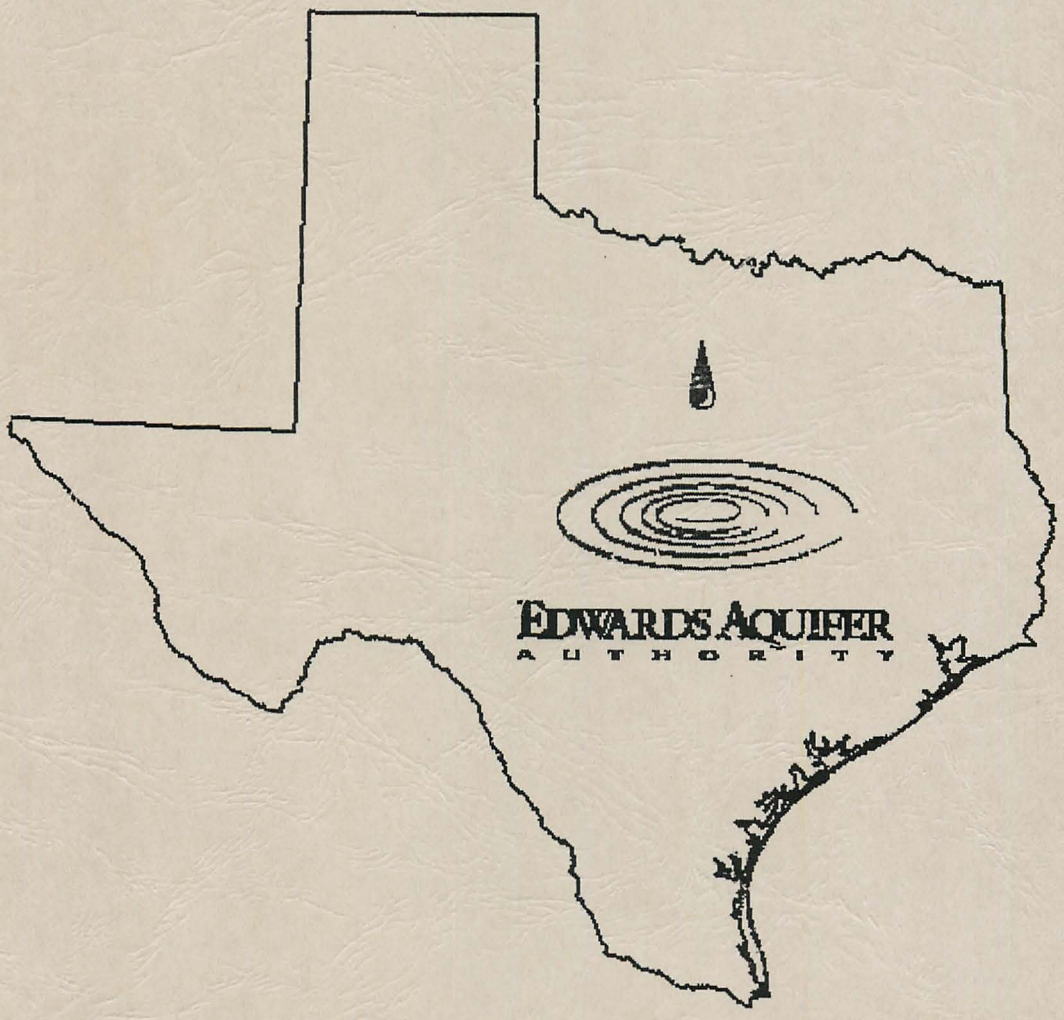
EDWARDS AQUIFER AUTHORITY
1615N. St. Marys
San Antonio, Texas 78212

Report 01-02

Edwards Aquifer Hydrogeologic Report for 2000



EDWARDS AQUIFER
AUTHORITY

1615 N. St. Mary's
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EDWARDS AQUIFER AUTHORITY HYDROGEOLOGIC DATA REPORT FOR 2000

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ACKNOWLEDGMENTS

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1.0 INTRODUCTION

The Balcones fault zone Edwards Aquifer in south central Texas is one of the most permeable and productive aquifers in the United States. The San Antonio segment of the aquifer extends from the groundwater divide near Brackettville in Kinney County – east to the city of San Antonio in Bexar County – then northeast to the groundwater divide near Kyle in Hays County – a distance of approximately 180 miles **(Figure 1.1).** The aquifer is the water source for approximately 1.7 million people in the region and is also a major source of water for agriculture and industry. In addition, the aquifer discharges through a series of large springs that provide the aquatic habitat for a number of endangered species. Springflow also provides a significant portion of water for down stream interests in the Guadalupe River basin.

The Edwards Aquifer Authority (the Authority) was created by the Texas Legislature in 1993 to replace the Edwards Underground Water District (EUWD) and was mandated to manage, preserve, and protect the Edwards Aquifer. The Authority encompasses all or parts of an eight-county area including Uvalde, Medina, Atascosa, Bexar, Comal, Guadalupe, Hays, and Caldwell counties **(Figure 1.1)**. The Authority is governed by a 17-member board of directors, with voting members elected to represent the 15 districts across the region, and two non-voting members appointed by other entities. Directors represent agricultural, industrial, domestic, municipal, spring, and downstream user groups. The Legislature also created a South Central Texas Water Advisory Committee to interact with the Authority when issues related to downstream water rights are being addressed.

The Legislature mandated the Authority take all necessary measures to effectively control the resource to protect domestic and municipal water supplies, the operation of existing agriculture and industries, terrestrial and aquatic life, and the economic development of the region. To accomplish these goals, the Authority is vested with all of the "powers, rights, and privileges necessary to manage, conserve, preserve and protect the Edwards Aquifer, and to increase the recharge of, and prevent the waste or pollution of water in, the aquifer."

This data report is specific to the San Antonio segment of the Balcones fault zone Edwards Aquifer that extends from a groundwater divide near Brackettville in Kinney County to a groundwater divide near Kyle in Hays County as indicated on Figure 1.1. The report presents quantitative and qualitative data collected in 2000, as well as an historical perspective by providing annual data for the period of record (1934-2000). Information concerning water levels and water quality are provided in this report.

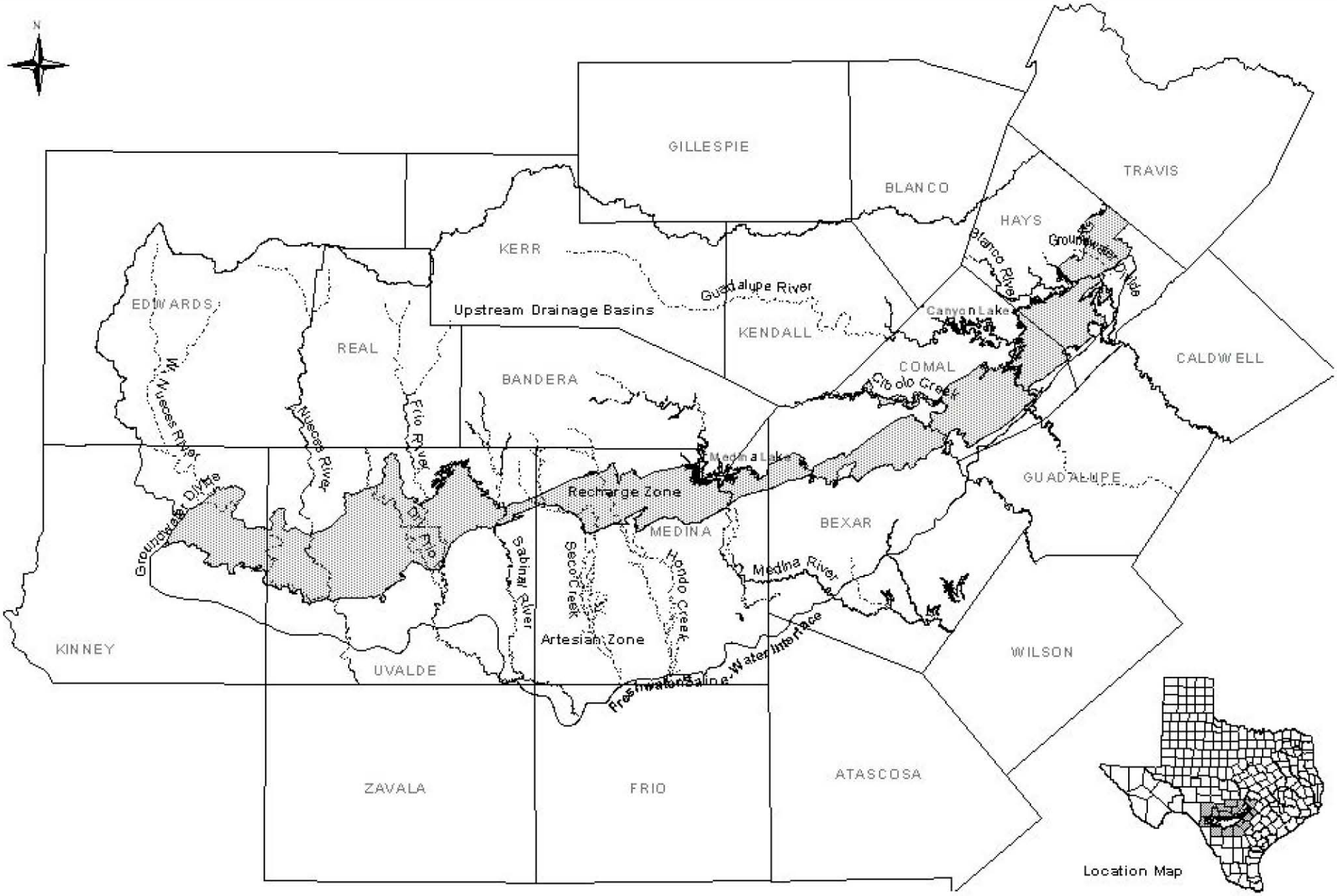


Figure 1.1
San Antonio Segment of the Balcones Fault Zone Edwards Aquifer and Other Physiographic Features in the Region

2.0 HYDROGEOLOGY OF THE EDWARDS AQUIFER

The Edwards Aquifer is contained within the Cretaceous age Edwards Group limestone (Edwards Limestone) and associated units. The aquifer is generally capped by the Del Rio Clay and overlays the Glen Rose Formation (upper unit of the Trinity Aquifer).

The Edwards Aquifer is one of the largest and most important karst aquifer systems in the United States. Historically, the aquifer has been protected by its great depth below population centers and undeveloped land in the recharge and contributing zones. Generally, the water quality in the aquifer is among the best in the United States. However; threats to the aquifer are many and occur from various sources including the transport and use of hazardous materials across the recharge zone, abandoned water wells, urban non-point runoff, etc.

The San Antonio segment of the Balcones fault zone Edwards Aquifer is one of the most productive karst groundwater systems in the United States. The aquifer extends through parts of Kinney, Uvalde, Medina, Frio, Atascosa, Bexar, Comal, Guadalupe, and Hays County in south central Texas – covering an area approximately 180 miles long and 5 to 40 miles wide. The aquifer is the predominant water source for much of this area including the City of San Antonio, the eighth largest city in the United States. Historically, the cities of San Marcos, New Braunfels, and San Antonio were founded around large springs that flow from the aquifer. As the region grew, wells were drilled into the aquifer to supplement the water supplied by the springs. In addition, the aquifer has become an important water source for agriculture and industry in the region.

The Edwards Aquifer is named after and contained in the Edwards Limestone of Cretaceous age. The Edwards Limestone and associated units range from 450 to over 600 feet thick in the region. A series of faults in the Balcones fault zone has exposed the Edwards Limestone at the surface along the southern boundary of the Texas Hill Country. Down faulting has dropped the Edwards Limestone to great depth below the surface along the aquifer's southern boundary. In some areas, fresh water can be found in the Edwards Limestone as much as 4,000 feet below the surface.

Water in the Edwards Aquifer is part of the hydrologic cycle and is constantly being recharged and discharged from the aquifer. Surface streams forming on the contributing zone (the Texas Hill Country), flow south and cross the Edwards Limestone outcrop (recharge zone) and during low flow conditions, most surface water is captured by the aquifer. In addition, rainfall that occurs directly on the recharge zone may also enter the aquifer. Groundwater moves through the aquifer and ultimately discharges from a number of locations such as Leona Springs in Uvalde County; San Pedro and San Antonio Springs in Bexar County; Hueco and Comal Springs in Comal County; San Marcos Springs in Hays County; and through domestic, municipal, agricultural, and industrial wells throughout the region. Residence time in the aquifer ranges from a few hours or days to many years depending upon depth of circulation, location, and other aquifer parameters.

The Edwards Aquifer is a karst aquifer that is characterized by the presence of sinkholes, sinking streams, caves, springs, and a well-integrated subsurface drainage system. The aquifer contains extremely high (cavernous) porosity and permeability that is characteristic of many karst aquifers. In contrast, aquifers that occur in sand and gravel or in bedrock such as sandstone, have a much lower permeability. The high porosity and permeability of the Edwards creates the conditions to allow extremely productive water wells, the rapid infiltration of surface water, and the quick response of groundwater levels to rainfall (recharge) events. While the Edwards Aquifer transmits very large volumes of water, the cavernous porosity provides rapid recharge and limited filtration of surface water.

3.0 GROUNDWATER LEVELS

In the San Antonio region of the Edwards Aquifer, periodic water level measurements have been compiled from a variety of wells since 1929. These periodic measurements were enhanced with the introduction of continuous water level recorders in some of the observation wells in the 1930s by the United States Geological Survey (USGS). The Authority has further enhanced its ability to collect the data with the introduction of continuous digital recorders - developing a groundwater level monitoring network from eastern Kinney County to central Hays County. **Figure 3.1** shows the locations of the Authority's observation well network within the Edwards Aquifer region. The water level observation network consists of wells equipped with water level recorders located in both the water table (unconfined) and the artesian (confined) zones of the Edwards Aquifer. All water level measurements are recorded in feet above mean sea level (MSL).

In 2000, the Authority's water level data collection program consisted of 19 digital recorder-equipped observation wells and monthly measurements from 20 periodic observation wells. The digital recorders measure water levels across the aquifer every 15 minutes, 365 days a year. These wells are equipped with a float device or a pressure transducer for water level readings. The data are recorded by the equipment at the site and then downloaded during a monthly site inspection, or by modem. Eleven additional recorders were added to the network in late 2000. To augment the water level observation network, Authority staff measures water levels at 20 observation wells on a monthly basis during normal aquifer conditions, and approximately 50 additional wells during periods of extreme high or low water level conditions. These periodic measurements are made manually with steel tape and electric line measuring devices. Water level data collected by the Authority is also forwarded to relevant federal, state and regional agencies.

The Authority, and its predecessor, the EUWD, have also collected water level data from the Trinity Aquifer in northern Bexar County since 1991, and the Leona Aquifer in southern Uvalde County since 1966. In many places, the Edwards and Trinity aquifers are hydraulically connected, allowing the interchange of groundwater, depending on hydraulic gradient. Water level monitoring of the Edwards Aquifer and associated hydrogeologic units adds to the base of scientific knowledge, and helps in the management of this regional water resource.

Historical water level trends in observation wells, along with corresponding precipitation and discharge information, are used to make projections on future aquifer levels and spring discharge rates. Water level increases generally indicate greater quantities of water are recharging the aquifer than are being discharged. During periods when groundwater recharge is greater than discharge, springflows increase as groundwater levels increase. Likewise, during drought or high-demand conditions, water levels and springflows generally decline, reflecting greater groundwater discharge than groundwater recharge. **Table 3.1** lists the annual records of high and low water levels measured in five selected Edwards Aquifer observation wells.

The year 2000 resulted in increased storage in the aquifer **(Appendix A: Tables A-1 – A-6)**. With the exception of the city of Uvalde index well, water levels in index wells were higher at the end of the year than at the beginning of the year. The maximum decrease in water levels at the Bexar County index well (AY-68-37-203, or "J-17") in 2000 was 30.2 feet (665.7 feet above MSL on February 6th to 635.5 feet above MSL on September 7th). Water levels then increased 41.2 feet towards the end of the year (from 635.5 feet above MSL on September 7th to 676.7 feet above MSL on December 31st).

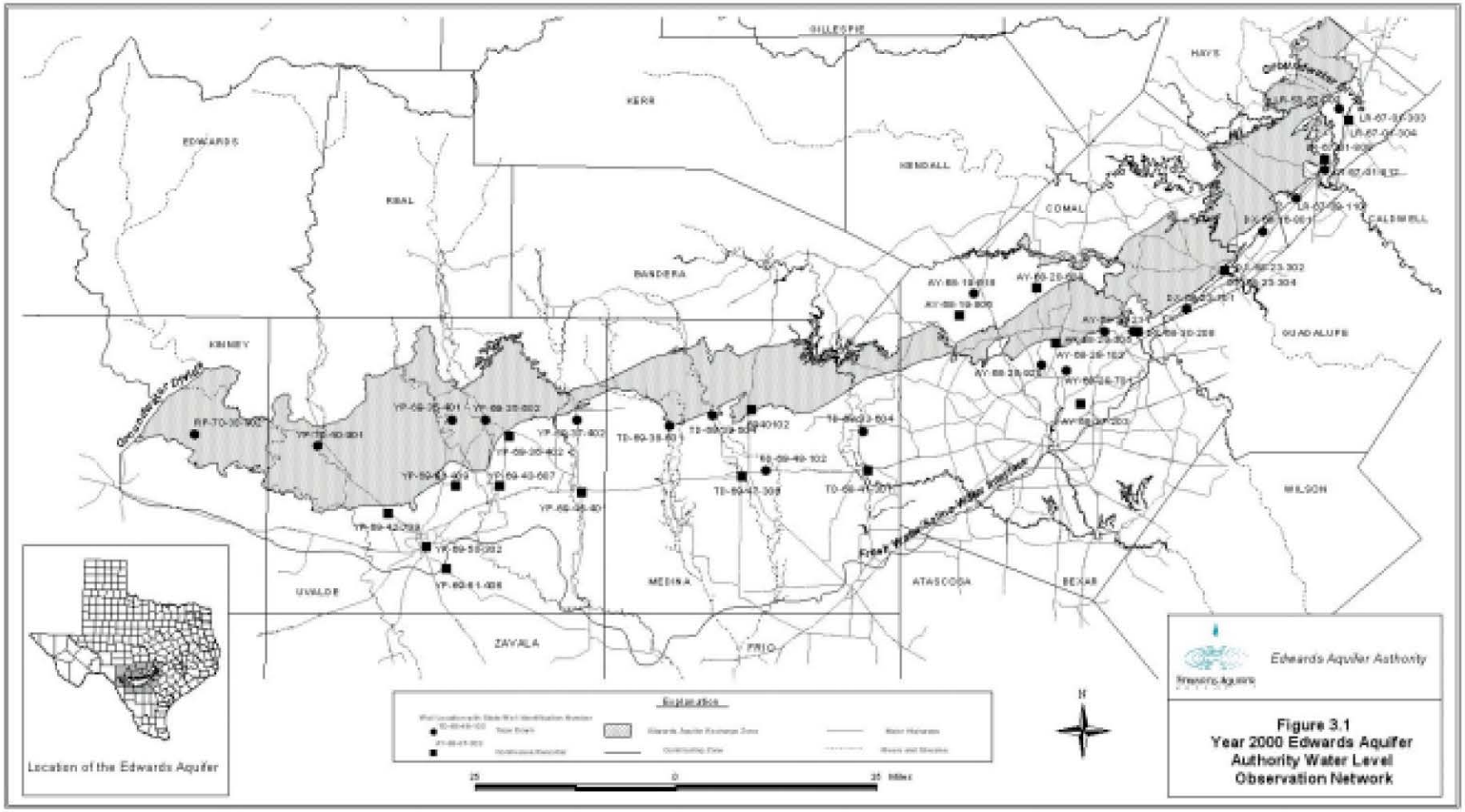

GILLESPIE
KERR
EDWARDS
REAL
KENDALL
COMAL
HAYS
CALDWELL
BANDERA
KINNEY
GUADALUPE
MEDINA
UVALDE
ZAVALA
FRIO
ATASCOSA
BEXAR
WILSON
Location of the Edwards Aquifer
Edwards Aquifer Authority
Figure 3.1
Year 2000 Edwards Aquifer
Authority Water Level
Observation Network

Table 3.1 Highest and lowest recorded water levels for selected observation wells in the San Antonio region of the Edwards Aquifer, 1934-2000 (measured in feet above Mean Sea Level).

Year	City of Uvalde Uvalde County YP-69-50-302[a] (J-27)		Castroville Medina County TD-68-41-301[b]		San Antonio Bexar County AY-68-37-203[c] (J-17)		New Braunfels Comal County DX-68-23-302[d]		Kyle Well Hays County LR-67-01-304[e]	
	High	Low	High	Low	High	Low	High	Low	High	Low
1934	----	----	----	----	675.2	666.8	----	----	----	----
1935	----	----	----	----	681.3	666.8	----	----	----	----
1936	876.6	876.5	----	----	683.0	676.6	----	----	----	----
1937	878.1	877.1	----	----	682.1	674.9	----	----	583.4	581.6
1938	875.8	874.0	----	----	681.4	673.6	----	----	590.6	581.5
1939	873.4	869.6	----	----	674.1	665.7	----	----	580.6	569.6
1940	872.3	868.5	----	----	671.4	661.0	----	----	572.2	568.7
1941	875.7	867.7	----	----	682.5	668.3	----	----	587.7	578.6
1942	875.8	871.9	----	----	685.4	669.7	----	----	580.8	573.7
1943	874.5	868.0	----	----	679.6	668.5	----	----	578.2	574.6
1944	869.3	866.8	----	----	677.6	667.1	----	----	580.5	579.3
1945	870.1	865.2	----	----	681.9	668.8	----	----	----	----
1946	867.1	862.9	----	----	681.2	663.6	----	----	----	----
1947	870.7	867.1	----	----	680.7	665.8	----	----	577.3	577.0
1948	868.4	860.5	----	----	667.7	653.7	624.4	624.3	560.5	559.4
1949	871.2	859.1	----	----	671.6	655.6	626.7	624.1	562.3	561.8
1950	871.2	861.8	687.0	674.9	665.4	653.8	625.2	624.0	575.8	575.2
1951	861.8	846.8	675.2	659.9	656.0	640.6	624.2	622.5	575.3	569.4
1952	846.8	834.9	663.8	649.9	650.5	633.4	623.0	621.5	573.0	569.1
1953	835.2	817.8	665.1	647.7	651.5	630.5	623.6	621.1	584.5	573.2
1954	836.7	823.1	660.3	642.4	646.3	628.9	623.1	620.5	581.8	562.8
1955	834.3	824.1	649.1	635.6	638.5	624.2	621.9	619.8	575.7	558.4
1956	834.2	814.2	641.6	622.3	632.2	612.5	621.0	613.3	569.8	542.2
1957	840.9	811.0	666.1	633.0	653.8	624.4	624.7	620.1	584.9	568.3
1958	866.1	840.8	704.4	665.7	679.6	653.3	626.6	624.6	593.6	580.8
1959	876.1	866.2	703.8	689.0	677.7	661.5	627.1	625.1	591.4	580.5
1960	876.9	873.1	706.3	686.0	679.4	657.9	627.1	624.9	589.4	584.3
1961	878.5	875.6	710.3	693.4	681.2	663.9	627.3	625.7	591.6	573.2
1962	878.3	867.7	703.6	676.3	675.5	646.9	626.3	623.2	584.1	565.0
1963	869.7	860.9	689.1	659.2	665.8	635.0	625.0	621.7	581.6	560.0
1964	860.9	849.0	676.3	654.8	657.1	632.8	624.1	621.6	578.2	562.8
1965	865.8	860.3	689.6	666.8	675.0	645.6	626.6	623.5	590.1	573.4
1966	867.2	860.2	686.1	665.0	668.8	642.7	625.9	623.1	589.0	566.6
1967	867.4	856.4	679.4	645.2	659.7	624.9	624.6	620.0	582.8	556.6
1968	873.3	864.8	702.0	679.2	678.3	655.9	627.2	624.6	593.8	574.4
1969	875.0	866.5	694.8	670.5	676.1	642.8	626.3	623.4	588.7	567.7
1970	876.1	871.3	700.7	678.8	677.1	650.4	627.2	624.3	593.2	575.0
1971	877.7	864.0	701.3	646.4	674.6	627.9	626.2	621.0	577.1	551.3
1972	877.8	874.6	704.6	676.7	679.0	651.2	626.7	624.1	579.7	576.3
1973	881.6	874.5	731.2	690.1	696.5	665.9	629.8	626.1	589.9	572.3
1974	881.4	876.0	723.8	696.0	689.2	660.9	629.1	625.8	593.6	558.5
1975	882.1	879.4	721.0	708.2	686.9	672.0	629.3	626.5	589.8	571.4
1976	884.9	876.0	732.4	694.9	693.1	663.8	629.4	625.8	584.6	571.2
1977	886.2	881.3	737.8	715.3	696.0	675.6	630.2	627.6	587.4	562.1
1978	882.6	875.6	722.4	681.7	684.1	650.1	628.1	624.5	572.0	540.4
1979	882.0	876.1	728.2	710.3	690.5	676.4	629.0	627.3	584.9	572.0
1980	879.1	868.0	716.1	666.8	680.3	640.8	627.5	623.0	572.0	551.8
1981	881.8	867.9	723.2	698.8	686.0	668.6	628.0	625.5	586.2	565.5
1982	881.8	876.4	717.1	682.8	680.5	645.3	627.3	623.6	584.7	544.7
1983	877.1	871.3	698.2	667.7	670.0	642.1	625.6	623.0	588.7	560.4
1984	873.3	856.9	684.5	642.0	657.0	623.3	624.4	619.6	582.5	544.3
1985	876.9	862.2	699.0	670.7	674.5	644.1	626.8	623.3	591.4	561.8
1986	877.8	872.2	704.6	674.2	685.6	649.8	627.7	624.1	595.0	576.3
1987	889.1	877.9	743.5	711.1	699.2	676.9	630.4	627.2	595.9	583.5
1988	887.0	878.0	725.3	679.9	684.9	647.7	627.9	623.9	593.2	585.9
1989	879.0	866.6	695.3	650.5	663.9	626.4	624.9	620.5	571.7	571.5

(Table 3.1 continued)

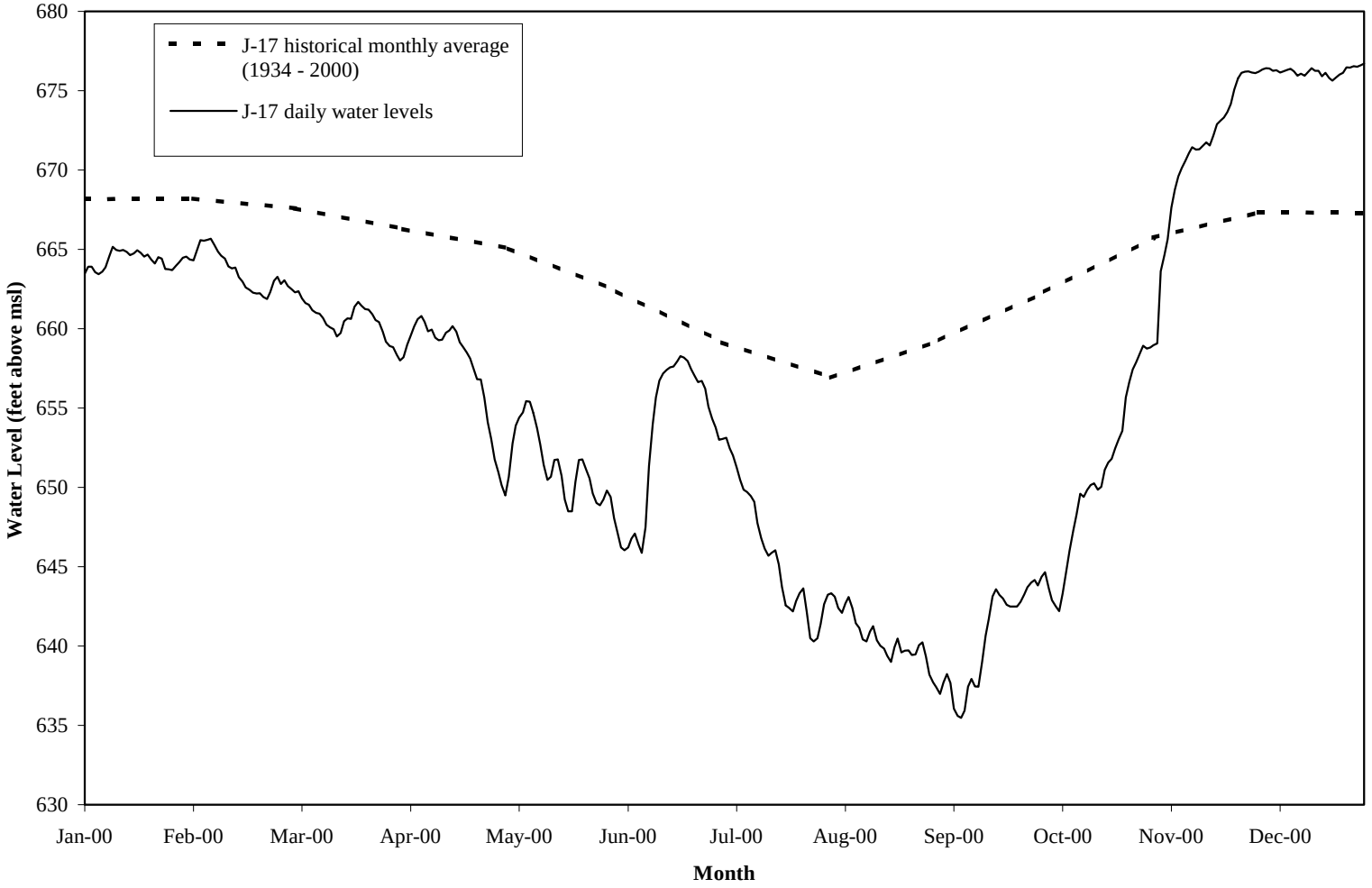
Year	City of Uvalde Uvalde County YP-69-50-302[a]		Castroville Medina County TD-68-41-301[b]		San Antonio Bexar County AY-68-37-203[c]		New Braunfels Comal County DX-68-23-302[d]		Kyle Well Hays County LR-67-01-304[e]	
	High	Low	High	Low	High	Low	High	Low	High	Low
1990	872.9	861.6	679.5	640.8	658.1	622.7	624.3	620.3	577.6	561.2
1991	873.8	865.4	703.8	666.1	680.3	640.5	627.0	623.3	593.8	575.1
1992	885.2	872.9	743.6	704.3	703.3	680.7	630.9	627.0	595.4	586.2
1993	884.9	877.3	730.2	706.6	692.8	672.0	629.4	626.9	593.7	575.9
1994	----	----	718.6	684.1	679.2	652.1	627.2	624.7	575.0	545.3
1995	877.2	871.1	703.0	681.8	676.5	651.1	626.8	624.5	575.4	552.4
1996	874.2	859.0	693.0	650.2	664.9	627.5	625.3	621.2	573.2	551.3
1997	882.3	868.2	700.5	672.7	677.9	648.7	626.4	623.6	575.8	559.0
1998	880.6	868.7	717.1	669.1	688.9	640.0	629.6	622.9	575.6	552.4
1999	880.7	876.8	716.4	682.9	686.4	656.9	628.7	624.9	588.6	537.9
2000	878.3	868.0	700.4	662.5	676.7	635.5	626.8	622.2	549.2	544.6
Average	High	Low	High	Low	High	Low	High	Low	High	Low
	872.5	863.5	701.4	672.2	675.5	651.7	626.6	623.4	582.5	566.2
Record	High	Low	High	Low	High	Low	High	Low	High	Low
Level	889.1	811.0	743.6	622.3	703.3	612.5	630.9	613.3	595.9	540.4
Month	June	April	June	Aug.	June	Aug.	June	Aug.	Sept.	July
Year	1987	1957	1992	1956	1992	1956	1992	1956	1987	1978

Data source: Edwards Aquifer Authority, 2001.
"a" Continuous monitoring equipment established on October 24, 1940.
"b" Continuous monitoring equipment established on May 25, 1950.
"c" Continuous monitoring equipment established on January 1, 1963.
"d" Continuous monitoring equipment established on November 4, 1948.
"e" Values based on monthly tape down measurements (No continuous monitoring equipment installed in this well).

In general, the water levels in the Edwards Aquifer were above average only during the last few months of the year. The lower water levels earlier in 2000 were due to below average precipitation during the summer months. The average annual water level for 2000 (656.3 feet above MSL) at J-17 was lower than the average annual water level at J-17 for 1999 (670.4 feet above MSL). The Edwards Aquifer Authority's Board of Directors passed Emergency Drought Management regulations on May 1st 2000 when water levels at J-17 reached 650 feet MSL. The emergency regulations stayed in effect until November 6th, 2000 when they expired. In 2000, the water level at J-17 reached a low of 635.5 feet MSL. In 2000, springflows at Comal Springs and San Marcos Springs reached lows of 140 cubic feet per second (cfs) and 108 cfs respectively. **Figure 3.2** compares the J-17 monthly average water level for the period of record and water levels for the year 2000. **Tables A-1** through **A-6** in **Appendix A** show 2000 water levels for selected observation wells.

Appendix B contains the Year 2000 hydrographs, with precipitation information, for the index wells in Bexar, Medina and Uvalde counties. **Appendix B** also contains the Year 2000 hydrographs, with precipitation information, for Comal and San Marcos Springs in Comal and Hays counties respectively. The hydrographs indicate the periods of relatively lower and higher water levels and how water levels in the Edwards Aquifer rapidly react to rainfall events.

Figure 3.2 Comparison of the monthly average water level for the period of record (1934-2000), and the daily high water level at the Bexar County index well, AY-68-37-203 (J-17).



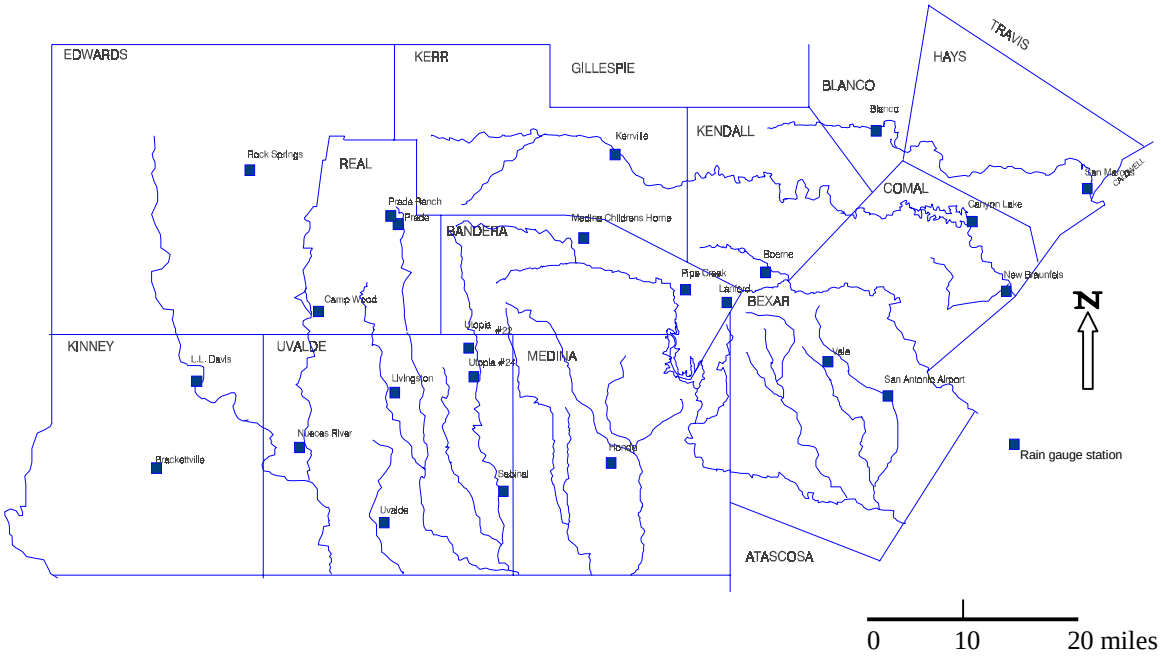
4.0 PRECIPITATION

4.1 Precipitation in the Edwards Aquifer Region

Precipitation is the principal source of recharge to the Edwards Aquifer. Water levels monitored by the Authority's network of observation wells across the Artesian Zone rise within hours of a heavy rainfall event on the Edwards Aquifer Recharge Zone (EARZ) or associated upstream drainage basins in the Texas Hill Country.

Annual precipitation in the Edwards Aquifer region is monitored by the Authority to determine the volume of groundwater recharged to the aquifer. Precipitation data is gathered from Authority rain gauge stations, National Oceanic and Atmospheric Administration (NOAA) weather stations, and the USGS rain gauge stations located across the EARZ and upstream drainage basins. **Figure 4.1** is a map showing the locations of precipitation gauging stations used by the Authority and other agencies to calculate recharge to the aquifer in 2000.

Figure 4.1 Sites used by the Edwards Aquifer Authority and other agencies to monitor precipitation in 2000.



Precipitation data for San Antonio has been collected by various agencies since 1871. Aquifer water levels, recharge and springflow are closely related to precipitation and decrease during periods of low precipitation.

The amount of rainfall received in the San Antonio region in 2000 was approximately 19% above average. Average precipitation in San Antonio for the period between 1934 and 2000 is 30.11 inches. In 2000, total precipitation measured at the San Antonio International Airport was 35.86 inches.

Figure 4.2 is a graph of precipitation data for San Antonio from 1934 to 2000. **Table 4.1** lists annual precipitation for selected rain gauges in the region. **Table 4.2** shows monthly measurements for 2000 at selected rain gauge stations across the region.

Figure 4.2 Annual precipitation and average precipitation for San Antonio, 1934-2000.

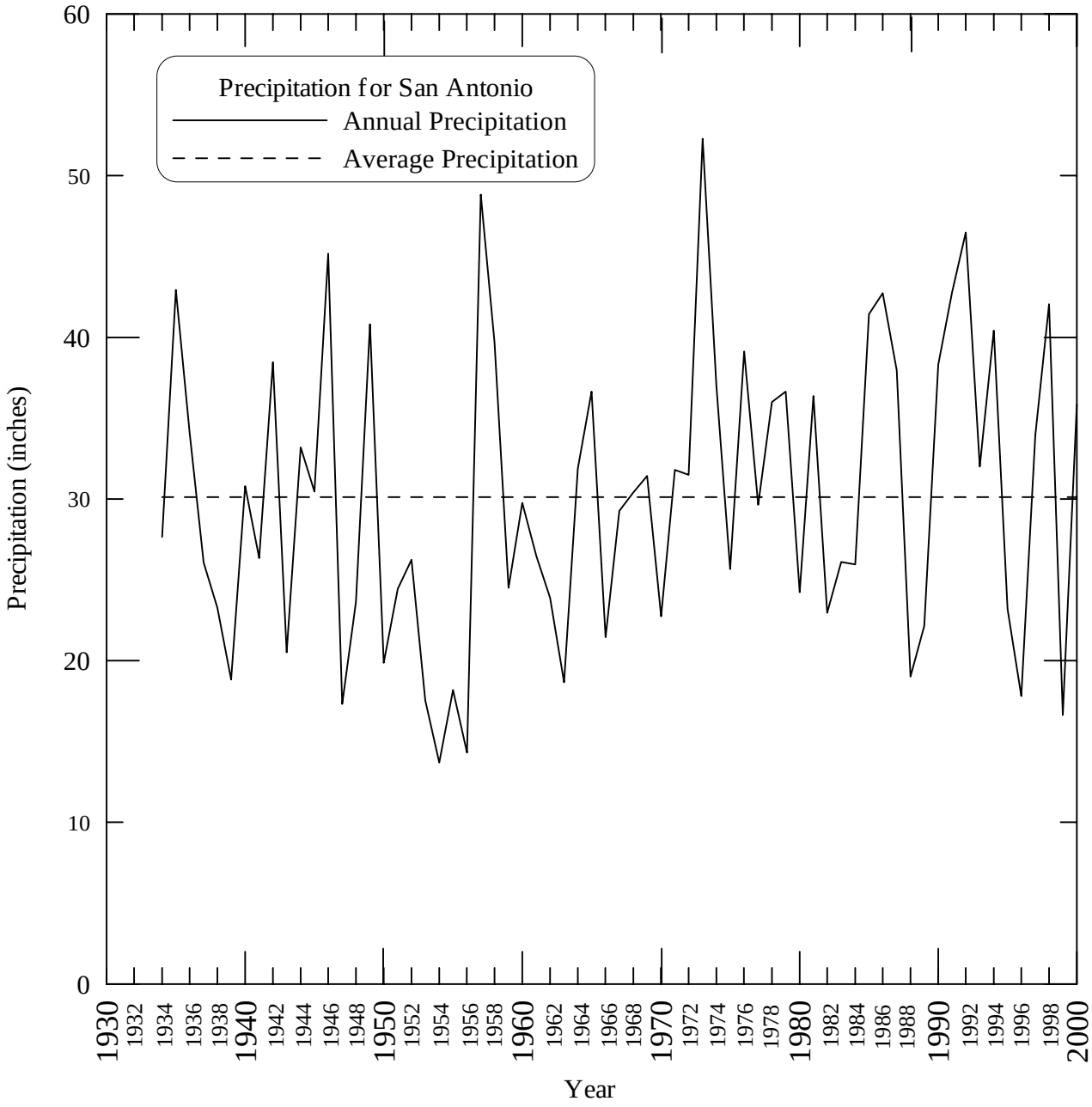


Table 4.1 Annual precipitation for selected rain gauges in the Edwards Aquifer region, 1934-2000 (measured in inches).

Year	Bracketville	Uvalde	Sabinal	Hondo	San Antonio	Boerne	New Braunfels	San Marcos
1934	---	16.70	18.07	23.97	27.65	26.78	30.80	35.67
1935	---	41.17	48.21	58.73	42.93	52.93	41.67	41.09
1936	22.34	24.53	26.53	35.27	34.11	47.59	30.41	33.48
1937	16.85	17.88	9.57a	22.93	26.07	32.81	29.19	26.03a
1938	19.97	13.12	15.39	27.56	23.26	24.14	28.32	28.17
1939	18.38	25.30	13.98b	23.14	18.83	26.20	13.35	18.59
1940	22.43	27.66	27.51	28.13	30.79	32.29	38.11	43.57
1941	21.52	31.79	33.74a	44.07	26.34	41.60	42.99	48.41
1942	21.01	19.01	11.37a	34.83	38.46	31.12	42.08	44.65
1943	23.39b	20.63	17.21	31.43	20.51	26.33	29.93	25.45
1944	24.76	32.76	27.62a	32.46	33.19	42.98	43.14	47.42
1945	15.69	22.37	26.60	29.57	30.46	33.50	39.38	31.74b
1946	19.10	26.41	14.16a	29.65	45.17	45.62	61.60	52.24
1947	22.92b	22.67	---	18.98	17.32	21.89	27.52	27.53
1948	20.02a	18.31	---	28.82	23.64	23.77	19.88b	21.27a
1949	31.32	34.41	---	39.90	40.81	41.15	43.21	36.22
1950	17.70	18.27	15.28a	24.91	19.86	24.94	21.13	21.10
1951	14.71	16.07	15.63	24.05a	24.44	18.76	24.84	30.88
1952	12.26	18.24	23.16	25.56	26.24	37.54	33.87	39.91
1953	10.12	18.34	21.44	20.61	17.56	21.42	30.06	33.39
1954	19.38	15.60	14.72	11.92	13.70	10.29	10.12	13.42
1955	26.55	18.36	20.87	21.21	18.18	19.27	23.12	26.44
1956	7.58	9.29	11.29	15.54	14.31	12.05	18.41	18.37
1957	34.21	39.30	40.03	35.09	48.83	52.55	51.88	46.51
1958	45.37	39.03	41.18	41.60	39.69	40.94	36.40	39.08
1959	27.51	31.51	27.02	30.68	24.50	35.64	40.45	43.47
1960	19.12	23.98	26.24	32.37	29.76	32.55	34.28	45.48
1961	17.91	26.26	27.24	27.36	26.47	25.45	15.70a	30.02
1962	10.87	14.12	13.58	17.85	23.90	25.26	27.40	28.47
1963	15.07	16.70	18.99	18.90	18.65	20.66	23.41	19.90
1964	20.75	22.30	23.78	28.29	31.88	27.36	30.65	30.27
1965	21.48	26.21	29.41	30.80	36.65	42.41	45.16	45.00
1966	21.63	20.87	21.54	29.46	21.44	29.05	25.98	27.12
1967	21.95	20.10	23.89	30.33	29.26	26.75	31.74	26.41
1968	17.26	25.20	29.88b	31.91	30.40	35.14	35.97	37.13
1969	28.53	33.38	33.05	32.30	31.42	38.07	33.01	36.59
1970	16.50	13.59	22.13	30.96	22.74	27.79	35.23	32.30
1971	29.46	31.01	31.00	32.96	31.80	45.24	29.43	31.10
1972	21.21	15.49	21.10	25.43	31.49	35.09	42.02	31.90
1973	30.61	30.85	35.14b	47.82	52.28	50.93	51.66	47.91
1974	18.25	30.94	20.93b	36.41b	37.00	41.80	42.85	37.28a
1975	26.62	24.92	23.65	25.84a	25.67	33.49	35.82	48.64
1976	34.40	46.04	40.82	45.21	39.13	45.24	49.06	47.46
1977	15.06	19.90	17.06	19.40	29.64	32.43	24.83	29.69
1978	19.04	18.48	21.28	24.64	35.99	35.17	36.35b	33.08
1979	16.34	32.35	31.44	28.83	36.64	39.97	36.72	38.74
1980	18.33	23.05	22.67	21.27	24.23	39.02	33.69	29.56
1981	28.73	26.24	30.19	27.40	36.37	41.05	43.23	49.62
1982	19.10	23.35	18.44	21.99	22.96	27.64	21.04	22.47b
1983	19.35	24.45a	23.33	20.92b	26.11	34.60	34.13	36.95
1984	16.24	15.33b	20.67	21.19a	25.95	26.97	20.90	8.26a
1985	18.93	5.76a	23.67	21.94	41.43	37.77	37.26	33.54
1986	27.44	29.86b	29.62b	36.01b	42.73	43.52	47.14	42.20
1987	39.45	36.39	38.36	40.09	37.96	39.86	37.33a	37.94
1988	12.08	15.20	13.52	9.81b	19.01	19.49	16.27b	21.50
1989	16.98	18.65	17.26	16.10	22.14	25.14	20.99	25.46
1990	38.24b	24.73	30.06	27.01	38.31	42.51	24.58a	35.14b
1991	23.11	21.77	31.12	34.55	42.76	48.22	56.55	51.07
1992	22.22	27.85a	37.73	45.34	46.49	64.17	38.84b	40.33b
1993	15.18	9.32c	13.20	16.60	32.00	24.02	19.54b	24.01b
1994	22.85a	39.61	29.32	22.38b	40.42	40.98	35.76a	40.85

(Table 4.1 continued)

Year	Bracketville	Uvalde	Sabinal	Hondo	San Antonio	Boerne	New Braunfels	San Marcos
1995	25.87	19.47	27.55	24.55	23.20	30.29	23.29	32.57
1996	20.32b	16.20	14.20	15.50	17.80	24.57	19.00	28.20
1997	---	27.77	35.74	37.54	33.94	---	41.65	43.56
1998	24.15	27.40b	20.66b	30.44a	42.10	45.74	52.98	58.51
1999	19.88	19.08	2.55b	16.94	16.63	18.67	21.07	19.38
2000	18.11b	23.84	22.87	32.49	35.86	46.30a	36.34b	40.56
Years of Record	98	97	82	96	116	96	101	97
Yearly Average	21.62	23.68	23.99a	28.32	30.11	33.86	33.14	34.33

Data source: US Department of Commerce (2001), NOAA (1934-2000).
"a" Partial record not included in long-term average; missing one month.
"b" Partial record not included in long-term average; missing more than one month.
"---" indicates no data available.

Table 4.2 Monthly precipitation data from selected Edwards Aquifer Authority and National Oceanic and Atmospheric Administration precipitation-gauging stations, 2000 (measured in inches).

Gauge	County	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sep	Oct	Nov	Dec	Total
San Antonio Intl. Airport	Bexar	1.40	2.20	0.91	1.22	3.59	7.61	0.34	0.16	2.65	5.62	8.59	1.57	35.86
Vanderpool 10N	Bandera	0.44	3.00	1.02	0.85	4.32	3.09	0.11	0.00	3.12	12.13	8.36	1.80	38.24
Vanderpool 4N	Bandera	0.30	3.08	0.93	0.69	3.56	4.66	0.45	0.71	2.56	12.32	9.07	2.24	40.54
Children's Home	Bandera	0.00	1.65	0.99	1.70	1.73	4.68	0.00	0.00	2.20	11.23	8.49	1.85	34.52
Landford	Bandera	0.74	1.38	0.53	1.34	4.96	4.85	0.68	0.0	2.10	9.36	5.32	1.22	32.48
New Braunfels	Comal	2.26	2.54	2.23	---	3.62	8.78	0.00	---	1.28	5.89	7.10	2.64	36.34b
San Marcos	Hays	2.85	2.74	2.29	2.28	6.43	5.84	0.40	0.05	2.68	6.02	7.13	1.85	40.56
Kerrville 3 NNE	Kerr	0.94	1.92	0.59	1.34	4.30	3.84	0.02	0.19	3.76	6.37	8.56	1.61	33.44
Hondo	Medina	0.71	1.36	1.07	0.79	3.59	7.88	0.45	0.38	2.21	7.68	4.80	1.57	32.49
Bracketville	Kinney	0.10	1.10	---	---	1.73	1.73	0.09	0.25	---	8.59	4.11	0.41	18.11b
Prade Ranch	Real	0.20	1.62	---	0.73	4.00	5.20	0.18	0.52	1.93	12.17	8.30	0.30	35.15a
Sabinal	Uvalde	0.24	2.34	0.46	0.80	3.79	4.77	0.41	0.01	0.87	5.27	2.84	1.07	22.87
Uvalde	Uvalde	0.16	2.08	0.24	1.59	2.95	4.66	0.10	0.70	2.06	4.62	3.86	0.82	23.84
Utopia 22	Uvalde	1.43	0.41	0.25	1.18	1.55	8.30	0.80	0.00	0.60	9.32	4.95	1.39	30.18

Gauge	County	Average	Total	Deviation from Avregae
San Antonio Intl. Airport	Bexar	30.11	35.86	+5.75
New Braunfels	Comal	33.14	36.34b	+3.20
San Marcos	Hays	34.33	40.56	+6.23
Hondo	Medina	28.32	32.49	+4.17
Uvalde	Uvalde	23.68	23.84	+0.16

Data source: Edwards Aquifer Authority and US Department of Commerce (NOAA), 2001.
"a" Partial record not included in long-term average; missing one month.
"b" Partial record not included in long-term average; missing more than one month.
"---" indicates missing or incomplete data for the month.

The San Antonio region is situated between the semi-arid Chihuahuan Desert area to the west and a wetter more humid Coastal Plain to the east. This location allows for large variations in monthly and annual precipitation amounts. The average annual precipitation for San Antonio is approximately 30 inches, however annual precipitation has ranged from approximately 13 to 52 inches (NOAA, 2000).

The year 2000 rainfall totals in the region were generally above average. Near normal rainfall occurred in the winter months and below average rainfall amounts were recorded in the early spring and summer months. Above average rainfall amounts fell in June, October and November. After the above average rainfall in June, the summer months proved to be much dryer than normal. The fall months were cooler and wetter than normal. With 5.97 inches above normal rainfall in November, it was the second wettest November on record in San Antonio. The 2000 rainfall total in San Antonio was 35.86 inches, 5.75 inches above average. The increased rainfall and recharge to the aquifer resulted in higher than average water levels and springflows in the last quarter of the year.

4.2 Precipitation Enhancement Program (PEP)

The Edwards Aquifer Authority Board of Directors voted in the Fall of 1997 to pursue a permit from the Texas Natural Resources Conservation Commission (TNRCC) to conduct precipitation enhancement (cloud-seeding). The permit was granted by the TNRCC in October 1998 to the Authority's precipitation enhancement contractor (Weather Modification, Inc.) and is valid for four years beginning in January 1999 and ending in December 2002. The Authority's PEP project area consists of 6.37 million acres across south Texas, covering all or parts of 12 counties including Real (east of US Highway 83), Kerr, Kendall, Blanco, Bandera, Uvalde, Medina, Bexar, Comal, Hays, Guadalupe, and Caldwell. The permit allows the Authority, through its contractor, to conduct precipitation enhancement anytime during the year, including the traditional period of April through September. The goals of the PEP are:

- To enhance rainfall in a targeted area by using state-of-the-art cloud seeding technology and procedures to seed suitable convective clouds (Weather Modification, Inc., 2001);
- To increase the average annual quantity of water that may be withdrawn from the aquifer;
- To reduce the periods of low water levels and resulting threatened springflows;
- To reduce and delay potentially large expenditures to import surface water for aquifer recharge; and
- To develop and demonstrate weather modification management techniques that will improve reliability and efficiency of water supply at desired locations.

Research indicates that precipitation enhancement can result in increased rainfall of approximately 10 to 15 percent. The Authority believes this increase in rainfall could add 10 percent of additional recharge to the Edwards Aquifer. In addition to increasing direct recharge, the increased rainfall also decreases pumpage demand for lawn watering and crop irrigation.

The 2000 PEP was operational from March 1st through November 30th. Weather Modification, Inc. (WMI) reported that the PEP operations in 2000 "successfully achieved its objective, to seed cells believed to have the potential to produce precipitation." During the nine-month project period, the two aircraft completed 82 seeding and reconnaissance missions. These flights totaled 218.80 hours on 45 days. A total of 29.3 kg of seeding in the form of 1,144 ejectable flares and 106 gallons of silver iodide-acetone solutions was dispersed as seeding agent during the flights. According to WMI, the year 2000 was characterized to have similar totals, in terms to hours flown and seeding materials used, to the 1999 season even though the program was longer. This reflects the extremely dry conditions from mid-June to mid-August, that were not experienced in 1999 (Weather Modification, Inc., 2001). A detailed assessment of the seeding effectiveness is beyond the scope of the present Weather Modification, Inc. contract. However, preliminary analyses of the radar storm tracking data support the hypotheses of promotion of additional rainfall from seeded storms (Weather Modification, Inc., 2001). The Authority, the Texas Water Development Board (TWDB), and the TNRCC are currently funding studies to evaluate the effectiveness of weather modification.

Weekly PEP reports are posted at the Authority's web page at http://www.edwardsaquifer.org/Pages/theprograms/precip_weekly.html.

5.0 GROUNDWATER RECHARGE

The segment of the Edwards Aquifer Recharge Zone (EARZ) that supplies groundwater to the San Antonio segment of the Balcones fault zone Edwards Aquifer extends from central Kinney County to central Hays County. **Figure 5.1** identifies the major drainage basins that cross the EARZ. These basins are also listed below in **Table 5.1**.

Table 5.1 Drainage basins that cross the Edwards Aquifer Recharge Zone.

Nueces/West Nueces River basin
Frio/Dry Frio River basin
Sabinal River basin
Area between Sabinal River and Medina River basins
Medina River basin
Area between Medina River and Cibolo/Dry Comal Creek basins
Cibolo Creek and Dry Comal Creek basin
Guadalupe River basin
Blanco River basin

Estimates of the contribution from adjacent hydraulically connected aquifers ranges from 5,000 to 60,000 acre feet per year. However, only surface water data from precipitation and streamflows are utilized to calculate total recharge.

The USGS has been calculating groundwater recharge to the Edwards Aquifer since 1934. **Table 5.2** lists estimated annual recharge by river basin from 1934 through 2000, based on USGS calculations. The USGS estimates that annual recharge for the period of record (1934 to 2000) ranged from 43,700 acre-feet at the height of the drought of record in 1956, to 2,486,000 acre-feet in 1992. In 2000, estimated recharge was 614,500 acre-feet. Average annual recharge from 1934 to 2000 was 679,000 acre-feet. However, since 1991, the ten-year average annual recharge has been estimated to be approximately 920,000 acre-feet. **Figure 5.2** depicts a graph of yearly recharge and the ten-year floating average recharge estimate for the San Antonio segment of the Balcones fault zone Edwards Aquifer from 1934 to 2000.

Recharge directly affects groundwater levels in the aquifer. Water levels rise during periods of higher-than-normal recharge, and generally decline during periods of below-normal recharge. Since recharge is a direct result of precipitation, water levels in the aquifer are greatly affected by rainfall. Above normal rainfall conditions in 2000, especially towards the end of 2000, resulted in a noticeable increase of recharge to the Edwards Aquifer relative to the 1999 recharge estimate of 473,400 acre-feet.

The Authority operates four recharge dams across the EARZ. The locations of the recharge structures are shown in Figure 5.1. A linear regression analysis of historical rainfall and recharge indicates all four structures contributed recharge above their historical average. A total recharge of 7,901 acre-feet occurred at the dams in 2000. Table 5.3 shows the annual historical recharge recorded, or estimated for each site since construction.

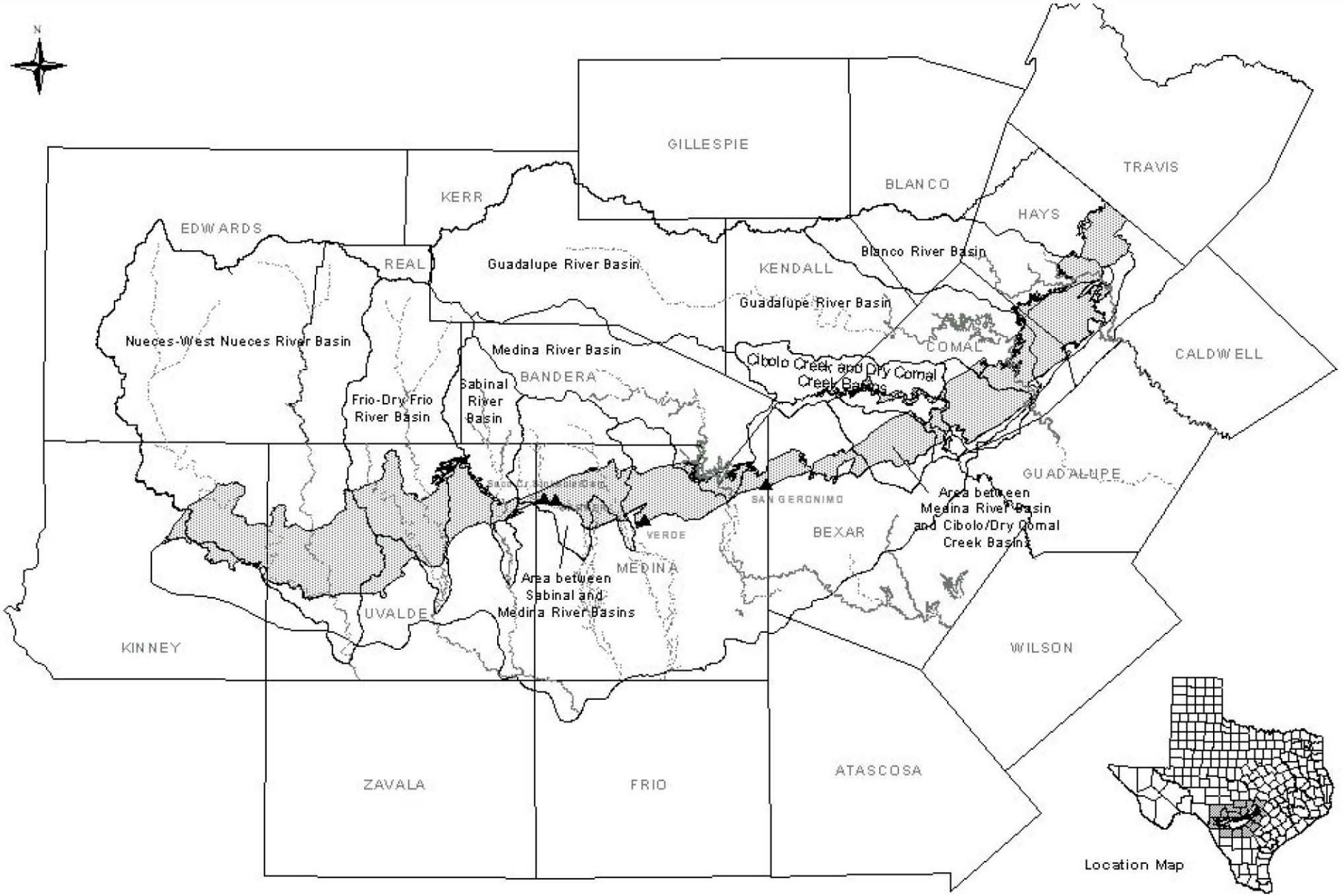


Figure 5.1
Major Drainage Basins and Edwards Aquifer Authority Recharge Structures in the San Antonio Segment of the Balcones Fault Zone Edwards Aquifer

Table 5.2 Estimated annual groundwater recharge to the Edwards Aquifer by drainage basin, 1934-2000 (measured in thousands of acre-feet).

Year	Nueces River/ West Nueces River basin	Frio River/ Dry Frio River basin	Sabinal River basin	Area between Sabinal River and Medina River basin	Medina River basin	Area between Medina River and Cibolo Creek/ Dry Comal Creek basin	Cibolo Creek/Dry Comal Creek basin	Blanco River basin	*Total
1934	8.6	27.9	7.5	19.9	46.5	21	28.4	19.8	179.6
1935	411.3	192.3	56.6	166.2	71.1	138.2	182.7	39.8	1258.2
1936	176.5	157.4	43.5	142.9	91.6	108.9	146.1	42.7	909.6
1937	28.8	75.7	21.5	61.3	80.5	47.8	63.9	21.2	400.7
1938	63.5	69.3	20.9	54.1	65.5	46.2	76.8	36.4	432.7
1939	227	49.5	17.0	33.1	42.4	9.3	9.6	11.1	399.0
1940	50.4	60.3	23.8	56.6	38.8	29.3	30.8	18.8	308.8
1941	89.9	151.8	50.6	139.0	54.1	116.3	191.2	57.8	850.7
1942	103.5	95.1	34.0	84.4	51.7	66.9	93.6	28.6	557.8
1943	36.5	42.3	11.1	33.8	41.5	29.5	58.3	20.1	273.1
1944	64.1	76.0	24.8	74.3	50.5	72.5	152.5	46.2	560.9
1945	47.3	71.1	30.8	78.6	54.8	79.6	129.9	35.7	527.8
1946	80.9	54.2	16.5	52.0	51.4	105.1	155.3	40.7	556.1
1947	72.4	77.7	16.7	45.2	44.0	55.5	79.5	31.6	422.6
1948	41.1	25.6	26.0	20.2	14.8	17.5	19.9	13.2	178.3
1949	166.0	86.1	31.5	70.3	33.0	41.8	55.9	23.5	508.1
1950	41.5	35.5	13.3	27.0	23.6	17.3	24.6	17.4	200.2
1951	18.3	28.4	7.3	26.4	21.1	15.3	12.5	10.6	139.9
1952	27.9	15.7	3.2	30.2	25.4	50.1	102.3	20.7	275.5
1953	21.4	15.1	3.2	4.4	36.2	20.1	42.3	24.9	167.6
1954	61.3	31.6	7.1	11.9	25.3	4.2	10.0	10.7	162.1
1955	128.0	22.1	0.6	7.7	16.5	4.3	3.3	9.5	192.0
1956	15.6	4.2	1.6	3.6	6.3	2.0	2.2	8.2	43.7
1957	108.6	133.6	65.4	129.5	55.6	175.6	397.9	76.4	1142.6
1958	266.7	300.0	223.8	294.9	95.5	190.9	268.7	70.7	1711.2
1959	109.6	158.9	61.6	96.7	94.7	57.4	77.9	33.6	690.4
1960	88.7	128.1	64.9	127.0	104.0	89.7	160.0	62.4	824.8
1961	85.2	151.3	57.4	105.4	88.3	69.3	110.8	49.4	717.1
1962	47.4	46.6	4.3	23.5	57.3	16.7	24.7	18.9	239.4
1963	39.7	27.0	5.0	10.3	41.9	9.3	21.3	16.2	170.7
1964	126.1	57.1	16.3	61.3	43.3	35.8	51.1	22.2	413.2
1965	97.9	83.0	23.2	104.0	54.6	78.8	115.3	66.7	623.5
1966	169.2	134.0	37.7	78.2	50.5	44.5	66.5	34.6	615.2
1967	82.2	137.9	30.4	64.8	44.7	30.2	57.3	19.0	466.5
1968	130.8	176.0	66.4	198.7	59.9	83.1	120.5	49.3	884.7
1969	119.7	113.8	30.7	84.2	55.4	60.2	99.9	46.6	610.5
1970	112.6	141.9	35.4	81.6	68.0	68.8	113.8	39.5	661.6
1971	263.4	212.4	39.2	155.6	68.7	81.4	82.4	22.2	925.3
1972	108.4	144.6	49.0	154.6	87.9	74.3	104.2	33.4	756.4
1973	190.6	256.9	123.9	286.4	97.6	237.2	211.7	82.2	1486.5
1974	91.1	135.7	36.1	115.3	96.2	68.1	76.9	39.1	658.5
1975	71.8	143.6	47.9	195.9	93.4	138.8	195.7	85.9	973.0
1976	150.7	238.6	68.2	182.0	94.5	47.9	54.3	57.9	894.1
1977	102.9	193.0	62.7	159.5	77.7	97.9	191.6	66.7	952.0
1978	69.8	73.1	30.9	103.7	76.7	49.6	72.4	26.3	502.5
1979	128.4	201.4	68.6	203.1	89.4	85.4	266.3	75.2	1117.8
1980	58.6	85.6	42.6	25.3	88.3	18.8	55.4	31.8	406.4
1981	205.0	365.2	105.6	252.1	91.3	165.0	196.8	67.3	1448.3
1982	19.4	123.4	21.0	90.9	76.8	22.6	44.8	23.5	422.4
1983	79.2	85.9	20.1	42.9	74.4	31.9	62.5	23.2	420.1
1984	32.4	40.4	8.8	18.1	43.9	11.3	16.9	25.9	197.7
1985	105.9	186.9	50.7	148.5	64.7	136.7	259.2	50.7	1003.3
1986	188.4	192.8	42.2	173.6	74.7	170.2	267.4	44.5	1153.8
1987	308.5	473.3	110.7	405.5	90.4	229.3	270.9	114.9	2003.5
1988	59.2	117.9	17.0	24.9	69.9	12.6	28.5	25.5	355.5

(Table 5.2 continued)

Year	Nueces River/ West Nueces River basin	Frio River/ Dry Frio River basin	Sabinal River basin	Area between Sabinal River and Medina River basin	Medina River basin	Area between Medina River and Cibolo Creek/ Dry Comal Creek basin	Cibolo Creek/Dry Comal Creek basin	Blanco River basin	*Total
1989	52.6	52.6	8.4	13.5	46.9	4.6	12.3	23.6	214.4
1990	479.3	255.0	54.6	131.2	54.0	35.9	71.8	41.3	1123.1
1991	325.2	421.0	103.1	315.2	52.8	84.5	109.7	96.9	1508.4
1992	234.1	586.9	201.1	566.1	91.4	290.6	286.6	226.9	2486.0
1993	32.6	78.5	29.6	60.8	78.5	38.9	90.9	37.8	447.6
1994	124.6	151.5	29.5	45.1	61.1	34.1	55.6	36.6	538.1
1995	107.1	147.6	34.7	62.4	61.7	36.2	51.1	30.6	531.3
1996	130.0	92.0	11.4	9.4	42.3	10.6	14.7	13.9	324.3
1997	176.9	209.1	57.0	208.4	63.3	193.4	144.2	82.3	1134.6
1998	141.5	214.8	72.5	201.4	80.3	86.2	240.9	104.7	1142.3
1999	101.4	136.8	30.8	57.2	77.1	21.2	27.9	21.0	473.4
2000	238.4	123.0	33.1	55.2	53.4	28.6	48.6	34.1	614.5
For the period of record 1934-2000:									
Average	118.6	134.2	41.8	107.0	61.5	69.4	104.0	42.4	679.0
Median	101.4	123.0	30.9	78.2	59.9	49.6	76.9	34.1	556.1
For the period of record 1991-2000:									
Average	161.2	216.1	60.3	158.1	66.2	82.4	107.0	68.5	920.0
Median	135.8	149.6	33.9	61.6	62.5	37.6	73.3	37.2	576.3

Data source: USGS, 2001.
*Total may not be equal to sum of basin values due to rounding.

Table 5.2 does not include recharge estimates for the Guadalupe River basin because the current method of estimating recharge includes the premise, based on available data, that the basin does not recharge the aquifer. The Authority is currently reviewing the recharge calculation methodology for possible revision.

Figure 5.2 Estimated annual recharge and ten-year floating average recharge for the San Antonio segment of the Balcones fault zone Edwards Aquifer (1934-2000).

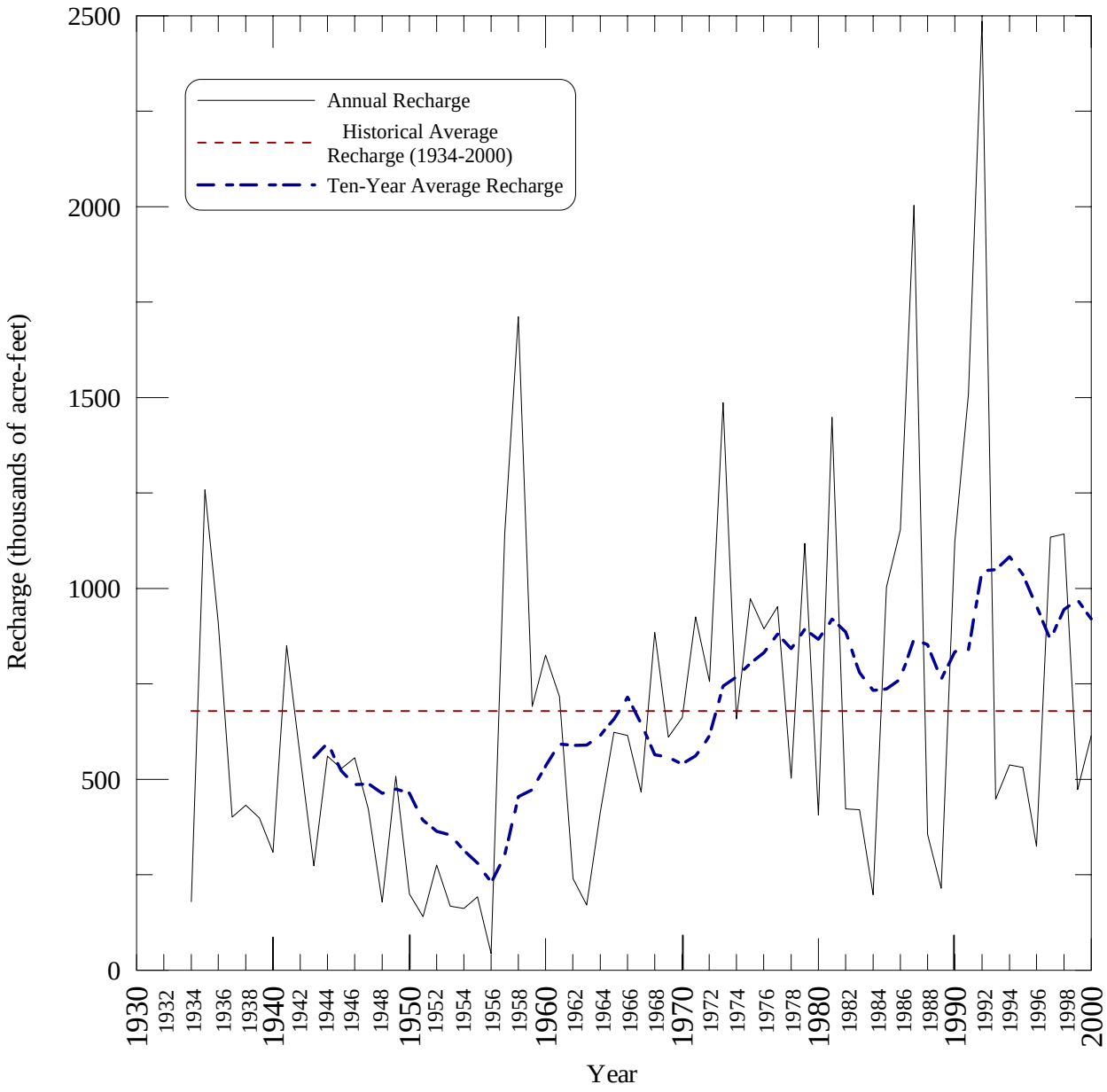


Table 5.3 Estimated annual Edwards Aquifer recharge from Edwards Aquifer Authority recharge projects (measured in acre-feet).

Year	Parker (4-20-74)	Verde (4-28-78)	San Geronimo (11-13-79)	Seco (10-21-82)	Yearly Total
1974	160	---	---	---	160
1975	620	---	---	---	620
1976	2,018	---	---	---	2,018
1977	6	---	---	---	6
1978	98	150	---	---	248
1979	2,315	1,725	0	---	4,040
1980	0	371	903	---	1,274
1981	772	1,923	1,407	---	4,102
1982	3	112	91	0	206
1983	0	254	0	0	254
1984	251	246	0	143	640
1985	232	440	1,097	643	2,412
1986	217	889	963	1,580	3,649
1987	2,104	4,141	1,176	12,915	20,336
1988	0	0	0	0	0
1989	0	0	0	0	0
1990	49	176	41	479	745
1991	647	966	1,647	2,160	5,420
1992	723	2,775	2,874	14,631	21,003
1993	0	0	334	508	842
1994	159	0	0	5	164
1995	18	79	51	880	1,028
1996	0	0	0	0	0
1997	2,941a	907b	1,383b	---	5,231
1998	1469a\b	1160b	872b	3796b	7297
1999	0b	0b	0b	50c	50b/c
2000	901b	1,371b	1,023b	4,606b	7,901b
Total	**15,703**	**17,685**	**13,862**	**42,396**	**89,646**
Average	582	769	630	2,355	3,320
Median	160	254	212.5	493.5	842

Data source: USGS and Edwards Aquifer Authority, 2001.
"a" Written communication from USGS - San Antonio Subdistrict Office.
"b" Determined by linear regression analysis.
“c” Linear regression analysis indicates zero recharge; however, one recharge event was observed that was estimated to have recharged 50 acre feet.
"---" indicates no data available.

The 2000 recharge estimates shown in **Table 5.3** for Parker Creek, Verde Creek, San Geronimo, and Seco Creek dams were determined by a linear regression analysis, using the "least squares" method. For each area, a comparison of rainfall data in the relevant drainage basin (obtained from the National Weather Service) to historical recharge data for the dam was used as data input. The resulting data were used to generate a linear regression equation. This equation was used to predict the amount of recharge at each of the four recharge structures for a given rainfall within the basin. A comparison of the resulting data to historical recharge indicates the regression results are reasonable (Gregory James, written communication, 1998).

The historical average annual recharge attributed to the recharge dams is based on a period of record that reflects the date of construction through 2000. The historical average annual recharge contributed by the combined structures is 3,320 acre-feet.

6.0 GROUNDWATER DISCHARGE AND USAGE

The Edwards Aquifer provides water for many diverse uses in south central Texas, including irrigation, municipal, industrial, and domestic/recreational needs. Groundwater is discharged from the Edwards Aquifer as springflow or through wells.

Springflow is the primary basis of recreational economies in New Braunfels and San Marcos, and provides habitat for threatened and endangered animal and plant species. The amount of groundwater discharged as springflow has historically been greater than the amount discharged through wells for any of the above-mentioned uses. Springflow is currently calculated by measuring streamflows downstream of the springs then making the necessary corrections to these values. **Figure 6.1** indicates the location of the major springs of the Edwards Aquifer. Aquifer discharge by pumping is calculated by tabulating reported water use data from municipal, irrigation, and industrial wells. Discharge from domestic and livestock wells is estimated.

Estimates of annual groundwater discharge from springflow and pumping for the Edwards Aquifer are available from 1934 to 2000 (**Table 6.1**). Annual groundwater discharge estimates range from a low of 388,800 acre-feet in 1955 to a high of 1,130,000 acre-feet in 1992. In 2000, total groundwater discharge from the Edwards Aquifer from wells and springs was estimated at 752,300 acre-feet.

Springflow from 1934 to 2000 has varied from a low of 69,800 acre-feet in 1956 to a high of 802,800 acre-feet in 1992 (**Table 6.1**). **Table 6.2** lists the monthly estimated discharge in 2000 for six primary Edwards Aquifer springs. Spring discharge from the Edwards Aquifer for 2000 was calculated at 337,500 acre-feet. Spring discharge accounted for 45 percent of total discharge from the Edwards Aquifer in 2000 (**Tables 6.1 and 6.2**).

Figure 6.2 is a graph comparing Edwards Aquifer well discharge to springflow. The figure shows the variability in springflow and the general trend of increasing well discharge over the period of record. The lowest estimated annual aquifer pumping level was 101,900 acre-feet recorded in 1934. Since 1934, pumping from the Edwards Aquifer has increased to 414,800 acre-feet in 2000, or an increase of approximately 400 percent. Average annual well production was estimated to be 302,400 acre-feet per year for the period of record from 1934 to 2000, while the estimated 10-year average for pumping from 1991 through 2000 was 417,500 acre-feet (**Table 6.1**). Reported groundwater pumping accounted for 414,800 acre-feet of water discharged from the Edwards Aquifer in 2000.

Table 6.3 shows the 2000 discharge data by use for the counties in the region. The discharge estimates were compiled from pumpage data reported by municipal, industrial, and agricultural users to the Authority. Pumpage from domestic supply, stock, and miscellaneous use were estimated by the Authority. **Table 6.4** shows annual Edwards Aquifer groundwater discharge by use from 1955 to 2000, the estimated 10-year average and median for pumping by use from 1991 through 2000 is also included in this table.

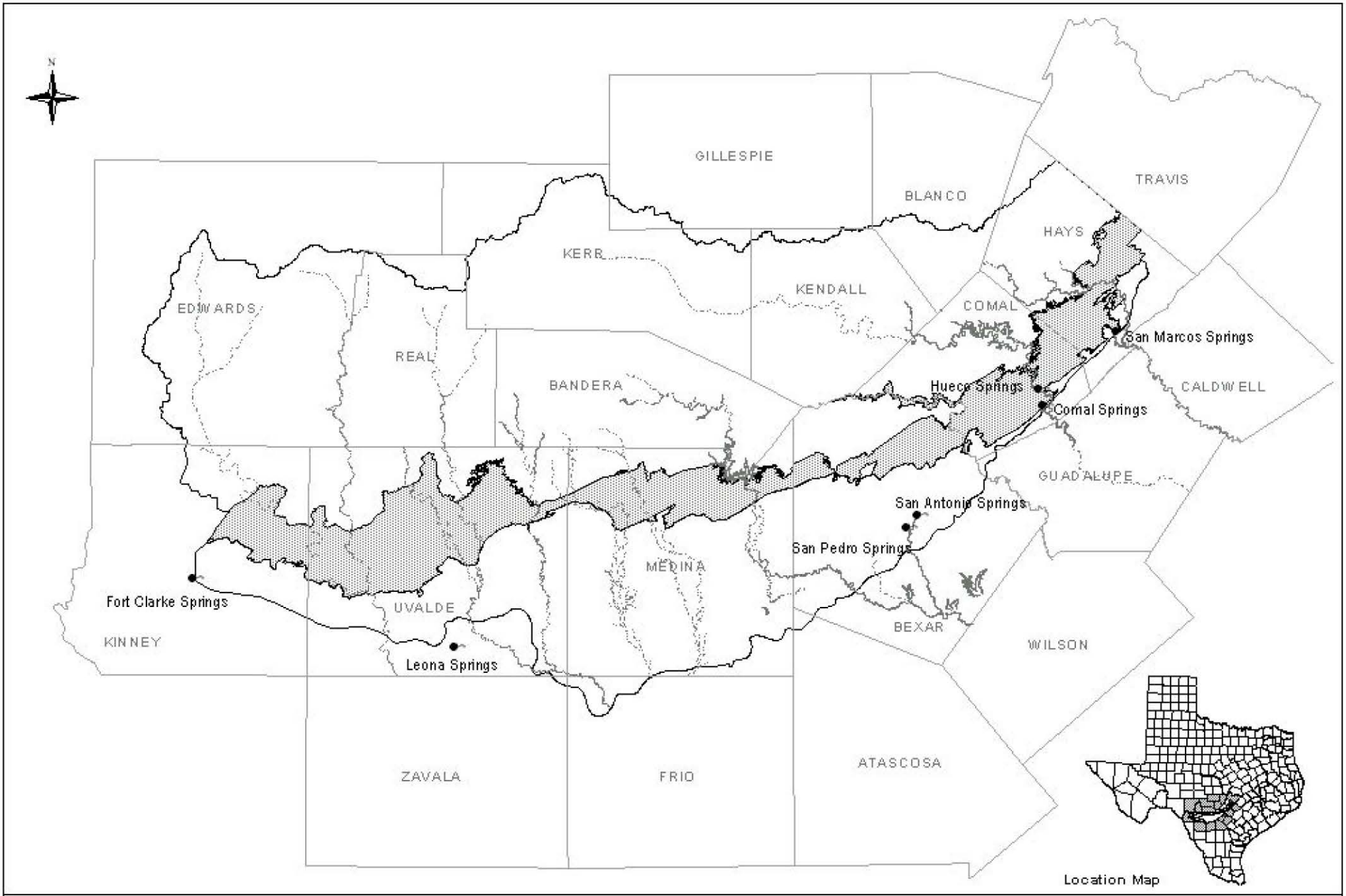


Figure 6.1
Major Springs in the San Antonio Segment of the Balcones Fault Zone Edwards Aquifer

Table 6.1 Annual estimated groundwater discharge data by county for the Edwards Aquifer, 1934-2000 (measured in thousands of acre-feet).

Year	Kinney, Uvalde	Medina	Bexar	Comal	Hays	Total	Total Wells	Total Springs
1934	12.6	1.3	109.3	229.1	85.6	437.9	101.9	336.0
1935	12.2	1.5	171.8	237.2	96.9	519.6	103.7	415.9
1936	26.6	1.5	215.2	261.7	93.2	598.2	112.7	485.5
1937	28.3	1.5	201.8	252.5	87.1	571.2	120.2	451.0
1938	25.2	1.6	187.6	250.0	93.4	557.8	120.1	437.7
1939	18.2	1.6	122.5	219.4	71.1	432.8	118.9	313.9
1940	16.1	1.6	116.7	203.8	78.4	416.6	120.1	296.5
1941	17.9	1.6	197.4	250.0	134.3	601.2	136.8	464.4
1942	22.5	1.7	203.2	255.1	112.2	594.7	144.6	450.1
1943	19.2	1.7	172.0	249.2	97.2	539.3	149.1	390.2
1944	11.6	1.7	166.3	252.5	135.3	567.4	147.3	420.1
1945	12.4	1.7	199.8	263.1	137.8	614.8	153.3	461.5
1946	6.2	1.7	180.1	261.9	134.0	583.9	155.0	428.9
1947	13.8	2.0	193.3	256.8	127.6	593.5	167.0	426.5
1948	9.2	1.9	159.2	203.0	77.3	450.6	168.7	281.9
1949	13.2	2.0	165.3	209.5	89.8	479.8	179.4	300.4
1950	17.8	2.2	177.3	191.1	78.3	466.7	193.8	272.9
1951	16.9	2.2	186.9	150.5	69.1	425.6	209.7	215.9
1952	22.7	3.1	187.1	133.2	78.8	424.9	215.4	209.5
1953	27.5	4.0	193.7	141.7	101.4	468.3	229.8	238.5
1954	26.6	6.3	208.9	101.0	81.5	424.3	246.2	178.1
1955	28.3	11.1	215.2	70.1	64.1	388.8	261.0	127.8
1956	59.6	17.7	229.6	33.6	50.4	390.9	321.1	69.8
1957	29.0	11.9	189.4	113.2	113.0	456.5	237.3	219.2
1958	23.7	6.6	199.5	231.8	155.9	617.5	219.3	398.2
1959	43.0	8.3	217.5	231.7	118.5	619.0	234.5	384.5
1960	53.7	7.6	215.4	235.2	143.5	655.4	227.1	428.3
1961	56.5	6.4	230.3	249.5	140.8	683.5	228.2	455.3
1962	64.6	8.1	220.0	197.5	98.8	589.0	267.9	321.1
1963	51.4	9.7	217.3	155.7	81.9	516.0	276.4	239.6
1964	49.3	8.6	201.0	141.8	73.3	474.0	260.2	213.8
1965	46.8	10.0	201.1	194.7	126.3	578.9	256.1	322.8
1966	48.5	10.4	198.0	198.9	115.4	571.2	255.9	315.3
1967	81.1	15.2	239.7	139.1	82.3	557.4	341.3	216.1
1968	58.0	9.9	207.1	238.2	146.8	660.0	251.7	408.3
1969	88.5	13.6	216.3	218.2	122.1	658.7	307.5	351.2
1970	100.9	16.5	230.6	229.2	149.9	727.1	329.4	397.7
1971	117.0	32.4	262.8	168.2	99.1	679.5	406.8	272.7
1972	112.6	28.8	247.7	234.3	123.7	747.1	371.3	375.8
1973	96.5	14.9	273.0	289.3	164.3	838.0	310.4	527.6
1974	133.3	28.6	272.1	286.1	141.1	861.2	377.4	483.8
1975	112.0	22.6	259.0	296.0	178.6	868.2	327.8	540.4
1976	136.4	19.4	253.2	279.7	164.7	853.4	349.5	503.9
1977	156.5	19.9	317.5	295.0	172.0	960.9	380.6	580.3
1978	154.3	38.7	269.5	245.7	99.1	807.3	431.8	375.5
1979	130.1	32.9	294.5	300.0	157.0	914.5	391.5	523.0
1980	151.0	39.9	300.3	220.3	107.9	819.4	491.1	328.3
1981	104.2	26.1	280.7	241.8	141.6	794.4	387.1	407.3
1982	129.2	33.4	305.1	213.2	105.5	786.4	453.1	333.3
1983	107.7	29.7	277.6	186.6	118.5	720.1	418.5	301.6
1984	156.9	46.9	309.7	108.9	85.7	708.1	529.8	178.3
1985	156.9	59.2	295.5	200.0	144.9	856.5	522.5	334.0
1986	91.7	41.9	294.0	229.3	160.4	817.3	429.3	388.0
1987	94.9	15.9	326.6	286.2	198.4	922.0	364.1	557.9
1988	156.7	82.2	317.4	236.5	116.9	909.7	540.0	369.7
1989	156.9	70.5	305.6	147.9	85.6	766.5	542.4	224.1
1990	118.1	69.7	276.8	171.3	94.1	730.0	489.4	240.6
1991	76.6	25.6	315.5	221.9	151.0	790.6	436.0	354.6
1992	76.5	9.3	370.5	412.4	261.3	1130.0	327.2	802.8
1993	107.5	17.8	371.0	349.5	151.0	996.7	407.3	589.4
1994	95.5	41.1	297.7	269.8	110.6	814.8	424.6	390.2

(Table 6.1 continued)

Year	Kinney, Uvalde	Medina	Bexar	Comal	Hays	Total	Total Wells	Total Springs
1995	90.8	35.2	*272.1	235.0	127.8	761.0	399.6	361.3
1996	117.6	66.3	*286.8	150.2	84.7	705.6	493.6	212.0
1997	77.0	31.4	260.2	243.3	149.2	761.1	377.1	383.9
1998	113.1a	51.3	312.4b	271.8c	168.8	917.6	453.5	464.1
1999	104.0	49.2	307.1b	295.5c	143.0	898.8	442.7	456.1
2000	89.1	45.1	283.6b	226.1c	108.4	752.3	414.8	337.5
For period of record 1934-2000:								
Average	71.3	20.0	238.2	220.3	118.8	668.7	302.4	366.3
Median	64.6	11.9	229.6	231.7	115.4	658.7	307.5	375.5
For period of record 1991-2000 (10 years):								
Average	94.8	37.2	307.7	267.5	145.6	852.7	417.5	435.2
Median	93.2	38.2	302.4	256.6	146.1	802.7	419.7	387.1

Data source: USGS and Edwards Aquifer Authority, 2001.
"a" USGS estimated Kinney County irrigation discharge.
"b" Includes estimates of Atascosa County reports of Edwards Aquifer irrigators.
"c" Includes estimates of Guadalupe County reports of Edwards Aquifer industrial and municipal users.
Differences may occur due to rounding procedures.
*In 1995, the USGS has revised the method of calculating domestic/livestock pumping, which significantly decreased the estimate for subsequent years.

Table 6.2 Estimated spring discharge from the Edwards Aquifer, 2000 (measured in acre-feet).

Month	Leona Springs and Leona River Underflow	San Pedro Springs	San Antonio Springs	Comal Springs	Hueco Springs	San Marcos Springs	Total monthly discharge combining all springs
January	2,710	172	0	18,610	631	6,790	28,913
February	2,258	145	0	17,510	561	6,620	27,094
March	2,092	110	0	17,970	533	7,040	27,745
April	1,669	73	0	16,550	476	6,710	25,478
May	1,445	12	0	15,390	2,490	7,500	26,837
June	1,394	37	0	15,200	4,447	9,890	30,968
July	1,133	3	0	13,530	2,625	9,330	26,621
August	836	0	0	10,900	472	7,650	19,858
September	891	0	0	9,830	170	6,610	17,501
October	1,220	24	0	13,380	1,279	7,080	22,983
November	1,625	333	544	19,290	4,180	12,810	38,782
December	1,799	505	1,482	21,470	5,940	13,530	44,726
Total	**19,074**	**1,415**	**2,026**	**189,630**	**23,804**	**101,560**	**337,509**

Data source: USGS, 2001.
Differences may occur due to rounding procedures.

Figure 6.2 Groundwater pumping compared to springflow from the Edwards Aquifer, 1934-2000 (measured in thousands of acre-feet).

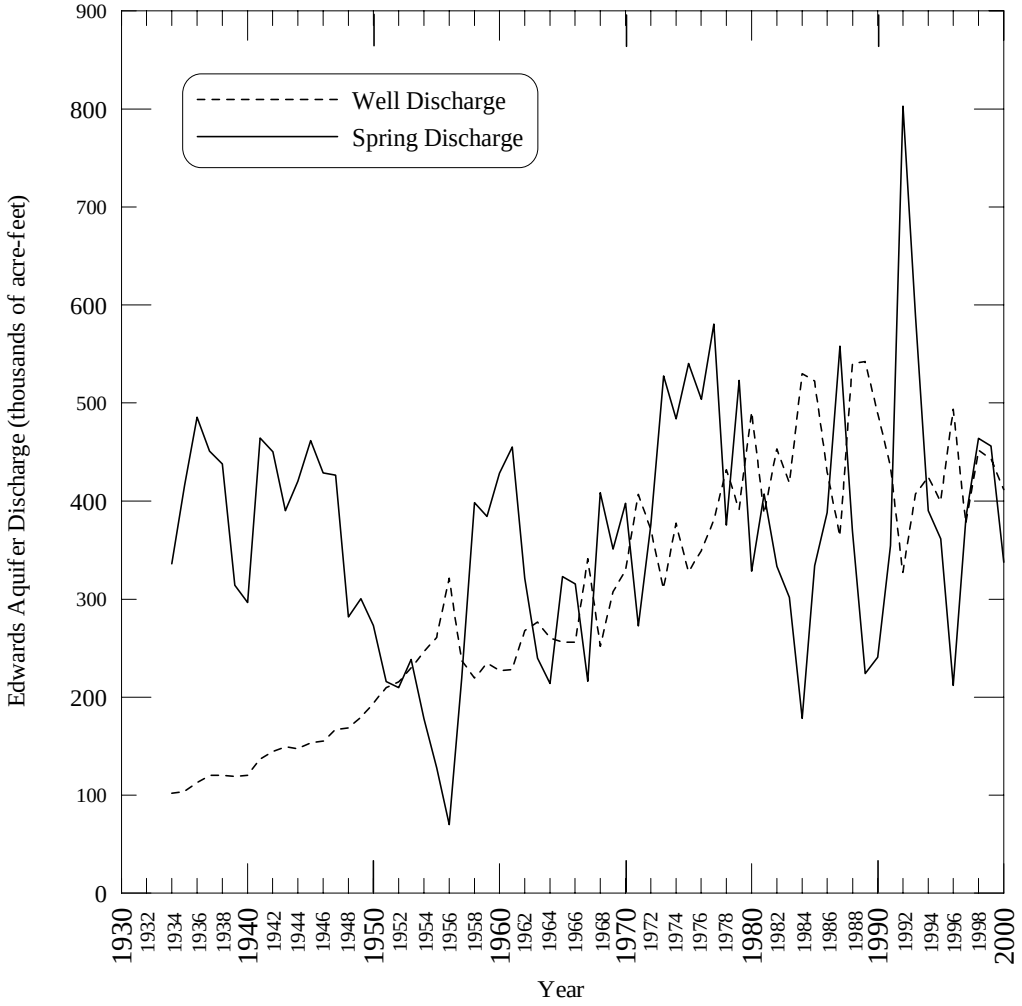


Table 6.3 Total groundwater discharge from the Edwards Aquifer, 2000 (measured in thousands of acre-feet).

County	Irrigation	Municipal /Military	Domestic /Stock	Industrial	Total Wells	Springs (est'd by USGS)	Total Well & Springs
Bexar	11.7 a,b	237.4	8.8	22.3	280.2	3.4	**283.6**
Comal	0.1 b	4.6 d	0.3	7.7 d	12.7	213.4	**226.1**
Hays	0.04 b	4.7	0.8	1.3	6.8	101.6	**108.4**
Medina	36.8 b	6.5	0.9	0.9	45.1	0.0	**45.1**
Uvalde	57.1 b	7.1	2.3	1.6	68.1	19.1	**87.2**
Kinney	0.6	1.0	0.3	0.0	1.9 c	0.0	**1.9**
Total	**106.3**	**261.3**	**13.4**	**33.8**	**414.8**	**337.5**	**752.3**

Differences may occur due to rounding procedures.
Data source: Edwards Aquifer Authority, and USGS 2001.
"a" Includes Atascosa County.
"b" Estimated from reports of Edwards Aquifer irrigators.
"c" Estimated by Edwards Aquifer Authority.
"d" Includes Guadalupe County.

Table 6.4 Annual estimated Edwards Aquifer groundwater discharge by use, 1955-2000 (measured in thousands of acre-feet).

Year	Irrigation	Municipal	Domestic/ Stock	Industrial/ Commercial	Springs
1955	85.2	120.5	30.1	25.1	127.8
1956	127.2	138.3	28.9	22.4	69.8
1957	68.8	116.1	29.8	22.6	219.2
1958	47.2	113.7	33.4	25.1	398.2
1959	60.0	118.9	31.5	24.2	384.5
1960	54.9	121.1	29.1	23.3	428.3
1961	52.1	124.5	29.6	22.2	455.3
1962	72.7	143.7	28.8	22.8	321.1
1963	75.4	151.8	27.8	21.8	239.6
1964	72.6	140.2	26.3	21.7	213.8
1965	68.0	138.8	27.0	22.3	322.8
1966	68.2	141.8	23.3	22.6	315.3
1967	119.4	171.0	25.1	25.8	216.1
1968	59.3	146.9	25.5	20.0	408.3
1969	95.2	162.0	29.2	21.1	351.2
1970	110.1	167.5	29.3	22.5	397.7
1971	159.4	196.2	28.6	22.6	272.7
1972	128.8	190.5	30.8	21.1	375.8
1973	82.2	177.1	32.3	18.8	527.6
1974	140.4	174.6	33.5	15.1	483.3
1975	96.4	182.5	33.6	15.3	540.4
1976	118.2	182.1	34.6	14.7	503.9
1977	124.2	205.3	38.1	13.0	580.3
1978	165.8	214.2	40.3	11.5	375.5
1979	126.8	208.9	40.7	15.2	523.0
1980	177.9	256.2	43.3	13.7	328.3
1981	101.8	231.8	40.9	12.6	407.3
1982	130.0	268.6	39.5	15.0	333.3
1983	115.9	249.2	38.8	14.7	301.5
1984	191.2	287.2	36.2	15.2	178.3
1985	203.1	263.7	39.2	16.5	334.0
1986	104.2	266.3	42.0	16.8	388.0
1987	40.9	260.9	43.5	18.7	557.9
1988	193.1	286.2	41.9	18.8	369.7
1989	196.2	285.2	38.2	22.9	224.1
1990	172.9	254.9	37.9	23.7	240.6
1991	88.5	240.5	39.5	67.5	354.6
1992	27.1	236.5	34.8	29.0	802.8
1993	69.3	252.0	49.9	36.1	589.4
1994	104.5	247.0	33.9	39.3	390.2

(Table 6.4 continued)

Year	Irrigation	Municipal	Domestic/ Stock	Industrial/ Commercial	Springs
1995	95.6	255.0	*11.6	37.3	361.3
1996	181.3	261.3	*12.3	38.8	212.0
1997	77.4 a/b	253.0	12.3	34.4	383.9
1998	131.9 a	266.5	13.4	41.7 b	464.1
1999	113.6	273.3	13.4	42.4	456.1
2000	106.3	261.3	13.4	33.8	337.5
Average 1955-2000	108.7	204.5	31.4	23.9	371.0
Median 1955-2000	104.4	207.1	31.9	22.4	372.6
Average 1991-2000	99.6	254.6	23.4	40.0	435.0
Median 1991-2000	100.1	254.0	13.4	38.1	387.1

Data source: USGS and Edwards Aquifer Authority, 2001.
"a" Includes estimates from Atascosa County discharge by Edwards Aquifer users.
"b" Includes estimates from Guadalupe County discharge by Edwards Aquifer users.
Differences may occur due to rounding procedures.
*In 1995 the USGS revised the method of calculating domestic/livestock pumpage, which significantly decreased the estimate for 1995 and 1996.

The Authority and the USGS estimated discharge from the Edwards Aquifer in 2000. Prior to 1997, the USGS determined the total amount of irrigated acreage from county tax rolls, which have remained relatively constant over recent years. County soil and water conservation districts provided estimates of irrigation "duties" for selected crop types. The USGS multiplied these duties by amounts of irrigated acreage by crop type as provided by the U.S. Department of Agriculture (USDA), thereby determining an estimate of irrigation uses from the Edwards Aquifer.

The Authority initiated the Edwards Aquifer Well Metering Program in 1997. This program requires that all municipal, industrial, and irrigation Edwards Aquifer wells be metered. Since 1998, the Authority has utilized well pumpage data from the Well Metering Program to estimate well discharge. The availability of direct pumpage data has significantly improved the discharge estimating process.

7.0 GROUNDWATER QUALITY

7.1 Water Quality Data from Edwards Aquifer Wells

The Authority, in cooperation with the USGS and TWDB, has conducted a systematic program of water quality data collection since 1968. Through this cooperative effort, the Authority has maintained a network of groundwater and surface water monitoring sites for gathering water quality data across the Edwards Aquifer area. Analyses of these data have been used by the Authority to assess aquifer water quality.

In 2000, the Authority in cooperation with the USGS, TWDB, and San Antonio Water System (SAWS) collected water quality samples from 83 wells, four springs, and eight surface streams. The locations of these monitoring sites are shown in **Figures 7.1**, **7.1a**, **7.1b**, **and 7.1c.** These samples were analyzed in the field for selected water quality parameters and in the laboratory for inorganic and organic chemical constituents. The field analysis included temperature, pH, conductivity, and alkalinity. All water samples were analyzed in the laboratory for common major ions, minor elements (metals, including heavy metals), total dissolved solids (TDS), hardness and nutrients. Water samples collected from 14 wells, four springs and eight stream locations were also analyzed for pesticides and herbicides. Water samples collected from 15 wells and four springs were also analyzed for volatile organic compounds (VOCs). A general listing of the parameters analyzed, their drinking water standards and typical concentrations in the Edwards Aquifer are listed in **Table 7.1**.

In 2000, all water samples were analyzed in the laboratory for minor element metals. Laboratory analyses indicated that several wells, primarily freshwater/saline water interface monitoring wells, contained minor element metal concentrations above the method detection limit (MDL). Occasionally, minor element metals are detected in water samples above the maximum contaminant level (MCL). In 2000, the following minor element metals were detected at or above MCLs:

- Lead - from a public supply well in Medina County (well TD-68-49-501) at 20.9 micrograms per liter (µg/l). A drinking water standard for lead is 15 µg/L.
- Lead - from a monitoring well in Bexar County (well AY-68-28-315) at 20.0 µg/L.
- Mercury - from a monitoring well in Bexar County (well AY-68-29-113) at 3.0 µg/L. The MCL for mercury is 2.0 µg/l.
- Cadmium - from a saline zone monitoring well in Bexar County (well AY-68-37-521) at 5.0 µg/L. The MCL for cadmium is 5.0 µg/L.
- Cadmium - from a saline zone monitoring well in Bexar County (well AY-68-37-525) at 8.0 µg/L.
- Cadmium - from a saline zone monitoring well in Guadalupe County (well KX-68-31-808) at 26.0 µg/L.

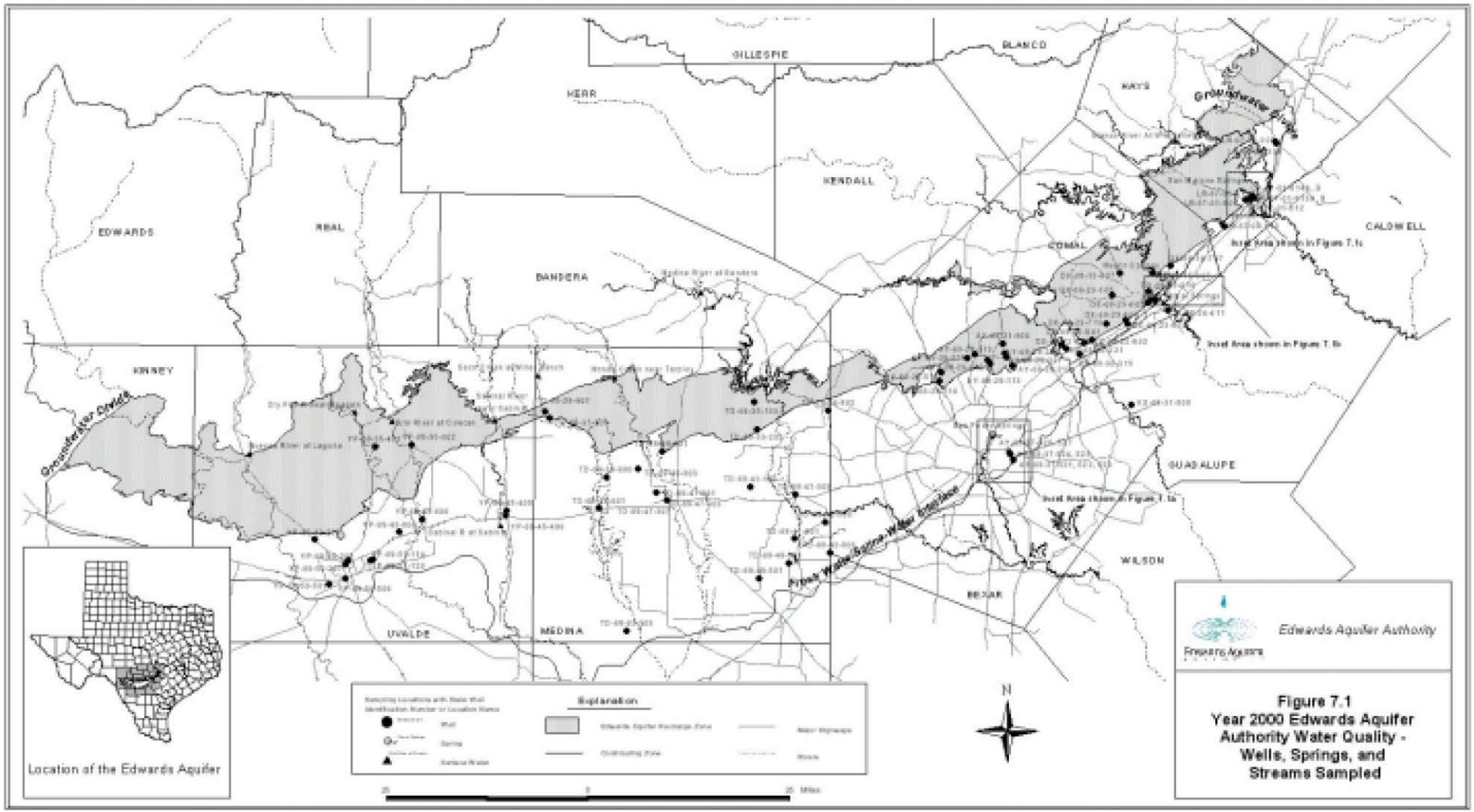
The cadmium concentrations detected above the MCL were detected in water samples from freshwater/saline water interface monitoring wells. The lead and mercury concentrations were detected in freshwater wells at concentrations near the MCL. These wells will continue to be monitored for minor element metal concentrations to assess any trends of concern.

Water samples from three freshwater/saline water interface monitoring wells in Bexar County and five freshwater/saline water interface monitoring wells in Hays County contained fluoride concentrations above the MCL of 4.0 mg/L. Water samples from several other wells, primarily freshwater/saline water interface monitoring wells, contained fluoride above the

secondary drinking water standard of 2.0 mg/L. These fluoride concentrations are believed to be naturally occurring.

Also laboratory analyses indicated that several wells located across the region, in Hays, Comal, Bexar, Medina and Uvalde counties, contained nitrate concentrations above the MDL. However, none of the nitrate concentrations exceeded the MCL. In general, relatively higher nitrate concentrations were detected in wells in the Uvalde area.

In 2000, water samples collected from 14 wells were analyzed for pesticides and herbicides. No pesticides or herbicides were detected in the samples. Water samples from 15 wells were also analyzed for volatile organic compounds (VOCs). One VOC (Tetrachloroethene) was detected in a well in well in Uvalde County (well YP- 69-51-114). The tetrachloroethene concentration detected in well YP- 69-51-114 was 7 µg/L; the MCL for tetrachloroethene is 5µg/L. The TNRCC is addressing the tetrachloroethene contamination in the Edwards Aquifer in Uvalde County with the responsible party.


GILLESPIE
BLANCO
HERR
KENDALL
EDWARDS
REAL
BANDERA
KINNEY
UVALDE
MEDINA
COMAL
CALDWELL
GUADALUPE
WILSON
BEXAR
Location of the Edwards Aquifer
Explanation
Edwards Aquifer Authority
Figure 7.1
Year 2000 Edwards Aquifer Authority Water Quality - Wells, Springs, and Streams Sampled

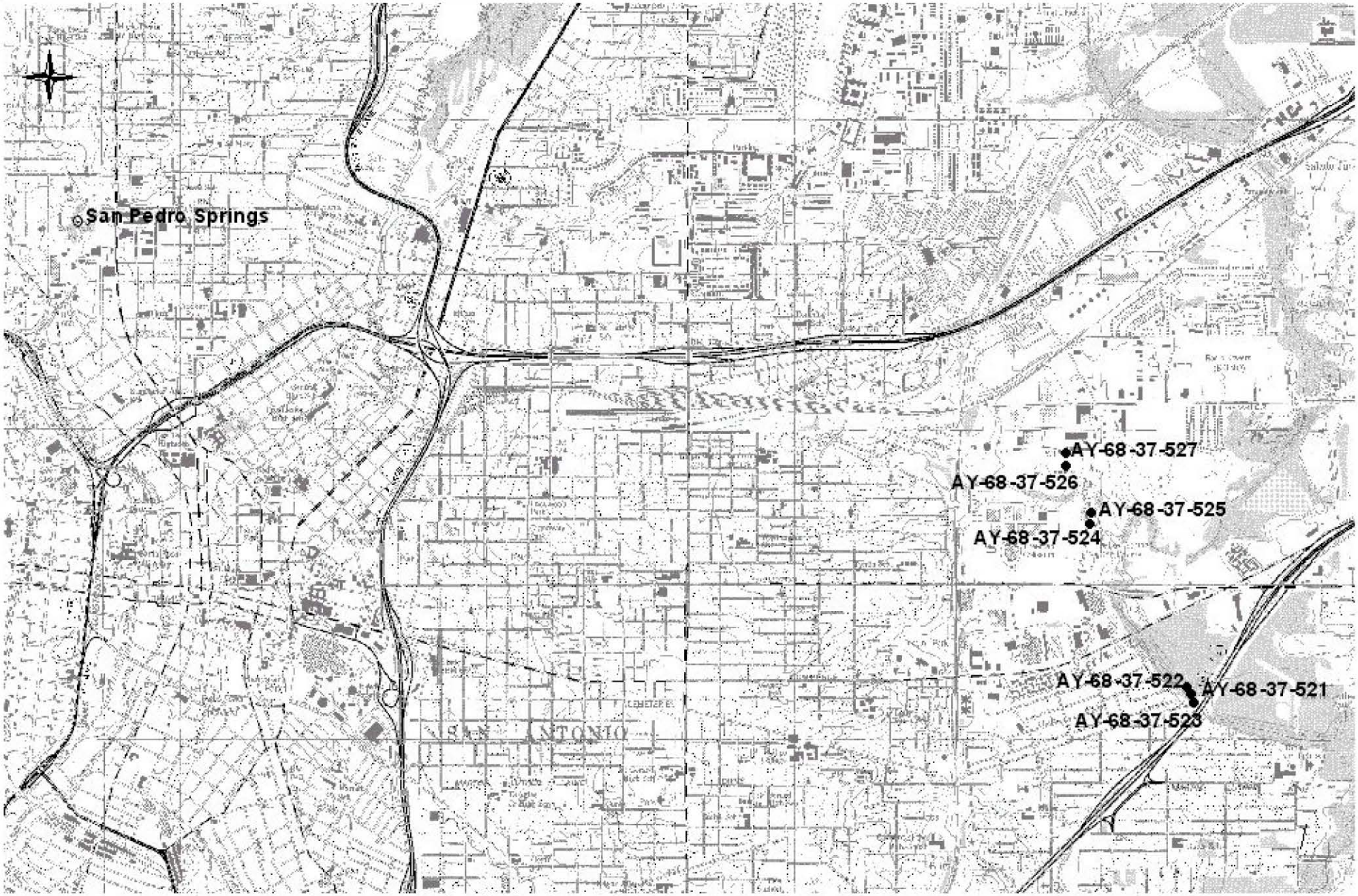


Figure 7.1a
Year 2000 Water Quality Sampling Locations in Central San Antonio

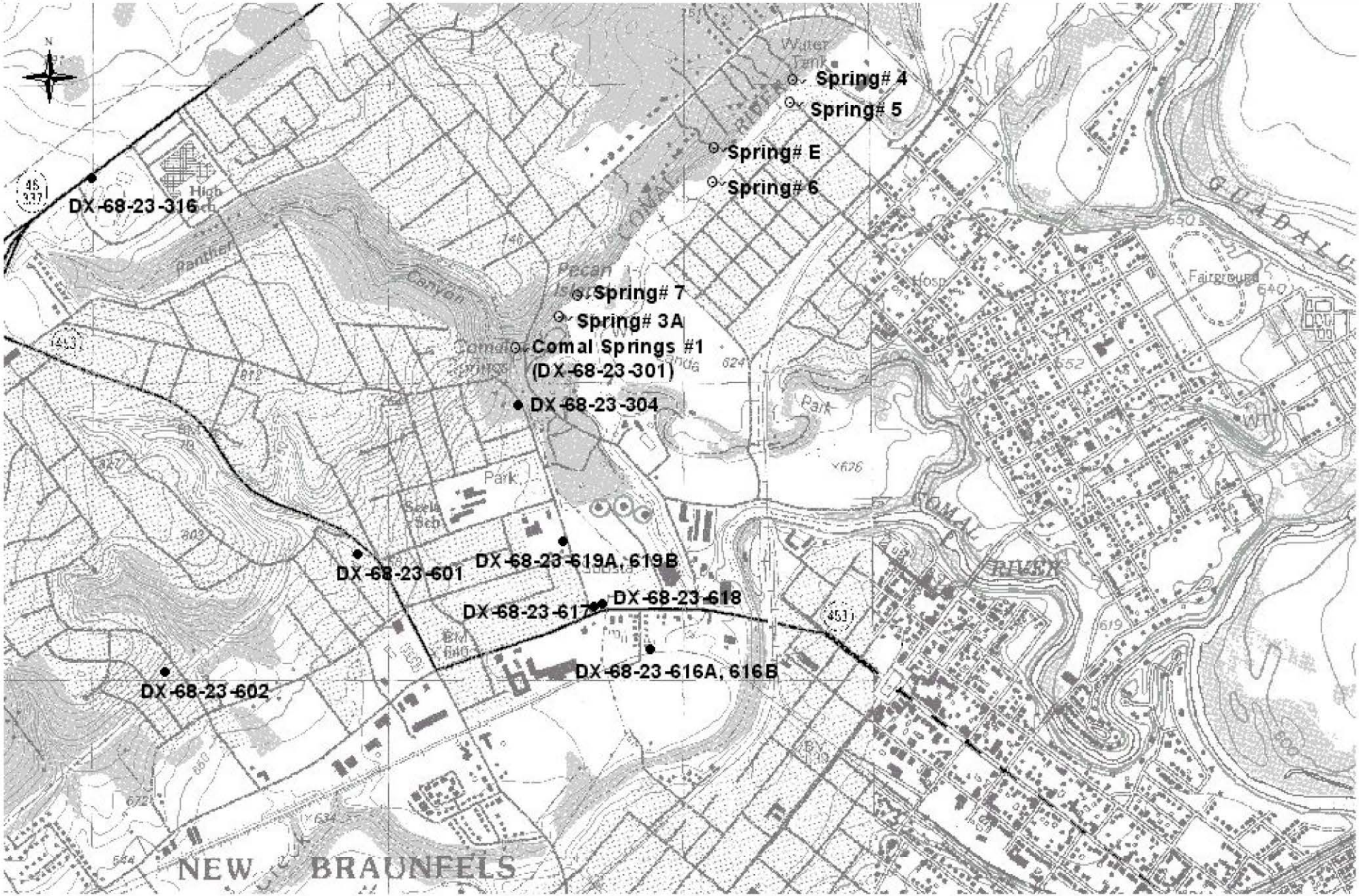


Figure 7.1b
Year 2000 Water Quality Sampling Locations near Comal Springs

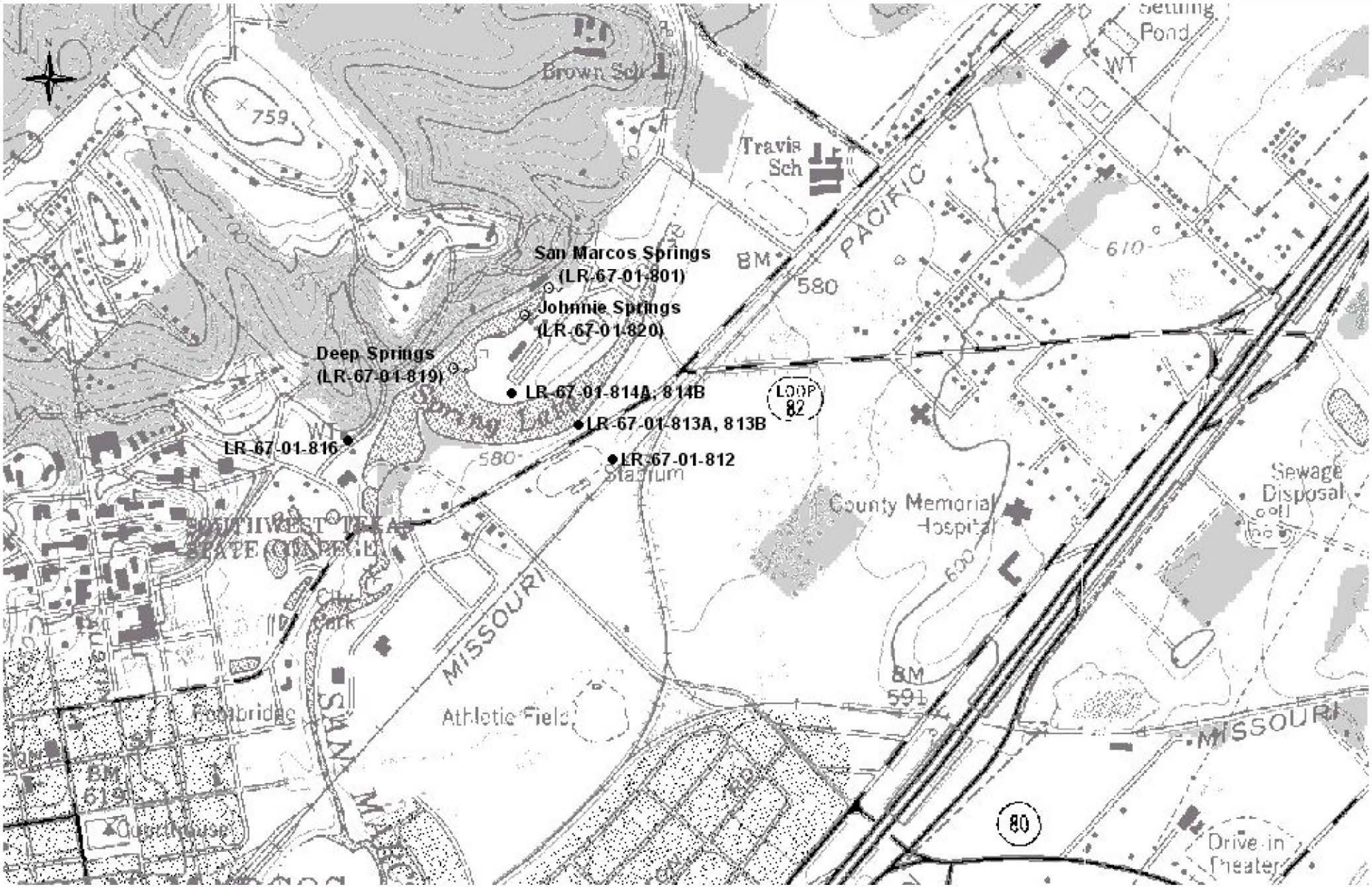


Figure 7.1c
Year 2000 Water Quality Sampling Locations near San Marcos Springs

Table 7.1 Comparison of drinking water quality standards to range of analysis from water quality results (2000).

Parameter	Current Maximum Contaminant Levels or Secondary Standards	Range of Concentrations Detected in 2000	Typical Range of Concentrations for the Freshwater Edwards Aquifer
Laboratory Parameters:			
PH	6.5-8.5*	6.6-7.6	6.5-8.0
Alkalinity (mg/L)	--	176-370	200-250
Color	15 color units*	NA	NA
Conductivity (µS/cm)	--	435-13,200	300-500
Corrosivity	Non-corrosive*	NA	NA
Hardness (mg/L)	--	160-3,400	250-300
Non-carbonate Hardness (mg/L)	--	NA	20-50
Dissolved Solids (mg/L)	500*	250-12,020	250-450
Total Organic Carbon (mg/L)	--	NA	1-5
Major Ions:			
Calcium (Ca) (mg/L)	--	44-990	80-120
Magnesium (Mg) (mg/L)	--	2-454	10-20
Sodium (Na) (mg/L)	--	2-2,284	3-10
Potassium (K) (mg/L)	--	0.4-103	1-2
Bicarbonate (CO_3) (mg/L)	--	NA	250-400
Carbonate (CO_3) (mg/L)	--	NA	0
Sulfate (SO_4) (mg/L)	250*	5.2-2,840	10-30
Chloride (Cl) (mg/L)	250*	8.7-4,298	10-30
Fluoride (F) (mg/L)	4	0.1-5.7	0.1-0.5
Silica (SiO_2) (mg/L)	--	5-22.1	10-20
Nutrients:			
Nitrate as Nitrogen (mg/L)	10	0.02-9.92	BMDL-3.0
Total Nitrite Nitrogen (mg/L)	1.0	0.018-0.02	BMDL-0.02
Total Phosphorus (mg/L)	--	< 0.01-0.1	BMDL-0.1
Microbiological Parameters:	--		
Total Coliform (cols/100ml)	10,000 (raw water for drinking-water supplies)	0-27	0-5,000
Fecal Coliform (cols/100ml)	2,000 (raw water for drinking-water supplies)	0-27	0-150
Fecal Streptococci (cols/100ml)	--	0-29	0-100
Minor Elements (Metals):			
Aluminum (Al) (µg/L)	50-200*	0-210	BMDL-210
Antimony (Sb) (µg/L)	6	< 1–1.18	BMDL – 1.18
Arsenic (As) (µg/L)	50	< 2-11	BMDL-2
Barium (Ba) (µg/L)	2,000	< 10-167	BMDL-100
Beryllium (Be) (µg/L)	4	< 1	BMDL
Cadmium (Cd) (µg/L)	5	< 1-26	BMDL-1
Chromium (Cr) (µg/L)	100	< 1-11	BMDL-15
Copper (Cu) (µg/L)	1,300**	< 1-17	BMDL-40
Iron (Fe) (µg/L)	300*	< 3-1,126	BMDL-500
Lead (Pb) (µg/L)	15**	< 2-21	BMDL-10
Manganese (Mn) (µg/L)	50*	< 2-38	BMDL-50
Mercury (Hg) (µg/L)	2	< 2-3	BMDL-1.5
Nickel (Ni) (µg/L)	100a	< 1–3.83	BMDL-4
Selenium (Se) (µg/L)	50	< 3-16	BMDL
Silver (Ag) (µg/L)	183a	< 1-2	BMDL
Thallium (Tl) (µg/L)	2	< 1	BMDL
Zinc (Zn) (µg/L)	5,000*	< 10-1,080	BMDL-2,000
Pesticides:			
Aldrin (µg/L)	0.005a	< 0.0002	BMDL
Atrazine (µg/L)	3	< 0.001	BMDL
Chlordane (µg/L)	2	< 0.05	BMDL
DDD (µg/L)	0.355a	< 0.001	BMDL
DDE (µg/L)	0.25a	< 0.001	BMDL
DDT (µg/L)	0.25a	< 0.001	BMDL
Endrin (µg/L)	2	< 0.0005	BMDL
Halowax (µg/L)	--	NA	BMDL
Heptachlor (µg/L)	0.4	< 0.0005	BMDL
Heptachlor epoxide (µg/L)	0.2	< 0.005	BMDL
Lindane (µg/L)	0.2	<0.0005	BMDL
Mirex (µg/L)	--	< 0.005	BMDL

(Table 7.1 continued)

Parameter	Current Maximum Contaminant Levels or Secondary Standards	Range of Concentrations Detected in 2000	Typical Range of Concentrations for the Freshwater Edwards Aquifer
Pesticides (cont'd):			
Diazinon (µg/L)	--	< 0.005	BMDL
Ethion (µg/L)	--	< 0.01	BMDL
Malathion (µg/L)	--	< 0.005	BMDL
Methyl Parathion (µg/L)	--	< 0.05	BMDL
Methyl Trithion (µg/L)	--	NA	BMDL
Parathion (µg/L)	--	< 0.01	BMDL
Trithion (µg/L)	--	< 0.002	BMDL
PCB (µg/L)	0.5	< 0.5	BMDL
Endosulfan (µg/L)	1.8a	< 0.001	BMDL
Ethyl Trithion (µg/L)	--	NA	BMDL
Perthane (µg/L)	--	< 0.01	BMDL
Toxaphene (µg/L)	3	< 0.2	BMDL
Herbicides:			
2, 4-D (µg/L)	70	< 0.001	BMDL
2, 4, 5-T (µg/L)	--	< 0.002	BMDL
2, 4, 5-TP (Silvex) (µg/L)	50	< 0.001	BMDL
Volatile organic compound:			
Acetone (µg/L)	3,650a	< 20	BMDL
Acrolein (µg/L)	730a	< 20	BMDL
Acrylonitrite (µg/L)	0.158a	< 20	BMDL
Benzene (µg/L)	5	< 1	BMDL
Bromoform (µg/L)	100a	< 2	BMDL
2-Butanone (µg/L)	--	< 20	BMDL
Carbon disulfide (µg/L)	3,650a	< 1	BMDL
Chlorobenzene (µg/L)	100	< 1	BMDL
Chloroform (µg/L)	100a	< 1	BMDL
Chloromethane (µg/L)	--	< 2	BMDL
1,2 Dichlorobenzene (µg/L)	600	< 2	BMDL
1,3 Dichlorobenzene (µg/L)	75	< 1	BMDL
1,2 Dichloroethane (µg/L)	5	< 1	BMDL
2-Hexanone (µg/L)	--	< 5	BMDL
4-Methyl-2-pentanone (µg/L)	--	< 2	BMDL
1,1,1-Trichloroethane (µg/L)	200	< 1	BMDL
1,1,2-Trichloroethane (µg/L)	5	< 2	BMDL
1,2-Dichloroethane (µg/L)	5	< 1	BMDL
1,2-Dichloropropane (µg/L)	5	< 1	BMDL
1,1-Dichloroethylene (µg/L)	7	< 1	BMDL
1,2,4-Trichlorobenzene (µg/L)	70	NA	BMDL
Carbon Tetrachloride (µg/L)	5	< 1	BMDL
cis-1,2-Dichloroethylene (µg/L)	70	< 1	BMDL
Dichloromethane (µg/L)	5	NA	BMDL
Ethylbenzene (µg/L)	700	< 1	BMDL
Methylene Chloride (µg/L)	5	< 2	BMDL
o-Dichlorobenzene (µg/L)	600	NA	BMDL
Naphthalene	--	< 1- 6.9s	BMDL
2-Methylnaphthalene	--	< 1-11.0s	BMDL
Para-Dichlorobenzene (µg/L)	75	NA	BMDL
Styrene (µg/L)	100	< 1	BMDL
Tetrachloroethane (µg/L)	5	NA	BMDL
Tetrachloroethylene (µg/L)	5	< 1-7	BMDL

(Table 7.1 continued)

Parameter	Current Maximum Contaminant Levels or Secondary Standards	Range of Concentrations Detected in 2000	Typical Range of Concentrations for the Freshwater Edwards Aquifer
Volatile organic compound: (cont'd):			
Toluene (µg/L)	1,000	< 1	BMDL
trans-1,2-Dichloroethylene (µg/L)	100	< 1	BMDL
Trichloroethylene (µg/L)	5	< 1	BMDL
Vinyl Chloride (µg/L)	2	< 1	BMDL
Xylenes, total (µg/L)	10,000	< 1-16.4s	BMDL

Data source: EPA maximum contaminant levels, 40 CFR , Part 141, 2001.
"a" Risk-based maximum contaminant level listed in 30 TAC Chapter 335, Subchapter S dated 7-20-2000.
"--" indicates no applicable maximum contaminant level or secondary standard.
"*" Secondary drinking water standards (40 CFR, Part 143, 2001).
"**" Copper and Lead are regulated by a Treatment Technique action level. The action level, which triggers public water systems into taking treatment steps if exceeded in more than 10% of tap samples, which is 1300 µg/L for Copper, and for Lead is 15µg/L.
"BMDL" = below method detection limits.
"NA" = not analyzed
"s" = spring sample

Primary Drinking Water Standards – These standards are enforceable and are often referred to as the maximum contaminant level (MCL) or primary drinking water standards. The MCL for a contaminant is the maximum permissible level in water that is delivered to any user of a public water system. MCLs protect drinking water quality by limiting the levels of specific contaminants that can adversely affect public health and are known or anticipated to occur in public water systems. The primary standards are indicated on **Table 7.1**. The water quality data collected in 2000 is included in **Appendix C**.

Secondary Drinking Water Standards – These standards are non-enforceable and are set for contaminants that may affect the aesthetic qualities of drinking water, such as odor or appearance. **Table 7.2** is a list of the current secondary standards. Concentrations of the secondary standards listed on **Table 7.2** are generally not exceeded in the freshwater portion of the Edwards Aquifer; however, concentrations of total dissolved solids (TDS), fluoride, and iron occasionally exceed the secondary standard in the saline water zone. On occasions when concentrations exceed a secondary standard, the exceedance can generally be attributed to naturally occurring conditions.

Table 7.2 Secondary drinking-water standards.

Parameter	Current Secondary Drinking Water Standard (mg/L)
Aluminum	0.05-0.2
Chloride	250
Color	15 color units
Copper	1.0
Corrosivity	Non-corrosive
Fluoride	2.0
Iron	0.3
Manganese	0.05
PH	6.5-8.5
Silver	0.10
Sulfate	250
Total Dissolved Solids (TDS)	500
Zinc	5

Data source: EPA, 40 CFR, Part 143, 2001.
The range of concentrations detected for these parameters in the Edwards Aquifer is included on table 7.1. Color and corrosivity are not analyzed.

The Authority will continue to monitor the Edwards Aquifer for contaminants in order to detect and investigate possible impacts to the aquifer. The Authority continues its programs to protect the generally excellent water quality of the aquifer through investigating groundwater contamination, and identifying and analyzing anomalous data from the Authority's aquifer-wide sampling program.

7.2 Freshwater/Saline-water Interface Studies

The freshwater/saline-water interface of the Edwards Aquifer is a regional boundary between the fresh and saline portion of the aquifer and is defined by a mapped iso-concentration line representing 1,000 mg/L of total dissolved solids (TDS). Groundwater is commonly classified according to TDS concentrations, as shown in **Table 7.3**.

Table 7.3 Classification of groundwater quality based on total dissolved solids.

Description	TDS Concentration (mg/L)
Fresh	Less than 1,000
Slightly saline	1,000 to 3,000
Moderately saline	3,000 to 10,000
Very saline	10,000 to 35,000
Brine	More than 35,000

Source: Winslow and Kister, 1956.

The interface varies both laterally and vertically in portions of the aquifer. Locally this line is referred to as the freshwater/saline-water interface, or "bad-water line," which defines the farthest downdip extent of potable water (Pavilicek and others, 1987). The freshwater/saline-water interface is shown in **Figures 3.1 and 7.1**. Water quality concerns related to the position and stability of the freshwater/saline-water interface have been expressed by some researchers. The limited water quality data collected during and since the drought of record in the 1950's is inconclusive as to whether encroachment of saline water is likely.

South and southeast of the interface, water from the aquifer is slightly to moderately saline and contains moderate to large concentrations of dissolved chloride and sulfate. The interface varies both laterally and vertically, as determined in several wells near the boundary. Water from some wells north of the interface, and from all wells south of the interface contains dissolved hydrogen sulfide gas. In most wells along the interface, freshwater has been encountered in the upper portion and saline water in the lower portion of the Edwards Aquifer (Groschen, 1993; Reeves, 1971). Other wells along the interface have encountered the opposite vertical distribution, with saline-water zones overlying freshwater zones, particularly in the southern area of Medina County (J.R. Waugh, oral communication, 1997).

In 1985, the former Edwards Underground Water District (EUWD) in cooperation with the USGS, TWDB and SAWS initiated a research study of the freshwater/saline-water interface. A series of seven wells were drilled in the San Antonio area that transects the freshwater/saline-water interface to detect changes in water quality as the hydraulic head in the aquifer changes. This program was implemented in response to the concern that increased aquifer withdrawals might result in encroachment of saline-water into the aquifer's freshwater zone. As part of the Authority's ongoing water quality program, monthly and other periodic samples have been collected and analyzed. Other samples are collected when certain spring-discharge criteria are met.

The possibility of saline-water encroachment and subsequent deterioration of water quality in the aquifer led to the construction of two additional water quality monitor well transects across the freshwater/saline-water interface. The monitor wells were drilled and tested by the Authority with the cooperation of local entities. These transects are located in the New Braunfels and San Marcos areas (Poteet and others, 1992). These transect wells have maintained relatively constant values of water quality with no significant changes. Since 1997, SAWS, working with the USGS, TWDB, and the Authority, has continued to install transects of freshwater/saline-water interface monitoring wells. These transects include:

- Kyle Transect (installed in 1998)
- East Uvalde "Knippa Gap" Transect (installed in 1999)
- "Tri-County" (Bexar-Comal- Guadalupe) Transect (installed 2000)
- Hays – Fish Hatchery Transect (present year 2001)

During the studies conducted to date (1986 to present), the data indicate that changes in the aquifer water levels have little effect on the water quality in wells that are directly adjacent to the freshwater/saline-water interface.

7.3 Surface Water Quality Data from Streams and Springs in the Edwards Aquifer Area

Surface water quality data is collected within the catchment area at USGS gauging stations upstream of the Edwards Aquifer Recharge Zone (EARZ). The surface water data collection sites are located within eight major stream basins that flow across and contribute significant groundwater recharge to the Edwards Aquifer within the EARZ in the San Antonio region. These include from west to east, the Nueces River, Dry Frio River, Frio River, Sabinal River, Seco Creek, Hondo Creek, Medina River, and Blanco River. Data from these sites can be used as a base level to evaluate the quality of water recharging the aquifer and the sensitivity of water quality to land use changes in various areas of the Edwards Aquifer region. Locations of the data collection sites are illustrated in **Figure 7.1**. Laboratory analyses of the samples collected in 2000 (**Appendix C**) indicate no detectable concentrations of pesticides, herbicides, or other direct evidence of surface water contamination.

In 2000, eight stream and four spring locations were analyzed for pesticides and herbicides. No pesticides or herbicides were detected in the samples. Water samples from San Pedro, Comal, Hueco, and San Marcos springs were analyzed for VOCs and semi volatile organic compounds (SVOCs). In 2000, Comal and Hueco springs were sampled numerous times response to a release of approximately 2,800 gallons of diesel fuel from an above ground storage tank. The release occurred in January 2000 on the recharge zone approximately four miles southwest of New Braunfels. VOCs and SVOCs of an unknown source were detected at Comal and Hueco springs in late January and early February 2000. The VOC and SVOC concentrations were not detected in subsequent samples collected from Comal and Hueco springs. No VOCs or SVOCs were detected at San Pedro or San Marcos Springs.

The VOCs and SVOCs detected at Comal Springs were:

- 2-methyl naphthalene at concentrations ranging from 6.5 to 11.0 µg/L.
- naphthalene at concentrations ranging from 3.4 to 6.9 µg/L.
- total xylenes (o,m,p xylenes) at concentrations ranging from 5.4 to 16.4 µg/L.

There are not established MCLs for 2-methyl naphthalene or naphthalene. The MCL for total xylenes is 10 mg/L (10,000 µg/L).

The VOCs and SVOCs detected at Hueco Springs were:

- 2-methyl naphthalene at concentrations ranging from 2.2 to 4.1 µg/L.
- naphthalene at concentrations ranging from 1.8 to 2.6 µg/L.

The Authority will continue to monitor the water quality at the surface water and springflow monitoring locations. The origin of the VOCs and SVOCs detected at Comal and Hueco springs in early 2000 continues to be investigated.

8.0 SUMMARY

In 2000, total discharge from the San Antonio segment of the Balcones fault zone Edwards Aquifer (the aquifer) exceeded recharge. Above average rainfall in the later portion of the year resulted in a net gain in aquifer storage as demonstrated by higher water levels in most index wells at the end of the year relative to the beginning of the year. The net increase in the Bexar County index well for 2000 was 13.1 feet. The amount of rain received in the San Antonio area in 2000 was approximately 19% above average.

The average annual recharge to the aquifer for the period 1934 through 2000 is approximately 679,000 acre-feet. Recharge in 2000 was estimated to be 614,500 acre-feet. The lowest annual recharge to the aquifer was 43,700 acre-feet and occurred in 1956, and the highest annual recharge to the aquifer was 2,486,000 acre-feet and occurred in 1992.

The average annual discharge from the aquifer, from wells and springs, for the period 1934 through 2000 is approximately 668,700 acre-feet. Discharge from the aquifer through wells and springs in 2000 was estimated to be 752,300 acre-feet. The lowest annual discharge through wells and springs was 388,800 acre-feet and occurred in 1955. The highest annual discharge was 1,130,000 acre-feet and occurred in 1992. Spring discharge from the aquifer in 2000 was estimated to be 337,500 acre-feet or 45 percent of the total discharge. Groundwater pumping from the aquifer in 2000 accounted for approximately 414,800 acre-feet of water discharged.

In 2000, the Authority collected water quality samples from 83 wells, four springs and eight surface water streams. The water samples were analyzed for major ions, minor element metals, TDS, hardness and nutrients. Laboratory analyses indicated that several wells, primarily freshwater/saline water interface monitoring wells, contained minor element metal concentrations above the method detection limit. In 2000, the following minor element metals were detected at or above a drinking water standard (Standards in 40 CFR Part 141, 40 CFR Part 143, and EPA's lead and copper rules):

- Lead - from a public supply well in Medina County (well TD-68-49-501) at 20.9 micrograms per liter (µg/l). A drinking water standard for lead is 15 µg/L.
- Lead - from a monitoring well in Bexar County (well AY-68-28-315) at 20.0 µg/L.
- Mercury - from a monitoring well in Bexar County (well AY-68-29-113) at 3.0 µg/L. The maximum contaminant level (MCL) for mercury is 2.0 µg/l.
- Cadmium - from a saline zone monitoring well in Bexar County (well AY-68-37-521) at 5.0 µg/L. The MCL for cadmium is 5.0 µg/L.
- Cadmium - from a saline zone monitoring well in Bexar County (well AY-68-37-525) at 8.0 µg/L.
- Cadmium - from a saline zone monitoring well in Guadalupe County (well KX-68-31-808) at 26.0 µg/L.

The cadmium concentrations above the MCL were detected in water samples from freshwater/saline water interface monitoring wells. The lead and mercury concentrations were detected in freshwater wells at concentrations just above the MCL. These wells will continue to be monitored for minor element metal concentrations to assess any trends of concern.

Water samples from three freshwater/saline water interface monitoring wells in Bexar County and five freshwater/saline water interface monitoring wells in Hays County contained fluoride concentrations above the MCL of 4.0 mg/L. Water samples from several other wells, primarily freshwater/saline water interface monitoring wells, contained fluoride above the secondary drinking water standard of 2.0 mg/L. These fluoride concentrations are believed to be naturally occurring.

Water samples from several wells contained nitrate concentrations above the MDL. However, none of the nitrate concentrations exceeded the MCL. In general, relatively higher nitrate concentrations were detected in the Uvalde area.

Water samples from 14 wells were analyzed for pesticides and herbicides. No pesticides or herbicides were detected in the samples. Water samples from 15 wells were also analyzed for VOCs. The VOC tetrachloroethene (PCE) was detected in a well in Uvalde County (YP- 69-51-114) at a concentration of 7 µg/L. The MCL for tetrachloroethene is 5µg/L. The TNRCC is working with the responsible party to address the tetrachloroethene contamination.

In 2000, eight stream and four spring locations were analyzed for pesticides and herbicides. No pesticides or herbicides were detected in the samples. Water samples from San Pedro, Comal, Hueco, and San Marcos springs were also analyzed for VOCs and SVOCs. Comal and Hueco springs were sampled numerous times in 2000 in response to a release of approximately 2,800 gallons of diesel fuel from an above ground storage tank. The release occurred in January 2000 on the recharge zone approximately four miles southwest of New Braunfels. VOCs and SVOCs of an unknown origin were detected at Comal and Hueco springs in late January and early February 2000. The VOC and SVOC concentrations were not detected in subsequent samples collected from Comal and Hueco springs. No VOCs or SVOCs were detected at San Pedro or San Marcos Springs. The VOCs and SVOCs detected at Comal Springs were:

- 2-methyl naphthalene at concentrations ranging from 6.5 to 11.0 µg/L.
- naphthalene at concentrations ranging from 3.4 to 6.9 µg/L.
- total xylenes (o,m,p xylenes) at concentrations ranging from 5.4 to 16.4 µg/L.

There are not established MCLs for 2-methyl naphthalene or naphthalene. The MCL for total xylenes is 10 mg/L (10,000 µg/L). The VOCs and SVOCs detected at Hueco Springs were:

- 2-methyl naphthalene at concentrations ranging from 2.2 to 4.1 µg/L.
- naphthalene at concentrations ranging from 1.8 to 2.6 µg/L.

The origin of the VOCs and SVOCs detected at Comal and Hueco Springs continues to be investigated.

9.0 DEFINITIONS

Technical terms and abbreviations used in this report are defined as follows:

Acre-foot (ac-ft) — The quantity of water required to cover one acre to a depth of one foot, equivalent to 43,560 ft^3 (cubic feet), about 325,851 gal (gallons), or 1,233 m^3 (cubic meters).

Aquifer — A body of rock that contains sufficient saturated permeable material to conduct groundwater and to yield economically significant quantities of groundwater to wells and springs.

Artesian well — A well tapping confined groundwater. Water in the well rises above the level of the confined water-bearing strata under artesian pressure but does not necessarily reach the land surface.

Artesian zone — An area where the water level from a confined aquifer stands above the top of the strata in which the aquifer is located.

Bacteria — Microscopic unicellular organisms, typically spherical, rod-like, or spiral and threadlike in shape, often clumped in colonies. Some bacteria are pathogenic (causing disease), while others perform an essential role in nature in the recycling of materials (measured in colonies/100 ml).

Conductivity — A measure of the ease with which an electrical current can be caused to flow through an aqueous solution under the influence of an applied electric field. Expressed as the algebraic reciprocal of electrical resistance (measured in microSiemens per centimeter (µS/cm) at ambient temperature). Generally, in water the greater the total dissolved solids content, the greater the value of conductivity. See also Specific conductance.

Confined aquifer — An artesian aquifer or an aquifer bound above and below by impermeable strata, or by strata with lower permeability than the aquifer itself.

Discharge — The volume of water that passes a given point within a given period of time.

Drainage basin — An area bounded by a divide and occupied by a drainage system. It consists of a surface stream or a body of impounded surface water together with all tributary surface streams and bodies of impounded surface water.

Edwards Underground Water District	The regional governmental entity that preceded the Edwards Aquifer Authority.
Edwards Aquifer Authority	The regional governmental entity established by the Texas Legislature in 1993 to "manage, preserve, and protect the Edwards Aquifer."
Freshwater/saline-water interface	The interface or area that separates total dissolved solids (TDS) values less than 1,000 mg/L (freshwater) from TDS values greater than 1,000 mg/L (saline-water). Commonly referred to as the "bad water line."
Gauging station	A particular site that systematically collects hydrologic data such as streamflow, springflow or precipitation.
Groundwater divide	A ridge, or mound in the water table or potentiometric surface from which the groundwater moves away in both directions.
Micrograms per liter (µg/L)	A unit for expressing the concentration of chemical constituents in solution as mass (micrograms) of solute per unit volume (liter) of water. 1,000 micrograms per liter are equal to 1 milligram per liter.
Milligrams per liter (mg/L)	A unit for expressing the concentration of chemical constituents in solution as mass (milligrams) of solute per unit volume (liter) of water. 1,000 milligrams per liter are equal to 1 gram per liter.
Potentiometric surface	An imaginary surface representing the total head of groundwater and defined by the level that water will rise in a well. Under confined conditions, the water level will rise above the producing aquifer. Under unconfined conditions, the water table is the potentiometric surface.
Real time data	Instantaneous or near-instantaneous information used to monitor a current condition such as precipitation, stream flow, spring discharge, etc.
Recharge	The process involved in absorption and addition of water to the zone of saturation.
Recharge zone	The area in which water infiltrates into the ground and eventually reaches the zone of saturation in one or more aquifers.
Specific conductance	A measure of the ability of an aqueous solution to conduct an electrical current. Specific conductance is the given value of conductivity adjusted to a standard temperature of 25^{o}C. Expressed in microsiemens per centimeter (µS/cm). See also Conductivity.
Ten-year floating average	The calculated mean of the current year plus the previous nine years in a graph.

Total dissolved solids (TDS)	The concentration of dissolved minerals in water, usually expressed in units of milligrams per liter (mg/L).
Transect wells	A group of Edwards Aquifer monitoring wells positioned in a linear transect to monitor for changes in water quality along the freshwater/saline-water interface.
Unconfined aquifer	An aquifer, or a portion of an aquifer, with a water table and containing groundwater that is not under pressure beneath relatively impermeable rocks.
Underflow	The movement of water flowing beneath the land surface within the bed or alluvial plain of a surface stream.
Water table	The interface between the zone of saturation and the zone of aeration, where the surface pressure of unconfined groundwater is equal to the atmospheric pressure.
Water level observation well	A water well used to measure the water level or potentiometric surface of water-bearing strata such as the Edwards Aquifer, Leona Gravel Aquifer, and Lower Glen Rose (Trinity) Aquifer.
Zone of aeration	The subsurface zone where the voids and pore spaces are filled with water under less pressure than that of the atmosphere and air.
Zone of saturation	The subsurface zone in which all voids and pore spaces are filled with water under pressure greater than that of the atmosphere.

10.0 REFERENCES

Bader, R.W., Walthour, S.D., and Waugh, J.R., 1993, Edwards Aquifer hydrogeologic status report for 1992: Edwards Underground Water District Report 93-05, 71 p.

Edwards Aquifer Authority, 2001 Open Data Files.

Hem, J.D., 1992, Study and interpretation of the chemical characteristics of natural water, third edition, U.S. Geological Survey Water-Supply Paper 2254, 263 p.

Pavilicek, D.J., Small, T.A., and Rettmann, P.L., 1987, Hydrogeologic data from a study of the freshwater zone/saline-water zone interface in the Edwards Aquifer, San Antonio Region, Texas: U.S. Geological Survey Open-File Report 87-389, 108 p.

Poteet, D., Collier, H., and Maclay, R.W., 1992, Investigation of the fresh/saline-water interface in the Edwards Aquifer in New Braunfels and San Marcos, Texas: San Antonio, Texas, Edwards Underground Water District Report 92-02 [variously paged].

Puente, C., 1978, Method of estimating natural recharge to the Edwards Aquifer in the San Antonio area, Texas: U.S. Geological Survey Water-Resources Investigations Report 78-10, 38 p.

Reeves, R.D., 1971 Results of test drilling at the San Marcos Fish Hatchery, Texas: U.S. Geological Survey Open-File Report, 11 p.

Schultz, A.L., 1992, Using geophysical logs in the Edwards Aquifer to estimate water quality along the freshwater/saline-water interface (Uvalde to San Antonio, Texas): Edwards Underground Water District Report 92-03, 47 p.

Schultz, A.L., 1993, Defining the Edwards Aquifer freshwater/saline-water interface with geophysical logs and measured data (San Antonio to Kyle, Texas): Edwards Underground Water District Report 93-06, 81 p.

Schultz, A.L., 1994, 1994 Review and update of the position of the Edwards Aquifer freshwater/saline-water interface from Uvalde to Kyle, Texas: Edwards Underground Water District Report 94-05, 31 p.

Texas Natural Resources Conservation Commission (TNRCC), 2000, 30 TAC Chapter 335, Subchapter S - Industrial Solid Waste and Municipal Hazardous Waste, July 2000.

United States Department of Commerce, 1970-1994, Climatological Data, Texas, Annual Summary: National Oceanic and Atmospheric Administration (NOAA), v 75-97, no. 13.

United States Department of Commerce, 2001, Climatological Data Monthly summaries: National Oceanic and Atmospheric Administration (NOAA), [variously paged], http://www.srh.noaa.gov/ewx/html/Climate.htm

United States Environmental Protection Agency, 2001, Maximum contaminant levels (subpart of part 141, National primary drinking water regulations): U.S. Code of Federal Regulations, Title 40, parts 100-149.

United States Environmental Protection Agency, 2001, National primary and secondary drinking water regulations; synthetic organic compounds and inorganic chemicals (section 141.32 – lead and copper public notifications): U.S. Code of Federal Regulations, Title 40, parts 100-149.

United States Environmental Protection Agency, 2001, Secondary drinking water standards (part 143, National secondary drinking water regulations): U.S. Code of Federal Regulations, Title 40, parts 100-149.

United States Geological Survey, 1996, Basic data collection joint funding agreement with Edwards Aquifer Authority for Fiscal Year 1995-1996: Authority open files.

Walthour, S.D., Waugh, J.R., and Sutton, C.M., 1994, Edwards Aquifer hydrogeologic report for 1993: Edwards Underground Water District Report 94-04, 178 p.

Walthour, S.D., Waugh, J.R., and O'Connor, J., 1995, Edwards Aquifer hydrogeologic report for 1994: Edwards Underground Water District Report 95-07, 124 p.

Waugh, J.R., 1993, South Medina County observation well report: Edwards Underground Water District Report 93-11, 10 p.

Weather Modification, Inc., 2001, Edwards Aquifer Precipitation Enhancement Program – Final Report 2000 – A program designed for seeding of convective clouds with glaciogenic nuclei to augment precipitation for the Edwards Aquifer Region, Weather Modification, Inc., Fargo, ND, 89 p.

Winslow, A.G., and Kister, L.R., 1956, Saline-water resources of Texas: U.S. Geological Survey Water-Supply Paper 1365, 105 p.

APPENDIX A – Year 2000 Water Level Data for Selected Wells

Table A-1 City of Uvalde index well (YP-69-50-302) daily high water levels (in feet above MSL), 2000.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	878.3	877.3	876.0	875.3	872.5	869.9	870.0	869.0	868.5	868.1	868.7	871.2
2	878.3	877.2	876.0	875.2	872.6	869.8	869.9	869.0	868.5	868.1	868.7	871.2
3	878.3	877.2	875.9	875.2	872.5	869.8	869.9	869.0	868.4	868.0	868.9	871.3
4	878.2	877.2	875.9	875.2	872.5	869.7	869.8	868.9	868.4	868.0	869.0	871.5
5	878.2	877.1	875.9	875.1	872.5	869.7	869.8	869.0	868.4	868.0	869.1	871.6
6	878.2	877.1	875.9	875.0	872.4	869.6	869.7	869.0	868.4	868.0	869.3	871.7
7	878.2	877.0	875.9	874.9	872.4	869.5	869.7	868.9	868.4	868.0	869.3	871.7
8	878.2	876.9	875.9	874.8	872.3	869.4	869.6	868.9	868.3	868.2	869.4	871.7
9	878.2	876.9	875.9	874.6	872.2	869.3	869.6	868.9	868.3	868.3	869.4	871.8
10	878.2	876.8	875.9	874.5	872.0	869.4	869.5	868.9	868.3	868.3	869.5	871.8
11	878.2	876.7	875.8	874.4	871.9	869.4	869.5	868.8	868.3	868.3	869.6	871.9
12	878.1	876.6	875.8	874.3	871.7	869.5	869.5	868.9	868.3	868.3	869.7	871.9
13	878.1	876.6	875.8	874.3	871.6	869.5	869.4	868.8	868.3	868.3	869.7	872.0
14	878.0	876.5	875.9	874.3	871.6	869.6	869.3	868.7	868.3	868.3	869.8	872.1
15	878.1	876.4	875.9	874.3	871.6	869.6	869.3	868.8	868.3	868.3	869.9	872.2
16	878.0	876.3	875.9	874.2	871.5	869.6	869.2	868.7	868.4	868.3	870.0	872.3
17	878.0	876.3	875.8	874.1	871.4	869.6	869.2	868.8	868.3	868.3	870.0	872.4
18	878.0	876.2	875.8	874.1	871.4	869.7	869.1	868.7	868.3	868.3	870.2	872.5
19	878.0	876.1	875.8	874.0	871.2	869.9	869.0	868.7	868.3	868.3	870.3	872.6
20	878.0	876.0	875.8	873.9	871.2	869.9	869.0	868.7	868.2	868.3	870.3	872.7
21	877.9	876.0	875.7	873.7	871.0	869.9	868.9	868.7	868.2	868.4	870.4	872.7
22	878.0	876.0	875.6	873.7	870.9	869.9	869.0	868.7	868.2	868.4	870.5	872.8
23	877.9	876.0	875.7	873.6	870.8	869.9	869.0	868.7	868.1	868.4	870.6	872.8
24	877.8	876.1	875.6	873.5	870.6	870.0	869.0	868.7	868.1	868.5	870.7	872.9
25	877.8	876.1	875.6	873.3	870.5	870.0	869.0	868.7	868.2	868.5	870.8	872.9
26	877.7	876.1	875.6	873.1	870.3	870.0	869.0	868.7	868.2	868.5	870.9	873.0
27	877.7	876.0	875.6	873.0	870.2	870.0	868.9	868.7	868.2	868.5	871.0	873.1
28	877.6	876.0	875.4	872.8	870.2	870.0	868.9	868.7	868.2	868.6	871.0	873.2
29	877.5	876.0	875.4	872.7	870.2	870.0	868.9	868.7	868.2	868.6	871.1	873.2
30	877.5		875.3	872.6	870.1	870.0	868.9	868.6	868.1	868.6	871.2	873.3
31	877.4		875.2		870.0		868.9	868.5		868.6		873.3

Table A-2 City of Hondo index well (TD-69-47-306) daily high water levels (in feet above MSL), 2000.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	715.3	714.0	708.5	702.6	692.1	686.1	695.0	686.9	681.7	686.0	700.9	719.1
2	715.7	714.2	708.5	704.1	694.8	684.0	695.0	687.0	681.4	685.8	701.0	719.3
3	715.7	714.9	708.0	704.6	696.6	683.2	694.4	687.0	681.7	684.9	702.6	719.5
4	714.9	715.0	707.4	705.0	697.3	684.4	694.4	686.6	681.6	684.8	704.1	719.7
5	715.2	714.7	707.6	705.3	697.7	685.3	694.0	686.4	680.9	684.8	705.4	720.0
6	715.1	714.3	707.6	705.0	697.9	685.8	693.7	686.5	680.7	685.0	706.9	720.2
7	715.3	713.8	708.0	704.2	697.4	685.5	693.2	686.4	679.7	685.6	708.0	720.4
8	715.8	712.8	708.4	703.3	696.3	685.4	692.7	685.8	679.4	686.5	709.2	720.5
9	716.2	712.0	707.7	703.3	693.8	686.0	692.7	685.5	680.1	687.5	710.0	720.6
10	716.2	711.8	707.5	702.8	691.5	689.3	692.4	685.5	680.4	688.4	710.7	720.8
11	716.2	710.9	706.7	703.1	689.1	692.1	691.8	684.7	680.6	689.2	711.5	720.9
12	716.2	709.5	706.8	704.2	687.4	694.2	691.1	684.5	680.3	689.7	712.0	720.6
13	716.0	708.9	706.8	704.4	689.0	695.9	690.3	684.9	680.8	690.1	712.1	720.9
14	715.7	708.8	706.8	704.8	690.2	697.1	690.1	684.7	681.5	690.4	712.4	720.8
15	715.6	708.4	707.1	704.5	690.7	698.0	690.0	684.1	682.7	690.6	712.8	721.2
16	715.8	707.8	706.6	704.9	688.0	698.5	689.7	683.8	683.8	690.6	713.1	721.3
17	716.0	708.2	706.8	704.7	685.6	698.7	689.4	684.0	684.4	691.0	713.1	721.4
18	715.8	707.9	707.4	703.7	684.9	699.0	689.1	683.9	684.6	692.1	713.7	721.5
19	715.4	707.3	706.8	703.7	685.1	699.5	688.2	683.9	684.6	692.8	714.2	721.3
20	714.7	706.9	706.9	701.9	689.2	699.8	687.9	684.0	684.3	693.1	714.8	721.6
21	714.6	707.0	706.5	701.2	690.6	699.8	687.5	683.9	683.6	693.5	715.3	721.4
22	714.9	706.6	706.0	699.9	690.9	699.3	687.1	683.6	683.3	693.7	715.9	721.3
23	714.6	707.3	706.1	699.8	689.9	699.4	686.7	683.5	683.4	694.7	716.5	721.6
24	714.3	708.1	705.6	699.5	689.3	699.1	687.3	683.5	683.8	696.4	717.0	721.6
25	713.9	708.5	704.9	697.1	687.5	698.8	687.1	683.0	684.7	697.6	717.6	721.9
26	713.0	708.5	704.7	694.4	685.9	698.5	686.7	682.5	685.5	698.5	718.1	722.0
27	713.4	708.3	704.5	692.0	685.3	697.8	686.0	683.0	685.9	699.1	718.4	721.9
28	713.3	708.7	704.2	690.0	688.8	696.9	685.8	682.9	686.0	699.6	718.7	722.1
29	713.7	708.5	703.4	688.9	689.6	696.1	685.8	682.7	686.2	700.1	718.7	722.1
30	714.0		702.5	687.6	689.8	695.6	686.1	682.4	686.2	700.3	719.0	722.2
31	714.1		701.8		688.0		686.1	681.9		700.7		722.4

"N/D" indicates no data available.

Table A-3 City of Castroville well (TD-68-41-301) daily high water levels (in feet above MSL), 2000.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	N/D	693.0	689.1	683.6	675.2	670.6	678.1	669.6	665.7	N/D	678.5	698.9
2	N/D	693.2	689.2	685.2	676.3	669.5	677.9	669.7	665.4	N/D	680.5	698.9
3	N/D	693.2	689.0	684.8	677.5	668.3	677.7	669.7	665.2	N/D	680.1	699.2
4	N/D	693.2	688.6	685.3	678.2	667.9	677.4	669.6	665.2	N/D	681.4	699.3
5	693.0	693.2	688.5	685.7	678.6	668.0	677.2	669.4	665.1	N/D	686.1	699.6
6	693.0	693.3	688.4	685.8	678.9	668.0	676.9	669.4	664.8	668.4	683.8	699.7
7	693.5	693.2	688.4	685.8	679.0	667.9	676.5	669.4	664.5	669.2	684.7	699.9
8	693.0	692.9	688.4	685.4	678.8	667.7	676.1	669.3	664.1	669.4	687.7	700.0
9	693.4	692.8	688.2	685.2	678.1	668.0	675.8	669.0	664.1	670.1	686.3	700.1
10	693.4	692.7	687.9	685.2	676.9	670.1	675.5	668.8	664.1	670.7	687.0	700.2
11	693.5	692.5	687.6	685.1	675.8	671.7	675.2	668.6	664.3	671.3	N/D	700.3
12	693.6	692.0	687.2	685.4	674.6	672.6	674.7	668.4	665.2	671.8	N/D	700.2
13	693.6	691.7	687.1	685.4	674.4	N/D	674.2	668.3	665.2	672.3	N/D	700.2
14	693.3	691.4	687.0	685.7	673.9	N/D	673.8	668.2	665.3	672.5	N/D	700.2
15	693.5	691.1	687.2	685.8	674.1	N/D	673.5	667.8	662.5	672.5	692.8	700.5
16	693.5	690.8	687.1	685.7	673.6	N/D	673.3	667.6	663.1	672.5	693.1	700.5
17	693.6	690.6	687.0	685.5	672.8	N/D	672.9	667.5	663.7	674.0	693.3	700.5
18	693.6	690.5	687.5	685.4	671.9	N/D	672.5	667.4	664.1	673.4	694.7	700.6
19	693.5	690.1	687.4	685.2	671.8	N/D	672.0	667.2	664.4	673.4	694.4	700.5
20	693.3	689.8	687.5	684.9	671.0	680.5	671.6	667.2	664.4	673.4	694.8	700.9
21	693.1	689.7	687.4	684.3	672.1	680.6	671.3	667.2	664.4	673.4	695.3	700.8
22	693.2	689.7	687.2	683.8	672.6	680.6	670.9	667.1	664.4	673.4	695.8	700.6
23	693.1	689.7	687.0	683.5	672.8	680.5	670.6	667.0	664.4	676.4	700.4	700.8
24	692.8	689.4	686.7	683.0	672.8	680.4	670.5	666.9	666.7	674.0	696.7	700.8
25	692.7	689.5	686.3	682.1	672.5	680.3	670.4	666.8	664.6	675.3	697.2	701.2
26	692.4	689.5	685.8	680.7	671.9	680.2	670.2	666.7	664.8	676.0	697.6	701.3
27	692.7	689.2	685.5	679.2	671.2	679.9	669.7	666.7	665.1	676.6	697.9	701.0
28	692.3	689.3	685.2	677.8	N/D	679.4	669.3	666.6	665.2	677.2	698.2	701.3
29	692.4	689.3	684.9	676.4	N/D	678.9	669.1	666.4	N/D	677.6	698.2	701.3
30	692.5		684.3	675.1	N/D	678.5	669.5	666.1	N/D	677.9	698.4	701.4
31	692.7		683.7		N/D		669.4	665.9		678.2		701.6

Table A-4 Bexar County index well (AY-68-37-203 (J-17)) daily high water levels (in feet above MSL), 2000.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	663.5	664.3	662.3	658.2	650.7	647.2	653.1	643.3	637.0	644.7	659.0	676.2
2	663.9	664.9	662.4	659.0	652.8	646.2	653.1	643.1	637.7	643.6	659.1	676.4
3	663.9	665.6	661.9	659.6	653.9	646.0	652.5	642.4	638.3	642.9	663.6	676.4
4	663.6	665.6	661.6	660.2	654.4	646.2	652.0	642.1	637.7	642.5	664.7	676.4
5	663.4	665.6	661.5	660.6	654.7	646.8	651.3	642.7	636.1	642.2	665.6	676.3
6	663.6	665.7	661.2	660.8	655.4	647.1	650.5	643.1	635.6	643.3	667.6	676.3
7	663.9	665.3	661.0	660.4	655.4	646.4	649.9	642.4	635.5	644.7	668.8	676.2
8	664.6	664.9	660.9	659.9	654.7	645.9	649.7	641.4	635.9	646.0	669.6	676.2
9	665.2	664.6	660.7	659.9	653.7	647.5	649.5	641.2	637.4	647.3	670.1	676.3
10	665.0	664.4	660.3	659.5	652.7	651.3	649.1	640.4	637.9	648.3	670.6	676.4
11	664.9	663.9	660.1	659.3	651.4	654.0	647.8	640.3	637.5	649.6	671.1	676.2
12	665.0	663.8	660.0	659.3	650.5	655.7	646.8	640.9	637.4	649.4	671.4	676.0
13	664.8	663.9	659.5	659.8	650.7	656.7	646.1	641.3	639.0	649.8	671.3	676.1
14	664.6	663.3	659.7	659.9	651.7	657.2	645.7	640.4	640.7	650.2	671.3	676.0
15	664.7	663.0	660.5	660.2	651.8	657.4	645.9	640.0	641.7	650.3	671.5	676.2
16	665.0	662.6	660.7	659.8	650.7	657.6	646.0	639.8	643.1	649.9	671.7	676.4
17	664.8	662.5	660.6	659.2	649.2	657.6	645.2	639.4	643.6	650.0	671.6	676.3
18	664.5	662.3	661.4	658.8	648.5	658.0	643.7	639.0	643.2	651.1	672.2	676.3
19	664.7	662.2	661.7	658.5	648.5	658.3	642.6	639.9	643.0	651.6	672.9	675.9
20	664.4	662.2	661.5	658.1	650.3	658.2	642.4	640.5	642.6	651.8	673.1	676.1
21	664.1	662.0	661.3	657.4	651.7	658.0	642.2	639.6	642.5	652.5	673.3	675.8
22	664.5	661.9	661.2	656.8	651.8	657.5	642.8	639.7	642.5	653.0	673.7	675.6
23	664.4	662.3	660.9	656.8	651.1	657.0	643.3	639.7	642.5	653.6	674.2	675.9
24	663.8	663.0	660.6	655.7	650.6	656.7	643.6	639.4	642.8	655.7	675.1	676.0
25	663.7	663.3	660.4	654.1	649.6	656.7	642.2	639.5	643.3	656.7	675.8	676.1
26	663.7	662.8	659.8	653.1	649.0	656.2	640.5	640.1	643.7	657.5	676.1	676.5
27	664.0	663.1	659.2	651.8	648.9	655.1	640.3	640.2	644.0	657.9	676.2	676.5
28	664.2	662.7	658.9	651.0	649.2	654.3	640.5	639.4	644.2	658.5	676.2	676.5
29	664.5	662.5	658.9	650.2	649.8	653.8	641.4	638.2	643.8	658.9	676.2	676.5
30	664.5		658.4	649.5	649.4	653.0	642.6	637.7	644.4	658.8	676.1	676.6
31	664.4		658.0		648.1		643.2	637.4		658.8		676.7

"N/D" indicates no data available.

Table A-5 Landa Park well (DX-68-23-302) daily high water levels (in feet above MSL), 2000.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	625.3	625.5	625.2	624.8	624.2	623.7	624.4	623.1	622.4	622.9	624.2	626.4
2	625.3	625.5	625.2	624.8	624.6	623.7	624.4	623.1	622.4	622.9	624.8	626.4
3	625.3	625.5	625.2	625.1	624.3	623.6	624.3	623.1	622.4	622.8	624.9	626.5
4	625.3	625.5	625.1	624.9	624.4	623.6	624.3	623.1	622.4	622.8	624.9	626.5
5	625.3	625.5	625.1	624.9	624.4	623.7	624.2	623.0	622.3	622.8	625.4	626.5
6	625.3	625.5	625.1	624.9	624.4	623.7	624.2	623.0	622.2	622.8	625.4	626.5
7	625.3	625.5	625.1	624.9	624.4	623.7	624.1	623.0	622.2	623.1	625.3	626.5
8	625.3	625.5	625.0	624.9	624.4	623.6	624.0	623.1	622.2	623.0	625.4	626.5
9	625.4	625.5	625.0	624.9	624.4	624.0	624.0	623.0	622.3	623.2	625.4	626.5
10	625.4	625.5	625.0	624.9	624.3	624.4	624.0	623.0	622.3	623.2	625.5	626.6
11	625.5	625.5	624.9	624.8	624.3	624.3	623.9	622.9	622.4	623.3	625.5	626.6
12	625.5	625.4	624.9	625.0	624.2	624.4	623.8	622.9	622.3	623.3	625.6	626.6
13	625.4	625.4	624.9	624.8	624.1	624.4	623.7	622.9	622.4	623.3	625.6	626.6
14	625.4	625.4	624.9	624.8	624.2	624.5	623.7	622.8	622.5	623.4	625.7	626.6
15	625.5	625.4	624.9	624.8	624.2	624.5	623.7	622.8	622.6	623.4	625.7	626.6
16	625.5	625.3	624.9	624.8	624.2	624.5	623.6	622.8	622.6	623.4	625.7	626.6
17	625.5	625.3	625.3	624.8	624.1	624.6	623.6	622.7	622.7	623.4	625.7	626.7
18	625.5	625.3	625.0	624.8	624.0	624.6	623.5	622.7	622.7	623.5	625.8	626.7
19	625.5	625.2	625.0	624.8	624.0	624.7	623.4	622.7	622.7	623.5	625.9	626.6
20	625.5	625.2	625.0	624.8	624.0	624.7	623.3	622.7	622.7	623.6	625.9	626.7
21	625.5	625.2	625.0	624.7	624.1	624.7	623.3	622.7	622.7	623.6	626.0	626.7
22	625.5	625.2	625.0	624.7	624.1	624.6	623.3	622.7	622.7	623.6	626.0	626.6
23	625.4	625.2	625.0	624.7	624.0	624.6	623.3	622.7	622.7	623.7	626.4	626.6
24	625.4	625.2	625.0	624.6	624.0	624.6	623.3	622.6	622.8	624.0	626.4	626.7
25	625.5	625.3	625.0	624.5	624.0	624.6	623.3	622.6	622.8	624.0	626.2	626.7
26	625.4	625.3	625.0	624.5	623.9	624.6	623.1	622.6	622.8	624.0	626.3	626.7
27	625.4	625.2	624.9	624.4	623.9	624.6	623.1	622.6	622.8	624.1	626.3	626.8
28	625.4	625.2	624.9	624.3	623.9	624.5	623.0	622.6	622.8	624.1	626.4	626.8
29	625.4	625.2	624.9	624.2	623.9	624.5	623.0	622.6	622.8	624.2	626.4	626.8
30	625.4		624.9	624.2	623.9	624.4	623.0	622.5	622.8	624.2	626.4	626.8
31	625.4		624.8		623.8		623.1	622.5		624.2		626.8

Table A-6 Knispel well (LR 67-01-809) daily high water levels (in feet above MSL), 2000.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	574.7	574.7	574.7	574.6	574.6	574.8	575.7	574.9	574.5	574.4	574.5	N/D
2	574.7	574.7	574.7	574.6	574.7	574.7	575.7	574.9	574.5	574.4	574.6	N/D
3	574.7	574.7	574.7	574.6	574.7	574.7	575.7	574.9	574.5	574.4	576.3	N/D
4	574.7	574.7	574.6	574.6	574.8	574.7	575.6	574.9	574.5	574.4	576.7	N/D
5	574.7	574.7	574.6	574.6	574.8	574.7	575.6	574.9	574.5	574.4	576.9	N/D
6	574.7	574.7	574.6	574.6	574.8	574.7	575.6	574.8	574.5	574.3	577.3	N/D
7	574.7	574.7	574.6	574.6	574.8	574.7	575.5	574.8	574.5	574.3	577.4	N/D
8	574.7	574.7	574.6	574.6	574.8	574.6	575.5	574.8	574.5	574.3	577.5	N/D
9	574.7	574.7	574.6	574.6	574.8	574.7	575.4	574.8	574.5	574.4	577.6	N/D
10	574.7	574.7	574.6	574.6	574.8	575.3	575.4	574.8	574.5	574.4	577.6	N/D
11	574.8	574.7	574.6	574.6	574.8	575.7	575.4	574.8	574.5	574.4	577.6	N/D
12	574.8	574.7	574.6	574.6	574.7	575.9	575.3	574.8	574.5	574.4	577.6	N/D
13	574.8	574.7	574.7	574.6	574.7	576.0	575.3	574.8	574.5	574.4	577.7	N/D
14	574.7	574.7	574.7	574.6	574.7	576.0	575.2	574.7	574.5	574.4	577.7	N/D
15	574.7	574.7	574.7	574.6	574.7	576.1	575.2	574.7	574.5	574.4	577.8	N/D
16	574.7	574.7	574.7	574.6	574.7	576.1	575.2	574.7	574.5	574.4	577.8	N/D
17	574.7	574.7	574.7	574.6	574.7	576.1	575.1	574.7	574.5	574.4	577.7	N/D
18	574.7	574.7	574.7	574.6	574.7	576.1	575.1	574.7	574.5	574.4	577.8	N/D
19	574.7	574.7	574.7	574.6	574.7	576.1	575.1	574.7	574.5	574.4	577.8	N/D
20	574.7	574.7	574.7	574.6	574.7	576.0	575.1	574.6	574.5	574.4	577.9	N/D
21	574.7	574.7	574.7	574.6	574.8	576.0	575.0	574.6	574.5	574.4	577.9	N/D
22	574.7	574.6	574.7	574.6	574.8	576.0	575.0	574.6	574.4	574.5	577.9	N/D
23	574.7	574.7	574.7	574.6	574.8	576.0	575.0	574.6	574.4	574.5	578.0	N/D
24	574.7	574.7	574.7	574.6	574.8	576.0	575.0	574.6	574.4	574.5	578.2	N/D
25	574.7	574.7	574.7	574.6	574.8	575.9	575.0	574.6	574.4	574.5	578.4	N/D
26	574.7	574.7	574.7	574.6	574.8	575.9	574.9	574.6	574.4	574.5	578.5	N/D
27	574.7	574.7	574.7	574.6	574.8	575.9	574.9	574.6	574.4	574.5	578.5	N/D
28	574.7	574.7	574.7	574.6	574.8	575.8	574.9	574.6	574.4	574.5	578.6	N/D
29	574.7	574.7	574.7	574.6	574.8	575.8	574.9	574.6	574.4	574.5	578.6	N/D
30	574.7		574.7	574.5	574.8	575.8	574.9	574.6	574.4	574.6	N/D	N/D
31	574.7		574.6		574.8		574.9	574.6		574.5		N/D

"N/D" indicates no data available.

APPENDIX B – Year 2000 Hydrographs for Index Wells and Springs

Figure B-1. Bexar County Index Well (AY-68-37-203 (J-17))
Hydrograph of Water Elevation vs. Precipitation at San Antonio Intl. Airport

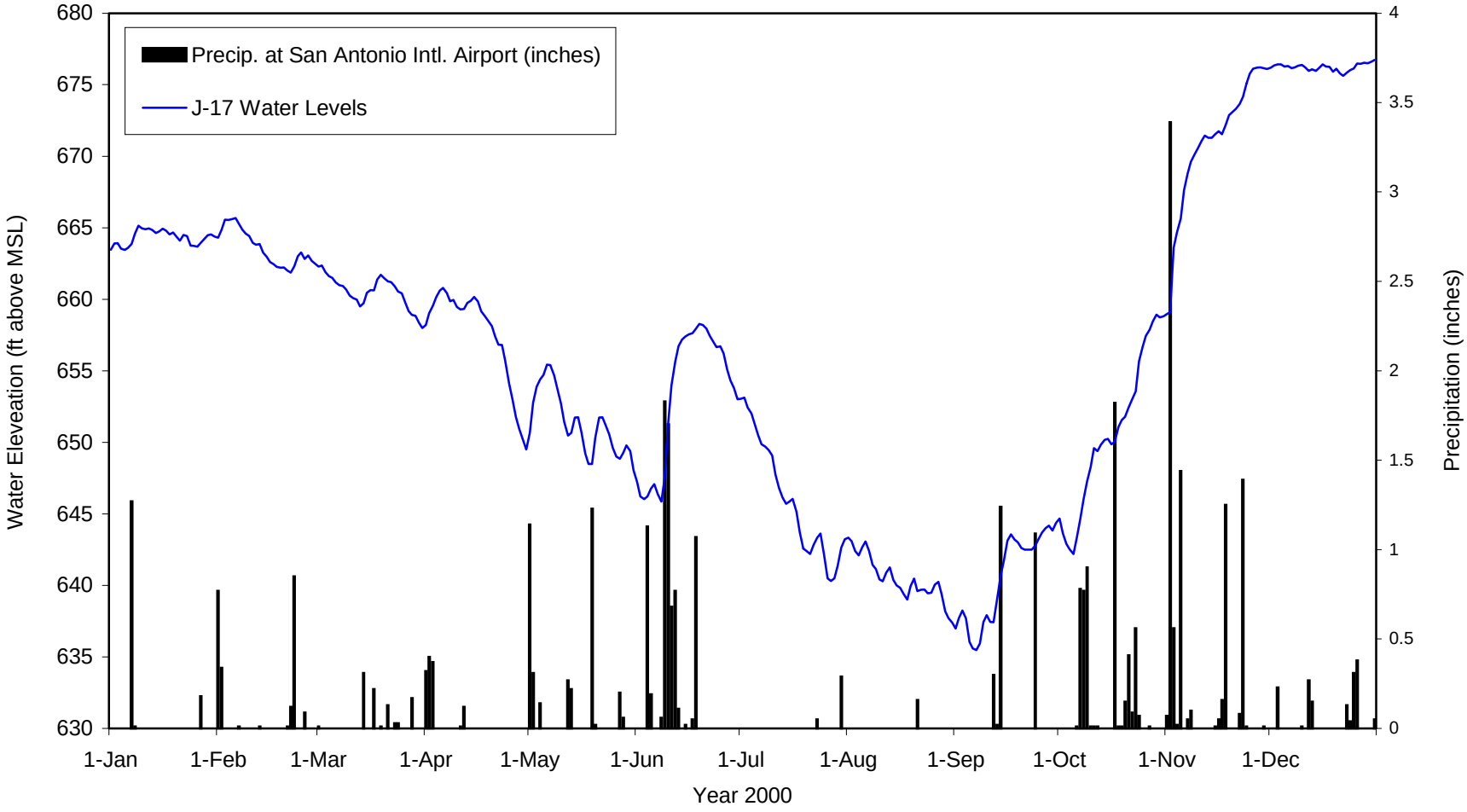


Figure B-2. City of Hondo Index Well (TD-69-47-306)
Hydrograph of Water Level Elevation vs. Precipitation at Hondo

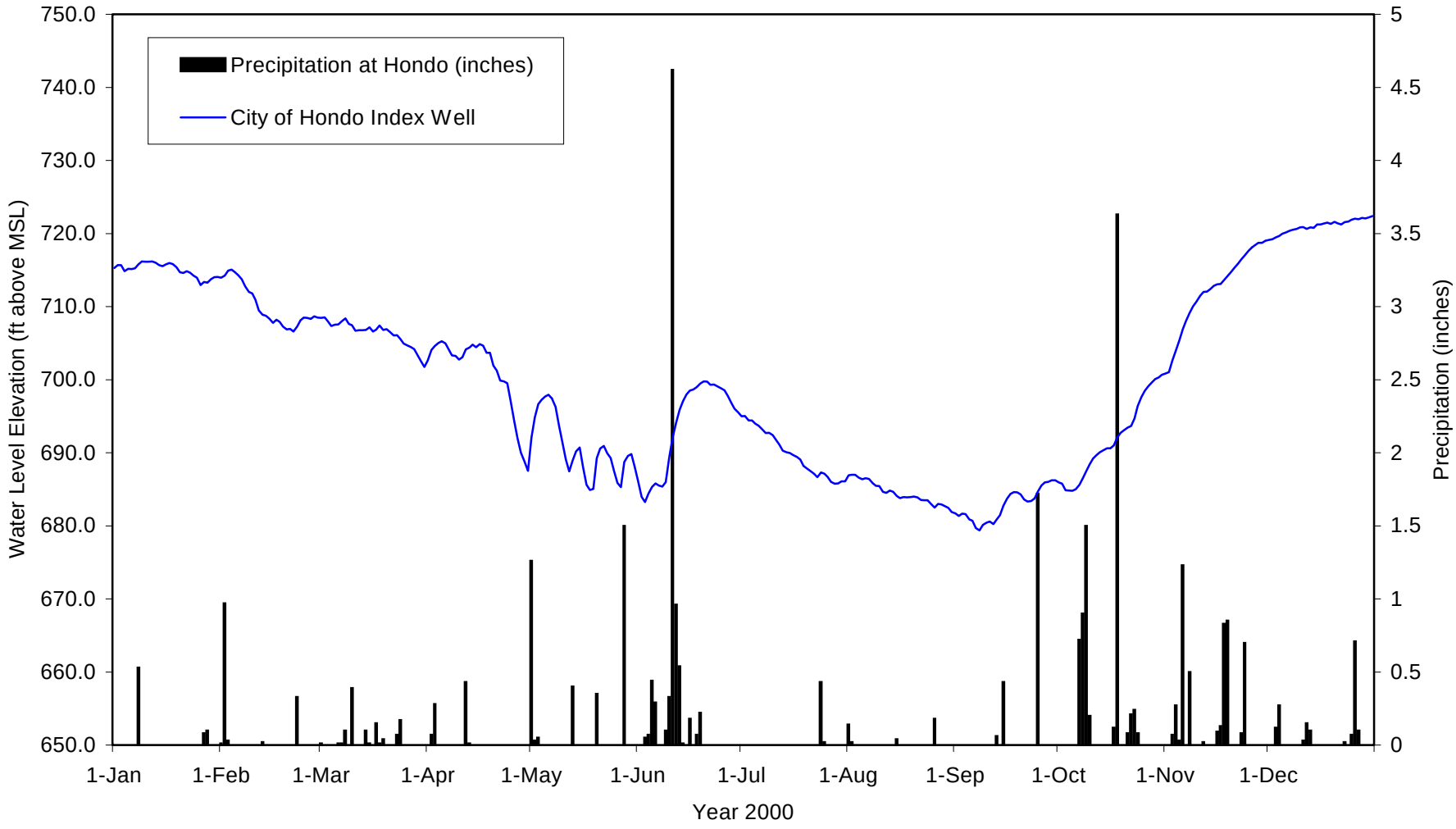


Figure B-3. City of Uvalde Index Well (YP-69-50-302 (J-27))
Hydrograph of Water Level Elevation vs. Precipitation at Uvalde

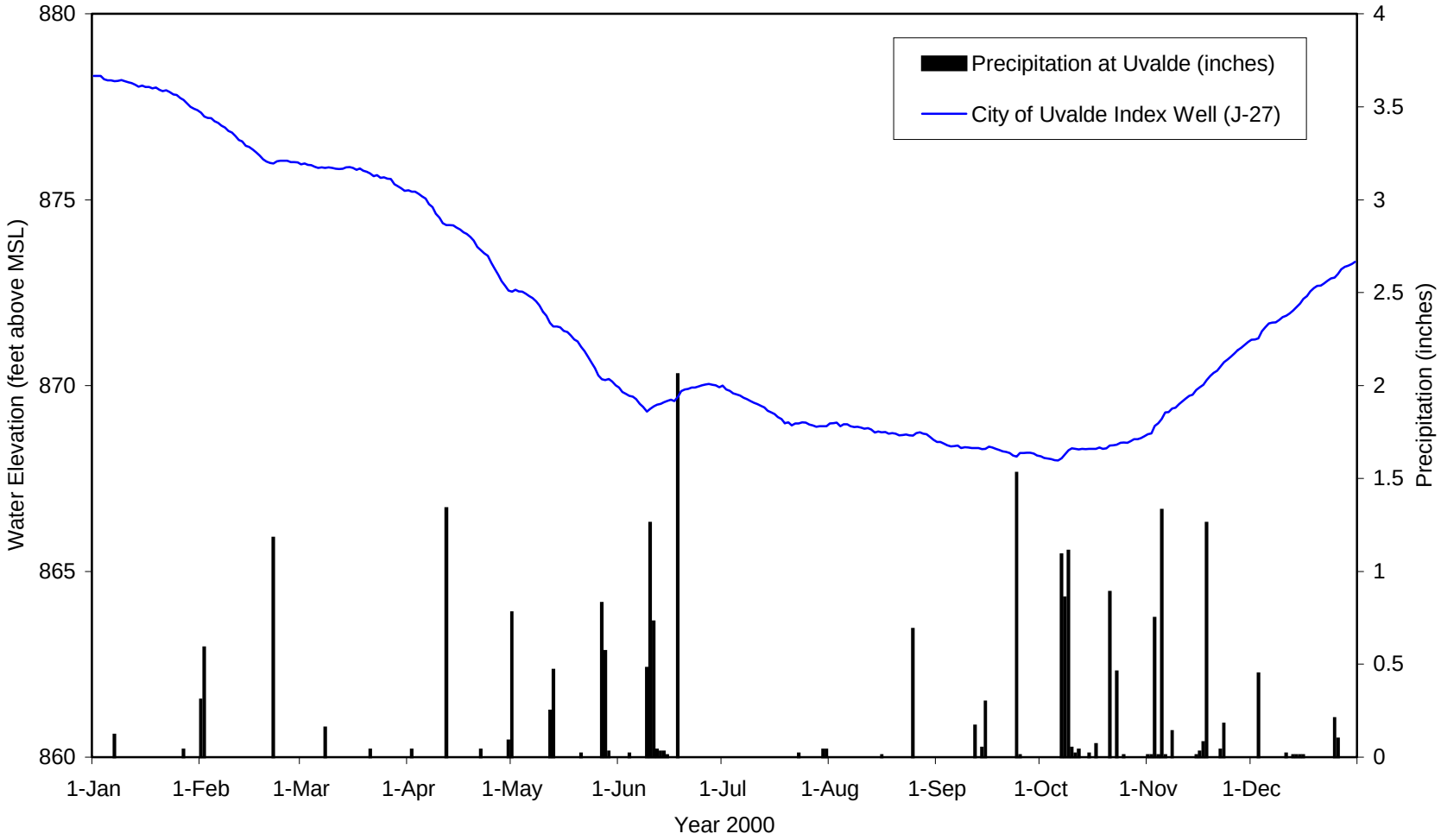


Figure B-4. Comal Springflow
Hydrograph of Springflow vs. Precipitation at San Antonio Intl. Airport

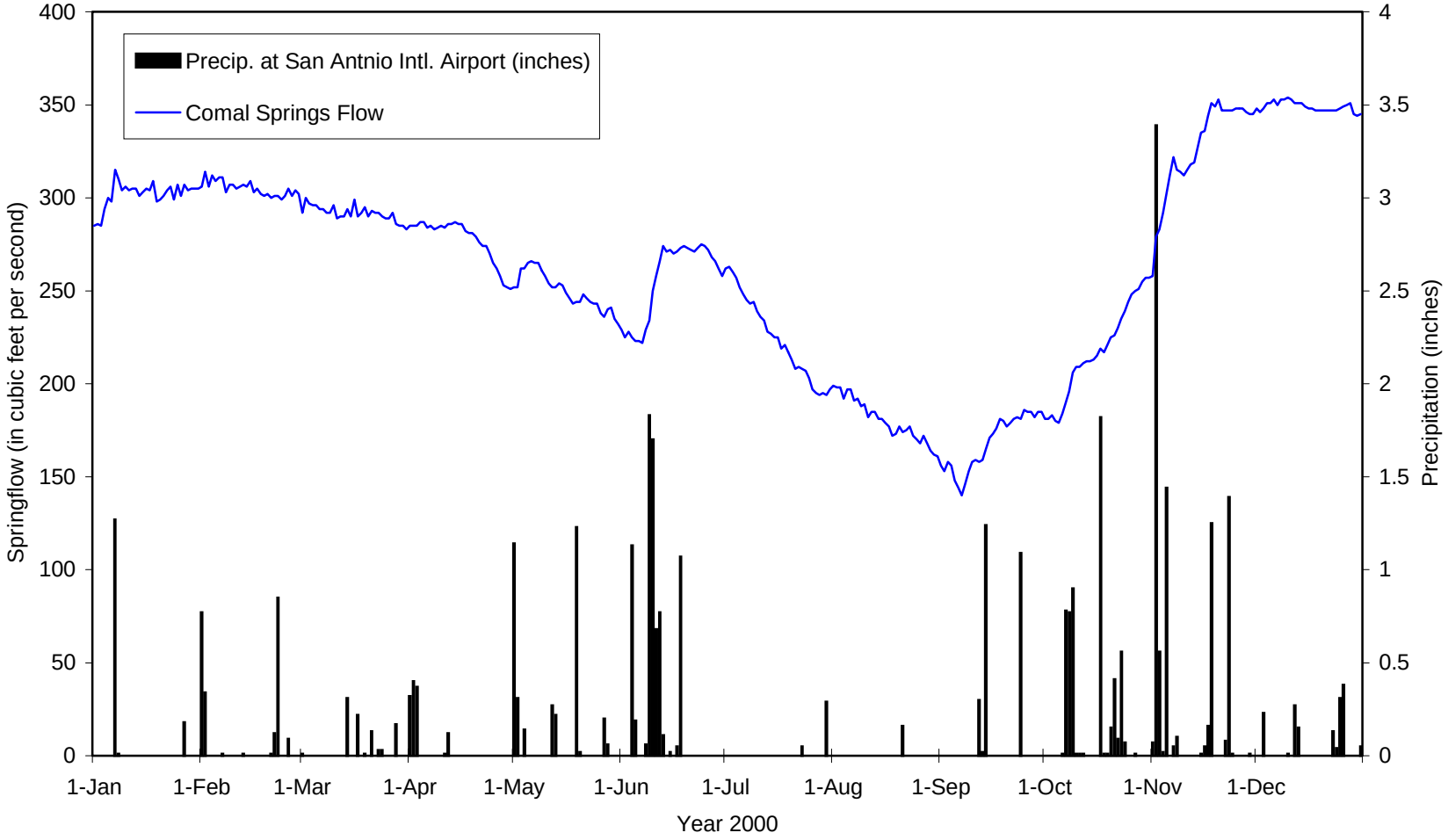
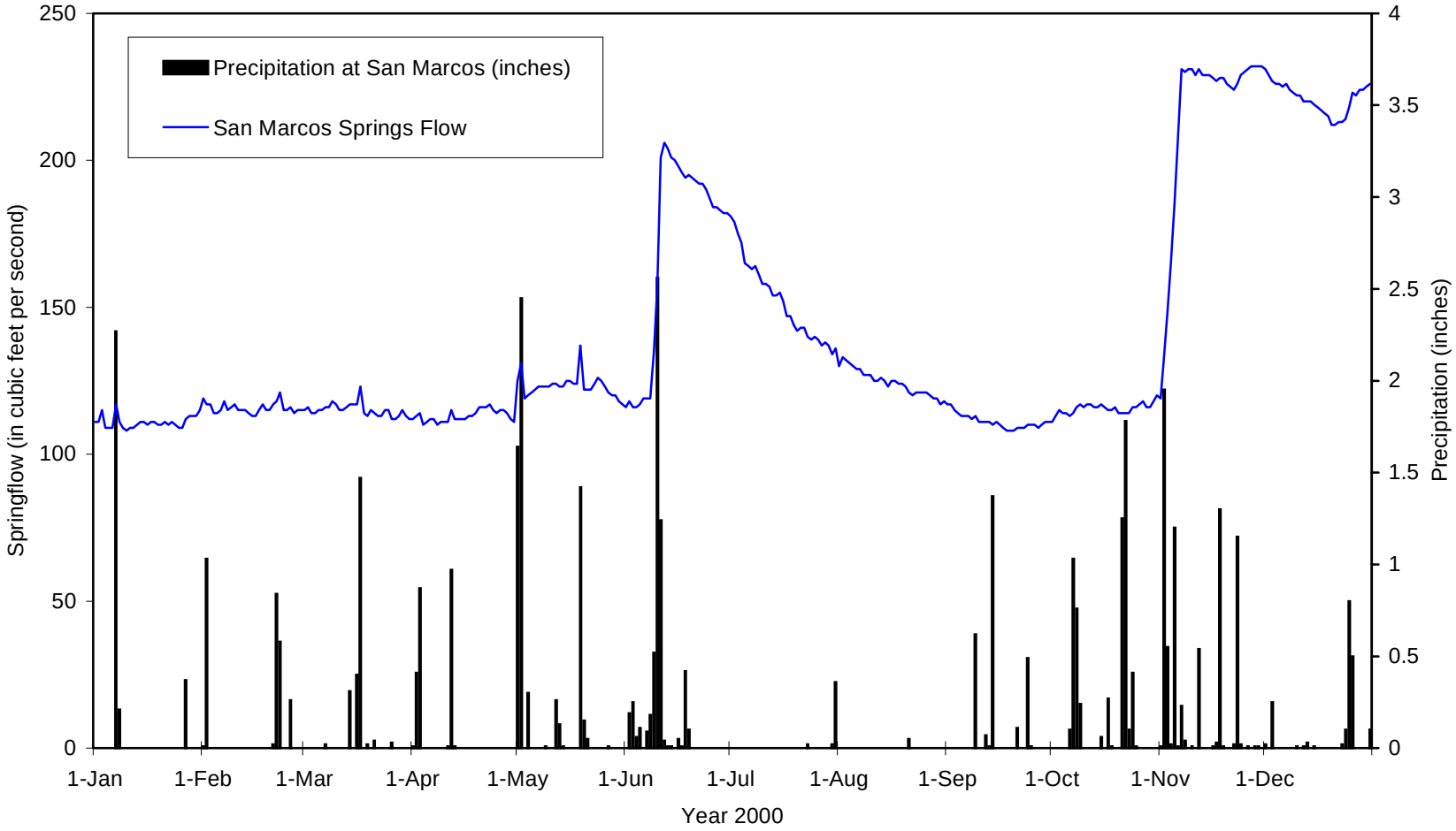


Figure B-5. San Marcos Springflow
Hydrograph of Springflow vs. Precipitation at San Marcos



APPENDIX C – Year 2000 Water Quality Data

Analytical data for selected properties and common inorganic constituents in water from wells completed in the Edwards Aquifer, 2000.

County	State well number	Date sampled	Time sampled	Depth of well (ft)	Pump or flow period prior to sampling (min)	Flow rate (gpm)	Water temperature (°C)	Conductivity field (µS/cm)	Specific conductance lab @25 °C (µS/cm)	Alkalinity field (mg/L)	Alkalinity lab (mg/L)	pH	Hard-ness, total (mg/L)
Bexar													
	AY-68-21-806	12/19/00	13:15	290	105	2.5	23.6	574	510	256	196	6.9	256
	AY-68-28-313	9/26/00	15:07	297	240	0.5	27.5	630	475	266	212	6.6	188
	AY-68-28-315	12/15/00	15:00	280	90	2.5	23.4	587	550	268	274	6.9	296
	AY-68-28-516	12/20/00	14:45	302	95	2.0	23.7	634	600	274	258	6.9	292
	AY-68-28-517	10/24/00	16:19	261	93	2.0	24.0	534	500	214	230	6.8	248
	AY-68-29-112	10/03/00	13:09	260	73	5.0	24.2	680	650	284	308	6.8	352
	AY-68-29-113	12/07/00	14:55	259	95	3.0	23.9	614	590	244	260	6.9	700
	AY-68-29-214	10/18/00	12:45	221	110	2.5	23.7	614	590	274	242	6.6	304
	AY-68-29-216	10/26/00	12:27	261	62	2.5	24.7	559	550	262	260	7.0	282
	AY-68-29-217	12/05/00	15:10	260	153	3.0	23.8	526	500	226	232	7.1	312
S	*AY-68-37-521	9/13/00	16:20	1275	NR	NR	30.5	3930	4810	220	220	6.8	2220
S	*AY-68-37-522	9/13/00	15:35	1075	NR	NR	30.0	5550	3390	233	220	6.6	1560
S	*AY-68-37-523	9/13/00	15:40	1175	NR	NR	29.0	928	4550	196	196	7.2	2210
S	*AY-68-37-524	9/13/00	13:10	881	NR	NR	29.0	6290	780	313	226	6.7	370
S	*AY-68-37-525	9/13/00	14:30	1150	NR	NR	27.0	893	5000	196	192	7.5	2570
S	*AY-68-37-526	9/13/00	15:30	1223	NR	NR	27.0	543	780	195	238	7.1	380
S	*AY-68-37-527	9/13/00	13:00	926	NR	NR	NR	NR	480		198		250
Comal													
	*DX-68-15-807	6/21/00	10:05	400	65	NR	22.9	NR	510	252	231	7.3	245
	*DX-68-15-907	6/27/00	13:35	180	45	NR	21.7	NR	589	276	263	7.2	278
	*DX-68-16-707	6/21/00	11:35	400	P	NR	22.3	NR	569	270	252	7.1	272
	*DX-68-22-811	8/1/00	11:34	NR	P	NR	22.5	NR	521	220	242	6.9	250
	*DX-68-22-901	6/16/00	9:55	255	P	NR	22.5	NR	506	246	230	7.1	244
	*DX-68-22-902	6/16/00	10:45	240	P	NR	22.4	NR	520	252	232	7.2	252
	*DX-68-23-105	6/29/00	14:25	450	50	NR	23.2	NR	574	282	263	7.2	278
	*DX-68-23-316	6/26/00	11:56	350	60	NR	24.0	NR	541	254	246	7.2	263
	*DX-68-23-504	6/14/00	10:00	215	P	NR	23.3	NR	562	240	241	7.2	280
	*DX-68-23-601	6/13/00	11:25	365	P	NR	23.4	NR	491	242	232	7.3	270
	*DX-68-23-602	4/7/00	14:01	790	P	NR	23.6	NR	532	236	232	7.4	276
S	DX-68-23-616A	2/28/00	15:10	576	75	10.0	25.3	2900	2650	262	282	6.9	710
S	*DX-68-23-616A	6/22/00	16:53	576	65	11.0	25.6	2840	2700	258	282	7.1	780
S	*DX-68-23-616B	2/28/00	15:24	738	80	12.5	26.1	1696	1600	230	234	7.1	470

*Data provided by the TWDB, USGS, or SAWS

NR = not recorded
P = Pump in continuous operation prior to sampling
S = Freshwater/Saline water Transect monitoring well

Analytical data for selected properties and common inorganic constituents in water from wells completed in the Edwards Aquifer, 2000.

County	State well number	Date sampled	Time sampled	Depth of well (ft)	Pump or flow period prior to sampling (min)	Flow rate (gpm)	Water temperature (°C)	Conductivity field (µS/cm)	Specific conductance lab @25 °C (µS/cm)	Alkalinity field (mg/L)	Alkalinity lab (mg/L)	pH	Hard-ness, total (mg/L)
Comal													
S	*DX-68-23-616B	6/22/00	16:33	738	80	12.0	26.4	1697	1620	260	240	7.3	500
S	DX-68-23-617	2/28/00	12:00	917	65	13.0	26.2	563	500	210	230	7.2	200
S	DX-68-23-618	2/28/00	11:53	660	60	15.0	25.7	631	550	202	214	7.2	180
S	*DX-68-23-618	6/22/00	11:35	660	60	13.0	25.6	633	600	208	210	7.4	246
S	DX-68-23-619A	2/28/00	16:52	652	60	11.5	25.4	535	500	202	211	7.2	160
S	DX-68-23-619A	6/22/00	14:43	652	60	11.0	26.3	558	500	212	210	7.5	212
S	DX-68-23-619B	2/28/00	14:32	787	65	10.0	26.1	558	500	196	230	7.2	200
S	DX-68-23-619B	6/22/00	17:18	787	65	7.5	25.7	536	520	220	230	7.5	232
	*DX-68-23-710	6/21/00	14:53	NR	55	NR	22.9	580	580	296	270	7.0	278
	*DX-68-23-810	6/16/00	10:34	NR	64	NR	24.6	544	544	212	188	7.5	228
	*DX-68-24-411	6/13/00	13:50	NR	P	NR	25.3	491	491	234	212	7.3	264
	*DX-68-30-221	8/1/00	15:00	140	120	NR	22.7	608	608	256	261	6.9	285
S	*DX-68-30-315	8/14/00	10:27	975	217	60.0	24.1	534	500	196	218	7.1	255
Guadalupe													
S	*KX-68-31-808	5/15/00	11:40	282	200	60.0	31.7	5000	5000	226	239	7.3	1270
Hays													
	LR-67-01-308	8/25/00	11:41	765	240	NR	25.3	694	650	206	220	7.1	354
	LR-67-01-309	8/25/00	10:50	595	230	NR	25.6	706	700	202	204	7.1	366
	LR-67-01-805	9/01/00	12:04	300	P	NR	23.6	595	575	242	254	7.1	292
S	LR-67-01-812	7/11/00	17:07	726	60	15.0	26.6	14790	13000	390	362	6.6	3200
S	LR-67-01-813A	7/11/00	15:15	564	60	12.5	24.9	14770	13000	386	370	6.6	3300
S	LR-67-01-813B	7/11/00	15:15	699	60	14.3	25.7	14760	13200	386	358	6.6	3300
S	LR-67-01-814A	7/11/00	11:35	556	60	12.5	25.1	14740	13000	368	360	6.6	3400
S	LR-67-01-814B	7/11/00	11:42	726	60	15.0	25.9	14700	13200	310	356	6.6	3400
	LR-67-01-816	9/01/00	11:18	115	P	NR	22.7	611	600	254	255	7.1	288
	LR-67-09-113	10/16/00	11:25	282	130	60	23.1	683	600	230	181	7.0	280
Medina													
	*TD-68-25-703	6/7/00	11:20	425	75	NR	21.9	435	NR	186	176	7.4	222
	*TD-68-26-802	7/14/00	14:27	980	60	NR	22.8	508	NR	208	201	7.2	257
	*TD-68-33-202	7/12/00	11:58	279	70	NR	22.6	435	NR	198	186	7.3	206
	*TD-68-41-102	6/6/00	14:48	717	P	NR	24.8	484	NR	210	201	7.3	240

*Data provided by the TWDB, USGS, or SAWS

NR = not recorded
P = Pump in continuous operation prior to sampling
S = Freshwater/Saline water Transect monitoring well

Analytical data for selected properties and common inorganic constituents in water from wells completed in the Edwards Aquifer, 2000.

County	State well number	Date sampled	Time sampled	Depth of well (ft)	Pump or flow period prior to sampling (min)	Flow rate (gpm)	Water temperature (°C)	Conductivity field (µS/cm)	Specific conductance lab @25 °C (µS/cm)	Alkalinity field (mg/L)	Alkalinity lab (mg/L)	pH	Hard-ness, total (mg/L)
Medina													
	*TD-68-41-303	5/23/00	13:15	717	P	NR	24.2	496	NR	208	197	7.5	248
	*TD-68-41-901	6/6/00	14:35	1855	P	NR	27.1	485	NR	204	196	7.3	236
	*TD-68-42-506	6/8/00	10:30	1445	P	NR	26.0	488	NR	204	194	7.4	237
	*TD-68-42-806	5/30/00	13:50	2044	P	NR	33.8	515	NR	184	178	7.6	290
	*TD-68-49-301	6/5/00	10:45	2550	P	NR	32.8	471	NR	202	187	7.3	226
	*TD-68-49-501	5/25/00	14:00	2716	P	NR	27.8	505	NR	208	192	7.3	248
	*TD-69-29-901	5/24/00	10:40	276	90	NR	23.9	522	NR	254	237	7.1	274
	*TD-69-37-305	5/23/00	11:30	NR	60	NR	26.4	458	NR	224	204	7.3	241
	*TD-69-38-906	6/8/00	13:15	940	P	NR	24.7	502	NR	234	222	7.2	256
	*TD-69-39-601	6/7/00	11:10	360	105	NR	24.6	473	NR	230	218	7.2	239
	*TD-69-39-803	7/12/00	10:10	848	185	NR	23.1	478	NR	194	198	7.3	210
	*TD-69-46-601	6/6/00	14:30	1289	P	NR	23.7	467	NR	216	204	7.3	237
	*TD-69-47-301	5/30/00	13:30	1510	P	NR	24.6	473	NR	208	201	7.3	241
	*TD-69-47-303	5/30/00	15:45	1803	P	NR	24.4	473	NR	202	201	7.3	243
	*TD-69-47-307	5/30/00	12:20	1600	P	NR	24.9	470	NR	220	201	7.2	234
S	*TD-69-63-103	5/23/00	14:05	3406	P	NR	44.2	555	NR	272	181	7.3	274
Uvalde													
	*YP-69-35-401	4/20/00	12:07	167	180	NR	24.1	504	NR	236	226	7.2	255
	*YP-69-35-602	5/22/00	11:45	237	90	NR	26.1	468	NR	216	201	7.2	241
	*YP-69-42-709	4/20/00	14:30	721	70	NR	26.1	486	NR	196	191	7.3	222
	*YP-69-43-606	4/26/00	14:38	698	P	NR	23.9	511	NR	216	199	7.2	239
	*YP-69-43-806	5/9/00	12:30	NR	P	NR	24.0	540	NR	206	203	7.2	246
	*YP-69-45-405	5/9/00	14:55	1211	P	NR	22.9	478	NR	212	202	7.4	239
	*YP-69-45-406	5/1/00	10:28	1500	P	NR	22.7	776	NR	212	211	7.3	307
	*YP-69-50-203	4/18/00	11:40	523	P	NR	23.7	554	NR	208	207	7.2	250
	*YP-69-50-207	4/18/00	11:45	265	P	NR	24.1	517	NR	207	201	7.2	219
	*YP-69-50-501	4/25/00	13:01	600	P	NR	22.9	1118	NR	224	226	7.0	437
	*YP-69-50-506	4/18/00	12:00	525	P	NR	24.2	596	NR		205	7.1	268
	*YP-69-51-114	5/9/00	14:18	565	70	NR	32.2	917	NR	272	253	7.0	382
	*YP-69-51-120	5/1/00	12:10	400	130	NR	24.1	1044	NR	254	245	7.1	414

*Data provided by the TWDB, USGS, or SAWS

NR = not recorded
P = Pump in continuous operation prior to sampling
S = Freshwater/Saline water Transect monitoring well

Analytical data for major ions in water from wells completed in the Edwards Aquifer, 2000.

County	State well number	Date sampled	Calcium, dissolved (mg/L)	Magnesium, dissolved (mg/L)	Sodium, dissolved (mg/L)	Potassium, dissolved (mg/L)	Chloride, dissolved (mg/L)	Sulfate, dissolved (mg/L)	Fluoride, dissolved (mg/L)	Silica, dissolved (mg/L)	Total dissolved solids (mg/L)
Bexar											
	AY-68-21-806	12/19/00	116	2	2	1	15	17	0.1	6.00	288
	AY-68-28-313	9/26/00	121	3	8	1	23	10	0.13	6.69	356
	AY-68-28-315	12/15/00	117	3	3	1	15	7	0.05	7.00	296
	AY-68-28-516	12/20/00	124	6	6	<1	20	24	0.08	5.70	308
	AY-68-28-517	10/24/00	95	7	5	<1	17	10	0.12	6.78	312
	AY-68-29-112	10/03/00	86	34	10	<1	27	7	0.2	6.18	404
	AY-68-29-113	12/07/00	110	9	9	<1	27	22	0.12	5.20	344
	AY-68-29-214	10/18/00	116	10	4	<1	14	7	0.15	6.86	356
	AY-68-29-216	10/26/00	107	18	4	<1	14	6	0.24	6.68	316
	AY-68-29-217	12/05/00	96	12	4	<1	17	14	0.11	5.70	256
S	*AY-68-37-521	9/13/00	564	196	506	30	920	1537	2.60	8.28	4428
S	*AY-68-37-522	9/13/00	399	136	337	22	640	1180	4.09	7.52	3390
S	*AY-68-37-523	9/13/00	555	205	513	32	990	1640	4.72	7.80	4476
S	*AY-68-37-524	9/13/00	98	32	51	4	105	154	1.41	6.18	684
S	*AY-68-37-525	9/13/00	622	255	602	37	1500	1920	4.92	7.90	5160
S	*AY-68-37-526	9/13/00	89	32	42	2	84	131	0.74	4.96	580
S	*AY-68-37-527	9/13/00	69	18	13	1	40	39	0.41	5.02	312
Comal											
	*DX-68-15-807	6/21/00	69.3	17.6	4.89	0.4	11.2	5.74	0.09	13.00	272
	*DX-68-15-907	6/27/00	90	13.1	8.79	1.15	16.7	17.2	0.18	14.30	322
	*DX-68-16-707	6/21/00	82.9	15.8	7.07	1.02	12.8	15.3	0.15	13.10	307
	*DX-68-22-811	8/1/00	85.8	8.71	7.1	1.57	9.43	8	0.08	14.00	289
	*DX-68-22-901	6/16/00	79.1	11.3	5.11	0.88	9.29	9.08	0.11	12.50	273
	*DX-68-22-902	6/16/00	82.2	11.6	5.71	0.86	10.2	11.8	0.13	12.60	281
	*DX-68-23-105	6/29/00	87	14.8	6.28	0.93	10.8	14	0.11	12.90	311
	*DX-68-23-316	6/26/00	84.6	12.6	5.15	0.9	9.38	9.9	0.09	12.40	290
	*DX-68-23-504	6/14/00	85.1	16.4	10.3	1.41	16.7	26.6	0.19	13.40	323
	*DX-68-23-601	6/13/00	81.7	16	9.79	1.37	16.6	23.9	0.19	13.40	311
	*DX-68-23-602	4/7/00	85.9	14.9	8.72	1.51	14.1	20.8	0.1	13.10	307
S	DX-68-23-616A	2/28/00	154	99	301	18	563	559	3.76	6.60	1904
S	*DX-68-23-616A	6/22/00	157	100	332	16	578	538	3.6	6.20	1996
S	DX-68-23-616B	2/28/00	95	60	134	8	298	302	3.56	6.20	1148

Analytical data for major ions in water from wells completed in the Edwards Aquifer, 2000.

County	State well number	Date sampled	Calcium, dissolved (mg/L)	Magnesium, dissolved (mg/L)	Sodium, dissolved (mg/L)	Potassium, dissolved (mg/L)	Chloride, dissolved (mg/L)	Sulfate, dissolved (mg/L)	Fluoride, dissolved (mg/L)	Silica, dissolved (mg/L)	Total dissolved solids (mg/L)
Comal											
S	*DX-68-23-616B	6/22/00	93	62	144	10	288	299	3.57	6.00	1170
S	DX-68-23-617	2/28/00	57	26	8	1	19	51	1.25	5.80	496
S	DX-68-23-618	2/28/00	51	32	21	2	48	61	2.74	6.10	372
S	*DX-68-23-618	6/22/00	55	34	26	3	54	65	2.77	6.00	372
S	DX-68-23-619A	2/28/00	49	29	10	1	25	44	2.44	6.00	312
S	DX-68-23-619A	6/22/00	51	30	10	1	27	43	2.53	6.00	292
S	DX-68-23-619B	6/22/00	62	27	7	1	22	47	1.55	5.70	320
S	DX-68-23-619B	2/28/00	58	25	7	<1	21	47	1.57	5.70	336
	*DX-68-23-710	6/21/00	97.5	8.51	4.35	0.91	8.74	5.22	0.07	14.00	309
	*DX-68-23-810	6/16/00	44.4	28.3	19.7	1.93	30.6	45.3	0.86	13.70	298
	*DX-68-24-411	6/13/00	77.8	17.2	10.5	1.46	18.6	27.1	0.37	13.10	301
	*DX-68-30-221	8/1/00	98.4	9.58	10.9	1.51	13.5	14.7	0.11	15.70	344
S	*DX-68-30-315	8/14/00	76	16	9	1	19	23	0.25	5.80	312
Guadalupe											
S	*KX-68-31-808	5/15/00	334	149	693	40	1348	1035	2.82	5.70	4336
Hays											
	LR-67-01-308	8/25/00	59	36	10	2	18	126	3.59	6.00	420
	LR-67-01-309	8/25/00	61	38	9	2	19	137	3.58	6.10	438
	LR-67-01-805	9/01/00	92	16	10	1	26	23	0.23	5.40	250
S	LR-67-01-812	7/11/00	885	438	2274	103	4273	2750	5.5	6.80	11600
S	LR-67-01-813A	7/11/00	867	437	2232	98	4248	2840	5.51	7.00	11980
S	LR-67-01-813B	7/11/00	990	454	2284	99	4298	2790	5.64	6.80	11860
S	LR-67-01-814A	7/11/00	871	444	2216	101	4298	2840	5.71	6.80	11852
S	LR-67-01-814B	7/11/00	863	447	2224	103	4298	2760	5.65	6.80	12020
	LR-67-01-816	9/01/00	93	16	12	<1	29	28	0.25	5.50	280
	*LR-67-09-113	10/16/00	94	19	22	1	38	41	0.32	6.63	380
Medina											
	*TD-68-25-703	6/7/00	72.3	10.1	6.39	1.18	10	37.5	0.09	11.10	256
	*TD-68-26-802	7/14/00	72.6	18.4	7.12	1.22	12.5	36.5	0.17	13.00	288
	TD-68-33-202	7/12/00	71	10	5	<1	15	28	0.18	5.20	268

Analytical data for major ions in water from wells completed in the Edwards Aquifer, 2000.

County	State well number	Date sampled	Calcium, dissolved (mg/L)	Magnesium, dissolved (mg/L)	Sodium, dissolved (mg/L)	Potassium, dissolved (mg/L)	Chloride, dissolved (mg/L)	Sulfate, dissolved (mg/L)	Fluoride, dissolved (mg/L)	Silica, dissolved (mg/L)	Total dissolved solids (mg/L)
Medina											
	*TD-68-41-102	6/6/00	69.9	15.8	9.93	1.13	20.4	16.2	0.13	13.40	278
	*TD-68-41-303	5/23/00	73	15.9	10.5	1.22	22.7	17.4	0.15	13.30	283
	*TD-68-41-901	6/6/00	66.2	16.8	9.82	1.1	23.6	15.2	0.2	13.20	275
	*TD-68-42-506	6/8/00	67.7	16.3	10	1.1	24.5	14.8	0.18	13.40	276
	*TD-68-42-806	5/30/00	65.3	24.6	8.21	1.02	15	82.5	3.55	18.10	348
	*TD-68-49-301	6/5/00	57.8	19.9	9.09	1.05	18.6	25.1	0.64	14.20	264
	*TD-68-49-501	5/25/00	71.3	16.4	11.3	1.17	27.3	19.6	0.21	13.20	288
	*TD-69-29-901	5/24/00	99.4	6.27	7.4	0.94	12.4	14.7	0.12	14.60	304
	*TD-69-37-305	5/23/00	75.4	12.8	6.37	0.86	11.9	11.6	0.13	12.80	259
	*TD-69-38-906	6/8/00	79.8	13.9	9.08	1.28	12.6	12.2	0.17	14.40	293
	*TD-69-39-601	6/7/00	78.7	10.5	6.65	0.87	11.9	10.7	0.11	13.30	270
	TD-69-39-803	7/12/00	76	10	9	1	17	12	0.18	5.30	274
	*TD-69-46-601	6/6/00	70.8	14.8	7.63	1.09	13.2	17.3	0.13	14.00	269
	*TD-69-47-301	5/30/00	70.7	15.7	7.95	1.12	13.2	17.6	0.17	13.50	268
	*TD-69-47-303	5/30/00	69.4	16.9	8.31	1.1	15.6	17.8	0.18	13.30	271
	*TD-69-47-307	5/30/00	68.6	15.3	7.61	1.16	14.8	17.9	0.17	13.40	267
S	*TD-69-63-103	5/23/00	60.9	23.7	13.9	1.57	17.8	79.2	1.4	22.10	350
Uvalde											
	*YP-69-35-401	4/20/00	74.6	16.8	7.51	0.75	12.4	8.76	0.08	12.50	284
	*YP-69-35-602	5/22/00	65.4	19	7.1	1.33	12.7	13.4	0.09	14.20	263
	*YP-69-42-709	4/20/00	71.9	10.5	14.8	1	24.1	12.9	0.09	12.90	275
	*YP-69-43-606	4/26/00	79	10.2	12.3	1.03	24.9	13.2	0.09	13.00	289
	*YP-69-43-806	5/9/00	84.8	8.45	14.8	1.12	31.6	13	0.1	14.20	306
	*YP-69-45-405	5/9/00	72.7	14	7.74	1.1	13	19	0.16	13.90	270
	*YP-69-45-406	5/1/00	85.8	22.6	20.8	2.64	20.8	97.9	0.29	13.90	400
	*YP-69-50-203	4/18/00	83.7	10.1	16.2	1.14	32.7	17.2	0.08	13.30	314
	*YP-69-50-207	4/18/00	73.3	8.75	12.4	1.09	25.6	14.2	0.08	13.30	283
	*YP-69-50-501	4/25/00	148	16.5	54.5	1.37	155	77.4	0.2	16.70	639
	*YP-69-50-506	4/18/00	92.6	9.12	17.9	1.2	39.1	23.8	0.1	13.50	340
	*YP-69-51-114	5/9/00	128	14.4	40.1	1.33	90.5	56.4	0.48	18.10	532
	*YP-69-51-120	5/1/00	138	16.2	55.8	1.31	120	65.3	1	17.20	609

Analytical data for minor element metals in water from wells completed in the Edwards Aquifer, 2000.

County	State well number	Date sampled	Arsenic, dissolved (mg/L)	Barium, dissolved (mg/L)	Cadmium, dissolved (mg/L)	Chromium, dissolved (mg/L)	Copper, dissolved (mg/L)	Iron, dissolved (mg/L)	Lead, dissolved (mg/L)	Manganese, dissolved (mg/L)	Mercury, dissolved (mg/L)	Selenium, dissolved (mg/L)	Silver, dissolved (mg/L)	Zinc, dissolved (mg/L)
Bexar														
	AY-68-21-806	12/19/00	0.002	0.04	<0.001	<0.002	<0.001	0.009	<0.002	<0.002	<0.002	<0.003	<0.001	<0.01
	AY-68-28-313	9/26/00	0.002	0.05	<0.001	0.002	0.002	0.006	0.004	<0.002	<0.002	<0.003	<0.001	<0.01
	AY-68-28-315	12/15/00	<0.002	0.03	<0.001	0.003	0.007	0.027	0.02	0.005	<0.002	<0.003	<0.001	<0.01
	AY-68-28-516	12/20/00	<0.002	0.04	<0.001	<0.002	<0.001	0.004	<0.002	<0.002	<0.002	0.003	<0.001	<0.01
	AY-68-28-517	10/24/00	<0.002	0.03	<0.002	<0.002	0.005	<0.003	0.003	<0.002	<0.002	<0.003	<0.001	<0.01
	AY-68-29-112	10/03/00	<0.002	0.04	<0.001	<0.002	0.002	0.031	<0.002	<0.002	<0.002	<0.003	<0.001	<0.01
	AY-68-29-113	12/07/00	<0.002	0.03	<0.001	<0.002	<0.002	0.022	<0.002	<0.002	0.003	<0.003	<0.001	<0.01
	AY-68-29-214	10/18/00	<0.002	0.03	<0.002	<0.002	0.003	0.004	<0.002	<0.002	<0.002	<0.003	<0.001	<0.01
	AY-68-29-216	10/26/00	0.003	0.02	<0.002	<0.002	0.007	<0.003	<0.002	<0.002	<0.002	<0.003	<0.001	<0.01
	AY-68-29-217	12/05/00	<0.002	0.03	<0.001	<0.002	<0.002	<0.003	0.005	<0.002	<0.002	<0.003	<0.001	0.06
S	*AY-68-37-521	9/13/00	0.003	0.01	0.005	<0.001	<0.001	0.04	<0.002	0.015	<0.002	0.008	<0.001	<0.01
S	*AY-68-37-522	9/13/00	<0.002	<0.01	0.004	<0.001	<0.001	0.061	<0.002	0.015	<0.002	0.008	<0.001	<0.01
S	*AY-68-37-523	9/13/00	0.005	<0.01	0.004	<0.001	<0.001	0.036	<0.002	0.015	<0.002	0.009	<0.001	<0.01
S	*AY-68-37-524	9/13/00	0.004	0.06	<0.001	<0.001	<0.001	0.989	0.004	0.008	<0.002	<0.003	<0.001	<0.01
S	*AY-68-37-525	9/13/00	<0.002	0.01	0.008	<0.001	<0.001	0.004	<0.002	0.028	<0.002	0.008	<0.001	<0.01
S	*AY-68-37-526	9/13/00	<0.002	0.11	<0.001	<0.001	<0.001	1.126	<0.002	0.038	<0.002	0.004	<0.001	<0.01
S	*AY-68-37-527	9/13/00	<0.002	0.1	<0.001	<0.001	<0.001	0.008	<0.002	0.012	<0.002	<0.003	<0.001	<0.01
Comal														
	*DX-68-15-807	6/21/00	<0.002	0.0273	<0.001	0.00426	<0.002	<0.05	<0.001	<0.001	NA	<0.004	NA	0.197
	*DX-68-15-907	6/27/00	<0.002	0.0316	<0.001	0.00609	<0.002	<0.05	<0.001	<0.001	NA	<0.004	NA	0.00638
	*DX-68-16-707	6/21/00	<0.002	0.0315	<0.001	0.00477	0.00567	<0.05	0.00129	<0.001	NA	<0.004	NA	0.0111
	*DX-68-22-811	8/1/00	<0.002	0.037	<0.001	0.00493	<0.002	<0.05	<0.001	<0.001	NA	<0.004	NA	0.039
	*DX-68-22-901	6/16/00	<0.002	0.0256	<0.001	0.00492	0.0024	<0.05	0.00243	<0.001	NA	<0.004	NA	0.012
	*DX-68-22-902	6/16/00	<0.002	0.0267	<0.001	0.00387	0.00201	<0.05	<0.001	<0.001	NA	<0.004	NA	<0.004
	*DX-68-23-105	6/29/00	<0.002	0.031	<0.001	0.0063	<0.002	<0.05	<0.001	<0.001	NA	<0.004	NA	0.0116
	*DX-68-23-316	6/26/00	<0.002	0.0284	<0.001	0.00581	<0.002	<0.05	<0.001	<0.001	NA	<0.004	NA	<0.004
	*DX-68-23-504	6/14/00	<0.002	0.043	<0.001	0.00453	0.00269	<0.05	<0.001	<0.001	NA	<0.004	NA	0.0184
	*DX-68-23-601	6/13/00	<0.002	0.0442	<0.001	0.00525	0.00324	<0.05	<0.001	<0.001	NA	<0.004	NA	0.0231
	*DX-68-23-602	4/7/00	<0.002	0.0367	<0.001	0.0114	0.0042	<0.05	<0.001	<0.001	NA	<0.004	NA	0.00416
S	*DX-68-23-616A	2/28/00	<0.002	0.01	0.003	<0.001	<0.001	0.087	<0.002	0.004	<0.002	<0.003	<0.001	<0.01
S	*DX-68-23-616A	6/22/00	<0.002	0.02	0.003	<0.001	<0.001	0.038	<0.002	0.004	<0.002	<0.003	<0.001	<0.01
S	DX-68-23-616B	2/28/00	<0.002	<0.01	0.002	<0.001	<0.001	0.011	<0.002	<0.002	<0.002	<0.003	<0.001	<0.01
S	*DX-68-23-616B	6/22/00	<0.002	0.02	0.002	<0.001	<0.001	0.013	<0.002	0.003	<0.002	<0.003	<0.001	<0.01
S	DX-68-23-617	2/28/00	<0.002	0.11	<0.001	<0.001	<0.001	0.015	0.006	<0.002	<0.002	0.004	<0.001	<0.01
S	DX-68-23-618	2/28/00	<0.002	0.02	<0.001	<0.001	0.002	0.022	<0.002	<0.002	<0.002	0.004	<0.001	<0.01
S	*DX-68-23-618	6/22/00	<0.002	0.03	<0.001	<0.001	<0.001	0.016	0.004	0.002	<0.002	<0.003	<0.001	<0.01

Analytical data for minor element metals in water from wells completed in the Edwards Aquifer, 2000.

County	State well number	Date sampled	Arsenic, dissolved (mg/L)	Barium, dissolved (mg/L)	Cadmium, dissolved (mg/L)	Chromium, dissolved (mg/L)	Copper, dissolved (mg/L)	Iron, dissolved (mg/L)	Lead, dissolved (mg/L)	Manganese, dissolved (mg/L)	Mercury, dissolved (mg/L)	Selenium, dissolved (mg/L)	Silver, dissolved (mg/L)	Zinc, dissolved (mg/L)
Comal														
S	DX-68-23-619A	2/28/00	<0.002	0.03	<0.001	<0.001	<0.001	0.073	<0.002	<0.002	<0.002	0.004	<0.001	<0.01
S	DX-68-23-619A	6/22/00	<0.002	0.04	<0.001	<0.001	<0.001	0.064	<0.002	0.005	<0.002	<0.003	<0.001	<0.01
S	DX-68-23-619B	6/22/00	<0.002	0.11	<0.001	<0.001	<0.001	0.027	<0.002	0.002	<0.002	<0.003	<0.001	<0.01
S	DX-68-23-619B	2/28/00	<0.002	0.11	<0.001	<0.001	<0.001	0.024	<0.002	<0.002	<0.002	<0.003	<0.001	<0.01
	*DX-68-23-710	6/21/00	<0.002	0.033	<0.001	0.0059	<0.002	<0.05	<0.001	<0.001	NA	<0.004	NA	<0.004
	*DX-68-23-810	6/16/00	<0.002	0.0444	<0.001	0.00308	<0.002	<0.05	<0.001	0.00108	NA	<0.004	NA	<0.004
	*DX-68-24-411	6/13/00	0.011	0.0513	<0.001	0.00419	0.00583	<0.05	<0.001	<0.001	NA	<0.004	NA	0.0318
	*DX-68-30-221	8/1/00	<0.002	0.0444	<0.001	0.00278	<0.002	<0.05	<0.001	<0.001	NA	<0.004	NA	0.0142
S	*DX-68-30-315	8/14/00	<0.002	0.05	<0.001	<0.001	0.005	0.02	<0.002	0.005	<0.002	<0.003	<0.001	0.09
Guadalupe														
S	*KX-68-31-808	5/15/00	0.005	0.06	0.026	<0.002	<0.001	0.302	<0.002	0.024	<0.002	<0.003	<0.001	0.01
Hays														
	LR-67-01-308	8/25/00	<0.002	0.06	<0.001	<0.002	<0.001	0.015	<0.002	<0.002	<0.002	<0.003	<0.001	0.04
	LR-67-01-309	8/25/00	<0.002	0.06	<0.001	<0.002	<0.001	0.74	<0.002	<0.002	<0.002	<0.003	<0.001	0.03
	LR-67-01-805	9/01/00	<0.002	0.04	<0.001	<0.002	0.005	<0.003	<0.002	<0.002	<0.002	<0.003	<0.001	0.03
S	LR-67-01-812	7/11/00	0.003	<0.01	<0.001	0.001	<0.001	0.012	<0.002	0.006	<0.002	0.016	<0.001	0.01
S	LR-67-01-813A	7/11/00	0.003	<0.01	<0.001	0.002	0.003	0.015	<0.002	0.008	<0.002	0.015	<0.001	0.04
S	LR-67-01-813B	7/11/00	<0.002	<0.01	<0.001	0.001	<0.001	0.006	<0.002	0.005	<0.002	0.015	0.002	<0.01
S	LR-67-01-814A	7/11/00	0.003	<0.01	<0.001	0.002	<0.001	0.01	<0.002	0.004	<0.002	0.013	<0.001	<0.01
S	LR-67-01-814B	7/11/00	0.003	<0.01	<0.001	0.002	<0.001	0.016	<0.002	0.004	<0.002	0.012	<0.001	<0.01
	LR-67-01-816	9/01/00		0.05	<0.001	<0.002	0.011	0.004	<0.002	<0.002	<0.002	0.004	<0.001	0.03
	*LR-67-09-113	10/16/00	<0.002	0.03	<0.002	<0.002	0.006	0.016	0.007	0.003	<0.002	<0.003	<0.001	0.09
Medina														
	*TD-68-25-703	6/7/00	<0.002	0.0293	<0.001	0.00354	0.00407	<0.05	<0.001	<0.001	NA	<0.004	NA	0.0408
	*TD-68-26-802	7/14/00	<0.002	0.0269	<0.001	0.00662	0.00657	<0.05	<0.001	<0.001	NA	<0.004	NA	0.00727
	TD-68-33-202	7/12/00	<0.002	0.03	<0.001	<0.001	0.005	0.004	0.003	<0.002	<0.002	0.006	<0.001	0.12
	*TD-68-41-102	6/6/00	<0.002	0.0478	<0.001	0.00441	0.00503	<0.05	0.00524	<0.001	NA	<0.004	NA	0.0171
	*TD-68-41-303	5/23/00	<0.002	0.0479	<0.001	<0.001	0.00403	<0.05	0.00413	<0.001	NA	<0.004	NA	0.0128
	*TD-68-41-901	6/6/00	<0.002	0.0849	<0.001	0.00433	0.00377	<0.05	0.00162	<0.001	NA	<0.004	NA	0.0112
	*TD-68-42-506	6/8/00	<0.002	0.0683	<0.001	0.00408	0.00523	<0.05	<0.001	<0.001	NA	<0.004	NA	0.0109
	*TD-68-42-806	5/30/00	<0.002	0.107	<0.001	<0.001	<0.002	0.139	<0.001	0.00932	NA	<0.004	NA	0.011
	*TD-68-49-301	6/5/00	<0.002	0.167	<0.001	0.00358	0.00703	<0.05	0.00163	<0.001	NA	<0.004	NA	0.00498
	*TD-68-49-501	5/25/00	<0.002	0.117	<0.001	<0.001	0.035	<0.05	0.0209	<0.001	NA	<0.004	NA	0.0506
	*TD-69-29-901	5/24/00	<0.002	0.0374	<0.001	<0.001	<0.002	<0.05	<0.001	<0.001	NA	<0.004	NA	0.185

Analytical data for minor element metals in water from wells completed in the Edwards Aquifer, 2000.

County	State well number	Date sampled	Arsenic, dissolved (mg/L)	Barium, dissolved (mg/L)	Cadmium, dissolved (mg/L)	Chromium, dissolved (mg/L)	Copper, dissolved (mg/L)	Iron, dissolved (mg/L)	Lead, dissolved (mg/L)	Manganese, dissolved (mg/L)	Mercury, dissolved (mg/L)	Selenium, dissolved (mg/L)	Silver, dissolved (mg/L)	Zinc, dissolved (mg/L)
Medina														
	*TD-69-37-305	5/23/00	<0.002	0.0323	<0.001	<0.001	<0.002	<0.05	<0.001	0.00316	NA	<0.004	NA	0.0242
	*TD-69-38-906	6/8/00	<0.002	0.0436	<0.001	0.00406	0.00468	<0.05	<0.001	<0.001	NA	<0.004	NA	0.00926
	*TD-69-39-601	6/7/00	<0.002	0.0314	<0.001	0.00354	0.00241	<0.05	0.0045	<0.001	NA	<0.004	NA	1.08
	TD-69-39-803	7/12/00	<0.002	0.03	<0.001	<0.001	<0.001	<0.003	<0.002	<0.002	<0.002	0.003	<0.001	0.01
	*TD-69-46-601	6/6/00	<0.002	0.0362	<0.001	0.00408	0.00513	<0.05	<0.001	<0.001	NA	<0.004	NA	0.00997
	*TD-69-47-301	5/30/00	<0.002	0.0355	<0.001	<0.001	0.00237	<0.05	0.00134	<0.001	NA	<0.004	NA	0.0375
	*TD-69-47-303	5/30/00	<0.002	0.0218	<0.001	<0.001	0.00295	<0.05	0.00345	<0.001	NA	<0.004	NA	0.00656
	*TD-69-47-307	5/30/00	<0.002	0.0388	<0.001	<0.001	<0.002	<0.05	0.00144	<0.001	NA	<0.004	NA	0.00727
S	*TD-69-63-103	5/23/00	<0.002	0.12	<0.001	<0.001	<0.002	0.441	<0.001	0.0155	NA	<0.004	NA	0.0121
Uvalde														
	*YP-69-35-401	4/20/00	<0.002	0.0421	<0.001	0.00205	0.00522	<0.05	<0.001	<0.001	NA	<0.004	NA	0.0072
	*YP-69-35-602	5/22/00	<0.002	0.039	<0.001	0.00121	<0.002	<0.05	<0.001	<0.001	NA	<0.004	NA	0.00609
	*YP-69-42-709	4/20/00	<0.002	0.0415	<0.001	0.00133	<0.002	<0.05	<0.001	<0.001	NA	<0.004	NA	<0.004
	*YP-69-43-606	4/26/00	<0.002	0.0462	<0.001	0.00217	0.00237	<0.05	<0.001	<0.001	NA	<0.004	NA	0.00543
	*YP-69-43-806	5/9/00	<0.002	0.0515	<0.001	0.00187	0.0024	<0.05	<0.001	<0.001	NA	<0.004	NA	0.0309
	*YP-69-45-405	5/9/00	<0.002	0.036	<0.001	0.00187	<0.002	<0.05	<0.001	<0.001	NA	<0.004	NA	0.01
	*YP-69-45-406	5/1/00	<0.002	0.0358	<0.001	0.00278	<0.002	<0.05	0.00124	<0.001	NA	<0.004	NA	0.00433
	*YP-69-50-203	4/18/00	<0.002	0.0465	<0.001	0.0019	0.0136	<0.05	0.00231	<0.001	NA	<0.004	NA	0.00959
	*YP-69-50-207	4/18/00	<0.002	0.0358	<0.001	0.00142	0.00431	<0.05	0.00121	<0.001	NA	<0.004	NA	0.0146
	*YP-69-50-501	4/25/00	<0.002	0.0868	<0.001	0.00207	<0.002	<0.05	0.00127	<0.001	NA	<0.004	NA	0.011
	*YP-69-50-506	4/18/00	<0.002	0.0594	<0.001	0.00175	0.0166	<0.05	0.00273	<0.001	NA	<0.004	NA	0.0184
	*YP-69-51-114	5/9/00	<0.002	0.102	<0.001	0.00308	0.0157	<0.05	0.00262	<0.001	NA	<0.004	NA	0.0294
	*YP-69-51-120	5/1/00	<0.002	0.0891	<0.001	0.00361	<0.002	<0.05	<0.001	<0.001	NA	<0.004	NA	0.0114

Analytical data for minor element metals in water from wells completed in the Edwards Aquifer, 2000.

County	State well number	Date sampled	Aluminum, dissolved (mg/L)	Antimony, dissolved (mg/L)	Beryllium, dissolved (mg/L)	Boron, dissolved (mg/L)	Bromide, dissolved (mg/L)	Cobalt, dissolved (mg/L)	Lithium, dissolved (mg/L)	Molybdenum, dissolved (mg/L)	Nickel, dissolved (mg/L)	Strontium, dissolved (mg/L)	Thallium, dissolved (mg/L)	Vanadium, dissolved (mg/L)
Bexar														
	AY-68-21-806	12/19/00	<0.04	NA	NA	NA	NA	NA	NA	NA	NA	0.039	NA	NA
	AY-68-28-313	9/26/00	<0.04	NA	NA	NA	NA	NA	NA	NA	NA	0.096	NA	NA
	AY-68-28-315	12/15/00	0.21	NA	NA	NA	NA	NA	NA	NA	NA	0.065	NA	NA
	AY-68-28-516	12/20/00	<0.04	NA	NA	NA	NA	NA	NA	NA	NA	0.137	NA	NA
	AY-68-28-517	10/24/00	<0.04	NA	NA	NA	NA	NA	NA	NA	NA	0.13	NA	NA
	AY-68-29-112	10/3/00	<0.04	NA	NA	NA	NA	NA	NA	NA	NA	0.136	NA	NA
	AY-68-29-113	12/7/00	0.06	NA	NA	NA	NA	NA	NA	NA	NA	0.152	NA	NA
	AY-68-29-214	10/18/00	0.05	NA	NA	NA	NA	NA	NA	NA	NA	0.132	NA	NA
	AY-68-29-216	10/26/00	<0.04	NA	NA	NA	NA	NA	NA	NA	NA	0.1	NA	NA
	AY-68-29-217	12/5/00	<0.04	NA	NA	NA	NA	NA	NA	NA	NA	0.143	NA	NA
S	AY-68-37-521	9/13/00	<0.04	NA	NA	NA	NA	NA	NA	NA	NA	13.28	NA	NA
S	AY-68-37-522	9/13/00	<0.04	NA	NA	NA	NA	NA	NA	NA	NA	10.39	NA	NA
S	AY-68-37-523	9/13/00	<0.04	NA	NA	NA	NA	NA	NA	NA	NA	12.55	NA	NA
S	AY-68-37-524	9/13/00	<0.04	NA	NA	NA	NA	NA	NA	NA	NA	2.67	NA	NA
S	AY-68-37-525	9/13/00	<0.04	NA	NA	NA	NA	NA	NA	NA	NA	13.9	NA	NA
S	AY-68-37-526	9/13/00	<0.04	NA	NA	NA	NA	NA	NA	NA	NA	5.43	NA	NA
S	AY-68-37-527	9/13/00	<0.04	NA	NA	NA	NA	NA	NA	NA	NA	1.6	NA	NA
Comal	DX-68-15-807	6/21/00	<0.004	<0.001	<0.001	<0.05	0.05	<0.001	<0.002	<0.001	<0.001	0.102	<0.001	0.00318
	DX-68-15-907	6/27/00	<0.004	<0.001	<0.001	<0.05	0.08	<0.001	0.00382	<0.001	0.00208	0.337	<0.001	0.0032
	DX-68-16-707	6/21/00	<0.004	<0.001	<0.001	<0.05	0.08	<0.001	0.00324	<0.001	0.00134	0.428	<0.001	0.00322
	DX-68-22-811	8/1/00	<0.004	<0.001	<0.001	0.0804	0.05	<0.001	<0.002	<0.001	0.00204	0.164	<0.001	0.00384
	DX-68-22-901	6/16/00	<0.004	<0.001	<0.001	<0.05	0.07	<0.001	0.00259	<0.001	0.00108	0.175	<0.001	0.00374
	DX-68-22-902	6/16/00	<0.004	<0.001	<0.001	<0.05	0.08	<0.001	0.00249	<0.001	0.00115	0.159	<0.001	0.00346
	DX-68-23-105	6/29/00	<0.004	<0.001	<0.001	<0.05	0.05	<0.001	0.00282	<0.001	0.00123	0.162	<0.001	0.00374
	DX-68-23-316	6/26/00	<0.004	<0.001	<0.001	<0.05	0.05	<0.001	0.0025	<0.001	0.00141	0.204	<0.001	0.00374
	DX-68-23-504	6/14/00	<0.004	<0.001	<0.001	0.0785	0.14	<0.001	0.00602	<0.001	0.00379	0.51	<0.001	0.00365
	DX-68-23-601	6/13/00	<0.004	<0.001	<0.001	0.0875	0.09	<0.001	0.0059	<0.001	0.00189	0.535	<0.001	0.00401
	DX-68-23-602	4/7/00	<0.004	<0.001	<0.001	0.0762	0.11	<0.001	0.00339	<0.001	0.00269	0.432	<0.001	0.00267
S	DX-68-23-616A	2/28/00	0.05	NA	NA	NA	NA	NA	NA	NA	NA	12.45	NA	NA
S	DX-68-23-616A	6/22/00	<0.004	NA	NA	NA	NA	NA	NA	NA	NA	12.3	NA	NA
S	DX-68-23-616B	2/28/00	0.08	NA	NA	NA	NA	NA	NA	NA	NA	34.38	NA	NA
S	DX-68-23-616B	6/22/00	<0.004	NA	NA	NA	NA	NA	NA	NA	NA	34.74	NA	NA
S	*DX-68-23-616B	6/22/00	<0.004	<0.001	<0.001	0.345	0.9	<0.001	0.205	<0.001	0.0012	35.6	<0.001	0.00139
S	DX-68-23-617	2/28/00	0.11	NA	NA	NA	NA	NA	NA	NA	NA	16.33	NA	NA

*Data provided by TWDB, or SAWS
S = Freshwater/Saline water Transect monitoring well

NA = not analyzed

Analytical data for minor element metals in water from wells completed in the Edwards Aquifer, 2000.

County	State well number	Date sampled	Aluminum, dissolved (mg/L)	Antimony, dissolved (mg/L)	Beryllium, dissolved (mg/L)	Boron, dissolved (mg/L)	Bromide, dissolved (mg/L)	Cobalt, dissolved (mg/L)	Lithium, dissolved (mg/L)	Molybdenum, dissolved (mg/L)	Nickel, dissolved (mg/L)	Strontium, dissolved (mg/L)	Thallium, dissolved (mg/L)	Vanadium, dissolved (mg/L)
Comal														
S	DX-68-23-618	2/28/00	0.06	NA	NA	NA	NA	NA	NA	NA	NA	2.51	NA	NA
S	*DX-68-23-618	6/22/00	<0.004	<0.001	<0.001	0.103	0.18	<0.001	0.0315	<0.001	<0.001	2.68	<0.001	<0.001
S	DX-68-23-619A	2/28/00	0.05	NA	NA	NA	NA	NA	NA	NA	NA	3	NA	NA
S	DX-68-23-619A	6/22/00	<0.04	NA	NA	NA	NA	NA	NA	NA	NA	2.875	NA	NA
S	DX-68-23-619B	2/28/00	0.05	NA	NA	NA	NA	NA	NA	NA	NA	16.71	NA	NA
S	DX-68-23-619B	6/22/00	<0.004	NA	NA	NA	NA	NA	NA	NA	NA	16.82	NA	NA
S	*DX-68-23-619B	6/22/00	<0.004	<0.001	<0.001	0.0701	0.07	<0.001	0.0151	0.00937	0.00139	16.7	<0.001	0.002
	DX-68-23-710	6/21/00	<0.004	<0.001	<0.001	<0.05	0.07	<0.001	<0.002	<0.001	0.00153	0.124	<0.001	0.00363
	DX-68-23-810	6/16/00	<0.004	<0.001	<0.001	0.103	0.12	<0.001	0.0229	<0.001	<0.001	1.29	<0.001	<0.001
	DX-68-23-810	8/11/00	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	DX-68-24-411	6/13/00	0.0178	<0.001	<0.001	0.0754	0.02	<0.001	0.00616	<0.001	0.0018	0.02	<0.001	0.00376
S	DX-68-30-315	8/14/00	<0.04	NA	NA	NA	NA	NA	NA	NA	NA	0.66	NA	NA
Guadalupe														
S	KX-68-31-808	5/15/00	<0.04	NA	NA	NA	NA	NA	NA	NA	NA	22.09	NA	NA
Hays														
	LR-67-01-308	8/25/00	<0.04	NA	NA	NA	NA	NA	NA	NA	NA	39.49	NA	NA
	LR-67-01-309	8/25/00	<0.04	NA	NA	NA	NA	NA	NA	NA	NA	41.57	NA	NA
	LR-67-01-805	9/1/00	<0.04	NA	NA	NA	NA	NA	NA	NA	NA	0.509	NA	NA
S	LR-67-01-812	7/11/00	<0.04	NA	NA	NA	NA	NA	NA	NA	NA	18.46	NA	NA
S	LR-67-01-813A	7/11/00	<0.04	NA	NA	NA	NA	NA	NA	NA	NA	18.94	NA	NA
S	LR-67-01-813B	7/11/00	<0.04	NA	NA	NA	NA	NA	NA	NA	NA	19.14	NA	NA
S	LR-67-01-814A	7/11/00	<0.04	NA	NA	NA	NA	NA	NA	NA	NA	18.84	NA	NA
S	LR-67-01-814B	7/11/00	<0.04	NA	NA	NA	NA	NA	NA	NA	NA	18.8	NA	NA
	LR-67-01-816	9/1/00	<0.04	NA	NA	NA	NA	NA	NA	NA	NA	0.541	NA	NA
	LR67-09-113	10/16/00	<0.04	NA	NA	NA	NA	NA	NA	NA	NA	0.68	NA	NA
Medina														
	TD-68-25-703	6/7/00	<0.004	<0.001	<0.001	0.0619	0.11	<0.001	<0.002	0.00103	0.00251	0.291	<0.001	0.00325
	TD-68-26-802	7/14/00	<0.004	<0.001	<0.001	0.0524	0.06	<0.001	0.00376	<0.001	0.00137	0.514	<0.001	0.0027
	TD-68-30-221	8/1/00	<0.004	<0.001	<0.001	0.0854	0.11	<0.001	0.00414	<0.001	0.00236	0.21	<0.001	0.00365
	TD-68-33-202	7/12/00	<0.004	NA	NA	NA	NA	NA	NA	NA	NA	0.422	NA	NA
	TD-68-41-102	6/6/00	<0.004	<0.001	<0.001	0.072	0.08	<0.001	0.00351	<0.001	0.00166	0.63	<0.001	0.00446

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NA = not anayzed

Analytical data for minor element metals in water from wells completed in the Edwards Aquifer, 2000.

County	State well number	Date sampled	Aluminum, dissolved (mg/L)	Antimony, dissolved (mg/L)	Beryllium, dissolved (mg/L)	Boron, dissolved (mg/L)	Bromide, dissolved (mg/L)	Cobalt, dissolved (mg/L)	Lithium, dissolved (mg/L)	Molybdenum, dissolved (mg/L)	Nickel, dissolved (mg/L)	Strontium, dissolved (mg/L)	Thallium, dissolved (mg/L)	Vanadium, dissolved (mg/L)
Medina														
	TD-68-41-303	5/23/00	<0.004	<0.001	<0.001	0.0596	0.09	<0.001	0.00654	<0.001	0.00222	0.542	<0.001	0.00382
	TD-68-41-901	6/6/00	<0.004	<0.001	<0.001	0.0674	0.1	<0.001	0.00362	<0.001	0.00152	1.52	<0.001	0.0052
	TD-68-42-506	6/8/00	<0.004	<0.001	<0.001	0.0569	0.12	<0.001	0.00361	<0.001	0.00159	1.25	<0.001	0.00493
	TD-68-42-806	5/30/00	<0.004	0.00118	<0.001	<0.05	0.05	<0.001	0.00935	0.00796	0.00243	23.5	<0.001	<0.001
	TD-68-49-301	6/5/00	<0.004	<0.001	<0.001	0.0586	0.07	<0.001	0.00453	0.00819	0.00163	7.01	<0.001	0.00935
	TD-68-49-501	5/25/00	<0.004	<0.001	<0.001	0.0505	0.05	<0.001	0.00761	<0.001	0.00266	2.45	<0.001	0.00405
	TD-69-29-901	5/24/00	<0.004	<0.001	<0.001	<0.05	0.07	<0.001	0.00363	<0.001	0.00278	0.234	<0.001	0.00197
	TD-69-37-305	5/23/00	<0.004	<0.001	<0.001	<0.05	0.05	<0.001	0.00527	<0.001	0.00213	0.195	<0.001	0.00308
	TD-69-38-906	6/8/00	<0.004	<0.001	<0.001	0.0577	0.07	<0.001	0.00365	<0.001	0.0019	0.269	<0.001	0.00428
	TD-69-39-601	6/7/00	<0.004	<0.001	<0.001	<0.05	0.05	<0.001	0.00206	<0.001	0.00301	0.218	<0.001	0.00307
	TD-69-39-803	7/12/00	<0.004	NA	NA	NA	NA	NA	NA	NA	NA	0.234	NA	NA
S	TD-69-63-103	5/23/00	<0.004	<0.001	<0.001	0.0828	0.08	<0.001	0.0156	0.0046	0.00258	21.7	<0.001	<0.001
Uvalde														
	YP-69-35-401	4/20/00	<0.004	<0.001	<0.001	<0.05	0.09	<0.001	0.00577	<0.001	0.00199	0.255	<0.001	0.00303
	YP-69-35-602	5/22/00	<0.004	<0.001	<0.001	0.0806	0.08	<0.001	0.0049	<0.001	0.00292	0.539	<0.001	0.0033
	YP-69-42-709	4/20/00	<0.004	<0.001	<0.001	0.0721	0.1	<0.001	0.00655	<0.001	0.00206	0.22	<0.001	0.00383
	YP-69-43-606	4/26/00	<0.004	<0.001	<0.001	0.0559	0.15	<0.001	0.00654	<0.001	0.00199	0.396	<0.001	0.00348
	YP-69-43-806	5/9/00	<0.004	<0.001	<0.001	0.064	0.14	<0.001	0.00548	<0.001	0.0012	0.281	<0.001	0.00644
	YP-69-45-405	5/9/00	<0.004	<0.001	<0.001	<0.05	0.08	<0.001	0.00524	<0.001	0.00285	0.349	<0.001	0.00401
	YP-69-45-406	5/1/00	<0.004	<0.001	<0.001	0.147	0.1	<0.001	0.0227	<0.001	0.00204	0.808	<0.001	0.00221
	YP-69-46-601	6/6/00	<0.004	<0.001	<0.001	0.0748	0.06	<0.001	0.00289	<0.001	0.00157	0.33	<0.001	0.00391
	YP-69-47-301	5/30/00	<0.004	<0.001	<0.001	<0.05	0.07	<0.001	0.00447	<0.001	0.00212	0.321	<0.001	0.00307
	YP-69-47-303	5/30/00	<0.004	<0.001	<0.001	<0.05	0.07	<0.001	0.00204	<0.001	0.00103	0.386	<0.001	0.00178
	YP-69-47-307	5/30/00	<0.004	<0.001	<0.001	0.0769	0.08	<0.001	0.00532	<0.001	0.002	0.315	<0.001	0.00311
	YP-69-50-203	4/18/00	<0.004	<0.001	<0.001	0.0793	0.02	<0.001	0.0065	<0.001	0.0023	0.258	<0.001	0.00479
	YP-69-50-207	4/18/00	<0.004	<0.001	<0.001	0.0652	0.17	<0.001	0.0063	<0.001	0.00168	0.226	<0.001	0.00357
	YP-69-50-501	4/25/00	<0.004	<0.001	<0.001	0.195	0.49	<0.001	0.0105	0.00114	0.00383	0.67	<0.001	0.00561
	YP-69-50-506	4/18/00	<0.004	<0.001	<0.001	0.0854	0.02	<0.001	0.00719	<0.001	0.00266	0.363	<0.001	0.0052
	YP-69-51-114	5/9/00	<0.004	<0.001	<0.001	0.135	0.4	<0.001	0.0113	0.00185	0.00234	3.27	<0.001	0.00906
	YP-69-51-120	5/1/00	<0.004	<0.001	<0.001	0.16	1.1	<0.001	0.0103	0.00424	0.0049	3.47	<0.001	0.0052

*Data provided by TWDB, or SAWS
S = Freshwater/Saline water Transect monitoring well

NA = not analyzed

Analytical data for nutrients in water from wells completed in the Edwards Aquifer, 2000.

County	Station name	Date sampled	Nitrogen, Kjeldahl (mg/L)	Nitrogen, nitrate (mg/L)	Nitrogen, nitrite (mg/L)	Phosphorus, total (mg/L)
Bexar						
	AY-68-21-806	12/19/00	NA	1.67	NA	NA
	AY-68-28-313	09/26/00	NA	3.9	NA	NA
	AY-68-28-315	12/15/00	NA	1.98	NA	NA
	AY-68-28-516	12/20/00	NA	1.3	NA	NA
	AY-68-28-517	10/24/00	NA	1.91	NA	NA
	AY-68-29-112	10/03/00	NA	1.24	NA	NA
	AY-68-29-113	12/07/00	NA	2.04	NA	NA
	AY-68-29-214	10/18/00	NA	1.62	NA	NA
	AY-68-29-216	10/26/00	NA	1.68	NA	NA
	AY-68-29-217	12/05/00	NA	1.67	NA	NA
Comal						
	*DX-68-15-807	6/21/00	NA	2.64	NA	NA
	*DX-68-15-907	6/27/00	NA	0.59	NA	NA
	*DX-68-16-707	6/21/00	NA	1.66	NA	NA
	*DX-68-22-811	8/1/00	NA	2.03	NA	NA
	*DX-68-22-901	6/16/00	NA	1.69	NA	NA
	*DX-68-22-902	6/16/00	NA	1.62	NA	NA
	*DX-68-23-105	6/29/00	NA	1.47	NA	NA
	*DX-68-23-316	6/26/00	NA	1.71	NA	NA
	*DX-68-23-504	6/14/00	NA	1.98	NA	NA
	*DX-68-23-601	6/13/00	NA	2.06	NA	NA
	*DX-68-23-602	4/7/00	NA	1.93	NA	NA
	*DX-68-23-710	6/21/00	NA	1.93	NA	NA
	*DX-68-23-810	6/16/00	NA	0.02	NA	NA
	*DX-68-24-411	6/13/00	NA	1.91	NA	NA
	*DX-68-30-221	8/1/00	NA	5.34	NA	NA
S	*DX-68-30-315	08/14/00	<0.25	1.59	0.02	0.10
Guadalupe						
S	*KX-68-31-808	05/15/00	1.95	0.5	0.018	0.01
Hays						
	*LR-67-09-113	10/16/00	<0.1	1	NA	<0.01
Medina						
	*TD-68-25-703	6/7/00	NA	0.41	NA	NA
	*TD-68-26-802	7/14/00	NA	1.29	NA	NA
	*TD-68-41-102	6/6/00	NA	2.29	NA	NA
	*TD-68-41-303	5/23/00	NA	2.34	NA	NA
	*TD-68-41-901	6/6/00	NA	2.26	NA	NA
	*TD-68-42-506	6/8/00	NA	2.40	NA	NA
	*TD-68-42-806	5/30/00	NA	0.02	NA	NA
	*TD-68-49-301	6/5/00	NA	1.35	NA	NA
	*TD-68-49-501	5/25/00	NA	2.36	NA	NA
	*TD-69-29-901	5/24/00	NA	1.30	NA	NA
	*TD-69-37-305	5/23/00	NA	1.20	NA	NA
	*TD-69-38-906	6/8/00	NA	3.65	NA	NA
	*TD-69-39-601	6/7/00	NA	1.60	NA	NA
	*TD-69-46-601	6/6/00	NA	1.66	NA	NA
	*TD-69-47-301	5/30/00	NA	1.66	NA	NA
	*TD-69-47-303	5/30/00	NA	1.72	NA	NA
	*TD-69-47-307	5/30/00	NA	1.65	NA	NA
S	*TD-69-63-103	5/23/00	NA	0.02	NA	NA
Uvalde						
	*YP-69-35-401	4/20/00	NA	3.52	NA	NA
	*YP-69-35-602	5/22/00	NA	2.04	NA	NA

*Data provided by TWDB, or SAWS

NA = not analyzed

S = Freshwater/Saline water Transect monitoring well

Analytical data for nutrients in water from wells completed in the Edwards Aquifer, 2000.

County	Station name	Date sampled	Nitrogen, Kjeldahl (mg/L)	Nitrogen, nitrate (mg/L)	Nitrogen, nitrite (mg/L)	Phosphorus, total (mg/L)
Uvald						
	*YP-69-42-709	4/20/00	NA	2.93	NA	NA
	*YP-69-43-606	4/26/00	NA	3.51	NA	NA
	*YP-69-43-806	5/9/00	NA	3.61	NA	NA
	*YP-69-45-405	5/9/00	NA	1.71	NA	NA
	*YP-69-45-406	5/1/00	NA	1.84	NA	NA
	*YP-69-50-203	4/18/00	NA	3.48	NA	NA
	*YP-69-50-207	4/18/00	NA	3.10	NA	NA
	*YP-69-50-501	4/25/00	NA	7.47	NA	NA
	*YP-69-50-506	4/18/00	NA	4.43	NA	NA
	*YP-69-51-114	5/9/00	NA	6.32	NA	NA
	*YP-69-51-120	5/1/00	NA	9.92	NA	NA

*Data provided by TWDB, or SAWS
S = Freshwater/Saline water Transect monitoring well

NA = not analyzed

Analytical data for pesticides and herbicides in water from wells completed in the Edwards Aquifer, 2000.

County	State Well Number	Date Sampled	Aldrin (µg/L)	Gamma BHC (Lindane) (µg/L)	Chlordane (µg/L)	DDD (µg/L)	DDE (µg/L)	DDT (µg/L)	Dieldrin (µg/L)	Endosulfan I, Alpha (µg/L)	Endosulfan II, Beta (µg/L)	Endrin (µg/L)
Bexar												
	AY-68-21-806	12/19/00	<0.0002	<0.0005	<0.05	<0.001	<0.001	<0.001	<0.0002	<0.001	<0.001	<0.0005
	AY-68-28-313	9/26/00	<0.0002	<0.0005	<0.05	<0.001	<0.001	<0.001	<0.0002	<0.001	<0.001	<0.0005
	AY-68-28-315	12/15/00	<0.0002	<0.0005	<0.05	<0.001	<0.001	<0.001	<0.0002	<0.001	<0.001	<0.0005
	AY-68-28-516	12/20/00	<0.0002	<0.0005	<0.05	<0.001	<0.001	<0.001	<0.0002	<0.001	<0.001	<0.0005
	AY-68-28-517	10/24/00	<0.0002	<0.0005	<0.05	<0.001	<0.001	<0.001	<0.0002	<0.001	<0.001	<0.0005
	AY-68-29-112	10/3/00	<0.0002	<0.0005	<0.05	<0.001	<0.001	<0.001	<0.0002	<0.001	<0.001	<0.0005
	AY-68-29-113	12/7/00	<0.0002	<0.0005	<0.05	<0.001	<0.001	<0.001	<0.0002	<0.001	<0.001	<0.0005
	AY-68-29-214	10/18/00	<0.0002	<0.0005	<0.05	<0.001	<0.001	<0.001	<0.0002	<0.001	<0.001	<0.0005
	AY-68-29-216	10/26/00	<0.0002	<0.0005	<0.05	<0.001	<0.001	<0.001	<0.0002	<0.001	<0.001	<0.0005
	AY-68-29-217	12/5/00	<0.0002	<0.0005	<0.05	<0.001	<0.001	<0.001	<0.0002	<0.001	<0.001	<0.0005
Comal												
	DX-68-30-221	8/1/00	<0.002	<0.0005	<0.05	<0.001	<0.001	<0.001	<0.0002	<0.001	<0.001	<0.0005
Medina												
	TD-68-26-802	7/14/00	<0.002	<0.0005	<0.05	<0.001	<0.001	<0.001	<0.0002	<0.001	<0.001	<0.0005
	TD-68-33-202	7/12/00	<0.002	<0.0005	<0.05	<0.001	<0.001	<0.001	<0.0002	<0.001	<0.001	<0.0005
	TD-69-39-803	7/12/00	<0.002	<0.0005	<0.05	<0.001	<0.001	<0.001	<0.0002	<0.001	<0.001	<0.0005

County	State Well Number	Date Sampled	Heptachlor µg/L)	Heptachlor Epoxide (µg/L)	Mirex (µg/L)	Perthane (µg/L)	Toxa-phene (µg/L)	PCB-Total (µg/L)	Diaz inon (µg/L)	Ethion (µg/L)	Malathion µg/L)	Methyl Parathion (µg/L)
Bexar												
	AY-68-21-806	12/19/00	<0.0005	<0.005	<0.005	<0.01	<0.2	<0.5	<0.005	<0.01	<0.005	<0.05
	AY-68-28-313	9/26/00	<0.0005	<0.005	<0.005	<0.01	<0.2	<0.5	<0.005	<0.01	<0.005	<0.05
	AY-68-28-315	12/15/00	<0.0005	<0.005	<0.005	<0.01	<0.2	<0.5	<0.005	<0.01	<0.005	<0.05
	AY-68-28-516	12/20/00	<0.0005	<0.005	<0.005	<0.01	<0.2	<0.5	<0.005	<0.01	<0.005	<0.05
	AY-68-28-517	10/24/00	<0.0005	<0.005	<0.005	<0.01	<0.2	<0.5	<0.005	<0.01	<0.005	<0.05
	AY-68-29-112	10/3/00	<0.0005	<0.005	<0.005	<0.01	<0.2	<0.5	<0.005	<0.01	<0.005	<0.05
	AY-68-29-113	12/7/00	<0.0005	<0.005	<0.005	<0.01	<0.2	<0.5	<0.005	<0.01	<0.005	<0.05
	AY-68-29-214	10/18/00	<0.0005	<0.005	<0.005	<0.01	<0.2	<0.5	<0.005	<0.01	<0.005	<0.05
	AY-68-29-216	10/26/00	<0.0005	<0.005	<0.005	<0.01	<0.2	<0.5	<0.005	<0.01	<0.005	<0.05
	AY-68-29-217	12/5/00	<0.0005	<0.005	<0.005	<0.01	<0.2	<0.5	<0.005	<0.01	<0.005	<0.05
Comal												
	DX-68-30-221	8/1/00	<0.0005	<0.005	<0.005	<0.01	<0.2	<0.5	<0.005	<0.01	<0.005	<0.05
Medina												
	TD-68-26-802	7/14/00	<0.0005	<0.005	<0.005	<0.01	<0.2	<0.5	<0.005	<0.01	<0.005	<0.05
	TD-68-33-202	7/12/00	<0.0005	<0.005	<0.005	<0.01	<0.2	<0.5	<0.005	<0.01	<0.005	<0.05
	TD-69-39-803	7/12/00	<0.0005	<0.005	<0.005	<0.01	<0.2	<0.5	<0.005	<0.01	<0.005	<0.05

NA = not analyzed

Analytical data for pesticides and herbicides in water from wells completed in the Edwards Aquifer, 2000.

County	State Well Number	Date Sampled	Parathion (µg/L)	Trithion (µg/L)	2,4-D (µg/L)	2,4,5-T (µg/L)	2,4,5-TP (Silvex) (µg/L)	Atraz ine (µg/L)	Hexachloro-benz ene (µg/L)	Hexachloro-cyclopentadiene (µg/L)	Methoxychlor (µg/L)
Bexar											
	AY-68-21-806	12/19/00	<0.01	<0.002	<0.001	<0.002	<0.001	<0.001	<0.005	<0.005	<0.05
	AY-68-28-313	9/26/00	<0.01	<0.002	<0.001	<0.002	<0.001	<0.001	<0.005	<0.005	<0.05
	AY-68-28-315	12/15/00	<0.01	<0.002	<0.001	<0.002	<0.001	<0.001	<0.005	<0.005	<0.05
	AY-68-28-516	12/20/00	<0.01	<0.002	<0.001	<0.002	<0.001	<0.001	<0.005	<0.005	<0.05
	AY-68-28-517	10/24/00	<0.01	<0.002	<0.001	<0.002	<0.001	<0.001	<0.005	<0.005	<0.05
	AY-68-29-112	10/3/00	<0.01	<0.002	<0.001	<0.002	<0.001	<0.001	<0.005	<0.005	<0.05
	AY-68-29-113	12/7/00	<0.01	<0.002	<0.001	<0.002	<0.001	<0.001	<0.005	<0.005	<0.05
	AY-68-29-214	10/18/00	<0.01	<0.002	<0.001	<0.002	<0.001	<0.001	<0.005	<0.005	<0.05
	AY-68-29-216	10/26/00	<0.01	<0.002	<0.001	<0.002	<0.001	<0.001	<0.005	<0.005	<0.05
	AY-68-29-217	12/5/00	<0.01	<0.002	<0.001	<0.002	<0.001	<0.001	<0.005	<0.005	<0.05
Comal											
	DX-68-30-221	8/1/00	<0.01	<0.002	<0.001	<0.002	<0.001	<0.001	<0.005	<0.005	<0.05
Medina											
	TD-68-26-802	7/14/00	<0.01	<0.002	<0.001	<0.002	<0.001	<0.001	<0.005	<0.005	<0.05
	TD-68-33-202	7/12/00	<0.01	<0.002	<0.001	<0.002	<0.001	<0.001	<0.005	<0.005	<0.05
	TD-69-39-803	7/12/00	<0.01	<0.002	<0.001	<0.002	<0.001	<0.001	<0.005	<0.005	<0.05

County	State Well Number	Date Sampled	Penta-chlorophenol (µg/L)	Pichloram (µg/L)	Polychlorinated Napthalenes (µg/L)	Simaz ine (µg/L)	Alachlor (µg/L)	Aldicarb (µg/L)	Aldicarb Sulfoxide (µg/L)	Carbofuran (µg/L)
Bexar										
	AY-68-21-806	12/19/00	<0.05	<0.01	<0.01	<0.01	<0.005	<0.05	<0.02	<0.01
	AY-68-28-313	9/26/00	<0.05	<0.01	<0.01	<0.01	<0.005	<0.05	<0.02	<0.01
	AY-68-28-315	12/15/00	<0.05	<0.01	<0.01	<0.01	<0.005	<0.05	<0.02	<0.01
	AY-68-28-516	12/20/00	<0.05	<0.01	<0.01	<0.01	<0.005	<0.05	<0.02	<0.01
	AY-68-28-517	10/24/00	<0.05	<0.01	<0.01	<0.01	<0.005	<0.05	<0.02	<0.01
	AY-68-29-112	10/3/00	<0.05	<0.01	<0.01	<0.01	<0.005	<0.05	<0.02	<0.01
	AY-68-29-113	12/7/00	<0.05	<0.01	<0.01	<0.01	<0.005	<0.05	<0.02	<0.01
	AY-68-29-214	10/18/00	<0.05	<0.01	<0.01	<0.01	<0.005	<0.05	<0.02	<0.01
	AY-68-29-216	10/26/00	<0.05	<0.01	<0.01	<0.01	<0.005	<0.05	<0.02	<0.01
	AY-68-29-217	12/5/00	<0.05	<0.01	<0.01	<0.01	<0.005	<0.05	<0.02	<0.01
Comal										
	DX-68-30-221	8/1/00	<0.05	<0.01	<0.01	<0.01	<0.005	<0.05	<0.02	<0.01
Medina										
	TD-68-26-802	7/14/00	<0.05	<0.01	<0.01	<0.01	<0.005	<0.05	<0.02	<0.01
	TD-68-33-202	7/12/00	<0.05	<0.01	<0.01	<0.01	<0.005	<0.05	<0.02	<0.01
	TD-69-39-803	7/12/00	<0.05	<0.01	<0.01	<0.005	<0.05	<0.02	<0.01	<0.01

NA = not analyzed

Analytical data for pesticides and herbicides in water from wells completed in the Edwards Aquifer, 2000.

County	State Well Number	Date Sampled	Alachlor (µg/L)	Aldicarb (µg/L)	Aldicarb Sulfoxide (µg/L)	Carbofuran (µg/L)	Dalapon (µg/L)	Dinoseb (µg/L)	Oxymyl (µg/L)
Bexar									
	AY-68-21-806	12/19/00	<0.005	<0.05	<0.02	<0.01	<0.05	<0.05	<0.01
	AY-68-28-313	9/26/00	<0.005	<0.05	<0.02	<0.01	<0.05	<0.05	<0.01
	AY-68-28-315	12/15/00	<0.005	<0.05	<0.02	<0.01	<0.05	<0.05	<0.01
	AY-68-28-516	12/20/00	<0.005	<0.05	<0.02	<0.01	<0.05	<0.05	<0.01
	AY-68-28-517	10/24/00	<0.005	<0.05	<0.02	<0.01	<0.05	<0.05	<0.01
	AY-68-29-112	10/3/00	<0.005	<0.05	<0.02	<0.01	<0.05	<0.05	<0.01
	AY-68-29-113	12/7/00	<0.005	<0.05	<0.02	<0.01	<0.05	<0.05	<0.01
	AY-68-29-214	10/18/00	<0.005	<0.05	<0.02	<0.01	<0.05	<0.05	<0.01
	AY-68-29-216	10/26/00	<0.005	<0.05	<0.02	<0.01	<0.05	<0.05	<0.01
	AY-68-29-217	12/5/00	<0.005	<0.05	<0.02	<0.01	<0.05	<0.05	<0.01
Comal									
	DX-68-30-221	8/1/00	<0.005	<0.05	<0.02	<0.01	<0.05	<0.05	<0.01
Medina									
	TD-68-26-802	7/14/00	<0.005	<0.05	<0.02	<0.01	<0.05	<0.05	<0.01
	TD-68-33-202	7/12/00	<0.005	<0.05	<0.02	<0.01	<0.05	<0.05	<0.01
	TD-69-39-803	7/12/00	<0.005	<0.05	<0.02	<0.01	<0.05	<0.05	<0.01

NA = not analyzed

Analytical data for volatile organic compound in water from wells completed in the Edwards Aquifer, 2000.

State Well Number	Date Sampled	Acetone (µg/L)	Acrolein (µg/L)	Acrylonitrile (µg/L)	Benz ene (µg/L)	Bromodichloromethane (µg/L)	Bromoform (µg/L)
AY-68-21-806	12/19/00	<20	NA	NA	<1	<1	<2
AY-68-28-313	9/26/00	<20	NA	NA	<1	<1	<2
AY-68-28-315	12/15/00	<20	NA	NA	<1	<1	<2
AY-68-28-516	12/20/00	<20	NA	NA	<1	<1	<2
AY-68-28-517	10/24/00	<20	NA	NA	<1	<1	<2
AY-68-29-112	10/3/00	<20	NA	NA	<1	<1	<2
AY-68-29-113	12/7/00	<20	NA	NA	<1	<1	<2
AY-68-29-214	10/18/00	<20	NA	NA	<1	<1	<2
AY-68-29-216	10/26/00	<20	NA	NA	<1	<1	<2
AY-68-29-217	12/5/00	<20	NA	NA	<1	<1	<2
DX-68-23-810	8/11/00	<20	NA	NA	<1	<1	<2
DX-68-30-221	8/1/00	<20	<20	<20	<1	<1	<2
LR-67-01-308	8/25/00	<20	NA	NA	<1	<1	<2
TD-68-26-802	7/14/00	<20	<20	<20	<1	<1	<2
YP-69-51-114	5/9/00	<20	<20	<20	<1	<1	<2

State Well Number	Date Sampled	Carbon tetrachloride (µg/L)	Chlorobenz ene (µg/L)	Chloroethane (µg/L)	Chloroform (µg/L)	Chloromethane (µg/L)	Dibromo-chloromethane (µg/L)
AY-68-21-806	12/19/00	<1	<1	<2	<1	<2	<1
AY-68-28-313	9/26/00	<1	<1	<2	<1	<2	<1
AY-68-28-315	12/15/00	<1	<1	<2	<1	<2	<1
AY-68-28-516	12/20/00	<1	<1	<2	<1	<2	<1
AY-68-28-517	10/24/00	<1	<1	<2	<1	<2	<1
AY-68-29-112	10/3/00	<1	<1	<2	<1	<2	<1
AY-68-29-113	12/7/00	<1	<1	<2	<1	<2	<1
AY-68-29-214	10/18/00	<1	<1	<2	<1	<2	<1
AY-68-29-216	10/26/00	<1	<1	<2	<1	<2	<1
AY-68-29-217	12/5/00	<1	<1	<2	<1	<2	<1
DX-68-23-810	8/11/00	<1	<1	<2	<1	<2	<1
DX-68-30-221	8/1/00	<1	<1	<2	<1	<2	<1
LR-67-01-308	8/25/00	<1	<1	<2	<1	<2	<1
TD-68-26-802	7/14/00	<1	<1	<2	<1	<2	<1
YP-69-51-114	5/9/00	<1	<1	<2	<1	<2	<1

NA = not analyzed

Analytical data for volatile organic compound in water from wells completed in the Edwards Aquifer, 2000.

State Well Number	Date Sampled	1,3-Dichlorobenz ene (µg/L)	1,4-Dichlorobenz ene (µg/L)	Dichlorodifluoromethane (µg/L)	1,1-Dichloroethane (µg/L)	1,2-Dichloroethane (µg/L)	1,1-Dichloroethene (µg/L)
AY-68-21-806	12/19/00	<1	<1	<2	<1	<1	<1
AY-68-28-313	9/26/00	<1	<1	<2	<1	<1	<1
AY-68-28-315	12/15/00	<1	<1	<2	<1	<1	<1
AY-68-28-516	12/20/00	<1	<1	<2	<1	<1	<1
AY-68-28-517	10/24/00	<1	<1	<2	<1	<1	<1
AY-68-29-112	10/3/00	<1	<1	<2	<1	<1	<1
AY-68-29-113	12/7/00	<1	<1	<2	<1	<1	<1
AY-68-29-214	10/18/00	<1	<1	<2	<1	<1	<1
AY-68-29-216	10/26/00	<1	<1	<2	<1	<1	<1
AY-68-29-217	12/5/00	<1	<1	<2	<1	<1	<1
DX-68-23-810	8/11/00	<1	<1	<2	<1	<1	<1
DX-68-30-221	8/1/00	<1	<1	<2	<1	<1	<1
LR-67-01-308	8/25/00	<1	<1	<2	<1	<1	<1
TD-68-26-802	7/14/00	<1	<1	<2	<1	<1	<1
YP-69-51-114	5/9/00	<1	<1	<2	<1	<1	<1

State Well Number	Date Sampled	2-Butanone (µg/L)	Carbon disulfide (µg/L)	Cis-1,2-Dichloropropene (µg/L)	Trans-1,2-Dichloropropene (µg/L)	Ethyl benz ene (µg/L)	Trans-1,2-Dichloroethene (µg/L)
AY-68-21-806	12/19/00	<20	<1	<1	<1	<1	<1
AY-68-28-313	9/26/00	<20	<1	<1	<1	<1	<1
AY-68-28-315	12/15/00	<20	<1	<1	<1	<1	<1
AY-68-28-516	12/20/00	<20	<1	<1	<1	<1	<1
AY-68-28-517	10/24/00	<20	<1	<1	<1	<1	<1
AY-68-29-112	10/3/00	<20	<1	<1	<1	<1	<1
AY-68-29-113	12/7/00	<20	<1	<1	<1	<1	<1
AY-68-29-214	10/18/00	<20	<1	<1	<1	<1	<1
AY-68-29-216	10/26/00	<20	<1	<1	<1	<1	<1
AY-68-29-217	12/5/00	<20	<1	<1	<1	<1	<1
DX-68-23-810	8/11/00	<20	<1	<1	<1	<1	<1
DX-68-30-221	8/1/00	<20	<1	<1	<1	<1	<1
LR-67-01-308	8/25/00	<20	<1	<1	<1	<1	<1
TD-68-26-802	7/14/00	<20	<1	<1	<1	<1	<1
YP-69-51-114	5/9/00	<20	<1	<1	<1	<1	<1

NA = not analyzed

Analytical data for volatile organic compound in water from wells completed in the Edwards Aquifer, 2000.

State Well Number	Date Sampled	Bromomethane (µg/L)	Dibromomethane (µg/L)	1,2-Dichlorobenz ene (µg/L)	4-Methyl-2-pentanone (µg/L)	Tetrachloroethene (µg/L)
AY-68-21-806	12/19/00	<2	<1	<1	<2	<1
AY-68-28-313	9/26/00	<2	<1	<1	<2	<1
AY-68-28-315	12/15/00	<2	<1	<1	<2	<1
AY-68-28-516	12/20/00	<2	<1	<1	<2	<1
AY-68-28-517	10/24/00	<2	<1	<1	<2	<1
AY-68-29-112	10/3/00	<2	<1	<1	<2	<1
AY-68-29-113	12/7/00	<2	<1	<1	<2	<1
AY-68-29-214	10/18/00	<2	<1	<1	<2	<1
AY-68-29-216	10/26/00	<2	<1	<1	<2	<1
AY-68-29-217	12/5/00	<2	<1	<1	<2	<1
DX-68-23-810	8/11/00	<2	<1	<1	<2	<1
DX-68-30-221	8/1/00	<2	<1	<1	<2	<1
LR-67-01-308	8/25/00	<2	<1	<1	<2	<1
TD-68-26-802	7/14/00	<2	<1	<1	<2	<1
YP-69-51-114	5/9/00	<2	<1	<1	<2	7

State Well Number	Date Sampled	1,2-Dibromoethane (µg/L)	Trichloroethene (µg/L)	Trichlorofluoromethane (µg/L)	1,2,3-Trichloropropane (µg/L)	2-Hexanone (µg/L)
AY-68-21-806	12/19/00	<1	<1	<1	<1	<5
AY-68-28-313	9/26/00	<1	<1	<1	<1	<5
AY-68-28-315	12/15/00	<1	<1	<1	<1	<5
AY-68-28-516	12/20/00	<1	<1	<1	<1	<5
AY-68-28-517	10/24/00	<1	<1	<1	<1	<5
AY-68-29-112	10/3/00	<1	<1	<1	<1	<5
AY-68-29-113	12/7/00	<1	<1	<1	<1	<5
AY-68-29-214	10/18/00	<1	<1	<1	<1	<5
AY-68-29-216	10/26/00	<1	<1	<1	<1	<5
AY-68-29-217	12/5/00	<1	<1	<1	<1	<5
DX-68-23-810	8/11/00	<1	<1	<1	<1	<5
DX-68-30-221	8/1/00	<1	<1	<1	<1	<5
LR-67-01-308	8/25/00	<1	<1	<1	<1	<5
TD-68-26-802	7/14/00	<1	<1	<1	<1	<5
YP-69-51-114	5/9/00	<1	<1	<1	<1	<5

NA = not analyzed

Analytical data for volatile organic compound in water from wells completed in the Edwards Aquifer, 2000.

State Well Number	Date Sampled	Cis-1,2-Dichloroethene (µg/L)	1,2-Dichloropropane (µg/L)	Styrene µg/L)	1,1,1,2-Tetrachloroethane (µg/L)	1,1,2,2-Tetrachloroethane (µg/L)
AY-68-21-806	12/19/00	<1	<1	<1	<1	<1
AY-68-28-313	9/26/00	<1	<1	<1	<1	<1
AY-68-28-315	12/15/00	<1	<1	<1	<1	<1
AY-68-28-516	12/20/00	<1	<1	<1	<1	<1
AY-68-28-517	10/24/00	<1	<1	<1	<1	<1
AY-68-29-112	10/3/00	<1	<1	<1	<1	<1
AY-68-29-113	12/7/00	<1	<1	<1	<1	<1
AY-68-29-214	10/18/00	<1	<1	<1	<1	<1
AY-68-29-216	10/26/00	<1	<1	<1	<1	<1
AY-68-29-217	12/5/00	<1	<1	<1	<1	<1
DX-68-23-810	8/11/00	<1	<1	<1	<1	<2
DX-68-30-221	8/1/00	<1	<1	<1	<1	<2
LR-67-01-308	8/25/00	<1	<1	<1	<1	<2
TD-68-26-802	7/14/00	<1	<1	<1	<1	<2
YP-69-51-114	5/9/00	<1	<1	<1	<1	<2

State Well Number	Date Sampled	1,1,1-Trichloroethane (µg/L)	1,1,2-Trichloroethane (µg/L)	Vinyl chloride (µg/L)	o-Xylene (µg/L)	m,p-Xylenes (µg/L)
AY-68-21-806	12/19/00	<1	<1	<2	<1	<1
AY-68-28-313	9/26/00	<1	<1	<2	<1	<1
AY-68-28-315	12/15/00	<1	<1	<2	<1	<1
AY-68-28-516	12/20/00	<1	<1	<2	<1	<1
AY-68-28-517	10/24/00	<1	<1	<2	<1	<1
AY-68-29-112	10/3/00	<1	<1	<2	<1	<1
AY-68-29-113	12/7/00	<1	<1	<2	<1	<1
AY-68-29-214	10/18/00	<1	<1	<2	<1	<1
AY-68-29-216	10/26/00	<1	<1	<2	<1	<1
AY-68-29-217	12/5/00	<1	<1	<2	<1	<1
DX-68-23-810	8/11/00	<1	<1	<2	<1	<1
DX-68-30-221	8/1/00	<1	<1	<2	<1	<1
LR-67-01-308	8/25/00	<1	<1	<2	<1	<1
TD-68-26-802	7/14/00	<1	<1	<2	<1	<1
YP-69-51-114	5/9/00	<1	<1	<2	<1	<1

NA = not analyzed

Analytical data for inorganic constituents in water from streams crossing the Edwards Aquifer Recharge Zone and springs discharging from the Edwards Aquifer, 2000.

Station Name	Date sampled	Time sampled	Water temp (oC)	Conductivity, field (µS/cm)	Alkalinity, field (mg/L)	pH	Oxygen, dissloved (mg/L)	Hardness, total (mg/L)
Blanco River @ Wimberley	3/27/00	15:45	26.7	455	198	7.85	8.40	182
	7/24/00	13:40	32.1	410	156	7.92	7.01	186
	12/1/00	13:15	17.9	521	206	8.22	7.40	232
Dry Frio River @ Reagan Wells	3/29/00	9:17	21.6	370	186	7.35	8.70	148
	7/26/00	9:50	26.2	392	164	7.71	7.40	168
	11/29/00	10:25	16.4	428	198	8.10	NA	200
Frio River @ Concan	3/29/00	10:45	23.9	734	164	7.27	9.10	140
	7/26/00	11:30	29.2	369	160	7.67	7.30	160
	11/29/00	11:45	17.4	455	180	8.10	10.10	216
Hondo Creek @ Tarpley	3/30/00	13:42	28.0	406	184	7.87	8.03	152
	7/27/00	14:20	35.1	346	172	8.19	10.40	136
	11/30/00	13:55	16.7	481	164	8.12	9.10	216
Medina River @ Bandera	4/3/00	12:38	18.5	582	168	7.71	10.10	252
	7/31/00	13:17	29.6	543	176	7.73	8.05	250
	12/4/00	12:30	12.7	566	202	8.22	NA	276
Nueces River @ Laguna	3/28/00	12:40	22.0	386	268	7.61	8.61	152
	7/25/00	14:30	29.4	402	176	7.64	7.70	162
	11/28/00	16:55	20.0	428	164	7.99	NA	200
Sabinal River near Sabinal	3/29/00	14:20	24.3	444	206	7.60	8.99	184
	7/26/00	14:45	29.3	430	176	7.46	7.00	176
	11/29/00	14:45	18.6	499	188	8.11	9.20	228
Seco Creek @ Miller Ranch	3/30/00	11:20	23.9	392	182	7.65	8.20	144
	7/27/00	11:35	31.0	421	124	7.73	6.80	180
	11/30/00	11:00	15.5	463	166	8.17	9.00	208
Comal Springs #1 (DX-68-23-301)	10/19/00	14:30	23.4	538	204	7.22	NA	NA
	1/19/00	17:24	23.4	540	NA	7.42	NA	NA
	1/21/00	13:49	23.4	541	NA	7.39	NA	NA
	1/24/00	15:18	23.4	542	NA	7.14	NA	NA
	1/26/00	11:25	23.0	542	NA	6.99	NA	NA

NA = not analyzed

Analytical data for inorganic constituents in water from streams crossing the Edwards Aquifer Recharge Zone and springs discharging from the Edwards Aquifer, 2000.

Station Name	Date sampled	Time sampled	Water temp (oC)	Conductivity, field (µS/cm)	Alkalinity, field (mg/L)	pH	Oxygen, dissloved (mg/L)	Hardness, total (mg/L)
Comal Springs #1 (DX-68-23-301)	1/28/00	10:02	23.3	542	NA	7.45	NA	NA
	2/4/00	13:40	23.4	542	NA	6.99	NA	NA
	2/7/00	17:20	23.4	542	228	7.00	5.03	246
	2/15/00	10:55	23.3	541	NA	6.92	7.00	NA
	2/24/00	13:25	23.4	541	NA	7.15	NA	NA
	3/1/00	12:10	23.4	541	NA	7.17	7.00	NA
	3/23/00	10:55	23.4	541	NA	6.94	6.70	NA
	4/17/00	13:40	23.4	540	NA	6.77	6.70	NA
	5/3/00	13:40	23.4	539	240	7.30	7.10	NA
	7/5/00	10:53	23.3	533	NA	7.11	NA	NA
Comal Springs #3A	1/19/00	17:00	23.3	538	NA	7.43	NA	NA
	1/21/00	13:32	23.2	538	NA	7.29	NA	NA
	1/24/00	14:51	22.8	539	NA	6.80	NA	NA
	1/26/00	11:00	23.1	540	NA	6.99	NA	NA
	1/28/00	9:45	23.1	539	NA	7.18	NA	NA
	2/4/00	13:12	23.2	539	NA	6.96	NA	NA
	2/7/00	13:40	25.0	540	224	6.98	5.56	250
	2/9/00	10:10	23.2	540	218	7.01	NA	246
	2/15/00	11:23	23.3	540	NA	6.97	6.99	NA
	2/24/00	13:06	23.3	540	NA	7.06	NA	NA
	3/1/00	11:45	23.2	541	NA	7.17	6.80	NA
	3/23/00	11:20	23.3	540	NA	6.93	6.70	NA
	4/17/00	14:00	23.4	539	NA	6.85	6.99	NA
	5/3/00	12:05	23.2	536	NA	7.20	6.70	NA
	7/5/00	11:25	23.3	535	NA	7.10	NA	NA
Comal Springs #4	2/8/00	11:45	23.8	545	226	6.92	NA	243
Comal Springs #5	2/8/00	12:30	23.9	545	220	7.06	NA	250
Comal Springs #6 (D)	2/8/00	14:45	23.5	544	218	6.95	NA	248
Comal Springs #7	1/19/00	16:33	23.8	542	NA	7.46	NA	NA
	1/21/00	13:15	23.8	543	NA	7.04	NA	NA
	1/24/00	14:38	23.8	544	NA	7.03	NA	NA
	1/26/00	10:40	23.8	543	NA	6.98	NA	NA

NA = not analyzed

Analytical data for inorganic constituents in water from streams crossing the Edwards Aquifer Recharge Zone and springs discharging from the Edwards Aquifer, 2000.

Station Name	Date sampled	Time sampled	Water temp (oC)	Conductivity, field (µS/cm)	Alkalinity, field (mg/L)	pH	Oxygen, dissloved (mg/L)	Hardness, total (mg/L)
Comal Springs #7	1/28/00	9:30	23.7	544	NA	6.98	NA	NA
	2/4/00	11:30	23.7	544	NA	6.82	NA	NA
	2/7/00	15:35	23.8	544	218	6.95	5.00	250
	2/15/00	11:52	23.8	543	NA	7.08	6.80	NA
	2/24/00	12:05	24.7	543	NA	6.76	NA	NA
	3/1/00	11:30	23.7	543	NA	7.04	7.00	NA
	3/23/00	11:45	23.8	542	NA	7.17	6.70	NA
	4/17/00	14:17	23.9	541	NA	6.90	6.80	NA
	5/3/00	11:30	23.7	539	NA	7.07	6.60	NA
	7/5/00	11:58	23.7	538	NA	7.14	NA	NA
Comal Springs "E"	2/8/00	11:45	23.0	549	216	7.06	NA	256
Hueco Springs	1/20/00	14:30	20.7	580	NA	7.12	NA	NA
	1/26/00	11:55	20.6	581	NA	7.26	NA	NA
	1/28/00	10:24	20.5	581	NA	7.29	NA	NA
	2/4/00	14:32	20.8	579	NA	7.04	NA	NA
	2/9/00	11:40	20.9	578	234	6.83	NA	272
	2/15/00	14:03	20.7	579	NA	7.25	7.30	NA
	2/24/00	12:08	20.7	578	NA	6.85	NA	NA
	3/1/00	10:50	20.8	574	NA	6.89	6.89	NA
	3/23/00	12:36	21.1	570	NA	7.05	6.40	NA
	4/17/00	15:17	21.6	564	NA	6.83	6.80	NA
	5/3/00	15:20	21.5	562	244	7.14	NA	NA
	7/5/00	14:50	22.4	523	NA	7.02	NA	NA
	10/19/00	9:45	22.3	581	230	7.07	NA	284
San Marcos Springs (LR-67-01-801)	8/31/00	11:33	21.9	584	202	6.93	NA	290
San Pedro Springs (AY-68-36-6XX)	11/16/00	9:51	24.1	533	198	7.15	NA	260
Train Bridge at Landa Park	2/8/00	16:25	23.9	540	220	7.20	NA	246

NA = not analyzed

Analytical data for selected properties and common inorganic constituents in water from streams crossing the Edwards Aquifer Recharge Zone and springs discharging from the Edwards Aquifer, 2000.

Station name	Date sampled	Calcium, dissolved (mg/L)	Magnesium, dissolved (mg/L)	Sodium, dissolved (mg/L)	Potassium, dissolved (mg/L)	Chloride, dissolved (mg/L)	Sulfate, dissolved (mg/L)	Fluoride, dissolved (mg/L)	Silica, dissolved (mg/L)	Total dissolved solids
Blanco River @ Wimberley	3/27/00	55	18	8	<1	18	45	0.26	4	288
	7/24/00	48	19	7	1	21	44	0.27	6.7	296
	12/1/00	86	15	7	1	20	25	0.17	3.9	312
Dry Frio River @ Reagan Wells	3/29/00	53	12	6	<1	14	18	0.1	4.2	184
	7/26/00	55	12	4	1	20	17	0.13	5.6	4192
	11/29/00	65	13	4	<1	16	15	0.12	4.32	260
Frio River @ Concan	3/29/00	49	13	6	<1	15	17	0.14	5	164
	7/26/00	48	13	5	1	21	17	0.16	6.3	208
	11/29/00	72	14	5	<1	17	16	0.2	5.12	228
Hondo Creek @ Tarpley	3/30/00	56	12	9	<1	17	61	0.3	5.5	236
	7/27/00	41	11	7	2	22	60	0.31	7.6	228
	11/30/00	83	10	5	<1	18	32	0.25	5.08	280
Medina River @ Bandera	4/3/00	82	21	6	<1	15	121	0.32	4.7	392
	7/31/00	71	21	6	2	21	118	0.4	7.8	412
	12/4/00	90	18	5	1	18	51	0.31	5.5	300
Nueces River @ Laguna	3/28/00	53	13	7	<1	16	15	0.13	5.1	180
	7/25/00	54	13	5	1	20	13	0.14	5.8	372
	11/28/00	65	14	5	<1	17	15	0.18	5.1	200
Sabinal River near Sabinal	3/29/00	64	13	8	<1	15	35	0.21	5.8	228
	7/26/00	61	12	7	2	21	30	0.22	6.6	280
	11/29/00	81	13	6	<1	17	25	0.28	5.42	296
Seco Creek @ Miller Ranch	3/30/00	50	12	8	<1	16	62	0.24	4.9	192
	7/27/00	58	12	6	2	22	75	0.28	6.8	296
	11/30/00	76	12	5	<1	17	34	0.24	5.1	284
Comal Springs #1 (DX-68-23-301)	2/7/00	78	16	10	2	19	24	0.29	5.6	412
	5/3/00	79.4	15.9	9.81	1.3	16.3	24	0.18	13.6	309

Analytical data for selected properties and common inorganic constituents in water from streams crossing the Edwards Aquifer Recharge Zone and springs discharging from the Edwards Aquifer, 2000.

Station name	Date sampled	Calcium, dissolved (mg/L)	Magnesium, dissolved (mg/L)	Sodium, dissolved (mg/L)	Potassium, dissolved (mg/L)	Chloride, dissolved (mg/L)	Sulfate, dissolved (mg/L)	Fluoride, dissolved (mg/L)	Silica, dissolved (mg/L)	Total dissolved solids
	10/19/00	80	16	10	1	22	23	0.27	6.7	336
Comal Springs #3A	2/7/00	78	15	10	2	19	24	0.27	5.4	372
	2/9/00	80	16	9	1	19	23	0.22	5.2	316
Comal Springs #4	2/8/00	76	17	11	1	20	26	0.24	5.6	370
Comal Springs #5	2/8/00	74	17	11	2	21	28	0.22	5.5	340
Comal Springs #6	2/8/00	78	16	9	1	20	24	0.22	5.4	336
Comal Springs #7	2/7/00	77	17	11	2	21	26	0.44	5.5	360
Comal Springs E	2/8/00	82	15	8	1	18	20	0.19	5.3	344
Hueco Springs (DX-68-15-901)	2/9/00	84	18	8	2	17	22	0.50	4.7	356
	5/3/00	82.3	18	9.84	1.41	15.8	20.5	0.22	12.3	317
	10/19/00	95	15	8	1	23	19	0.29	6.2	296
San Marcos Springs (LR-67-01-801)	8/31/00	87	17	9	<1	22	22	0.21	5.1	280
San Pedro Springs (AY-68-36-6XX)	11/16/00	76	16	10	1	21	20	0.3	5	284

Analytical data for minor element metals in water from streams crossing the Edwards Aquifer Recharge Zone and springs discharging from the Edwards Aquifer, 2000.

Station name	Date sampled	As, dissld* (mg/L)	Ba, dissld* (mg/L)	Cd, dissld* (mg/L)	Cr, dissld* (mg/L)	Cu, dissld* (mg/L)	Fe, dissld* (mg/L)	Pb, dissld* (mg/L)	Mn, dissld* (mg/L)	Hg, dissld* (mg/L)	Se, dissld* (mg/L)	Ag, dissld* (mg/L)	Zn, dissld* (mg/L)
Blanco River @ Wimberley	3/27/00	<0.002	0.03	<0.001	<0.002	0.002	0.009	0.004	0.002	<0.002	<0.003	<0.001	<0.01
	7/24/00	<0.002	0.03	0.003	<0.001	0.001	0.007	0.004	0.002	<0.002	<0.003	<0.001	0.01
	12/1/00	<0.002	0.02	<0.001	<0.002	0.001	0.007	0.003	0.002	<0.002	<0.003	<0.001	0.02
Dry Frio River @ Reagan Wells	3/29/00	<0.002	0.04	<0.001	<0.002	<0.001	0.012	<0.002	<0.002	<0.002	<0.003	<0.001	0.02
	7/26/00	<0.002	0.04	<0.001	<0.001	<0.001	0.006	0.002	<0.002	<0.002	<0.003	<0.001	<0.01
	11/29/00	<0.002	0.04	<0.001	<0.002	<0.001	<0.003	<0.002	<0.002	<0.002	<0.003	<0.001	0.08
Frio River @ Concan	3/29/00	<0.002	0.03	<0.001	<0.002	0.002	0.009	<0.002	<0.002	<0.002	<0.003	<0.001	0.01
	7/26/00	0.002	0.04	<0.001	<0.001	0.006	<0.003	<0.002	<0.002	<0.002	<0.003	<0.001	<0.01
	11/29/00	<0.002	0.04	<0.001	<0.002	0.001	<0.003	0.004	<0.002	<0.002	<0.003	<0.001	0.03
Hondo Creek @ Tarpley	3/30/00	<0.002	0.03	<0.001	0.003	0.002	0.033	<0.002	0.004	<0.002	<0.003	<0.001	<0.01
	7/27/00	<0.002	0.02	<0.001	<0.001	0.001	0.011	0.004	<0.002	<0.002	<0.003	<0.001	<0.01
	11/30/00	<0.002	0.03	<0.001	<0.002	<0.01	0.004	<0.002	<0.002	<0.002	<0.003	<0.001	0.02
Medina River @ Bandera	4/3/00	<0.002	0.4	<0.001	<0.002	<0.001	0.005	<0.002	0.003	<0.002	0.004	<0.001	0.04
	7/31/00	<0.002	0.03	<0.001	<0.001	<0.001	0.01	0.003	0.004	<0.002	<0.003	<0.001	0.02
	12/4/00	<0.002	0.03	<0.001	<0.002	0.016	0.005	0.009	<0.002	<0.002	<0.003	<0.001	<0.01
Nueces River @ Laguna	3/28/00	<0.002	0.04	<0.001	<0.002	0.012	0.021	<0.002	<0.002	<0.002	<0.003	<0.001	<0.01
	7/25/00	<0.002	0.04	<0.001	<0.001	0.002	<0.003	<0.002	<0.002	<0.002	<0.003	<0.001	0.03
	11/28/00	<0.002	0.04	<0.001	<0.002	<0.001	<0.003	0.002	<0.002	<0.002	<0.003	<0.001	0.05
Sabinal River near Sabinal	3/29/00	<0.002	0.03	<0.001	0.004	0.008	0.048	0.02	0.005	<0.002	<0.003	<0.001	<0.01
	7/26/00	<0.002	0.03	<0.001	<0.001	<0.001	0.005	<0.002	0.005	<0.002	<0.003	<0.001	0.04
	11/29/00	<0.002	0.03	<0.001	<0.002	<0.001	<0.003	<0.002	<0.002	<0.002	<0.003	<0.001	0.02
Seco Creek @ Miller Ranch	3/30/00	<0.002	0.03	<0.001	<0.002	0.002	0.01	<0.002	0.002	<0.002	<0.003	<0.001	<0.01
	7/27/00	<0.002	0.03	<0.001	<0.001	0.001	0.003	<0.002	<0.002	<0.002	<0.003	<0.001	<0.01
	11/30/00	<0.002	0.03	<0.001	<0.002	<0.001	<0.003	0.002	0.003	<0.002	0.003	<0.001	0.03

dissld = dissolved
NA = not analyzed

Analytical data for minor element metals in water from streams crossing the Edwards Aquifer Recharge Zone and springs discharging from the Edwards Aquifer, 2000.

Station name	Date sampled	As, disld* (mg/L)	Ba, disld* (mg/L)	Cd, disld* (mg/L)	Cr, disld* (mg/L)	Cu, disld* (mg/L)	Fe, disld* (mg/L)	Pb, disld* (mg/L)	Mn, disld* (mg/L)	Hg, disld* (mg/L)	Se, disld* (mg/L)	Ag, disld* (mg/L)	Zn, disld* (mg/L)
Comal Springs #1 (DX-68-23-301)	2/7/00	0.003	0.06	<0.001	<0.002	0.001	0.006	<0.002	<0.002	<0.002	<0.003	<0.001	0.02
	5/3/00	<0.002	0.044	<0.001	0.004	<0.002	<0.05	<0.001	<0.001	NA	<0.004	NA	<0.004
	10/19/00	<0.002	0.04	<0.002	<0.002	0.002	0.014	0.008	<0.002	<0.002	<0.003	<0.001	<0.01
Comal Springs #3A	2/7/00	0.002	0.06	<0.001	<0.002	0.001	<0.003	<0.002	<0.002	<0.002	<0.003	<0.001	<0.01
	2/9/00	<0.002	0.06	<0.001	<0.002	<0.001	<0.003	<0.002	<0.002	<0.002	<0.003	<0.001	0.02
Comal Springs #4	2/8/00	<0.002	0.06	<0.001	<0.002	0.001	0.003	<0.002	<0.002	<0.002	<0.003	<0.001	0.01
Comal Springs #5	2/8/00	<0.002	0.06	<0.001	<0.002	0.001	<0.003	<0.002	<0.002	<0.002	<0.003	<0.001	0.01
Comal Springs #6	2/8/00	<0.002	0.06	<0.001	<0.002	0.001	0.005	<0.002	<0.002	<0.002	<0.003	<0.001	0.05
Comal Springs #7	2/7/00	<0.002	0.06	<0.001	<0.002	<0.001	<0.003	<0.002	<0.002	<0.002	<0.003	<0.001	<0.01
Comal Springs "E"	2/8/00	0.002	0.06	<0.001	0.002	<0.001	0.012	<0.002	<0.002	<0.002	<0.003	<0.001	0.01
Hueco Springs (DX-68-15-901)	2/9/00	0.003	0.04	<0.001	<0.002	0.001	0.006	<0.002	<0.002	<0.002	<0.003	<0.001	0.01
	5/3/00	<0.002	0.031	<0.001	0.004	<0.002	<0.05	<0.001	0.0012	NA	<0.004	NA	<0.004
	10/19/00	<0.002	0.03	<0.002	<0.002	0.005	0.004	0.003	<0.002	<0.002	<0.003	<0.001	<0.01
San Marcos Springs (LR-67-01-801)	8/31/00	<0.002	0.04	<0.001	<0.002	0.001	0.004	<0.002	<0.002	<0.002	0.003	<0.001	0.04
San Pedro Springs (AY-68-36-6XX)	11/16/00	<0.002	0.05	<0.001	<0.002	0.1	<0.003	<0.002	<0.002	<0.002	<0.003	<0.001	0.02

disld = dissolved
NA = not analyzed

Analytical data for minor element metals in water from streams crossing the Edwards Aquifer Recharge Zone and springs discharging from the Edwards Aquifer, 2000.

Station name	Date sampled	Al, disld* (mg/L)	Sb, disld* (mg/L)	Be, disld* (mg/L)	B, disld* (mg/L)	Br, disld* (mg/L)	Co, disld* (mg/L)	Li, disld* (mg/L)	Mo, disld* (mg/L)	Ni, disld* (mg/L)	Sr, disld* (mg/L)	Tl, disld* (mg/L)	V, disld (mg/L)
Blanco River @ Wimberley	3/27/00	<0.04	NA	NA	NA	NA	NA	NA	NA	NA	0.64	NA	NA
	7/24/00	<0.04	NA	NA	NA	NA	NA	NA	NA	NA	0.6	NA	NA
	12/1/00	0.04	NA	NA	NA	NA	NA	NA	NA	NA	0.26	NA	NA
Dry Frio River @ Reagan Wells	3/29/00	0.05	NA	NA	NA	NA	NA	NA	NA	NA	0.31	NA	NA
	7/26/00	<0.04	NA	NA	NA	NA	NA	NA	NA	NA	0.35	NA	NA
	11/29/00	0.06	NA	NA	NA	NA	NA	NA	NA	NA	0.32	NA	NA
Frio River @ Concan	3/29/00	<0.04	NA	NA	NA	NA	NA	NA	NA	NA	0.24	NA	NA
	7/26/00	0.06	NA	NA	NA	NA	NA	NA	NA	NA	0.26	NA	NA
	11/29/00	<0.04	NA	NA	NA	NA	NA	NA	NA	NA	0.26	NA	NA
Hondo Creek @ Tarpley	3/30/00	0.05	NA	NA	NA	NA	NA	NA	NA	NA	0.44	NA	NA
	7/27/00	<0.04	NA	NA	NA	NA	NA	NA	NA	NA	0.41	NA	NA
	11/30/00	<0.04	NA	NA	NA	NA	NA	NA	NA	NA	0.35	NA	NA
Medina River @ Bandera	4/3/00	<0.04	NA	NA	NA	NA	NA	NA	NA	NA	0.97	NA	NA
	7/31/00	<0.04	NA	NA	NA	NA	NA	NA	NA	NA	0.94	NA	NA
	12/4/00	<0.04	NA	NA	NA	NA	NA	NA	NA	NA	0.67	NA	NA
Nueces River @ Laguna	3/28/00	<0.04	NA	NA	NA	NA	NA	NA	NA	NA	0.21	NA	NA
	7/25/00	<0.04	NA	NA	NA	NA	NA	NA	NA	NA	0.23	NA	NA
	11/28/00	<0.04	NA	NA	NA	NA	NA	NA	NA	NA	0.22	NA	NA
Sabinal River near Sabinal	3/29/00	0.04	NA	NA	NA	NA	NA	NA	NA	NA	0.34	NA	NA
	7/26/00	<0.04	NA	NA	NA	NA	NA	NA	NA	NA	0.31	NA	NA
	11/29/00	<0.04	NA	NA	NA	NA	NA	NA	NA	NA	0.31	NA	NA
Seco Creek @ Miller Ranch	3/30/00	<0.04	NA	NA	NA	NA	NA	NA	NA	NA	0.38	NA	NA
	7/27/00	<0.04	NA	NA	NA	NA	NA	NA	NA	NA	0.4	NA	NA
	11/30/00	<0.04	NA	NA	NA	NA	NA	NA	NA	NA	0.45	NA	NA

disld = dissolved
NA = not analyzed

Analytical data for minor element metals in water from streams crossing the Edwards Aquifer Recharge Zone and springs discharging from the Edwards Aquifer, 2000.

Station name	Date sampled	Al, disld* (mg/L)	Sb, disld* (mg/L)	Be, disld* (mg/L)	B, disld* (mg/L)	Br, disld* (mg/L)	Co, disld* (mg/L)	Li, disld* (mg/L)	Mo, disld* (mg/L)	Ni, disld* (mg/L)	Sr, disld* (mg/L)	Tl, disld* (mg/L)	V, disld (mg/L)
Comal Springs #1 (DX-68-23-301)	5/3/00	<0.004	<0.001	<0.001	0.075	0.1	<0.001	0.007	<0.001	0.002	0.58	<0.001	0
	10/19/00	<0.04	NA	NA	NA	NA	NA	NA	NA	NA	0.58	NA	NA
Hueco Springs (DX-68-15-901)	5/3/00	<0.004	<0.001	<0.001	0.075	0.08	<0.001	0.005	<0.001	0.002	0.51	<0.001	0
	10/19/00	<0.04	NA	NA	NA	NA	NA	NA	NA	NA	0.36	NA	NA
San Marcos Springs (LR-67-01-801)	8/31/00	<0.04	NA	NA	NA	NA	NA	NA	NA	NA	0.49	NA	NA
San Pedro Springs (AY-68-36-6XX)	11/16/00	<0.04	NA	NA	NA	NA	NA	NA	NA	NA	0.52	NA	NA

disld = dissolved
NA = not analyzed

Analytical data for nutrients in water from streams crossing the Edwards Aquifer Recharge Zone and springs discharging from the Edwards Aquifer, 2000.

Station name	Date sampled	BOD5	Nitrogen, Kjeldahl (mg/L)	Nitrogen, nitrate (mg/L)	Nitrogen, nitrite (mg/L)	Phosphorus, total (mg/L)	Total organic carbon (mg/L)	Total suspended solids (mg/L)
Blanco River @ Wimberley	3/27/00	1	0.74	0.001	<0.005	<0.01	<1	2
	7/24/00	1	0.65	<0.01	<0.005	0.02	3	1
	12/1/00	<1	<0.1	1.03	<0.005	<0.01	2	2
Dry Frio River @ Reagan Wells	3/29/00	<1	0.46	0.36	<0.005	<0.01	<1	<1
	7/26/00	<1	<0.1	0.23	<0.005	<0.01	2	<1
	11/29/00	<1	0	1.36	<0.005	0.01	<1	<1
Frio River @ Concan	3/29/00	<1	0.37	0.21	<0.005	<0.01	<1	1
	7/26/00	<1	<0.1	0.22	<0.005	<0.01	2	<1
	11/29/00	<1	0	1.68	<0.005	0.01	<1	1
Hondo Creek @ Tarpley	3/30/00	<1	<0.1	0.02	<0.005	<0.01	1	1
	7/27/00	1	0.56	<0.01	<0.005	<0.01	3	1
	11/30/00	<1	<0.1	1.24	<0.005	<0.01	<1	<1
Medina River @ Bandera	4/3/00	<1	<0.1	<0.01	<0.005	0.01	1	1
	7/31/00	<1	0.56	<0.01	<0.005	<0.01	3	3
	12/4/00	<1	0	1.33	<0.005	<0.01	1	1
Nueces River @ Laguna	3/28/00	<1	0.65	0.61	<0.005	<0.01	<1	<1
	7/25/00	<1	0.56	0.67	<0.005	<0.01	2	<1
	11/28/00	<1	0	2.02	<0.005	<0.01	1	<1
Sabinal River near Sabinal	3/29/00	1	<0.1	<0.01	<0.005	<0.01	1	1
	7/26/00	<1	<0.1	0.04	<0.005	<0.01	2	<1
	11/29/00	<1	<0.1	1.11	<0.005	0.01	<1	<1
Seco Creek @ Miller Ranch	3/30/00	<1	<0.1	0.04	<0.005	<0.01	<1	<1
	7/27/00	<1	<0.1	0.09	<0.005	<0.01	1	1
	11/30/00	<1	<0.1	0.81	<0.005	<0.01	<1	<1
Comal Springs #1 (DX-68-23-301)	5/3/00	NA	NA	1.96	NA	NA	NA	NA
	10/19/00	<1	<0.1	2.08	<0.005	<0.01	<1	<1
Hueco Springs (DX-68-15-901)	10/19/00	<1	<0.1	2.12	<0.005	<0.01	<1	<1
San Pedro Springs	11/16/00	<1	<0.1	2.16	<0.005	<0.01	<1	<1

NA = not analyzed

Analytical data for pesticides and herbicides in water from streams crossing the Edwards Aquifer Recharge Zone and springs discharging from the Edwards Aquifer,2000.

Station name	Date Sampled	Aldrin (µg/L)	Gamma BHC (Lindane) (µg/L)	Chlordane (µg/L)	4,4' - DDD (µg/L)	4,4' - DDE (µg/L)	4,4' - DDT (µg/L)	Dieldrin (µg/L)	Endosulfan I (Alpha) (µg/L)	Endosulfan II (Beta) (µg/L)
Blanco River @ Wimberley	3/27/00	<0.0002	<0.0005	<0.05	<0.001	<0.001	<0.001	<0.0002	<0.001	<0.001
	7/24/00	<0.0002	<0.0005	<0.05	<0.001	<0.001	<0.001	<0.0002	<0.001	<0.001
	12/1/00	<0.0002	<0.0005	<0.05	<0.001	<0.001	<0.001	<0.0002	<0.001	<0.001
Dry Frio River @ Reagan Wells	3/29/00	<0.0002	<0.0005	<0.05	<0.001	<0.001	<0.001	<0.0002	<0.001	<0.001
	7/26/00	<0.0002	<0.0005	<0.05	<0.001	<0.001	<0.001	<0.0002	<0.001	<0.001
	11/29/00	<0.0002	<0.0005	<0.05	<0.001	<0.001	<0.001	<0.0002	<0.001	<0.001
Frio River @ Concan	3/29/00	<0.0002	<0.0005	<0.05	<0.001	<0.001	<0.001	<0.0002	<0.001	<0.001
	7/26/00	<0.0002	<0.0005	<0.05	<0.001	<0.001	<0.001	<0.0002	<0.001	<0.001
	11/29/00	<0.0002	<0.0005	<0.05	<0.001	<0.001	<0.001	<0.0002	<0.001	<0.001
Hondo Creek @ Tarpley	3/30/00	<0.0002	<0.0005	<0.05	<0.001	<0.001	<0.001	<0.0002	<0.001	<0.001
	7/27/00	<0.0002	<0.0005	<0.05	<0.001	<0.001	<0.001	<0.0002	<0.001	<0.001
	11/30/00	<0.0002	<0.0005	<0.05	<0.001	<0.001	<0.001	<0.0002	<0.001	<0.001
Medina River @ Bandera	4/3/00	<0.0002	<0.0005	<0.05	<0.001	<0.001	<0.001	<0.0002	<0.001	<0.001
	7/31/00	<0.0002	<0.0005	<0.05	<0.001	<0.001	<0.001	<0.0002	<0.001	<0.001
	12/4/00	<0.0002	<0.0005	<0.05	<0.001	<0.001	<0.001	<0.0002	<0.001	<0.001
Nueces River @ Laguna	3/28/00	<0.0002	<0.0005	<0.05	<0.001	<0.001	<0.001	<0.0002	<0.001	<0.001
	7/25/00	<0.0002	<0.0005	<0.05	<0.001	<0.001	<0.001	<0.0002	<0.001	<0.001
	11/28/00	<0.0002	<0.0005	<0.05	<0.001	<0.001	<0.001	<0.0002	<0.001	<0.001
Sabinal River near Sabinal	3/29/00	<0.0002	<0.0005	<0.05	<0.001	<0.001	<0.001	<0.0002	<0.001	<0.001
	7/26/00	<0.0002	<0.0005	<0.05	<0.001	<0.001	<0.001	<0.0002	<0.001	<0.001
	11/29/00	<0.0002	<0.0005	<0.05	<0.001	<0.001	<0.001	<0.0002	<0.001	<0.001
Seco Creek @ Miller Ranch	3/30/00	<0.0002	<0.0005	<0.05	<0.001	<0.001	<0.001	<0.0002	<0.001	<0.001
	7/27/00	<0.0002	<0.0005	<0.05	<0.001	<0.001	<0.001	<0.0002	<0.001	<0.001
	11/30/00	<0.0002	<0.0005	<0.05	<0.001	<0.001	<0.001	<0.0002	<0.001	<0.001
San Marcos Springs (LR-67-01-801)	8/31/00	<0.0002	<0.0005	<0.05	<0.001	<0.001	<0.001	<0.0002	<0.001	<0.001
San Pedro Springs (AY-68-36-6XX)	11/16/00	<0.0002	<0.0005	<0.05	<0.001	<0.001	<0.001	<0.0002	<0.001	<0.001

Analytical data for pesticides and herbicides in water from streams crossing the Edwards Aquifer Recharge Zone and springs discharging from the Edwards Aquifer,2000.

Station name	Date Sampled	Endrin (µg/L)	Heptachlor (µg/L)	Heptachlor Epoxide (µg/L)	Mirex (µg/L)	Perthane (µg/L)	Toxaphene (µg/L)	PCB-Total (µg/L)	Diaz inon (µg/L)	Ethion (µg/L)	Malathion (µg/L)
Blanco River @ Wimberley	3/27/00	<0.0005	<0.0005	<0.005	<0.005	<0.01	<0.2	<0.05	<0.005	<0.01	<0.005
	7/24/00	<0.0005	<0.0005	<0.005	<0.005	<0.01	<0.2	<0.05	<0.005	<0.01	<0.005
	12/1/00	<0.0005	<0.0005	<0.005	<0.005	<0.01	<0.2	<0.05	<0.005	<0.01	<0.005
Dry Frio River @ Reagan Wells	3/29/00	<0.0005	<0.0005	<0.005	<0.005	<0.01	<0.2	<0.05	<0.005	<0.01	<0.005
	7/26/00	<0.0005	<0.0005	<0.005	<0.005	<0.01	<0.2	<0.05	<0.005	<0.01	<0.005
	11/29/00	<0.0005	<0.0005	<0.005	<0.005	<0.01	<0.2	<0.05	<0.005	<0.01	<0.005
Frio River @ Concan	3/29/00	<0.0005	<0.0005	<0.005	<0.005	<0.01	<0.2	<0.05	<0.005	<0.01	<0.005
	7/26/00	<0.0005	<0.0005	<0.005	<0.005	<0.01	<0.2	<0.05	<0.005	<0.01	<0.005
	11/29/00	<0.0005	<0.0005	<0.005	<0.005	<0.01	<0.2	<0.05	<0.005	<0.01	<0.005
Hondo Creek @ Tarpley	3/30/00	<0.0005	<0.0005	<0.005	<0.005	<0.01	<0.2	<0.05	<0.005	<0.01	<0.005
	7/27/00	<0.0005	<0.0005	<0.005	<0.005	<0.01	<0.2	<0.05	<0.005	<0.01	<0.005
	11/30/00	<0.0005	<0.0005	<0.005	<0.005	<0.01	<0.2	<0.05	<0.005	<0.01	<0.005
Medina River @ Bandera	4/3/00	<0.0005	<0.0005	<0.005	<0.005	<0.01	<0.2	<0.05	<0.005	<0.01	<0.005
	7/31/00	<0.0005	<0.0005	<0.005	<0.005	<0.01	<0.2	<0.05	<0.005	<0.01	<0.005
	12/4/00	<0.0005	<0.0005	<0.005	<0.005	<0.01	<0.2	<0.05	<0.005	<0.01	<0.005
Nueces River @ Laguna	3/28/00	<0.0005	<0.0005	<0.005	<0.005	<0.01	<0.2	<0.05	<0.005	<0.01	<0.005
	7/25/00	<0.0005	<0.0005	<0.005	<0.005	<0.01	<0.2	<0.05	<0.005	<0.01	<0.005
	11/28/00	<0.0005	<0.0005	<0.005	<0.005	<0.01	<0.2	<0.05	<0.005	<0.01	<0.005
Sabinal River near Sabinal	3/29/00	<0.0005	<0.0005	<0.005	<0.005	<0.01	<0.2	<0.05	<0.005	<0.01	<0.005
	7/26/00	<0.0005	<0.0005	<0.005	<0.005	<0.01	<0.2	<0.05	<0.005	<0.01	<0.005
	11/29/00	<0.0005	<0.0005	<0.005	<0.005	<0.01	<0.2	<0.05	<0.005	<0.01	<0.005
Seco Creek @ Miller Ranch	3/30/00	<0.0005	<0.0005	<0.005	<0.005	<0.01	<0.2	<0.05	<0.005	<0.01	<0.005
	7/27/00	<0.0005	<0.0005	<0.005	<0.005	<0.01	<0.2	<0.05	<0.005	<0.01	<0.005
	11/30/00	<0.0005	<0.0005	<0.005	<0.005	<0.01	<0.2	<0.05	<0.005	<0.01	<0.005
San Marcos Springs (LR-67-01-801)	8/31/00	<0.0005	<0.0005	<0.005	<0.005	<0.01	<0.2	<0.5	<0.005	<0.01	<0.005
San Pedro Springs (AY-68-36-6XX)	11/16/00	<0.0005	<0.0005	<0.005	<0.005	<0.01	<0.2	<0.5	<0.005	<0.01	<0.005

Analytical data for pesticides and herbicides in water from streams crossing the Edwards Aquifer Recharge Zone and springs discharging from the Edwards Aquifer,2000.

Station name	Date Sampled	Methyl Parathion (µg/L)	Parathion (µg/L)	Trithion (µg/L)	2,4-D (µg/L)	2,4,5-T (µg/L)	2,4,5-TP (Silvex) (µg/L)	Atraz ine (µg/L)	Hexachloro-benz ene (µg/L)	Hexachloro-cyclo-pentadiene (µg/L)
Blanco River @ Wimberley	3/27/00	<0.05	<0.01	<0.002	<0.001	<0.002	<0.001	<0.001	<0.005	<0.005
	7/24/00	<0.05	<0.01	<0.002	<0.001	<0.002	<0.001	<0.001	<0.005	<0.005
	12/1/00	<0.05	<0.01	<0.002	<0.001	<0.002	<0.001	<0.001	<0.005	<0.005
Dry Frio River @ Reagan Wells	3/29/00	<0.05	<0.01	<0.002	<0.001	<0.002	<0.001	<0.001	<0.005	<0.005
	7/26/00	<0.05	<0.01	<0.002	<0.001	<0.002	<0.001	<0.001	<0.005	<0.005
	11/29/00	<0.05	<0.01	<0.002	<0.001	<0.002	<0.001	<0.001	<0.005	<0.005
Frio River @ Concan	3/29/00	<0.05	<0.01	<0.002	<0.001	<0.002	<0.001	<0.001	<0.005	<0.005
	7/26/00	<0.05	<0.01	<0.002	<0.001	<0.002	<0.001	<0.001	<0.005	<0.005
	11/29/00	<0.05	<0.01	<0.002	<0.001	<0.002	<0.001	<0.001	<0.005	<0.005
Hondo Creek @ Tarpley	3/30/00	<0.05	<0.01	<0.002	<0.001	<0.002	<0.001	<0.001	<0.005	<0.005
	7/27/00	<0.05	<0.01	<0.002	<0.001	<0.002	<0.001	<0.001	<0.005	<0.005
	11/30/00	<0.05	<0.01	<0.002	<0.001	<0.002	<0.001	<0.001	<0.005	<0.005
Medina River @ Bandera	4/3/00	<0.05	<0.01	<0.002	<0.001	<0.002	<0.001	<0.001	<0.005	<0.005
	7/31/00	<0.05	<0.01	<0.002	<0.001	<0.002	<0.001	<0.001	<0.005	<0.005
	12/4/00	<0.05	<0.01	<0.002	<0.001	<0.002	<0.001	<0.001	<0.005	<0.005
Nueces River @ Laguna	3/28/00	<0.05	<0.01	<0.002	<0.001	<0.002	<0.001	<0.001	<0.005	<0.005
	7/25/00	<0.05	<0.01	<0.002	<0.001	<0.002	<0.001	<0.001	<0.005	<0.005
	11/28/00	<0.05	<0.01	<0.002	<0.001	<0.002	<0.001	<0.001	<0.005	<0.005
Sabinal River near Sabinal	3/29/00	<0.05	<0.01	<0.002	<0.001	<0.002	<0.001	<0.001	<0.005	<0.005
	7/26/00	<0.05	<0.01	<0.002	<0.001	<0.002	<0.001	<0.001	<0.005	<0.005
	11/29/00	<0.05	<0.01	<0.002	<0.001	<0.002	<0.001	<0.001	<0.005	<0.005
Seco Creek @ Miller Ranch	3/30/00	<0.05	<0.01	<0.002	<0.001	<0.002	<0.001	<0.001	<0.005	<0.005
	7/27/00	<0.05	<0.01	<0.002	<0.001	<0.002	<0.001	<0.001	<0.005	<0.005
	11/30/00	<0.05	<0.01	<0.002	<0.001	<0.002	<0.001	<0.001	<0.005	<0.005
San Marcos Springs (LR-67-01-801)	8/31/00	<0.05	<0.01	<0.002	<0.001	<0.002	<0.001	<0.001	<0.005	<0.005
San Pedro Springs (AY-68-36-6XX)	11/16/00	<0.05	<0.01	<0.002	<0.001	<0.002	<0.001	<0.001	<0.005	<0.005

Analytical data for pesticides and herbicides in water from streams crossing the Edwards Aquifer Recharge Zone and springs discharging from the Edwards Aquifer,2000.

Station name	Date Sampled	Methoxychlor (µg/L)	Pentachloro-phenol (µg/L)	Pichloram (µg/L)	Polychlorinated Napthalenes (µg/L)	Simaz ine (µg/L)	Alachlor (µg/L)
Blanco River @ Wimberley	3/27/00	<0.05	<0.05	<0.01	<0.01	<0.01	<0.005
	7/24/00	<0.05	<0.05	<0.01	<0.01	<0.01	<0.005
	12/1/00	<0.05	<0.05	<0.01	<0.01	<0.01	<0.005
Dry Frio River @ Reagan Wells	3/29/00	<0.05	<0.05	<0.01	<0.01	<0.01	<0.005
	7/26/00	<0.05	<0.05	<0.01	<0.01	<0.01	<0.005
	11/29/00	<0.05	<0.05	<0.01	<0.01	<0.01	<0.005
Frio River @ Concan	3/29/00	<0.05	<0.05	<0.01	<0.01	<0.01	<0.005
	7/26/00	<0.05	<0.05	<0.01	<0.01	<0.01	<0.005
	11/29/00	<0.05	<0.05	<0.01	<0.01	<0.01	<0.005
Hondo Creek @ Tarpley	3/30/00	<0.05	<0.05	<0.01	<0.01	<0.01	<0.005
	7/27/00	<0.05	<0.05	<0.01	<0.01	<0.01	<0.005
	11/30/00	<0.05	<0.05	<0.01	<0.01	<0.01	<0.005
Medina River @ Bandera	4/3/00	<0.05	<0.05	<0.01	<0.01	<0.01	<0.005
	7/31/00	<0.05	<0.05	<0.01	<0.01	<0.01	<0.005
	12/4/00	<0.05	<0.05	<0.01	<0.01	<0.01	<0.005
Nueces River @ Laguna	3/28/00	<0.05	<0.05	<0.01	<0.01	<0.01	<0.005
	7/25/00	<0.05	<0.05	<0.01	<0.01	<0.01	<0.005
	11/28/00	<0.05	<0.05	<0.01	<0.01	<0.01	<0.005
Sabinal River near Sabinal	3/29/00	<0.05	<0.05	<0.01	<0.01	<0.01	<0.005
	7/26/00	<0.05	<0.05	<0.01	<0.01	<0.01	<0.005
	11/29/00	<0.05	<0.05	<0.01	<0.01	<0.01	<0.005
Seco Creek @ Miller Ranch	3/30/00	<0.05	<0.05	<0.01	<0.01	<0.01	<0.005
	7/27/00	<0.05	<0.05	<0.01	<0.01	<0.01	<0.005
	11/30/00	<0.05	<0.05	<0.01	<0.01	<0.01	<0.005
San Marcos Springs (LR-67-01-801)	8/31/00	<0.05	<0.05	<0.01	<0.01	<0.01	<0.005
San Pedro Springs (AY-68-36-6XX)	11/16/00	<0.05	<0.05	<0.01	<0.01	<0.01	<0.005

Analytical data for pesticides and herbicides in water from streams crossing the Edwards Aquifer Recharge Zone and springs discharging from the Edwards Aquifer,2000.

Station name	Date Sampled	Aldicarb (µg/L)	Aldicarb Sulfoxide (µg/L)	Carbofuran (µg/L)	Dalapon (µg/L)	Dinoseb (µg/L)	Oxymyl (µg/L)
Blanco River @ Wimberley	3/27/00	<0.05	<0.02	<0.01	<0.05	<0.05	<0.01
	7/24/00	<0.05	<0.02	<0.01	<0.05	<0.05	<0.01
	12/1/00	<0.05	<0.02	<0.01	<0.05	<0.05	<0.01
Dry Frio River @ Reagan Wells	3/29/00	<0.05	<0.02	<0.01	<0.05	<0.05	<0.01
	7/26/00	<0.05	<0.02	<0.01	<0.05	<0.05	<0.01
	11/29/00	<0.05	<0.02	<0.01	<0.05	<0.05	<0.01
Frio River @ Concan	3/29/00	<0.05	<0.02	<0.01	<0.05	<0.05	<0.01
	7/26/00	<0.05	<0.02	<0.01	<0.05	<0.05	<0.01
	11/29/00	<0.05	<0.02	<0.01	<0.05	<0.05	<0.01
Hondo Creek @ Tarpley	3/30/00	<0.05	<0.02	<0.01	<0.05	<0.05	<0.01
	7/27/00	<0.05	<0.02	<0.01	<0.05	<0.05	<0.01
	11/30/00	<0.05	<0.02	<0.01	<0.05	<0.05	<0.01
Medina River @ Bandera	4/3/00	<0.05	<0.02	<0.01	<0.05	<0.05	<0.01
	7/31/00	<0.05	<0.02	<0.01	<0.05	<0.05	<0.01
	12/4/00	<0.05	<0.02	<0.01	<0.05	<0.05	<0.01
Nueces River @ Laguna	3/28/00	<0.05	<0.02	<0.01	<0.05	<0.05	<0.01
	7/25/00	<0.05	<0.02	<0.01	<0.05	<0.05	<0.01
	11/28/00	<0.05	<0.02	<0.01	<0.05	<0.05	<0.01
Sabinal River near Sabinal	3/29/00	<0.05	<0.02	<0.01	<0.05	<0.05	<0.01
	7/26/00	<0.05	<0.02	<0.01	<0.05	<0.05	<0.01
	11/29/00	<0.05	<0.02	<0.01	<0.05	<0.05	<0.01
Seco Creek @ Miller Ranch	3/30/00	<0.05	<0.02	<0.01	<0.05	<0.05	<0.01
	7/27/00	<0.05	<0.02	<0.01	<0.05	<0.05	<0.01
	11/30/00	<0.05	<0.02	<0.01	<0.05	<0.05	<0.01
San Marcos Springs (LR-67-01-801)	8/31/00	<0.05	<0.02	<0.01	<0.05	<0.05	<0.01
San Pedro Springs (AY-68-36-6XX)	11/16/00	<0.05	<0.02	<0.01	<0.05	<0.05	<0.01

Analytical data for volatile organic compounds in water from springs discharging from the Edwards Aquifer, 2000.

State Well Number	Date Sampled	Time Sampled	GRO (µg/L)	DRO (µg/L)	Acenaphtene (µg/L)	Acenaphthylene (µg/L)	Acetone (µg/L)	Acrolein (µg/L)	Acrylonitrile (µg/L)	Anthracene (µg/L)	Benz ene (µg/L)
Comal Springs #1 (DX-68-23-301)	1/19/00	17:24	<0.05	<0.05	<1	NA	NA	<20	<10	<1	<1
	1/21/00	13:49	<0.05	<0.05	<1	NA	NA	NA	NA	<1	NA
	1/24/00	15:18	<0.05	<0.05	<1	NA	NA	NA	NA	<1	NA
	1/26/00	11:25	<0.05	<0.05	<1	NA	NA	NA	NA	<1	NA
	1/28/00	10:02	<0.05	<0.05	<1	NA	NA	<20	<10	<1	<1
	2/4/00	13:40	NA	NA	<1	<1	<20	<20	<10	<0.5	<1
	2/7/00	17:20	NA	NA	<1	<2	<20	<20	<20	<1	<1
	2/15/00	10:55	NA	NA	<1	<1	<20	<20	<20	<1	<1
	2/24/00	13:25	NA	NA	<1	<2	<20	NA	NA	<1	NA
	3/1/00	12:10	NA	NA	<1	<1	<20	<20	<20	<1	<1
	3/23/00	10:55	NA	NA	<1	<1	<20	<20	<20	<1	<1
	4/17/00	13:40	NA	NA	<1	<1	<20	<20	<20	<1	<1
	5/3/00	13:40	NA	NA	<1	<1	<20	<20	<20	<1	<1
	7/5/00	10:53	NA	NA	<1	<1	<20	<20	<20	<0.5	<1
	10/19/00	14:30	NA	NA	<1	<1	<20	<20	<20	<0.5	<1
Comal Springs #3A	1/19/00	17:00	<0.05	<0.05	<1	NA	NA	<20	<20	<1	<1
	1/21/00	13:32	<0.05	<0.05	<1	NA	NA	NA	NA	<1	NA
	1/24/00	14:51	<0.05	<0.05	<1	NA	NA	NA	NA	<1	NA
	1/26/00	11:00	<0.05	<0.05	<1	NA	NA	<20	<10	<1	<1
	1/28/00	9:45	<0.05	<0.05	<1	NA	NA	<20	<20	<1	<1
	2/4/00	13:12	NA	NA	<1	<1	<20	<20	<20	<1	<1
	2/7/00	13:40	NA	NA	<1	NA	<20	NA	NA	<1	NA
	2/9/00	10:10	NA	NA	<1	<1	<20	<20	<20	<0.5	<1
	2/15/00	11:23	NA	NA	<1	<1	<20	<20	<20	<1	<1
	2/24/00	13:06	NA	NA	<1	<2	<20	<20	<20	<1	<1
	3/1/00	11:45	NA	NA	<1	<1	<20	<20	<20	<1	<1
	3/23/00	11:20	NA	NA	<1	<1	<20	<20	<20	<1	<1
	4/17/00	14:00	NA	NA	<1	<1	<20	<20	<20	<1	<1
	5/3/00	12:05	NA	NA	<1	<1	<20	<20	<10	<0.5	<1
	7/5/00	11:25	NA	NA	<1	<1	<20	<20	<20	<1	<1
Comal Springs #4	2/8/00	11:45	NA	NA	<1	<2	<20	<20	<20	<1	<1
Comal Springs #5	2/8/00	12:30	NA	NA	<1	<1	<20	NA	NA	<1	NA
Comal Springs #6 (D)	2/8/00	14:45	NA	NA	<1	<1	<20	NA	NA	<1	NA
Comal Springs #7	1/19/00	16:33	<0.05	<0.05	<1	NA	NA	NA	NA	<1	NA
	1/24/00	14:38	<0.05	<0.05	<1	NA	NA	NA	NA	<1	NA
	1/26/00	10:40	<0.05	<0.05	<1	NA	NA	<20	<10	<1	<1
	1/28/00	9:30	<0.05	<0.05	<1	NA	NA	<20	<10	<0.5	<1
	2/4/00	11:30	NA	NA	<1	<1	<20	<20	<20	<1	<1
	2/7/00	15:35	NA	NA	<1	<2	<20	<20	<20	<0.5	<1
	2/15/00	11:52	NA	NA	<1	<1	<20	<20	<20	<1	<1
	2/24/00	12:05	NA	NA	<1	<2	<20	<20	<20	<1	<1
	3/1/00	11:30	NA	NA	<1	<1	<20	<20	<20	<1	<1
	3/23/00	11:45	NA	NA	<1	<1	<20	<20	<20	<1	<1
	4/17/00	14:17	NA	NA	<1	<1	<20	<20	<20	<1	<1
	5/3/00	11:30	NA	NA	<1	<1	<20	NA	NA	<1	NA
	7/5/00	11:58	NA	NA	<1	<1	<20	NA	NA	<1	NA
Comal Springs "E"	2/8/00	11:45	NA	NA	<1	<1	<20	NA	NA	<1	NA
Hueco Springs (DX-68-15-901)	1/20/00	14:30	<0.05	<0.05	<1	NA	NA	NA	NA	<1	NA
	1/26/00	11:55	<0.05	<0.05	<1	NA	NA	NA	NA	<1	NA
	1/28/00	10:24	<0.05	<0.05	<1	NA	NA	NA	NA	<1	NA
	2/4/00	14:32	NA	NA	<1	<1	<20	<20	<10	<1	<1
	2/9/00	11:40	NA	NA	<1	<1	<20	<20	<20	<1	<1
	2/15/00	14:03	NA	NA	<1	<1	<20	<20	<20	<1	<1
	2/24/00	12:08	NA	NA	<1	<2	<20	<20	<20	<0.5	<1
	3/1/00	10:50	NA	NA	<1	<1	<20	<20	<20	<1	<1
	3/23/00	12:36	NA	NA	<1	<1	<20	<20	<20	<1	<1
	4/17/00	15:17	NA	NA	<1	<1	<20	<20	<20	<1	<1
	5/3/00	15:20	NA	NA	<1	<1	<20	<20	<20	<1	<1
	7/5/00	14:50	NA	NA	<1	<1	<20	<20	<20	<1	<1
	10/19/00	11:45	NA	NA	<1	<1	<20	<20	<20	<1	<1
San Marcos Springs (LR-67-01-801)	8/31/00	11:33	NA	NA	NA	NA	<20	NA	NA	NA	<1
S.M.S. "Deep" (LR-67-01-819)	2/2/00	15:20	NA	NA	<10	<10	<10	NA	NA	<10	<1
S.M.S. "Johnny" (LR-67-01-820)	2/2/00	14:45	NA	NA	<10	<10	<10	NA	NA	<10	<1
	3/10/00	10:35	NA	NA	<1	NA	<20	<20	<20	<1	<1
San Pedro Springs (AY-68-36-6XX)	11/16/00	9:51	NA	NA	NA	NA	<20	NA	NA	NA	<1

S.M.S. = San Marcos Springs
NA = not anaylzed

Analytical data for volatile organic compounds in water from springs discharging from the Edwards Aquifer, 2000.

State Well Number	Date Sampled	Benz o(a) anthracene (µg/L)	Benz o(a) pyrene (µg/L)	Benz o(b) flouranthene (µg/L)	Benz o(k) fluoranthene (µg/L)	Benz o (ghi)perylene (µg/L)	Bromo benz ene (µg/L)	Bromo dichloro methane (µg/L)	Bromoform (µg/L)	Bromo methane (µg/L)	2-Butanone (µg/L)
Comal Springs #1 (DX-68-23-301)	1/19/00	<1	<1	<1	<1	<1	NA	<1	<1	<2	<20
	1/21/00	<1	<1	<1	<1	<2	NA	NA	NA	NA	NA
	1/24/00	<1	<1	<1	<1	<2	NA	NA	NA	NA	NA
	1/26/00	<1	<1	<1	<1	<2	NA	NA	NA	NA	NA
	1/28/00	<1	<1	<1	<1	<1	NA	<1	<1	<2	<20
	2/4/00	<0.1	<0.02	<0.01	<0.01	<0.05	NA	<1	<1	<2	<20
	2/7/00	<1	<1	<1	<1	<1	NA	<1	<2	<2	<20
	2/15/00	<1	<1	<1	<1	<1	NA	<1	<2	<2	<20
	2/24/00	<1	<1	<1	<1	<2	NA	NA	NA	NA	NA
	3/1/00	<1	<1	<1	<1	<1	NA	<1	<2	<2	<20
	3/23/00	<1	<1	<1	<1	<1	NA	<1	<2	<2	<20
	4/17/00	<1	<1	<1	<1	<1	NA	<1	<2	<2	<20
	5/3/00	<1	<1	<1	<1	<1	NA	<1	<2	<2	<20
	7/5/00	<0.1	<0.02	<0.01	<0.01	<0.05	NA	<1	<2	<2	<20
	10/19/00	<0.1	<0.02	<0.01	<0.01	<0.05	NA	<1	<2	<2	<20
Comal Springs #3A	1/19/00	<1	<1	<1	<1	<1	NA	<1	<2	<2	<20
	1/21/00	<1	<1	<1	<1	<2	NA	NA	NA	NA	NA
	1/24/00	<1	<1	<1	<1	<2	NA	NA	NA	NA	NA
	1/26/00	<1	<1	<1	<1	<1	NA	<1	<1	<2	<20
	1/28/00	<1	<1	<1	<1	<1	NA	<1	<2	<2	<20
	2/4/00	<1	<1	<1	<1	<1	NA	<1	<2	<2	<20
	2/7/00	<1	<1	<1	<1	<2	NA	NA	NA	NA	NA
	2/9/00	<0.1	<0.02	<0.01	<0.01	<0.05	NA	<1	<2	<2	<20
	2/15/00	<1	<1	<1	<1	<1	NA	<1	<2	<2	<20
	2/24/00	<1	<1	<1	<1	<1	NA	<1	<2	<2	<20
	3/1/00	<1	<1	<1	<1	<1	NA	<1	<2	<2	<20
	3/23/00	<1	<1	<1	<1	<1	NA	<1	<2	<2	<20
	4/17/00	<1	<1	<1	<1	<1	NA	<1	<2	<2	<20
	5/3/00	<0.1	<0.02	<0.01	<0.01	<0.05	NA	<1	<1	<2	<20
	7/5/00	<1	<1	<1	<1	<1	NA	<1	<2	<2	<20
Comal Springs #4	2/8/00	<1	<1	<1	<1	<1	NA	<1	<2	<2	<20
Comal Springs #5	2/8/00	<1	<1	<1	<1	<2	NA	NA	NA	NA	NA
Comal Springs #6 (D)	2/8/00	<1	<1	<1	<1	<2	NA	NA	NA	NA	NA
Comal Springs #7	1/19/00	<1	<1	<1	<1	<2	NA	NA	NA	NA	NA
	1/24/00	<1	<1	<1	<1	<2	NA	NA	NA	NA	NA
	1/26/00	<1	<1	<1	<1	<1	NA	<1	<1	<2	<20
	1/28/00	<0.1	<0.02	<0.01	<0.01	<0.05	NA	<1	<1	<2	<20
	2/4/00	<1	<1	<1	<1	<1	NA	<1	<2	<2	<20
	2/7/00	<0.1	<0.02	<0.01	<0.01	<0.05	NA	<1	<2	<2	<20
	2/15/00	<1	<1	<1	<1	<1	NA	<1	<2	<2	<20
	2/24/00	<1	<1	<1	<1	<1	NA	<1	<2	<2	<20
	3/1/00	<1	<1	<1	<1	<1	NA	<1	<2	<2	<20
	3/23/00	<1	<1	<1	<1	<1	NA	<1	<2	<2	<20
	4/17/00	<1	<1	<1	<1	<1	NA	<1	<2	<2	<20
	5/3/00	<1	<1	<1	<1	<2	NA	NA	NA	NA	NA
	7/5/00	<1	<1	<1	<1	<2	NA	NA	NA	NA	NA
Comal Springs "E"	2/8/00	<1	<1	<1	<1	<2	NA	NA	NA	NA	NA
Hueco Springs (DX-68-15-901)	1/20/00	<1	<1	<1	<1	<2	NA	NA	NA	NA	NA
	1/26/00	<1	<1	<1	<1	<2	NA	NA	NA	NA	NA
	1/28/00	<1	<1	<1	<1	<2	NA	NA	NA	NA	NA
	2/4/00	<1	<1	<1	<1	<1	NA	<1	<1	<2	<20
	2/9/00	<1	<1	<1	<1	<1	NA	<1	<2	<2	<20
	2/15/00	<1	<1	<1	<1	<1	NA	<1	<2	<2	<20
	2/24/00	<0.1	<0.02	<0.01	<0.01	<0.05	NA	<1	<2	<2	<20
	3/1/00	<1	<1	<1	<1	<1	NA	<1	<2	<2	<20
	3/23/00	<1	<1	<1	<1	<1	NA	<1	<2	<2	<20
	4/17/00	<1	<1	<1	<1	<1	NA	<1	<2	<2	<20
	5/3/00	<1	<1	<1	<1	<1	NA	<1	<2	<2	<20
	7/5/00	<1	<1	<1	<1	<1	NA	<1	<2	<2	<20
	10/19/00	<1	<1	<1	<1	<1	NA	<1	<2	<2	<20
San Marcos Springs (LR-67-01-801)	8/31/00	NA	NA	NA	NA	NA	<1	<1	<2	<2	<20
S.M.S. "Deep" (LR-67-01-819)	2/2/00	<10	NA	<10	<10	<10	NA	<1.2	<1	<1.9	<10
S.M.S. "Johnny" (LR-67-01-820)	2/2/00	<10	NA	<10	<10	<10	NA	<1.2	<1	<1.9	<10
	3/10/00	<1	<1	<1	<1	<1	NA	<1	<2	<2	<20
San Pedro Springs (AY-68-36-6XX)	11/16/00	NA	NA	NA	NA	NA	<1	<1	<2	<2	<20

S.M.S. = San Marcos Springs
NA = not anaylzed

Analytical data for volatile organic compounds in water from springs discharging from the Edwards Aquifer, 2000.

State Well Number	Date Sampled	Carbon disulfide (µg/L)	Carbon tetra chloride (µg/L)	Chloro benz ene (µg/L)	Chloro ethane (µg/L)	Chloroform (µg/L)	Chloro methane (µg/L)	Chrysene (µg/L)	Dibenz (a,h) anthracene (µg/L)	Dibromo chloro methane (µg/L)	1,2-Dibromo-3-chloro propane (µg/L)
Comal Springs #1 (DX-68-23-301)	1/19/00	<1	<1	<1	<2	<1	<2	<1	<1	<1	<1
	1/21/00	NA	NA	NA	NA	NA	NA	NA	<2	NA	NA
	1/24/00	NA	NA	NA	NA	NA	NA	NA	<2	NA	NA
	1/26/00	NA	NA	NA	NA	NA	NA	NA	<2	NA	NA
	1/28/00	<1	<1	<1	<2	<1	<2	<1	<1	<1	NA
	2/4/00	<1	<1	<1	<2	<1	<2	<0.1	<0.01	<1	<1
	2/7/00	<1	<1	<1	<2	<1	<2	<1	<1	<1	<2
	2/15/00	<1	<1	<1	<2	<1	<2	<1	<1	<1	<2
	2/24/00	NA	NA	NA	NA	NA	NA	NA	<2	NA	NA
	3/1/00	<1	<1	<1	<2	<1	<2	<1	<1	<1	<2
	3/23/00	<1	<1	<1	<2	<1	<2	<1	<1	<1	<2
	4/17/00	<1	<1	<1	<2	<1	<2	<1	<1	<1	<2
	5/3/00	<1	<1	<1	<2	<1	<2	<1	<1	<1	<2
	7/5/00	<1	<1	<1	<2	<1	<2	<0.01	<0.2	<1	<2
	10/19/00	<1	<1	<1	<2	<1	<2	<0.01	<0.2	<1	<2
Comal Springs #3A	1/19/00	<1	<1	<1	<2	<1	<2	<1	<1	<1	<2
	1/21/00	NA	NA	NA	NA	NA	NA	NA	<2	NA	NA
	1/24/00	NA	NA	NA	NA	NA	NA	NA	<2	NA	NA
	1/26/00	<1	<1	<1	<2	<1	<2	<1	<1	<1	NA
	1/28/00	<1	<1	<1	<2	<1	<2	<1	<1	<1	<2
	2/4/00	<1	<1	<1	<2	<1	<2	<1	<1	<1	<2
	2/7/00	NA	NA	NA	NA	NA	NA	NA	<2	NA	NA
	2/9/00	<1	<1	<1	<2	<1	<2	<0.01	<0.2	<1	<2
	2/15/00	<1	<1	<1	<2	<1	<2	<1	<1	<1	<2
	2/24/00	<1	<1	<1	<2	<1	<2	<1	<1	<1	<2
	3/1/00	<1	<1	<1	<2	<1	<2	<1	<1	<1	<2
	3/23/00	<1	<1	<1	<2	<1	<2	<1	<1	<1	<2
	4/17/00	<1	<1	<1	<2	<1	<2	<1	<1	<1	<2
	5/3/00	<1	<1	<1	<2	<1	<2	<0.01	<0.2	<1	<1
	7/5/00	<1	<1	<1	<2	<1	<2	<1	<1	<1	<2
Comal Springs #4	2/8/00	<1	<1	<1	<2	<1	<2	<1	<1	<1	<2
Comal Springs #5	2/8/00	NA	NA	NA	NA	NA	NA	NA	<2	NA	NA
Comal Springs #6 (D)	2/8/00	NA	NA	NA	NA	NA	NA	NA	<2	NA	NA
Comal Springs #7	1/19/00	NA	NA	NA	NA	NA	NA	NA	<2	NA	NA
	1/24/00	NA	NA	NA	NA	NA	NA	NA	<2	NA	NA
	1/26/00	<1	<1	<1	<2	<1	<2	<1	<1	<1	NA
	1/28/00	<1	<1	<1	<2	<1	<2	<0.1	<0.01	<1	<1
	2/4/00	<1	<1	<1	<2	<1	<2	<1	<1	<1	<2
	2/7/00	<1	<1	<1	<2	<1	<2	<0.01	<0.2	<1	<2
	2/15/00	<1	<1	<1	<2	<1	<2	<1	<1	<1	<2
	2/24/00	<1	<1	<1	<2	<1	<2	<1	<1	<1	<2
	3/1/00	<1	<1	<1	<2	<1	<2	<1	<1	<1	<2
	3/23/00	<1	<1	<1	<2	<1	<2	<1	<1	<1	<2
	4/17/00	<1	<1	<1	<2	<1	<2	<1	<1	<1	<2
	5/3/00	NA	NA	NA	NA	NA	NA	NA	<2	NA	NA
	7/5/00	NA	NA	NA	NA	NA	NA	NA	<2	NA	NA
Comal Springs "E"	2/8/00	NA	NA	NA	NA	NA	NA	NA	<2	NA	NA
Hueco Springs (DX-68-15-901)	1/20/00	NA	NA	NA	NA	NA	NA	NA	<2	NA	NA
	1/26/00	NA	NA	NA	NA	NA	NA	NA	<2	NA	NA
	1/28/00	NA	NA	NA	NA	NA	NA	NA	<2	NA	NA
	2/4/00	<1	<1	<1	<2	<1	<2	<1	<1	<1	NA
	2/9/00	<1	<1	<1	<2	<1	<2	<1	<1	<1	<2
	2/15/00	<1	<1	<1	<2	<1	<2	<1	<1	<1	<2
	2/24/00	<1	<1	<1	<2	<1	<2	<0.01	<0.2	<1	<2
	3/1/00	<1	<1	<1	<2	<1	<2	<1	<1	<1	<2
	3/23/00	<1	<1	<1	<2	<1	<2	<1	<1	<1	<2
	4/17/00	<1	<1	<1	<2	<1	<2	<1	<1	<1	<2
	5/3/00	<1	<1	<1	<2	<1	<2	<1	<1	<1	<2
	7/5/00	<1	<1	<1	<2	<1	<2	<1	<1	<1	<2
	10/19/00	<1	<1	<1	<2	<1	<2	<1	<1	<1	<2
San Marcos Springs (LR-67-01-801)	8/31/00	<1	<1	<1	<2	<1	<2	NA	NA	<1	NA
S.M.S. "Deep" (LR-67-01-819)	2/2/00	<1	<1	<1	<1	<1	<1	<10	<10	<1	NA
S.M.S. "Johnny" (LR-67-01-820)	2/2/00	<1	<1	<1	<1	<1	<1	<10	<10	<1	NA
	3/10/00	<1	<1	<1	<2	<1	<2	<1	<1	<1	<2
San Pedro Springs (AY-68-36-6XX)	11/16/00	<1	<1	<1	<2	<1	<2	NA	NA	<1	NA

S.M.S. = San Marcos Springs
NA = not anaylzed

Analytical data for volatile organic compounds in water from springs discharging from the Edwards Aquifer, 2000.

State Well Number	Date Sampled	1,2-Dibromo ethane (µg/L)	Dibromo methane (µg/L)	1,2-Dichloro benz ene (µg/L)	1,3-Dichloro benz ene (µg/L)	1,4-Dichloro benz ene (µg/L)	1,4-Dichlor-2-butene (µg/L)	Dichloro difluoro methane (µg/L)	1,1-Dichloro ethane (µg/L)
Comal Springs #1 (DX-68-23-301)	1/19/00	<1	<1	<1	<1	<1	<1	<2	<1
	1/21/00	NA	NA	NA	NA	NA	NA	NA	NA
	1/24/00	NA	NA	NA	NA	NA	NA	NA	NA
	1/26/00	NA	NA	NA	NA	NA	NA	NA	NA
	1/28/00	<1	<2	<1	<1	<1	NA	<2	<1
	2/4/00	<1	<1	<1	<1	<1	<1	<2	<1
	2/7/00	<1	<1	<1	<1	<1	<2	<2	<1
	2/15/00	<1	<1	<1	<1	<1	<2	<2	<1
	2/24/00	NA	NA	NA	NA	NA	NA	NA	NA
	3/1/00	<1	<1	<1	<1	<1	<2	<2	<1
	3/23/00	<1	<1	<1	<1	<1	<2	<2	<1
	4/17/00	<1	<1	<1	<1	<1	<2	<2	<1
	5/3/00	<1	<1	<1	<1	<1	<2	<2	<1
	7/5/00	<1	<1	<1	<1	<1	<2	<2	<1
	10/19/00	<1	<1	<1	<1	<1	<2	<2	<1
Comal Springs #3A	1/19/00	<1	<1	<1	<1	<1	<2	<2	<1
	1/21/00	NA	NA	NA	NA	NA	NA	NA	NA
	1/24/00	NA	NA	NA	NA	NA	NA	NA	NA
	1/26/00	<1	<2	<1	<1	<1	NA	<2	<1
	1/28/00	<1	<1	<1	<1	<1	<2	<2	<1
	2/4/00	<1	<1	<1	<1	<1	<2	<2	<1
	2/7/00	NA	NA	NA	NA	NA	NA	NA	NA
	2/9/00	<1	<1	<1	<1	<1	<2	<2	<1
	2/15/00	<1	<1	<1	<1	<1	<2	<2	<1
	2/24/00	<1	<1	<1	<1	<1	<2	<2	<1
	3/1/00	<1	<1	<1	<1	<1	<2	<2	<1
	3/23/00	<1	<1	<1	<1	<1	<2	<2	<1
	4/17/00	<1	<1	<1	<1	<1	<2	<2	<1
	5/3/00	<1	<1	<1	<1	<1	<1	<2	<1
	7/5/00	<1	<1	<1	<1	<1	<2	<2	<1
Comal Springs #4	2/8/00	<1	<1	<1	<1	<1	<2	<2	<1
Comal Springs #5	2/8/00	NA	NA	NA	NA	NA	NA	NA	NA
Comal Springs #6 (D)	2/8/00	NA	NA	NA	NA	NA	NA	NA	NA
Comal Springs #7	1/19/00	NA	NA	NA	NA	NA	NA	NA	NA
	1/24/00	NA	NA	NA	NA	NA	NA	NA	NA
	1/26/00	<1	<2	<1	<1	<1	NA	<2	<1
	1/28/00	<1	<1	<1	<1	<1	<1	<2	<1
	2/4/00	<1	<1	<1	<1	<1	<2	<2	<1
	2/7/00	<1	<1	<1	<1	<1	<2	<2	<1
	2/15/00	<1	<1	<1	<1	<1	<2	<2	<1
	2/24/00	<1	<1	<1	<1	<1	<2	<2	<1
	3/1/00	<1	<1	<1	<1	<1	<2	<2	<1
	3/23/00	<1	<1	<1	<1	<1	<2	<2	<1
	4/17/00	<1	<1	<1	<1	<1	<2	<2	<1
	5/3/00	NA	NA	NA	NA	NA	NA	NA	NA
	7/5/00	NA	NA	NA	NA	NA	NA	NA	NA
Comal Springs "E"	2/8/00	NA	NA	NA	NA	NA	NA	NA	NA
Hueco Springs (DX-68-15-901)	1/20/00	NA	NA	NA	NA	NA	NA	NA	NA
	1/26/00	NA	NA	NA	NA	NA	NA	NA	NA
	1/28/00	NA	NA	NA	NA	NA	NA	NA	NA
	2/4/00	<1	<2	<1	<1	<1	NA	<2	<1
	2/9/00	<1	<1	<1	<1	<1	<2	<2	<1
	2/15/00	<1	<1	<1	<1	<1	<2	<2	<1
	2/24/00	<1	<1	<1	<1	<1	<2	<2	<1
	3/1/00	<1	<1	<1	<1	<1	<2	<2	<1
	3/23/00	<1	<1	<1	<1	<1	<2	<2	<1
	4/17/00	<1	<1	<1	<1	<1	<2	<2	<1
	5/3/00	<1	<1	<1	<1	<1	<2	<2	<1
	7/5/00	<1	<1	<1	<1	<1	<2	<2	<1
	10/19/00	<1	<1	<1	<1	<1	<2	<2	<1
San Marcos Springs (LR-67-01-801)	8/31/00	<1	<1	<1	<1	<1	NA	<2	<1
S.M.S. "Deep" (LR-67-01-819)	2/2/00	<1.1	<1.5	<1.1	<1	<1.3	<1.9	<2	<1
S.M.S. "Johnny" (LR-67-01-820)	2/2/00	<1.1	<1.5	<1.1	<1	<1.3	<1.9	<2	<1
	3/10/00	<1	<1	<1	<1	<1	<2	<2	<1
San Pedro Springs (AY-68-36-6XX)	11/16/00	<1	<1	<1	<1	<1	NA	<2	<1

S.M.S. = San Marcos Springs
NA = not anaylzed

Analytical data for volatile organic compounds in water from springs discharging from the Edwards Aquifer, 2000.

State Well Number	Date Sampled	1,2-Dichloroethane (µg/L)	1,1-Dichloroethene (µg/L)	Cis-1,2-Dichloroethene (µg/L)	Trans-1,2-Dichloroethene (µg/L)	1,2-Dichloropropane (µg/L)	Trans-1,3-Dichloropropene (µg/L)	Cis-1,2-Dichloropropene (µg/L)	Trans-1,2-Dichloropropene (µg/L)	Cis-1,3-Dichloropropene (µg/L)	Trans-1,3-Dichloropropene (µg/L)	Ethylbenzene (µg/L)	Flouranthene (µg/L)
Comal Springs #1 (DX-68-23-301)	1/19/00	<1	<1	<1	<1	<1	<1	NA	NA	<1	<1	<1	<1
	1/21/00	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<1
	1/24/00	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<1
	1/26/00	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<1
	1/28/00	<1	<1	<1	<1	<1	NA	<1	<1	NA	NA	<1	<1
	2/4/00	<1	<1	<1	<1	<1	<1	NA	NA	<1	<1	<1	<0.2
	2/7/00	<1	<1	<1	<1	<1	<1	NA	NA	NA	NA	<1	<1
	2/15/00	<1	<1	<1	<1	<1	<1	NA	NA	NA	NA	<1	<1
	2/24/00	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<1
	3/1/00	<1	<1	<1	<1	<1	<1	NA	NA	NA	NA	<1	<1
	3/23/00	<1	<1	<1	<1	<1	<1	NA	NA	NA	NA	<1	<1
	4/17/00	<1	<1	<1	<1	<1	<1	NA	NA	NA	NA	<1	<1
	5/3/00	<1	<1	<1	<1	<1	<1	NA	NA	NA	NA	<1	<1
	7/5/00	<1	<1	<1	<1	<1	<1	NA	NA	NA	NA	<1	<0.2
	10/19/00	<1	<1	<1	<1	<1	<1	NA	NA	NA	NA	<1	<0.2
Comal Springs #3A	1/19/00	<1	<1	<1	<1	<1	<1	NA	NA	NA	NA	<1	<1
	1/21/00	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<1
	1/24/00	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<1
	1/26/00	<1	<1	<1	<1	<1	NA	<1	<1	NA	NA	<1	<1
	1/28/00	<1	<1	<1	<1	<1	<1	NA	NA	NA	NA	<1	<1
	2/4/00	<1	<1	<1	<1	<1	<1	NA	NA	NA	NA	<1	<1
	2/7/00	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<1
	2/9/00	<1	<1	<1	<1	<1	<1	NA	NA	NA	NA	<1	<0.2
	2/15/00	<1	<1	<1	<1	<1	<1	NA	NA	NA	NA	<1	<1
	2/24/00	<1	<1	<1	<1	<1	<1	NA	NA	NA	NA	<1	<1
	3/1/00	<1	<1	<1	<1	<1	<1	NA	NA	NA	NA	<1	<1
	3/23/00	<1	<1	<1	<1	<1	<1	NA	NA	NA	NA	<1	<1
	4/17/00	<1	<1	<1	<1	<1	<1	NA	NA	NA	NA	<1	<1
	5/3/00	<1	<1	<1	<1	<1	NA	NA	NA	<1	<1	<1	<0.2
	7/5/00	<1	<1	<1	<1	<1	<1	NA	NA	NA	NA	<1	<1
Comal Springs #4	2/8/00	<1	<1	<1	<1	<1	<1	NA	NA	NA	NA	<1	<1
Comal Springs #5	2/8/00	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<1
Comal Springs #6 (D)	2/8/00	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<1
Comal Springs #7	1/19/00	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<1
	1/24/00	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<1
	1/26/00	<1	<1	<1	<1	<1	NA	<1	<1	NA	NA	<1	<1
	1/28/00	<1	<1	<1	<1	<1	<1	NA	NA	<1	<1	<1	<0.2
	2/4/00	<1	<1	<1	<1	<1	<1	NA	NA	NA	NA	<1	<1
	2/7/00	<1	<1	<1	<1	<1	<1	NA	NA	NA	NA	<1	<0.2
	2/15/00	<1	<1	<1	<1	<1	<1	NA	NA	NA	NA	<1	<1
	2/24/00	<1	<1	<1	<1	<1	<1	NA	NA	NA	NA	<1	<1
	3/1/00	<1	<1	<1	<1	<1	<1	NA	NA	NA	NA	<1	<1
	3/23/00	<1	<1	<1	<1	<1	<1	NA	NA	NA	NA	<1	<1
	4/17/00	<1	<1	<1	<1	<1	<1	NA	NA	NA	NA	<1	<1
	5/3/00	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<1
	7/5/00	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<1
Comal Springs "E"	2/8/00	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<1
Hueco Springs (DX-68-15-901)	1/20/00	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<1
	1/26/00	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<1
	1/28/00	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<1
	2/4/00	<1	<1	<1	<1	<1	NA	<1	<1	NA	NA	<1	<1
	2/9/00	<1	<1	<1	<1	<1	<1	NA	NA	NA	NA	<1	<1
	2/15/00	<1	<1	<1	<1	<1	<1	NA	NA	NA	NA	<1	<1
	2/24/00	<1	<1	<1	<1	<1	<1	NA	NA	NA	NA	<1	<0.2
	3/1/00	<1	<1	<1	<1	<1	<1	NA	NA	NA	NA	<1	<1
	3/23/00	<1	<1	<1	<1	<1	<1	NA	NA	NA	NA	<1	<1
	4/17/00	<1	<1	<1	<1	<1	<1	NA	NA	NA	NA	<1	<1
	5/3/00	<1	<1	<1	<1	<1	<1	NA	NA	NA	NA	<1	<1
	7/5/00	<1	<1	<1	<1	<1	<1	NA	NA	NA	NA	<1	<1
	10/19/00	<1	<1	<1	<1	<1	<1	NA	NA	NA	NA	<1	<1
San Marcos Springs (LR-67-01-801)	8/31/00	<1	<1	<1	<1	<1	NA	<1	<1	NA	NA	<1	NA
S.M.S. "Deep" (LR-67-01-819)	2/2/00	<1.1	<1	<1	<1	<1.1	<1.1	<1	NA	NA	NA	<1	<10
S.M.S. "Johnny" (LR-67-01-820)	2/2/00	<1.1	<1	<1	<1	<1.1	<1.1	<1	NA	NA	NA	<1	<10
	3/10/00	<1	<1	<1	<1	<1	<1	NA	NA	<1	<1	<1	<1
San Pedro Springs (AY-68-36-6XX)	11/16/00	<1	<1	<1	<1	<1	NA	<1	<1	NA	NA	<1	NA

S.M.S. = San Marcos Springs
NA = not anaylzed

Analytical data for volatile organic compounds in water from springs discharging from the Edwards Aquifer, 2000.

State Well Number	Date Sampled	Flourene (µg/L)	2-Hexanone (µg/L)	Indeno (1,2,3-cd) pyrene µg/L)	Iodo methane (µg/L)	Methylene chloride (µg/L)	Methyl chloride (µg/L)	4-Methyl-2-pentanone (µg/L)	2-Methyl naphthalene (µg/L)	MTBE (µg/L)
Comal Springs #1 (DX-68-23-301)	1/19/00	<1	<10	<1	<2	NA	<1	<5	<1	<5
	1/21/00	<1	NA	<2	NA	NA	NA	NA	<1	NA
	1/24/00	<1	NA	<2	NA	NA	NA	NA	<1	NA
	1/26/00	<1	NA	<2	NA	NA	NA	NA	<1	NA
	1/28/00	<1	<5	<1	NA	<2	NA	<5	<1	NA
	2/4/00	<0.2	<10	<0.02	<2	NA	<1	<5	<1	<5
	2/7/00	<1	<5	<1	<1	<1	NA	<2	<1	<2
	2/15/00	<1	<5	<1	<1	<1	NA	<2	<1	<2
	2/24/00	<1	NA	<2	NA	NA	NA	NA	<1	NA
	3/1/00	<1	<5	<1	<1	<1	NA	<2	<1	<2
	3/23/00	<1	<5	<1	<1	<1	NA	<2	<1	<2
	4/17/00	<1	<5	<1	<1	<1	NA	<2	<1	<2
	5/3/00	<1	<5	<1	<1	<1	NA	<2	<1	<2
	7/5/00	<0.2	<5	<1	<1	<1	NA	<2	<1	<2
	10/19/00	<0.2	<5	<1	<1	<1	NA	<2	<1	<2
Comal Springs #3A	1/19/00	<1	<5	<1	<1	<1	NA	<2	<1	<2
	1/21/00	<1	NA	<2	NA	NA	NA	NA	<1	NA
	1/24/00	<1	NA	<2	NA	NA	NA	NA	<1	NA
	1/26/00	<1	<5	<1	NA	<2	NA	<5	<1	NA
	1/28/00	<1	<5	<1	<1	<1	NA	<2	<1	<2
	2/4/00	<1	<5	<1	<1	<1	NA	<2	<1	<2
	2/7/00	<1	NA	<2	NA	NA	NA	NA	<1	NA
	2/9/00	<0.2	<5	<1	<1	<1	NA	<2	<1	<2
	2/15/00	<1	<5	<1	<1	<1	NA	<2	<1	<2
	2/24/00	<1	<5	<1	<1	<1	NA	<2	<1	<2
	3/1/00	<1	<5	<1	<1	<1	NA	<2	<1	<2
	3/23/00	<1	<5	<1	<1	<1	NA	<2	<1	<2
	4/17/00	<1	<5	<1	<1	<1	NA	<2	<1	<2
	5/3/00	<0.02	<10	<1	<2	<1	NA	<5	<1	<5
	7/5/00	<1	<5	<1	<1	<1	NA	<2	<1	<2
Comal Springs #4	2/8/00	<1	<5	<1	<1	<1	NA	<2	<1	<2
Comal Springs #5	2/8/00	<1	NA	<2	NA	NA	NA	NA	<1	NA
Comal Springs #6 (D)	2/8/00	<1	NA	<2	NA	NA	NA	NA	<1	NA
Comal Springs #7	1/19/00	<1	NA	<2	NA	NA	NA	NA	<1	NA
	1/24/00	<1	NA	<2	NA	NA	NA	NA	6.5	NA
	1/26/00	<1	<5	<1	NA	<2	NA	<5	8.9	NA
	1/28/00	<0.2	<10	<0.02	<2	NA	<1	<5	11	NA
	2/4/00	<1	<5	<1	<1	<1	NA	<2	<1	NA
	2/7/00	<0.2	<5	<1	<1	<1	NA	<2	<1	<5
	2/15/00	<1	<5	<1	<1	<1	NA	<2	<1	<2
	2/24/00	<1	<5	<1	<1	<1	NA	<2	<1	<2
	3/1/00	<1	<5	<1	<1	<1	NA	<2	<1	<2
	3/23/00	<1	<5	<1	<1	<1	NA	<2	<1	<2
	4/17/00	<1	<5	<1	<1	<1	NA	<2	<1	<2
	5/3/00	<1	NA	<2	NA	NA	NA	NA	<1	<2
	7/5/00	<1	NA	<2	NA	NA	NA	NA	<1	<2
Comal Springs "E"	2/8/00	<1	NA	<2	NA	NA	NA	NA	<1	NA
Hueco Springs (DX-68-15-901)	1/20/00	<1	NA	<2	NA	NA	NA	NA	<1	NA
	1/26/00	<1	NA	<2	NA	NA	NA	NA	2.2	NA
	1/28/00	<1	NA	<2	NA	NA	NA	NA	4.1	NA
	2/4/00	<1	<5	<1	NA	<2	NA	<5	<1	NA
	2/9/00	<1	<5	<1	<1	<1	NA	<2	<1	NA
	2/15/00	<1	<5	<1	<1	<1	NA	<2	<1	NA
	2/24/00	<0.2	<5	<1	<1	<1	NA	<2	<1	<2
	3/1/00	<1	<5	<1	<1	<1	NA	<2	<1	<2
	3/23/00	<1	<5	<1	<1	<1	NA	<2	<1	<2
	4/17/00	<1	<5	<1	<1	<1	NA	<2	<1	<2
	5/3/00	<1	<5	<1	<1	<1	NA	<2	<1	<2
	7/5/00	<1	<5	<1	<1	<1	NA	<2	<1	<2
	10/19/00	<1	<5	<1	<1	<1	NA	<2	<1	<2
San Marcos Springs (LR-67-01-801)	8/31/00	NA	<5	NA	NA	<2	NA	<2	<5	<2
S.M.S. "Deep" (LR-67-01-819)	2/2/00	<10	<1.1	NA	<1.4	<1	NA	<10	NA	NA
S.M.S. "Johnny" (LR-67-01-820)	2/2/00	<10	<1.1	NA	<1.4	<1	NA	<10	NA	NA
	3/10/00	<1	<5	<1	<1	<1	NA	<2	<1	<2
San Pedro Springs (AY-68-36-6XX)	11/16/00	NA	<5	NA	NA	<2	NA	<2	<5	<2

S.M.S. = San Marcos Springs
NA = not anaylzed

Analytical data for volatile organic compounds in water from springs discharging from the Edwards Aquifer, 2000.

State Well Number	Date Sampled	Naphthalene (µg/L)	Phenathrene (µg/L)	Pyrene (µg/L)	Styrene (µg/L)	1,1,1,2-Tetrachloroethane (µg/L)	1,1,2,2-Tetrachloroethane (µg/L)	Tetrachloroethene (µg/L)	Toluene (µg/L)
Comal Springs #1 (DX-68-23-301)	1/19/00	<1	<1	<1	<1	<1	<1	<1	<1
	1/21/00	<1	<1	<1	NA	NA	NA	NA	NA
	1/24/00	<1	<1	<1	NA	NA	NA	NA	NA
	1/26/00	<1	<1	<1	NA	NA	NA	NA	NA
	1/28/00	<1	<1	<1	<1	<1	<1	<1	<1
	2/4/00	<1	<0.5	<0.2	<1	<1	<1	<1	<1
	2/7/00	<1	<1	<1	<1	<1	<2	<1	<1
	2/15/00	<1	<1	<1	<1	<1	<2	<1	<1
	2/24/00	<1	<1	<1	NA	NA	NA	NA	NA
	3/1/00	<1	<1	<1	<1	<1	<2	<1	<1
	3/23/00	<1	<1	<1	<1	<1	<2	<1	<1
	4/17/00	<1	<1	<1	<1	<1	<2	<1	<1
	5/3/00	<1	<1	<1	<1	<1	<2	<1	<1
	7/5/00	<0.5	<0.2	<0.1	<1	<1	<2	<1	<1
	10/19/00	<0.5	<0.2	<0.1	<1	<1	<2	<1	<1
Comal Springs #3A	1/19/00	<1	<1	<1	<1	<1	<2	<1	<1
	1/21/00	<1	<1	<1	NA	NA	NA	NA	NA
	1/24/00	<1	<1	<1	NA	NA	NA	NA	NA
	1/26/00	<1	<1	<1	<1	<1	<1	<1	<1
	1/28/00	<1	<1	<1	<1	<1	<2	<1	<1
	2/4/00	<1	<1	<1	<1	<1	<2	<1	<1
	2/7/00	<1	<1	<1	NA	NA	NA	NA	NA
	2/9/00	<0.5	<0.2	<0.1	<1	<1	<2	<1	<1
	2/15/00	<1	<1	<1	<1	<1	<2	<1	<1
	2/24/00	<1	<1	<1	<1	<1	<2	<1	<1
	3/1/00	<1	<1	<1	<1	<1	<2	<1	<1
	3/23/00	<1	<1	<1	<1	<1	<2	<1	<1
	4/17/00	<1	<1	<1	<1	<1	<2	<1	<1
	5/3/00	<0.5	<0.2	<0.1	<1	<1	<1	<1	<1
	7/5/00	<1	<1	<1	<1	<1	<2	<1	<1
Comal Springs #4	2/8/00	<1	<1	<1	<1	<1	<2	<1	<1
Comal Springs #5	2/8/00	<1	<1	<1	NA	NA	NA	NA	NA
Comal Springs #6 (D)	2/8/00	<1	<1	<1	NA	NA	NA	NA	NA
Comal Springs #7	1/19/00	<1	<1	<1	NA	NA	NA	NA	NA
	1/24/00	3.4	<1	<1	NA	NA	NA	NA	NA
	1/26/00	4.7	<1	<1	<1	<1	<1	<1	<1
	1/28/00	6.9	<0.5	<0.2	<1	<1	<1	<1	<1
	2/4/00	<1	<1	<1	<1	<1	<2	<1	<1
	2/7/00	<0.5	<0.2	<0.1	<1	<1	<2	<1	<1
	2/15/00	<1	<1	<1	<1	<1	<2	<1	<1
	2/24/00	<1	<1	<1	<1	<1	<2	<1	<1
	3/1/00	<1	<1	<1	<1	<1	<2	<1	<1
	3/23/00	<1	<1	<1	<1	<1	<2	<1	<1
	4/17/00	<1	<1	<1	<1	<1	<2	<1	<1
	5/3/00	<1	<1	<1	NA	NA	NA	NA	NA
	7/5/00	<1	<1	<1	NA	NA	NA	NA	NA
Comal Springs "E"	2/8/00	<1	<1	<1	NA	NA	NA	NA	NA
Hueco Springs (DX-68-15-901)	1/20/00	<1	<1	<1	NA	NA	NA	NA	NA
	1/26/00	1.8	<1	<1	NA	NA	NA	NA	NA
	1/28/00	2.6	<1	<1	NA	NA	NA	NA	NA
	2/4/00	<1	<1	<1	<1	<1	<1	<1	<1
	2/9/00	<1	<1	<1	<1	<1	<2	<1	<1
	2/15/00	<1	<1	<1	<1	<1	<2	<1	<1
	2/24/00	<0.5	<0.2	<0.1	<1	<1	<2	<1	<1
	3/1/00	<1	<1	<1	<1	<1	<2	<1	<1
	3/23/00	<1	<1	<1	<1	<1	<2	<1	<1
	4/17/00	<1	<1	<1	<1	<1	<2	<1	<1
	5/3/00	<1	<1	<1	<1	<1	<2	<1	<1
	7/5/00	<1	<1	<1	<1	<1	<2	<1	<1
	10/19/00	<1	<1	<1	<1	<1	<2	<1	<1
San Marcos Springs (LR-67-01-801)	8/31/00	NA	NA	NA	<1	<1	<1	<1	<1
S.M.S. "Deep" (LR-67-01-819)	2/2/00	<10	<10	<10	<1.5	<1.4	<1.6	<1.2	<1.1
S.M.S. "Johnny" (LR-67-01-820)	2/2/00	<10	<10	<10	<1.5	<1.4	<1.6	<1.2	<1.1
	3/10/00	<1	<1	<1	<1	<1	<2	<1	<1
San Pedro Springs (AY-68-36-6XX)	11/16/00	NA	NA	NA	<1	<1	<1	<1	<1

S.M.S. = San Marcos Springs
NA = not anaylzed

Analytical data for volatile organic compounds in water from springs discharging from the Edwards Aquifer, 2000.

State Well Number	Date Sampled	1,2,4-Trichloro benz ene (µg/L)	1,1,1-Trichloroethane (µg/L)	1,1,2-Trichloroethane (µg/L)	Trichloroethene (µg/L)	Trichloro fluoro methane (µg/L)	1,2,3-Trichloro propane (µg/L)	Vinyl acetate (µg/L)	Vinyl chloride (µg/L)	o-Xylene (µg/L)	m,p-Xylenes (µg/L)
Comal Springs #1 (DX-68-23-301)	1/19/00	<1	<1	<1	<1	<1	<1	<20	<2	<1	<1
	1/21/00	NA	NA	NA	NA	NA	NA	NA	NA	<1	<1
	1/24/00	NA	NA	NA	NA	NA	NA	NA	NA	<1	<1
	1/26/00	NA	NA	NA	NA	NA	NA	NA	NA	<1	<1
	1/28/00	NA	<1	<1	NA	<2	<1	NA	<2	<1	<1
	2/4/00	<1	<1	<1	<1	<1	<1	<20	<2	<1	<1
	2/7/00	<2	<1	<1	<1	<1	<1	NA	<2	<1	<1
	2/15/00	<2	<1	<1	<1	<1	<1	NA	<2	<1	<1
	2/24/00	NA	NA	NA	NA	NA	NA	NA	NA	<1	<1
	3/1/00	<2	<1	<1	<1	<1	<1	NA	<2	<1	<1
	3/23/00	<2	<1	<1	<1	<1	<1	NA	<2	<1	<1
	4/17/00	<2	<1	<1	<1	<1	<1	NA	<2	<1	<1
	5/3/00	<2	<1	<1	<1	<1	<1	NA	<2	<1	<1
	7/5/00	<2	<1	<1	<1	<1	<1	NA	<2	<1	<1
	10/19/00	<2	<1	<1	<1	<1	<1	NA	<2	<1	<1
Comal Springs #3A	1/19/00	<2	<1	<1	<1	<1	<1	NA	<2	<1	<1
	1/21/00	NA	NA	NA	NA	NA	NA	NA	NA	<1	<1
	1/24/00	NA	NA	NA	NA	NA	NA	NA	NA	<1	<1
	1/26/00	NA	<1	<1	NA	<2	<1	NA	<2	<1	<1
	1/28/00	<2	<1	<1	<1	<1	<1	NA	<2	<1	<1
	2/4/00	<2	<1	<1	<1	<1	<1	NA	<2	<1	<1
	2/7/00	NA	NA	NA	NA	NA	NA	NA	NA	<1	<1
	2/9/00	<2	<1	<1	<1	<1	<1	NA	<2	<1	<1
	2/15/00	<2	<1	<1	<1	<1	<1	NA	<2	<1	<1
	2/24/00	<2	<1	<1	<1	<1	<1	NA	<2	<1	<1
	3/1/00	<2	<1	<1	<1	<1	<1	NA	<2	<1	<1
	3/23/00	<2	<1	<1	<1	<1	<1	NA	<2	<1	<1
	4/17/00	<2	<1	<1	<1	<1	<1	NA	<2	<1	<1
	5/3/00	<1	<1	<1	<1	<1	<1	<20	<2	<1	<1
	7/5/00	<2	<1	<1	<1	<1	<1	NA	<2	<1	<1
Comal Springs #4	2/8/00	<2	<1	<1	<1	<1	<1	NA	<2	<1	<1
Comal Springs #5	2/8/00	NA	NA	NA	NA	NA	NA	NA	NA	<1	<1
Comal Springs #6 (D)	2/8/00	NA	NA	NA	NA	NA	NA	NA	NA	<1	<1
Comal Springs #7	1/19/00	NA	NA	NA	NA	NA	NA	NA	NA	<1	<1
	1/24/00	NA	NA	NA	NA	NA	NA	NA	NA	1.8	3.6
	1/26/00	NA	<1	<1	NA	<2	<1	NA	<2	5.4	11
	1/28/00	<1	<1	<1	<1	<1	<1	<20	<2	3.6	8.7
	2/4/00	<2	<1	<1	<1	<1	<1	NA	<2	<1	<1
	2/7/00	<2	<1	<1	<1	<1	<1	NA	<2	<1	<1
	2/15/00	<2	<1	<1	<1	<1	<1	NA	<2	<1	<1
	2/24/00	<2	<1	<1	<1	<1	<1	NA	<2	<1	<1
	3/1/00	<2	<1	<1	<1	<1	<1	NA	<2	<1	<1
	3/23/00	<2	<1	<1	<1	<1	<1	NA	<2	<1	<1
	4/17/00	<2	<1	<1	<1	<1	<1	NA	<2	<1	<1
	5/3/00	NA	NA	NA	NA	NA	NA	NA	NA	<1	<1
	7/5/00	NA	NA	NA	NA	NA	NA	NA	NA	<1	<1
Comal Springs "E"	2/8/00	NA	NA	NA	NA	NA	NA	NA	NA	<1	<1
Hueco Springs (DX-68-15-901)	1/20/00	NA	NA	NA	NA	NA	NA	NA	NA	<1	<1
	1/26/00	NA	NA	NA	NA	NA	NA	NA	NA	<1	<1
	1/28/00	NA	NA	NA	NA	NA	NA	NA	NA	<1	<1
	2/4/00	NA	<1	<1	NA	<2	<1	NA	<2	<1	<1
	2/9/00	<2	<1	<1	<1	<1	<1	NA	<2	<1	<1
	2/15/00	<2	<1	<1	<1	<1	<1	NA	<2	<1	<1
	2/24/00	<2	<1	<1	<1	<1	<1	NA	<2	<1	<1
	3/1/00	<2	<1	<1	<1	<1	<1	NA	<2	<1	<1
	3/23/00	<2	<1	<1	<1	<1	<1	NA	<2	<1	<1
	4/17/00	<2	<1	<1	<1	<1	<1	NA	<2	<1	<1
	5/3/00	<2	<1	<1	<1	<1	<1	NA	<2	<1	<1
	7/5/00	<2	<1	<1	<1	<1	<1	NA	<2	<1	<1
	10/19/00	<2	<1	<1	<1	<1	<1	NA	<2	<1	<1
San Marcos Springs (LR-67-01-801)	8/31/00	NA	<1	<1	<1	<1	<1	NA	<2	<1	<1
S.M.S. "Deep" (LR-67-01-819)	2/2/00	NA	<1	<1.1	<1	<1	<1.3	NA	<1.5	<1.4	<2.3
S.M.S. "Johnny" (LR-67-01-820)	2/2/00	NA	<1	<1.1	<1	<1	<1.3	NA	<1.5	<1.4	<2.3
	3/10/00	<2	<1	<1	<1	<1	<1	NA	<2	<1	<1
San Pedro Springs (AY-68-36-6XX)	11/16/00	NA	<1	<1	<1	<1	<1	NA	<2	<1	<1

S.M.S. = San Marcos Springs
NA = not anaylzed