	0.800	0.010	0.29	0.30	<0.010	0.6				
	--	--	--	<0.010	1.00	<0.010	--	0.20	<0.010	0.7				
	--	--	--	<0.010	0.900	0.010	0.19	0.20	<0.010	0.3				
	0.30	12	370	<0.010	0.900	<0.010	--	<0.20	<0.010	0.1				
LR-58-57-303	0.20	11	330	<0.010	1.10	0.010	0.29	0.30	<0.010	0.8				
	--	--	--	<0.010	1.40	<0.010	--	0.30	0.010	0.7				
	--	--	--	<0.010	1.40	0.020	0.28	0.30	0.020	0.4				
	0.30	12	330	<0.010	1.40	0.010	--	<0.20	0.020	0.1				
LR-58-57-402	1.9	11	720	<0.010	<0.100	0.180	0.12	0.30	<0.010	0.9				
	--	--	--	<0.010	<0.100	0.210	0.09	0.30	<0.010	0.1				
	--	--	--	<0.010	<0.100	0.040	0.16	0.20	<0.010	0.2				
	3.3	12	960	<0.010	<0.100	0.470	0.13	0.60	<0.010	0.3				
LR-58-58-403	0.50	11	320	<0.010	1.40	0.020	0.38	0.40	<0.010	0.3				
	--	--	--	<0.010	1.50	<0.010	--	0.60	<0.010	<0.1				
	0.50	11	320	<0.010	1.50	0.020	0.28	0.30	0.010	--				
	--	--	--	<0.010	1.50	<0.010	--	<0.20	<0.010	0.1				
0.40	11	320	<0.010	1.40	<0.010	--	<0.20	<0.010	<0.1					

Hays County--Continued

Table 9.--Water quality data from wells in the Austin urban study area, 1986--Continued

Well number	Di-chloro-bromo-methane total (µg/L)		Carbon-tetra-chloride total (µg/L)		1,2-Di-chloro-ethane total (µg/L)		Bromo-form total (µg/L)		Chloro-di-bromo-methane total (µg/L)		Chloro-form total (µg/L)		Toluene total (µg/L)		Benzene total (µg/L)		Chloro-benzene total (µg/L)		Chloro-ethane total (µg/L)		
	<3.0	--	<3.0	--	<3.0	--	<3.0	--	<3.0	--	<3.0	--	<3.0	--	<3.0	--	<3.0	--	<3.0	--	
LR-58-49-903	<3.0	--	<3.0	--	<3.0	--	<3.0	--	<3.0	--	<3.0	--	<3.0	--	<3.0	--	<3.0	--	<3.0	--	<3.0
LR-58-57-202	<3.0	--	<3.0	--	<3.0	--	<3.0	--	<3.0	--	<3.0	--	<3.0	--	<3.0	--	<3.0	--	<3.0	--	<3.0
LR-58-57-303	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
LR-58-57-402	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
LR-58-58-403	<3.0	--	<3.0	--	<3.0	--	<3.0	--	<3.0	--	4.5	--	<3.0	--	<3.0	--	<3.0	--	<3.0	--	<3.0

Hays County--Continued

Table 9.--Water quality data from wells in the Austin urban study area, 1986--Continued

Well number	Ethyl- benzene total (µg/L)	Methyl- bromide total (µg/L)	Methyl- chloride total (µg/L)	Tetra- chloro- ethylene total (µg/L)	Tri- chloro- fluoro- methane total (µg/L)	1,1-Di- chloro- ethane total (µg/L)	1,1-Di- chloro- ethylene total (µg/L)	1,1,1- Tri- chloro- ethane total (µg/L)	1,1,2- Tri- chloro- ethane total (µg/L)
	Hays County--Continued								
LR-58-49-903	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--
LR-58-57-202	--	--	--	--	--	--	--	--	--
	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--
LR-58-57-303	--	--	--	--	--	--	--	--	--
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LR-58-57-402	--	--	--	--	--	--	--	--	--
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LR-58-58-403	--	--	--	--	--	--	--	--	--
	4.7	<3.0	>30	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
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