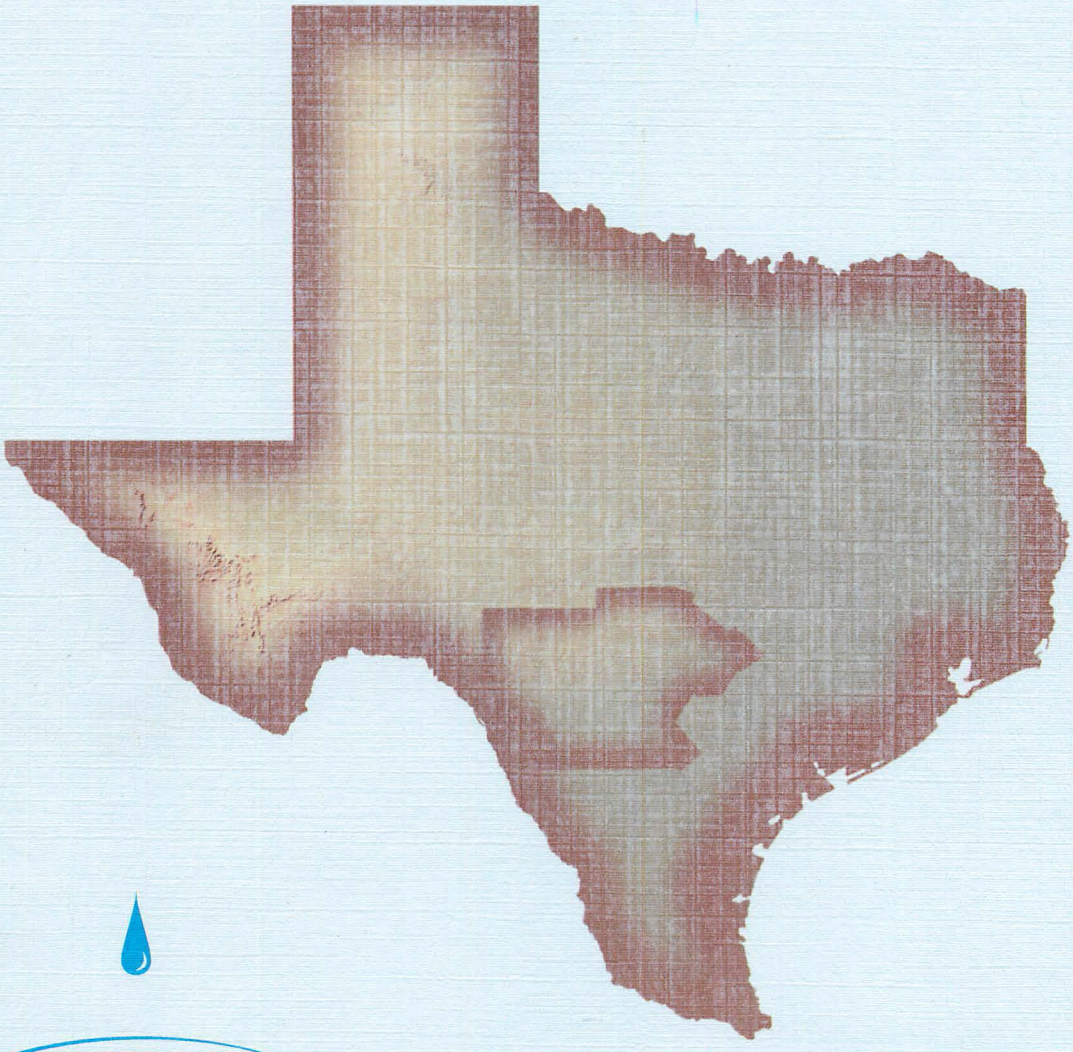
EDWARDS AQUIFER AUTHORITY

HYDROLOGIC DATA REPORT FOR 2003



EDWARDS AQUIFER
AUTHORITY

REPORT 04-02

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EDWARDS AQUIFER AUTHORITY HYDROLOGIC DATA REPORT FOR 2003

Compiled by:

J. Mark Hamilton, Senior Hydrogeologist
Steve Johnson, Senior Hydrogeologist
Roberto Esquilin, Hydrogeologist
Emily L. Thompson, Environmental Coordinator
Andrew Wiatrek, Environmental Science Technician
Gizelle Luevano, Environmental Science Technician
David Gregory, Environmental Science Technician
Chanda Burgoon, Environmental Science Technician
Jesse Mireles, Gauging System Specialist
Ron Gloyd, Gauging System Technician
Joseph Sterzenback, Gauging System Technician
Ramiro Mendoza, Gauging System Technician
John R. Hoyt, Aquifer Science Program Manager
Earl Parker, Investigations & Monitoring Program Manager

Geary M. Schindel, Chief Technical Officer

June 2004

1615 N. St. Mary's
San Antonio, Texas 78215

http://www.edwardsaquifer.org

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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, which is the subject of this report, 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 primary source of water for approximately 1.7 million people in the region and provides most of the water for agriculture and industry. In addition, the aquifer discharges through a series of large springs that provide aquatic habitat for a number of threatened and endangered species. Springflow also provides a significant portion of water for downstream 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) as a special regional management district in charge of the San Antonio segment of the Edwards Aquifer. The Authority's jurisdictional area encompasses all or parts of eight counties 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 15 districts across the Authority's 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 the South Central Texas Water Advisory Committee (SCTWAC) to interact with the Authority when issues related to downstream water rights are being addressed.

The Legislature mandated that the Authority take all necessary measures to effectively manage the resource to ensure domestic and municipal water supplies, to promote the operation of existing agriculture and industry, to protect terrestrial and aquatic habitat, and to sustain 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 report presents the results of the Authority's Edwards Aquifer data collection program for calendar year 2003. The Authority and cooperating agencies collected a wide variety of data regarding the Edwards Aquifer including water levels, water quality samples, precipitation measurements, and stream and spring discharges. In addition, the report contains historical annual data for the period of record (1934-2003). Chapters 2 through 7 describe each type of data that were collected, and Chapter 8 contains a summary of the 2003 data. Chapters 9 and 10 contain definitions and references, respectively.

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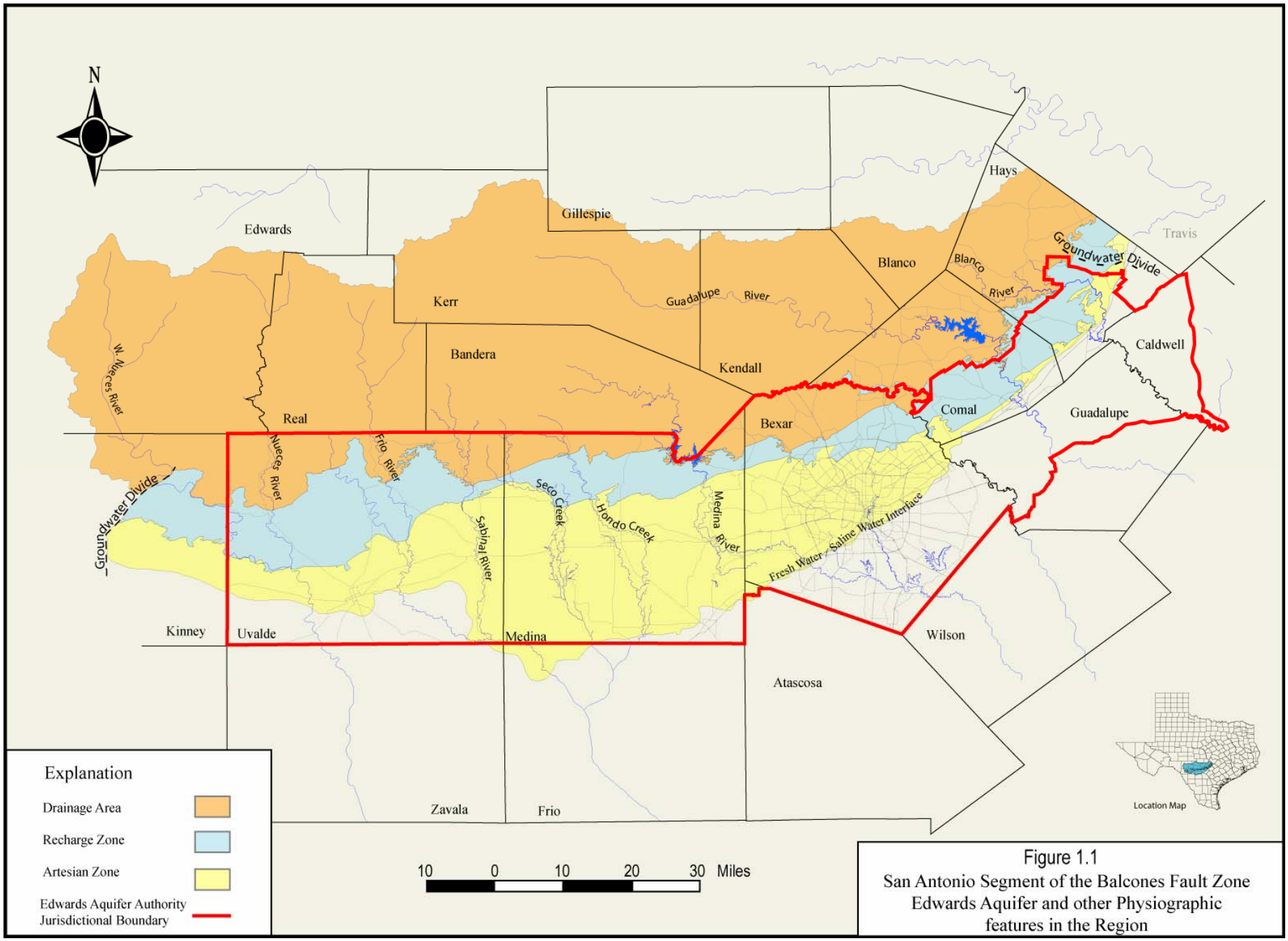


Figure 1.1
San Antonio Segment of the Balcones Fault Zone
Edwards Aquifer and other Physiographic features in the Region

2.0 HYDROGEOLOGY OF THE EDWARDS AQUIFER

The Balcones Fault Zone Edwards Aquifer in south central Texas is one of the largest and most important karst aquifer systems in the United States. Generally, the water quality in the aquifer is among the best in the United States. The aquifer extends through parts of Kinney, Uvalde, Medina, Frio, Atascosa, Bexar, Comal, Guadalupe, and Hays counties and covers an area approximately 180 miles long and 5 to 40 miles wide. The aquifer is the primary water source for much of this area including the City of San Antonio. Historically, the cities of Uvalde, San Antonio, New Braunfels, and San Marcos 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 Edwards Aquifer is the principal source of water for agriculture and industry in the region and provides springflow required for endangered species habitat, as well as for recreational purposes and downstream uses in the Guadalupe and San Marcos River basins.

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 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 depths 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 circulates through the Edwards Aquifer as part of the hydrologic cycle from recharge areas to discharge points (springs and wells). There are approximately 1,250 square miles of Edwards Limestone exposed at the ground surface, which comprises the recharge zone of the aquifer. Streams flow south from the drainage area (the Texas Hill Country) and lose all or most of their baseflow as they cross the recharge zone. In addition, a portion of the rainfall that falls directly on the recharge zone also enters 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; and San Marcos Springs in Hays County. In addition, domestic, municipal, agricultural, and industrial wells throughout the region withdraw water from the aquifer. The residence time of water 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. It is one of the most productive groundwater systems in the United States, characterized by extremely productive water wells and high spring discharges. The aquifer exhibits extremely high (cavernous) porosity and permeability which is characteristic of many karst aquifers. In contrast, aquifers that occur in sand and gravel or in other rock types, such as sandstone, have a much lower permeability. The Edwards Aquifer transmits very large volumes of water, enabling groundwater levels to respond quickly to rainfall (recharge) events.

Historically, water quality in the Edwards Aquifer has been protected by its great depth below population centers and undeveloped land in the recharge zone and drainage area. However; there are many potential threats to the quality of water in the aquifer from various sources including the transport and use of hazardous materials and other chemicals on the

recharge zone, abandoned water wells, and urban non-point runoff. The high porosity and permeability of the Edwards Aquifer allows inflow of contaminants from the ground surface with little or no filtration.

3.0 GROUNDWATER LEVELS

The Authority currently maintains a groundwater level monitoring network from eastern Kinney County to central Hays County. **Figures 3.1 and 3.1a** indicate the locations of the Authority's observation well network within the Edwards Aquifer region. The water level observation network includes both the water table (unconfined) and the artesian (confined) zones of the Edwards Aquifer. Water levels are monitored through manual measurements, and continuous recorders. All water level measurements are recorded in feet above mean sea level (msl). Many of the wells have at least partial historical records dating back to the 1930s. Water levels were measured manually until the United States Geological Survey (USGS) introduced continuous water level recorders in some of the observation wells in the 1930s. In more recent years, electronic data loggers installed and maintained by the Authority are replacing the old drum-type recorders.

In 2003, the Authority's Water Level Data Collection Program consisted of 41 continuous recorder-equipped observation wells and 16 periodic manually measured observation wells. The continuous recorders measure water levels at 15-minute intervals using a float device, bubbler or a pressure transducer. The data are recorded by the equipment at the site and then downloaded during a periodic site inspection or by modem. To augment the water level observation network, Authority staff measures water levels at 16 observation wells on a monthly basis and approximately 150-170 additional wells under a synoptic water level monitoring program three times each year. These periodic measurements are made manually with steel tape and electric line measuring devices. Water level data collected by the Authority are forwarded to interested 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. Water level monitoring of the Edwards Aquifer and associated hydrogeologic units add to the base of scientific knowledge and helps in the management of this regional water resource.

Historical water level trends, precipitation measurements, and discharges from springs and wells are used as a basis for projections of future aquifer level and spring discharge trends. Rising water levels generally indicate that the amount of water recharging the aquifer is greater than the amount being discharged through springs and wells. During droughts or when there is a high demand for water, water levels and springflows generally decline which indicates 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 across the region.

Water levels are typically highest in the spring and then decline during the summer before rebounding in the fall and winter. During 2003, water levels generally declined between January and early June. Rainfall in June and July reversed the trend of falling water levels. Subsequent rains through the remainder of the year maintained water levels at above average levels with minimal fluctuations. As indicated on **Figure 3.2**, the maximum decrease in water levels at the Bexar County index well J-17 (AY-68-37-203) in 2003 was 23.2 feet from 694.8 feet above msl on January 1st to 671.6 feet above msl on June 2nd. Water levels then increased 12.9 feet during the period between June 2nd and July 20th (from 671.6 feet above msl to 684.5 feet above msl). For the remainder of the year, water levels did not fluctuate greatly (6.7 feet of total fluctuation at J-17 between July 20th and the end of the year). Similar water level behaviors were seen in most of the index wells during the year **(Appendix A)**.

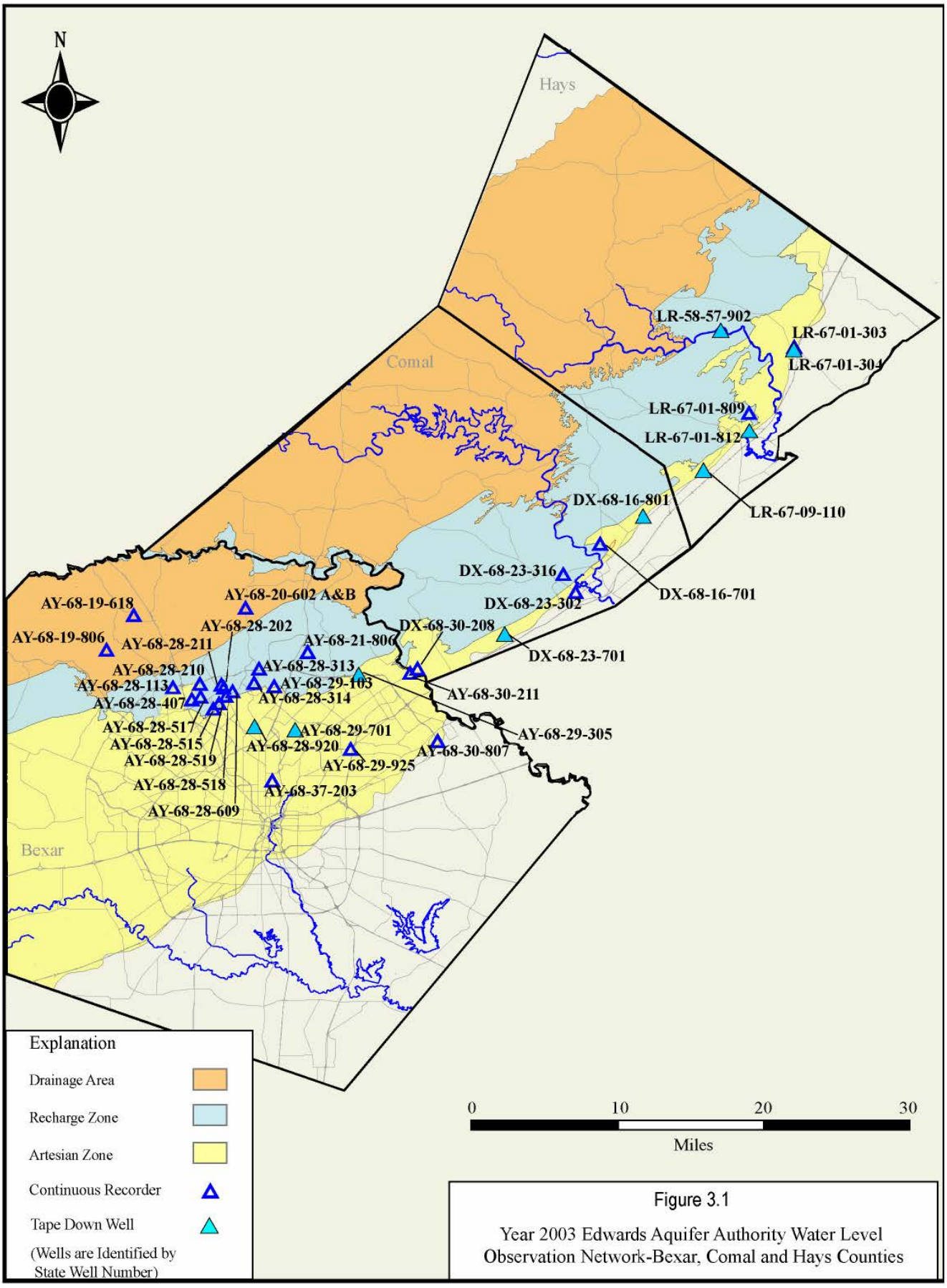


Figure 3.1

Year 2003 Edwards Aquifer Authority Water Level Observation Network-Bexar, Comal and Hays Counties

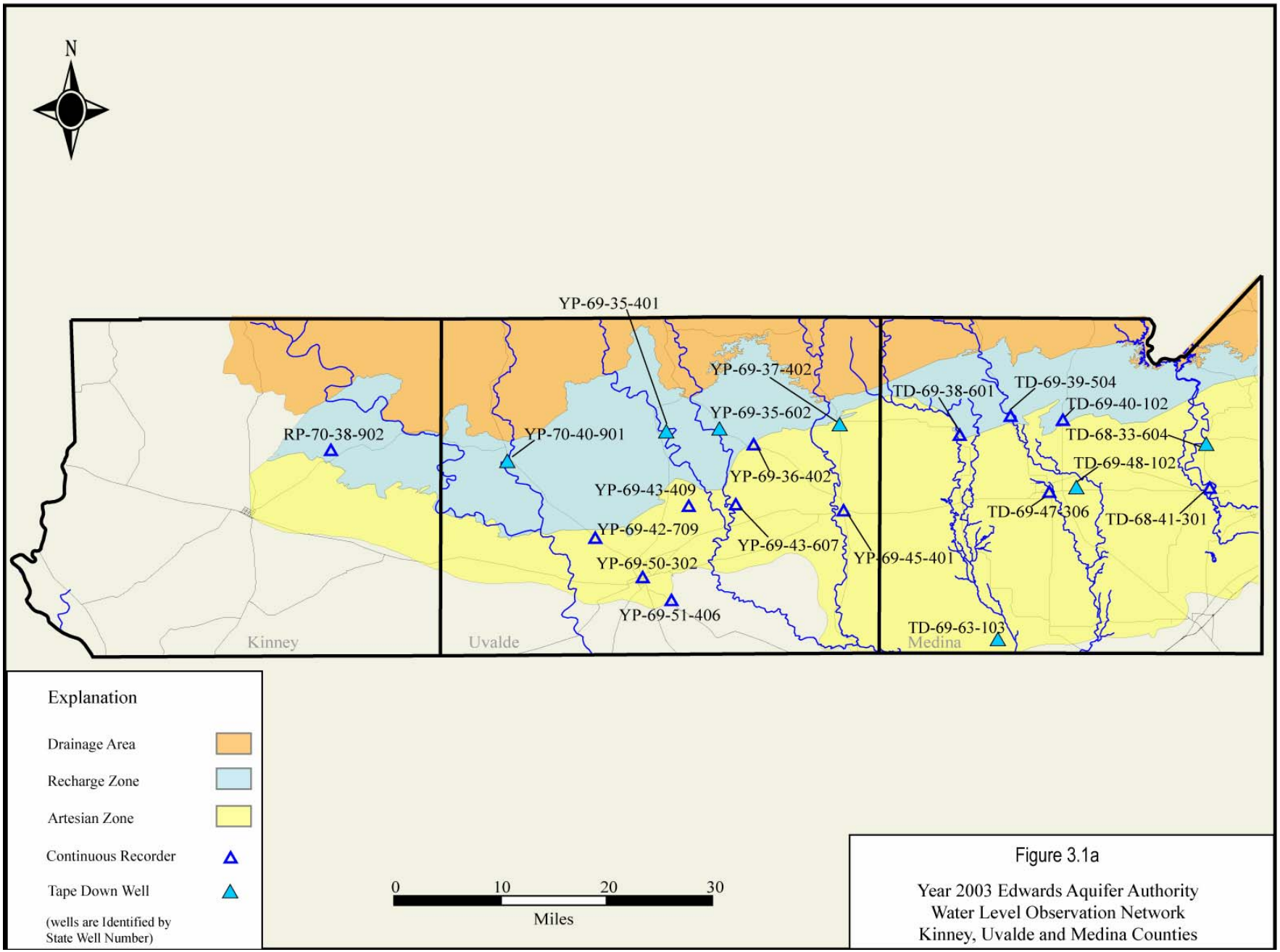


Figure 3.1a

Year 2003 Edwards Aquifer Authority
Water Level Observation Network
Kinney, Uvalde and Medina Counties

Table 3.1 Highest and lowest recorded water levels for selected observation wells in the San Antonio Segment of the Edwards Aquifer, 1934-2003 (measured in feet above Mean Sea Level).

	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]	
Year	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)

	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]	
Year	**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
2001	877.2	872.7	713.4	685.9	682.8	652.8	628.3	624.5	563.9	544.6
2002	883.2	876.3	732.7	685.8	697.9	650.0	630.2	624.6	589.3	554.4
2003	883.3	877.9	729.5	696.7	694.8	671.6	629.9	627.5	604.2	537.6
Average	High	Low	High	Low	High	Low	High	Low	High	Low
	872.9	864.1	702.7	673.1	676.2	652.0	626.8	623.5	582.7	565.3
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	604.2	540.4
Month	June	April	June	Aug.	June	Aug.	June	Aug.	Jan.	July
Year	1987	1957	1992	1956	1992	1956	1992	1956	2003	1978

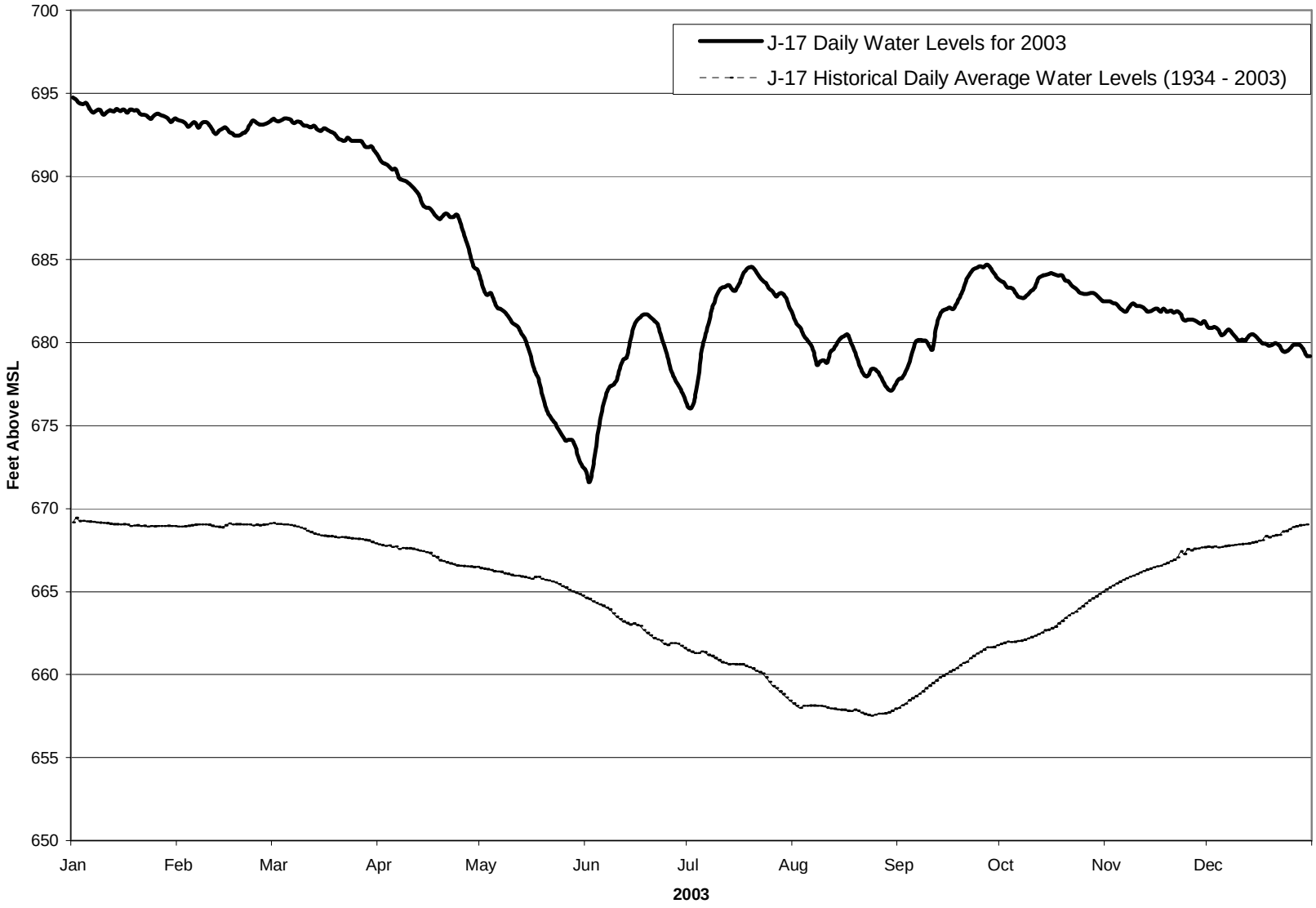
Data source: Edwards Aquifer Authority, 2003.
[a] Continuous monitoring equipment established on October 24, 1940.
[b] Continuous monitoring equipment established on May 25, 1950.
[c] Continuous monitoring equipment established on January 1, 1963.
[d] Continuous monitoring equipment established on November 4, 1948.
[e] Values based on monthly tape down measurements (No continuous monitoring equipment installed in this well).

Aquifer water levels at J-17 remained above the historical average for the year, as did springflow at Comal Springs, however; springflow at San Marcos Springs dropped to just below average by late November. **Figure 3.2** compares the J-17 average daily water level for the period of record with water levels for the year 2003. The highest water level observed at J-17 in 2003 was 694.8 feet msl on January 1st and the lowest level was 671.6 feet msl on June 2nd. **Tables A-1** through **A-6** in **Appendix A** provide a summary of 2003 water levels for selected observation wells.

Generally, springflows at Comal and San Marcos springs were very high for the first six-months of the year, based on United States Geological Survey (USGS) discharge measurements. In 2003, springflows at Comal and San Marcos springs reached lows of 351 cubic feet per second (cfs) and 156 cfs, respectively. Springflows declined slowly at Comal Springs between January and June, and varied only slightly (approximately 50 cfs) throughout the remainder of the year. San Marcos Springs generally declined in flow volume throughout the year, starting at 320 cfs on January 1, 2003 and ending the year at 156 cfs on December 31, 2003.

Appendix B contains the 2003 hydrographs, with precipitation measurements, for the index wells in Bexar, Medina, and Uvalde counties. **Appendix B** also contains the 2003 hydrographs, with precipitation measurements, for Comal and San Marcos springs in Comal and Hays counties, respectively. The hydrographs indicate the periods of relatively lower and relatively higher water levels and show that water levels in the Edwards Aquifer respond rapidly to rainfall events.

Figure 3.2 Comparison of the historical daily average water level for the period of record 1934-2003 and the daily high water level at the Bexar County index well, J-17 (AY-68-37-203)



4.0 PRECIPITATION

4.1 Precipitation in the Edwards Aquifer Region

The San Antonio region is situated between the arid Chihuahuan Desert area to the west and a wetter more humid Coastal Plain to the east. Consequently, the average annual precipitation ranges from approximately 20 inches in the western part of the region to approximately 32 inches in the eastern part of the region. The average annual precipitation for San Antonio is approximately 30 inches, although annual precipitation has ranged from 13.70 to 52.28 inches since 1934 (United States Department of Commerce, 2003). Aquifer water levels and springflow respond quickly to precipitation, decreasing during periods of low precipitation, and increasing during periods of high precipitation.

Precipitation data are used to calculate recharge to the Edwards Aquifer, to monitor any precipitation trends that may affect recharge to the aquifer, to evaluate the effectiveness of the Authority's Precipitation Enhancement Program (see Section 4.2), and to investigate groundwater flowpaths by correlating rainfall and water-level responses in wells. Precipitation data are gathered from the Authority's real-time network rain gauge stations, the National Oceanic and Atmospheric Administration (NOAA) weather stations, and the USGS rain gauge stations located throughout the region. **Figure 4.1** shows the locations of precipitation gauging stations used by the Authority to monitor precipitation in 2003.

Table 4.1 lists annual precipitation for selected rain gauges in the region. **Table 4.2** shows monthly measurements for 2003 at selected rain gauge stations across the region. **Table 4.3** lists monthly totals for rainfall at each of the real-time network rain gauge stations. In 2003, the Authority's real-time network included the 56 rain gauge sites indicated on **Figure 4.1**. Most, but not all of the rain gauge stations are on the recharge zone and drainage area.

The amount of rainfall received in San Antonio in 2003 was approximately 94 percent of average. Average precipitation in San Antonio for the period between 1934 and 2003 is 30.41 inches. In 2003, the total precipitation measured at the San Antonio International Airport was 28.45 inches, 1.96 inches below average. **Figure 4.2** is a graph of precipitation data for San Antonio from 1934 to 2003.

Regional rainfall in 2003 varied with respect to averages from nearly 30 percent below average in New Braunfels to approximately 21 percent above average in Hondo. Specifically, New Braunfels (Comal County) recorded 23.42 inches of rainfall, approximately 29 percent below the annual average of 33.07 inches. Hondo (Medina County) recorded 34.7 inches of rainfall, approximately 21 percent above the annual average of 28.68 inches. San Marcos (Hays County) recorded 25.74 inches of rainfall, approximately 25 percent below the annual average of 34.48 inches. Uvalde (Uvalde County) recorded 23.39 inches of rainfall, approximately 2 percent below the annual average of 23.39 inches.

Rainfall amounts across the region for 2003 were generally below average except in Hondo, where rainfall was well above average. Rainfall events were generally coincident with historically high demand periods, resulting in decreased demand for outdoor water use. Rainfall events in 2003 generally did not result in problematic flooding such as occurred in 2002.

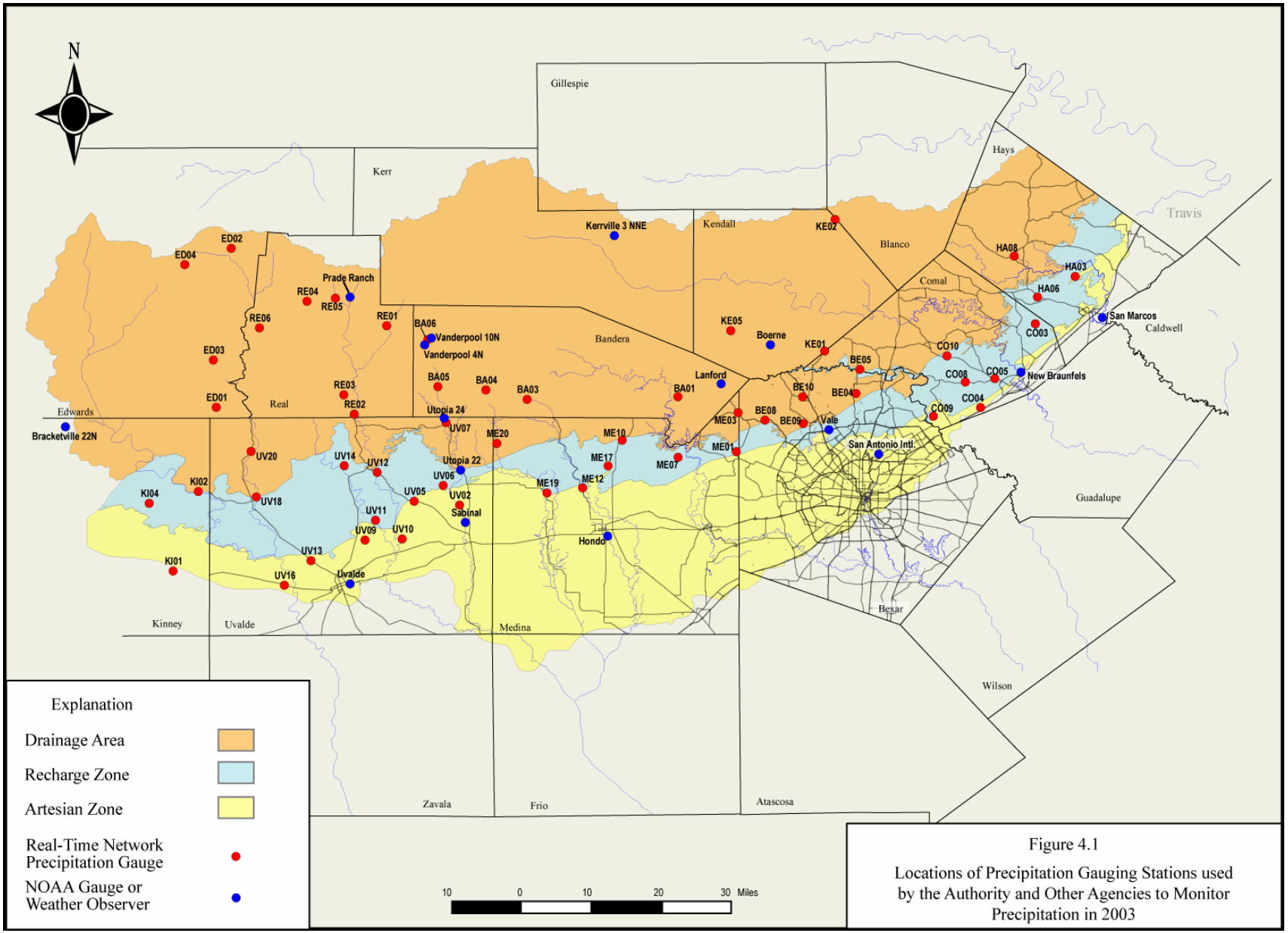


Figure 4.1

Locations of Precipitation Gauging Stations used by the Authority and Other Agencies to Monitor Precipitation in 2003

Figure 4.2 Annual precipitation and average precipitation for San Antonio, 1934-2003.

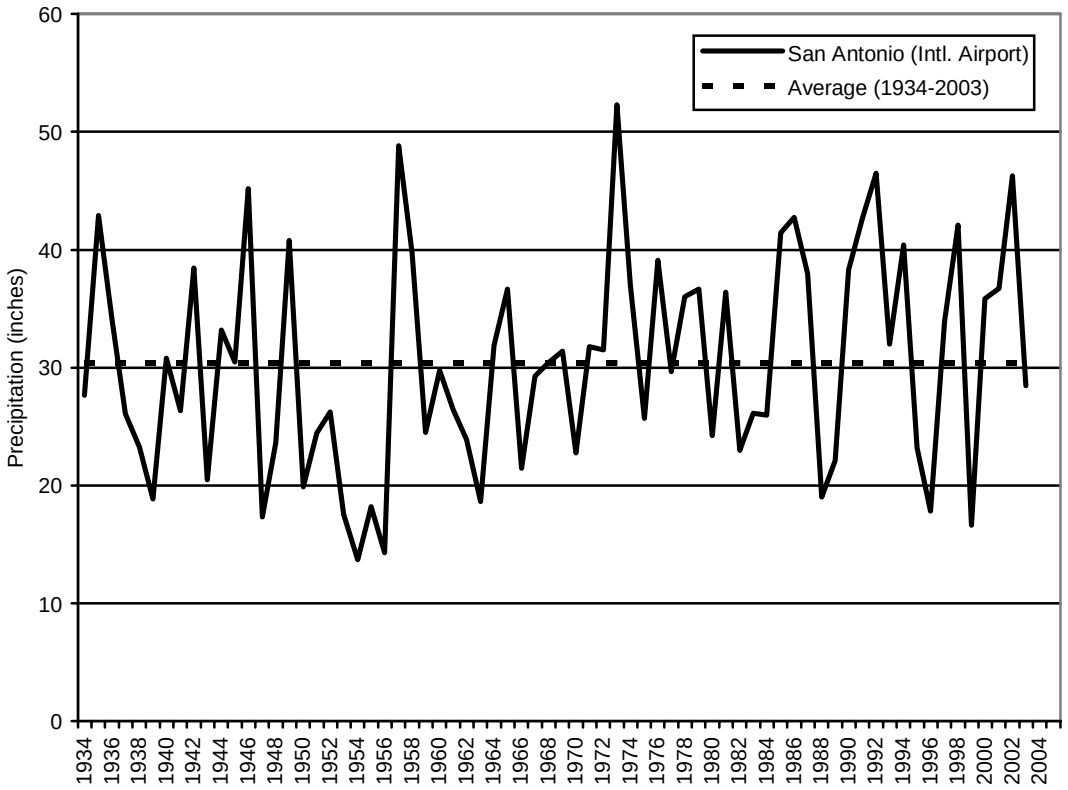


Table 4.1 Annual precipitation for selected rain gauges in the Edwards Aquifer region, 1934-2003 (measured in inches).

Year	Brackettville	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	8.26b
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	Brackettville	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
2001	18.40	26.02	25.87	30.59	36.72	53.91	37.91	42.41
2002	---	36.79	35.75	44.70	46.27	63.2	43.60	46.16
2003	25.19[c]	23.39	24.86	34.70	28.45	28.55	23.42	25.74
Years of Record (shown)	65	70	67	70	70	69	70	70
Annual Average	21.57	23.90	24.03	28.68	30.41	34.07	33.07	34.48

Data source: US Department of Commerce (2003), NOAA (1934-2003).
a Indicates partial record not included in long-term average; missing one month.
b Indicates partial record not included in long-term average; missing more than one month.
c Indicates a change in gauge location from previous years. Only one year of record available, used 1936-2001 data for previous gauge location for historical average.
--- indicates no data available.
(NOAA records may exceed the period of record shown in Table 4.1 for some locations)

Table 4.2 Monthly precipitation data from selected Edwards Aquifer Authority and National Oceanic and Atmospheric Administration precipitation gauging stations, 2003 (measured in inches).

Gauge	County	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sep	Oct	Nov	Dec	Total
San Antonio Intl. Airport	Bexar	0.99	2.15	0.77	0.17	0.12	2.90	8.12	1.65	9.21	1.94	0.32	0.11	28.45
Vale	Bexar	0.90	2.10	0.85	0.00	0.00	4.80	6.30	0.60	5.75	2.25	0.15	0.00	23.70
Vanderpool 10N	Bandera	0.62	1.42	1.38	0.11	0.17	6.82	4.14	1.21	3.65	3.80	1.43	0.00	24.75
Vanderpool 4N	Bandera	0.64	0.76	1.38	0.54	0.53	6.10	3.30	2.10	5.96	3.92	2.03	0.00	27.26
Landford	Bandera	1.30	2.85	0.80	0.00	0.00	5.30	4.90	1.05	3.15	2.90	0.30	0.00	22.55
New Braunfels	Comal	0.98	2.70	1.18	0.26	0.10	4.72	3.28	1.59	3.62	3.54	0.95	0.50	23.42
San Marcos	Hays	1.33	3.06	1.13	0.21	0.17	4.76	2.24	0.89	7.52	2.26	1.62	0.55	25.74
Kerrville 3 NNE	Kerr	0.70	2.47	1.34	0.21	0.67	5.98	3.24	1.78	2.57	4.21	0.59	0.16	23.92
Hondo	Medina	0.95	1.47	3.96	0.12	0.47	4.07	14.66	0.49	5.29	2.59	0.47	0.16	34.70
Brackettville 22N	Kinney	0.46	0.78	1.11	0.24	2.41	2.75	3.71	2.03	6.25	4.74	0.71	0.00	25.19
Prade Ranch	Real	0.35	2.00	1.10	0.00	1.22	3.70	9.00	2.60	5.73	4.03	2.44	0.35	32.52
Sabinal	Uvalde	0.92	1.62	0.57	0.10	1.64	4.42	8.19	0.10	4.47	2.08	0.69	0.06	24.86
Uvalde	Uvalde	0.8	0.74	0.52	0.04	0.83	4.31	7.29	0.82	3.82	1.96	2.10	0.16	23.39
Utopia 22	Uvalde	1.00	1.35	0.85	0.45	0.00	4.30	6.20	0.30	6.35	1.95	0.55	0.00	23.30

Gauge	County	Average	Total	Deviation from Average
San Antonio Intl. Airport	Bexar	30.41	28.45	-1.96
New Braunfels	Comal	33.07	23.42	-9.65
San Marcos	Hays	34.48	25.74	-8.74
Hondo	Medina	28.68	34.70	+6.02
Uvalde	Uvalde	23.90	23.39	-0.51

Table 4.3 2003 Monthly Precipitation Totals for the Real-time Network Rain Gauges

	BA01	BA03	BA04	BA05	BA06	BE04	BE05	BE08	BE09	BE10	CO03	CO04	CO05	CO08	CO09	CO10	ED01	ED02	ED03
January	1.39	0.66	0.54	0.6	0.42	1.06	1.09	1.45	1.39	1.18	1.29	0.92	1.17	0.95	0.94	1.05	0.5	0.16	0.3
February	2.41	5.42	1.61	1.00	0.84	2.58	2.35	1.93	2.39	1.67	2.84	1.85	2.20	2.13	1.62	2.11	1.35	0.68	0.52
March	1.09	3.35	2.48	1.85	1.09	0.48	0.64	0.36	0.92	0.56	1.02	0.48	0.88	0.61	0.5	0.45	1.64	1.33	1.42
April	0	0.07	0	0	0.06	0	0.03	0.04	0.04	0	0.26	0.08	0.22	0.07	0	0.07	0.13	0.24	0.14
May	0.12	0.18	0.71	1.45	0.34	0	0	0	0.24	0.07	0.07	0	0	0	0	0.07	0.3	0.4	1.18
June	4.54	12.65	5.89	5.13	5.53	3.94	4.09	6.09	4.61	3.9	6.36	4.96	6.15	5.97	3.49	5.04	9.08[H]	4.55	4.39
July	3.28	0	6.17	3.85	2.01	5.08	2.8	4.65	5.84	3.19	2.55	4.6	3.94	4.44	4.69	4.54	0.57	0	3.09
August	2.07	0.77	1.48	2.57	1.06	0.95	1.64	0.64	0.69	0.7	1.33	1	1.35	1.56	1.24	1.36	0.13	1.56	4.65
September	3.49	2.91	4.64	2.56	3.25	3.89	4.05	3.9	3.8	2.9	0.78	3.55	5.7	6.48	4.94	5.27	0.28	1.56	1.46
October	3.03	1.95	1.86	2.49	3.04	2.68	2.07	1.89	1.67	1.78	2.57	2.58	3.2	2.59	2.54	2.51	0.56	5.8	4.58
November	0.44	0.81	0.67	0.2	0.51	0.07	0.1	0.2	0.04	0.07	0.85	0.68	0.67	0.39	0.54	0.07	0.38	0.44	0.89
December	0.2	0.27	0.07	0.12	0	0.07	0.06	0	0	0	0.39	0.28	0.27	0.19	0.27	0.26	0	0	0.26
Mo. Totals	22.06	29.04	26.12	21.82	18.15	20.8	18.92	21.15	21.63	16.02	20.31	20.98	25.75	25.38	20.77	22.8	14.92	16.72	22.88

	ED04	HA03	HA06	HA08	KE01	KE02	KE05	KI01	KI02	KI04	ME01	ME03	ME07	ME10	ME12	ME17	ME19	ME20	RE01
January	0.15	1.17	1.3	0.07	1.57	0	0.73	0.52	0.38	0.32	0.88	1.62	0.72	0	0.67	1.14	0.87	0.95	0.3
February	0.37	2.97	3.44	3.62	2.69	0.00	0.75	0.45	0.41	0.40	1.66	1.90	1.20	1.21	0.87	0.96	0.98	1.32	1.26
March	0.81	0.52	0.48	0.48	0.85	0.48	1.4	0.79	0.78	2.76	0.8	0.84	1	0.07	1.38	1.63	2.27	1.18	0.94
April	0	0	0	0.03	0.11	0	0.1	0	0.03	0	0	0	0	0	0	0	0.03	0.19	0.11
May	0.51	0	0	0	0	0.43	0.13	1.73	2.07	5.55	0.2	0	0	0.07	0	0	0.07	0.11	0.38
June	1.63	3.6	4.61	3.56	4.9	5.76	4.15	3.84	2.89	6.16[H]	4.15	6.13	3.52	1.4	4.08	3.76	3.86	4.51	4.24
July	0	0.96	0	1.04	0	2.15	0	1.74	4.71	3.11	0	4.98	6.28	0	8.81	9.53	10.37	7.36	0
August	4.34	1.39	1.08	1.31	0.99	1.73	0.54	1.07	1.17	1.41	1.08	1.08	1.52	0.49	0.38	0.68	0.5	1.07	1.83
September	2	4.65	4.18	1.23	2.56	2.37	3.79	0.83	1.57	2.51	4.03	3.69	3.04	4.19	3.66	3.67	3.45	2.63	1.03
October	4.31	1.43	2.1	2.07	1.88	1.25	3.36	2.55	4.32	0.48	1.52	1.69	1.96	1.95	1.4	2.34	1.24	2.27	3.27
November	0.8	0.26	0.48	0.1	0.17	0.92	0.21	0.21	0.32	0.08	0.08	0.12	0	0.1	0	0.2	0.06	0.33	1.29
December	0	0.39	0.2	0	0.03	0.16	0	0	0	0	0.12	0.12	0	0	0	0	0.03	0	0
Mo. Totals	14.92	17.34	17.87	13.51	15.75	15.25	15.16	13.73	18.65	22.78	14.52	22.17	19.24	9.48	21.25	23.91	23.73	21.92	14.65

	RE02	RE03	RE04	RE05	RE06	UV02	UV05	UV06	UV07	UV09	UV10	UV11	UV12	UV13	UV14	UV16	UV18	UV20
January	0.3	0.48	0.28	0.28	0.26	0.59	0.86	0.81	0.66	0.36	0.35	0.72	0.89	0.35	0.51	0.32	0.5	0.38
February	0.61	0.60	1.04	1.29	0.72	0.38	0.30	0.48	1.03	0.08	0.00	0.36	0.64	0.52	0.57	0.44	0.07	0.69
March	1.5	0.96	1.73	1.37	1.81	0.5	0.34	0.68	1.56	0.16	0.3	0.24	1.04	0.33	0.58	0.48	0.07	0.62
April	0.07	0.04	0.24	0.12	0.28	0.07	0.86	0.16	0.03	0	0	0	0.82	0	0.07	0	0.11	0.11
May	0.38	0.32	0.92	1.04	1.59	0.22	0.66	0.04	0.3	0.24	0.38	0.36	1.21	0.43	1.87	1.23	1.47	0.73
June	4.12	4.01	4.81	3.63	5.94	4.77	4.06	5.18	5.11	2.2[L]	5.2[H]	4.65	7.18	3.48	5.51	3.97	5.84	3.5
July	0	0	0.88	0	0	6.99	0	6.03	3.35	1.14	2.52	4.05	3.35	5.3	0	4.43	2.65	1.89
August	2.94	2.17	1.4	2.25	5.19	0.38	1.16	0.2	1.81	0.44	3.16	1.94	0.56	0.5	0.7	0.76	0.92	1.38
September	2.77	2.21	0	3.25	4.22	1.99	3.26	2	2.81	1	1.63	2.25	3.73	2.46	4.16	3.36[H]	2.58	4.41
October	1.41	2.53	1.46	2.63	3.51	1.81	1.4	0.8	1.75	0.52	1.76	1.32	1.69	2.32	1.79	0.8	2.37	2.89
November	1.49	1.81	1.16	0.76	1	0.07	0.13	0.12	0.36	1.14	0.03	1.13	1.54	0.54	1.48	0.52	0.51	0.4
December	0	0	0.32	0.4	0.58	0	0	0	0	0	0	0	0	0	0	0	0	0
Mo. Totals	15.59	15.13	14.24	17.02	25.1	17.77	13.03	16.5	18.77	7.28	15.33	17.02	22.65	16.23	17.24	16.31	17.09	17

[H]Indicates data set may be skewed high due to equipment problems.
[L]Indicates data set may be skewed low due to equipment problems.
Rain gauge locations are shown on **Figure 4.1**.

Rainfall is summarized in **Figure 4.3** by compiling the regional data into a shaded contour-type map showing the variations in recorded rainfall across the region. The figure shows the distribution of precipitation in the Edwards Aquifer region for 2003 based on measurements from the Authority's real-time network and NOAA stations. The 2003 total rainfall ranged from less than 15-inches to more than 35-inches. Central Uvalde County, portions of southern Blanco County and central Hays County received the lowest rainfall volumes. The highest rainfall amounts were located in west central Real County, central Bandera County, central Medina County, and southern Comal County.

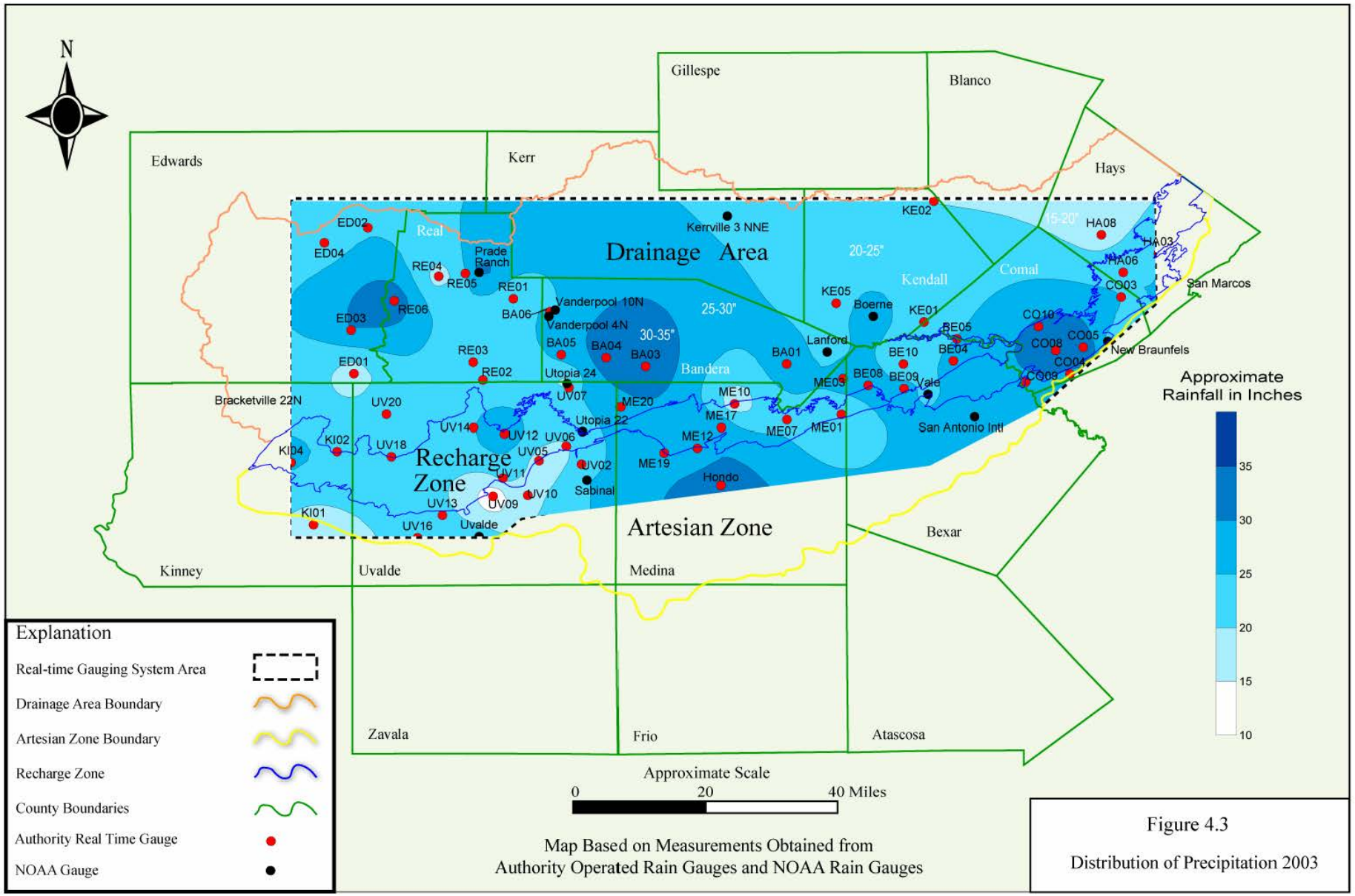


Figure 4.3

Distribution of Precipitation 2003

4.2 Precipitation Enhancement Program (PEP)

Previous research performed by weather scientists indicates that precipitation enhancement can increase rainfall by as much as 21 percent (Woodley 2002) from clouds that have been seeded, which may significantly increase recharge to the aquifer. In addition to increasing direct recharge, the increased rainfall also decreases demand for lawn watering and crop irrigation.

The Authority's board of directors voted in the fall of 1997 to pursue a permit from the Texas Commission on Environmental Quality (TCEQ) (formerly the Texas Natural Resources Conservation Commission or TNRCC) to conduct a precipitation enhancement program (PEP). 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;
- To increase the average annual quantity of water that may be withdrawn from the aquifer;
- To reduce demands from the aquifer by the increase in precipitation; and
- To reduce the periods of low water levels and resulting threatened springflows.

In October 1998 the Authority's PEP contractor, Weather Modification, Inc., (WMI) received a four-year permit (January 1999 to December 2002) from the TCEQ. The Authority's original PEP project area consisted 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. From 1999 through 2001, the Authority utilized WMI to perform weather modification services in the 12 county area.

In June 2001, the Authority, the Texas Water Development Board (TWDB), and the TCEQ initiated a study to evaluate the effectiveness of the Authority's PEP for 1999 through 2001. Woodley Weather Consultants conducted the study and concluded in the final report completed in June 2002 that the Authority's PEP had produced an additional 179,000 acre-feet of rainfall due to seeding (approximately 60,000 acre-feet per year). A finding in the report was that typical radar-predicted rainfall in South Central Texas is generally under reported. The under reporting is a function of equations used by the National Weather Service that do not take into account the tropical nature of much of the rainfall in the San Antonio area. This factor was revealed by the correlation of radar-predicted rainfall to actual rainfall recorded by the Authority's real- time network. A recommendation of the report was to allow more seeding through the use of additional aircraft or downsizing the target area to concentrate seeding.

In 2002 and 2003, the Authority contracted with South Texas Weather Modification Association to perform cloud seeding in Bandera, Bexar & Medina counties, totaling approximately 2,171,000 acres. During the same time period, the Authority contracted with Southwest Texas Rain Enhancement Association to perform cloud seeding in Uvalde County, an area of approximately 949,000 acres.

During the 2003 season, cloud seeding activities were conducted on twenty-two separate days in Bandera, Bexar, and Medina counties and on nineteen separate days in Uvalde County. In 2003, an estimated total of 21,410 grams (47.2 pounds) of silver iodide cloud seeding agent was dispersed in the four counties where cloud seeding is funded by the Authority. An independent assessment performed by Arquimedes Ruiz (2003), indicated that an additional

85,745-acre feet of rainfall was created for Bexar, Bandera and Medina counties and 36,733-acre feet of rainfall was created for Uvalde County as a result of the 2003 cloud seeding work.

5.0 Groundwater Recharge

Recharge to the Edwards Aquifer originates as precipitation on the drainage area and recharge zone. The area consists of nine drainage basins that extend across the recharge zone as indicated in **Figure 5.1**. 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

Approximately 85 percent of recharge to the Aquifer is derived from the drainage area and enters the aquifer through the bottom of losing streams as they cross the recharge zone. Approximately 15 percent of recharge is derived from direct precipitation on the recharge zone. In addition, some recharge also flows into the Edwards Aquifer from adjacent aquifers such as the Trinity Aquifer. Estimates of the contribution from adjacent hydraulically connected aquifers range 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 calculated groundwater recharge to the Edwards Aquifer since 1934. **Table 5.2** lists estimated annual recharge by river basin from 1934 through 2003, based on USGS calculations. The USGS estimates that annual recharge for the period of record (1934 to 2003) 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 2003, estimated recharge was 669,000 acre-feet. The median annual recharge for 1934 through 2003 is 559,400 acre-feet, and the median annual recharge for the last 10 years is 641,700 acre-feet. **Figure 5.2** is a graph of annual recharge and the ten-year floating median recharge estimate for the San Antonio segment of the Balcones Fault Zone Edwards Aquifer from 1934 to 2003.

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

Recharge directly increases groundwater levels in the aquifer. Water levels rise during periods of higher-than-normal recharge and generally decline during periods of below-normal recharge. The 2003 estimated recharge was approximately 20 percent above the historical median. Most of the 2003 rainfall that was sufficient to induce runoff and subsequent recharge occurred between June and October 2003. The rainfall volumes were adequate to produce enough recharge to sustain aquifer levels through the high demand months of the year.

The Authority operates four recharge structures located in the Edwards Aquifer Recharge Zone as indicated in **Figure 5.1**. Total recharge for each site is calculated using data from stage recorders located near these structures. **Table 5.3** shows the annual recharge (total recharge) for each site since construction. A total recharge volume of 1,314 acre-feet occurred at the structures in 2003.

The historical median and mean annual recharge attributed to the recharge structures is based on a period of record that reflects the date of construction through 2003. The historical median annual recharge contributed by the combined structures is 1,028 acre-feet while the historical mean annual recharge contributed by the combined structures is 4,362 acre-feet. Calendar year 2003 combined recharge volume for all four structures was approximately 28 percent above the historical median.

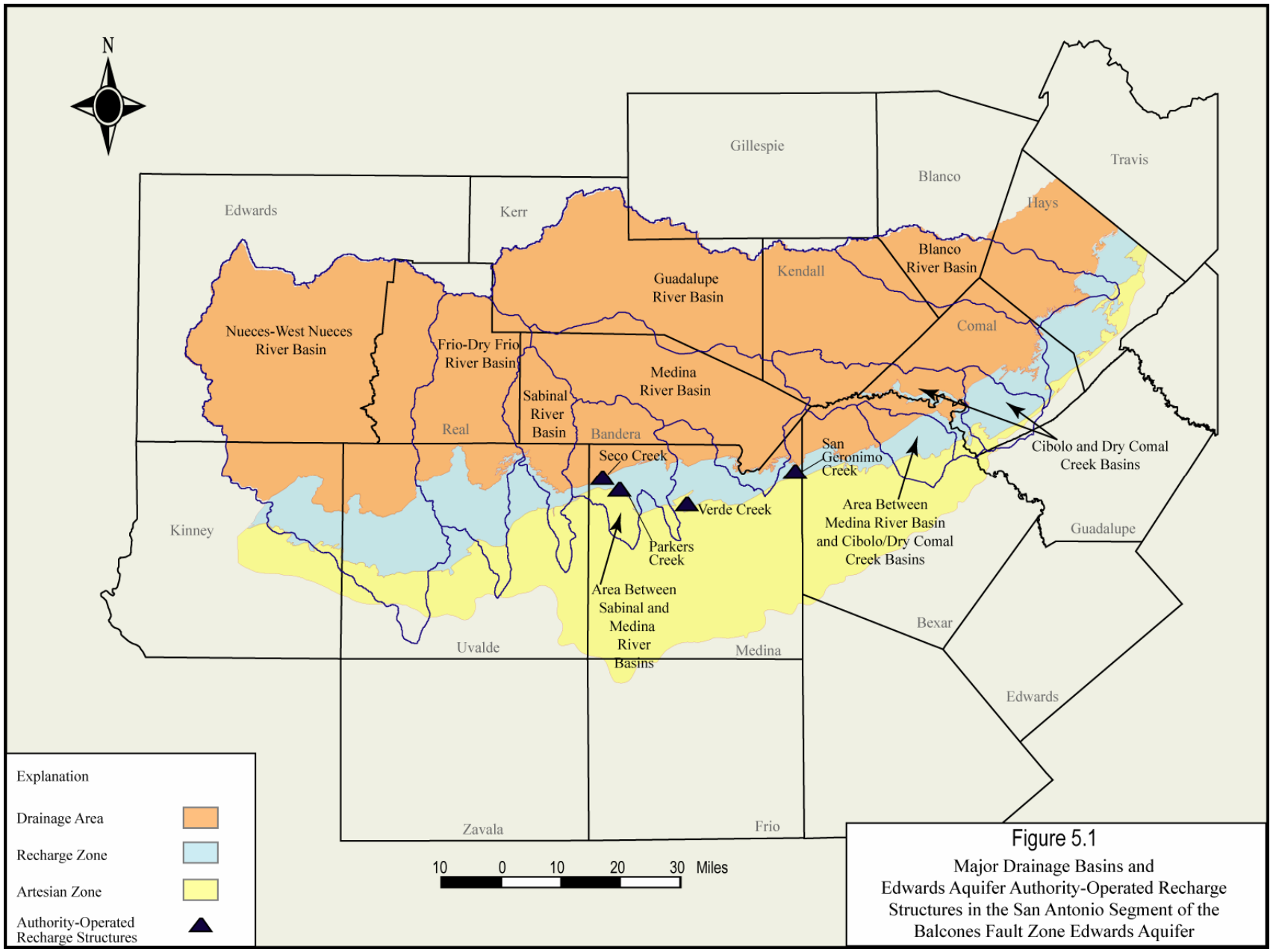


Figure 5.1
Major Drainage Basins and Edwards Aquifer Authority-Operated Recharge Structures in the San Antonio Segment of the Balcones Fault Zone Edwards Aquifer

Table 5.2 Estimated annual groundwater recharge to the Edwards Aquifer by drainage basin, 1934-2003 (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	1,258.2
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	1,142.6
1958	266.7	300.0	223.8	294.9	95.5	190.9	268.7	70.7	1,711.2
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	1,486.5

(**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*
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	1,117.8
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	1,448.3
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	1,003.3
1986	188.4	192.8	42.2	173.6	74.7	170.2	267.4	44.5	1,153.8
1987	308.5	473.3	110.7	405.5	90.4	229.3	270.9	114.9	2,003.5
1988	59.2	117.9	17.0	24.9	69.9	12.6	28.5	25.5	355.5
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	1,123.1
1991	325.2	421.0	103.1	315.2	52.8	84.5	109.7	96.9	1,508.4
1992	234.1	586.9	201.1	566.1	91.4	290.6	286.6	226.9	2,486.0
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	1,134.6
1998	141.5	214.8	72.5	201.4	80.3	86.2	240.9	104.7	1,142.3
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
2001	297.5	126.7	66.2	124.1	90.0	101.5	173.7	89.7	1,069.4
2002	83.6	207.3	70.6	345.2	93.7	175.5	539.3	150.0	1,665.2
2003	149.8	112.2	31.7	67.4	86.8	105.0	56.2	59.9	669.0
Recharge for the period of record 1934-2003:									
Median	102.2	123.2	31.6	78.4	61.4	52.8	77.4	35.2	559.4
Mean	121.1	134.9	42.4	110.1	62.7	71.9	110.6	44.9	698.5
Recharge for the period of record 1994-2003 (last 10 years):									
Median	135.8	142.2	33.9	64.9	70.2	61.2	55.9	48.3	641.7
Mean	155.1	152.1	43.8	117.6	71.0	79.2	135.2	62.3	816.2

Data source: USGS, 2004.
*Total may not be equal to sum of basin values due to rounding.

Figure 5.2 Estimated annual recharge and ten-year floating median recharge for the San Antonio segment of the Balcones Fault Zone Edwards Aquifer 1934-2003

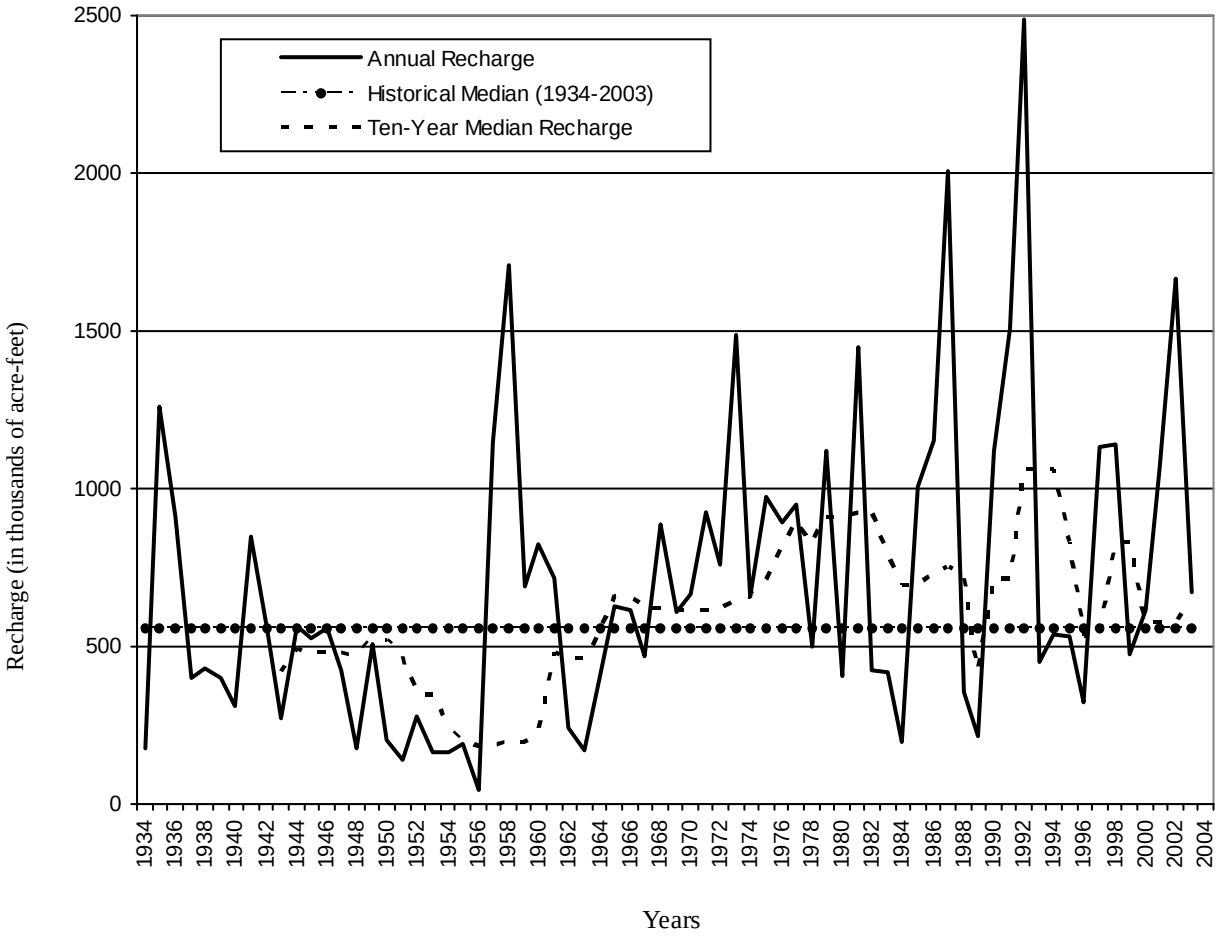


Table 5.3 Estimated annual Edwards Aquifer recharge from Edwards Aquifer Authority-operated recharge structures (measured in acre-feet).

Year	Parker (April 1974)	Verde (April 1978)	San Geronimo (November 1979)	Seco (October 1982)	Annual 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	2,154b	1,579b	7,515b	14,189b
1998	1,469a/b	1,160b	872b	3,796b	7,297b
1999	0b	0b	0b	50c	50b/c
2000	901b	1,371b	1,023b	4,606b	7,901b
2001	526b	657b/d	1,085b/d	2,154b/d	4,422b/d
2002	1,811	1,511	4,350	18,872	26,544
2003	665	184	0	465	1,314
Total	18,705	21,284	19,493	71,375	130,857
Mean	624	819	780	3244	4362
Median	217	371	603	643	1028

Data source: USGS and Edwards Aquifer Authority, 2003.
a = Written communication from USGS - San Antonio Subdistrict Office.
b = Determined by a linear regression analysis using rainfall data and historical recharge data.
c = Linear regression analysis indicates zero recharge; however, one recharge event was observed that was estimated to have recharged 50 acre feet.
d = A portion of the 2001 recharge estimate was provided by HDR Engineering, Inc., August 2002.
--- = indicates years prior to construction of the recharge structure.

6.0 Groundwater Discharge and Usage

Groundwater discharges from the Edwards Aquifer as springflow or as water pumped from wells. Springflow is the primary basis of recreational economies in New Braunfels and San Marcos, and the springs provide habitat for threatened and endangered animal and plant species. **Figure 6.1** shows the locations of the major springs in the San Antonio segment of the aquifer. Wells provide water for many diverse uses in south central Texas, including irrigation, municipal water supplies, industrial applications, and domestic/livestock consumption. The amount of groundwater discharged as springflow has historically been greater than the amount discharged through wells for any of the above-mentioned uses.

Estimates of annual groundwater discharge from springflow and pumping for the Edwards Aquifer are available from 1934 to 2003 (**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 2003, the total groundwater discharge from the Edwards Aquifer from wells and springs was estimated at 974,777 acre-feet.

Springflow was calculated by measuring streamflow downstream of the springs and converting the streamflow measurements to spring discharge. Continuous recording equipment is located at Leona, Hueco, Comal and San Marcos springs. Periodic measurements were performed at the San Pedro and San Antonio springs.

Springflow from 1934 to 2003 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 2003 for the six primary Edwards Aquifer springs. Spring discharge from the Edwards Aquifer for 2003 was calculated at 621,534 acre-feet. This represents the second highest spring discharge for the period of record and accounts for approximately 64 percent of total discharge from the Edwards Aquifer in 2003 (**Tables 6.1 and 6.2**). The high spring discharge appears to be the result of high aquifer levels early in the year, followed by frequent rainfall during the summer (historically high usage) months of 2003.

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. In 2003, total estimated well production was 353,243 acre-feet of water from the Edwards Aquifer, an increase of approximately 346 percent since 1934. Total well production for 2003 was slightly less than 2002 (approximately 4 percent). The reduction is likely due to the timing and duration of rainfall in 2003 which appears to have averted a portion of the outdoor water use typical of high demand months. Median annual well production was estimated to be 315,800 acre-feet per year for the period of record from 1934 to 2003, while the estimated 10-year median for pumping from 1994 through 2003 was 407,200 acre-feet (**Table 6.1**). Reported groundwater pumping accounted for 337,955 acre-feet of water discharged from the Edwards Aquifer in 2003. Unreported pumping (domestic, livestock, Kinney County and federal facilities pumping) is estimated to be 21,411 acre-feet, or approximately 6 percent of total pumpage.

Table 6.3 shows the 2003 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. The Authority estimated pumpage for domestic supply, stock, and miscellaneous use. **Table 6.4** shows annual Edwards Aquifer groundwater discharge by use from 1955 to 2003, and the estimated 10-year mean and median for pumping by use from 1994 through 2003 are also included in this table.

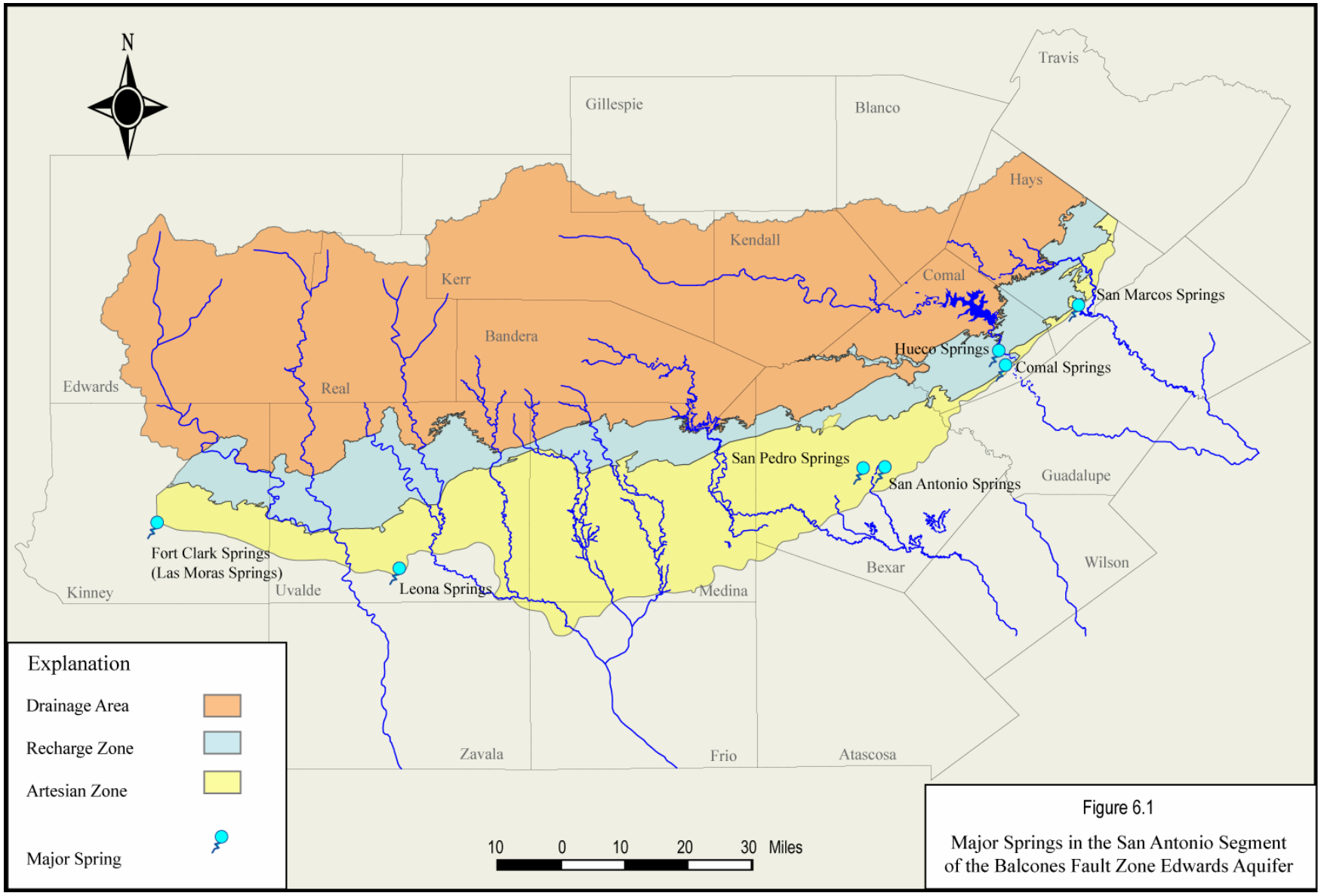


Figure 6.1

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, 1934-2003 (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

(Table 6.1 continued)

Year	Kinney Uvalde	Medina	Bexar	Comal	Hays	Total	Total Wells	Total Springs
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
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	113.1	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
2001	68.6	33.9	291.6b	327.7c	175.4	890.0	367.7	529.6
2002	74.4	39.5	314.1b	346.9c	202.2	977.1	367.2	609.9
2003	89.2	34.5	331.9b	343.9c	175.2	974.8	353.2	621.5
For period of record 1934-2003:								
Mean	71.6[a]	20.7	241.4	225.4	121.6	680.6	305.0	375.8
Median	71.5	14.3	230.5	233.1	117.7	669.8	315.8	379.9
For period of record 1994-2003 (last 10 years):								
Mean	91.9[a]	42.8	295.8	271.0	144.5	845.3	409.4	436.6
Median	90.0	40.3	294.7	270.8	146.1	852.4	407.2	423.2

Data source: USGS and Edwards Aquifer Authority, 2004.
a Kinney County well discharge is estimated.
b Includes reports of Edwards Aquifer irrigators in Atascosa County.
c Includes reports of Edwards Aquifer industrial and municipal users in Guadalupe County.
Differences may occur due to rounding.

Table 6.2 Estimated spring discharge from the Edwards Aquifer, 2003 (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 From Springs
January	1,318	1,313	11,418	27,560	5,236	19,470	66,315
February	2,465	1,140	9,779	24,310	5,319	17,220	60,233
March	3,880	1,254	10,646	26,080	6,516	18,380	66,756
April	3,410	1,029	7,871	24,300	5,977	16,600	59,187
May	2,695	653	3,549	23,390	5,417	15,100	50,804
June	2,620	631	3,445	22,070	3,814	13,740	46,320
July	2,995	805	5,399	23,130	2,605	13,470	48,404
August	3,090	672	3,968	22,240	3,249	11,930	45,149
September	3,050	761	4,796	22,260	3,360	11,390	45,617
October	3,395	843	5,631	23,310	2,717	11,530	47,426
November	3,475	751	4,894	21,680	1,935	10,270	43,005
December	3,495	729	4,241	22,380	1,534	9,940	42,319
Total	35,888	10,581	75,637	282,710	47,679	169,040	621,535

Data source: USGS, 2004.
Differences may occur due to rounding.

Figure 6.2 Groundwater pumping compared to springflow from the Edwards Aquifer, 1934-2003 (measured in thousands of acre-feet).

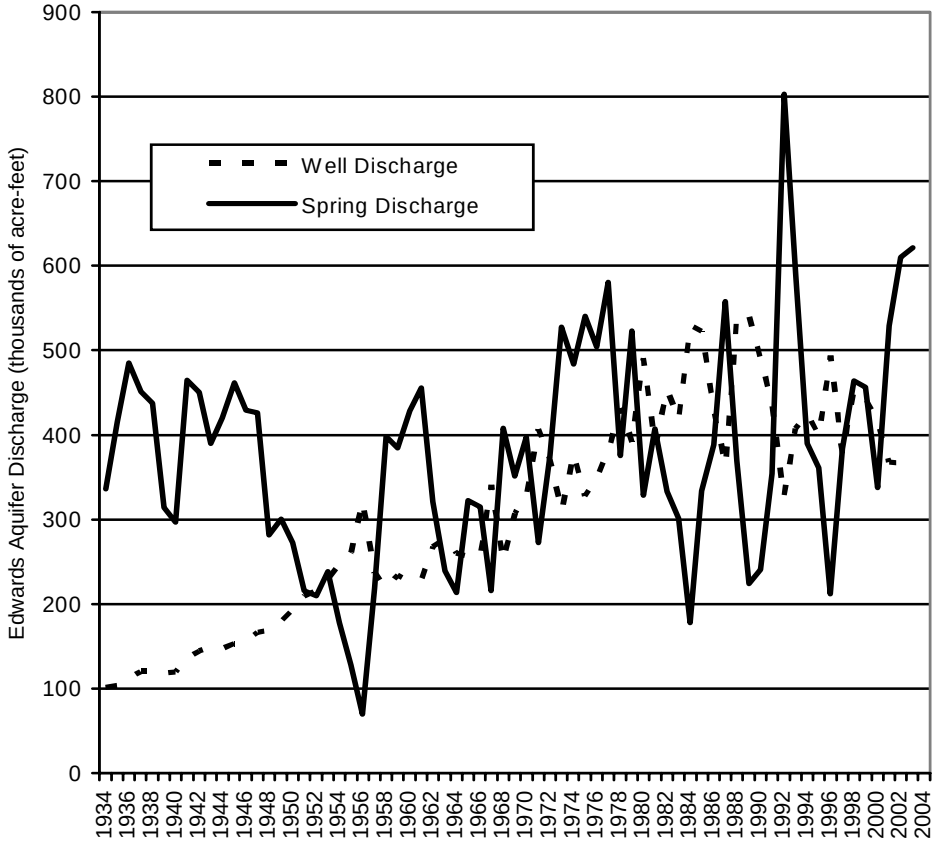


Table 6.3 Total groundwater discharge from the Edwards Aquifer, 2003 (measured in thousands of acre-feet).

County	Irrigation	Municipal /Military	Domestic /Stock	Industrial	Total Wells	Springs	Total Wells & Springs
Bexar	7.1a/b	210.4	9.0	19.2	245.7	86.2e	332.0
Comal	0.1b	3.7d	0.3	9.4d	13.5	330.4e	343.9
Hays	0.1b	5.0	0.8	0.2	6.2	169.0e	175.2
Medina	26.9b	5.9	0.9	0.7	34.5	0.0	34.5
Uvalde	44.6b	4.0	2.3	0.5	51.4	35.9e	87.3
Kinney	0.6	1.0	0.3	0.0	1.9	0.0	1.9
Total	79.4	230.1	13.7c	30.1	353.2	621.5	974.8

Differences may occur due to rounding.
Data source: Edwards Aquifer Authority, and USGS 2004.
a Includes Atascosa County.
b Estimated from reports by Edwards Aquifer irrigators.
c Estimated by Edwards Aquifer Authority.
d Includes Guadalupe County.
e Estimated by the USGS.

Table 6.4 Annual estimated Edwards Aquifer groundwater discharge by use, 1955-2003 (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
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	253.0	12.3*	34.4	383.9
1998	131.9	266.5	13.4*	41.7b	464.1
1999	113.6	273.3	13.4*	42.4	456.1
2000	106.3	261.3	13.4*	33.8	337.5
2001	79.0	245.9	13.4*	29.4	529.4
2002	94.6	228.1	13.6**	31.0	609.9
2003	79.4	230.1	13.7***	30.1	621.5
			For period of record 1955-2003:		
Mean	107.2	206.3	30.3	24.3	384.2
Median	101.8	214.2	30.8	22.5	375.8
			For period of record 1994-2003 (last 10 years):		
Mean	106.4	252.2	15.1	35.8	436.6
Median	100.1	254.0	13.4	35.9	423.2

Data source: USGS and Edwards Aquifer Authority, 2004.
Differences may occur due to rounding.
*In 1995 the USGS revised the method of calculating domestic/livestock pumpage, which significantly decreased the estimate for subsequent years.
**Revision based on number of new wells permitted in 2001, 2002.
***Revision based on number of new wells permitted in 2001, 2002 and 2003.

In 2003, the Authority and USGS estimated discharge from the Edwards Aquifer. 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.

In 1997, the Authority initiated the Edwards Aquifer Well Metering Program, which requires meters for all municipal, industrial, and irrigation wells in the Edwards Aquifer. 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.

In 2001, a well permitting system was introduced, requiring all new wells drilled in the Edwards Aquifer to have a well construction permit. Permitting data were used to develop updated estimates for the domestic/livestock use category in **Tables 6.3** and **6.4**. Based on the addition of 140 wells in the category of domestic/livestock in 2003, the domestic/livestock use was increased by approximately 88 acre feet for 2003 compared to 2002.

7.0 WATER QUALITY

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, including major springs, 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 2003, the Authority collected water quality samples from 89 wells, five spring groups, and nine streams. Water quality samples collected by the Authority are summarized in this report. The locations of these monitoring sites are shown on **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 analyses included temperature, pH, conductivity, and alkalinity. In general, all water samples were analyzed in the laboratory for common major ions, minor elements (metals), total dissolved solids (TDS), hardness, and nutrients. Water samples collected from 22 wells, the five spring groups, and eight stream locations were also analyzed for pesticides and herbicides. Water samples collected from 34 wells and the five spring groups were also analyzed for volatile organic compounds (VOCs). Semivolatile organic compounds (SVOCs) were included in the analyses of water samples from 14 wells and the five spring groups.

A general listing of the parameters analyzed, their drinking water standards, and typical concentrations in the Edwards Aquifer are listed in **Table 7.1**. The water quality data collected in 2003 are included in **Appendix C**. Water quality data collected from wells in 2003 are compiled in **Appendix C**, tables C-1 through C-7. Water quality data collected from streams and springs in 2003 are compiled in **Appendix C**, tables C-8 through C-14. The Authority compares the water analyses to the following federal and state water quality standards to determine if any concentrations exceed health-based levels:

Primary Drinking Water Standards – These standards are enforceable and are often referred to as the maximum contaminant levels (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**. For compounds that do not have an established MCL, the protective concentration level (PCL), is provided. The PCL is based on the Texas Risk Reduction Program (TRRP), Tier 1, residential value as referenced in Title 30, Texas Administrative Code, Chapter 350. This concentration is the value estimated to be protective of human health, and the environment.

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, although concentrations of total dissolved solids (TDS), fluoride, chloride, and iron typically exceed secondary standards in samples from the saline water zone.

7.1 Water Quality Data from Edwards Aquifer Wells

Summary of Analytical Results – Groundwater samples were analyzed by contract laboratories [Severn Trent Services (STL) and Lower Colorado River Authority (pursuant to an analytical services contract with the TWDB)] for the following metals: aluminum, antimony, arsenic, barium, beryllium, boron, cadmium, calcium, chromium, cobalt, copper, iron, lead, lithium, magnesium, manganese, mercury, molybdenum, nickel, potassium, selenium, silicon, silver, sodium, strontium, thallium, vanadium, and zinc.

Laboratory analyses indicated the presence of three metals, regulated under the primary drinking water standards in well water samples during 2003 at concentrations exceeding their respective MCL. Antimony, which has an MCL of 0.006 mg/L was detected above the MCL in the following five wells in Bexar County:

- AY-68-28-8GE (0.014 mg/L)
- AY-68-28-210 (0.0179 mg/L)
- AY-68-29-925 (0.034 mg/L)
- AY-68-28-203 (0.0193 mg/L)
- AY-68-28-205 (0.0281 mg/L)

Thallium, which has an MCL of 0.002 mg/L, was detected above the MCL in 12 Wells in Hays County. Five of the twelve wells are located within the saline water zone while the remaining seven wells are in the freshwater portion of the aquifer. Thallium was detected above the MCL in the following seven freshwater wells in Hays County:

- LR-67-01-303 (0.0057 (B) mg/L)
- LR-68-08-902 (0.0068 (B) mg/L)
- LR-67-09-1SM (0.0098 mg/L)
- LR-67-01-810 (0.0098 mg/L)
- LR-67-01-816 (0.0108 mg/L)
- LR-67-01-8SW (0.011 mg/L and 0.0296 mg/L)
- LR-67-09-1HB (0.0149 mg/L)

(B Indicates the concentration is above the detection limit and below the laboratory reporting limit.)

Selenium was detected in two saline water wells in Comal County above the MCL of 0.05 mg/L. Selenium was detected in well DX-68-23-616B at 0.0991 mg/L, and DX-68-23-616A at 0.115 mg/L. Detection of regulated metals within the saline water zone of the aquifer does not pose a concern since the water is not used due to high total dissolved solids.

Historically, regulated metals such as antimony and thallium have been detected within the saline water zone with greater frequency than detections in the freshwater portion of the aquifer. As such, their presence in the freshwater artesian portion of the aquifer is unusual, especially when detected over a large area. Therefore, confirmation analyses for antimony and thallium were performed in 2004 at selected wells using a more sensitive analytical method. These analyses were performed at two of the five wells in Bexar County where antimony was detected above the MCL and at five of the seven freshwater wells in Hays County where thallium was detected above the MCL. The confirmation analyses indicate no detections of antimony, and one detection of thallium at 0.000267 mg/L at only one well, LR-67-09-1HB; thallium was not detected in any of the other wells resampled. Based on the confirmation analyses, the elevated antimony and thallium concentrations appear to be false positives. The detailed results of the confirmation sampling efforts will be published in the Authority's

Hydrologic Data Report for 2004. These wells will be monitored in the future for possible trends of antimony and thallium impacts.

Laboratory analyses indicated that 72 wells in Hays, Comal, Bexar, Medina, and Uvalde counties contained detectable nitrate as nitrogen concentrations. None of the nitrate as nitrogen concentrations exceed the MCL of 10 mg/L. In general, elevated nitrate as nitrogen concentrations were detected in wells in the Uvalde area (YP-69-50-501 at 9.05 mg/L, YP-69-51-120 at 7.37 mg/L, and YP-69-51-114 at 5.38 mg/L), Comal County (DX-68-30-221, at 5.47 mg/L) and in Bexar County (AY-68-28-313, at 5.08 mg/L). The Authority is studying historical nitrate concentrations to identify trends that may indicate contamination sources.

Some well water samples contained organic compounds; however, only one compound, the semi-volatile organic compound bis (2-ethylhexyl) phthalate, was detected above a drinking water standard. Water samples collected from 22 wells were analyzed for pesticides and herbicides. One pesticide compound, Gamma-chlordane was detected in Bexar County well AY-68-27-611, at 0.05(J) µg/L (no MCL has been established for this compound). This concentration is below the laboratory reporting limit, but above the method detection limit, or "J" flagged (note: Data flagging criteria differ for metals and organic analyses. The letter "J" is used for this condition in organic analyses, while the letter B is used for this condition in metals analyses). As such, the reported concentration may not be indicative of the actual concentration. No herbicide compounds were detected in the 2003 well water analyses. Water samples from 34 wells were also analyzed for volatile organic compounds (VOCs). Four samples contained detectable concentrations of tetrachloroethene (PCE). Well YP-69-51-114, located in the City of Uvalde contained PCE at 5.0 µg/L. The other three wells were located in Bexar Couny. Wells AY-68-29-414 and AY-68-29-406 contained PCE at concentrations of 0.6 (J), and 0.3 (J) µg/L respectively. Well AY-68-28-516 tested positive for PCE at 0.2 (J, TB) µg/L. The TB flag indicates that PCE was detected in the associated trip blank for the sample, possibly indicating that the result is a false positive. The MCL for PCE is 5 µg/L.

The source of the PCE in Uvalde was an industrial dry cleaning operation that was destroyed by fire in 1979. Tetrachloroethene has been detected in well YP-69-51-114 in the past. The TCEQ is addressing the Uvalde area contamination in the Edwards Aquifer with the responsible party. The Authority and TCEQ are investigating the source of the tetrachloroethene in Bexar County.

Trace amounts of several other VOCs were contained in the laboratory reports for 2003. It is likely that these analytes are a consequence of either laboratory contamination or some other post sample collection contamination and do not reflect aquifer water quality. Trace amounts of the following VOCs were reported:

- Acetone (concentration range of 0.6(J,TB)-1(J) µg/L)
- Bromodichloromethane (concentration range of 0.2(J)-0.3(J) µg/L)
- Bromoform (tribromomethane) (concentration range of 0.2(J)-0.6(J) µg/L)
- Carbon disulfide (concentration range of 0.2(J)-7 µg/L)
- Chloroform (concentration range of 0.2(J)-1 µg/L)
- Chloromethane (concentration of 0.3(J) µg/L)
- Dibromochloromethane (concentration range of 0.3(J)-0.6(J) µg/L)
- Toluene (concentration range of 0.2(J)-2(TB) µg/L)

Four of the compounds above are frequently found in water samples exposed to chlorine. Bromodichloromethane, bromoform, chloroform and dibromochloromethane are common chlorination by-products that may be detected if water samples are collected downstream of a chlorination device, or if exposed to chlorinated water. Carbon disulfide is a common chemical

with a wide range of uses; however, it can also be a pervasive laboratory contaminant. Chloromethane is a common solvent with many uses, but also can be a pervasive laboratory contaminant. Toluene is another commonly used solvent that frequently appears as a post collection sample contaminant due to its widespread presence in many products that may be in use around sampling sites or in the laboratory environment.

Most of the VOC compounds listed above are flagged as being detected, but in concentrations below the laboratory reporting limit. In addition, most of the acetone and one of the two toluene detections are flagged "TB" indicating detection of the same analyte in the associated trip blank. The data flag (J) combined with the other issues relative to these compounds indicates a low probability of contamination issues related to the listed compounds. The Authority will continue monitoring the aquifer to establish possible trends, or rule out false positive detections that may be reported for these and other compounds.

The SVOC, bis (2-ethylhexyl) phthalate, which has an MCL of 0.006 mg/L was detected above the MCL in the following four Bexar County wells:

- AY-68-28-211, 10 (J) µg/L
- AY-68-28-314, 11 µg/L
- AY-68-28-609, 11 µg/L
- AY-68-29-103, 12 µg/L

Two other wells, DX-68-23-304 in Comal County and LR-67-09-113 in Hays County indicated bis (2-ethylhexyl) phthalate concentrations of 0.5(J), and 5(J) respectively. Bis (2-ethylhexyl) phthalate is a byproduct of plastics production and is commonly seen in wells with PVC casing; however, it is also a frequent ingredient in insect repellents, soaps, cosmetics, and other commonly used items. As such, its presence in groundwater samples is frequently due to post sample collection contamination, either during the sample collection process or in the laboratory. Samples exposed to sampling and analytical equipment that may contain bis (2-ethylhexl) phthalate are frequently contaminated. For example, a trace amount of cosmetics, or insect repellent on a sample handlers gloves can easily cause a false positive result in the 10 to 20 part per billion (µg/L) range. As such, the bis (2-ethylhexyl) phthalate detections summarized herein are believed to represent post collection contaminants, and not contamination in the aquifer. The Authority will continue its aquifer-wide well sampling program to monitor for any indication of water quality impacts from this compound.

In summary, most of the compounds detected during the 2003 water quality sampling efforts do not appear to be indicative of contamination in the aquifer. However, it should be noted that some of the detections are confirmed and provide an indicator of the vulnerability of the Aquifer to potential contamination. For example, the PCE detections in Uvalde and Bexar counties are confirmed contaminant detections and are areas that will be monitored in the future to further evaluate potential impacts to the Aquifer. In addition, elevated nitrate as nitrogen concentrations will be monitored in the future in order to further assess any potential impacts to the aquifer. The presence of one pesticide compound (gamma-chlordane) in a well sample in Bexar County will require future monitoring to confirm the presence or absence of pesticide related compounds in this area. The Authority will continue its aquifer-wide well sampling efforts to monitor for potential trends of contaminants.

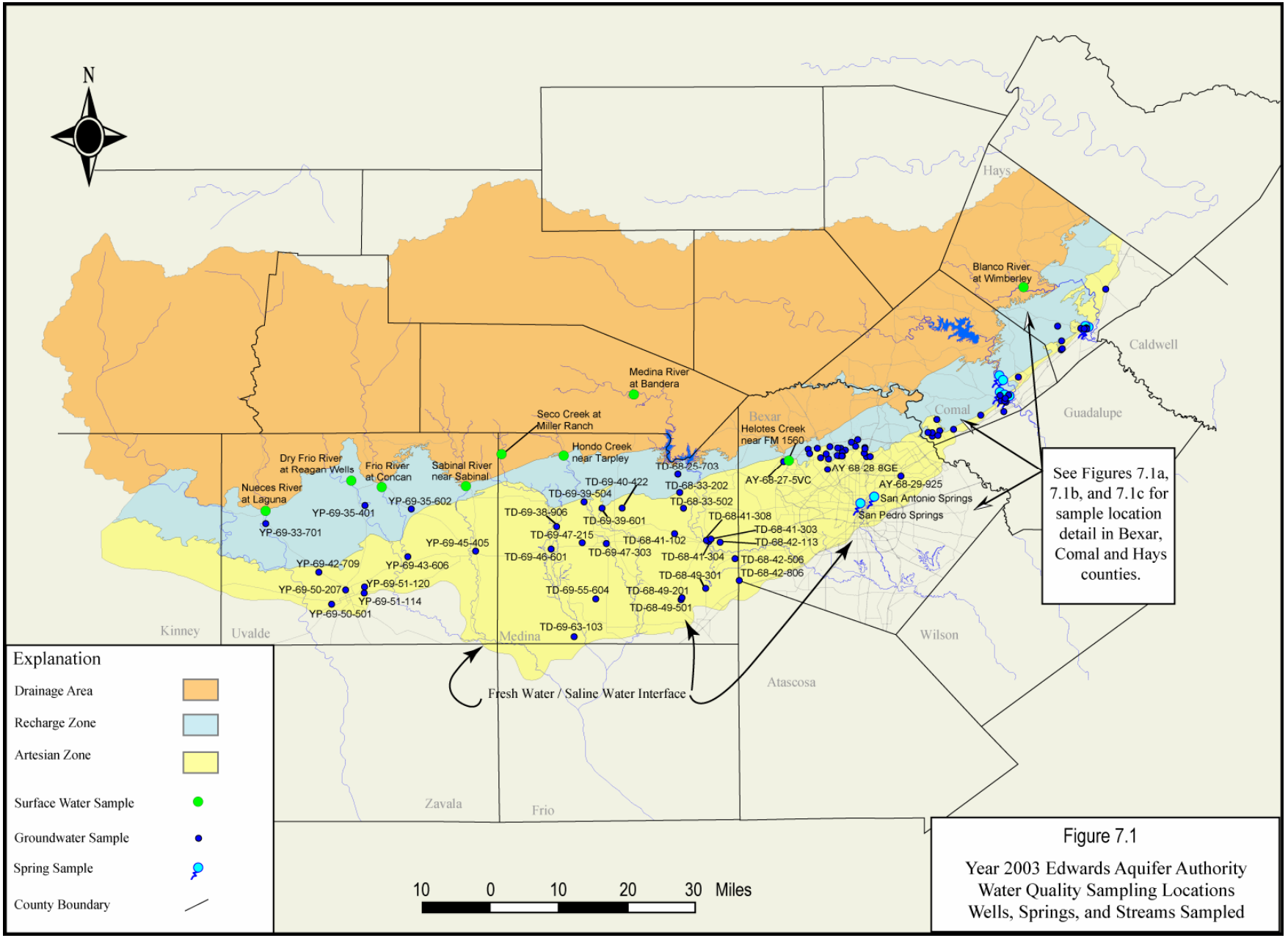


Figure 7.1

Year 2003 Edwards Aquifer Authority Water Quality Sampling Locations Wells, Springs, and Streams Sampled

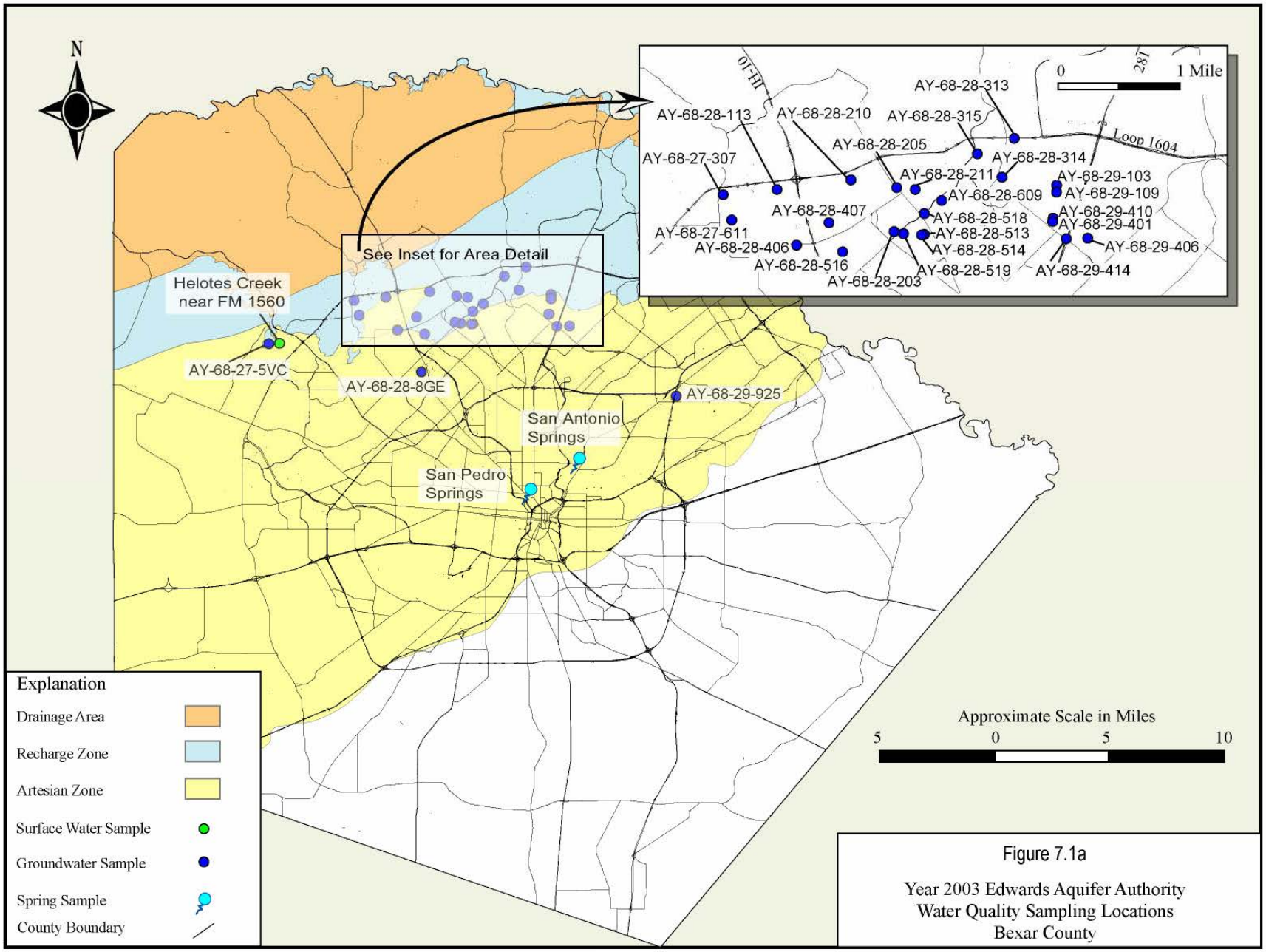


Figure 7.1a

Year 2003 Edwards Aquifer Authority
Water Quality Sampling Locations
Bexar County

40

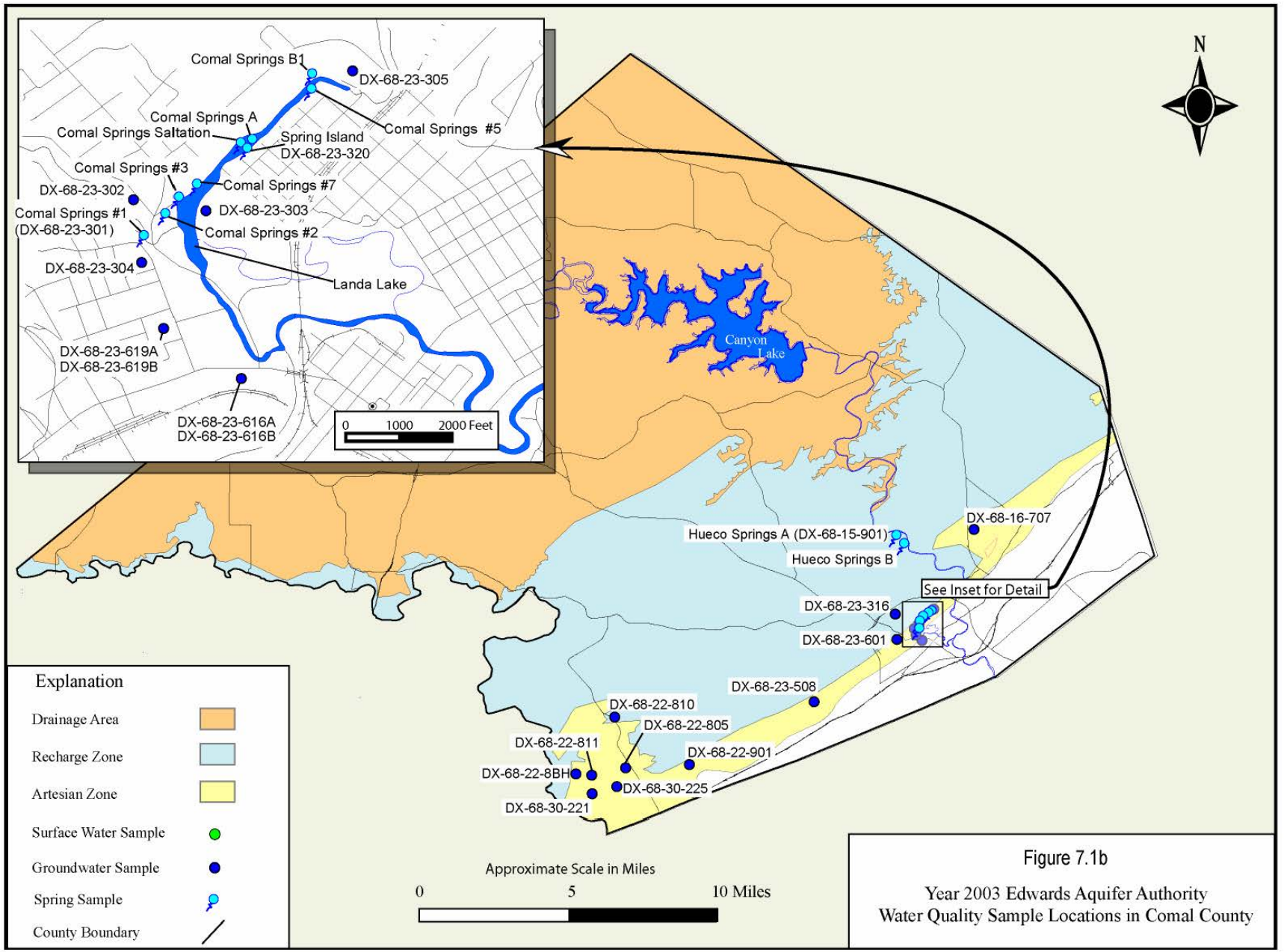


Figure 7.1b

Year 2003 Edwards Aquifer Authority
Water Quality Sample Locations in Comal County

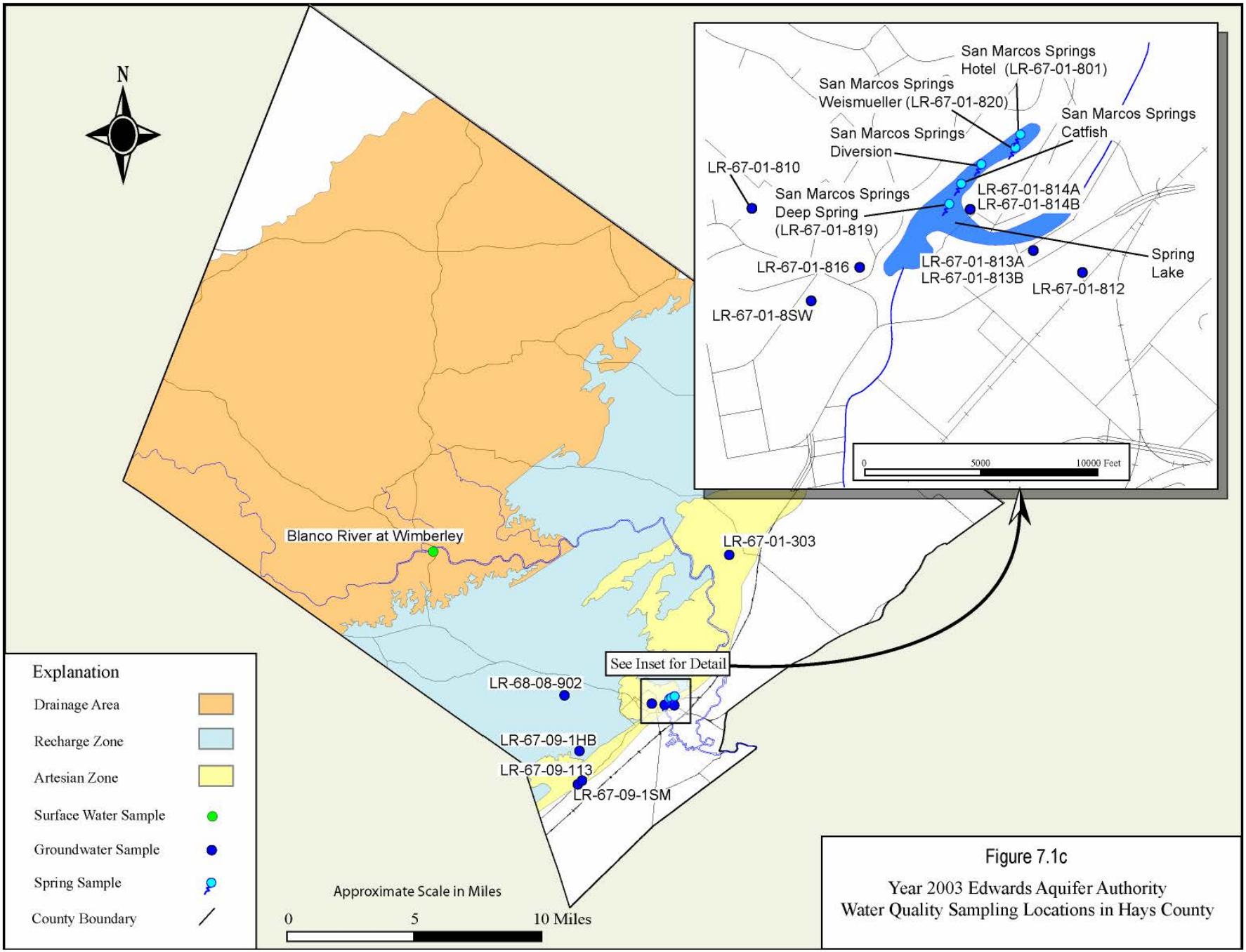


Figure 7.1c

Year 2003 Edwards Aquifer Authority
Water Quality Sampling Locations in Hays County

Table 7.1 Comparison of drinking water quality standards to range of concentrations from water quality results, 2003.

Parameter	Maximum Contaminant Levels or Secondary Standards	Range of Concentrations Detected in 2003	Typical Range of Concentrations for the Freshwater Edwards Aquifer
Field			
Temperature (˚C) EPA 170.1	NE	16.3 – 42.8	20-23
pH measured at 25 ˚C EPA 150.1	6.5 – 8.5 *	6.36 – 8.25	6.5-8.0
Turbidity (NTU)	NE	0.05 – 65.10	0.05-2
Dissolved Oxygen (DO) (Mg/L)	500*	4.67 – 6.97	2-4
Alkalinity total as $CACO_3$ SM 2320 B (Mg/L)	NE	134 - 372	200-400
Fecal Coliform (colonies / 100 mL)	0 MCLG[1]	0 – 830	0-3
Fecal Strep (colonies / 100 mL)	0 MCLG[1]	0 – 1120	0-9
Total Coliform (colonies / 100 mL)	0 MCLG[1]	0 – 4	0-4
E-Coli	0 MCLG[1]	ND	0
Nutrients (Mg/L)			
Nitrate-nitrite as N EPA354.1/300.0	10	0 – 9.05	ND-2.5
Nitrogen nitrate as N (NO_3-N) EPA 300.0	10	0 - 1.9	ND-2.5
Nitrogen nitrite as N (NO_2-N) EPA 354.1	1	0 - 0.028	ND-0.02
Orthophosphate EPA 365.3	NE	ND	ND-0.03
Biochemical Oxygen Demand (mg/L)	NE		ND
Major Ions (Mg/L)			
Sulfate (SO_4) EPA 300.0	250*	4.47 - 45	30-60
Solids total dissolved (TDS) EPA 160.1	NE	110-10,700	200-400
Solids total suspended (TSS) EPA 160.2	NE	0-73	ND-2
Bromide (Br) EPA 300.0	NE	0 – 0.592	ND-0.2
Chloride (Cl) EPA 300.0	250*	7.43 - 4320	15-50
Fluoride (F) EPA 340.2	4.0	0.044 - 3.76	0.02-0.4
Calcium (Ca)	NE	37.1 - 138	50-100
Magnesium (Mg)	NE	5.75 - 28.7	10-40
Sodium (Na)	NE	5.47 - 58.3	5-15
Potassium (K)	NE	0.69 - 1.64	0.5-2
Silica (SiO_2)	NE	11.7 – 22.2	5-8
Bicarbonate (HCO_3) SM 2320 B	NE	143 - 348	200-400
Carbonate (CO_3) SM 2320 B	NE	0 - 5	0
Metals by EPA 200.7 and 200.8 (µg/L)			
Aluminum	24,000**	<4	ND-40
Antimony	6.0	<1	ND–1
Arsenic	50.0	<2- 2.06	ND-1
Barium	2,000	<26.8 - 166	10-100
Beryllium	4.0	<106	ND-1
Boron	2,200**	<50 - 281	ND-60
Cadmium	5.0	<1	ND-0.6
Chromium	100.0	<1 - 4	ND-3
Cobalt	1,500**	<1	ND-1
Copper	1,000*	<1 - 11.9	ND-4
Iron	300*	<50 - 656	ND-6
Lead	15.0	<1	ND–3
Lithium	490**	<2 - 9	ND-5
Manganese	50.0*	<1 – 25.2	ND-4
Molybdenum	120**	<1–9	ND-10
Nickel	490**	<1 - 9	ND-3
Selenium	50.0	<4-6	ND-30
Strontium	15,000**	<120 – 25,300	200-500
Thallium	2.0	<1	ND-1
Vanadium	170**	<1- 11	ND-4
Zinc	5,000*	<4 - 549	ND-20
Metals by SW-6010B (Mg/L)			
Arsenic	0.05	<0.0037 - 0.0059	ND-0.001
Barium	2.0	<0.0025 - 0.123	0.010-0.10
Beryllium	0.004	<0.0002 - 0.0014	ND-0.001
Cadmium	0.005	<0.0005 - 0.0021	ND-0.0006
Calcium	NE	<37.1 - 1000	0.05-0.10
Chromium	0.1	<0.0019 – 0.0046	ND-0.003
Copper	1*	<0.0022 - 0.246	ND-0.004

Table 7.1 (Continued)

Parameter	Maximum Contaminant Levels or Secondary Standards	Range of Concentrations Detected in 2003	Typical Range of Concentrations for the Freshwater Edwards Aquifer
Iron	0.3*	<0.0048 - 1.0	ND-0.006
Lead	0.015**	<0.0013-0.0043	ND–0.003
Magnesium	NE	<2.79-503	ND-0.004
Manganese	0.05*/1.1**	<0.0002-0.103	ND-0.004
Nickel	.49**	<0.0007-0.0297	ND-0.003
Phosphorus	NE	<0.0053–0.104	ND-0.02
Potassium	NE	<0.223-88	5-15
Selenium	0.05	<0.0045–0.115	ND-0.03
Silicon	NE	<3.5-33.5	0.005-0.008
Silver	0.1*	<0.0009-0.0034	ND-0.001
Sodium	NE	<3.8–2110	0.005-0.015
Strontium	15**	<0.0001-36.1	0.2-0.5
Thallium	0.002	<0.0043-0.0348	ND-0.001
Zinc	5.0*	<0.001-0.196	ND-0.02
Metals by SW-7041 (Mg/L)			
Antimony	0.006	<0.00072-0.034	ND–0.001
Metals by SW-7470A (Mg/L)			
Mercury	.002	<0.0001–0.00045	ND-0.0001
Herbicides by SW-8141 (µg/L)			
Atrazine	3.0	<0.13	ND
Azinphos methyl	37**	<0.023	ND
Bolstar (Sulprofos)	NE	<0.012	ND
Carbophenothion	320**	<0.23	ND
Chlorpyrifos	73**	<0.022	ND
Chlorpyrifos Methyl	NE	<0.17	ND
Coumaphos	170**	<0.023	ND
Demeton	0.98**	<0.030	ND
Diazinon	22**	<0.010 - 0.01 (J)	ND
Dichlofenthion	NE	<0.11	ND
Dichlorvos	3.1**	<0.047	ND
Dimethoate	4.9**	<0.088	ND
Disulfoton	0.98**	<0.026	ND
EPN	0.24**	<0.19	ND
Ethion	12**	<0.12	ND
Ethoprop	2.4**	<0.019	ND
Ethyl Parathion	150**	<0.083	ND
Famphur	0.73**	<0.25	ND
Fensulfothion	24**	<0.03-0.0355	ND
Fenthion	1.7**	<0.014	ND
Malathion	490**	<0.071	ND
Merphos	0.73**	<0.024	ND
Methyl parathion	6.1**	<0.022	ND
Mevinphos	NE	<0.022	ND
Mononcrotophos	NE	<2.9	ND
Naled	49**	<0.022	ND
Phorate	4.9**	<0.027	ND
Ronnel	1,200**	<0.021	ND
Simazine	4.0	<0.19	ND
Stirophos (Tetrachlorvinphos)	NE	<0.014	ND
Sulfotepp (Tetraethyl dithiopyrophosphate)	12**	<0.17	ND
Terbufos	0.61**	<0.16	ND
Thionazin	1.7**	<0.21	ND
Tokuthion (Prothiofos)	NE	<0.22	ND
Trichloronate	73**	<0.12	ND
Herbicides by SW-8151 (µg/L)			
2,4,5-T	NE	<0.087	ND
2,4,5-TP (Silvex)	50.0	<0.048	ND
2,4-D	70.0	<0.16	ND
Bentazon	NE	<0.24	ND
Dinoseb	7.0	<0.88	ND
Pentachlorophenol	1.0	<0.043	ND
Picloram	500	<0.092	ND

Table 7.1 (Continued)

Parameter	Maximum Contaminant Levels or Secondary Standards	Range of Concentrations Detected in 2003	Typical Range of Concentrations for the Freshwater Edwards Aquifer
Pesticides by SW-8081 (µg/L)			
4, 4'-DDD	3.8**	<0.009	ND
4, 4'-DDE	2.7**	<0.004	ND
4, 4'-DDT	2.7**	<0.006	ND
Aldrin	0.054**	<0.02	ND
Alpha-bhc (alpha-hexachlorocyclohexane)	0.14**	<0.006	ND
Alpha-chlordane	2.6**	<0.009	ND
Beta-bhc (beta-hexachlorocyclohexane)	0.51**	<0.005	ND
Delta-bhc (delta-hexachlorocyclohexane)	0.51**	<0.005	ND
Dieldrin	0.057**	<0.004	ND
Endosulfan I	49**	<0.005	ND
Endosulfan II	150**	<0.03	ND
Endosulfan sulfate	150**	<0.02	ND
Endrin	2.0**	<0.009	ND
Endrin aldehyde	7.3**	<0.03	ND
Endrin ketone	7.3**	<0.02	ND
Gamma-bhc (Lindane)	0.2	< 0.01	ND
Gamma-chlordane	2.6**	<0.004 - 0.050 (J)	ND
Heptachlor	0.4	<0.004	ND
Heptachlor epoxide	0.2	<0.003	ND
Methoxychlor	40.0	<0.05	ND
Toxaphene	3.0	<0.5	ND
PCBs by SW-8082 (µg/L)			
Aroclor 1016	0.5	<0.5	ND
Aroclor 1221	0.5	<0.5	ND
Aroclor 1232	0.5	<0.5	ND
Aroclor 1242	0.5	<0.5	ND
Aroclor 1248	0.5	<0.5	ND
Aroclor 1254	0.5	<0.5	ND
Aroclor 1260	0.5	<0.5	ND
SVOCs by SW-8270C (µg/L)			
2, 4, 5-trichlorophenol	2,400**	<0.9	ND
2, 4, 6-trichlorophenol	83**	<0.9	ND
2, 4-dichlorophenol	73**	<0.8	ND
2, 4-dimethylphenol	490**	<0.5	ND
2, 4-dinitrophenol	49**	<4	ND
2-chlorophenol	120**	<1	ND
2-methyl-4 6-dinitrophenol	490**	<4	ND
2-methylphenol (o-cresol)	1,200**	<0.5	ND
2-nitrophenol	49**	<2	ND
3 & 4 methylphenol (m&p cresol)	NE	<1	ND
4-chloro-3-methylphenol	NE	<0.5	ND
4-nitrophenol	49**	<4	ND
Naphthalene	490**	<0.3	ND
Nitrobenzene	12**	<0.5	ND
O o o-triethyl phosphorothioate	0.2**	<0.5	ND
Pentachlorophenol	1.0	<4	ND
Phenanthrene	730**	<0.3	ND
Phenol	7,300**	<0 .3 - 3	ND
Pronamide	1,800**	<0.5	ND
Pyrene	730**	<0.3	ND
M-nitroaniline	NE	<2	ND
N-nitrosodi-n-propylamine	0.13**	<0.5	ND
N-nitrosodiphenylamine	190**	<1	ND
O-nitroaniline	NE	<0.7	ND
P-nitroaniline	NE	<2	ND
Acenaphthene	1,500**	<0.5	ND
Acenaphthylene	1,500**	<0.5	ND
Acetophenone	2,400**	<0.5	ND
Anthracene	7,300**	<1	ND
Benzo(a)anthracene (1 2-benzanthracene)	1.3**	<0.6	ND
Benzo(b)fluoranthene	1.3**	<2	ND
Benzo(k)fluoranthene	13**	<0.9	ND
Benzo(ghi)perylene	730**	<0.5	ND
Benzo(a)pyrene	0.2	<2	ND
Butyl benzyl phthalate	4,900**	<1	ND

Table 7.1 (Continued)

Parameter	Maximum Contaminant Levels or Secondary Standards	Range of Concentrations Detected in 2003	Typical Range of Concentrations for the Freshwater Edwards Aquifer
Bis(2-chloroethoxy)methane	0.83**	<0.5	ND
Bis(2-chloroethyl)ether	0.83**	<0.5	ND
Bis(2-ethylhexyl)phthalate	6.0	<0.5 – 12	ND
4-bromophenyl phenyl ether	0.061**	<0.5	ND
Carbazole	46**	<0.5	ND
4-chloroaniline	NE	<0.5	ND
2-chloronaphthalene	2,000**	<0.5	ND
4-chlorophenyl phenyl ether	0.061**	<0.5	ND
Chrysene	130**	<0.3	ND
Dibenzo(ah)anthracene	0.2**	<1	ND
Dibenzofuran	98**	<0.5	ND
3 3-dichlorobenzidine	2**	<4	ND
Diethyl phthalate	20,000**	<0.5	ND
Dimethyl phthalate	20,000**	<1	ND
Di-n-butyl phthalate	2,400**	<1	ND
Di-n-octyl phthalate	490**	<1	ND
2 4-dinitrotoluene	1.3**	<2	ND
2 6-dinitrotoluene	1.3**	<0.5	ND
Diphenyl (1 1-biphenyl)	1,200**	<0.2	ND
Fluoranthene	980**	<0.5	ND
Fluorene	980**	<0.5	ND
Hexachlorobenzene	1**	<0.5	ND
Hexachlorocyclopentaiene		<10	ND
Hexachloroethane		<10	ND
Indeno(1,2,3-cd)pyrene		<10	ND
Isophorone		<10	ND
VOCs SW-8260b (µg/L)			
1, 1, 1-trichloroethane	200.0	<0.08	ND
1, 1, 2, 2-tetrachloroethane	4.6**	<0.09	ND
1, 1, 2-trichloro-1 2 2-trifluoroethane	73**	<0.07	ND
1, 1, 2-trichloroethane	5.0	<0.09	ND
1, 1-dichloroethane	2,400**	<0.06	ND
1, 1-dichloroethene (vinylidene chloride)	7.0	<0.07	ND
1, 2, 4-trichlorobenzene	70.0	<0.08	ND
1, 2-dibromo-3-chloropropane	0.2	<1	ND
1, 2-dibromoethane (EDB)	NE	<0.07	ND
1, 2-dichlorobenzene	600**	<0.06	ND
1, 2-dichloroethane (EDC)	5.0	<0.09 – 0.3 (J)	ND
1, 2-dichloropropane	5.0	<0.06	ND
1, 3-dichlorobenzene	730**	<0.09	ND
1, 4-dichlorobenzene	75**	<0.06	ND
2-hexanone	1,500**	<0.09	ND
4-methyl-2-pentanone (MIBK)	NE	<0.1	ND
Acetone	22,000**	<1– 2 (J)	ND
Benzene	5.0	<0 .05- 0.2 (J)	ND
Bromochloromethane (chlorobromomethane)	980**	<0.09	ND
Bromodichloromethane	15**	<0.09 – 0.3 (J)	ND
Bromoform (tribromomethane)	120**	<0.2 - 0.6 (J)	ND
Bromomethane (methyl bromide)	34**	<0.4 - 0.8 (J)	ND
Carbon disulfide	2400**	<0.05 - 19	ND
Carbon tetrachloride	5.0	<0.07	ND
Chlorobenzene	100.0	<0.06	ND
Chloroethane (ethyl chloride)	9,800**	<0.2	ND
Chloroform	240**	<0.06 – 1	ND
Chloromethane (methyl chloride)	70**	<0.1– 1 (J)	ND
Cis-1 2-dichloroethene	70.0	<0.08	ND
Cis-1 3-dichloropropene	1.7**	<0.08	ND
Cyclohexane	120,000*	<0.1	ND
Dibromochloromethane	11**	<0.08 - 0.6 (J)	ND
Dichlorodifluoromethane	4,900**	<0.09	ND
Ethylbenzene	700**	<0.03	ND
Isopropylbenzene (cumene)	700 / 2400**	<0.04	ND
Methyl ethyl ketone (2-butanone)	15,000**	<0.2	ND

Table 7.1 (Continued)

Parameter	Maximum Contaminant Levels or Secondary Standards	Range of Concentrations Detected in 2003	Typical Range of Concentrations for the Freshwater Edwards Aquifer
Methylene chloride (dichloromethane)	5**	<0.4	ND
Styrene	100.0	<0.05	ND
Tert-butyl methyl ether (mtbe)	240**	<0.04	ND
Tetrachloroethene	5.0	<0 – 50.08	ND
Toluene	1,000	<0 – 20.04	ND
Trans-1, 2-dichloroethene	100	<0.2	ND
Trans-1, 3-dichloropropene	9.1**	<0.07	ND
Trichloroethene	5.0	<0.08	ND
Trichlorofluoromethane	7,300**	<0.06	ND
Vinyl chloride (chloroethene)	2.0	<0.07	ND
Xylenes (total)	10,000	<0.1	ND

Data source: EPA maximum contaminant levels, 40 CFR, Part 141, 2004 (www.epa.gov).
NE indicates no established maximum contaminant level, secondary standard, or groundwater protective concentration levels (PCLs).
* Secondary drinking water standards (40 CFR, Part 143, 2004).
**Texas Risk Reduction Program (TRRP) rules, Tier 1, residential PCLs, 30 TAC Chapter 350, updated March 31, 2004.
(see http://www.tnrcc.state.tx.us/permitting/remed/techsupp/guidance.htm)
1 = MCLG-Maximum Contaminant Level Goal
ND = indicates not detectable
NA = not analyzed
Note: Reader is encouraged to check 40 CFR, 141, and Tier 1 PCL value updates.
< = Indicates the detection limit and not necessarily the concentration of the compound in water.

Table 7.2 Secondary drinking-water standards.

Parameter	**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, 2004 (www.epa.gov).
The range of concentrations detected for these parameters in the Edwards Aquifer is included on **Table 7.1**. Color and corrosivity are not analyzed.

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 approximate location of the freshwater/saline-water interface is shown in **Figures 1.1 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 1950s is inconclusive as to whether encroachment of saline water is likely during a recurrence of extreme drought conditions. However, encroachment of saline water has not been identified as a problem in the region when water levels are above the lowest levels recorded in the aquifer.

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.

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, periodic samples are 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 additional water quality monitor well transects across the freshwater/saline-water interface. Two 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). Water quality in these transect wells has been relatively uniform with no significant changes since the program began. 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 (2001)
- Mission Road Transect (2002)

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. The Authority, USGS, and SAWS will continue to monitor water quality in the freshwater/saline water interface monitoring wells.

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

Surface water quality data are collected within the drainage area of the aquifer (see **Figure 7.1**) at USGS gauging stations located upstream of the Edwards Aquifer Recharge Zone. The surface water data collection sites are located within eight major stream basins that flow across the recharge zone and contribute significant groundwater recharge to the Edwards Aquifer. The streams monitored, from west to east, are the Nueces River, Dry Frio River, Frio River, Sabinal River, Seco Creek, Hondo Creek, Medina River, and Blanco River. In 2003, surface water samples were collected from each of the listed rivers and creeks, along with a surface water sample at Helotes Creek in Bexar County. Data from these sites can be used as a base-line 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.

Water quality data are also collected from five major spring groups discharging from the aquifer because they provide composite samples of the vast underground drainage network that makes up the aquifer. Multiple spring orifices were sampled at Comal, Hueco, and San Marcos springs, while single spring orifices were sampled at San Antonio and San Pedro springs.

Summary of Analytical Results – Water samples from the nine stream locations and five spring groups were analyzed for the following metals: aluminum, antimony, arsenic, barium, beryllium, boron, bromide, cadmium, chromium, cobalt, copper, iron, lead, lithium, manganese, mercury, molybdenum, nickel, selenium, silver, strontium, thallium, vanadium, and zinc. Detectable metal concentrations in surface water are common at trace amounts.

Analytical results for metals with a primary standard or MCL indicate the presence of antimony at two surface water and five spring water sample sites and the presence of thallium at two surface water and two spring water sample sites. These two regulated metals were detected at concentrations slightly above their MCLs. The MCL for antimony is 0.006 mg/L and the MCL for thallium is 0.002 mg/L. Antimony and thallium were detected above their respective MCLs at the following sites:

Hondo Creek near Tarpley:

- Thallium at 0.0087 (B) mg/L

Medina River at Bandera:

- Thallium at 0.0064 (B) mg/L

San Pedro Springs:

- Antimony at 0.0277 (B) mg/L, thallium at 0.0048 (B) mg/L

San Antonio Springs:

- Antimony at 0.0305 (B) mg/L

Comal Springs:

- Spring #5-antimony at 0.0139 mg/L

Hueco Springs:

- Hueco B Spring-antimony at 0.0084 (B) mg/L

San Marcos Springs:

- Deep Spring-antimony at 0.0078 (B) mg/L, thallium at 0.0308 (B) mg/L
- Hotel Spring-antimony at 0.0081 (B) mg/L
- Weissmuller Spring-antimony at 0.0071 (B) mg/L, thallium at 0.0348 (B) mg/L
- Catfish Spring-thallium at 0.0286 (B) mg/L

Note: (Analytical results flagged with the letter "B" indicate detected quantity is below the reporting limit but above the method detection limit. Flagging criteria differ for metals and organic analyses, the letter "J" is used for this condition in organic analyses.)

As with the well samples discussed in Section 7.1 of this report, the concentrations of antimony and thallium detected above their respective MCLs are suspect and are not believed to be representative of actual concentrations. As a result, confirmation testing for metals in well water samples was conducted in 2004. The confirmation samples were analyzed with a more sensitive analytical method that is better suited to quantification of metals at extremely low concentrations. The confirmation analyses indicated only one positive result for thallium at a level well below the MCL and no positive results for antimony. Detailed results of the confirmation analyses will be published in the Authority's *Hydrologic Data Report for 2004*. The Authority will continue to monitor these sites for the presence of antimony and thallium using improved analytical techniques to rule out false detections.

Laboratory analyses indicated trace amounts of nitrate as nitrogen in most surface water and all spring water samples. Surface water samples had nitrate concentrations ranging from less than the reporting limit to 0.521 mg/L. All spring water samples indicated the presence of nitrate, with concentrations between 0.719 mg/L and 1.97 mg/L. None of the nitrate concentrations detected exceeds the MCL of 10 mg/L (nitrate as nitrogen) for drinking water.

Stream samples were tested for organic compounds related to herbicides and pesticides in 2003 with no positive results noted for these compounds. Stream samples were not tested for SVOCs or VOCs. Surface water samples are not tested for VOCs due to the inherent volatility of VOCs making their presence in surface waters rare. Some spring samples contained organic compounds; however, only the SVOC, bis (2-ethylhexyl) phthalate, was detected above a drinking water standard.

Spring samples tested for herbicides and pesticides indicated the presence of the pesticide compounds diazinon at 0.01(J) µg/L at San Marcos Springs-Hotel Spring and gamma-chlordane at 0.01(J) µg/L at San Marcos Springs-Deep Spring. The analytical laboratory reports indicated that they were detected below the laboratory reporting limit ("J" flag notation). As such, the results may not be representative of actual concentrations. No MCL has been established for these compounds.

Water samples from San Pedro, San Antonio, Comal, Hueco and San Marcos springs were analyzed for VOCs in 2003. Eight different VOC analytes were detected at levels well below MCL concentrations in the spring water samples. Detected compounds are discussed by spring group as applicable. With the exception of carbon disulfide, most of the analytes are "J" flagged indicating the detected concentration is also below the laboratory reporting limit and therefore may not be representative of actual concentrations. Some analytes are also "TB" flagged, indicating the same analyte was detected in the associated trip blank. Analytes with a TB flag are believed to be false positive detections and not representative of the aquifer.

San Antonio Springs:

- Carbon disulfide was detected on three occasions at San Antonio Springs with concentrations of 0.2(J), 5, and 19 µg/L. The MCL for carbon disulfide is 3650 µg/L.
- Chloromethane was detected twice at 0.3(J) µg/L in each sample. Chloromethane does not have an established MCL.
- Tetrachloroethene (PCE) was detected once at 0.4(J) µg/L. The MCL for PCE is 5 µg/L.
- Bromomethane was detected at 0.6(J) µg/L.
- Benzene was detected at 0.2(J,TB) µg/L.
- Toluene was detected at 0.3(J,TB) µg/L.

San Pedro Springs:

- Acetone was detected twice at 1.0(J,TB) µg/L and and 0.6(J, TB) µg/L, no MCL has been established for acetone.
- 1,2-Dichloroethane (EDC) was detected at 0.3(J) µg/L. The MCL for EDC is 5.0 µg/L.
- Carbon disulfide was detected on three occasions at San Pedro Springs at concentrations of 0.2(J), 0.6(J), and 5 µg/L. The MCL for carbon disulfide is 3,650 µg/L.
- PCE was detected at 0.2(J) µg/L. The MCL for PCE is 5 µg/L.

Comal Springs:

- Acetone was detected at Spring #7, at 2(J,TB) µg/L. No MCL has been established for acetone.
- Bromomethane was detected at Spring Island at 0.7 (J) µg/L; Saltation at 0.7(J) µg/L and at Spring #1, at 0.5(J) µg/L. No MCL has been established for bromomethane.
- Carbon disulfide was detected at; Spring Island at 0.1(J) µg/L; B1 at 0.1 µg/L; and at Spring #5 at 1 µg/L. The duplicate sample, Spring #5 duplicate indicated a carbon disulfide concentration of 14 µg/L. The MCL for carbon disulfide is 3,650 µg/L.
- Chloromethane was detected on two occasions at Spring #1 at 0.2(J) µg/L; Spring #5, and Spring #5 duplicate at 0.2(J) µg/L; Spring #7 at 0.3(J); B1 at 0.4(J, TB) µg/L and at Saltation at 0.8(J) µg/L. Chloromethane does not have an established MCL.
- Tetrachloroethene was detected at Spring #7 at 0.2(J) µg/L. The MCL for PCE is 5 µg/L.

Hueco Springs:

- Acetone was detected at Hueco B Spring at 1(J, TB) µg/L. No MCL has been established for acetone.

- Carbon disulfide was detected at Hueco B Spring at 3 µg/L. The MCL for carbon disulfide is 3,650 µg/L.

San Marcos Springs:

- Bromomethane was detected at Diversion at 0.7(J) µg/L and at Weissmuller at 0.5(J) µg/L. No MCL has been established for bromomethane.
- Carbon disulfide was detected at five springs; Hotel at 0.2(J) and 0.4(J) µg/L; Catfish at 0.6(J) µg/L; Weissmuller at 2 µg/L; Diversion at 3 µg/L; and Deep at 4 µg/L. The MCL for carbon disulfide is 3,650 µg/L.
- Chloromethane was detected at 0.4(J) µg/L at Diversion; 1(J) µg/L at Catfish; 0.7(J, TB) µg/L at Deep and 0.2(J) µg/L at Hotel. Chloromethane does not have an established MCL.

As discussed in Section 7.1, many of the listed organic compounds are not believed to be representative of actual concentrations in the aquifer. Specifically, detections summarized for the springs related to carbon disulfide, acetone and chloromethane are suspect due to their characteristics as either pervasive post collection contaminants, their associated data flags, or their detection over a widespread geographic area.

Semi-volatile organic compounds were detected at all five spring complexes during 2003. Phenol was detected at 0.3(J) µg/L each at San Antonio and San Pedro springs. Phenol does not have an established MCL. The phenol results are detected at concentrations below the laboratory reporting limit and may not be representative of the actual concentrations. Several phthalate compounds were detected, but only Bis (2-ethylhexyl) phthalate) was detected above the MCL. SVOC detections for the springs are summarized below:

San Pedro Springs:

- Bis (2-ethylhexyl) phthalate was detected at 4(J) and 3(J) µg/L. The MCL for bis (2-ethylhexyl) phthalate is 6 µg/L.
- Diethyl phthalate was detected at 1(J) µg/L, no MCL has been established for this compound.
- Phenol was detected at 3(J) µg/L, no MCL has been established for this compound.

San Antonio Springs:

- Bis (2-ethylhexyl) phthalate was detected at 1(J) µg/L.
- Diethyl phthalate was detected at 1(J) µg/L.
- Phenol was detected at 3(J) Diethyl phthalate was detected at 1(J) µg/L.

Comal Springs:

- Bis (2-ethylhexyl) phthalate was detected at Spring #1 at 0.6(J) µg/L and Spring #7 at 1(J) µg/L.

Hueco Springs:

- Bis (2-ethylhexyl) phthalate was detected at A-Spring at 0.6(J) and 4(J) µg/L and at B-Spring at 13, 2(J) and 2(J) µg/L.

- Butyl benzyl phthalate was detected at B-Spring at 0.8(J) µg/L, no MCL has been established for this compound.
- Diethyl phthalate was detected at B-Spring at 0.6(J) µg/L.

San Marcos Springs:

- Bis (2-ethylhexyl) phthalate was detected at Catfish at 1(J) µg/L; Deep at 4(J) and 4(J) µg/L; Diversion at 2(J) µg/L; Hotel at 4(J) and 1(J) µg/L and at Weissmuller at 0.9(J) µg/L.
- Di-n-butyl phthalate was detected at Deep at 2(J) µg/L, no MCL has been established for this compound.
- Diethyl phthalate was detected at Deep at 0.8(J) and 0.9(J) µg/L.

Phthalates (especially bis (2-ethylhexyl) phthalate) are common post sample collection contaminants as discussed in Section 7.1 of this report. These phthalate detections are not believed to be representative of contamination in the aquifer. They are believed to be representative of post sample collection contamination from sampling or analytical equipment. The Authority will continue monitoring for the presence of contaminants at these stream and spring sites.

8.0 SUMMARY

This report presents the results of the Authority's Edwards Aquifer Data Collection Program for calendar year 2003. During 2003, the Authority collected a wide variety of data regarding the Edwards Aquifer including:

- Groundwater level data
- Precipitation measurement data
- Groundwater recharge data
- Groundwater discharge and usage data
- Water quality data from groundwater, surface water, and springs

Groundwater level data

Water levels remained well above average at the Bexar County (J-17) index well throughout 2003. Other index wells in the region exhibited similar behavior. Aquifer (groundwater) levels started the year very high due to heavy rainfall in the second half of 2002, however; a dry spring caused a minor decline in water levels in the region. Early summer and early fall rains maintained aquifer levels above average for the remainder of 2003.

Precipitation measurement data

Precipitation in the Edwards Aquifer region was generally slightly below average in 2003, except in Hondo where precipitation exceeded the annual average by approximately 21 percent. Rainfall amounts varied from less than 15-inches to more than 35-inches across the region. Central Uvalde County, portions of southern Blanco County and central Hays County received the least rainfall. The highest rainfall volumes were recorded in west central Real, central Bandera, central Medina, and southern Comal counties.

Groundwater recharge data

In 2003, total recharge to the Edwards Aquifer was 669,000 acre-feet. This recharge volume is approximately 20 percent above the median of 559,400 acre-feet for the period of record (1934-2003) and approximately four percent below the mean of 698,500 acre-feet for the period of record (1934-2003).

Groundwater discharge and usage data

In 2003, discharge from the Edwards Aquifer through wells and springs totaled 974,800 acre-feet. This discharge volume is approximately 46 percent above the median of 669,800 acre-feet for the period of record (1934-2003) and approximately 43 percent above the mean of 680,600 acre-feet for the period of record (1934-2003).

Discharge from wells in 2003 was estimated to be 353,200 acre-feet. This discharge volume is approximately 13 percent below the 407,200 acre-foot ten-year median (1994-2003) and approximately 14 percent below the 409,400 acre-foot ten-year mean (1994-2003).

Discharge from springs in 2003 was estimated to be 621,535 acre-feet. This discharge volume is approximately 47 percent above the 423,200 acre-foot ten-year median (1994-2003) and approximately 42 percent above the 436,600 acre-foot ten-year mean (1994-2003). For the period of record, 2003 experienced the second highest annual discharge from springs, exceeded only by the 1992 spring discharge volume.

Water quality data from groundwater, surface water, and springs

In 2003, the Authority collected water quality samples from 89 wells, nine streams, and five spring groups. In 2003, wells were generally sampled once, streams were generally

sampled twice, and spring groups were generally sampled four times. The water samples were analyzed for the following parameters:

- Samples from all locations were analyzed for major ions, metals, and nitrate.
- Samples from 22 wells, eight streams and all spring groups were analyzed for pesticides and herbicides.
- Samples from 34 wells and all spring groups were analyzed for volatile organic compounds (VOCs).
- Samples from 14 wells and all spring groups were analyzed for semi-volatile organic compounds (SVOCs).

Salient points regarding the 2003 water quality data are summarized below:

- Antimony was detected in five well and seven spring samples at concentrations above its maximum concentration level (MCL) of six micrograms per liter (µg/L). Thallium was detected in seven well, two stream, and three spring samples at concentrations above its MCL of 2 µg/L. Follow-up sampling indicated that the elevated antimony and thallium concentrations were false positives and are not representative of conditions in the aquifer.
- Nitrate as nitrogen concentrations ranged from below the laboratory reporting limit of <0.02 milligrams per liter (mg/L) to 9.05 mg/L. None of the samples collected exceeded the MCL of 10 mg/L of nitrate as nitrogen. Nitrate as nitrogen concentrations were detected above 5.0 mg/L in five wells.
- The volatile organic compound (VOC) tetrachloroethene (PCE) was detected in one well sample at a concentration equal to its MCL of 5.0 µg/L. PCE was not detected above the MCL in any of the samples collected in 2003.
- The semi-volatile organic compound (SVOC) bis (2-ethylhexyl) phthalate was detected above its MCL of 6 µg/L in one spring and four well samples. The bis (2-ethylhexyl) phthalate concentrations detected are believed to represent post sample collection contamination and are not representative of conditions in the aquifer.

The results of the 2003 water quality sampling indicate that water quality in the aquifer is generally excellent. Edwards Aquifer water is generally of such high quality that it normally requires only chlorination to meet public drinking water standards. However, the detection of trace quantities of metals and organic compounds in the aquifer is a concern and the Authority will continue to monitor for these compounds to determine possible sources and trends. Quantification of many of the metals and organic compounds at the low concentrations indicated in the report can be problematic and continued monitoring will be required to confirm their presence or absence. The Authority's aquifer-wide water quality sampling program will continue to monitor wells, streams, and springs for indications of water quality impacts. Authority staff and cooperating agencies will continue to analyze any anomalous data and investigate possible sources of contamination.

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 Area — The area or watershed where runoff from precipitation flows downgradient to the recharge zone of the Edwards Aquifer. Also known as the "Texas Hill Country."

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 (EUWD)	The regional governmental entity that preceded the Edwards Aquifer Authority.
Edwards Aquifer Authority (EAA or Authority)	The regional governmental entity established by the Texas Legislature in 1993 to "manage, enhance, and protect the Edwards Aquifer system."
Freshwater/saline-water interface	The interface or boundary 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.
Mean	The arithmetic average of a population of numbers. Described mathematically as: $\mathbf{Mean = X_1{}^{+}X_2{}^{+}X_3{}^{+\cdots+}X_n / n}$.
Median	The numerical value at the "center" or "middle" of a data set, where one-half of the sample population is less than, and one-half is greater than the median value.
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 to which water will rise in a well. Under confined conditions, the water level will rise above the producing aquifer.
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.

Semivolatile organic compounds (SVOC) — Class of naturally occurring and synthetic organic compounds such as polynuclear aromatic hydrocarbons and chlorinated hydrocarbons and pesticides; typically analyzed with gas chromatograph/mass spectrometers.

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°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.

Volatile organic compounds VOC) — Class of naturally occurring and synthetic organic compounds with boiling points below 200˚C, typically analyzed with gas chromatograph/mass spectrometers; includes solvents such as trichloroethene, tetrachloroethene, and carbon tetrachloride.

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. The water table is also known as the piezometric surface.

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 may contain water under less pressure than that of the atmosphere. Also known as the vadose zone.

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. Also known as the phreatic zone.

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APPENDIX A – Year 2003 Water Level Data for Selected Wells

Table A-1 City of Uvalde Index Well J-27 (YP-69-50-302) daily high water levels (in feet above msl), 2003.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	883.2	883.1	882.5	882.6	880.5	878.4	878.0	879.1	879.0	879.4	879.8	880.3
2	883.1	883.1	882.5	882.0	880.4	878.3	878.0	879.1	878.9	879.4	879.9	880.2
3	883.1	883.2	882.5	881.9	880.4	878.3	878.0	879.0	879.0	879.4	879.9	880.3
4	883.1	883.0	882.5	881.9	880.4	878.2	877.9	879.0	879.0	879.4	879.9	880.2
5	883.1	883.0	882.5	881.9	880.3	878.1	878.2	879.0	879.0	879.5	880.0	880.2
6	883.1	883.0	882.5	881.8	880.2	878.1	878.4	879.0	879.0	879.5	880.0	880.2
7	883.0	882.9	882.5	881.8	880.1	878.1	878.4	879.0	879.0	879.5	880.0	880.2
8	883.1	882.9	882.5	881.7	880.1	878.1	878.4	878.9	879.0	879.6	880.0	880.2
9	883.1	882.8	882.5	881.7	880.0	878.1	878.5	878.9	879.0	879.6	880.0	880.2
10	883.1	882.8	882.5	881.7	880.0	878.2	878.5	878.9	879.0	879.6	880.0	880.1
11	883.2	882.9	882.5	881.6	879.9	878.2	878.52	878.9	879.0	879.6	880.1	880.2
12	883.2	882.8	882.5	881.6	879.8	878.3	878.6	878.9	879.1	879.7	880.1	880.2
13	883.2	882.8	882.5	881.5	879.7	878.3	878.6	878.9	879.1	879.7	880.1	880.2
14	883.2	882.8	882.4	881.4	879.6	878.3	878.6	879.0	879.1	879.7	880.1	880.2
15	883.2	882.8	882.4	881.4	879.6	878.4	878.7	879.0	879.1	879.7	880.1	880.2
16	883.2	882.6	882.4	881.4	879.5	878.5	878.9	879.0	879.1	879.7	880.1	880.1
17	883.2	882.6	882.3	881.3	879.4	878.5	878.9	879.0	879.1	879.7	880.2	880.0
18	883.2	882.6	882.4	881.2	879.3	878.5	878.9	879.0	879.2	879.7	880.2	880.0
19	883.2	882.5	882.3	881.1	879.1	878.5	879.0	878.9	879.2	879.7	880.1	880.1
20	883.2	882.5	882.3	881.0	879.0	878.6	879.1	878.9	879.2	879.7	880.2	880.1
21	883.3	882.6	882.3	881.0	878.8	878.6	879.1	878.9	879.3	879.7	880.2	880.1
22	883.2	882.5	882.2	881.0	878.8	878.6	879.1	878.9	879.3	879.7	880.2	880.1
23	883.2	882.5	882.2	881.0	878.7	878.6	879.1	878.9	879.3	879.8	880.2	880.1
24	883.2	882.4	882.2	881.0	878.6	878.6	879.1	878.9	879.3	879.8	880.2	880.1
25	883.2	882.4	882.2	880.9	878.5	878.6	879.1	879.0	879.3	879.8	880.2	880.1
26	883.2	882.5	882.2	880.8	878.5	878.5	879.1	879.0	879.4	879.8	880.2	880.1
27	883.2	882.5	882.2	880.7	878.5	878.4	879.1	879.0	879.4	879.8	880.2	880.1
28	883.2	882.5	882.2	880.6	878.5	878.3	879.2	879.0	879.4	879.8	880.2	880.1
29	883.2		882.0	880.6	878.5	878.2	879.2	879.0	879.4	879.9	880.2	880.1
30	883.2		882.0	880.6	878.5	878.1	879.2	879.0	879.4	879.8	880.3	880.1
31	883.2		882.0		878.5		879.1	879.0		879.8		880.1

Table A-2 City of Hondo Index Well (TD-69-47-306) daily high water levels (in feet above msl), 2003.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	757.7	755.8	755.1	752.9	737.2	720.8	728.2	740.4	736.4	742.7	741.4	739.8
2	757.4	755.9	755.0	752.7	736.4	720.4	728.1	739.8	736.2	742.5	741.3	739.8
3	757.4	756.1	755.2	752.3	736.2	719.5	729.4	739.4	736.7	742.5	741.3	740.0
4	757.4	755.7	755.4	752.1	736.4	723.5	730.9	739.4	737.0	742.2	741.2	739.9
5	757.4	755.7	755.4	751.2	736.6	726.5	734.4	738.9	737.6	741.9	741.1	739.6
6	757.2	755.6	755.4	751.2	735.3	728.5	736.9	738.5	738.1	741.7	740.8	739.4
7	756.9	755.3	755.3	750.5	734.2	730.0	738.3	737.8	738.3	741.7	740.7	739.6
8	757.1	755.2	755.4	750.1	734.2	730.5	739.4	737.2	738.4	741.6	740.8	739.8
9	757.2	755.4	755.2	749.9	732.6	730.8	740.4	736.5	738.2	742.0	740.9	739.7
10	756.8	755.3	755.1	749.6	732.6	732.2	741.1	736.7	738.4	742.1	741.1	739.2
11	756.6	755.2	755.1	749.4	733.6	733.7	741.8	736.6	738.7	742.2	741.2	739.1
12	756.8	755.1	755.1	748.8	734.3	734.7	741.8	737.3	739.3	742.3	741.2	739.1
13	756.8	755.0	754.9	748.4	733.1	735.4	742.0	737.4	739.7	742.6	741.0	739.0
14	756.9	755.3	754.6	747.9	732.0	736.2	742.1	737.8	740.0	742.6	740.9	739.1
15	757.1	755.3	754.8	747.5	730.3	737.0	742.1	737.7	740.4	742.7	741.0	739.2
16	757.0	754.9	755.0	747.2	728.6	737.8	742.3	738.1	740.6	742.8	740.9	738.8
17	756.8	754.9	755.0	747.1	726.6	738.3	742.8	737.9	740.7	742.7	741.2	738.5
18	756.8	754.9	754.9	746.7	726.5	738.5	743.2	738.0	741.0	742.7	741.2	738.6
19	756.9	754.8	754.7	746.5	725.5	738.5	743.4	737.6	741.3	742.7	740.9	738.2
20	756.6	754.9	754.4	746.4	724.0	738.6	743.6	737.4	741.7	742.5	740.7	737.9
21	756.7	755.2	754.0	746.4	722.4	737.9	743.6	737.1	742.1	742.4	740.4	737.8
22	756.6	755.3	753.6	746.4	722.7	737.3	743.6	736.9	742.5	742.4	740.5	737.9
23	756.3	755.4	753.8	746.7	722.0	737.0	743.5	736.7	742.8	742.3	740.4	737.5
24	756.3	755.2	753.9	746.8	722.1	735.6	743.4	736.9	743.1	742.0	740.1	737.5
25	756.5	755.1	753.9	745.2	721.1	733.1	743.3	737.0	743.1	741.6	740.3	737.6
26	756.5	755.3	753.8	743.5	720.6	731.3	742.9	737.1	743.2	741.4	740.2	737.6
27	756.5	755.2	754.0	742.0	722.4	730.1	742.6	736.7	743.3	741.8	739.9	737.6
28	756.4	755.0	753.9	740.9	723.2	728.7	742.3	736.6	743.1	741.8	739.5	737.2
29	756.3		753.2	739.9	722.5	728.1	741.8	736.1	742.9	741.7	739.7	737.2
30	756.2		753.1	738.5	722.1	728.3	741.1	735.9	742.8	741.6	739.9	737.2
31	756.2		753.0		722.1		740.6	736.2		741.5		737.2

"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), 2003.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	729.5	728.1	727.4	725.1	712.9	698.6	703.5	715.1	708.8	715.2	714.3	712.8
2	729.2	728.0	727.4	725.1	712.0	698.0	703.6	714.6	708.8	715.2	714.4	712.7
3	729.0	727.9	727.7	725.0	711.4	698.1	704.3	714.4	709.1	714.9	714.3	712.8
4	729.3	727.8	727.8	724.8	711.3	696.7	705.6	714.1	712.4	714.9	714.2	712.7
5	729.4	727.9	727.8	724.5	711.4	699.0	708.3	712.2	712.3	714.6	714.1	712.5
6	729.4	727.9	727.7	724.3	710.9	701.3	708.7	711.7	712.3	714.5	713.8	712.3
7	728.7	727.6	727.6	723.9	710.3	702.6	710.2	711.1	711.3	714.5	713.6	712.5
8	728.9	727.5	727.1	723.4	710.3	703.3	711.4	710.7	711.5	714.9	713.7	712.6
9	729.1	727.7	727.3	723.0	710.0	703.7	712.3	710.2	711.5	714.5	713.8	712.5
10	728.9	727.4	727.2	722.9	709.5	704.5	713.0	710.1	711.4	714.7	713.9	712.2
11	728.7	727.3	727.4	722.9	709.3	705.5	713.4	710.0	713.8	714.7	714.0	712.0
12	729.0	727.2	727.5	722.3	709.2	706.3	713.6	710.6	714.2	715.3	714.0	712.1
13	728.9	727.3	727.2	721.3	708.9	710.2	714.0	710.7	712.5	715.4	713.8	712.1
14	728.9	727.3	727.0	721.1	707.7	708.6	714.2	710.8	713.4	715.3	713.8	711.9
15	728.9	727.3	727.0	720.8	707.7	708.6	714.2	710.8	713.4	715.3	713.8	712.0
16	728.9	726.9	n/a	720.6	706.0	710.2	718.9	711.2	713.5	715.5	713.8	711.9
17	728.8	726.9	726.8	720.6	704.9	710.8	717.2	711.2	713.7	715.5	714.0	711.3
18	728.8	726.8	726.8	720.5	703.8	711.8	717.6	710.9	713.4	715.4	714.0	711.4
19	728.8	726.7	726.7	720.4	703.4	711.4	717.8	710.7	713.7	715.5	713.7	711.2
20	728.9	727.5	726.4	720.3	702.5	711.5	717.9	710.3	714.5	715.4	713.7	711.0
21	728.9	727.1	726.2	720.2	701.8	711.0	718.0	710.0	714.9	715.2	713.6	711.0
22	728.7	727.1	726.6	720.2	701.2	710.5	718.0	709.7	715.0	715.2	713.6	711.0
23	728.6	727.3	725.9	720.3	700.2	709.9	717.8	709.4	715.4	715.1	713.6	710.7
24	728.3	727.0	726.1	720.4	699.9	709.2	717.8	710.1	715.7	714.9	712.9	710.4
25	728.4	727.1	726.3	719.7	699.6	707.6	717.6	709.6	715.8	714.6	713.2	710.6
26	728.4	727.1	726.3	719.2	699.7	706.0	717.2	709.6	715.9	714.4	713.2	710.6
27	728.3	727.4	726.3	717.4	699.7	704.9	717.0	709.4	715.9	714.6	713.0	710.6
28	728.4	727.4	726.2	716.3	699.5	705.2	716.8	708.9	715.9	714.7	712.5	710.4
29	728.3		725.7	715.3	699.5	704.3	716.6	708.6	715.7	714.7	712.7	710.3
30	728.1		725.3	715.2	699.3	704.0	716.2	708.5	715.6	714.6	712.8	710.1
31	728.2		725.1		698.9		715.5	708.6		714.4		710.1

Table A-4 Bexar County Index Well J-17 (AY-68-37-203) daily high water levels (in feet above msl), 2003.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	694.8	693.4	693.5	691.2	683.8	672.3	676.1	681.6	677.8	683.7	682.5	680.9
2	694.6	693.3	693.3	690.9	683.2	671.6	676.1	681.1	677.9	683.6	682.5	680.9
3	694.4	693.3	693.3	690.8	682.9	672.4	676.6	680.9	678.2	683.3	682.4	680.9
4	694.4	693.0	693.5	690.6	683.0	673.8	677.8	680.5	678.7	683.3	682.3	680.8
5	694.4	693.2	693.5	690.4	682.5	675.1	679.5	680.2	679.4	683.1	682.1	680.4
6	694.1	693.3	693.4	690.4	682.1	676.1	680.3	679.9	680.0	682.8	681.9	680.6
7	693.9	692.9	693.2	689.9	682.0	676.9	681.1	679.4	680.2	682.7	681.9	680.8
8	694.0	693.2	693.3	689.8	681.9	677.3	682.0	678.7	680.1	682.7	682.2	680.6
9	694.0	693.3	693.3	689.7	681.6	677.4	682.5	678.9	680.1	682.9	682.4	680.4
10	693.7	693.2	693.1	689.6	681.3	677.7	683.1	678.9	679.8	683.1	682.2	680.1
11	693.9	692.9	693.0	689.4	681.1	678.4	683.3	678.8	679.6	683.3	682.2	680.2
12	694.0	692.6	693.0	689.1	680.9	679.0	683.4	679.4	680.9	683.8	682.1	680.1
13	693.9	692.7	693.1	688.9	680.6	679.1	683.5	679.7	681.6	684.0	681.9	680.4
14	694.1	692.9	692.8	688.3	680.3	680.0	683.2	680.0	681.9	684.1	681.9	680.5
15	693.9	693.0	692.8	688.1	679.7	680.9	683.1	680.3	682.0	684.1	682.0	680.4
16	694.0	692.7	692.9	688.1	678.9	681.3	683.5	680.4	682.1	684.2	682.1	680.2
17	693.9	692.6	692.8	687.9	678.3	681.5	684.0	680.5	682.0	684.1	681.9	679.9
18	694.0	692.5	692.7	687.6	677.8	681.7	684.4	680.0	682.3	684.0	682.0	679.9
19	694.0	692.5	692.6	687.4	677.0	681.7	684.5	679.5	682.7	684.0	681.8	679.8
20	694.0	692.6	692.3	687.6	676.2	681.5	684.5	678.9	683.2	683.8	681.9	679.9
21	693.8	692.7	692.2	687.8	675.7	681.3	684.3	678.4	683.8	683.7	681.8	680.0
22	693.7	693.1	692.2	687.6	675.4	681.1	684.0	678.0	684.2	683.4	681.9	679.8
23	693.6	693.4	692.3	687.6	675.1	680.5	683.7	678.0	684.4	683.3	681.7	679.5
24	693.5	693.3	692.2	687.7	674.8	679.8	683.6	678.4	684.5	683.1	681.3	679.5
25	693.7	693.1	692.2	687.3	674.4	679.2	683.2	678.4	684.6	682.9	681.4	679.6
26	693.8	693.1	692.1	686.6	674.1	678.4	683.1	678.2	684.5	682.9	681.4	679.8
27	693.7	693.2	692.1	686.0	674.2	677.9	682.8	677.9	684.7	683.0	681.3	679.9
28	693.6	693.3	691.8	685.2	674.1	677.5	683.0	677.4	684.5	683.0	681.2	679.9
29	693.5		691.8	684.6	673.7	677.2	682.9	677.2	684.2	682.9	681.1	679.6
30	693.3		691.8	684.4	673.0	676.7	682.6	677.1	683.9	682.7	681.3	679.2
31	693.5		691.5		672.5		682.1	677.5		682.5		679.2

"N/D" indicates no data available.

Table A-5 Landa Park Well (DX-68-23-302) daily high water levels (in feet above msl), 2003.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	629.9	629.7	629.7	629.5	628.9	627.7	627.8	628.1	627.7	628.1	628.0	627.8
2	629.9	629.7	629.7	629.4	628.9	627.6	627.8	628.1	627.7	628.1	628.0	627.8
3	629.9	629.7	629.7	629.4	628.8	627.6	627.7	628.0	627.7	628.1	628.0	627.8
4	629.9	629.7	629.7	629.4	628.8	627.6	627.8	628.0	627.7	628.1	628.0	627.8
5	629.9	629.7	629.7	629.4	628.8	628.2	627.8	628.0	627.7	628.1	628.0	627.8
6	629.9	629.7	629.7	629.4	628.8	627.8	627.9	628.0	627.7	628.1	628.0	627.7
7	629.9	629.7	629.7	629.4	628.7	627.8	627.9	627.9	627.7	628.1	627.9	627.7
8	629.9	629.7	629.6	629.3	628.7	627.8	628.0	627.9	627.7	628.1	627.9	627.7
9	629.8	629.7	629.6	629.3	628.7	627.8	628.0	627.8	627.7	628.0	627.9	627.7
10	629.8	629.7	629.6	629.3	628.7	627.9	628.0	627.9	627.7	628.0	628.0	627.7
11	629.8	629.7	629.6	629.3	628.6	627.9	628.1	627.9	628.4	628.5	627.9	627.7
12	629.9	629.7	629.6	629.3	628.6	627.9	628.1	627.8	628.0	628.2	627.9	627.7
13	629.9	629.7	629.6	629.2	628.6	628.0	628.1	627.8	627.9	628.2	627.9	627.7
14	629.8	629.7	629.6	629.2	628.6	628.0	628.1	627.8	628.0	628.2	627.9	627.7
15	629.8	629.7	629.6	629.2	628.5	628.3	628.1	627.8	628.0	628.2	627.9	627.7
16	629.8	629.7	629.6	629.2	628.5	628.1	628.4	627.8	628.0	628.2	627.9	627.7
17	629.8	629.7	629.6	629.2	628.4	628.1	628.2	627.8	628.0	628.1	627.9	627.6
18	629.8	629.7	629.6	629.2	628.3	628.1	628.2	627.9	628.0	628.1	627.9	627.6
19	629.8	629.7	629.6	629.2	628.3	628.0	628.2	627.9	628.0	628.2	627.9	627.6
20	629.8	629.7	629.6	629.1	628.2	628.0	628.2	627.9	628.0	628.2	627.9	627.6
21	629.8	629.7	629.6	629.1	628.1	628.0	628.2	628.0	627.9	628.1	627.9	627.6
22	629.8	629.7	629.6	629.1	628.1	628.0	628.2	628.0	627.9	628.1	627.9	627.6
23	629.8	629.7	629.5	629.1	628.0	628.0	628.2	628.0	627.9	628.1	627.9	627.6
24	629.7	629.7	629.5	629.1	628.0	628.0	628.2	627.9	628.0	628.1	627.9	627.6
25	629.7	629.7	629.5	629.0	628.0	628.0	628.2	627.9	628.1	628.1	627.9	627.6
26	629.7	629.7	629.5	629.0	627.9	627.9	628.2	628.0	628.1	628.1	627.8	627.6
27	629.7	629.7	629.5	629.0	627.9	627.9	628.2	627.6	628.1	628.1	627.8	627.6
28	629.7	629.7	629.5	628.9	627.9	627.9	628.2	627.8	628.1	628.1	627.8	627.6
29	629.7		629.5	628.9	627.8	627.9	628.2	627.7	628.1	628.1	627.8	627.6
30	629.7		629.5	628.9	627.8	627.8	628.2	627.7	628.1	628.1	627.8	627.5
31	629.7		629.5		627.7		628.1	627.7		628.0		627.5

Table A-6 Knispel Well (LR 67-01-809) daily high water levels (in feet above msl), 2003.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	582.8	582.0	581.8	581.3	580.1	578.9	578.5	577.63	577.0	577.1	576.6	576.1
2	582.7	582.0	581.8	581.2	580.0	578.8	578.4	577.62	577.0	577.1	576.6	576.1
3	582.7	582.0	581.8	581.2	580.0	578.8	578.4	577.62	577.0	576.2	576.6	576.1
4	582.7	581.9	581.8	581.2	579.9	578.8	578.3	577.61	576.9	576.2	576.6	576.1
5	582.7	581.9	581.8	581.2	579.9	578.9	578.3	577.59	576.9	576.2	576.6	576.1
6	582.7	581.9	581.8	581.1	579.9	579.0	578.3	577.56	576.9	576.2	576.6	576.0
7	582.5	581.8	581.8	581.1	579.8	579.0	578.3	577.49	576.9	576.1	576.6	576.0
8	582.5	581.8	581.8	581.0	579.8	578.9	576.7	577.43	576.9	576.1	576.6	576.0
9	582.5	581.8	581.8	580.9	579.7	578.9	576.6	577.41	576.9	576.1	576.5	576.0
10	582.5	581.8	581.8	580.9	579.7	578.9	576.6	577.40	576.8	576.1	576.5	576.0
11	582.4	581.8	581.8	580.9	579.7	578.9	576.6	577.39	576.9	576.1	576.5	576.0
12	582.4	581.8	581.8	580.9	579.6	578.9	576.5	577.3	577.0	576.1	576.5	576.0
13	582.4	581.8	581.8	580.8	579.6	578.9	576.5	577.3	577.1	576.1	576.5	576.0
14	582.4	581.8	581.8	580.8	579.5	578.9	576.5	577.3	577.1	576.1	576.4	576.0
15	582.5	581.8	581.8	580.7	579.5	578.9	576.4	577.3	577.2	576.1	576.4	576.0
16	582.5	581.8	581.8	580.7	579.5	578.9	576.4	577.3	577.2	576.1	576.4	575.9
17	582.4	581.8	581.8	580.7	579.4	578.9	577.91	577.3	577.2	576.0	576.5	575.9
18	582.4	581.8	581.8	580.6	579.4	579.0	577.91	577.3	577.2	576.0	576.5	575.9
19	582.4	581.3	581.8	580.6	579.3	579.0	577.90	577.2	577.2	575.9	576.4	575.9
20	582.4	601.7	581.8	580.6	579.3	578.9	577.88	577.2	577.2	575.9	576.3	575.9
21	582.4	581.6	581.7	580.5	579.2	578.9	577.86	577.2	577.2	575.9	576.3	575.9
22	582.4	581.7	581.7	580.5	579.16	578.8	577.83	577.1	577.3	576.8	576.3	575.9
23	582.3	581.7	581.6	580.5	579.12	578.8	577.79	577.1	577.3	576.8	576.3	575.9
24	582.2	581.7	581.6	580.5	579.09	578.7	577.75	577.1	577.3	576.8	576.2	575.8
25	582.2	581.7	581.6	580.5	579.07	578.7	577.71	577.1	577.3	576.7	576.3	575.8
26	582.2	581.8	581.5	580.5	579.02	578.6	577.67	577.1	577.3	576.7	576.3	575.8
27	582.2	581.8	581.5	580.3	578.96	578.6	577.64	577.0	577.3	576.7	576.2	575.8
28	582.2	581.8	581.5	580.2	578.91	578.6	577.62	577.0	577.3	576.7	576.2	575.8
29	582.1		581.4	580.2	578.89	578.6	577.59	577.0	577.3	576.7	576.2	575.8
30	582.1		581.3	580.1	578.88	578.5	577.61	577.0	577.2	576.7	576.2	575.8
31	582.0		581.3		578.88		577.63	577.0		576.6		575.8

"N/D" indicates no data available.

APPENDIX B – Year 2003 Hydrographs for Index Wells and Springs

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

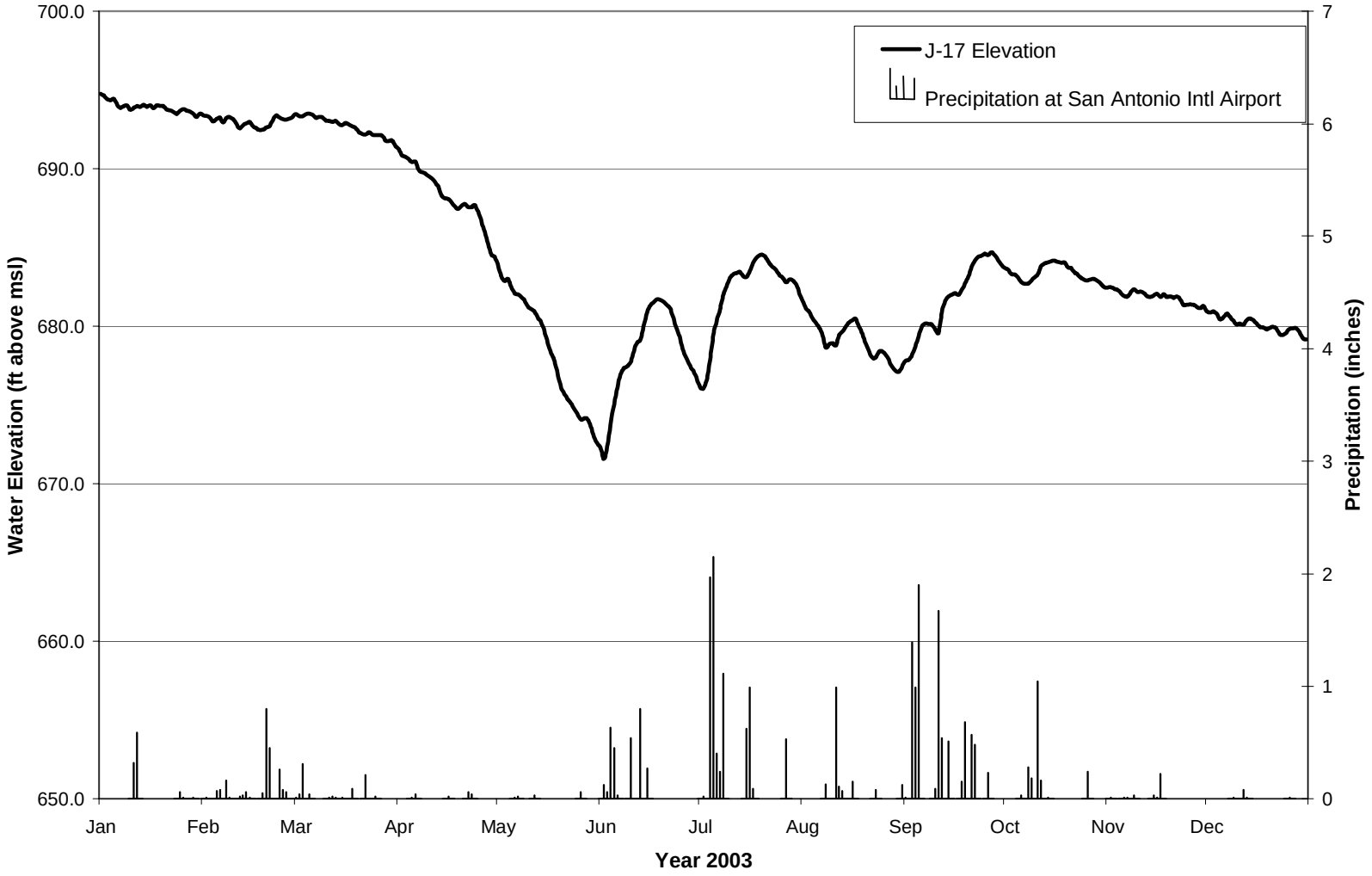


Figure B-2. City of Hondo Index Well (TD-69-47-306)
Hydrograph of Groundwater Elevation vs. Precipitation at Hondo

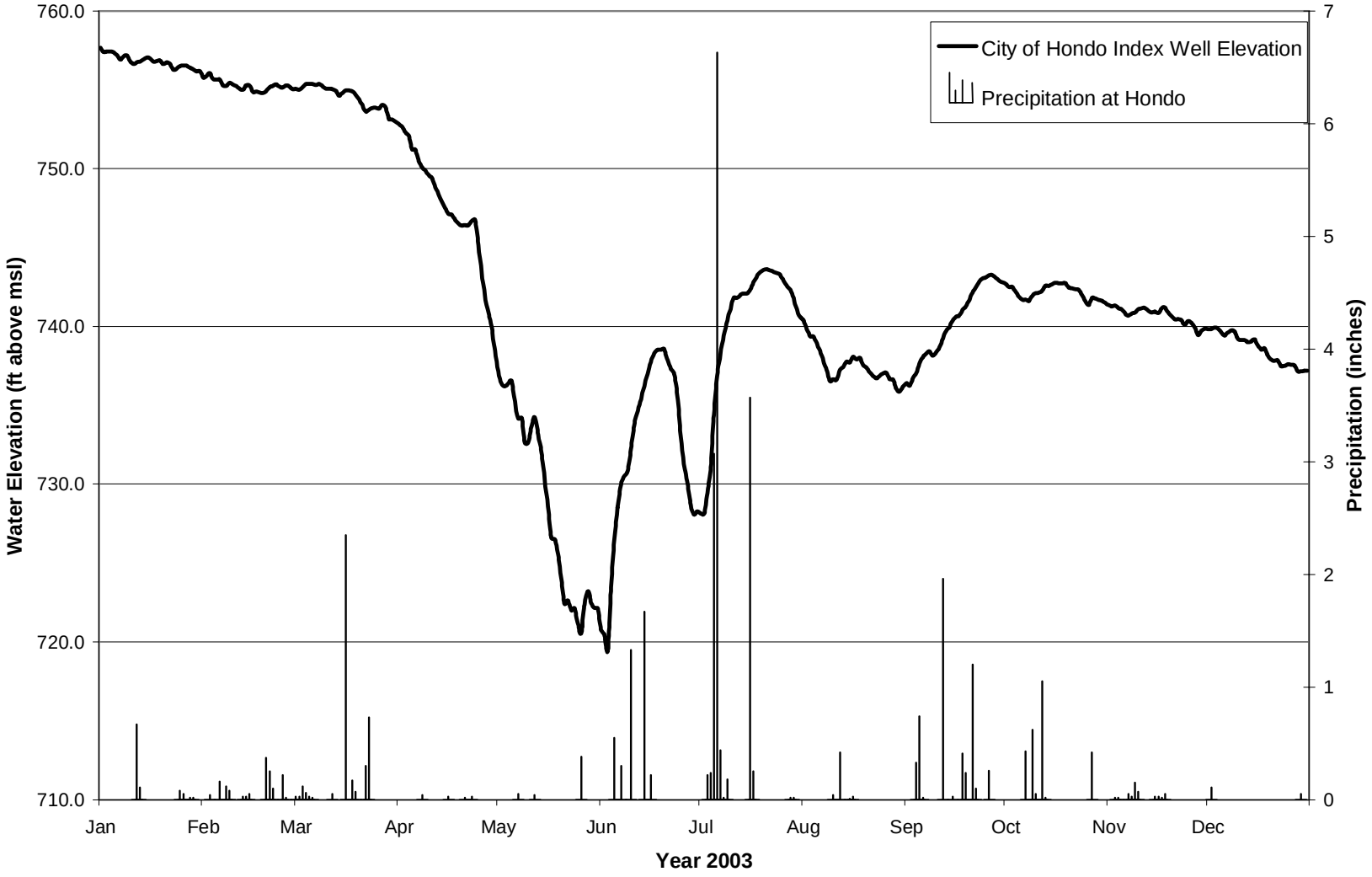


Figure B-3. City of Uvalde Index Well J-27 (YP-69-50-302)
Hydrograph of Groundwater Elevation vs. Precipitation at Uvalde

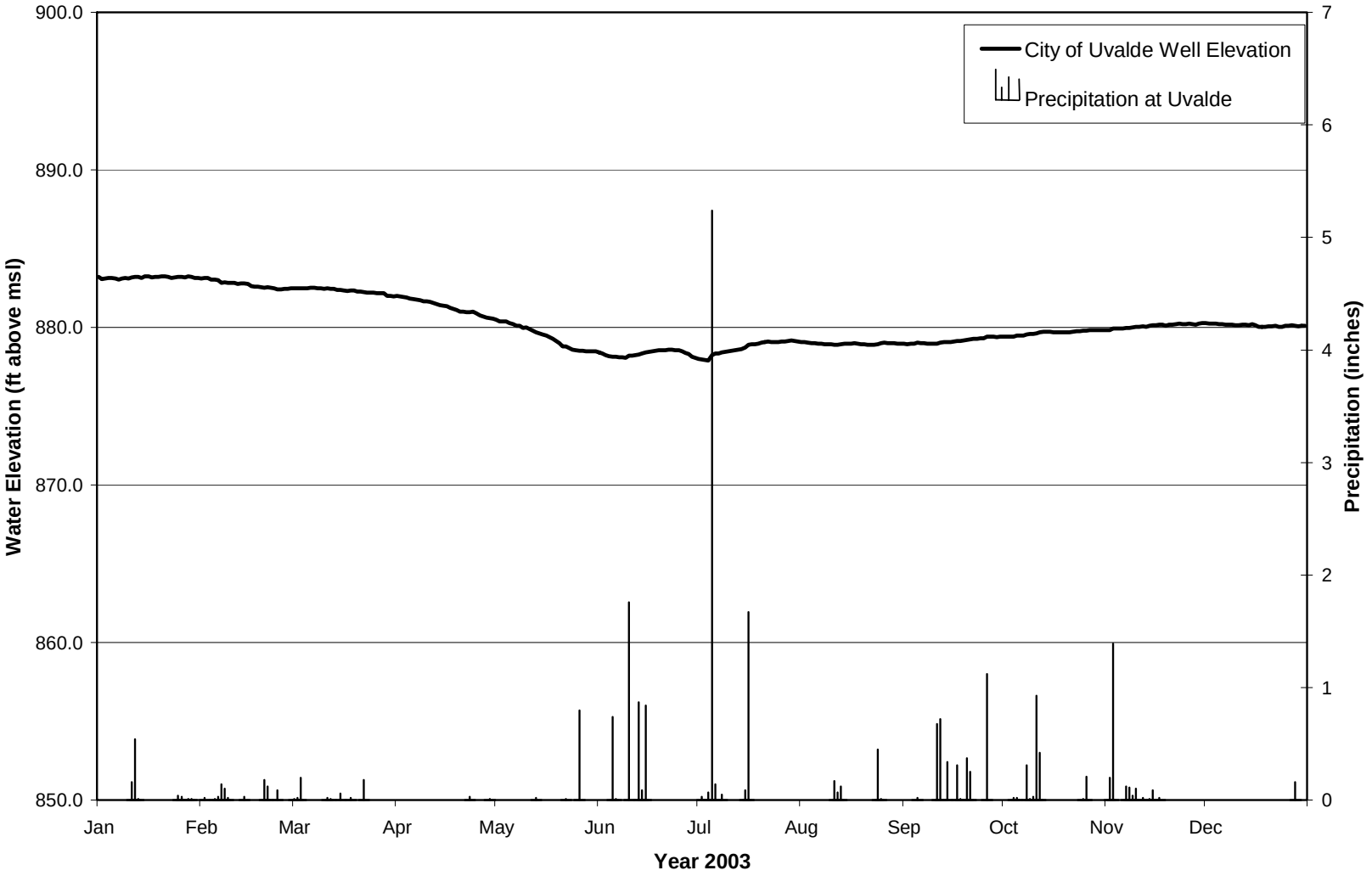


Figure B-4. Comal Springflow
Hydrograph of Springflow vs. Precipitation at San Antonio International Airport

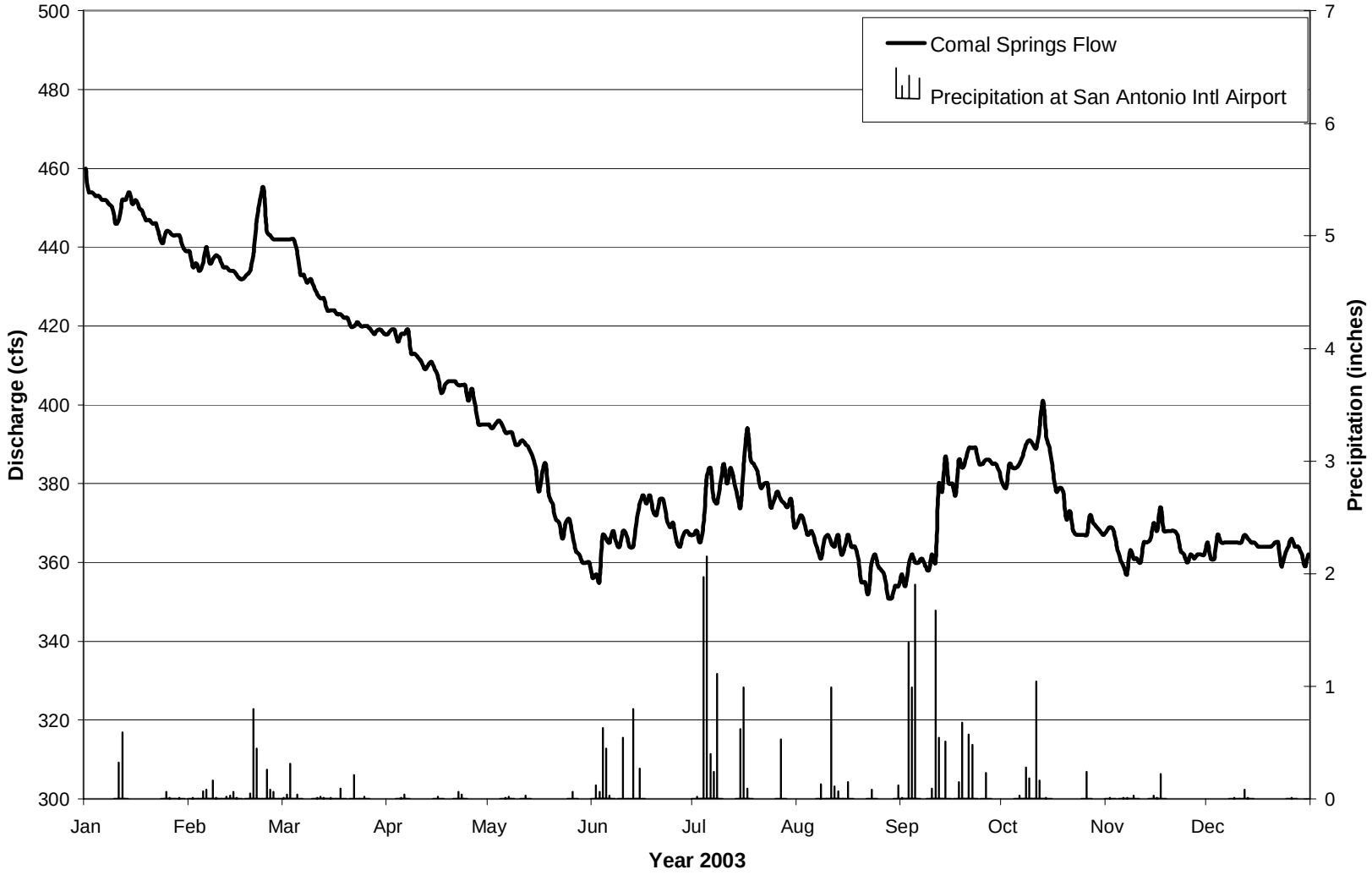
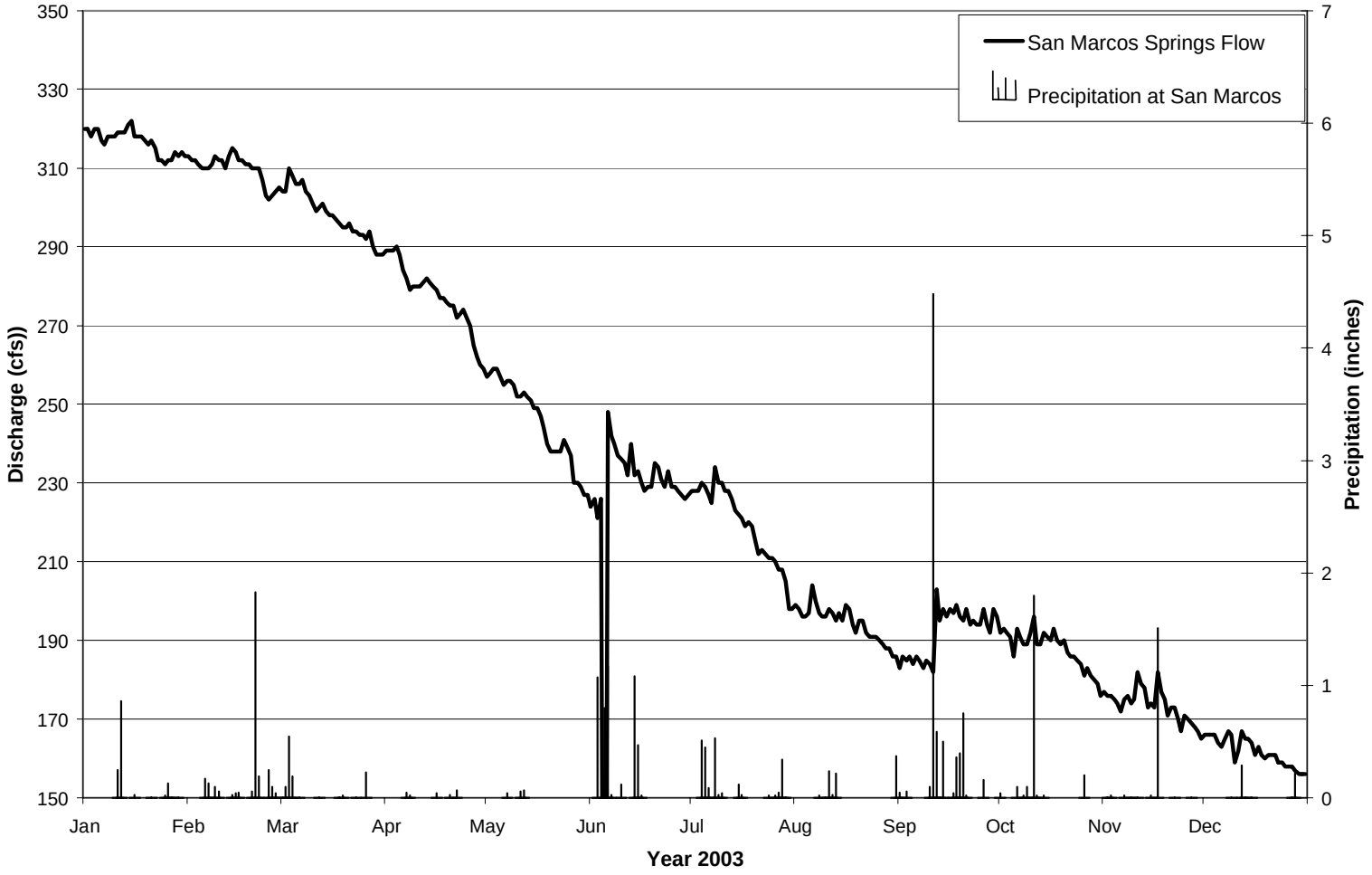


Figure B-5. San Marcos Springflow
Hydrograph of Springflow vs. Precipitation at San Marcos



APPENDIX C – Year 2003 Water Quality Data

Table C-1 Field measurements and bacteria counts in water samples from wells completed in the Edwards Aquifer, 2003

County	State Well Number	Date Sampled	Time Sampled	Well Depth (ft)	Water Level (ft above msl)	Pump or Flow Period (min)	Flow Rate (gpm)	Water Temp (deg C)	Field Conductivity (µS/cm)	Field pH (std units)
Bexar	AY-68-27-307	3/25/2003	12:00	270	150.00	70	3.5	22.9	588	6.85
Bexar	AY-68-27-5VC	1/6/2003	11:25	NR	NR	POA	NR	20.3	561	7.02
Bexar	AY-68-27-611	8/13/2003	11:15	260	178.32	70	NR	23.8	581	6.91
Bexar	AY-68-28-113	8/12/2003	11:25	320	210.04	75	NR	23.8	535	6.84
Bexar	AY-68-28-203	10/24/2003	10:35	435	NR	20	NR	22.3	845	6.36
Bexar	AY-68-28-205	10/24/2003	11:50	485	194.30	20	NR	23.3	693	6.53
Bexar	AY-68-28-210	10/1/2003	11:30	281	193.15	65	NR	25	589	6.66
Bexar	AY-68-28-211	3/7/2003	12:30	300	180.08	65	NR	22.9	628	7.07
Bexar	AY-68-28-313	3/21/2003	11:50	300	NR	65	NR	22.7	655	6.80
Bexar	AY-68-28-314	4/5/2003	11:15	241	142.80	70	3.5	23.4	675	6.64
Bexar	AY-68-28-315	3/28/2003	10:55	280	179.06	70	3.5	22.9	600	6.84
Bexar	AY-68-28-406	8/21/2003	14:05	304	217.23	75	NR	25.2	583	7.12
Bexar	AY-68-28-407	8/21/2003	11:05	310	220.52	70	NR	25	515	7.15
Bexar	AY-68-28-513	10/24/2003	12:50	510	NR	10	NR	22.3	631	7.24
Bexar	AY-68-28-514	10/24/2003	13:40	510	NR	10	NR	22.6	696	6.39
Bexar	AY-68-28-516	5/1/2003	10:40	302	179.82	65	3.5	22.6	655	6.86
Bexar	AY-68-28-518	4/29/2003	11:20	261	150.40	65	3.5	22.7	701	6.82
Bexar	AY-68-28-519	4/29/2003	14:00	280	182.69	70	3.5	22.8	621	6.80
Bexar	AY-68-28-609	3/28/2003	14:45	260	164.47	80	3.5	22.2	533	6.89
Bexar	AY-68-28-8GE	12/9/2003	13:15	541.67	298.90	1850	NR	23.7	646	6.77
Bexar	AY-68-29-103	5/1/2003	13:25	547	216.00	65	3.5	23.7	509	7.03
Bexar	AY-68-29-109	7/30/2003	11:50	460	NR	POA	NR	22.7	651	6.84
Bexar	AY-68-29-401	7/30/2003	10:40	517	NR	POA	NR	22.8	569	6.91
Bexar	AY-68-29-406	8/6/2003	14:10	410	NR	45	NR	22.9	740	6.62
Bexar	AY-68-29-410	7/30/2003	11:10	376	NR	25	NR	24.3	578	6.92

NA = Not analyzed
NR = Not Recorded
POA = Pump operating upon arrival
S = Freshwater / Saline Water Transect Monitoring Well

Table C-1 Field measurements and bacteria counts in water samples from wells completed in the Edwards Aquifer, 2003 (cont'd)

County	State Well Number	Date Sampled	Time Sampled	Well Depth (ft)	Water Level (ft above msl)	Pump or Flow Period (min)	Flow Rate (gpm)	Water Temp (deg C)	Field Conductivity (µS/cm)	Field pH (std units)
Bexar	AY-68-29-414	7/30/2003	9:55	710	NR	POA	NR	25	641	6.81
Bexar	AY-68-29-925	12/12/2003	14:30	525	100.00	285	12	24.2	503	7.09
Comal	DX-68-16-707	6/25/2003	9:40	400	NR	20	NR	22	592	6.78
Comal	DX-68-22-805	6/25/2003	11:10	378	NR	POA	NR	22.4	547	7.04
Comal	DX-68-22-810	6/25/2003	12:10	405	NR	30	NR	23	556	6.94
Comal	DX-68-22-811	8/6/2003	11:40	NR	NR	45	NR	22.2	547	6.87
Comal	DX-68-22-8BH	8/6/2003	12:45	NR	NR	POA	NR	22.3	524	6.80
Comal	DX-68-22-901	6/27/2003	12:00	255	NR	POA	NR	22.4	507	7.06
Comal	DX-68-23-302	8/27/2003	15:10	320	14.05	75	NR	25.3	550	7.58
Comal	DX-68-23-303	10/8/2003	11:50	1045	NR	35	NR	23.6	580	7.11
Comal	DX-68-23-304	6/18/2003	14:00	965	NR	170	NR	24	558	7.16
Comal	DX-68-23-305	6/27/2003	10:00	102	NR	POA	NR	24	557	7.13
Comal	DX-68-23-316	8/27/2003	12:20	350	175.95	75	NR	24.8	581	6.90
Comal	DX-68-23-508	6/26/2003	10:10	225	NR	30	NR	23.3	571	7.08
Comal	DX-68-23-601	6/27/2003	10:45	790	NR	25	NR	23.3	553	7.06
Comal, S	DX-68-23-616A	7/8/2003	11:30	937	NR	90	NR	23.3	2470	7.17
Comal, S	DX-68-23-616B	7/8/2003	11:15	937	NR	75	NR	23.3	1494	7.50
Comal, S	DX-68-23-619A	6/25/2003	14:15	959	NR	70	NR	24	483	7.84
Comal, S	DX-68-23-619B	7/8/2003	12:00	959	NR	115	NR	23.5	547	7.59
Comal	DX-68-30-221	6/26/2003	12:40	330	NR	POA	NR	22.6	632	6.90
Comal	DX-68-30-225	8/6/2003	10:50	455	NR	POA	NR	22.3	608	6.91
Hays	LR-67-01-303	7/14/2003	15:00	595	NR	20	NR	24.3	650	7.36
Hays	LR-67-01-810	7/15/2003	14:00	NR	NR	25	NR	22.1	609	6.94
Hays, S	LR-67-01-812	9/23/2003	17:00	543	NR	70	NR	24.2	14900	6.45
Hays, S	LR-67-01-813A	9/23/2003	15:30	564	NR	70	NR	24.4	14880	6.46

NA = Not analyzed
NR = Not Recorded
POA = Pump operating upon arrival
S = Freshwater / Saline Water Transect Monitoring Well

Table C-1 Field measurements and bacteria counts in water samples from wells completed in the Edwards Aquifer, 2003 (cont'd)

County	State Well Number	Date Sampled	Time Sampled	Well Depth (ft)	Water Level (ft above msl)	Pump or Flow Period (min)	Flow Rate (gpm)	Water Temp (deg C)	Field Conductivity (µS/cm)	Field pH (std units)
Hays, S	LR-67-01-813B	9/23/2003	14:55	699	NR	70	NR	25.2	14580	6.45
Hays, S	LR-67-01-814A	9/23/2003	11:30	556	NR	70	NR	24.7	14840	6.50
Hays, S	LR-67-01-814B	9/23/2003	12:05	726	NR	70	NR	25.9	14810	6.56
Hays	LR-67-01-816	7/15/2003	12:50	NR	NR	25	NR	22.1	623	6.89
Hays	LR-67-01-8SW	7/15/2003	14:30	NA	NR	POA	NR	22.5	633	7.15
Hays	LR-67-01-8SW	10/6/2003	15:05	NA	NR	NA	NR	22.1	637	6.71
Hays	LR-67-09-113	11/4/2003	11:10	280	124.34	85	NR	24.6	497	7.35
Hays	LR-67-09-1HB	7/22/2003	12:30	NR	NR	70	NR	22.5	557	6.99
Hays	LR-67-09-1SM	7/15/2003	11:30	NR	NR	15	NR	22.7	684	6.85
Hays	LR-68-08-902	7/14/2003	10:45	335	NR	POA	NR	22.7	649	7.17
Medina	TD-68-25-703	5/14/2003	10:45	425	NR	60	NR	21.9	453	7.30
Medina	TD-68-33-202	6/30/2003	12:45	279	NR	75	NR	22.4	457	7.20
Medina	TD-68-33-502	5/28/2003	10:35	1475	NR	35	NR	22.5	NR	7.13
Medina	TD-68-41-102	5/30/2003	10:15	1431	NR	20	NR	25.3	495	7.20
Medina	TD-68-41-303	8/25/2003	11:05	717	NR	20	NR	23.8	499	7.20
Medina	TD-68-41-304	8/25/2003	10:30	1085	NR	20	NR	23.8	500	7.18
Medina	TD-68-41-308	5/16/2003	13:15	717	NR	26	NR	23.9	505	7.35
Medina	TD-68-41-308	8/25/2003	9:50	715	NR	POA	NR	23.5	505	7.18
Medina	TD-68-42-113	8/4/2003	10:05	636	NR	35	NR	23.5	506	7.21
Medina	TD-68-42-113	8/25/2003	11:40	636	NR	10	NR	23.4	503	7.27
Medina	TD-68-42-506	5/16/2003	9:45	1445	NR	25	NR	25.8	497	7.31
Medina	TD-68-42-806	6/13/2003	10:10	2044	NR	25	NR	31.7	489	7.16
Medina	TD-68-49-201	8/4/2003	15:05	2716	NR	25	NR	27.3	513	7.08
Medina	TD-68-49-301	6/30/2003	10:38	2550	NR	23	NR	32.7	480	7.20
Medina	TD-68-49-501	5/30/2003	13:35	2716	NR	20	NR	28.3	514	7.20

NA = Not analyzed
NR = Not Recorded
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Table C-1 Field measurements and bacteria counts in water samples from wells completed in the Edwards Aquifer, 2003 (cont'd)

County	State Well Number	Date Sampled	Time Sampled	Well Depth (ft)	Water Level (ft above msl)	Pump or Flow Period (min)	Flow Rate (gpm)	Water Temp (deg C)	Field Conductivity (µS/cm)	Field pH (std units)
Medina	TD-69-38-906	5/28/2003	13:55	940	NR	POA	NR	23.8	NR	7.13
Medina	TD-69-39-504	7/1/2003	15:10	653	NR	65	NR	23.6	457	7.02
Medina	TD-69-39-601	5/14/2003	13:15	360	NR	65	NR	23.2	483	7.23
Medina	TD-69-40-422	5/16/2003	11:55	360	NR	45	NR	23.2	503	7.15
Medina	TD-69-46-601	6/13/2003	11:35	1289	NR	20	NR	23.6	478	7.24
Medina	TD-69-47-215	8/4/2003	12:05	1600	NR	25	NR	25.7	476	7.17
Medina	TD-69-47-303	5/14/2003	13:50	1803	NR	POA	NR	24.2	477	7.37
Medina	TD-69-55-604	5/28/2003	12:05	2350	NR	30	NR	23.1	NR	7.03
Medina	TD-69-63-103	6/30/2003	15:50	3406	NR	70	NR	42.8	569	7.24
Uvalde	YP-69-33-701	5/8/2003	11:10	NR	NR	30	NR	21	418	7.34
Uvalde	YP-69-35-401	5/13/2003	12:10	NR	NR	65	NR	23	504	7.22
Uvalde	YP-69-35-602	5/6/2003	15:10	237	62.65	65	NR	22.9	430	7.31
Uvalde	YP-69-42-709	5/6/2003	12:20	706.3	104.73	70	NR	23.3	487	7.20
Uvalde	YP-69-43-606	5/8/2003	9:40	698	NR	30	NR	22.5	524	7.19
Uvalde	YP-69-45-405	5/7/2003	13:15	1211	NR	30	NR	22.3	482	7.53
Uvalde	YP-69-50-203	5/7/2003	10:35	525	NR	POA	NR	22.4	560	7.15
Uvalde	YP-69-50-501	5/7/2003	11:55	600	NR	POA	NR	22.2	1159	6.97
Uvalde	YP-69-51-114	5/8/2003	14:10	565	NR	POA	NR	250	902	6.92
Uvalde	YP-69-51-120	5/13/2003	11:05	400	NR	65	NR	24.7	1013	7.01

NA = Not analyzed
NR = Not Recorded
POA = Pump operating upon arrival
S = Freshwater / Saline Water Transect Monitoring Well

Table C-1 Field measurements and bacteria counts in water samples from wells completed in the Edwards Aquifer, 2003 (cont'd)

State Well Number	Date Sampled	Field Alkalinity (mg/L)	Field Turbidity (NTU)	Dissolved Oxygen (mg/L)	Fecal Coliform (colonies/100ml)	Fecal Strep (colonies/100ml)	Total Coliform (colonies/100ml)	E-coli (colonies/100ml)
AY-68-27-307	3/25/2003	270	0.30	NR	NA	NA	NA	NA
AY-68-27-5VC	1/6/2003	224	0.42	NR	NA	NA	NA	NA
AY-68-27-611	8/13/2003	264	1.80	5.23	<2	32	NA	NA
AY-68-28-113	8/12/2003	244	3.71	5.48	<2	<2	NA	NA
AY-68-28-203	10/24/2003	350	1.04	5.50	<2	3	NA	NA
AY-68-28-205	10/24/2003	256	5.67	3.37	<2	<2	NA	NA
AY-68-28-210	10/1/2003	280	2.28	4.17	<2	2	NA	NA
AY-68-28-211	3/7/2003	232	0.26	NR	NA	NA	NA	NA
AY-68-28-313	3/21/2003	302	65.10	NR	NA	NA	NA	NA
AY-68-28-314	4/5/2003	360	0.50	NR	NA	NA	NA	NA
AY-68-28-315	3/28/2003	300	10.90	NR	NA	NA	NA	NA
AY-68-28-406	8/21/2003	252	0.43	5.42	<2	11	NA	NA
AY-68-28-407	8/21/2003	235	0.47	5.96	<2	<2	NA	NA
AY-68-28-513	10/24/2003	280	0.20	5.07	<2	<2	NA	NA
AY-68-28-514	10/24/2003	284	0.07	5.17	<2	4	NA	NA
AY-68-28-516	5/1/2003	314	0.58	NR	<3	<3	NA	NA
AY-68-28-518	4/29/2003	288	2.23	NR	<3	<3	NA	NA
AY-68-28-519	4/29/2003	318	3.27	NR	<3	<3	NA	NA
AY-68-28-609	3/28/2003	268	1.17	NR	NA	NA	NA	NA
AY-68-28-8GE	12/9/2003	225	30.70	1.01	NA	NA	NA	NA
AY-68-29-103	5/1/2003	250	0.44	NR	<3	<3	NA	NA
AY-68-29-109	7/30/2003	187	0.30	4.18	<2	<2	NA	NA
AY-68-29-401	7/30/2003	257	0.23	4.31	<2	<2	NA	NA
AY-68-29-406	8/6/2003	300	1.42	4.06	<2	9	NA	NA
AY-68-29-410	7/30/2003	255	1.03	4.40	<2	2	NA	NA
AY-68-29-414	7/30/2003	274	0.14	3.73	<2	13	NA	NA

NA = Not analyzed
NR = Not Recorded
POA = Pump operating upon arrival
S = Freshwater / Saline Water Transect Monitoring Well

Table C-1 Field measurements and bacteria counts in water samples from wells completed in the Edwards Aquifer, 2003 (cont'd)

State Well Number	Date Sampled	Field Alkalinity (mg/L)	Field Turbidity (NTU)	Dissolved Oxygen (mg/L)	Fecal Coliform (colonies/100ml)	Fecal Strep (colonies/100ml)	Total Coliform (colonies/100ml)	E-coli (colonies/100ml)
AY-68-29-925	12/12/2003	195	3.90	0.04	NA	NA	NA	NA
DX-68-16-707	6/25/2003	272	0.28	3.73	<2	<2	NA	NA
DX-68-22-805	6/25/2003	264	0.10	3.98	<2	<2	NA	NA
DX-68-22-810	6/25/2003	264	0.53	4.81	NA	NA	NA	NA
DX-68-22-811	8/6/2003	236	0.54	4.62	<2	7	NA	NA
DX-68-22-8BH	8/6/2003	NR	0.56	4.39	<2	9	NA	NA
DX-68-22-901	6/27/2003	230	0.46	4.86	<2	<2	NA	NA
DX-68-23-302	8/27/2003	238	0.10	3.87	<2	4	NA	NA
DX-68-23-303	10/8/2003	230	0.24	3.89	<2	48	NA	NA
DX-68-23-304	6/18/2003	232	0.99	2.74	<2	2	NA	NA
DX-68-23-305	6/27/2003	222	0.30	3.86	<2	<2	NA	NA
DX-68-23-316	8/27/2003	282	0.27	4.03	<2	9	NA	NA
DX-68-23-508	6/26/2003	252	0.05	3.78	<2	<2	NA	NA
DX-68-23-601	6/27/2003	252	2.26	3.25	<2	<2	NA	NA
DX-68-23-616A	7/8/2003	270	31.20	0.37	2	1120	NA	NA
DX-68-23-616B	7/8/2003	300	0.32	0.54	<2	60	NA	NA
DX-68-23-619A	6/25/2003	200	0.96	0.10	<2	<2	NA	NA
DX-68-23-619B	7/8/2003	256	5.06	0.34	<2	72	NA	NA
DX-68-30-221	6/26/2003	282	0.43	4.22	<2	<2	NA	NA
DX-68-30-225	8/6/2003	265	0.09	3.99	<2	4	NA	NA
LR-67-01-303	7/14/2003	364	0.35	3.10	<2	<2	NA	NA
LR-67-01-810	7/15/2003	292	0.16	3.95	2	<2	NA	NA
LR-67-01-812	9/23/2003	372	0.27	0.10	NA	NA	NA	NA
LR-67-01-813A	9/23/2003	366	0.07	0.08	<2	4	NA	NA
LR-67-01-813B	9/23/2003	368	0.14	0.09	20	<2	NA	NA
LR-67-01-814A	9/23/2003	340	0.92	3.27	4	<2	NA	NA

NA = Not analyzed
NR = Not Recorded
POA = Pump operating upon arrival
S = Freshwater / Saline Water Transect Monitoring Well

Table C-1 Field measurements and bacteria counts in water samples from wells completed in the Edwards Aquifer, 2003 (cont'd)

State Well Number	Date Sampled	Field Alkalinity (mg/L)	Field Turbidity (NTU)	Dissolved Oxygen (mg/L)	Fecal Coliform (colonies/100ml)	Fecal Strep (colonies/100ml)	Total Coliform (colonies/100ml)	E-coli (colonies/100ml)
LR-67-01-814B	9/23/2003	366	0.29	1.67	<2	2	NA	NA
LR-67-01-816	7/15/2003	258	0.22	3.71	<2	25	NA	NA
LR-67-01-8SW	7/15/2003	270	0.38	3.48	<2	118	NA	NA
LR-67-01-8SW	10/6/2003	260	0.15	3.50	3	8	NA	NA
LR-67-09-113	11/4/2003	302	36.90	0.03	<7	<7	NA	NA
LR-67-09-1HB	7/22/2003	256	0.06	4.90	<2	9	NA	NA
LR-67-09-1SM	7/15/2003	286	0.11	3.09	<2	<2	NA	NA
LR-68-08-902	7/14/2003	340	0.11	4.68	<2	<2	NA	NA
TD-68-25-703	5/14/2003	190	0.43	NR	NA	NA	NA	NA
TD-68-33-202	6/30/2003	190	0.86	2.06	<2	4	NA	NA
TD-68-33-502	5/28/2003	200	0.12	NR	NA	NA	NA	NA
TD-68-41-102	5/30/2003	208	0.38	NR	NA	NA	NA	NA
TD-68-41-303	8/25/2003	202	0.18	4.43	<1	<1	<1	<1
TD-68-41-304	8/25/2003	204	0.20	3.97	<1	<1	<1	<1
TD-68-41-308	5/16/2003	208	0.19	NR	NA	NA	NA	NA
TD-68-41-308	8/25/2003	210	0.62	4.24	<1	<1	4	<1
TD-68-42-113	8/4/2003	201	0.16	4.30	<2	2	NA	NA
TD-68-42-113	8/25/2003	202	0.22	4.86	<1	4	<1	<1
TD-68-42-506	5/16/2003	2.02	0.11	NR	NA	NA	NA	NA
TD-68-42-806	6/13/2003	198	0.12	NR	<3	40	NA	NA
TD-68-49-201	8/4/2003	194	0.12	4.35	<2	<2	NA	NA
TD-68-49-301	6/30/2003	196	0.22	2.29	<2	<2	NA	NA
TD-68-49-501	5/30/2003	204	0.51	NR	NA	NA	NA	NA
TD-69-38-906	5/28/2003	236	0.87	NR	NA	NA	NA	NA
TD-69-39-504	7/1/2003	203	0.84	7.34	NA	NA	NA	NA
TD-69-39-601	5/14/2003	220	0.83	NR	NA	NA	NA	NA

NA = Not analyzed
NR = Not Recorded
POA = Pump operating upon arrival
S = Freshwater / Saline Water Transect Monitoring Well

Table C-1 Field measurements and bacteria counts in water samples from wells completed in the Edwards Aquifer, 2003 (cont'd)

State Well Number	Date Sampled	Field Alkalinity (mg/L)	Field Turbidity (NTU)	Dissolved Oxygen (mg/L)	Fecal Coliform (colonies/100ml)	Fecal Strep (colonies/100ml)	Total Coliform (colonies/100ml)	E-coli (colonies/100ml)
TD-69-40-422	5/16/2003	230	0.53	NR	<2	<2	NA	NA
TD-69-46-601	6/13/2003	212	0.07	NR	<3	26	NA	NA
TD-69-47-215	8/4/2003	201	2.45	3.00	<2	<2	NA	NA
TD-69-47-303	5/14/2003	212	0.08	NR	NA	NA	NA	NA
TD-69-55-604	5/28/2003	200	0.05	NR	NA	NA	NA	NA
TD-69-63-103	6/30/2003	190	7.59	0.26	NA	NA	NA	NA
YP-69-33-701	5/8/2003	172	1.37	NR	NA	NA	NA	NA
YP-69-35-401	5/13/2003	232	0.16	NR	NA	NA	NA	NA
YP-69-35-602	5/6/2003	196	0.71	NR	NA	NA	NA	NA
YP-69-42-709	5/6/2003	192	0.08	NR	NA	NA	NA	NA
YP-69-43-606	5/8/2003	210	0.11	NR	NA	NA	NA	NA
YP-69-45-405	5/7/2003	212	0.14	NR	NA	NA	NA	NA
YP-69-50-203	5/7/2003	210	0.18	NR	NA	NA	NA	NA
YP-69-50-501	5/7/2003	240	0.13	NR	NA	NA	NA	NA
YP-69-51-114	5/8/2003	262	0.80	NR	NA	NA	NA	NA
YP-69-51-120	5/13/2003	248	4.81	NR	NA	NA	NA	NA

NA = Not analyzed
NR = Not Recorded
POA = Pump operating upon arrival
S = Freshwater / Saline Water Transect Monitoring Well

Table C-2 Analytical data for major ions in water samples from wells completed in the Edwards Aquifer, 2003

County	State Well Number	Date Sampled	Calcium dissolved (mg/L)	Sodium dissolved (mg/L)	Magnesium 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-68-27-307	03/25/03	98.1	5.68	7.76	0.681B	11.8	16.6	0.103	5.01	340
	AY-68-27-5VC	01/06/03	82.7	9.36	14.6	1.14	16.4	26.7	0.16	4.48	340
	AY-68-27-611	08/13/03	*101	*9.4	*8.14	*1.18	*14.4	*12.6	*0.14	*14.5	*327
	AY-68-28-113	08/12/03	*95	*5.51	*5.75	*0.79	*10.6	*9.39	*0.08	*13.5	*297
	AY-68-28-203	10/24/03	136	23.2	5.05	1.01	67.4	14.1	0.08B	6.1	510
	AY-68-28-205	10/24/03	112	9.74	11	0.938	29	12.3	0.17	5.83	380
	AY-68-28-210	10/01/03	109	7.09	2.79	0.429B	14.8	4.47	0.11	6.12	330
	AY-68-28-211	03/07/03	104	12.8	14.1	1.45	20.8	45.2	0.166	4.86	300
	AY-68-28-313	03/21/03	111	9.09	4.01	1.8	15.7	9.44	0.09B	7.38	420
	AY-68-28-314	04/05/03	177	7.95	3.31	0.362B	16.4	6.41	0.044B	6.37	390
	AY-68-28-315	03/28/03	105	3.83	2.94	1.61	9.68	8.72	0.053B	5.73	400
	AY-68-28-406	08/21/03	*95	*11.7	*9.78	*1.19	*18	*16.9	*0.13	*13.5	*329
	AY-68-28-407	08/21/03	*86.3	*6.2	*9.97	*0.74	*11.5	*8.99	*0.11	*13.1	*286
	AY-68-23-513	10/24/03	108	7.62	7.38	1.42	19	10.5	0.14	5.65	340
	AY-68-23-514	10/24/03	113	9.18	6.66	0.769	24.4	11.8	0.12	5.59	360
	AY-68-28-516	05/01/03	119	5.55	3.8	0.662B	13.2	9.93	0.071B	5.16	380
	AY-68-28-518	04/29/03	119	13.2	4.2	0.832B	34	10.4	0.089B	5.27	400
	AY-68-28-519	04/29/03	115	3.96	3.73	1.58	13.2	6.77	0.06B	5.15	350
	AY-68-28-609	03/28/03	94.4	3.8	3.56	1.84	9.11	7.44	0.081B	5.69	380
	AY-68-28-8GE	12/09/03	86.9	14.6	15.8	2.34	23.1	68.7	0.48	4.69	380
	AY-68-29-103	05/01/03	81.4	4.86	9.7	0.603B	9.57	6.25	0.149	4.92	290
	AY-68-29-109	07/30/03	*107	*10.9	*11	*0.72	*23.1	*9.39	*0.1	*14.5	*359
	AY-68-29-401	07/30/03	*96.2	*7.75	*9.6	*0.84	*14.2	*9.29	*0.13	*14.7	*317
	AY-68-29-406	08/06/03	*113	*27	*8.29	*0.93	*34.8	*22.7	*0.27	*18.2	*419
	AY-68-29-410	07/30/03	*103	*8.25	*6.96	*0.82	*15.4	*8.64	*0.11	*13.9	*323
	AY-68-29-414	07/30/03	*105	*11.5	*12.3	*1.07	*19.5	*15.6	*0.13	*14.1	*359
	AY-68-29-925	12/12/03	45.7	10.9	23.3	1.45	17.5	33	1.5	4.96	270
Comal	DX-68-16-707	06/25/03	*89.9	*7.47	*16.2	*1.02	*12.4	*13.9	*0.13	*13.3	*325
	DX-68-22-805	06/25/03	*86.4	*6.81	*12.4	*0.83	*12	*9.05	*0.09	*12.4	*298
	DX-68-22-810	06/25/03	*94.7	*6.06	*9.18	*0.73	*10.2	*6.83	*0.1	*13.1	*305
	DX-68-22-811	08/06/03	*86.6	*10.6	*8.8	*1.64	*9.36	*8.21	*0.09	*13.8	*305
	DX-68-22-901	06/27/03	*80.1	*5.47	*10.8	*0.88	*9.59	*9	*0.12	*12.2	*274

* Sample collected by the Authority and analyzed by TWDB
B = Estimated result. Result is less than reporting limit (RL)
S = Freshwater / Saline Water Transect Monitoring Well
NA = Not Analyzed

Table C-2 Analytical data for major ions in water samples from wells completed in the Edwards Aquifer, 2003 (cont'd)

County	State Well Number	Date Sampled	Calcium dissolved (mg/L)	Sodium dissolved (mg/L)	Magnesium 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)
	DX-68-23-302	08/27/03	*83.8	*10.5	*16.6	*1.43	*15.8	*21.9	*0.19	*13.3	*313
	DX-68-23-303	10/08/03	78.8	22.3	17.7	2.72	17.7	34.3	0.26	11.4	340
	DX-68-23-304	06/18/03	75.3	10.5	16.6	0.895B	18	24.4	0.25	*5.41	330
	DX-68-23-305	06/27/03	*75.5	*11	*16.9	*1.33	*17.9	*24.9	*0.2	*14	*308
	DX-68-23-316	08/27/03	*99.7	*6.23	*14	*1.04	*9.73	*10.9	*0.11	*12.6	*326
	DX-68-23-508	06/26/03	*81	*9.91	*15.9	*1.31	*15.6	*23.4	*0.17	*13.5	*314
	DX-68-23-601	06/27/03	*77.9	*9.56	*15.6	*1.26	*15.4	*21	*0.17	*13.7	*304
S	DX-68-23-616A	07/08/03	125	241	78.7	17.5	434	421	3.2	5.74	1560
S	DX-68-23-616B	07/08/03	76.5	110	51.1	8.9	211	215	3.18	5.35	910
S	DX-68-23-619A	06/25/03	*37.1	*14.4	*28.7	*1.63	*22.5	*12.8	*2.07	*11.8	*254
S	DX-68-23-619B	07/08/03	56.8	10.1	22.5	1.41	16.5	24.9	2.08	4.71	300
	DX-68-30-221	06/26/03	*102	*11.9	*10	*1.53	*13.7	*16.8	*0.12	*15.3	*356
	DX-68-30-225	08/06/03	*94.8	*10.6	*10.2	*1.38	*15.5	*13.4	*0.13	*14.5	*335
Hays	LR-67-01-303	07/14/03	57.1	6.07	33.9	0.791B	11.6	77.9	2.7	5.3	400
	LR-67-01-810	07/15/03	90.7	10	16.2	1.63	18.3	23.8	0.22	5.54	360
S	LR-67-01-812	09/23/03	883	1900	440	88	4140	2630	2.92	6.58	10500
S	LR-67-01-813A	09/23/03	1000	2110	503	79.9B	4120	2650	2.9	11.9	10500
S	LR-67-01-813B	09/23/03	946	1960	466	77.6B	4080	2650	2.88	5.76	10400
S	LR-67-01-814A	09/23/03	957	2000	479	63.4B	4320	2630	2.98	6.33	10700
S	LR-67-01-814B	09/23/03	980	2060	490	63B	4180	2620	2.94	6.19	10700
	LR-67-01-816	07/15/03	89.4	11.1	15.6	1.36	21.1	27.4	0.3	5.38	350
	LR-67-01-8SW	07/15/03	90.5	12.3	15.9	1.61	23.2	29.3	0.24	5.44	380
	LR-67-01-8SW	10/06/03	95.6	13.1	16.7	1.61	23	29.3	0.24	5.58	350
	LR-67-09-113	11/04/03	51.5	19.4	17.4	1.57	35.3	12.4	0.19	2.93	270
	LR-67-09-1HB	07/22/03	83.4	5.94	15	0.567B	10.7	16	0.18	4.99	310
	LR-67-09-1SM	07/15/03	94	16.1	15.8	1.9	28.5	39.3	0.31	5.65	400
	LR-68-08-902	07/14/03	94.2	14.9	10.6	0.323B	44.5	7.49	0.11	5	420
Medina	TD-68-25-703	05/14/03	*72.6	*6.11	*8.5	*0.9	*9.44	*29.8	*0.09	*12.3	*252
	TD-68-33-202	06/30/03	*69.7	*6.2	*10.3	*1.01	*9.84	*26.3	*0.11	*12.6	*253
	TD-68-33-502	05/28/03	*64	*6.61	*16.1	*1.24	*11.5	*43.1	*0.17	*13.6	*275
	TD-68-41-102	05/30/03	*62.7	*8.91	*14.8	*0.99	*20.6	*15.9	*0.16	*13.9	*267
	TD-68-41-308	05/16/03	*66.7	*10.8	*14.9	*1.07	*22.1	*15.9	*0.17	*14	*274

* Sample collected by the Authority and analyzed by TWDB
B = Estimated result. Result is less than reporting limit (RL)
S = Freshwater / Saline Water Transect Monitoring Well
NA = Not Analyzed

Table C-2 Analytical data for major ions in water samples from wells completed in the Edwards Aquifer, 2003 (cont'd)

County	State Well Number	Date Sampled	Calcium dissolved (mg/L)	Sodium dissolved (mg/L)	Magnesium 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)
	TD-68-42-113	08/04/03	*65.3	*10.7	*15	*1.1	*22.2	*16.3	*0.16	*13.4	*275
	TD-68-42-506	05/16/03	*64.3	*9.92	*15.7	*1	*23.7	*13.8	*0.19	*14	*269
	TD-68-42-806	06/13/03	*62.5	*10.3	*16.2	*1.06	*21.2	*17.3	*1.35	*13.8	*266
	TD-68-49-201	08/04/03	*64.4	*11.1	*15.5	*1.1	*25.6	*17.3	*0.21	*13.5	*281
	TD-68-49-301	06/30/03	*53.8	*8.94	*19	*0.96	*18	*21.8	*0.52	*14.3	*264
	TD-68-49-501	05/30/03	*62	*10.5	*15.2	*1.03	*25.7	*19	*0.24	*13.8	*277
	TD-69-38-906	05/28/03	*74.9	*9.12	*13	*1.24	*12.4	*11.4	*0.16	*15.3	*294
	TD-69-39-504	07/01/03	*71.4	*5.89	*8.35	*1.06	*9	*13.2	*0.11	*12.9	*250
	TD-69-39-601	05/14/03	*76.6	*6.63	*9.84	*0.8	*10.5	*10.3	*0.12	*13.9	*264
	TD-69-40-422	05/16/03	*82.1	*6.43	*9.12	*1.03	*11.5	*9.44	*0.11	*15.3	*279
	TD-69-46-601	06/13/03	*65.7	*7.48	*14.3	*1	*13	*17	*0.16	*13.1	*261
	TD-69-47-215	08/04/03	*64.4	*7.61	*14.9	*1.06	*13.5	*16.3	*0.17	*13.9	*261
	TD-69-47-303	05/14/03	*63.1	*7.82	*15.9	*1	*14.5	*16.4	*0.17	*14.3	*260
	TD-69-55-604	05/28/03	*65.3	*10.8	*13.8	*0.97	*27.4	*15.8	*0.15	*13.9	*282
	TD-69-63-103	06/30/03	*55.4	*14.2	*21.9	*1.37	*17.1	*73.7	*1.41	*22.2	*345
Uvalde	YP-69-33-701	05/08/03	*54.6	*7.31	*13	*0.82	*12.1	*12	*0.11	*12.3	*223
	YP-69-35-401	05/13/03	*70.6	*6.84	*15.8	*0.69	*11.7	*8.75	*0.09	*13.5	*272
	YP-69-35-602	05/06/03	*50.8	*6.28	*17.6	*0.98	*10.7	*11.4	*0.12	*14.2	*231
	YP-69-42-709	05/06/03	*65.7	*13.7	*10.2	*0.9	*21.6	*11.9	*0.09	*13.5	*263
	YP-69-43-606	05/08/03	*73.4	*12.3	*10.2	*0.99	*25.9	*13.1	*0.11	*13.5	*283
	YP-69-45-405	05/07/03	*65.7	*7.64	*13.6	*0.99	*12.3	*17.9	*0.16	*13.4	*260
	YP-69-50-203	05/07/03	*77.8	*15.3	*9.91	*0.97	*31.2	*16.2	*0.1	*13.8	*302
	YP-69-50-501	05/07/03	*138	*58.3	*15.5	*1.21	*158	*71.4	*0.15	*16.6	*636
	YP-69-51-114	05/08/03	*115	*36.7	*14	*1.3	*84	*50.7	*0.53	*17.9	*497
	YP-69-51-120	05/13/03	*127	*51.3	*15.2	*1.36	*110	*63.6	*1.16	*17.6	*568

* Sample collected by the Authority and analyzed by TWDB
B = Estimated result. Result is less than reporting limit (RL)
S = Freshwater / Saline Water Transect Monitoring Well
NA = Not Analyzed

Table C-3 Analytical data for metals in water samples from wells completed in the Edwards Aquifer, 2003

County	State Well Number	Date Sampled	Aluminum dissolved (mg/L)	Antimony dissolved (mg/L)	Arsenic dissolved (mg/L)	Barium dissolved (mg/L)	Beryllium dissolved (mg/L)	Boron dissolved (mg/L)	Bromide dissolved (mg/L)	Cadmium dissolved (mg/L)
Bexar	AY-68-27-307	03/25/03	NA	0.0018B	<0.01	0.036	<0.01	NA	NA	<0.01
	AY-68-27-5VC	01/06/03	NA	0.0025B	0.0055B	0.028	0.0014B	NA	NA	<0.01
	AY-68-27-611	08/13/03	*<0.004	*<0.001	*<0.002	*0.041	*<0.001	*<0.05	*0.0776	*<0.001
	AY-68-28-113	08/12/03	*<0.004	*<0.001	*<0.002	*0.031	*<0.001	*<0.05	*0.0504	*<0.001
	AY-68-28-203	10/24/03	NA	0.0193	<0.01	0.067	<0.005	NA	NA	<0.01
	AY-68-28-205	10/24/03	NA	0.0281	<0.01	0.0428	<0.005	NA	NA	<0.01
	AY-68-28-210	10/01/03	NA	0.0179	<0.01	0.0486	<0.005	NA	NA	<0.01
	AY-68-28-211	03/07/03	NA	0.002B	<0.01	0.043	<0.01	NA	NA	<0.01
	AY-68-28-313	03/21/03	NA	0.0037B	<0.01	0.0702	<0.01	NA	NA	<0.01
	AY-68-28-314	04/05/03	NA	0.0015B	<0.01	0.0668	<0.01	NA	NA	<0.01
	AY-68-28-315	03/28/03	NA	0.0033B	<0.01	0.03	<0.01	NA	NA	<0.01
	AY-68-28-406	08/21/03	*<0.004	*<0.001	*<0.002	*0.03	*<0.001	*<0.05	*0.0994	*<0.001
	AY-68-28-407	08/21/03	*<0.004	*<0.001	*<0.002	*0.034	*<0.001	*<0.05	*0.0647	*<0.001
	AY-68-28-513	10/24/03	NA	<0.01	<0.01	0.0444	<0.005	NA	NA	<0.01
	AY-68-28-514	10/24/03	NA	<0.01	<0.01	0.0429	<0.005	NA	NA	<0.01
	AY-68-28-516	05/01/03	NA	0.0037B	<0.01	0.0409	<0.01	NA	NA	<0.01
	AY-68-28-518	04/29/03	NA	<0.01	<0.01	0.0454	<0.01	NA	NA	<0.01
	AY-68-28-519	04/29/03	NA	<0.01	<0.01	0.0372	<0.01	NA	NA	<0.01
	AY-68-28-609	03/28/03	NA	0.0028B	<0.01	0.0311	<0.01	NA	NA	<0.01
	AY-68-28-8GE	12/09/03	NA	0.014	<0.01	0.0445	<0.005	NA	NA	<0.01
	AY-68-29-103	05/01/03	NA	0.0039B	<0.01	0.0318	<0.01	NA	NA	<0.01
	AY-68-29-109	07/30/03	*<0.004	*<0.001	*<0.002	*0.039	*<0.001	*<0.05	*0.0826	*<0.001
	AY-68-29-401	07/30/03	*<0.004	*<0.001	*<0.002	*0.031	*<0.001	*<0.05	*0.0672	*<0.001
	AY-68-29-406	08/06/03	*<0.004	*<0.001	*<0.002	*0.048	*<0.001	*0.086	*0.123	*<0.001
	AY-68-29-410	07/30/03	*<0.004	*<0.001	*<0.002	*0.032	*<0.001	*<0.05	*0.0592	*<0.001
	AY-68-29-414	07/30/03	*<0.004	*<0.001	*<0.002	*0.034	*<0.001	*0.051	*0.102	*<0.001
	AY-68-29-925	12/12/03	NA	0.034	0.0047B	0.0499	<0.005	NA	NA	<0.01

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S = Freshwater / Saline Water Transect Monitoring Well

Table C-3 Analytical data for metals in water samples from wells completed in the Edwards Aquifer, 2003 (cont'd)

County	State Well Number	Date Sampled	Aluminum dissolved (mg/L)	Antimony dissolved (mg/L)	Arsenic dissolved (mg/L)	Barium dissolved (mg/L)	Beryllium dissolved (mg/L)	Boron dissolved (mg/L)	Bromide dissolved (mg/L)	Cadmium dissolved (mg/L)
Comal	DX-68-16-707	06/25/03	*<0.004	*<0.001	*<0.002	*0.033	*<0.001	*<0.05	*0.0672	*<0.001
	DX-68-22-805	06/25/03	*<0.004	*<0.001	*<0.002	*0.028	*<0.001	*<0.05	*0.0444	*<0.001
	DX-68-22-810	06/25/03	*<0.004	*<0.001	*<0.002	*0.033	*<0.001	*<0.05	*0.0596	*<0.001
	DX-68-22-811	08/06/03	*<0.004	*<0.001	*<0.002	*0.036	*<0.001	*<0.05	*0.0797	*<0.001
	DX-68-22-901	06/27/03	*<0.004	*<0.001	*<0.002	*0.027	*<0.001	*<0.05	*<0.02	*<0.001
	DX-68-23-302	08/27/03	*<0.004	*<0.001	*<0.002	*0.047	*<0.001	*<0.05	*0.0736	*<0.001
	DX-68-23-303	10/08/03	NA	<0.01	<0.01	0.051	0.0004B	NA	NA	0.0005B
	DX-68-23-304	06/18/03	*<0.004	*<0.001	<0.01	0.0584	<0.01	*<0.05	*0.0834	*<0.001
	DX-68-23-305	06/27/03	*<0.004	*<0.001	*<0.002	*0.054	*<0.001	*0.061	*0.08	*<0.001
	DX-68-23-316	08/27/03	*<0.004	*<0.001	*<0.002	*0.033	*<0.001	*<0.05	*0.0471	*<0.001
	DX-68-23-508	06/26/03	*<0.004	*<0.001	*<0.002	*0.041	*<0.001	*0.066	*0.0581	*<0.001
	DX-68-23-601	06/27/03	*<0.004	*<0.001	*<0.002	*0.045	*<0.001	*0.055	*0.0608	*<0.001
S	DX-68-23-616A	07/08/03	NA	0.004B	<0.01	0.041	0.0002B	NA	NA	<0.01
S	DX-68-23-616B	07/08/03	NA	<0.01	<0.01	0.0687	0.0002B	NA	NA	<0.01
S	DX-68-23-619A	06/25/03	*<0.004	*<0.001	*<0.002	*0.047	*<0.001	*0.281	*0.0836	*<0.001
S	DX-68-23-619B	07/08/03	NA	0.002B	<0.01	0.123	<0.005	NA	NA	<0.01
	DX-68-30-221	06/26/03	*<0.004	*<0.001	*<0.002	*0.043	*<0.001	*0.084	*0.0952	*<0.001
	DX-68-30-225	08/06/03	*<0.004	*<0.001	*<0.002	*0.036	*<0.001	*<0.05	*0.086	*<0.001
Hays	LR-67-01-303	07/14/03	NA	<0.01	<0.01	0.105	<0.01	NA	NA	<0.01
	LR-67-01-810	07/15/03	NA	<0.01	<0.01	0.066	<0.01	NA	NA	<0.01
S	LR-67-01-812	09/23/03	NA	<0.01	<0.01	0.0065B	<0.01	NA	NA	0.0007B
S	LR-67-01-813A	09/23/03	NA	<0.01	<0.01	0.0056B	<0.01	NA	NA	0.0021B
S	LR-67-01-813B	09/23/03	NA	<0.01	<0.01	0.0025B	<0.01	NA	NA	0.0009B
S	LR-67-01-814A	09/23/03	NA	<0.01	<0.01	0.0038B	<0.01	NA	NA	0.0005B
S	LR-67-01-814B	09/23/03	NA	<0.01	<0.01	0.0036B	<0.01	NA	NA	0.0007B
	LR-67-01-816	07/15/03	NA	<0.01	<0.01	0.0594	<0.01	NA	NA	<0.01
	LR-67-01-8SW	07/15/03	NA	<0.01	<0.01	0.0504	<0.01	NA	NA	<0.01

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NA = Not analyzed

Table C-3 Analytical data for metals in water samples from wells completed in the Edwards Aquifer, 2003 (cont'd)

County	State Well Number	Date Sampled	Aluminum dissolved (mg/L)	Antimony dissolved (mg/L)	Arsenic dissolved (mg/L)	Barium dissolved (mg/L)	Beryllium dissolved (mg/L)	Boron dissolved (mg/L)	Bromide dissolved (mg/L)	Cadmium dissolved (mg/L)
	LR-67-01-8SW	10/06/03	NA	<0.01	<0.01	0.0392	<0.005	NA	NA	<0.01
	LR-67-09-113	11/04/03	NA	<0.01	<0.01	0.0293	0.001B	NA	NA	<0.01
	LR-67-09-1HB	07/22/03	NA	<0.01	<0.01	0.0363	<0.005	NA	NA	0.0006B
	LR-67-09-1SM	07/15/03	NA	0.0012B	<0.01	0.0599	<0.01	NA	NA	<0.01
	LR-68-08-902	07/14/03	NA	0.0022B	<0.01	0.0362	<0.01	NA	NA	<0.01
Medina	TD-68-25-703	05/14/03	*<0.004	*<0.001	*<0.002	*0.032	*<0.001	*0.062	*0.0489	*<0.001
	TD-68-33-202	06/30/03	*<0.004	*<0.001	*<0.002	*0.031	*<0.001	*<0.05	*0.0535	*<0.001
	TD-68-33-502	05/28/03	*<0.004	*<0.001	*<0.002	*0.033	*<0.001	*0.054	*0.0668	*<0.001
	TD-68-41-102	05/30/03	*<0.004	*<0.001	*<0.002	*0.054	*<0.001	*0.061	*<0.02	*<0.001
	TD-68-41-308	05/16/03	*<0.004	*<0.001	*<0.002	*0.046	*<0.001	*0.088	*0.08	*<0.001
	TD-68-42-113	08/04/03	*<0.004	*<0.001	*<0.002	*0.051	*<0.001	*0.056	*0.0841	*<0.001
	TD-68-42-506	05/16/03	*<0.004	*<0.001	*<0.002	*0.072	*<0.001	*0.073	*0.0936	*<0.001
	TD-68-42-806	06/13/03	*<0.004	*<0.001	*<0.002	*0.084	*<0.001	*0.063	*0.0796	*<0.001
	TD-68-49-201	08/04/03	*<0.004	*<0.001	*<0.002	*0.109	*<0.001	*<0.05	*0.0909	*<0.001
	TD-68-49-301	06/30/03	*<0.004	*<0.001	*<0.002	*0.166	*<0.001	*0.062	*0.0697	*<0.001
	TD-68-49-501	05/30/03	*<0.004	*<0.001	*<0.002	*0.121	*<0.001	*0.059	*0.0962	*<0.001
	TD-69-38-906	05/28/03	*<0.004	*<0.001	*<0.002	*0.048	*<0.001	*0.057	*0.0556	*<0.001
	TD-69-39-504	07/01/03	*<0.004	*<0.001	*<0.002	*0.027	*<0.001	*<0.05	*0.0452	*<0.001
	TD-69-39-601	05/14/03	*<0.004	*<0.001	*<0.002	*0.033	*<0.001	*0.059	*0.0503	*<0.001
	TD-69-40-422	05/16/03	*<0.004	*<0.001	*<0.002	*0.033	*<0.001	*0.067	*0.0539	*<0.001
	TD-69-46-601	06/13/03	*<0.004	*<0.001	*<0.002	*0.033	*<0.001	*<0.05	*0.0602	*<0.001
	TD-69-47-215	08/04/03	*<0.004	*<0.001	*<0.002	*0.042	*<0.001	*<0.05	*0.0582	*<0.001
	TD-69-47-303	05/14/03	*<0.004	*<0.001	*<0.002	*0.045	*<0.001	*0.064	*0.052	*<0.001
	TD-69-55-604	05/28/03	*<0.004	*<0.001	*<0.002	*0.058	*<0.001	*0.065	*0.0972	*<0.001
	TD-69-63-103	06/30/03	*<0.004	*<0.001	*<0.002	*0.109	*<0.001	*0.072	*0.0671	*<0.001
Uvalde	YP-69-33-701	05/08/03	*<0.004	*<0.001	*<0.002	*0.039	*<0.001	*0.058	*0.0408	*<0.001

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NA = Not analyzed

Table C-3 Analytical data for metals in water samples from wells completed in the Edwards Aquifer, 2003 (cont'd)

County	State Well Number	Date Sampled	Aluminum dissolved (mg/L)	Antimony dissolved (mg/L)	Arsenic dissolved (mg/L)	Barium dissolved (mg/L)	Beryllium dissolved (mg/L)	Boron dissolved (mg/L)	Bromide dissolved (mg/L)	Cadmium dissolved (mg/L)
Uvalde	YP-69-35-401	05/13/03	*<0.004	*<0.001	*<0.002	*0.047	*<0.001	*0.064	*0.0541	*<0.001
	YP-69-35-602	05/06/03	*<0.004	*<0.001	*<0.002	*0.034	*<0.001	*0.071	*0.0531	*<0.001
	YP-69-42-709	05/06/03	*<0.004	*<0.001	*<0.002	*0.042	*<0.001	*0.089	*0.0864	*<0.001
	YP-69-43-606	05/08/03	*<0.004	*<0.001	*<0.002	*0.049	*<0.001	*0.075	*0.101	*<0.001
	YP-69-45-405	05/07/03	*<0.004	*<0.001	*<0.002	*0.035	*<0.001	*0.067	*0.0564	*<0.001
	YP-69-50-203	05/07/03	*<0.004	*<0.001	*<0.002	*0.05	*<0.001	*0.092	*0.114	*<0.001
	YP-69-50-501	05/07/03	*<0.004	*<0.001	*<0.002	*0.096	*<0.001	*0.198	*0.592	*<0.001
	YP-69-51-114	05/08/03	*<0.004	*<0.001	*<0.002	*0.106	*<0.001	*0.137	*0.302	*<0.001
	YP-69-51-120	05/13/03	*<0.004	*<0.001	*0.002	*0.099	*<0.001	*0.16	*0.314	*<0.001

County	State Well Number	Date Sampled	Chromium dissolved (mg/L)	Cobalt dissolved (mg/L)	Copper dissolved (mg/L)	Iron dissolved (mg/L)	Lead dissolved (mg/L)	Lithium dissolved (mg/L)	Manganese dissolved (mg/L)	Mercury dissolved (mg/L)
Bexar	AY-68-27-307	03/25/03	<0.01	NA	0.0034B	<0.01	<0.01	NA	0.0003B	<0.0002
	AY-68-27-5VC	01/06/03	<0.01	NA	0.0043B	<0.01	0.0024B	NA	<0.01	0.0002
	AY-68-27-611	08/13/03	*0.001	*<0.001	*<0.001	*<0.05	*<0.001	*0.003	*<0.001	NA
	AY-68-28-113	08/12/03	*<0.001	*<0.001	*<0.001	*<0.05	*<0.001	<0.002	*<0.001	NA
	AY-68-28-203	10/24/03	<0.01	NA	0.0051B	0.0856B	0.002B	NA	0.0035B	<0.0002
	AY-68-28-205	10/24/03	<0.01	NA	0.0141	<0.25	0.0068B	NA	0.0004B	<0.0002
	AY-68-28-210	10/01/03	<0.01	NA	<0.01	0.533	<0.01	NA	0.0016B	<0.0002
	AY-68-28-211	03/07/03	<0.01	NA	<0.01	<0.01	0.0015B	NA	<0.01	<0.0002
	AY-68-28-313	03/21/03	<0.01	NA	0.0034B	0.471	<0.01	NA	0.0052B	0.00015B
	AY-68-28-314	04/05/03	<0.01	NA	<0.01	<0.01	<0.01	NA	<0.01	<0.0002
	AY-68-28-315	03/28/03	<0.01	NA	<0.01	<0.01	<0.01	NA	0.0003B	<0.0002

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Table C-3 Analytical data for metals in water samples from wells completed in the Edwards Aquifer, 2003 (cont'd)

County	State Well Number	Date Sampled	Chromium dissolved (mg/L)	Cobalt dissolved (mg/L)	Copper dissolved (mg/L)	Iron dissolved (mg/L)	Lead dissolved (mg/L)	Lithium dissolved (mg/L)	Manganese dissolved (mg/L)	Mercury dissolved (mg/L)
Bexar	AY-68-28-406	08/21/03	*<0.001	*<0.001	*<0.001	*<0.05	*<0.001	*0.003	*<0.001	NA
	AY-68-28-407	08/21/03	*0.002	*<0.001	*<0.001	*<0.05	*<0.001	*<0.002	*<0.001	NA
	AY-68-28-513	10/24/03	<0.01	NA	0.0092B	<0.25	0.0016B	NA	<0.01	<0.0002
	AY-68-28-514	10/24/03	<0.01	NA	0.0099B	<0.25	0.0014B	NA	<0.01	0.00012B
	AY-68-28-516	05/01/03	<0.01	NA	0.0038B	<0.01	0.0017B	NA	0.0003B	<0.0002
	AY-68-28-518	04/29/03	<0.01	NA	<0.01	<0.01	<0.01	NA	0.0024B	<0.0002
	AY-68-28-519	04/29/03	<0.01	NA	<0.01	<0.01	<0.01	NA	0.0021B	<0.0002
	AY-68-28-609	03/28/03	<0.01	NA	<0.01	<0.01	<0.01	NA	<0.01	<0.0002
	AY-68-28-8GE	12/09/03	<0.01	NA	<0.01	0.13B	<0.01	NA	0.103	<0.0002
	AY-68-29-103	05/01/03	<0.01	NA	0.0054B	<0.01	0.002B	NA	<0.01	<0.0002
	AY-68-29-109	07/30/03	*<0.001	*<0.001	*0.004	*<0.05	*<0.001	*<0.002	*<0.001	NA
	AY-68-29-401	07/30/03	*<0.001	*<0.001	*0.006	*<0.05	*0.001	*0.002	*<0.001	NA
	AY-68-29-406	08/06/03	*<0.001	*<0.001	*<0.001	*<0.05	*<0.001	*0.009	*<0.001	NA
	AY-68-29-410	07/30/03	*<0.001	*<0.001	*0.007	*<0.05	*0.001	*0.002	*<0.001	NA
	AY-68-29-414	07/30/03	*<0.001	*<0.001	*0.003	*<0.05	*0.002	*0.003	*<0.001	NA
	AY-68-29-925	12/12/03	<0.01	NA	<0.01	0.306	<0.01	NA	0.0109	<0.0002
Comal	DX-68-16-707	06/25/03	*<0.001	*<0.001	*0.003	*<0.05	*<0.001	*0.003	*<0.001	NA
	DX-68-22-805	06/25/03	*0.002	*<0.001	*0.003	*<0.05	*0.003	*<0.002	*<0.001	NA
	DX-68-22-810	06/25/03	*0.001	*<0.001	*0.001	*<0.05	*0.005	*0.002	*<0.001	NA
	DX-68-22-811	08/06/03	*<0.001	*<0.001	*0.001	*<0.05	*<0.001	*<0.002	*<0.001	NA
	DX-68-22-901	06/27/03	*<0.001	*<0.001	*0.003	*<0.05	*0.001	*0.002	*<0.001	NA
	DX-68-23-302	08/27/03	*0.003	*<0.001	*<0.001	*<0.05	*<0.001	*0.006	*<0.001	NA
	DX-68-23-303	10/08/03	<0.01	NA	0.0399	<0.25	<0.01	NA	<0.01	<0.0002
	DX-68-23-304	06/18/03	<0.01	*<0.001	0.0047B	0.0061B	*<0.001	*0.007	*0.002	<0.0002
	DX-68-23-305	06/27/03	*<0.001	*<0.001	*0.001	*<0.05	*<0.001	*0.006	*<0.001	NA
	DX-68-23-316	08/27/03	*0.004	*<0.001	*<0.001	*<0.05	*<0.001	*0.002	*<0.001	NA

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Table C-3 Analytical data for metals in water samples from wells completed in the Edwards Aquifer, 2003 (cont'd)

County	State Well Number	Date Sampled	Chromium dissolved (mg/L)	Cobalt dissolved (mg/L)	Copper dissolved (mg/L)	Iron dissolved (mg/L)	Lead dissolved (mg/L)	Lithium dissolved (mg/L)	Manganese dissolved (mg/L)	Mercury dissolved (mg/L)
Comal	DX-68-23-508	06/26/03	*0.002	*<0.001	*0.003	*<0.05	*<0.001	*0.005	*<0.001	NA
	DX-68-23-601	06/27/03	*<0.001	*<0.001	*0.002	*<0.05	*0.003	*0.005	*<0.001	NA
S	DX-68-23-616A	07/08/03	<0.01	NA	<0.01	0.156B	0.0036B	NA	0.0148	<0.0002
S	DX-68-23-616B	07/08/03	<0.01	NA	<0.01	0.124B	0.0041B	NA	0.0412	0.0004
S	DX-68-23-619A	06/25/03	*<0.001	*<0.001	*<0.001	*0.291	*<0.001	*0.014	*0.014	NA
S	DX-68-23-619B	07/08/03	<0.01	NA	<0.01	1	<0.01	NA	0.0566	<0.0002
	DX-68-30-221	06/26/03	*0.002	*<0.001	*0.001	*<0.05	*<0.001	*0.004	*<0.001	NA
	DX-68-30-225	08/06/03	*<0.001	*<0.001	*0.003	*<0.05	*0.001	*0.003	*<0.001	NA
Hays	LR-67-01-303	07/14/03	<0.01	NA	0.246	<0.01	<0.01	NA	0.0005B	<0.0002
	LR-67-01-810	07/15/03	<0.01	NA	<0.01	0.0928	<0.01	NA	0.0011B	<0.0002
S	LR-67-01-812	09/23/03	0.0024B	NA	0.018	<0.01	<0.01	NA	0.0043B	<0.0002
S	LR-67-01-813A	09/23/03	0.0021B	NA	0.0226	0.0049B	0.0015B	NA	0.0054B	<0.0002
S	LR-67-01-813B	09/23/03	0.0023B	NA	0.0208	<0.01	<0.01	NA	0.0029B	<0.0002
S	LR-67-01-814A	09/23/03	0.002B	NA	0.0133	<0.01	<0.01	NA	0.0029B	<0.0002
S	LR-67-01-814B	09/23/03	0.0023B	NA	0.0097B	<0.01	<0.01	NA	0.0022B	<0.0002
	LR-67-01-816	07/15/03	<0.01	NA	<0.01	0.134	<0.01	NA	0.0018B	<0.0002
	LR-67-01-8SW	07/15/03	<0.01	NA	<0.01	0.0769	<0.01	NA	0.001B	<0.0002
	LR-67-01-8SW	10/06/03	<0.01	NA	<0.01	<0.25	<0.01	NA	0.0006B	0.00014B
	AY-67-09-113	11/04/03	<0.01	NA	0.0083B	4.88	<0.01	NA	0.0995	<0.0002
	LR-67-09-1HB	07/22/03	<0.01	NA	<0.01	0.0096B	<0.01	NA	0.0009B	<0.0002
	LR-67-09-1SM	07/15/03	<0.01	NA	0.0069B	0.0678	0.0043B	NA	0.0013B	<0.0002
	LR-68-08-902	07/14/03	<0.01	NA	0.0542	<0.01	0.0018B	NA	0.0005B	0.00037
Medina	TD-68-25-703	05/14/03	*0.002	*<0.001	*0.002	*<0.05	*<0.001	*<0.002	*<0.001	NA
	TD-68-33-202	06/30/03	*0.001	*<0.001	*0.002	*<0.05	*<0.001	*0.002	*<0.001	NA
	TD-68-33-502	05/28/03	*0.003	*<0.001	*0.002	*<0.05	*<0.001	*0.005	*<0.001	NA
	TD-68-41-102	05/30/03	*0.003	*<0.001	*0.009	*<0.05	*<0.001	*0.004	*<0.001	NA

* Sample collected by the Authority and analyzed by TWDB
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J = Method blank contamination (The associated method blank contains the target analyte at a reportable level)
S = Freshwater / Saline Water Transect Monitoring Well
NA = Not analyzed

Table C-3 Analytical data for metals in water samples from wells completed in the Edwards Aquifer, 2003 (cont'd)

County	State Well Number	Date Sampled	Chromium dissolved (mg/L)	Cobalt dissolved (mg/L)	Copper dissolved (mg/L)	Iron dissolved (mg/L)	Lead dissolved (mg/L)	Lithium dissolved (mg/L)	Manganese dissolved (mg/L)	Mercury dissolved (mg/L)
Medina	TD-68-41-308	05/16/03	*0.002	*<0.001	*<0.001	*<0.05	*<0.001	*0.005	*<0.001	NA
	TD-68-42-113	08/04/03	*<0.001	*<0.001	*0.001	*<0.05	*<0.001	*0.004	*<0.001	NA
	TD-68-42-506	05/16/03	*0.002	*<0.001	*0.001	*<0.05	*<0.001	*0.003	*<0.001	NA
	TD-68-42-806	06/13/03	*0.001	*<0.001	*0.007	*<0.05	*0.002	*0.004	*<0.001	NA
	TD-68-49-201	08/04/03	*<0.001	*<0.001	*0.005	*<0.05	80.001	*0.004	*<0.001	NA
	TD-68-49-301	06/30/03	*0.001	*<0.001	*0.005	*<0.05	*0.002	*0.004	*<0.001	NA
	TD-68-49-501	05/30/03	*0.003	*<0.001	*0.004	*<0.05	*0.002	*0.005	*<0.001	NA
	TD-69-38-906	05/28/03	*0.003	*<0.001	*0.012	*<0.05	*0.007	*0.004	*<0.001	NA
	TD-69-39-504	07/01/03	*0.001	*<0.001	*<0.001	*<0.05	*<0.001	*<0.002	*<0.001	NA
	TD-69-39-601	05/14/03	*0.002	*<0.001	*0.001	*<0.05	*<0.001	*0.002	*<0.001	NA
	TD-69-46-601	06/13/03	*0.001	*<0.001	*0.004	*<0.05	*<0.001	*0.003	*<0.001	NA
	TD-69-47-215	08/04/03	*<0.001	*<0.001	*0.002	*<0.05	*0.004	*0.003	*<0.001	NA
	TD-69-47-303	05/14/03	*0.002	*<0.001	*<0.001	*<0.05	*0.001	*0.003	*<0.001	NA
	TD-69-55-604	05/28/03	*0.003	*<0.001	*0.002	*<0.05	*0.005	*0.004	*<0.001	NA
	TD-69-63-103	06/30/03	*<0.001	*<0.001	*<0.001	*0.656	*<0.001	*0.01	*0.025	NA
Uvalde	YP-69-33-701	05/08/03	*0.001	*<0.001	*<0.001	*<0.05	*<0.001	*0.002	*<0.001	NA
	YP-69-35-401	05/13/03	*0.002	*<0.001	*<0.001	*<0.05	*<0.001	*<0.002	*<0.001	NA
	YP-69-35-602	05/06/03	*<0.001	*<0.001	*<0.001	*<0.05	*<0.001	*0.002	*<0.001	NA
	YP-69-40-422	05/16/03	*<0.001	*<0.001	*0.001	*<0.05	*<0.001	*0.002	*<0.001	NA
	YP-69-42-709	05/06/03	*<0.001	*<0.001	*<0.001	*<0.05	*<0.001	*0.003	*<0.001	NA
	YP-69-43-606	05/08/03	*0.002	*<0.001	*0.002	*<0.05	*<0.001	*0.003	*<0.001	NA
	YP-69-45-405	05/07/03	*<0.001	*<0.001	*0.001	*<0.05	*<0.001	*0.003	*<0.001	NA
	YP-69-50-203	05/07/03	*<0.001	*<0.001	*0.002	*<0.05	*<0.001	*0.003	*<0.001	NA
	YP-69-50-501	05/07/03	*<0.001	*<0.001	*0.001	*<0.05	*<0.001	*0.006	*<0.001	NA
	YP-69-51-114	05/08/03	*0.002	*<0.001	*0.005	*<0.05	*<0.001	*0.009	*<0.001	NA
	YP-69-51-120	05/13/03	*0.003	*<0.001	*0.002	*<0.05	*<0.001	*0.009	*<0.001	NA

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S = Freshwater / Saline Water Transect Monitoring Well
NA = Not analyzed

Table C-3 Analytical data for metals in water samples from wells completed in the Edwards Aquifer, 2003 (cont'd)

County	State Well Number	Date Sampled	Molybdenum dissolved (mg/L)	Nickel dissolved (mg/L)	Selenium dissolved (mg/L)	Silver dissolved (mg/L)	Strontium dissolved (mg/L)	Thallium dissolved (mg/L)	Vanadium dissolved (mg/L)	Zinc dissolved (mg/L)
Bexar	AY-68-27-307	03/25/03	NA	0.0011B	<0.01	<0.01	0.128	<0.01	NA	0.0023B
	AY-68-27-5VC	01/06/03	NA	<0.01	0.0081B	0.0011B	0.266	<0.01	NA	0.0027B
	AY-68-27-611	08/13/03	*<0.001	*0.003	*<0.004	NA	*0.225	*<0.001	*0.002	*0.007
	AY-68-28-113	08/12/03	*<0.001	*0.003	*<0.004	NA	*0.113	*<0.001	*0.002	*0.004
	AY-68-28-203	10/24/03	NA	0.0063B	<0.01	<0.005	0.132	<0.01	NA	<0.01
	AY-68-28-205	10/24/03	NA	0.008B	<0.01	0.0013B	0.711	<0.01	NA	0.061
	AY-68-28-210	10/01/03	NA	0.0043B	<0.01	<0.005	0.128	<0.01	NA	0.0024B
	AY-68-28-211	03/07/03	NA	<0.01	<0.01	<0.01	0.297	<0.01	NA	0.0018B
	AY-68-28-313	03/21/03	NA	0.0015B	<0.01	<0.01	0.000	<0.01	NA	0.0054B
	AY-68-28-314	04/05/03	NA	0.0022B	<0.01	<0.01	0.0872	<0.01	NA	0.0024B
	AY-68-28-315	03/28/03	NA	0.0008B	<0.01	<0.01	0.0707	<0.01	NA	0.0039B
	AY-68-28-406	08/21/03	*<0.001	*0.003	*<0.004	NA	*0.26	*<0.001	*0.002	*0.007
	AY-68-28-407	08/21/03	*<0.001	*0.003	*<0.004	NA	*0.18	*<0.001	*0.003	*0.008
	AY-68-28-513	10/24/03	NA	0.0065B	<0.01	<0.005	0.221	<0.01	NA	<0.01
	AY-68-28-514	10/24/03	NA	0.0057B	<0.01	<0.005	0.198	<0.01	NA	<0.01
	AY-68-28-516	05/01/03	NA	0.0013B	<0.01	0.0009B	0.117	<0.01	NA	0.0023B
	AY-68-28-518	04/29/03	NA	0.0007B	<0.01	<0.01	0.126	<0.01	NA	0.0023B
	AY-68-28-519	04/29/03	NA	0.0013B	<0.01	<0.01	0.0842	<0.01	NA	0.002B
	AY-68-28-609	03/28/03	NA	<0.01	<0.01	<0.01	0.0855	<0.01	NA	0.0037B
	AY-68-28-8GE	12/09/03	NA	0.0118	0.0207	<0.005	0.859	<0.01	NA	0.0164
	AY-68-29-103	05/01/03	NA	<0.01	<0.01	0.0009B	0.559	<0.01	NA	0.002B
	AY-68-29-109	07/30/03	*<0.001	*0.002	*<0.004	NA	*0.21	*<0.001	*0.003	*0.007
	AY-68-29-401	07/30/03	*<0.001	*0.002	*<0.004	NA	*0.211	*<0.001	*0.003	*0.012
	AY-68-29-406	08/06/03	*<0.001	*0.004	*<0.004	NA	*0.31	*<0.001	*0.005	*0.265
	AY-68-29-410	07/30/03	*<0.001	*0.002	*<0.004	NA	*0.134	*<0.001	*0.003	*0.009
	AY-68-29-414	07/30/03	*<0.001	*0.002	*<0.004	NA	*0.228	*<0.001	*0.003	*0.015
	AY-68-29-925	12/12/03	NA	0.0049B	<0.01	<0.005	1.65	<0.01	NA	0.196

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NA = Not analyzed

Table C-3 Analytical data for metals in water samples from wells completed in the Edwards Aquifer, 2003 (cont'd)

County	State Well Number	Date Sampled	Molybdenum dissolved (mg/L)	Nickel dissolved (mg/L)	Selenium dissolved (mg/L)	Silver dissolved (mg/L)	Strontium dissolved (mg/L)	Thallium dissolved (mg/L)	Vanadium dissolved (mg/L)	Zinc dissolved (mg/L)
Comal	DX-68-16-707	06/25/03	*<0.001	*0.002	*<0.004	NA	*0.39	*<0.001	*0.002	*0.009
	DX-68-22-805	06/25/03	*<0.001	*0.002	*<0.004	NA	*0.16	*<0.001	*0.003	*0.007
	DX-68-22-810	06/25/03	*<0.001	*0.003	*<0.004	NA	*0.12	*<0.001	*0.003	*0.549
	DX-68-22-811	08/06/03	*<0.001	*0.003	*<0.004	NA	*0.162	*<0.001	*0.003	*0.027
	DX-68-22-901	06/27/03	*<0.001	*0.003	*<0.004	NA	*0.16	*<0.001	*0.003	*0.009
	DX-68-23-302	08/27/03	*<0.001	*0.002	*<0.004	NA	*0.56	*<0.001	*0.003	*0.008
	DX-68-23-303	10/08/03	NA	0.0049B	<0.01	0.002B	0.753	<0.01	NA	0.0752
	DX-68-23-304	06/18/03	<0.001	0.002	<0.01	<0.01	0.728	<0.001	0.003	0.0046B
	DX-68-23-305	06/27/03	*<0.001	*0.002	*<0.004	NA	*0.7	*<0.001	*0.003	*0.015
	DX-68-23-316	08/27/03	*<0.001	*0.003	*<0.004	NA	*0.19	*<0.001	*0.003	*0.007
	DX-68-23-508	06/26/03	*<0.001	*0.002	*<0.004	NA	*0.5	*<0.001	*0.003	*0.008
	DX-68-23-601	06/27/03	*<0.001	*0.002	*<0.004	NA	*0.55	*<0.001	*0.002	*0.007
S	DX-68-23-616A	07/08/03	NA	0.0023B	0.115	<0.005	<0.05	<0.01	NA	<0.01
S	DX-68-23-616B	07/08/03	NA	0.0025B	0.0991	<0.005	<0.05	<0.01	NA	<0.01
S	DX-68-23-619A	06/25/03	*<0.001	*0.001	*<0.004	NA	*3.16	*<0.001	*<0.001	*0.006
S	DX-68-23-619B	07/08/03	NA	0.0009B	0.0352	<0.005	<0.05	<0.01	NA	0.0051B
	DX-68-30-221	06/26/03	*<0.001	*0.003	*<0.004	NA	*0.21	*<0.001	*0.003	*0.006
	DX-68-30-225	08/06/03	*<0.001	*0.003	*<0.004	NA	*0.21	*<0.001	*0.003	*0.08
Hays	LR-67-01-303	07/14/03	NA	0.0026B	0.0439	<0.01	<0.05	0.0057B	NA	0.0488
	LR-67-01-810	07/15/03	NA	0.0033B	0.0379	<0.01	0.502	0.0098B	NA	0.105
S	LR-67-01-812	09/23/03	NA	0.0035B	<0.01	<0.01	34.6	0.022	NA	<0.01
S	LR-67-01-813A	09/23/03	NA	0.0035B	<0.01	<0.01	28.9	0.0235	NA	<0.01
S	LR-67-01-813B	09/23/03	NA	0.0057B	<0.01	<0.01	36.1	0.02	NA	<0.01
S	LR-67-01-814A	09/23/03	NA	0.0053B	<0.01	<0.01	28.1	0.0225	NA	<0.01
S	LR-67-01-814B	09/23/03	NA	0.0057B	<0.01	<0.01	31.1	0.0232	NA	<0.01
	LR-67-01-816	07/15/03	NA	0.003B	0.0381	<0.01	0.515	0.0108	NA	0.104

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Table C-3 Analytical data for metals in water samples from wells completed in the Edwards Aquifer, 2003 (cont'd)

County	State Well Number	Date Sampled	Molybdenum dissolved (mg/L)	Nickel dissolved (mg/L)	Selenium dissolved (mg/L)	Silver dissolved (mg/L)	Strontium dissolved (mg/L)	Thallium dissolved (mg/L)	Vanadium dissolved (mg/L)	Zinc dissolved (mg/L)
Hays	LR-67-01-8SW	07/15/03	NA	0.0032B	0.0347	<0.01	0.548	0.011	NA	0.105
	LR-67-01-8SW	10/06/03	NA	0.0033B	0.0178	0.002B	0.548	0.0296	NA	<0.01
	LR-67-09-113	11/04/03	NA	0.004B	<0.01	<0.005	0.355	<0.01	NA	<0.01
	LR-67-09-1HB	07/22/03	NA	0.0011B	0.0076B	<0.005	0.382	0.0149	NA	0.0188
	LR-67-09-1SM	07/15/03	NA	0.0037B	0.0324	<0.01	0.647	0.0098B	NA	0.116
	LR-68-08-902	07/14/03	NA	0.003B	0.0417	<0.01	0.154	0.0068B	NA	0.0338
Medina	TD-68-25-703	05/14/03	*<0.001	*0.002	*0.007	NA	*0.249	*<0.001	*0.003	*0.017
	TD-68-33-202	06/30/03	*<0.001	*0.002	*<0.004	NA	*0.4	*<0.001	*0.002	*0.145
	TD-68-33-502	05/28/03	*<0.001	*0.002	*<0.004	NA	*0.569	*<0.001	*0.003	*0.005
	TD-68-41-102	05/30/03	*<0.001	*0.002	*<0.004	NA	*0.63	*<0.001	*0.004	*0.005
	TD-68-41-308	05/16/03	*<0.001	*0.001	*<0.004	NA	*0.525	*<0.001	*0.003	*0.006
	TD-68-42-113	08/04/03	*<0.001	*0.002	*<0.004	NA	*0.62	*<0.001	*0.003	*0.005
	TD-68-42-506	05/16/03	*<0.001	*0.002	*0.005	NA	*1.23	*<0.001	*0.004	*<0.004
	TD-68-42-806	06/13/03	*0.031	*0.003	*<0.004	NA	*2.16	*<0.001	*0.011	*0.018
	TD-68-49-201	08/04/03	*<0.001	*0.002	*<0.004	NA	*2.19	*<0.001	*0.003	*0.012
	TD-68-49-301	06/30/03	*0.009	*0.002	*<0.004	NA	*6.34	*<0.001	*0.008	*0.013
	TD-68-49-501	05/30/03	*<0.001	*0.002	*<0.004	NA	*2.65	*<0.001	*0.004	*0.009
	TD-69-38-906	05/28/03	*<0.001	*0.003	*<0.004	NA	*0.269	*<0.001	*0.004	*0.018
	TD-69-39-504	07/01/03	*0.001	*0.005	*<0.004	NA	*0.23	*<0.001	*0.002	*<0.004
	TD-69-39-601	05/14/03	*<0.001	*0.002	*0.006	NA	*0.217	*<0.001	*0.003	*0.255
	TD-69-46-601	06/13/03	*<0.001	*0.001	*<0.004	NA	*0.33	*<0.001	*0.003	*0.009
	TD-69-47-215	08/04/03	*<0.001	*0.003	*<0.004	NA	*0.341	*<0.001	*0.002	*0.016
	TD-69-47-303	05/14/03	*<0.001	*0.002	*0.005	NA	*0.36	*<0.001	*0.004	*0.006
	TD-69-55-604	05/28/03	*<0.001	*0.002	*<0.004	NA	*0.878	*<0.001	*0.004	*0.005
	TD-69-63-103	06/30/03	*0.004	*0.002	*<0.004	NA	*25.3	*<0.001	*<0.001	*0.008
Uvalde	YP-69-33-701	05/08/03	*<0.001	*0.002	*<0.004	NA	*0.226	*<0.001	*0.004	*0.013

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NA = Not analyzed

Table C-3 Analytical data for metals in water samples from wells completed in the Edwards Aquifer, 2003 (cont'd)

County	State Well Number	Date Sampled	Molybdenum dissolved (mg/L)	Nickel dissolved (mg/L)	Selenium dissolved (mg/L)	Silver dissolved (mg/L)	Strontium dissolved (mg/L)	Thallium dissolved (mg/L)	Vanadium dissolved (mg/L)	Zinc dissolved (mg/L)
Uvalde	YP-69-35-401	05/13/03	*<0.001	*0.002	*0.01	NA	*0.266	*<0.001	*0.004	*0.005
	YP-69-35-602	05/06/03	*<0.001	*0.002	*<0.004	NA	*0.626	*<0.001	*0.003	*0.004
	YP-69-40-422	05/16/03	*<0.001	*0.002	*<0.004	NA	*0.155	*<0.001	*0.003	*0.326
	YP-69-42-709	05/06/03	*<0.001	*0.002	*<0.004	NA	*0.22	*<0.001	*0.004	*<0.004
	YP-69-43-606	05/08/03	*<0.001	*0.002	*<0.004	NA	*0.4	*<0.001	*0.004	*<0.004
	YP-69-45-405	05/07/03	*<0.001	*0.002	*<0.004	NA	*0.33	*<0.001	*0.002	*0.004
	YP-69-50-203	05/07/03	*<0.001	*0.003	*<0.004	NA	*0.25	*<0.001	*0.005	*0.006
	YP-69-50-501	05/07/03	*<0.001	*0.004	*<0.004	NA	*0.59	*<0.001	*0.005	*0.011
	YP-69-51-114	05/08/03	*0.002	*0.004	*<0.004	NA	*3.41	*<0.001	*0.007	*0.021
	YP-69-51-120	05/13/03	*0.005	*0.006	*0.017	NA	*3.75	*<0.001	*0.006	*0.01

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NA = Not analyzed

Table C-4 Analytical data for nutrients in water samples from wells completed in the Edwards Aquifer, 2003

County	State Well Number	Date Sampled	Nitrate-Nitrite as N (mg/L)	Nitrite as N (mg/L)	Phosphorus as P (mg/L)
Bexar	AY-68-27-307	03/25/03	1.65	NA	<0.1
	AY-68-27-5VC	01/06/03	2.03	NA	0.0193B
	AY-68-27-611	08/13/03	*2.01	NA	NA
	AY-68-28-113	08/12/03	*1.83	NA	NA
	AY-68-28-203	10/24/03	2.55	NA	<0.1
	AY-68-28-205	10/24/03	1.03	NA	<0.1
	AY-68-28-210	10/01/03	0.506	NA	<0.1
	AY-68-28-211	03/07/03	1.23	NA	<0.1
	AY-68-28-313	03/21/03	5.08	0.0058B	<0.1
	AY-68-28-314	04/05/03	2.25	0.0009B	0.0121B
	AY-68-28-315	03/28/03	1.27	0.014	0.0206B
	AY-68-28-406	08/21/03	*3.44	NA	NA
	AY-68-28-407	08/21/03	*1.36	NA	NA
	AY-68-28-513	10/24/03	1.30	NA	<0.1
	AY-68-28-514	10/24/03	1.44	NA	<0.1
	AY-68-28-516	05/01/03	1.30	0.0017B	0.0116B
	AY-68-28-518	04/29/03	1.77	0.0022B	<0.1
	AY-68-28-519	04/29/03	0.782B	0.0037B	0.0088B
	AY-68-28-609	03/28/03	1.10	0.0029B	0.0107B
	AY-68-28-8GE	12/09/03	1.21	NA	<0.1
	AY-68-29-103	05/01/03	0.489	0.0017B	0.0081B
	AY-68-29-109	07/30/03	*1.97	NA	NA
	AY-68-29-401	07/30/03	*2.01	NA	NA
	AY-68-29-406	08/06/03	*3.35	NA	NA
	AY-68-29-410	07/30/03	*2.10	NA	NA
	AY-68-29-414	07/30/03	*2.11	NA	NA
	AY-68-29-925	12/12/03	<0.4	NA	<0.1
Comal	DX-68-16-707	06/25/03	*1.75	NA	NA
	DX-68-22-805	06/25/03	*1.39	NA	NA
	DX-68-22-810	06/25/03	*1.88	NA	NA
	DX-68-22-811	08/06/03	*2.76	NA	NA
	DX-68-22-901	06/27/03	*2.03	NA	NA
	DX-68-23-302	08/27/03	*2.00	NA	NA
	DX-68-23-303	10/08/03	1.72	NA	0.0132B
	DX-68-23-304	06/18/03	1.76	0.028	<0.1
	DX-68-23-305	06/27/03	*1.77	NA	NA
	DX-68-23-316	08/27/03	*1.62	NA	NA
	DX-68-23-508	06/26/03	*1.71	NA	NA
	DX-68-23-601	06/27/03	*1.82	NA	NA
S	DX-68-23-616A	07/08/03	<0.2	0.0058B	0.0184B
S	DX-68-23-616B	07/08/03	<0.2	0.0015B	0.0139B

* Sample collected by the Authority and analyzed by TWDB
B = Estimated result between the method detection limit and the reporting limit
S = Freshwater / Saline Water Transect Monitoring Well
NA = Not analyzed

Table C-4 Analytical data for nutrients in water samples from wells completed in the Edwards Aquifer, 2003 (cont'd)

County	State Well Number	Date Sampled	Nitrate-Nitrite as N (mg/L)	Nitrite as N (mg/L)	Phosphorus as P (mg/L)
S	DX-68-23-619A	06/25/03	*<0.02	NA	NA
S	DX-68-23-619B	07/08/03	<0.2	0.0036B	<0.1
	DX-68-30-221	06/26/03	*5.47	NA	NA
	DX-68-30-225	08/06/03	*3.51	NA	NA
Hays	LR-67-01-303	07/14/03	<0.4	NA	0.0101B
	LR-67-01-810	07/15/03	1.50	NA	0.0152B
S	LR-67-01-812	09/23/03	<0.4	NA	<0.1
S	LR-67-01-813A	09/23/03	<0.4	NA	<0.1
S	LR-67-01-813B	09/23/03	<0.4	NA	<0.1
S	LR-67-01-814A	09/23/03	<0.4	NA	<0.1
S	LR-67-01-814B	09/23/03	<0.4	NA	0.0127B
	LR-67-01-816	07/15/03	1.55	NA	0.0155B
	LR-67-01-8SW	07/15/03	1.56	NA	0.0171B
	LR-67-01-8SW	10/06/03	1.54	NA	0.0058B
	LR-67-09-113	11/04/03	<0.2	NA	<0.1
	LR-67-09-1HB	07/22/03	1.18	0.0022B	0.0164B
	LR-67-09-1SM	07/15/03	1.97	NA	0.0135B
	LR-68-08-902	07/14/03	1.01	NA	0.0110B
Medina	TD-68-25-703	05/14/03	*0.500	NA	NA
	TD-68-33-202	06/30/03	*0.709	NA	NA
	TD-68-33-502	05/28/03	*0.690	NA	NA
	TD-68-41-102	05/30/03	*1.88	NA	NA
	TD-68-41-308	05/16/03	*2.01	NA	NA
	TD-68-42-113	08/04/03	*2.04	NA	NA
	TD-68-42-506	05/16/03	*2.03	NA	NA
	TD-68-42-806	06/13/03	*1.12	NA	NA
	TD-68-49-201	08/04/03	*2.21	NA	NA
	TD-68-49-301	06/30/03	*1.20	NA	NA
	TD-68-49-501	05/30/03	*2.02	NA	NA
	TD-69-38-906	05/28/03	*3.96	NA	NA
	TD-69-39-504	07/01/03	*1.95	NA	NA
	TD-69-39-601	05/14/03	*1.30	NA	NA
	TD-69-40-422	05/16/03	*1.85	NA	NA
	TD-69-46-601	06/13/03	*1.35	NA	NA
	TD-69-47-215	08/04/03	*1.44	NA	NA
	TD-69-47-303	05/14/03	*1.50	NA	NA
	TD-69-55-604	05/28/03	*2.47	NA	NA
	TD-69-63-103	06/30/03	*<0.02	NA	NA
Uvalde	YP-69-33-701	05/08/03	*0.746	NA	NA
	YP-69-35-401	05/13/03	*2.57	NA	NA
	YP-69-35-602	05/06/03	*1.32	NA	NA

* Sample collected by the Authority and analyzed by TWDB
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S = Freshwater / Saline Water Transect Monitoring Well
NA = Not analyzed

Table C-4 Analytical data for nutrients in water samples from wells completed in the Edwards Aquifer, 2003

County	State Well Number	Date Sampled	Nitrate-Nitrite as N (mg/L)	Nitrite as N (mg/L)	Phosphorus as P (mg/L)
Uvalde	YP-69-42-709	05/06/03	*2.33	NA	NA
	YP-69-43-606	05/08/03	*3.14	NA	NA
	YP-69-45-405	05/07/03	*1.41	NA	NA
	YP-69-50-203	05/07/03	*2.81	NA	NA
	YP-69-50-501	05/07/03	*9.05	NA	NA
	YP-69-51-114	05/08/03	*5.38	NA	NA
	YP-69-51-120	05/13/03	*7.37	NA	NA

* Sample collected by the Authority and analyzed by TWDB
B = Estimated result between the method detection limit and the reporting limit
S = Freshwater / Saline Water Transect Monitoring Well
NA = Not analyzed

Table C-5 Analytical data for pesticides, herbicides and PCB (Aroclors) in water samples from wells completed in the Edwards Aquifer, 2003

Station Name	Date Sampled	Aldrin (µg/L)	alpha BHC (µg/L)	alpha-Chlordane (µg/L)	Aroclor 1016 (µg/L)	Aroclor 1221 (µg/L)	Aroclor 1232 (µg/L)	Aroclor 1242 (µg/L)	Aroclor 1248 (µg/L)	Aroclor 1254 (µg/L)
AY-68-27-307	03/25/03	<0.05	<0.05	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AY-68-27-611	08/13/03	<0.05	<0.05	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AY-68-28-113	08/12/03	<0.05	<0.05	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AY-68-28-210	10/01/03	<0.05	<0.05	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AY-68-28-211	03/07/03	<0.05	<0.05	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AY-68-28-313	03/21/03	<0.05	<0.05	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AY-68-28-314	04/05/03	<0.05	<0.05	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AY-68-28-315	03/28/03	<0.05	<0.05	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AY-68-28-406	08/21/03	<0.05	<0.05	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AY-68-28-407	08/21/03	<0.05	<0.05	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AY-68-28-516	05/01/03	<0.05	<0.05	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AY-68-28-518	04/29/03	<0.05	<0.05	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AY-68-28-519	04/29/03	<0.05	<0.05	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AY-68-28-609	03/28/03	<0.05	<0.05	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AY-68-29-103	05/01/03	<0.05	<0.05	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DX-68-22-811	08/06/03	<0.05	<0.05	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DX-68-23-302	08/27/03	<0.05	<0.05	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DX-68-23-304	06/18/03	<0.05	<0.05	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
LR-67-01-303	07/14/03	<0.05	<0.05	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
LR-67-01-816	07/15/03	<0.05	<0.05	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
LR-67-09-113	11/04/03	<0.05	<0.05	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
LR-68-08-902	07/14/03	<0.05	<0.05	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

J = Estimated result between the method detection limit and the reporting limit
NA = Not analyzed

Table C-5 Analytical data for pesticides, herbicides and PCB (Aroclors) in water samples from wells completed in the Edwards Aquifer, 2003 (cont'd)

Station Name	Date Sampled	Aroclor 1260 (µg/L)	Atrazine (µg/L)	Azinphos methyl (µg/L)	Bentazon (µg/L)	beta BHC (µg/L)	Bolstar (Sulprofos) (µg/L)	Carbo phenothion (µg/L)	Chlorpyrifos (µg/L)
AY-68-27-307	03/25/03	<0.5	<2.0	<1.0	<2.0	<0.05	<1.0	<1.0	<1.0
AY-68-27-611	08/13/03	<0.5	<2.0	<1.0	<2.0	<0.05	<1.0	<1.0	<1.0
AY-68-28-113	08/12/03	<0.5	<2.0	<1.0	<2.0	<0.05	<1.0	<1.0	<1.0
AY-68-28-210	10/01/03	<0.5	<2.0	<1.0	<2.0	<0.05	<1.0	<1.0	<1.0
AY-68-28-211	03/07/03	<0.5	<2.0	<1.0	<2.0	<0.05	<1.0	<1.0	<1.0
AY-68-23-313	03/21/03	<0.5	<2.0	<1.0	<2.0	<0.05	<1.0	<1.0	<1.0
AY-68-28-314	04/05/03	<0.5	<2.0	<1.0	<2.0	<0.05	<1.0	<1.0	<1.0
AY-68-28-315	03/28/03	<0.5	<2.0	<1.0	<2.0	<0.05	<1.0	<1.0	<1.0
AY-68-28-406	08/21/03	<0.5	<2.0	<1.0	<2.0	<0.05	<1.0	<1.0	<1.0
AY-68-28-407	08/21/03	<0.5	<2.0	<1.0	<2.0	<0.05	<1.0	<1.0	<1.0
AY-68-28-516	05/01/03	<0.5	<2.0	<1.0	<2.0	<0.05	<1.0	<1.0	<1.0
AY-68-28-518	04/29/03	<0.5	<2.0	<1.0	<2.0	<0.05	<1.0	<1.0	<1.0
AY-68-28-519	04/29/03	<0.5	<2.0	<1.0	<2.0	<0.05	<1.0	<1.0	<1.0
AY-68-28-609	03/28/03	<0.5	<2.0	<1.0	<2.0	<0.05	<1.0	<1.0	<1.0
AY-68-29-103	05/01/03	<0.5	<2.0	<1.0	<2.0	<0.05	<1.0	<1.0	<1.0
DX-68-22-811	08/06/03	<0.5	<2.0	<1.0	<2.0	<0.05	<1.0	<1.0	<1.0
DX-68-23-302	08/27/03	<0.5	<2.0	<1.0	<2.0	<0.05	<1.0	<1.0	<1.0
DX-68-23-304	06/18/03	<0.5	<2.0	<1.0	<2.0	<0.05	<1.0	<1.0	<1.0
LR-67-01-303	07/14/03	<0.5	<2.0	<1.0	<2.0	<0.05	<1.0	<1.0	<1.0
LR-67-01-816	07/15/03	<0.5	<2.0	<1.0	<2.0	<0.05	<1.0	<1.0	<1.0
LR-67-09-113	11/04/03	<0.5	<2.0	<1.0	<2.0	<0.05	<1.0	<1.0	<1.0
LR-68-08-902	07/14/03	<0.5	<2.0	<1.0	<2.0	<0.05	<1.0	<1.0	<1.0

J = Estimated result between the method detection limit and the reporting limit
NA = Not analyzed

Table C-5 Analytical data for pesticides, herbicides and PCB (Aroclors) in water samples from wells completed in the Edwards Aquifer, 2003 (cont'd)

Station Name	Date Sampled	Chlorpyrifos methyl (µg/L)	Coumaphos (µg/L)	2,4-D (µg/L)	4,4'-DDD (µg/L)	4,4'-DDE (µg/L)	4,4'-DDT (µg/L)	delta BHC (µg/L)	Demeton (µg/L)	Diazinon (µg/L)	Dichlo Fenthion (µg/L)
AY-68-27-307	03/25/03	<1.0	<1.0	<0.50	<0.20	<0.10	<0.10	<0.05	<2.5	<1.0	<1.0
AY-68-27-611	08/13/03	<1.0	<1.0	<0.50	<0.10	<0.10	<0.10	<0.05	<2.5	<1.0	<1.0
AY-68-28-113	08/12/03	<1.0	<1.0	<0.50	<0.10	<0.10	<0.10	<0.05	<2.5	<1.0	<1.0
AY-68-28-210	10/01/03	<1.0	<1.0	<0.50	<0.10	<0.10	<0.10	<0.05	<2.5	<1.0	<1.0
AY-68-28-211	03/07/03	<1.0	<1.0	<0.50	<0.20	<0.10	<0.10	<0.05	<2.5	<1.0	<1.0
AY-68-23-313	03/21/03	<1.0	<1.0	<0.50	<0.20	<0.10	<0.10	<0.05	<2.5	<1.0	<1.0
AY-68-28-314	04/05/03	<1.0	<1.0	<0.50	<0.20	<0.10	<0.10	<0.05	<2.5	<1.0	<1.0
AY-68-28-315	03/28/03	<1.0	<1.0	<0.50	<0.20	<0.10	<0.10	<0.05	<2.5	<1.0	<1.0
AY-68-28-406	08/21/03	<1.0	<1.0	<0.50	<0.10	<0.10	<0.10	<0.05	<2.5	<1.0	<1.0
AY-68-28-407	08/21/03	<1.0	<1.0	<0.50	<0.10	<0.10	<0.10	<0.05	<2.5	<1.0	<1.0
AY-68-28-516	05/01/03	<1.0	<1.0	<0.50	<0.10	<0.10	<0.10	<0.05	<2.5	<1.0	<1.0
AY-68-28-518	04/29/03	<1.0	<1.0	<0.50	<0.20	<0.10	<0.10	<0.05	<2.5	<1.0	<1.0
AY-68-28-519	04/29/03	<1.0	<1.0	<0.50	<0.20	<0.10	<0.10	<0.05	<2.5	<1.0	<1.0
AY-68-28-609	03/28/03	<1.0	<1.0	<0.50	<0.20	<0.10	<0.10	<0.05	<2.5	<1.0	<1.0
AY-68-29-103	05/01/03	<1.0	<1.0	<0.50	<0.10	<0.10	<0.10	<0.05	<2.5	<1.0	<1.0
DX-68-22-811	08/06/03	<1.0	<1.0	<0.50	<0.10	<0.10	<0.10	<0.05	<2.5	<1.0	<1.0
DX-68-23-302	08/27/03	<1.0	<1.0	<0.50	<0.10	<0.10	<0.10	<0.05	<2.5	<1.0	<1.0
DX-68-23-304	06/18/03	<1.0	<1.0	<0.50	<0.20	<0.10	<0.10	<0.05	<2.5	<1.0	<1.0
LR-67-01-303	07/14/03	<1.0	<1.0	<0.50	<0.20	<0.10	<0.10	<0.05	<2.5	<1.0	<1.0
LR-67-01-816	07/15/03	<1.0	<1.0	<0.50	<0.20	<0.10	<0.10	<0.05	<2.5	<1.0	<1.0
LR-67-09-113	11/04/03	<1.0	<1.0	<0.50	<0.10	<0.10	<0.10	<0.05	<2.5	<1.0	<1.0
LR-68-08-902	07/14/03	<1.0	<1.0	<0.50	<0.20	<0.10	<0.10	<0.05	<2.5	<1.0	<1.0

J = Estimated result between the method detection limit and the reporting limit
NA = Not analyzed

Table C-5 Analytical data for pesticides, herbicides and PCB (Aroclors) in water samples from wells completed in the Edwards Aquifer, 2003 (cont'd)

Station Name	Date Sampled	Dichlorvos (µg/L)	Dieldrin (µg/L)	Dimethoate (µg/L)	Dinoseb (µg/L)	Disulfoton (µg/L)	Endo sulfan I (µg/L)	Endo sulfan II (µg/L)	Endosulfan sulfate (µg/L)	Endrin (µg/L)
AY-68-27-307	03/25/03	<2.0	<0.10	<2.0	<6.0	<2.0	<0.05	<0.10	<0.10	<0.10
AY-68-27-611	08/13/03	<2.0	<0.10	<2.0	<6.0	<2.0	<0.05	<0.10	<0.10	<0.10
AY-68-28-113	08/12/03	<2.0	<0.10	<2.0	<6.0	<2.0	<0.05	<0.10	<0.10	<0.10
AY-68-28-210	10/01/03	<2.0	<0.10	<2.0	<6.0	<2.0	<0.05	<0.10	<0.10	<0.10
AY-68-28-211	03/07/03	<2.0	<0.10	<2.0	<6.0	<2.0	<0.05	<0.10	<0.10	<0.10
AY-68-23-313	03/21/03	<2.0	<0.10	<2.0	<6.0	<2.0	<0.05	<0.10	<0.10	<0.10
AY-68-28-314	04/05/03	<2.0	<0.10	<2.0	<6.0	<2.0	<0.05	<0.10	<0.10	<0.10
AY-68-28-315	03/28/03	<2.0	<0.10	<2.0	<6.0	<2.0	<0.05	<0.10	<0.10	<0.10
AY-68-28-406	08/21/03	<2.0	<0.10	<2.0	<6.0	<2.0	<0.05	<0.10	<0.10	<0.10
AY-68-28-407	08/21/03	<2.0	<0.10	<2.0	<6.0	<2.0	<0.05	<0.10	<0.10	<0.10
AY-68-28-516	05/01/03	<2.0	<0.10	<2.0	<6.0	<2.0	<0.05	<0.10	<0.10	<0.10
AY-68-28-518	04/29/03	<2.0	<0.10	<2.0	<6.0	<2.0	<0.05	<0.10	<0.10	<0.10
AY-68-28-519	04/29/03	<2.0	<0.10	<2.0	<6.0	<2.0	<0.05	<0.10	<0.10	<0.10
AY-68-28-609	03/28/03	<2.0	<0.10	<2.0	<6.0	<2.0	<0.05	<0.10	<0.10	<0.10
AY-68-29-103	05/01/03	<2.0	<0.10	<2.0	<6.0	<2.0	<0.05	<0.10	<0.10	<0.10
DX-68-22-811	08/06/03	<2.0	<0.10	<2.0	<6.0	<2.0	<0.05	<0.10	<0.10	<0.10
DX-68-23-302	08/27/03	<2.0	<0.10	<2.0	<6.0	<2.0	<0.05	<0.10	<0.10	<0.10
DX-68-23-304	06/18/03	<2.0	<0.10	<2.0	<6.0	<2.0	<0.05	<0.10	<0.10	<0.10
LR-67-01-303	07/14/03	<2.0	<0.10	<2.0	<6.0	<2.0	<0.05	<0.10	<0.10	<0.10
LR-67-01-816	07/15/03	<2.0	<0.10	<2.0	<6.0	<2.0	<0.05	<0.10	<0.10	<0.10
LR-67-09-113	11/04/03	<2.0	<0.10	<2.0	<6.0	<2.0	<0.05	<0.10	<0.10	<0.10
LR-68-08-902	07/14/03	<2.0	<0.10	<2.0	<6.0	<2.0	<0.05	<0.10	<0.10	<0.10

J = Estimated result between the method detection limit and the reporting limit
NA = Not analyzed

Table C-5 Analytical data for pesticides, herbicides and PCB (Aroclors) in water samples from wells completed in the Edwards Aquifer, 2003 (cont'd)

Station Name	Date Sampled	Endrin aldehyde (µg/L)	Endrin ketone (µg/L)	EPN (µg/L)	Ethion (µg/L)	Ethoprop (µg/L)	Ethyl parathion (µg/L)	Famphur (µg/L)	Fensulfothion (µg/L)	Fenthion (µg/L)	gamma BHC (Lindane) (µg/L)
AY-68-27-307	03/25/03	<0.10	<0.10	<0.10	<0.50	<0.50	<0.10	<2.0	<5.0	<0.10	<0.1
AY-68-27-611	08/13/03	<0.10	<0.10	<0.10	<0.50	<0.50	<0.10	<2.0	<5.0	<0.10	<0.05
AY-68-28-113	08/12/03	<0.10	<0.10	<0.10	<0.50	<0.50	<0.10	<2.0	<5.0	<0.10	<0.05
AY-68-28-210	10/01/03	<0.10	<0.10	<0.10	<0.50	<0.50	<0.10	<2.0	<5.0	<0.10	<0.05
AY-68-28-211	03/07/03	<0.10	<0.10	<0.10	<0.50	<0.50	<0.10	<2.0	<5.0	<0.10	<0.1
AY-68-23-313	03/21/03	<0.10	<0.10	<0.10	<0.50	<0.50	<0.10	<2.0	<5.0	<0.10	<0.1
AY-68-28-314	04/05/03	<0.10	<0.10	<0.10	<0.50	<0.50	<0.10	<2.0	<5.0	<0.10	<0.1
AY-68-28-315	03/28/03	<0.10	<0.10	<0.10	<0.50	<0.50	<0.10	<2.0	<5.0	<0.10	<0.1
AY-68-28-406	08/21/03	<0.10	<0.10	<0.10	<0.50	<0.50	<0.10	<2.0	<5.0	<0.10	<0.05
AY-68-28-407	08/21/03	<0.10	<0.10	<0.10	<0.50	<0.50	<0.10	<2.0	<5.0	<0.10	<0.05
AY-68-28-516	05/01/03	<0.10	<0.10	<0.10	<0.50	<0.50	<0.10	<2.0	<5.0	<0.10	<0.05
AY-68-28-518	04/29/03	<0.10	<0.10	<0.10	<0.50	<0.50	<0.10	<2.0	<5.0	<0.10	<0.1
AY-68-28-519	04/29/03	<0.10	<0.10	<0.10	<0.50	<0.50	<0.10	<2.0	<5.0	<0.10	<0.1
AY-68-28-609	03/28/03	<0.10	<0.10	<0.10	<0.50	<0.50	<0.10	<2.0	<5.0	<0.10	<0.1
AY-68-29-103	05/01/03	<0.10	<0.10	<0.10	<0.50	<0.50	<0.10	<2.0	<5.0	<0.10	<0.05
DX-68-22-811	08/06/03	<0.10	<0.10	<0.10	<0.50	<0.50	<0.10	<2.0	<5.0	<0.10	<0.05
DX-68-23-302	08/27/03	<0.10	<0.10	<0.10	<0.50	<0.50	<0.10	<2.0	<5.0	<0.10	<0.05
DX-68-23-304	06/18/03	<0.10	<0.10	<0.10	<0.50	<0.50	<0.10	<2.0	<5.0	<0.10	<0.1
LR-67-01-303	07/14/03	<0.10	<0.10	<0.10	<0.50	<0.50	<0.10	<2.0	<5.0	<0.10	<0.1
LR-67-01-816	07/15/03	<0.10	<0.10	<0.10	<0.50	<0.50	<0.10	<2.0	<5.0	<0.10	<0.1
LR-67-09-113	11/04/03	<0.10	<0.10	<0.10	<0.50	<0.50	<0.10	<2.0	<5.0	<0.10	<0.1
LR-68-08-902	07/14/03	<0.10	<0.10	<0.10	<0.50	<0.50	<0.10	<2.0	<5.0	<0.10	<0.1

J = Estimated result between the method detection limit and the reporting limit
NA = Not analyzed

Table C-5 Analytical data for pesticides, herbicides and PCB (Aroclors) in water samples from wells completed in the Edwards Aquifer, 2003 (cont'd)

Station Name	Date Sampled	gamma-Chlordane (µg/L)	Heptachlor (µg/L)	Heptachlor epoxide (µg/L)	Malathion (µg/L)	Merphos (µg/L)	Methoxychlor (µg/L)	Methyl parathion (µg/L)	Mevinphos (µg/L)
AY-68-27-307	03/25/03	<0.05	<0.05	<0.05	<1.0	<1.0	<0.50	<0.50	<2.0
AY-68-27-611	08/13/03	0.05J	<0.05	<0.05	<1.0	<1.0	<0.50	<0.50	<2.0
AY-68-28-113	08/12/03	<0.05	<0.05	<0.05	<1.0	<1.0	<0.50	<0.50	<2.0
AY-68-28-210	10/01/03	<0.05	<0.05	<0.05	<1.0	<1.0	<0.50	<0.50	<2.0
AY-68-28-211	03/07/03	<0.05	<0.05	<0.05	<1.0	<1.0	<0.50	<0.50	<2.0
AY-68-23-313	03/21/03	<0.05	<0.05	<0.05	<1.0	<1.0	<0.50	<0.50	<2.0
AY-68-28-314	04/05/03	<0.05	<0.05	<0.05	<1.0	<1.0	<0.50	<0.50	<2.0
AY-68-28-315	03/28/03	<0.05	<0.05	<0.05	<1.0	<1.0	<0.50	<0.50	<2.0
AY-68-28-406	08/21/03	<0.05	<0.05	<0.05	<1.0	<1.0	<0.50	<0.50	<2.0
AY-68-28-407	08/21/03	<0.05	<0.05	<0.05	<1.0	<1.0	<0.50	<0.50	<2.0
AY-68-28-516	05/01/03	<0.05	<0.05	<0.05	<1.0	<1.0	<0.50	<0.50	<2.0
AY-68-28-518	04/29/03	<0.05	<0.05	<0.05	<1.0	<1.0	<0.50	<0.50	<2.0
AY-68-28-519	04/29/03	<0.05	<0.05	<0.05	<1.0	<1.0	<0.50	<0.50	<2.0
AY-68-28-609	03/28/03	<0.05	<0.05	<0.05	<1.0	<1.0	<0.50	<0.50	<2.0
AY-68-29-103	05/01/03	<0.05	<0.05	<0.05	<1.0	<1.0	<0.50	<0.50	<2.0
DX-68-22-811	08/06/03	<0.05	<0.05	<0.05	<1.0	<1.0	<0.50	<0.50	<2.0
DX-68-23-302	08/27/03	<0.05	<0.05	<0.05	<1.0	<1.0	<0.50	<0.50	<2.0
DX-68-23-304	06/18/03	<0.05	<0.05	<0.05	<1.0	<1.0	<0.50	<0.50	<2.0
LR-67-01-303	07/14/03	<0.05	<0.05	<0.05	<1.0	<1.0	<0.50	<0.50	<2.0
LR-67-01-816	07/15/03	<0.05	<0.05	<0.05	<1.0	<1.0	<0.50	<0.50	<2.0
LR-67-09-113	11/04/03	<0.05	<0.05	<0.05	<1.0	<1.0	<0.50	<0.50	<2.0
LR-68-08-902	07/14/03	<0.05	<0.05	<0.05	<1.0	<1.0	<0.50	<0.50	<2.0

J = Estimated result between the method detection limit and the reporting limit
NA = Not analyzed

Table C-5 Analytical data for pesticides, herbicides and PCB (Aroclors) in water samples from wells completed in the Edwards Aquifer, 2003 (cont'd)

Station Name	Date Sampled	Mono-ncrot-ophos (µg/L)	Naled (µg/L)	Penta-Chlor-ophe-nol (µg/L)	Phorate (µg/L)	Picloram (µg/L)	Ronnel (µg/L)	Simazine (µg/L)	Sulfotepp (µg/L)	2,4,5-T (µg/L)	Terbufos (µg/L)
AY-68-27-307	03/25/03	<10.0	<5.0	<1.0	<1.0	<0.50	<1.0	<2.0	<0.50	<0.50	<1.0
AY-68-27-611	08/13/03	<10.0	<5.0	<1.0	<1.0	<0.50	<1.0	<2.0	<0.50	<0.50	<0.50
AY-68-28-113	08/12/03	<10.0	<5.0	<1.0	<1.0	<0.50	<1.0	<2.0	<0.50	<0.50	<0.50
AY-68-28-210	10/01/03	<10.0	<5.0	<1.0	<1.0	<0.5	<1.0	<2.0	<0.50	<0.50	<0.50
AY-68-28-211	03/07/03	<10.0	<5.0	<1.0	<1.0	<0.50	<1.0	<2.0	<0.50	<0.50	<0.50
AY-68-23-313	03/21/03	<10.0	<5.0	<1.0	<1.0	<0.50	<1.0	<2.0	<0.50	<0.50	<1.0
AY-68-28-314	04/05/03	<10.0	<5.0	<1.0	<1.0	<0.5	<1.0	<2.0	<0.50	<0.5	<1.0
AY-68-28-315	03/28/03	<10.0	<5.0	<1.0	<1.0	<0.5	<1.0	<2.0	<0.50	<0.5	<1.0
AY-68-28-406	08/21/03	<10.0	<5.0	<1.0	<1.0	<0.50	<1.0	<2.0	<0.50	<0.50	<0.50
AY-68-28-407	08/21/03	<10.0	<5.0	<1.0	<1.0	<0.50	<1.0	<2.0	<0.50	<0.50	<0.50
AY-68-28-516	05/01/03	<10.0	<5.0	<1.0	<1.0	<0.50	<1.0	<2.0	<0.50	<0.50	<1.0
AY-68-28-518	04/29/03	<10.0	<5.0	<1.0	<1.0	<0.5	<1.0	<2.0	<0.50	<0.5	<1.0
AY-68-28-519	04/29/03	<10.0	<5.0	<1.0	<1.0	<0.5	<1.0	<2.0	<0.50	<0.5	<1.0
AY-68-28-609	03/28/03	<10.0	<5.0	<1.0	<1.0	<0.5	<1.0	<2.0	<0.50	<0.5	<1.0
AY-68-29-103	05/01/03	<10.0	<5.0	<1.0	<1.0	<0.50	<1.0	<2.0	<0.50	<0.50	<1.0
DX-68-22-811	08/06/03	<10.0	<5.0	<1.0	<1.0	<0.50	<1.0	<2.0	<0.50	<0.50	<0.50
DX-68-23-302	08/27/03	<10.0	<5.0	<1.0	<1.0	<0.50	<1.0	<2.0	<0.50	<0.50	<1.0
DX-68-23-304	06/18/03	<10.0	<5.0	<1.0	<1.0	<0.50	<1.0	<2.0	<0.50	<0.50	<1.0
LR-67-01-303	07/14/03	<10.0	<5.0	<1.0	<1.0	<0.50	<1.0	<2.0	<0.50	<0.50	<1.0
LR-67-01-816	07/15/03	<10.0	<5.0	<1.0	<1.0	<0.50	<1.0	<2.0	<0.50	<0.50	<1.0
LR-67-09-113	11/04/03	<10.0	<5.0	<1.0	<1.0	<0.5	<1.0	<2.0	<0.50	<0.5	<1.0
LR-68-08-902	07/14/03	<10.0	<5.0	<1.0	<1.0	<0.50	<1.0	<2.0	<0.50	<0.50	<1.0

J = Estimated result between the method detection limit and the reporting limit
NA = Not analyzed

Table C-5 Analytical data for pesticides, herbicides and PCB (Aroclors) in water samples from wells completed in the Edwards Aquifer, 2003

Station Name	Date Sampled	Tetrachlorvinphos (Stirophos) (µg/L)	Thionazin (µg/L)	Tokuthion (µg/L)	Toxaphene (µg/L)	2,4,5-TP (Silvex) (µg/L)	Trichloronate (µg/L)
AY-68-27-307	03/25/03	<1.0	<1.0	<1.0	<0.6	<0.50	<1.0
AY-68-27-611	08/13/03	<1.0	<1.0	<1.0	<0.6	<0.50	<1.0
AY-68-28-113	08/12/03	<1.0	<1.0	<1.0	<0.6	<0.50	<1.0
AY-68-28-210	10/01/03	<1.0	<1.0	<1.0	<0.6	<0.50	<1.0
AY-68-28-211	03/07/03	<1.0	<1.0	<1.0	<0.6	<0.50	<1.0
AY-68-23-313	03/21/03	<1.0	<1.0	<1.0	<0.6	<0.50	<1.0
AY-68-28-314	04/05/03	<1.0	<1.0	<1.0	<0.6	<0.50	<1.0
AY-68-28-315	03/28/03	<1.0	<1.0	<1.0	<0.6	<0.50	<1.0
AY-68-28-406	08/21/03	<1.0	<1.0	<1.0	<0.6	<0.50	<1.0
AY-68-28-407	08/21/03	<1.0	<1.0	<1.0	<0.6	<0.50	<1.0
AY-68-28-516	05/01/03	<1.0	<1.0	<1.0	<0.6	<0.50	<1.0
AY-68-28-518	04/29/03	<1.0	<1.0	<1.0	<0.6	<0.50	<1.0
AY-68-28-519	04/29/03	<1.0	<1.0	<1.0	<0.6	<0.50	<1.0
AY-68-28-609	03/28/03	<1.0	<1.0	<1.0	<0.6	<0.50	<1.0
AY-68-29-103	05/01/03	<1.0	<1.0	<1.0	<0.6	<0.50	<1.0
DX-68-22-811	08/06/03	<1.0	<1.0	<1.0	<0.6	<0.50	<1.0
DX-68-23-302	08/27/03	<1.0	<1.0	<1.0	<0.6	<0.50	<1.0
DX-68-23-304	06/18/03	<1.0	<1.0	<1.0	<0.6	<0.50	<1.0
LR-67-01-303	07/14/03	<1.0	<1.0	<1.0	<0.6	<0.50	<1.0
LR-67-01-816	07/15/03	<1.0	<1.0	<1.0	<0.6	<0.50	<1.0
LR-67-09-113	11/04/03	<1.0	<1.0	<1.0	<0.6	<0.50	<1.0
LR-68-08-902	07/14/03	<1.0	<1.0	<1.0	<0.6	<0.50	<1.0

J = Estimated result between the method detection limit and the reporting limit

NA = Not analyzed

Table C-6 Analytical data for volatile organic compounds (VOC) in water samples from wells completed in the Edwards Aquifer, 2003

State Well Number	Date Sampled	Acetone (µg/L)	Benzene (µg/L)	Bromo chloro methane (µg/L)	Bromo dichloro methane (µg/L)	Bromoform (µg/L)	Bromo methane (µg/L)	2-Butanone (µg/L)	Carbon disulfide (µg/L)
AY-68-27-307	03/25/03	<20	<1.0	<1.0	<1.0	<1.0	<2.0	<5.0	0.5J
AY-68-27-611	08/13/03	<20	<1.0	<1.0	<1.0	<1.0	<2.0	<5.0	7
AY-68-28-113	08/12/03	2J, TB	<1.0	<1.0	<1.0	0.5J	<2.0	<5.0	5
AY-68-28-203	10/24/03	0.7J	<1.0	<1.0	<1.0	<1.0	<2.0	<5.0	<1.0
AY-68-28-205	10/24/03	<20	<1.0	<1.0	<1.0	<1.0	<2.0	<5.0	<1.0
AY-68-28-210	10/01/03	1J, TB	<1.0	<1.0	0.2J	0.2J	<2.0	<5.0	0.4J
AY-68-28-211	03/07/03	<20	<1.0	<1.0	<1.0	<1.0	<2.0	<5.0	0.7J
AY-68-28-313	03/21/03	<20	<1.0	<1.0	<1.0	<1.0	<2.0	<5.0	<1.0
AY-68-28-314	04/05/03	<20	<1.0	<1.0	0.3J	0.6J	<2.0	<5.0	0.2J
AY-68-28-315	03/28/03	<20	<1.0	<1.0	<1.0	<1.0	<2.0	<5.0	6
AY-68-28-406	08/21/03	<20	<1.0	<1.0	<1.0	<1.0	<2.0	<5.0	0.4J
AY-68-28-407	08/21/03	<20	<1.0	<1.0	<1.0	0.4J	<2.0	<5.0	<1.0
AY-68-28-513	10/24/03	1J	<1.0	<1.0	<1.0	<1.0	<2.0	<5.0	<1.0
AY-68-28-514	10/24/03	<20	<1.0	<1.0	<1.0	0.3J	<2.0	<5.0	<1.0
AY-68-28-516	05/01/03	<20	<1.0	<1.0	<1.0	0.4J	<2.0	<5.0	0.2J
AY-68-28-518	04/29/03	<20	<1.0	<1.0	<1.0	0.2J	<2.0	<5.0	<1.0
AY-68-28-519	04/29/03	<20	<1.0	<1.0	<1.0	<1.0	<2.0	<5.0	5
AY-68-28-609	03/28/03	<20	<1.0	<1.0	<1.0	<1.0	<2.0	<5.0	3
AY-68-28-8GE	12/09/03	0.6J, TB	<1.0	<1.0	<1.0	<1.0	<2.0	<5.0	<1.0
AY-68-29-103	05/01/03	<20	<1.0	<1.0	<1.0	<1.0	<2.0	<5.0	0.8J
AY-68-29-109	07/30/03	<20	<1.0	<1.0	<1.0	<1.0	<2.0	<5.0	<1.0
AY-68-29-401	07/30/03	<20	<1.0	<1.0	<1.0	0.2J	<2.0	<5.0	<1.0
AY-68-29-406	08/06/03	<20	<1.0	<1.0	<1.0	<1.0	<2.0	<5.0	<1.0
AY-68-29-410	07/30/03	<20	<1.0	<1.0	<1.0	0.4J	<2.0	<5.0	<1.0
AY-68-29-414	07/30/03	<20	<1.0	<1.0	<1.0	<1.0	<2.0	<5.0	<1.0
AY-68-29-925	12/12/03	<20	<1.0	<1.0	<1.0	<1.0	<2.0	<5.0	<1.0
DX-68-23-302	08/27/03	<20	<1.0	<1.0	<1.0	<1.0	<2.0	<5.0	<1.0
DX-68-23-303	10/08/03	<20	<1.0	<1.0	<1.0	<1.0	<2.0	<5.0	<1.0
DX-68-23-304	06/18/03	<20	<1.0	<1.0	<1.0	<1.0	<2.0	<5.0	<1.0
LR-67-01-303	07/14/03	<20	<1.0	<1.0	<1.0	<1.0	<2.0	<5.0	<1.0
LR-67-01-8SW	10/06/03	<20	<1.0	<1.0	<1.0	<1.0	<2.0	<5.0	<1.0
LR-67-09-113	11/04/03	1J	<1.0	<1.0	<1.0	<1.0	<2.0	<5.0	<1.0
LR-68-08-902	07/14/03	<20	<1.0	<1.0	0.3J	<1.0	<2.0	<5.0	<1.0
YP-69-51-114	05/08/03	<20	<1.0	<1.0	<1.0	<1.0	<2.0	<5.0	<1.0

J = Estimated result between the method detection limit and the reporting limit
NA = Not Analyzed
TB = Analyte detected in associated trip blank

Table C-6 Analytical data for volatile organic compounds (VOC) in water samples from wells completed in the Edwards Aquifer, 2003 (cont'd)

State Well Number	Date Sampled	Carbon tetrachloride (µg/L)	Chloro benzene (µg/L)	Chloro ethane (µg/L)	Chloroform (µg/L)	Chloro methane (µg/L)	cis-1,2-Dichloro ethene (µg/L)	cis-1,3-Dichloro propene (µg/L)	Cyclo hexane (µg/L)
AY-68-27-307	03/25/03	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0	<10
AY-68-27-611	08/13/03	<1.0	<1.0	<2.0	0.2J	<2.0	<1.0	<1.0	<10
AY-68-28-113	08/12/03	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0	<10
AY-68-28-203	10/24/03	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0	<10
AY-68-28-205	10/24/03	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0	<10
AY-68-28-210	10/01/03	<1.0	<1.0	<2.0	0.2J	<2.0	<1.0	<1.0	<10
AY-68-28-211	03/07/03	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0	<10
AY-68-28-313	03/21/03	<1.0	<1.0	<2.0	0.6J	<2.0	<1.0	<1.0	<10
AY-68-28-314	04/05/03	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0	<10
AY-68-28-315	03/28/03	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0	<10
AY-68-28-406	08/21/03	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0	<10
AY-68-28-407	08/21/03	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0	<10
AY-68-28-513	10/24/03	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0	<10
AY-68-28-514	10/24/03	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0	<10
AY-68-28-516	05/01/03	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0	<10
AY-68-28-518	04/29/03	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0	<10
AY-68-28-519	04/29/03	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0	<10
AY-68-28-609	03/28/03	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0	<10
AY-68-28-8GE	12/09/03	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0	<10
AY-68-29-103	05/01/03	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0	<10
AY-68-29-109	07/30/03	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0	<10
AY-68-29-401	07/30/03	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0	<10
AY-68-29-406	08/06/03	<1.0	<1.0	<2.0	0.2J	<2.0	<1.0	<1.0	<10
AY-68-29-410	07/30/03	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0	<10
AY-68-29-414	07/30/03	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0	<10
AY-68-29-925	12/12/03	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0	<10
DX-68-23-302	08/27/03	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0	<10
DX-68-23-303	10/08/03	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0	<10
DX-68-23-304	06/18/03	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0	<10
LR-67-01-303	07/14/03	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0	<10
LR-67-01-8SW	10/06/03	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0	<10
LR-67-09-113	11/04/03	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0	<10
LR-68-08-902	07/14/03	<1.0	<1.0	<2.0	1	0.3J	<1.0	<1.0	<10
YP-69-51-114	05/08/03	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0	<10

J = Estimated result between the method detection limit and the reporting limit
NA = Not Analyzed
TB = Analyte detected in associated trip blank

Table C-6 Analytical data for volatile organic compounds (VOC) in water samples from wells completed in the Edwards Aquifer, 2003 (cont'd)

State Well Number	Date Sampled	1,2-Dibromo 3-chloro propane (µg/L)	Dibromo Chloro methane (µg/L)	1,2-Dibromo ethane (µg/L)	1,2-Dichloro benzene (µg/L)	1,3-Dichloro benzene (µg/L)	1,4-Dichloro benzene (µg/L)	Dichloro Difluoro methane (µg/L)	1,1-Dichloro ethane (µg/L)
AY-68-27-307	03/25/03	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0
AY-68-27-611	08/13/03	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0
AY-68-28-113	08/12/03	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0
AY-68-28-203	10/24/03	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0
AY-68-28-205	10/24/03	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0
AY-68-28-210	10/01/03	<1.0	0.3J	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0
AY-68-28-211	03/07/03	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0
AY-68-28-313	03/21/03	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0
AY-68-28-314	04/05/03	<1.0	0.6J	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0
AY-68-28-315	03/28/03	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0
AY-68-28-406	08/21/03	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0
AY-68-28-407	08/21/03	<1.0	0.3J	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0
AY-68-28-513	10/24/03	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0
AY-68-28-514	10/24/03	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0
AY-68-28-516	05/01/03	<1.0	0.4J	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0
AY-68-28-518	04/29/03	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0
AY-68-28-519	04/29/03	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0
AY-68-28-609	03/28/03	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0
AY-68-28-8GE	12/09/03	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0
AY-68-29-103	05/01/03	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0
AY-68-29-109	07/30/03	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0
AY-68-29-401	07/30/03	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0
AY-68-29-406	08/06/03	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0
AY-68-29-410	07/30/03	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0
AY-68-29-414	07/30/03	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0
AY-68-29-925	12/12/03	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0
DX-68-23-302	08/27/03	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0
DX-68-23-303	10/08/03	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0
DX-68-23-304	06/18/03	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0
LR-67-01-303	07/14/03	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0
LR-67-01-8SW	10/06/03	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0
LR-67-09-113	11/04/03	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0
LR-68-08-902	07/14/03	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0
YP-69-51-114	05/08/03	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0

J = Estimated result between the method detection limit and the reporting limit
NA = Not Analyzed
TB = Analyte detected in associated trip blank

Table C-6 Analytical data for volatile organic compounds (VOC) in water samples from wells completed in the Edwards Aquifer, 2003 (cont'd)

State Well Number	Date Sampled	1,2-Dichloroethane (µg/L)	1,1-Dichloroethene (µg/L)	1,2-Dichloropropane (µg/L)	Ethyl benzene (µg/L)	2-Hexanone (µg/L)	Isopropyl benzene (µg/L)	Methyl tert-butyl ether (µg/L)	4-Methyl-2-pentanone (µg/L)
AY-68-27-307	03/25/03	<1.0	<1.0	<1.0	<1.0	<5.0	<10	<5.0	<5.0
AY-68-27-611	08/13/03	<1.0	<1.0	<1.0	<1.0	<5.0	<10	<5.0	<5.0
AY-68-28-113	08/12/03	<1.0	<1.0	<1.0	<1.0	<5.0	<10	<5.0	<5.0
AY-68-28-203	10/24/03	<1.0	<1.0	<1.0	<1.0	<5.0	<10	<5.0	<5.0
AY-68-28-205	10/24/03	<1.0	<1.0	<1.0	<1.0	<5.0	<10	<5.0	<5.0
AY-68-28-210	10/01/03	<1.0	<1.0	<1.0	<1.0	<5.0	<10	<5.0	<5.0
AY-68-28-211	03/07/03	<1.0	<1.0	<1.0	<1.0	<5.0	<10	<5.0	<5.0
AY-68-28-313	03/21/03	<1.0	<1.0	<1.0	<1.0	<5.0	<10	<5.0	<5.0
AY-68-28-314	04/05/03	<1.0	<1.0	<1.0	<1.0	<5.0	<10	<5.0	<5.0
AY-68-28-315	03/28/03	<1.0	<1.0	<1.0	<1.0	<5.0	<10	<5.0	<5.0
AY-68-28-406	08/21/03	<1.0	<1.0	<1.0	<1.0	<5.0	<10	<5.0	<5.0
AY-68-28-407	08/21/03	<1.0	<1.0	<1.0	<1.0	<5.0	<10	<5.0	<5.0
AY-68-28-513	10/24/03	<1.0	<1.0	<1.0	<1.0	<5.0	<10	<5.0	<5.0
AY-68-28-514	10/24/03	<1.0	<1.0	<1.0	<1.0	<5.0	<10	<5.0	<5.0
AY-68-28-516	05/01/03	<1.0	<1.0	<1.0	<1.0	<5.0	<10	<5.0	<5.0
AY-68-28-518	04/29/03	<1.0	<1.0	<1.0	<1.0	<5.0	<10	<5.0	<5.0
AY-68-28-519	04/29/03	<1.0	<1.0	<1.0	<1.0	<5.0	<10	<5.0	<5.0
AY-68-28-609	03/28/03	<1.0	<1.0	<1.0	<1.0	<5.0	<10	<5.0	<5.0
AY-68-28-8GE	12/09/03	<1.0	<1.0	<1.0	<1.0	<5.0	<10	<5.0	<5.0
AY-68-29-103	05/01/03	<1.0	<1.0	<1.0	<1.0	<5.0	<10	<5.0	<5.0
AY-68-29-109	07/30/03	<1.0	<1.0	<1.0	<1.0	<5.0	<10	<5.0	<5.0
AY-68-29-401	07/30/03	<1.0	<1.0	<1.0	<1.0	<5.0	<10	<5.0	<5.0
AY-68-29-406	08/06/03	<1.0	<1.0	<1.0	<1.0	<5.0	<10	<5.0	<5.0
AY-68-29-410	07/30/03	<1.0	<1.0	<1.0	<1.0	<5.0	<10	<5.0	<5.0
AY-68-29-414	07/30/03	<1.0	<1.0	<1.0	<1.0	<5.0	<10	<5.0	<5.0
AY-68-29-925	12/12/03	<1.0	<1.0	<1.0	<1.0	<5.0	<10	<5.0	<5.0
DX-68-23-302	08/27/03	<1.0	<1.0	<1.0	<1.0	<5.0	<10	<5.0	<5.0
DX-68-23-303	10/08/03	<1.0	<1.0	<1.0	<1.0	<5.0	<10	<5.0	<5.0
DX-68-23-304	06/18/03	<1.0	<1.0	<1.0	<1.0	<5.0	<10	<5.0	<5.0
LR-67-01-303	07/14/03	<1.0	<1.0	<1.0	<1.0	<5.0	<10	<5.0	<5.0
LR-67-01-8SW	10/06/03	<1.0	<1.0	<1.0	<1.0	<5.0	<10	<5.0	<5.0
LR-67-09-113	11/04/03	<1.0	<1.0	<1.0	<1.0	<5.0	<10	<5.0	<5.0
LR-68-08-902	07/14/03	<1.0	<1.0	<1.0	<1.0	<5.0	<10	<5.0	<5.0
YP-69-51-114	05/08/03	<1.0	<1.0	<1.0	<1.0	<5.0	<10	<5.0	<5.0

J = Estimated result between the method detection limit and the reporting limit
NA = Not Analyzed
TB = Analyte detected in associated trip blank

Table C-6 Analytical data for volatile organic compounds (VOC) in water samples from wells completed in the Edwards Aquifer, 2003 (cont'd)

State Well Number	Date Sampled	Methylene chloride (µg/L)	Styrene (µg/L)	1,1,2,2-Tetrachloroethane (µg/L)	Tetrachloroethene (µg/L)	Toluene (µg/L)	trans-1,2-Dichloroethene (µg/L)	trans-1,3-Dichloropropene (µg/L)	1,1,2-Trichloro-1,2,2-trifluoroethane (µg/L)
AY-68-27-307	03/25/03	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10
AY-68-27-611	08/13/03	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10
AY-68-28-113	08/12/03	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10
AY-68-28-203	10/24/03	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<50
AY-68-28-205	10/24/03	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<50
AY-68-28-210	10/01/03	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<50
AY-68-28-211	03/07/03	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10
AY-68-28-313	03/21/03	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10
AY-68-28-314	04/05/03	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10
AY-68-28-315	03/28/03	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10
AY-68-28-406	08/21/03	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10
AY-68-28-407	08/21/03	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10
AY-68-28-513	10/24/03	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<50
AY-68-28-514	10/24/03	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<50
AY-68-28-516	05/01/03	<2.0	<1.0	<1.0	0.2J, TB	<1.0	<1.0	<1.0	<10
AY-68-28-518	04/29/03	<2.0	<1.0	<1.0	<1.0	0.2J	<1.0	<1.0	<10
AY-68-28-519	04/29/03	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10
AY-68-28-609	03/28/03	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10
AY-68-28-8GE	12/09/03	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<50
AY-68-29-103	05/01/03	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10
AY-68-29-109	07/30/03	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10
AY-68-29-401	07/30/03	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10
AY-68-29-406	08/06/03	<2.0	<1.0	<1.0	0.3J	<1.0	<1.0	<1.0	<10
AY-68-29-410	07/30/03	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10
AY-68-29-414	07/30/03	<2.0	<1.0	<1.0	0.6J	<1.0	<1.0	<1.0	<10
AY-68-29-925	12/12/03	<2.0	<1.0	<1.0	<1.0	2 TB	<1.0	<1.0	<50
DX-68-23-302	08/27/03	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10
DX-68-23-303	10/08/03	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10
DX-68-23-304	06/18/03	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10
LR-67-01-303	07/14/03	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10
LR-67-01-8SW	10/06/03	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10
LR-67-09-113	11/04/03	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<50
LR-68-08-902	07/14/03	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10
YP-69-51-114	05/08/03	<2.0	<1.0	<1.0	5	<1.0	<1.0	<1.0	<10

J = Estimated result between the method detection limit and the reporting limit
NA = Not Analyzed
TB = Analyte detected in associated trip blank

Table C-6 Analytical data for volatile organic compounds (VOC) in water samples from wells completed in the Edwards Aquifer, 2003

State Well Number	Date Sampled	1,2,4-Trichloro benzene (µg/L)	1,1,1-Trichloro ethane (µg/L)	1,1,2-Trichloro ethane (µg/L)	Trichloro ethene (µg/L)	Trichloro fluoro methane (µg/L)	Vinyl chloride (µg/L)	Xylenes (total) (µg/L)
AY-68-27-307	03/25/03	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0
AY-68-27-611	08/13/03	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0
AY-68-28-113	08/12/03	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0
AY-68-28-203	10/24/03	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0
AY-68-28-205	10/24/03	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0
AY-68-28-210	10/01/03	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0
AY-68-28-211	03/07/03	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0
AY-68-28-313	03/21/03	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0
AY-68-28-314	04/05/03	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0
AY-68-28-315	03/28/03	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0
AY-68-28-406	08/21/03	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0
AY-68-28-407	08/21/03	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0
AY-68-28-513	10/24/03	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0
AY-68-28-514	10/24/03	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0
AY-68-28-516	05/01/03	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0
AY-68-28-518	04/29/03	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0
AY-68-28-519	04/29/03	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0
AY-68-28-609	03/28/03	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0
AY-68-28-8GE	12/09/03	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0
AY-68-29-103	05/01/03	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0
AY-68-29-109	07/30/03	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0
AY-68-29-401	07/30/03	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0
AY-68-29-406	08/06/03	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0
AY-68-29-410	07/30/03	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0
AY-68-29-414	07/30/03	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0
AY-68-29-925	12/12/03	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0
DX-68-23-302	08/27/03	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0
DX-68-23-303	10/08/03	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0
DX-68-23-304	06/18/03	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0
LR-67-01-303	07/14/03	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0
LR-67-01-8SW	10/06/03	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0
LR-67-09-113	11/04/03	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0
LR-68-08-902	07/14/03	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0
YP-69-51-114	05/08/03	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0

J = Estimated result between the method detection limit and the reporting limit
NA = Not Analyzed
TB = Analyte detected in associated trip blank

Table C-7 Analytical data for semivolatile organic compounds (SVOC) in water samples from wells completed in the Edwards Aquifer, 2003

State Well Number	Date Sampled	3&4 Methyl phenol (µg/L)	Acenaphthene (µg/L)	Acenaphthylene (µg/L)	Aceto Phenone (µg/L)	Anthracene (µg/L)	Benzo(a) anthracene (µg/L)	Benzo(a) pyrene (µg/L)	Benzo(b) fluoranthene (µg/L)
AY-68-27-307	03/25/03	<10	<10	<10	<10	<10	<10	<10	<10
AY-68-28-210	10/01/03	<10	<10	<10	<10	<10	<10	<10	<10
AY-68-28-211	03/07/03	<10	<10	<10	<10	<10	<10	<10	<10
AY-68-28-313	03/21/03	<10	<10	<10	<10	<10	<10	<10	<10
AY-68-28-314	04/05/03	<10	<10	<10	<10	<10	<10	<10	<10
AY-68-28-315	03/28/03	<10	<10	<10	<10	<10	<10	<10	<10
AY-68-28-516	05/01/03	<10	<10	<10	<10	<10	<10	<10	<10
AY-68-28-518	04/29/03	<10	<10	<10	<10	<10	<10	<10	<10
AY-68-28-519	04/29/03	<10	<10	<10	<10	<10	<10	<10	<10
AY-68-28-609	03/28/03	<10	<10	<10	<10	<10	<10	<10	<10
AY-68-29-103	05/01/03	<10	<10	<10	<10	<10	<10	<10	<10
DX-68-23-302	08/27/03	<10	<10	<10	<10	<10	<10	<10	<10
DX-68-23-304	06/18/03	<10	<10	<10	<10	<10	<10	<10	<10
LR-67-09-113	11/04/03	<10	<10	<10	<10	<10	<10	<10	<10

State Well Number	Date Sampled	Benzo(ghi) perylene (µg/L)	Benzo(k) fluoranthene (µg/L)	bis (2-Chloro ethoxy) methane (µg/L)	Bis (2-Chloro ethyl) ether (µg/L)	bis (2-Ethylhexyl) phthalate (µg/L)	4-Bromo phenyl phenyl ether (µg/L)	Butyl benzyl phthalate (µg/L)	Carbazole (µg/L)
AY-68-27-307	03/25/03	<10	<10	<10	<10	<10	<10	<10	<10
AY-68-28-210	10/01/03	<10	<10	<10	<10	<10	<10	<10	<10
AY-68-28-211	03/07/03	<10	<10	<10	<10	10J	<10	<10	<10
AY-68-28-313	03/21/03	<10	<10	<10	<10	<10	<10	<10	<10
AY-68-28-314	04/05/03	<10	<10	<10	<10	11	<10	<10	<10
AY-68-28-315	03/28/03	<10	<10	<10	<10	<10	<10	<10	<10
AY-68-28-516	05/01/03	<10	<10	<10	<10	<10	<10	<10	<10
AY-68-28-518	04/29/03	<10	<10	<10	<10	<10	<10	<10	<10
AY-68-28-519	04/29/03	<10	<10	<10	<10	<10	<10	<10	<10
AY-68-28-609	03/28/03	<10	<10	<10	<10	11	<10	<10	<10
AY-68-29-103	05/01/03	<10	<10	<10	<10	12	<10	<10	<10
DX-68-23-302	08/27/03	<10	<10	<10	<10	<10	<10	<10	<10
DX-68-23-304	06/18/03	<10	<10	<10	<10	0.5J	<10	<10	<10
LR-67-09-113	11/04/03	<10	<10	<10	<10	5J	<10	<10	<10

J = Estimated result between the method detection limit and the reporting limit
NA = Not analyzed

Table C-7 Analytical data for semivolatile organic compounds (SVOC) in water samples from wells completed in the Edwards Aquifer, 2003 (cont'd)

State Well Number	Date Sampled	4-Chloro-3-methyl phenol (µg/L)	4-Chloro aniline (µg/L)	2-Chloro naphthalene (µg/L)	2-Chloro phenol (µg/L)	4-Chloro phenyl phenyl ether (µg/L)	Chrysene (µg/L)	Di-n-butyl phthalate (µg/L)	Di-n-octyl phthalate (µg/L)
AY-68-27-307	03/25/03	<10	<10	<10	<10	<10	<10	<10	<10
AY-68-28-210	10/01/03	<10	<10	<10	<10	<10	<10	<10	<10
AY-68-28-211	03/07/03	<10	<10	<10	<10	<10	<10	<10	<10
AY-68-28-313	03/21/03	<10	<10	<10	<10	<10	<10	<10	<10
AY-68-28-314	04/05/03	<10	<10	<10	<10	<10	<10	<10	<10
AY-68-28-315	03/28/03	<10	<10	<10	<10	<10	<10	<10	<10
AY-68-28-516	05/01/03	<10	<10	<10	<10	<10	<10	<10	<10
AY-68-28-518	04/29/03	<10	<10	<10	<10	<10	<10	<10	<10
AY-68-28-519	04/29/03	<10	<10	<10	<10	<10	<10	<10	<10
AY-68-28-609	03/28/03	<10	<10	<10	<10	<10	<10	<10	<10
AY-68-29-103	05/01/03	<10	<10	<10	<10	<10	<10	<10	<10
DX-68-23-302	08/27/03	<10	<10	<10	<10	<10	<10	<10	<10
DX-68-23-304	06/18/03	<10	<10	<10	<10	<10	<10	<10	<10
LR-67-09-113	11/04/03	<10	<10	<10	<10	<10	<10	<10	<10

State Well Number	Date Sampled	Dibenzo (a,h) anthracene (µg/L)	Dibenzo furan (µg/L)	3,3'-Dichloro benzidine (µg/L)	2,4-Dichloro phenol (µg/L)	Diethyl phthalate (µg/L)	Dimethyl phthalate (µg/L)	2,4-Dimethyl phenol (µg/L)	2,4-Dinitro phenol (µg/L)
AY-68-27-307	03/25/03	<10	<10	<20	<10	<10	<10	<10	<50
AY-68-28-210	10/01/03	<10	<10	<20	<10	<10	<10	<10	<50
AY-68-28-211	03/07/03	<10	<10	<20	<10	<10	<10	<10	<50
AY-68-28-313	03/21/03	<10	<10	<20	<10	<10	<10	<10	<50
AY-68-28-314	04/05/03	<10	<10	<20	<10	<10	<10	<10	<50
AY-68-28-315	03/28/03	<10	<10	<20	<10	<10	<10	<10	<50
AY-68-28-516	05/01/03	<10	<10	<20	<10	<10	<10	<10	<50
AY-68-28-518	04/29/03	<10	<10	<20	<10	<10	<10	<10	<50
AY-68-28-519	04/29/03	<10	<10	<20	<10	<10	<10	<10	<50
AY-68-28-609	03/28/03	<10	<10	<20	<10	<10	<10	<10	<50
AY-68-29-103	05/01/03	<10	<10	<20	<10	<10	<10	<10	<50
DX-68-23-302	08/27/03	<10	<10	<20	<10	<10	<10	<10	<50
DX-68-23-304	06/18/03	<10	<10	<20	<10	<10	<10	<10	<50
LR-67-09-113	11/04/03	<10	<10	<20	<10	<10	<10	<10	<50

J = Estimated result between the method detection limit and the reporting limit
NA = Not analyzed

Table C-7 Analytical data for semivolatile organic compounds (SVOC) in water samples from wells completed in the Edwards Aquifer, 2003 (cont'd)

State Well Number	Date Sampled	2,4-Dinitro toluene (µg/L)	2,6-Dinitro toluene (µg/L)	Diphenyl (µg/L)	Fluoranthene (µg/L)	Fluorene (µg/L)	Hexachloro benzene (µg/L)	Hexachloro butadiene (µg/L)	Hexachloro cyclo pentadiene (µg/L)
AY-68-27-307	03/25/03	<10	<10	<10	<10	<10	<10	<10	<10
AY-68-28-210	10/01/03	<10	<10	<10	<10	<10	<10	<10	<10
AY-68-28-211	03/07/03	<10	<10	<10	<10	<10	<10	<10	<10
AY-68-28-313	03/21/03	<10	<10	<10	<10	<10	<10	<10	<10
AY-68-28-314	04/05/03	<10	<10	<10	<10	<10	<10	<10	<10
AY-68-28-315	03/28/03	<10	<10	<10	<10	<10	<10	<10	<10
AY-68-28-516	05/01/03	<10	<10	<10	<10	<10	<10	<10	<10
AY-68-28-518	04/29/03	<10	<10	<10	<10	<10	<10	<10	<10
AY-68-28-519	04/29/03	<10	<10	<10	<10	<10	<10	<10	<10
AY-68-28-609	03/28/03	<10	<10	<10	<10	<10	<10	<10	<10
AY-68-29-103	05/01/03	<10	<10	<10	<10	<10	<10	<10	<10
DX-68-23-302	08/27/03	<10	<10	<10	<10	<10	<10	<10	<10
DX-68-23-304	06/18/03	<10	<10	<10	<10	<10	<10	<10	<10
LR-67-09-113	11/04/03	<10	<10	<10	<10	<10	<10	<10	<10

State Well Number	Date Sampled	Hexachloro ethane (µg/L)	Indeno (1,2,3-cd) pyrene (µg/L)	Isophorone (µg/L)	m-Nitro aniline (µg/L)	2-Methyl-4,6-dinitro phenol (µg/L)	2-Methyl naphthalene (µg/L)	2-Methyl phenol (µg/L)	N-Nitro sodi-n-propyl amine (µg/L)
AY-68-27-307	03/25/03	<10	<10	<10	<50	<50	<10	<10	<10
AY-68-28-210	10/01/03	<10	<10	<10	<50	<50	<10	<10	<10
AY-68-28-211	03/07/03	<10	<10	<10	<50	<50	<10	<10	<10
AY-68-28-313	03/21/03	<10	<10	<10	<50	<50	<10	<10	<10
AY-68-28-314	04/05/03	<10	<10	<10	<50	<50	<10	<10	<10
AY-68-28-315	03/28/03	<10	<10	<10	<50	<50	<10	<10	<10
AY-68-28-516	05/01/03	<10	<10	<10	<50	<50	<10	<10	<10
AY-68-28-518	04/29/03	<10	<10	<10	<50	<50	<10	<10	<10
AY-68-28-519	04/29/03	<10	<10	<10	<50	<50	<10	<10	<10
AY-68-28-609	03/28/03	<10	<10	<10	<50	<50	<10	<10	<10
AY-68-29-103	05/01/03	<10	<10	<10	<50	<50	<10	<10	<10
DX-68-23-302	08/27/03	<10	<10	<10	<50	<50	<10	<10	<10
DX-68-23-304	06/18/03	<10	<10	<10	<50	<50	<10	<10	<10
LR-67-09-113	11/04/03	<10	<10	<10	<50	<50	<10	<10	<10

J = Estimated result between the method detection limit and the reporting limit
NA = Not analyzed

Table C-7 Analytical data for semivolatile organic compounds (SVOC) in water samples from wells completed in the Edwards Aquifer, 2003

State Well Number	Date Sampled	N-Nitro Sodiphenyl amine (µg/L)	Naphthalene (µg/L)	Nitro benzene (µg/L)	2-Nitro phenol (µg/L)	4-Nitro phenol (µg/L)	o,o,o-Triethyl phosphoro thioate (µg/L)	o-Nitro aniline (µg/L)	p-Nitro aniline (µg/L)
AY-68-27-307	03/25/03	<10	<10	<10	<10	<50	<10	<50	<50
AY-68-28-210	10/01/03	<10	<10	<10	<10	<50	<10	<50	<50
AY-68-28-211	03/07/03	<10	<10	<10	<10	<50	<10	<50	<50
AY-68-28-313	03/21/03	<10	<10	<10	<10	<50	<10	<50	<50
AY-68-28-314	04/05/03	<10	<10	<10	<10	<50	<10	<50	<50
AY-68-28-315	03/28/03	<10	<10	<10	<10	<50	<10	<50	<50
AY-68-28-516	05/01/03	<10	<10	<10	<10	<50	<10	<50	<50
AY-68-28-518	04/29/03	<10	<10	<10	<10	<50	<10	<50	<50
AY-68-28-519	04/29/03	<10	<10	<10	<10	<50	<10	<50	<50
AY-68-28-609	03/28/03	<10	<10	<10	<10	<50	<10	<50	<50
AY-68-29-103	05/01/03	<10	<10	<10	<10	<50	<10	<50	<50
DX-68-23-302	08/27/03	<10	<10	<10	<10	<50	<10	<50	<50
DX-68-23-304	06/18/03	<10	<10	<10	<10	<50	<10	<50	<50
LR-67-09-113	11/04/03	<10	<10	<10	<10	<50	<10	<50	<50

State Well Number	Date Sampled	Pentachloro phenol (µg/L)	Phenanthrene (µg/L)	Phenol (µg/L)	Pronamide (µg/L)	Pyrene (µg/L)	2,4,5-Trichloro phenol (µg/L)	2,4,6-Trichloro phenol (µg/L)
AY-68-27-307	03/25/03	<50	<10	<10	<50	<10	<10	<10
AY-68-28-210	10/01/03	<50	<10	<10	<10	<10	<10	<10
AY-68-28-211	03/07/03	<50	<10	<10	<50	<10	<10	<10
AY-68-28-313	03/21/03	<50	<10	<10	<50	<10	<10	<10
AY-68-28-314	04/05/03	<50	<10	<10	<50	<10	<10	<10
AY-68-28-315	03/28/03	<50	<10	<10	<50	<10	<10	<10
AY-68-28-516	05/01/03	<50	<10	<10	<10	<10	<10	<10
AY-68-28-518	04/29/03	<50	<10	<10	<10	<10	<10	<10
AY-68-28-519	04/29/03	<50	<10	<10	<10	<10	<10	<10
AY-68-28-609	03/28/03	<50	<10	<10	<50	<10	<10	<10
AY-68-29-103	05/01/03	<50	<10	<10	<10	<10	<10	<10
DX-68-23-302	08/27/03	<50	<10	<10	<10	<10	<10	<10
DX-68-23-304	06/18/03	<50	<10	<10	<50	<10	<10	<10
LR-67-09-113	11/04/03	<50	<10	<10	<10	<10	<10	<10

J = Estimated result between the method detection limit and the reporting limit
NA = Not analyzed

Table C-8 Field measurements, bacterial counts and biochemical oxygen demand in water samples from streams crossing the Edwards Aquifer Recharge Zone and springs discharging from the Edwards Aquifer, 2003 (cont'd)

County	Station Name	Date Sampled	Time Sampled	Water Temp (° C)	Field Conductivity (µS/cm)	Field pH (std units)	Field Alkalinity (mg/L)	Turbidity (NTU)	Dissolved Oxygen (mg/L)
Hays	Blanco River at Wimberley [8171000]	4/16/2003	10:20	21.2	489	8.13	298	0.97	6.06
Hays	Blanco River at Wimberley [8171000]	9/16/2003	12:30	25.4	456	8.20	200	0.64	5.70
Uvalde	Dry Frio River at Reagan Wells [8196000]	4/9/2003	10:30	18.1	374	7.77	154	0.31	6.18
Uvalde	Dry Frio River at Reagan Wells [8196000]	9/10/2003	9:40	25.1	311	7.66	186	0.33	4.67
Uvalde	Frio River at Concan [8195000]	4/9/2003	11:30	18.2	399	7.98	172	0.33	6.23
Uvalde	Frio River at Concan [8195000]	9/10/2003	10:40	25.5	398	7.90	179	1.62	4.73
Bexar	Helotes Creek near FM 1560	1/6/2003	11:55	16.3	547	7.95	226	4.67	NR
Medina	Hondo Creek near Tarpley [8200000]	4/17/2003	9:55	18.7	458	8.00	212	0.75	6.45
Medina	Hondo Creek near Tarpley [8200000]	9/15/2003	11:30	24.0	393	8.05	153	1.16	5.40
Bandera	Medina River at Bandera [8178880]	4/17/2003	12:45	19.4	582	8.08	202	2.90	5.93
Bandera	Medina River at Bandera [8178880]	9/15/2003	12:30	23.8	511	8.03	183	9.31	4.91
Uvalde	Nueces River at Laguna [8190000]	4/8/2003	16:00	19.7	406	8.00	188	2.20	6.97
Uvalde	Nueces River at Laguna [8190000]	9/9/2003	15:20	26.7	409	7.60	196	0.25	5.58
Uvalde	Sabinal River near Sabinal [8198000]	4/9/2003	14:35	19.1	438	8.24	216	0.87	6.75
Uvalde	Sabinal River near Sabinal [8198000]	9/10/2003	13:45	26.0	428	7.94	186	0.69	5.18
Medina	Seco Creek at Miller Ranch [8201500]	4/9/2003	16:45	22.6	416	8.25	156	0.83	5.87
Medina	Seco Creek at Miller Ranch [8201500]	9/10/2003	15:10	27.7	364	7.69	136	0.89	5.48

NR = Not Recorded
NA = Not Analyzed
( ) = State Well Number
[ ] = USGS Gauge Number

Table C-8 Field measurements, bacterial counts and biochemical oxygen demand in water samples from streams crossing the Edwards Aquifer Recharge Zone and springs discharging from the Edwards Aquifer, 2003 (cont'd)

County	Station Name	Date Sampled	Time Sampled	Fecal Coliform (colonies/ 100ml)	Fecal Strep (colonies/ 100ml)	Biochemical Oxygen Demand (mg/L)
Hays	Blanco River at Wimberley [8171000]	4/16/2003	10:20	40	61	<2
Hays	Blanco River at Wimberley [8171000]	9/16/2003	12:30	440	173	<2
Uvalde	Dry Frio River at Reagan Wells [8196000]	4/9/2003	10:30	0	4	<2
Uvalde	Dry Frio River at Reagan Wells [8196000]	9/10/2003	9:40	830	460	<2
Uvalde	Frio River at Concan [8195000]	4/9/2003	11:30	1	19	<2
Uvalde	Frio River at Concan [8195000]	9/10/2003	10:40	98	232	<2
Bexar	Helotes Creek near FM 1560	1/6/2003	11:55	NR	NR	NR
Medina	Hondo Creek near Tarpley [8200000]	4/17/2003	9:55	52	128	<2
Medina	Hondo Creek near Tarpley [8200000]	9/15/2003	11:30	22	140	<2
Bandera	Medina River at Bandera [8178880]	4/17/2003	12:45	74	82	<2
Bandera	Medina River at Bandera [8178880]	9/15/2003	12:30	400	93	<2
Uvalde	Nueces River at Laguna [8190000]	4/8/2003	16:00	1	0	<2
Uvalde	Nueces River at Laguna [8190000]	9/9/2003	15:20	10	7	<2
Uvalde	Sabinal River near Sabinal [8198000]	4/9/2003	14:35	5	13	<2
Uvalde	Sabinal River near Sabinal [8198000]	9/10/2003	13:45	15	30	<2
Medina	Seco Creek at Miller Ranch [8201500]	4/9/2003	16:45	6	28	<2
Medina	Seco Creek at Miller Ranch [8201500]	9/10/2003	15:10	15	93	<2

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Table C-8 Field measurements, bacterial counts and biochemical oxygen demand in water samples from streams crossing the Edwards Aquifer Recharge Zone and springs discharging from the Edwards Aquifer, 2003 (cont'd)

County	Station Name	Date Sampled	Time Sampled	Water Temp (° C)	Field Conductivity (µS/cm)	Field pH (std units)	Field Alkalinity (mg/L)	Turbidity (NTU)	Dissolved Oxygen (mg/L)
Comal	Comal Springs #1 (DX-68-23-301)	3/5/2003	12:45	23.2	554	7.18	220	0.28	NR
Comal	Comal Springs #1 (DX-68-23-301)	6/18/2003	10:00	23.5	549	7.15	236	0.16	3.71
Comal	Comal Springs #1 (DX-68-23-301)	6/20/2003	11:50	NR	NR	NR	NR	NR	NR
Comal	Comal Springs #1 (DX-68-23-301)	10/10/2003	13:35	23.0	556	6.91	224	0.06	3.95
Comal	Comal Springs #1 (DX-68-23-301)	12/3/2003	9:30	23.0	563	6.62	230	0.41	3.90
Comal	Comal Springs #2	10/8/2003	13:05	22.9	554	6.72	230	0.55	3.41
Comal	Comal Springs #3	10/8/2003	12:20	23.1	556	6.81	230	NR	2.64
Comal	Comal Springs #5 (Dup)	10/10/2003	12:30	23.4	559	6.39	228	3.02	2.66
Comal	Comal Springs #5	10/10/2003	12:30	23.4	559	6.93	228	3.02	2.66
Comal	Comal Springs #7	3/6/2003	13:25	23.6	553	7.35	208	0.15	NR
Comal	Comal Springs #7	6/17/2003	9:55	23.8	555	7.33	186	0.11	3.57
Comal	Comal Springs #7	10/8/2003	14:20	23.5	559	6.83	230	0.13	2.88
Comal	Comal Springs #7	12/3/2003	10:20	23.4	557	6.88	212	0.24	2.87
Comal	Comal Springs A	10/10/2003	11:10	23.5	559	6.91	224	0.39	3.19
Comal	Comal Springs B1	6/18/2003	9:15	24.1	555	7.07	224	0.13	3.63
Comal	Comal Springs B1	6/20/2003	11:45	NR	NR	NR	NR	NR	NR
Comal	Comal Springs B1	10/8/2003	11:05	23.5	559	6.87	232	0.68	3.34

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Table C-8 Field measurements, bacterial counts and biochemical oxygen demand in water samples from streams crossing the Edwards Aquifer Recharge Zone and springs discharging from the Edwards Aquifer, 2003 (cont'd)

County	Station Name	Date Sampled	Time Sampled	Water Temp (° C)	Field Conductivity (µS/cm)	Field pH (std units)	Field Alkalinity (mg/L)	Turbidity (NTU)	Dissolved Oxygen (mg/L)
Comal	Comal Springs-Saltation	10/8/2003	15:50	23.6	557	6.84	230	1.05	3.28
Comal	Comal Springs-Spring Island (DX-68-23-320)	8/20/2003	11:10	23.5	556	7.04	234	0.22	2.45
Comal	Comal Springs-Spring Island (DX-68-23-320)	10/8/2003	15:10	23.5	558	7.01	232	3.35	2.36
Comal	Hueco Springs A (DX-68-15-901)	3/5/2003	11:45	20.1	614	7.02	270	2.62	NR
Comal	Hueco Springs A (DX-68-15-901)	6/17/2003	12:10	21.8	586	6.95	256	6.70	4.03
Comal	Hueco Springs A (DX-68-15-901)	10/7/2003	9:30	21.6	618	6.44	274	3.06	3.72
Comal	Hueco Springs A (DX-68-15-901)	12/1/2003	10:10	21.1	633	6.52	262	1.75	3.70
Comal	Hueco Springs B	6/17/2003	11:20	21.5	584	6.94	318	6.33	4.02
Comal	Hueco Springs B	10/7/2003	10:30	21.6	617	6.61	272	3.03	3.00
Comal	Hueco Springs B	12/1/2003	10:50	21.1	626	6.72	267	2.76	3.25
Comal	Hueco Springs B	3/5/2003	11:00	20.1	612	7.04	262	2.88	NR
Bexar	San Antonio Springs	3/10/2003	10:45	24.1	494	7.08	194	0.52	NR
Bexar	San Antonio Springs	4/10/2003	15:35	24.1	494	7.08	210	0.26	NR
Bexar	San Antonio Springs	6/16/2003	11:50	24.5	492	7.21	200	0.89	4.48
Bexar	San Antonio Springs	10/9/2003	10:50	23.9	499	6.79	204	0.73	4.50
Bexar	San Antonio Springs	12/2/2003	9:15	23.9	495	6.75	200	0.38	4.33
Hays	San Marcos Springs-Catfish	10/6/2003	13:00	22.9	608	7.01	260	0.17	3.75
Hays	San Marcos Springs-Catfish	12/19/2003	12:35	21.9	612	6.90	144	0.15	3.79

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Table C-8 Field measurements, bacterial counts and biochemical oxygen demand in water samples from streams crossing the Edwards Aquifer Recharge Zone and springs discharging from the Edwards Aquifer, 2003 (cont'd)

County	Station Name	Date Sampled	Time Sampled	Water Temp (° C)	Field Conductivity (µS/cm)	Field pH (std units)	Field Alkalinity (mg/L)	Turbidity (NTU)	Dissolved Oxygen (mg/L)
Hays	San Marcos Springs-Deep (LR-67-01-819)	3/12/2003	10:20	21.8	609	7.02	230	0.18	NR
Hays	San Marcos Springs-Deep (LR-67-01-819)	6/23/2003	10:30	22.5	609	7.02	242	0.25	3.50
Hays	San Marcos Springs-Deep (LR-67-01-819)	10/6/2003	13:30	22.7	618	6.69	262	0.11	3.22
Hays	San Marcos Springs-Deep (LR-67-01-819)	12/29/2003	10:30	21.6	625	6.87	247	0.14	3.71
Hays	San Marcos Springs-Diversion	10/6/2003	12:05	21.7	597	6.99	256	0.16	2.99
Hays	San Marcos Springs-Diversion	12/19/2003	11:35	20.4	597	6.84	137	0.27	3.10
Hays	San Marcos Springs-Hotel (LR-67-01-801)	3/12/2003	11:35	21.3	618	7.29	238	0.42	NR
Hays	San Marcos Springs-Hotel (LR-67-01-801)	6/19/2003	10:45	21.6	603	7.00	276	0.45	2.82
Hays	San Marcos Springs-Hotel (LR-67-01-801)	10/10/2003	9:55	21.4	599	6.77	256	0.07	2.45
Hays	San Marcos Springs-Hotel (LR-67-01-801)	12/4/2003	11:20	21.3	591	6.80	243	0.15	2.27
Hays	San Marcos Springs-Weismueller (LR-67-01-820)	10/6/2003	11:10	21.2	601	6.62	252	0.14	2.48
Hays	San Marcos Springs-Weismueller (LR-67-01-820)	12/19/2003	10:25	18.4	599	6.69	134	0.10	2.57
Bexar	San Pedro Springs	3/10/2003	9:15	23.7	507	7.02	196	0.47	NR
Bexar	San Pedro Springs	4/10/2003	14:40	23.7	515	6.48	210	1.42	NR
Bexar	San Pedro Springs	6/16/2003	10:50	24.0	508	7.15	212	0.08	4.25
Bexar	San Pedro Springs	10/9/2003	9:10	23.7	523	6.76	206	0.91	4.27
Bexar	San Pedro Springs	12/2/2003	10:05	23.5	509	6.81	216	0.49	3.98

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Table C-8 Field measurements, bacterial counts and biochemical oxygen demand in water samples from streams crossing the Edwards Aquifer Recharge Zone and springs discharging from the Edwards Aquifer, 2003 (cont'd)

County	Station Name	Date Sampled	Time Sampled	Fecal Coliform (colonies/ 100ml)	Fecal Strep (colonies/ 100ml)	Biochemical Oxygen Demand (mg/L)
Comal	Comal Springs #1 (DX-68-23-301)	3/5/2003	12:45	0	0	NA
Comal	Comal Springs #1 (DX-68-23-301)	6/18/2003	10:00	2	<2	NA
Comal	Comal Springs #1 (DX-68-23-301)	6/20/2003	11:50	<2	<2	NA
Comal	Comal Springs #1 (DX-68-23-301)	10/10/2003	13:35	<2	16	NA
Comal	Comal Springs #1 (DX-68-23-301)	12/3/2003	9:30	<2	4	NA
Comal	Comal Springs #2	10/8/2003	13:05	2	14	NA
Comal	Comal Springs #3	10/8/2003	12:20	2	60	NA
Comal	Comal Springs #5 (Duplicate)	10/10/2003	12:30	NR	NR	NA
Comal	Comal Springs #5	10/10/2003	12:30	4	146	NA
Comal	Comal Springs #7	3/6/2003	13:25	0	0	NA
Comal	Comal Springs #7	6/17/2003	9:55	<3	<3	NA
Comal	Comal Springs #7	10/8/2003	14:20	<2	23	NA
Comal	Comal Springs #7	12/3/2003	10:20	<2	5	NA
Comal	Comal Springs A	10/10/2003	11:10	<2	5	NA
Comal	Comal Springs B1	6/18/2003	9:15	<2	<2	NA
Comal	Comal Springs B1	6/20/2003	11:45	<2	<2	NA
Comal	Comal Springs B1	10/8/2003	11:05	2	174	NA

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Table C-8 Field measurements, bacterial counts and biochemical oxygen demand in water samples from streams crossing the Edwards Aquifer Recharge Zone and springs discharging from the Edwards Aquifer, 2003 (cont'd)

County	Station Name	Date Sampled	Time Sampled	Fecal Coliform (colonies/ 100ml)	Fecal Strep (colonies/ 100ml)	Biochemical Oxygen Demand (mg/L)
Comal	Comal Springs-Saltation	10/8/2003	15:50	16	106	NA
Comal	Comal Springs-Spring Island (DX-68-23-320)	8/20/2003	11:10	<3	4	NA
Comal	Comal Springs-Spring Island (DX-68-23-320)	10/8/2003	15:10	22	94	NA
Comal	Hueco Springs A (DX-68-15-901)	3/5/2003	11:45	16	8	NA
Comal	Hueco Springs A (DX-68-15-901)	6/17/2003	12:10	400	820	NA
Comal	Hueco Springs A (DX-68-15-901)	10/7/2003	9:30	14	622	NA
Comal	Hueco Springs A (DX-68-15-901)	12/1/2003	10:10	8	2	NA
Comal	Hueco Springs B	6/17/2003	11:20	480	900	NA
Comal	Hueco Springs B	10/7/2003	10:30	5	5	NA
Comal	Hueco Springs B	12/1/2003	10:50	<1	3	NA
Comal	Hueco Springs B	3/5/2003	11:00	8	5	NA
Bexar	San Antonio Springs	3/10/2003	10:45	0	0	NA
Bexar	San Antonio Springs	4/10/2003	15:35	NR	NR	NA
Bexar	San Antonio Springs	6/16/2003	11:50	<3	<3	NA
Bexar	San Antonio Springs	10/9/2003	10:50	13	4	NA
Bexar	San Antonio Springs	12/2/2003	9:15	276	<2	NA
Hays	San Marcos Springs-Catfish	10/6/2003	13:00	5	286	NA
Hays	San Marcos Springs-Catfish	12/19/2003	12:35	<2	<2	NA

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Table C-8 Field measurements, bacterial counts and biochemical oxygen demand in water samples from streams crossing the Edwards Aquifer Recharge Zone and springs discharging from the Edwards Aquifer, 2003

County	Station Name	Date Sampled	Time Sampled	Fecal Coliform (colonies/ 100ml)	Fecal Strep (colonies/ 100ml)	Biochemical Oxygen Demand (mg/L)
Hays	San Marcos Springs-Deep (LR-67-01-819)	3/12/2003	10:20	0	0	NA
Hays	San Marcos Springs-Deep (LR-67-01-819)	6/23/2003	10:30	<3	5	NA
Hays	San Marcos Springs-Deep (LR-67-01-819)	10/6/2003	13:30	<2	25	NA
Hays	San Marcos Springs-Deep (LR-67-01-819)	12/29/2003	10:30	<3	<3	NA
Hays	San Marcos Springs-Diversion	10/6/2003	12:05	<2	13	NA
Hays	San Marcos Springs-Diversion	12/19/2003	11:35	<2	<2	NA
Hays	San Marcos Springs-Hotel (LR-67-01-801)	3/12/2003	11:35	0	0	NA
Hays	San Marcos Springs-Hotel (LR-67-01-801)	6/19/2003	10:45	2	<2	NA
Hays	San Marcos Springs-Hotel (LR-67-01-801)	10/10/2003	9:55	<2	80	NA
Hays	San Marcos Springs-Hotel (LR-67-01-801)	12/4/2003	11:20	<2	<2	NA
Hays	San Marcos Springs-Weismueller (LR-67-01-820)	10/6/2003	11:10	<2	16	NA
Hays	San Marcos Springs-Weismueller (LR-67-01-820)	12/19/2003	10:25	<2	<2	NA
Bexar	San Pedro Springs	3/10/2003	9:15	1	2	NA
Bexar	San Pedro Springs	4/10/2003	14:40	NR	NR	NA
Bexar	San Pedro Springs	6/16/2003	10:50	46	26	NA
Bexar	San Pedro Springs	10/9/2003	9:10	346	207	NA
Bexar	San Pedro Springs	12/2/2003	10:05	41	39	NA

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Table C-9 Analytical data for major ions in water samples from streams crossing the Edwards Aquifer Recharge Zone and springs discharging from the Edwards Aquifer, 2003 (cont'd)

Station Name	Date Sampled	Calcium dissolved (mg/L)	Sodium dissolved (mg/L)	Magnesium 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)
Blanco River at Wimberley [8171000]	04/16/03	68.3	7.31	15.7	0.791B	12.6	24.2	0.215	3.5	270
Blanco River at Wimberley [8171000]	09/16/03	79.1	264	124	13.8	11.1	32.4	0.25	33.5	250
Dry Frio River at Reagan Wells [8196000]	04/09/03	52.8	5.58	11.6	0.554B	10.3	13.4	0.112	3.82	210
Dry Frio River at Reagan Wells [8196000]	09/10/03	53.9	4.77	11.9	0.223B	7.43	11	0.12	4.7	210
Frio River at Concan [8195000]	04/09/03	53.8	6.27	13.5	0.677B	11	13.7	0.145	4.45	210
Frio River at Concan [8195000]	09/10/03	54.7	6.19	13.9	0.639	10.2	13.1	0.16	5.58	220
Helotes Creek near FM 1560	01/06/03	84.4	10.1	13.3	1.01	17	25.9	0.123	4.2	540
Hondo Creek near Tarpley [8200000]	04/17/03	72.1	7.31	10.3	1.16	13	32.1	0.226	4.66	270
Hondo Creek near Tarpley [8200000]	09/15/03	55.6	6.28	9.77	0.687B	9.88	35.8	0.24	5.44	230
Medina River at Bandera [8178880]	04/17/03	86.9	6.54	17.7	1.46	11.8	88.2	0.25	4.68	350
Medina River at Bandera [8178880]	09/15/03	70.6	5.46	16.3	0.988B	9.34	72.2	0.27	4.99	310
Nueces River at Laguna [8190000]	04/08/03	55	7.2	13.7	0.513B	12.6	12.1	0.141	4.58	220
Nueces River at Laguna [8190000]	09/09/03	53	6.35	12.8	0.536B	11.3	10.8	0.16	5.27	230

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Table C-9 Analytical data for major ions in water samples from streams crossing the Edwards Aquifer Recharge Zone and springs discharging from the Edwards Aquifer, 2003 (cont'd)

Station Name	Date Sampled	Calcium dissolved (mg/L)	Sodium dissolved (mg/L)	Magnesium 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)
Sabinal River near Sabinal [8198000]	04/09/03	62.6	6.81	12	1.59	11	23.5	0.184	4.51	270
Sabinal River near Sabinal [8198000]	09/10/03	60.6	6.38	11.9	0.75B	10	23.2	0.21	5.76	260
Seco Creek at Miller Ranch [8201500]	04/09/03	61	7.2	11.5	1.24	11	45	0.197	4.5	260
Seco Creek at Miller Ranch [8201500]	09/10/03	50.4	5.63	9.77	0.869B	9.13	36.2	0.21	5.31	220
Comal Springs #1 (DX-68-23-301)	03/05/03	85.4	10.6	17.2	1.5	18.9	22.2	0.242	5.73	320
Comal Springs #1 (DX-68-23-301)	06/18/03	*76.2	*9.9	*15.5	*1.28	*16.1	*22.3	*0.18	*13.6	*303
Comal Springs #1 (DX-68-23-301)	10/10/03	78.8	9.3	15.6	1.27	16.1	21.6	0.21	5.17	330
Comal Springs #1 (DX-68-23-301)	12/03/03	79	9.89	16.1	0.971	16.5	22.8	0.28	5.53	310
Comal Springs #2	10/08/03	79.1	20.2	15.8	2.64	15.9	21.5	0.26	11.3	310
Comal Springs #3	10/08/03	78.2	20	15.8	2.12	16.1	21.7	0.26	11.2	310
Comal Springs #5 (Duplicate)	10/10/03	77.8	10.2	16.4	1.44	17.6	24.3	0.24	5.24	330
Comal Springs #5	10/10/03	157	20.7	32.6	1.57	18.1	24.5	0.24	11.5	340
Comal Springs #7	03/06/03	80	11.3	17.5	1.35	18.6	23.9	0.252	5.41	310
Comal Springs #7	06/17/03	77.9	10.4	16.3	2.31	17.6	23.6	0.24	5.28	320
Comal Springs #7	10/08/03	76.1	21.6	16.3	3.35	17.7	23.8	0.25	11.5	330
Comal Springs #7	12/03/03	75.9	10.4	16.2	2.0	18	24.9	0.29	5.44	310

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Table C-9 Analytical data for major ions in water samples from streams crossing the Edwards Aquifer Recharge Zone and springs discharging from the Edwards Aquifer, 2003 (cont'd)

Station Name	Date Sampled	Calcium dissolved (mg/L)	Sodium dissolved (mg/L)	Magnesium 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 Springs A	10/10/03	155	21	33.3	2.18	17.9	24.3	0.26	11.6	340
Comal Springs B1	06/18/03	71.6	10	15.7	0.556B	17.5	24	0.24	5.14	340
Comal Springs B1	10/08/03	75.7	22.4	16.5	2.77	17.9	24.2	0.27	11.7	320
Comal Springs-Saltation	10/08/03	75.6	21.5	16.2	1.74	17.6	23.5	0.24	11	320
Comal Springs-Spring Island (DX-68-23-320)	08/20/03	*81.6	*10	*15.9	*1.33	*16.2	*22.1	*0.19	*13.6	*313
Comal Springs-Spring Island (DX-68-23-320)	10/08/03	78.7	20.3	15.3	3.18	16.3	21.4	0.23	11.4	320
Hueco Springs A (DX-68-15-901)	03/05/03	210	16.1	19.3	3.13	15.1	17	0.171	8.94	360
Hueco Springs A (DX-68-15-901)	10/07/03	*93.9	*7.84	*11	*1.29	*11.8	*17	*1.05	*11.7	*320
Hueco Springs A (DX-68-15-901)	10/07/03	98.7	9.15	15.1	1.11	14.2	24.4	0.23	5.12	350
Hueco Springs A (DX-68-15-901)	12/01/03	84.6	8.78	14.9	0.609B	14.1	27.5	0.3	4.85	360
Hueco Springs B	03/05/03	107	8.47	10.1	1.47	15.1	17	0.167	4.38	360
Hueco Springs B	06/17/03	181	14.5	20.9	2.12	11.7	16.5	0.19	8.66	340
Hueco Springs B	10/07/03	190	17.9	29.4	3.81	14.2	24.2	0.26	9.85	340
Hueco Springs B	12/01/03	89.2	8.98	15.2	0.909	14.2	27.4	0.3	5.04	370
San Antonio Springs	03/10/03	63.3	8.29	14.1	1.27	18.5	17.4	0.193	5.14	370
San Antonio Springs	06/16/03	66.1	8.96	15.1	1.15	17	15.9	0.21	5.36	260
San Antonio Springs	10/09/03	71	9.2	15.7	1.05	17.3	16	0.2	5.35	280
San Antonio Springs	12/02/03	65.8	9.15	15.4	1.02	18.1	16.5	0.24	5.45	110
San Marcos Springs-Catfish	10/06/03	91.8	9.58	15.9	0.962	17	22.1	0.22	5.42	340
San Marcos Springs-Catfish	12/19/03	93.3	9.77	16.4	1.28	18.6	23.6	0.22	5.58	340

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Table C-9 Analytical data for major ions in water samples from streams crossing the Edwards Aquifer Recharge Zone and springs discharging from the Edwards Aquifer, 2003

Station Name	Date Sampled	Calcium dissolved (mg/L)	Sodium dissolved (mg/L)	Magnesium 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)
San Marcos Springs-Deep (LR-67-01-819)	03/12/03	85.8	9.73	15	1.48	18.4	24.8	0.179	4.84	360
San Marcos Springs-Deep (LR-67-01-819)	06/23/03	88.5	10.7	15.8	1.41	18.8	24.1	0.21	5.19	360
San Marcos Springs-Deep (LR-67-01-819)	10/06/03	91.8	11.2	16.1	1.69	20.1	25.8	0.26	5.41	330
San Marcos Springs-Deep (LR-67-01-819)	12/29/03	77.4	10.1	14	1.16	21	26.5	0.3	4.72	360
San Marcos Springs-Diversion	10/06/03	85.8	10.2	17.7	1.64	18.6	23.9	0.26	5.11	330
San Marcos Springs-Diversion	12/19/03	86.4	10.1	18.2	1.12	19.6	24.8	0.25	4.94	320
San Marcos Springs-Hotel (LR-67-01-801)	03/12/03	85.6	10.9	18.7	1.55	20.1	26.7	0.213	4.67	360
San Marcos Springs-Hotel (LR-67-01-801)	06/19/03	160	20.3	36.3	1.24	18.8	23.8	0.23	9.24	330
San Marcos Springs-Hotel (LR-67-01-801)	10/10/03	167	20.8	36.1	2.12	18.8	24	0.22	10.3	360
San Marcos Springs-Hotel (LR-67-01-801)	12/04/03	80	10.9	18.3	1.41	18.6	25.2	0.26	5	360
San Marcos Springs-Weismueller (LR-67-01-820)	10/06/03	85.9	11.1	18.5	1.81	20	25.8	0.27	5.17	340
San Marcos Springs-Weismueller (LR-67-01-820)	12/19/03	83.2	10.5	18.1	1.16	20.5	26.2	0.25	5.12	330
San Pedro Springs	03/10/03	67.5	9.12	13.8	1.29	19.7	20.5	0.197	5.24	270
San Pedro Springs	06/16/03	67.6	9.84	14.7	0.949B	18.3	17.7	0.23	5.43	320
San Pedro Springs	10/09/03	72.7	10.1	14.9	1.1	19	18.7	0.21	5.49	310
San Pedro Springs	12/02/03	76.1	10.8	16.1	1.6	19.6	19.7	0.26	6.04	290

B = Estimated result between the method detection limit and the reporting limit
( ) = State Well Number
[ ] = USGS Gauge Number
* = Sample collected by the Authority and analyzed by TWDB

Table C-10 Analytical data for metals in water samples from streams crossing the Edwards Aquifer Recharge Zone and Springs discharging from the Edwards Aquifer, 2003 (cont'd)

Station Name	Date Sampled	Aluminum dissolved (mg/L)	Antimony dissolved (mg/L)	Arsenic dissolved (mg/L)	Barium dissolved (mg/L)	Beryllium dissolved (mg/L)	Boron dissolved (mg/L)	Bromide dissolved (mg/L)	Cadmium dissolved (mg/L)
Blanco River at Wimberley [8171000]	04/16/03	NA	0.0021B	<0.01	0.0303B	<0.01	NA	NA	<0.01
Blanco River at Wimberley [8171000]	09/16/03	NA	<0.01	<0.01	0.0505B	0.0002B	NA	NA	<0.01
Dry Frio River at Reagan Wells [8196000]	04/09/03	NA	0.0013B	<0.01	0.0337B	<0.01	NA	NA	<0.01
Dry Frio River at Reagan Wells [8196000]	09/10/03	NA	<0.01	<0.01	0.0405B	<0.01	NA	NA	0.0018B
Frio River at Concan [8195000]	04/09/03	NA	<0.01	<0.01	0.0312B	<0.01	NA	NA	<0.01
Frio River at Concan [8195000]	09/10/03	NA	<0.01	<0.01	0.0347B	<0.01	NA	NA	0.0012B
Helotes Creek near FM 1560	01/06/03	NA	0.0021B	0.0059B	0.0368	0.0014B	NA	NA	<0.01
Hondo Creek near Tarpley [8200000]	04/17/03	NA	0.0021B	<0.01	0.0289B	<0.01	NA	NA	<0.01
Hondo Creek near Tarpley [8200000]	09/15/03	NA	<0.01	<0.01	0.0264B	<0.01	NA	NA	0.0007B
Medina River at Bandera [8178880]	04/17/03	NA	0.0032B	<0.01	0.0301B	<0.01	NA	NA	<0.01
Medina River at Bandera [8178880]	09/15/03	NA	<0.01	<0.01	0.0304B	<0.01	NA	NA	<0.01
Nueces River at Laguna [8190000]	04/08/03	NA	0.0031B	<0.01	0.0365B	<0.01	NA	NA	<0.01
Nueces River at Laguna [8190000]	09/09/03	NA	<0.01	<0.01	0.0386B	<0.01	NA	NA	0.0007B
Sabinal River near Sabinal [8198000]	04/09/03	NA	0.0009B	<0.01	0.0331B	<0.01	NA	NA	<0.01
Sabinal River near Sabinal [8198000]	09/10/03	NA	<0.01	<0.01	0.035B	<0.01	NA	NA	0.0009B
Seco Creek at Miller Ranch [8201500]	09/10/03	NA	<0.01	<0.01	0.026B	<0.01	NA	NA	0.0007B
Seco Creek at Miller Ranch [8201500]	04/09/03	NA	<0.01	<0.01	0.0294B	<0.01	NA	NA	<0.01

* Sample collected by the Authority and analyzed by TWDB

B = Estimated Result between the method detection limit and the reporting limit

NA = Not analyzed

Table C-10 Analytical data for metals in water samples from streams crossing the Edwards Aquifer Recharge Zone and Springs discharging from the Edwards Aquifer, 2003 (cont'd)

Station Name	Date Sampled	Chromium dissolved (mg/L)	Cobalt dissolved (mg/L)	Copper dissolved (mg/L)	Iron dissolved (mg/L)	Lead dissolved (mg/L)	Lithium dissolved (mg/L)	Manganese dissolved (mg/L)	Mercury dissolved (mg/L)
Blanco River at Wimberley [8171000]	04/16/03	0.0028B	NA	<0.01	<0.01	<0.01	NA	0.0026B	<0.0002
Blanco River at Wimberley [8171000]	09/16/03	0.0021B	NA	0.0054B	0.507B	0.0034B	NA	0.0638B	0.00026B
Dry Frio River at Reagan Wells [8196000]	04/09/03	<0.01	NA	<0.01	<0.01	0.0026B	NA	0.0011B	0.00045B
Dry Frio River at Reagan Wells [8196000]	09/10/03	<0.01	NA	0.0283B	<0.01	0.0038B	NA	0.0014B	<0.0002
Frio River at Concan [8195000]	04/09/03	<0.01	NA	<0.01	<0.01	0.0021B	NA	0.0006B	<0.0002
Frio River at Concan [8195000]	09/10/03	<0.01	NA	0.017B	<0.01	0.0033B	NA	0.0011B	0.00015B
Helotes Creek near FM 1560	01/06/03	<0.01	NA	0.0025B	0.0052B	0.0014B	NA	0.0332	0.00026
Hondo Creek near Tarpley [8200000]	04/17/03	<0.01	NA	<0.01	<0.01	<0.01	NA	0.0005B	<0.0002
Hondo Creek near Tarpley [8200000]	09/15/03	<0.01	NA	0.0077B	<0.01	<0.01	NA	0.0009B	<0.0002
Medina River at Bandera [8178880]	04/17/03	<0.01	NA	<0.01	0.0083B	<0.01	NA	0.0027B	<0.0002
Medina River at Bandera [8178880]	09/15/03	<0.01	NA	0.008B	<0.01	<0.01	NA	0.0023B	0.00021B
Nueces River at Laguna [8190000]	04/08/03	<0.01	NA	0.0026B	<0.01	0.0027B	NA	0.0003B	0.00014B
Nueces River at Laguna [8190000]	09/09/03	<0.01	NA	0.0038B	<0.01	<0.01	NA	<0.01	0.00018B
Sabinal River near Sabinal [8198000]	04/09/03	<0.01	NA	0.0037B	<0.01	0.002B	NA	0.001B	<0.0002
Sabinal River near Sabinal [8198000]	09/10/03	<0.01	NA	0.0128B	<0.01	0.0016B	NA	0.0008B	<0.0002
Seco Creek at Miller Ranch [8201500]	09/10/03	<0.01	NA	0.0099B	0.0199B	0.0018B	NA	0.0007B	<0.0002
Seco Creek at Miller Ranch [8201500]	04/09/03	<0.01	NA	0.0043B	<0.01	0.002B	NA	0.0007B	0.00026B

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NA = Not analyzed

Table C-10 Analytical data for metals in water samples from streams crossing the Edwards Aquifer Recharge Zone and Springs discharging from the Edwards Aquifer, 2003 (cont'd)

Station Name	Date Sampled	Molybdenum dissolved (mg/L)	Nickel dissolved (mg/L)	Selenium dissolved (mg/L)	Silver dissolved (mg/L)	Strontium dissolved (mg/L)	Thallium dissolved (mg/L)	Vanadium dissolved (mg/L)	Zinc dissolved (mg/L)
Blanco River at Wimberley [8171000]	04/16/03	NA	<0.01	<0.01	<0.01	0.389B	<0.01	NA	0.0034B
Blanco River at Wimberley [8171000]	09/16/03	NA	0.0297B	<0.01	<0.01	0.583B	<0.01	NA	<0.01
Dry Frio River at Reagan Wells [8196000]	04/09/03	NA	<0.01	<0.01	<0.01	0.334B	<0.01	NA	0.0025B
Dry Frio River at Reagan Wells [8196000]	09/10/03	NA	0.0044B	<0.01	0.0015B	0.187B	<0.01	NA	0.0071B
Frio River at Concan [8195000]	04/09/03	NA	<0.01	<0.01	<0.01	0.272B	<0.01	NA	0.002B
Frio River at Concan [8195000]	09/10/03	NA	0.0043B	<0.01	<0.01	0.152B	<0.01	NA	0.0104B
Helotes Creek near FM 1560	01/06/03	NA	0.0008B	<0.01	<0.01	0.166	<0.01	NA	0.0036B
Hondo Creek near Tarpley [8200000]	04/17/03	NA	0.0023B	<0.01	<0.01	0.382B	0.0087B	NA	<0.01
Hondo Creek near Tarpley [8200000]	09/15/03	NA	0.0041B	<0.01	<0.01	0.373B	<0.01	NA	0.0064B
Medina River at Bandera [8178880]	04/17/03	NA	0.0023B	<0.01	<0.01	0.871B	0.0064B	NA	<0.01
Medina River at Bandera [8178880]	09/15/03	NA	0.0029B	<0.01	<0.01	0.796B	<0.01	NA	0.0447B
Nueces River at Laguna [8190000]	04/08/03	NA	<0.01	<0.01	<0.01	0.236B	<0.01	NA	0.0036B
Nueces River at Laguna [8190000]	09/09/03	NA	0.003B	<0.01	<0.01	0.235B	<0.01	NA	0.0077B
Sabinal River near Sabinal [8198000]	04/09/03	NA	<0.01	<0.01	<0.01	0.336B	<0.01	NA	0.0025B
Sabinal River near Sabinal [8198000]	09/10/03	NA	0.0056B	<0.01	<0.01	0.351B	<0.01	NA	0.0062B
Seco Creek at Miller Ranch [8201500]	09/10/03	NA	0.0044B	<0.01	<0.01	0.39B	<0.01	NA	0.0069B
Seco Creek at Miller Ranch [8201500]	04/09/03	NA	<0.01	<0.01	<0.01	0.473B	<0.01	NA	0.0023B

* Sample collected by the Authority and analyzed by TWDB

B = Estimated Result between the method detection limit and the reporting limit

NA = Not analyzed

Table C-10 Analytical data for metals in water samples from streams crossing the Edwards Aquifer Recharge Zone and Springs discharging from the Edwards Aquifer, 2003 (cont'd)

Station Name	Date Sampled	Aluminum dissolved (mg/L)	Antimony dissolved (mg/L)	Arsenic dissolved (mg/L)	Barium dissolved (mg/L)	Beryllium dissolved (mg/L)	Boron dissolved (mg/L)	Bromide dissolved (mg/L)
Comal Springs #1 (DX-68-23-301)	03/05/03	NA	<0.01	<0.01	0.0497B	<0.01	NA	NA
Comal Springs #1 (DX-68-23-301)	06/18/03	*<0.004	*<0.001	*<0.002	*0.044B	*<0.001	*<0.05	*0.0773B
Comal Springs #1 (DX-68-23-301)	10/10/03	NA	<0.01	<0.01	0.0476B	0.0004B	NA	NA
Comal Springs #1 (DX-68-23-301)	12/03/03	NA	<0.01	<0.01	0.0482B	<0.005	NA	NA
Comal Springs #2	10/08/03	NA	<0.01	<0.01	0.0456B	0.0003B	NA	NA
Comal Springs #3	10/08/03	NA	<0.01	<0.01	0.0463B	0.0003B	NA	NA
Comal Springs #5 (Duplicate)	10/10/03	NA	0.0059	0.0037	0.0535	0.00058	NA	NA
Comal Springs #5	10/10/03	NA	0.0139	0.0037	0.0525	0.0004B	NA	NA
Comal Springs #7	03/06/03	NA	<0.01	<0.01	0.0571B	<0.01	NA	NA
Comal Springs #7	06/17/03	NA	<0.01	<0.01	0.053B	<0.01	NA	NA
Comal Springs #7	10/08/03	NA	<0.01	<0.01	0.0526B	0.0004B	NA	NA
Comal Springs #7	12/03/03	NA	<0.01	<0.01	0.0549B	<0.005	NA	NA
Comal Springs A	10/10/03	NA	<0.01	0.0037B	0.0544B	0.0004B	NA	NA
Comal Springs B1	06/18/03	NA	<0.01	<0.01	0.056B	<0.01	NA	NA
Comal Springs B1	10/08/03	NA	<0.01	<0.01	0.0519B	<0.005	NA	NA
Comal Springs-Saltation	10/08/03	NA	<0.01	<0.01	0.0544B	0.0004B	NA	NA
Comal Springs-Spring Island (DX-68-23-320)	08/20/03	*<0.004	*<0.001	*<0.002	*0.048	*<0.001	*<0.05	*0.0781
Comal Springs-Spring Island (DX-68-23-320)	10/08/03	NA	<0.01	<0.01	0.0488B	0.0004B	NA	NA
Hueco Springs A (DX-68-15-901)	03/05/03	NA	<0.01	<0.01	0.0318B	<0.01	NA	NA
Hueco Springs A (DX-68-15-901)	06/17/03	*<0.004	*<0.001	*<0.002	*0.029	*<0.001	*<0.05	*0.0654
Hueco Springs A (DX-68-15-901)	10/07/03	NA	<0.01	<0.01	0.0333B	0.0003B	NA	NA
Hueco Springs A (DX-68-15-901)	12/01/03	NA	<0.01	<0.01	0.0329B	<0.005	NA	NA
Hueco Springs B	03/05/03	NA	0.0011B	<0.01	0.0304B	<0.01	NA	NA
Hueco Springs B	06/17/03	NA	0.0017B	<0.01	0.0319B	<0.01	NA	NA

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Table C-10 Analytical data for metals in water samples from streams crossing the Edwards Aquifer Recharge Zone and Springs discharging from the Edwards Aquifer, 2003 (cont'd)

Station Name	Date Sampled	Aluminum dissolved (mg/L)	Antimony dissolved (mg/L)	Arsenic dissolved (mg/L)	Barium dissolved (mg/L)	Beryllium dissolved (mg/L)	Boron dissolved (mg/L)	Bromide dissolved (mg/L)
Hueco Springs B	10/07/03	NA	<0.01	<0.01	0.032B	0.0003B	NA	NA
Hueco Springs B	12/01/03	NA	0.0084B	<0.01	0.0326B	<0.005	NA	NA
San Antonio Springs	03/10/03	NA	0.0042B	<0.01	0.0477B	<0.01	NA	NA
San Antonio Springs	06/16/03	NA	0.0012B	<0.01	0.0468B	<0.01	NA	NA
San Antonio Springs	10/09/03	NA	<0.01	<0.01	0.0452B	0.0004B	NA	NA
San Antonio Springs	12/02/03	NA	0.0305B	<0.01	0.0469B	<0.005	NA	NA
San Marcos Springs-Catfish	10/06/03	NA	<0.01	<0.01	0.0376B	<0.005	NA	NA
San Marcos Springs-Catfish	12/19/03	NA	<0.01	<0.01	0.0362B	<0.005	NA	NA
San Marcos Springs-Deep (LR-67-01-819)	03/12/03	NA	0.0019B	<0.01	0.0689B	0.0004B	NA	NA
San Marcos Springs-Deep (LR-67-01-819)	06/23/03	NA	0.002B	<0.01	0.0376B	<0.01	NA	NA
San Marcos Springs-Deep (LR-67-01-819)	10/06/03	NA	<0.01	<0.01	0.0375B	<0.005	NA	NA
San Marcos Springs-Deep (LR-67-01-819)	12/29/03	NA	0.0078B	<0.01	0.0364B	<0.005	NA	NA
San Marcos Springs-Diversion	10/06/03	NA	<0.01	<0.01	0.0335B	<0.005	NA	NA
San Marcos Springs-Diversion	12/19/03	NA	<0.01	<0.01	0.0358B	<0.005	NA	NA
San Marcos Springs-Hotel (LR-67-01-801)	03/12/03	NA	0.0027B	<0.01	0.0335B	<0.01	NA	NA
San Marcos Springs-Hotel (LR-67-01-801)	06/19/03	NA	0.0012B	<0.01	0.0364B	<0.01	NA	NA
San Marcos Springs-Hotel (LR-67-01-801)	10/10/03	NA	<0.01	0.0043B	0.034B	0.0004B	NA	NA
San Marcos Springs-Hotel (LR-67-01-801)	12/04/03	NA	0.0081B	<0.01	0.0362B	<0.005	NA	NA
San Marcos Springs-Weismueller (LR-67-01-820)	10/06/03	NA	<0.01	<0.01	0.0388B	<0.005	NA	NA
San Marcos Springs-Weismueller (LR-67-01-820)	12/19/03	NA	0.0071B	<0.01	0.0341B	<0.005	NA	NA
San Pedro Springs	03/10/03	NA	0.0016B	<0.01	0.0472B	<0.01	NA	NA
San Pedro Springs	06/16/03	NA	0.002B	<0.01	0.0451B	<0.01	NA	NA
San Pedro Springs	10/09/03	NA	<0.01	<0.01	0.0462B	0.0005B	NA	NA
San Pedro Springs	12/02/03	NA	0.0277B	<0.01	0.0484B	<0.005	NA	NA

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B = Estimated Result between the method detection limit and the reporting limit
NA = Not analyzed

Table C-10 Analytical data for metals in water samples from streams crossing the Edwards Aquifer Recharge Zone and Springs discharging from the Edwards Aquifer, 2003 (cont'd)

Station Name	Date Sampled	Cadmium dissolved (mg/L)	Chromium dissolved (mg/L)	Cobalt dissolved (mg/L)	Copper dissolved (mg/L)	Iron dissolved (mg/L)	Lead dissolved (mg/L)	Lithium dissolved (mg/L)
Comal Springs #1 (DX-68-23-301)	03/05/03	<0.01	<0.01	NA	<0.01	<0.01	<0.01	NA
Comal Springs #1 (DX-68-23-301)	06/18/03	*<0.001	*0.002B	*<0.001	*<0.001	*<0.05	*<0.001	*0.006B
Comal Springs #1 (DX-68-23-301)	10/10/03	0.0005B	<0.01	NA	<0.01	<0.25	<0.01	NA
Comal Springs #1 (DX-68-23-301)	12/03/03	<0.01	0.0032B	NA	<0.01	<0.25	<0.01	NA
Comal Springs #2	10/08/03	<0.01	<0.01	NA	<0.01	<0.25	<0.01	NA
Comal Springs #3	10/08/03	<0.01	<0.01	NA	<0.01	<0.25	<0.01	NA
Comal Springs #5 (Duplicate)	10/10/03	.0006B	.0019	NA	.0022	.0048	.0013	NA
Comal Springs #5	10/10/03	.0005B	.0019	NA	.0022	.0048	.0013	NA
Comal Springs #7	03/06/03	<0.01	<0.01	NA	<0.01	<0.01	<0.01	NA
Comal Springs #7	06/17/03	<0.01	<0.01	NA	<0.01	0.0123B	<0.01	NA
Comal Springs #7	10/08/03	0.0005B	<0.01	NA	<0.01	<0.25	<0.01	NA
Comal Springs #7	12/03/03	<0.01	0.0032B	NA	<0.01	<0.25	<0.01	NA
Comal Springs A	10/10/03	0.0005B	<0.01	NA	<0.01	<0.25	<0.01	NA
Comal Springs B1	06/18/03	<0.01	<0.01	NA	0.0051B	<0.01	<0.01	NA
Comal Springs B1	10/08/03	<0.01	<0.01	NA	<0.01	<0.25	<0.01	NA
Comal Springs-Saltation	10/08/03	<0.01	<0.01	NA	<0.01	<0.25	<0.01	NA
Comal Springs-Spring Island (DX-68-23-320)	08/20/03	*<0.001	*<0.001	*<0.001	*<0.001	*<0.05	*<0.001	*0.005
Comal Springs-Spring Island (DX-68-23-320)	10/08/03	0.0005B	<0.01	NA	<0.01	<0.25	<0.01	NA
Hueco Springs A (DX-68-15-901)	03/05/03	<0.01	<0.01	NA	<0.01	<0.01	<0.01	NA
Hueco Springs A (DX-68-15-901)	06/17/03	*<0.001	*<0.001	*<0.001	*0.003	*<0.05	*0.001	*0.002
Hueco Springs A (DX-68-15-901)	10/07/03	<0.01	<0.01	NA	<0.01	<0.25	<0.01	NA
Hueco Springs A (DX-68-15-901)	12/01/03	<0.01	<0.01	NA	<0.01	<0.25	<0.01	NA
Hueco Springs B	03/05/03	<0.01	<0.01	NA	<0.01	<0.01	<0.01	NA
Hueco Springs B	06/17/03	<0.01	<0.01	NA	<0.01	<0.01	<0.01	NA

* Sample collected by the Authority and analyzed by TWDB

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Table C-10 Analytical data for metals in water samples from streams crossing the Edwards Aquifer Recharge Zone and Springs discharging from the Edwards Aquifer, 2003 (cont'd)

Station Name	Date Sampled	Cadmium dissolved (mg/L)	Chromium dissolved (mg/L)	Cobalt dissolved (mg/L)	Copper dissolved (mg/L)	Iron dissolved (mg/L)	Lead dissolved (mg/L)	Lithium dissolved (mg/L)
Hueco Springs B	10/07/03	<0.01	<0.01	NA	<0.01	<0.25	<0.01	NA
Hueco Springs B	12/01/03	<0.01	<0.01	NA	<0.01	<0.25	<0.01	NA
San Antonio Springs	03/10/03	<0.01	<0.01	NA	<0.01	0.0056B	<0.01	NA
San Antonio Springs	06/16/03	<0.01	<0.01	NA	0.0087B	<0.01	<0.01	NA
San Antonio Springs	10/09/03	0.0007B	<0.01	NA	<0.01	<0.25	<0.01	NA
San Antonio Springs	12/02/03	<0.01	0.004B	NA	0.0031B	<0.25	<0.01	NA
San Marcos Springs-Catfish	10/06/03	<0.01	<0.01	NA	<0.01	<0.25	<0.01	NA
San Marcos Springs-Catfish	12/19/03	<0.01	<0.01	NA	<0.01	0.0208B	<0.01	NA
San Marcos Springs-Deep (LR-67-01-819)	03/12/03	<0.01	<0.01	NA	<0.01	0.0088B	0.0043B	NA
San Marcos Springs-Deep (LR-67-01-819)	06/23/03	<0.01	<0.01	NA	<0.01	0.007B	<0.01	NA
San Marcos Springs-Deep (LR-67-01-819)	10/06/03	<0.01	<0.01	NA	<0.01	0.0585B	<0.01	NA
San Marcos Springs-Deep (LR-67-01-819)	12/29/03	<0.01	<0.01	NA	<0.01	<0.25	<0.01	NA
San Marcos Springs-Diversion	10/06/03	<0.01	0.002B	NA	<0.01	0.0142B	<0.01	NA
San Marcos Springs-Diversion	12/19/03	<0.01	<0.01	NA	<0.01	0.011B	<0.01	NA
San Marcos Springs-Hotel (LR-67-01-801)	03/12/03	<0.01	<0.01	NA	<0.01	0.0051B	0.0023B	NA
San Marcos Springs-Hotel (LR-67-01-801)	06/19/03	<0.01	<0.01	NA	0.0055B	<0.01	<0.01	NA
San Marcos Springs-Hotel (LR-67-01-801)	10/10/03	<0.01	<0.01	NA	<0.01	<0.25	<0.01	NA
San Marcos Springs-Hotel (LR-67-01-801)	12/04/03	<0.01	<0.01	NA	<0.01	<0.25	<0.01	NA
San Marcos Springs-Weismueller (LR-67-01-820)	10/06/03	<0.01	<0.01	NA	<0.01	0.0111B	<0.01	NA
San Marcos Springs-Weismueller (LR-67-01-820)	12/19/03	<0.01	0.002B	NA	<0.01	0.0188B	<0.01	NA
San Pedro Springs	03/10/03	<0.01	<0.01	NA	<0.01	<0.01	<0.01	NA
San Pedro Springs	06/16/03	<0.01	<0.01	NA	0.0123B	<0.01	<0.01	NA
San Pedro Springs	10/09/03	0.0006B	<0.01	NA	<0.01	<0.25	<0.01	NA
San Pedro Springs	12/02/03	<0.01	0.0046B	NA	0.0023B	<0.25	<0.01	NA

* Sample collected by the Authority and analyzed by TWDB
B = Estimated Result between the method detection limit and the reporting limit
NA = Not analyzed

Table C-10 Analytical data for metals in water samples from streams crossing the Edwards Aquifer Recharge Zone and Springs discharging from the Edwards Aquifer, 2003 (cont'd)

Station Name	Date Sampled	Manganese dissolved (mg/L)	Mercury dissolved (mg/L)	Molybdenum dissolved (mg/L)	Nickel dissolved (mg/L)	Selenium dissolved (mg/L)
Comal Springs #1 (DX-68-23-301)	03/05/03	<0.01	0.00025B	NA	<0.01	<0.01
Comal Springs #1 (DX-68-23-301)	06/18/03	*<0.001	NA	*<0.001	*0.001B	*<0.004
Comal Springs #1 (DX-68-23-301)	10/10/03	<0.01	<0.0002	NA	0.0072B	<0.01
Comal Springs #1 (DX-68-23-301)	12/03/03	0.0026B	0.00032B	NA	0.0061B	<0.01
Comal Springs #2	10/08/03	<0.01	<0.0002	NA	0.0072B	<0.01
Comal Springs #3	10/08/03	<0.01	<0.0002	NA	0.0061B	<0.01
Comal Springs #5 (Duplicate)	10/10/03	0.0002	0.00012	NA	0.0046B	0.0045
Comal Springs #5	10/10/03	0.0002	0.00012	NA	0.0035B	0.0045
Comal Springs #7	03/06/03	<0.01	<0.0002	NA	<0.01	<0.01
Comal Springs #7	06/17/03	0.0003B	<0.0002	NA	0.0008B	<0.01
Comal Springs #7	10/08/03	<0.01	<0.0002	NA	0.0051B	<0.01
Comal Springs #7	12/03/03	0.0025B	<0.0002	NA	0.0065B	<0.01
Comal Springs A	10/10/03	<0.01	<0.0002	NA	0.0037B	<0.01
Comal Springs B1	06/18/03	<0.01	<0.0002	NA	<0.01	0.0063B
Comal Springs B1	10/08/03	<0.01	<0.0002	NA	0.0031B	<0.01
Comal Springs-Saltation	10/08/03	<0.01	<0.0002	NA	0.0048B	<0.01
Comal Springs-Spring Island (DX-68-23-320)	08/20/03	*<0.001	NA	*<0.001	*0.002	*<0.004
Comal Springs-Spring Island (DX-68-23-320)	10/08/03	<0.01	<0.0002	NA	0.0008B	<0.01
Hueco Springs A (DX-68-15-901)	03/05/03	<0.01	<0.0002	NA	<0.01	<0.01
Hueco Springs A (DX-68-15-901)	06/17/03	*<0.001	NA	*<0.001	*0.002	*<0.004
Hueco Springs A (DX-68-15-901)	10/07/03	<0.01	0.00022B	NA	0.008B	<0.01
Hueco Springs A (DX-68-15-901)	12/01/03	<0.01	0.00023B	NA	0.0038B	<0.01
Hueco Springs B	03/05/03	<0.01	0.00024B	NA	<0.01	<0.01
Hueco Springs B	06/17/03	0.0002B	0.00014B	NA	0.0012B	0.0097B

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B = Estimated Result between the method detection limit and the reporting limit, NA = Not analyzed

Table C-10 Analytical data for metals in water samples from streams crossing the Edwards Aquifer Recharge Zone and Springs discharging from the Edwards Aquifer, 2003 (cont'd)

Station Name	Date Sampled	Manganese dissolved (mg/L)	Mercury dissolved (mg/L)	Molybdenum dissolved (mg/L)	Nickel dissolved (mg/L)	Selenium dissolved (mg/L)
Hueco Springs B	10/07/03	<0.01	<0.0002	NA	0.0011B	<0.01
Hueco Springs B	12/01/03	<0.01	<0.0002	NA	0.0034B	<0.01
San Antonio Springs	03/10/03	0.0003B	<0.0002	NA	<0.01	<0.01
San Antonio Springs	06/16/03	<0.01	0.00023B	NA	<0.01	<0.01
San Antonio Springs	10/09/03	<0.01	<0.0002	NA	0.0045B	<0.01
San Antonio Springs	12/02/03	0.0024B	0.00022B	NA	0.0055B	<0.01
San Marcos Springs-Catfish	10/06/03	0.0006B	<0.0002	NA	0.0039B	0.0226B
San Marcos Springs-Catfish	12/19/03	0.0004B	<0.0002	NA	0.0042B	0.0189B
San Marcos Springs-Deep (LR-67-01-819)	03/12/03	0.0003B	0.00013B	NA	<0.01	<0.01
San Marcos Springs-Deep (LR-67-01-819)	06/23/03	<0.01	<0.0002	NA	<0.01	<0.01
San Marcos Springs-Deep (LR-67-01-819)	10/06/03	0.0007B	0.00019B	NA	0.0016B	0.0135B
San Marcos Springs-Deep (LR-67-01-819)	12/29/03	0.0002B	<0.0002	NA	0.002B	<0.01
San Marcos Springs-Diversion	10/06/03	0.0008B	<0.0002	NA	0.0023B	0.0179B
San Marcos Springs-Diversion	12/19/03	<0.01	<0.0002	NA	0.0035B	0.0185B
San Marcos Springs-Hotel (LR-67-01-801)	03/12/03	<0.01	<0.0002	NA	<0.01	<0.01
San Marcos Springs-Hotel (LR-67-01-801)	06/19/03	0.0004B	0.00013B	NA	0.0007B	0.0069B
San Marcos Springs-Hotel (LR-67-01-801)	10/10/03	<0.01	<0.0002	NA	0.0043B	<0.01
San Marcos Springs-Hotel (LR-67-01-801)	12/04/03	<0.01	<0.0002	NA	0.0021B	<0.01
San Marcos Springs-Weismueller (LR-67-01-820)	10/06/03	0.0009B	<0.0002	NA	0.0022B	0.0115B
San Marcos Springs-Weismueller (LR-67-01-820)	12/19/03	<0.01	<0.0002	NA	0.0037B	0.0171B
San Pedro Springs	03/10/03	<0.01	<0.0002	NA	<0.01	<0.01
San Pedro Springs	06/16/03	<0.01	<0.0002	NA	0.0012B	<0.01
San Pedro Springs	10/09/03	<0.01	<0.0002	NA	0.0081B	<0.01
San Pedro Springs	12/02/03	0.0024B	<0.0002	NA	0.0064B	<0.01

* Sample collected by the Authority and analyzed by TWDB

B = Estimated Result between the method detection limit and the reporting limit

NA = Not analyzed

Table C-10 Analytical data for metals in water samples from streams crossing the Edwards Aquifer Recharge Zone and Springs discharging from the Edwards Aquifer, 2003 (cont'd)

Station Name	Date Sampled	Silver dissolved (mg/L)	Strontium dissolved (mg/L)	Thallium dissolved (mg/L)	Vanadium dissolved (mg/L)	Zinc dissolved (mg/L)
Comal Springs #1 (DX-68-23-301)	03/05/03	<0.01	0.621B	<0.01	NA	<0.01
Comal Springs #1 (DX-68-23-301)	06/18/03	NA	*0.576B	*<0.001	*0.003B	*<0.004
Comal Springs #1 (DX-68-23-301)	10/10/03	0.0023B	0.601B	<0.01	NA	0.0014B
Comal Springs #1 (DX-68-23-301)	12/03/03	<0.005	0.646B	<0.01	NA	0.0011B
Comal Springs #2	10/08/03	0.0016B	0.572B	<0.01	NA	0.0223B
Comal Springs #3	10/08/03	0.0034B	0.579B	<0.01	NA	0.0255B
Comal Springs #5 (Duplicate)	10/10/03	0.0012B	0.6959	0.0043	NA	0.001
Comal Springs #5	10/10/03	0.0009B	0.6869	0.0043	NA	0.001
Comal Springs #7	03/06/03	<0.01	0.735B	<0.01	NA	0.0016B
Comal Springs #7	06/17/03	<0.01	0.642B	<0.01	NA	<0.01
Comal Springs #7	10/08/03	<0.005	0.706B	<0.01	NA	0.008B
Comal Springs #7	12/03/03	<0.005	0.728B	<0.01	NA	0.0045B
Comal Springs A	10/10/03	<0.005	0.729B	<0.01	NA	0.002B
Comal Springs B1	06/18/03	<0.01	0.7B	<0.01	NA	<0.01
Comal Springs B1	10/08/03	0.0019B	0.685B	<0.01	NA	0.0208B
Comal Springs-Saltation	10/08/03	<0.005	0.677B	<0.01	NA	0.0384B
Comal Springs-Spring Island (DX-68-23-320)	08/20/03	NA	*0.058	*<0.001	*0.003	*0.008
Comal Springs-Spring Island (DX-68-23-320)	10/08/03	0.001B	0.595B	<0.01	NA	0.0096B
Hueco Springs A (DX-68-15-901)	03/05/03	<0.01	0.185B	<0.01	NA	0.0013B
Hueco Springs A (DX-68-15-901)	06/17/03	NA	*0.26	*<0.001	*0.002	*<0.004
Hueco Springs A (DX-68-15-901)	10/07/03	0.002B	0.406B	<0.01	NA	<0.01
Hueco Springs A (DX-68-15-901)	12/01/03	0.001B	0.524B	<0.01	NA	0.0089B
Hueco Springs B	03/05/03	<0.01	0.178B	<0.01	NA	0.0012B
Hueco Springs B	06/17/03	<0.01	0.248B	<0.01	NA	<0.01

* Sample collected by the Authority and analyzed by TWDB

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Table C-10 Analytical data for metals in water samples from streams crossing the Edwards Aquifer Recharge Zone and Springs discharging from the Edwards Aquifer, 2003

Station Name	Date Sampled	Silver dissolved (mg/L)	Strontium dissolved (mg/L)	Thallium dissolved (mg/L)	Vanadium dissolved (mg/L)	Zinc dissolved (mg/L)
Hueco Springs B	10/07/03	0.0017B	0.393B	<0.01	NA	<0.01
Hueco Springs B	12/01/03	<0.005	0.528B	<0.01	NA	<0.01
San Antonio Springs	03/10/03	<0.01	0.556B	<0.01	NA	0.0029B
San Antonio Springs	06/16/03	<0.01	0.548B	<0.01	NA	<0.01
San Antonio Springs	10/09/03	0.0012B	0.538B	<0.01	NA	<0.01
San Antonio Springs	12/02/03	<0.005	0.585B	<0.01	NA	0.001B
San Marcos Springs-Catfish	10/06/03	0.0019B	0.458B	0.0286B	NA	<0.01
San Marcos Springs-Catfish	12/19/03	<0.005	0.468B	<0.01	NA	0.0031B
San Marcos Springs-Deep (LR-67-01-819)	03/12/03	<0.01	0.929B	<0.01	NA	0.004B
San Marcos Springs-Deep (LR-67-01-819)	06/23/03	<0.01	0.512B	<0.01	NA	<0.01
San Marcos Springs-Deep (LR-67-01-819)	10/06/03	<0.005	0.516B	0.0308B	NA	<0.01
San Marcos Springs-Deep (LR-67-01-819)	12/29/03	<0.005	0.0046B	<0.01	NA	0.0023B
San Marcos Springs-Diversion	10/06/03	0.002B	0.513B	0.0283B	NA	<0.01
San Marcos Springs-Diversion	12/19/03	<0.005	0.555B	<0.01	NA	0.0034B
San Marcos Springs-Hotel (LR-67-01-801)	03/12/03	<0.01	0.539B	<0.01	NA	0.0032B
San Marcos Springs-Hotel (LR-67-01-801)	06/19/03	<0.01	0.55B	<0.01	NA	0.0057B
San Marcos Springs-Hotel (LR-67-01-801)	10/10/03	0.0012B	0.542B	<0.01	NA	<0.01
San Marcos Springs-Hotel (LR-67-01-801)	12/04/03	<0.005	0.663B	<0.01	NA	0.002B
San Marcos Springs-Weismueller (LR-67-01-820)	10/06/03	0.0029B	0.55B	0.0348B	NA	<0.01
San Marcos Springs-Weismueller (LR-67-01-820)	12/19/03	<0.005	0.566B	<0.01	NA	0.0036B
San Pedro Springs	03/10/03	<0.01	0.552B	<0.01	NA	0.0025B
San Pedro Springs	06/16/03	<0.01	0.53B	<0.01	NA	0.0434B
San Pedro Springs	10/09/03	<0.005	0.545B	0.0048B	NA	<0.01
San Pedro Springs	12/02/03	0.0012B	0.618B	<0.01	NA	0.0024B

* Sample collected by the Authority and analyzed by TWDB

B = Estimated Result between the method detection limit and the reporting limit

NA = Not analyzed

Table C-11 Analytical data for nutrients in water samples from streams crossing the Edwards Aquifer Recharge Zone and springs discharging from the Edwards Aquifer, 2003 (cont'd)

Station Name	Date Sampled	Nitrate-Nitrite as N (mg/L)	Nitrite as N (mg/L)	Ortho-phosphate as P (mg/L)	Phosphorus (mg/L)
Blanco River at Wimberley [8171000]	04/16/03	0.380B	0.0039B	NA	<0.1
Blanco River at Wimberley [8171000]	09/16/03	0.313B	0.0064B	NA	0.104
Dry Frio River at Reagan Wells [8196000]	04/09/03	0.313B	0.0018B	NA	0.0076B
Dry Frio River at Reagan Wells [8196000]	09/10/03	0.402B	0.0038B	NA	<0.1
Frio River at Concan [8195000]	04/09/03	0.314B	0.0027B	NA	<0.1
Frio River at Concan [8195000]	09/10/03	0.299B	0.0038B	NA	<0.1
Helotes Creek near FM 1560	01/06/03	1.38B	NA	NA	0.0181B
Hondo Creek near Tarpley [8200000]	04/17/03	0.444B	0.0026B	NA	0.0191B
Hondo Creek near Tarpley [8200000]	09/15/03	<1	0.0037B	NA	<0.1
Medina River at Bandera [8178880]	04/17/03	0.420B	0.0032B	NA	0.0174B
Medina River at Bandera [8178880]	09/15/03	0.222B	0.0064B	NA	<0.1
Nueces River at Laguna [8190000]	04/08/03	0.521B	0.0021B	NA	0.0059B
Nueces River at Laguna [8190000]	09/09/03	0.474B	0.0038B	NA	<0.1
Sabinal River near Sabinal [8198000]	04/09/03	0.298	0.0021B	NA	<0.1
Sabinal River near Sabinal [8198000]	09/10/03	0.309B	0.0038B	NA	<0.1
Seco Creek at Miller Ranch [8201500]	09/10/03	0.102B	0.0032B	NA	<0.1
Seco Creek at Miller Ranch [8201500]	04/09/03	0.112B	0.0018B	NA	<0.1
Comal Springs #1 (DX-68-23-301)	03/05/03	1.51	0.0020B	<0.03	<0.1
Comal Springs #1 (DX-68-23-301)	06/18/03	*1.87	NA	NA	NA
Comal Springs #1 (DX-68-23-301)	10/10/03	1.77	0.0013B	NA	0.0158B
Comal Springs #1 (DX-68-23-301)	12/03/03	1.66	NA	NA	<0.1
Comal Springs #2	10/08/03	1.79	NA	NA	0.0067B
Comal Springs #3	10/08/03	1.77	NA	NA	0.0059B
Comal Springs #5 (Duplicate)	10/10/03	1.71	.0013B	.0208B	.0177B
Comal Springs #5	10/10/03	1.70	.0016B	.0084B	.0193B
Comal Springs #7	03/06/03	1.49	0.0029B	<0.03	<0.1
Comal Springs #7	06/17/03	1.86	<0.01	NA	<0.1
Comal Springs #7	10/08/03	1.75	NA	NA	0.0148B
Comal Springs #7	12/03/03	1.64	NA	NA	<0.1
Comal Springs A	10/10/03	1.75	<0.01	NA	0.0136B
Comal Springs B1	06/18/03	1.79	<0.01	NA	<0.1
Comal Springs B1	10/08/03	1.75	NA	NA	<0.1

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B = Estimated result between the method detection limit and the reporting limit
NA = Not analyzed

Table C-11 Analytical data for nutrients in water samples from streams crossing the Edwards Aquifer Recharge Zone and springs discharging from the Edwards Aquifer, 2003

Station Name	Date Sampled	Nitrate-Nitrite as N (mg/L)	Nitrite as N (mg/L)	Ortho-phosphate as P (mg/L)	Phosphorus (mg/L)
Comal Springs-Saltation	10/08/03	1.71	NA	NA	0.0094B
Comal Springs-Spring Island (DX-68-23-320)	08/20/03	*1.83	NA	NA	NA
Comal Springs-Spring Island (DX-68-23-320)	10/08/03	1.69	NA	NA	0.0130B
Hueco Springs A (DX-68-15-901)	03/05/03	0.721	0.0043B	<0.03	<0.1
Hueco Springs A (DX-68-15-901)	06/17/03	*1.41	NA	NA	NA
Hueco Springs A (DX-68-15-901)	10/07/03	1.18	NA	NA	<0.1
Hueco Springs A (DX-68-15-901)	12/01/03	1.11	NA	NA	<0.1
Hueco Springs B	03/05/03	0.719	0.0037B	<0.03	<0.1
Hueco Springs B	06/17/03	1.55	0.0024B	NA	<0.1
Hueco Springs B	10/07/03	1.16	NA	NA	0.0246B
Hueco Springs B	12/01/03	0.819	NA	NA	<0.1
San Antonio Springs	03/10/03	1.65	0.0022B	<0.03	<0.1
San Antonio Springs	06/16/03	1.80	<0.01	NA	0.0055B
San Antonio Springs	10/09/03	1.77	NA	NA	0.0174B
San Antonio Springs	12/02/03	1.68	NA	NA	0.0054B
San Marcos Springs-Catfish	10/06/03	1.40	NA	NA	0.0089B
San Marcos Springs-Catfish	12/19/03	1.27	NA	NA	0.0072B
San Marcos Springs-Deep (LR-67-01-819)	03/12/03	1.28	0.0040B	NA	0.0098B
San Marcos Springs-Deep (LR-67-01-819)	06/23/03	1.37	0.0043B	NA	<0.1
San Marcos Springs-Deep (LR-67-01-819)	10/06/03	1.47	NA	NA	<0.1
San Marcos Springs-Deep (LR-67-01-819)	12/29/03	1.53	NA	NA	<0.1
San Marcos Springs-Diversion	10/06/03	0.991	NA	NA	0.0097B
San Marcos Springs-Diversion	12/19/03	0.908	NA	NA	0.0063B
San Marcos Springs-Hotel (LR-67-01-801)	03/12/03	0.952	0.0028B	NA	<0.1
San Marcos Springs-Hotel (LR-67-01-801)	06/19/03	1.01	<0.01	NA	<0.1
San Marcos Springs-Hotel (LR-67-01-801)	10/10/03	0.974	0.0016B	NA	0.0165B
San Marcos Springs-Hotel (LR-67-01-801)	12/04/03	0.819	NA	NA	0.0078B
San Marcos Springs-Weismueller (LR-67-01-820)	10/06/03	0.942	NA	NA	<0.1
San Marcos Springs-Weismueller (LR-67-01-820)	12/19/03	0.822	NA	NA	<0.1
San Pedro Springs	03/10/03	1.79	0.0022B	<0.03	<0.1
San Pedro Springs	06/16/03	1.90	<0.01	NA	<0.1
San Pedro Springs	10/09/03	1.97	NA	NA	0.0261B
San Pedro Springs	12/02/03	1.85	NA	NA	0.0363B

* Sample collected by the Authority and analyzed by TWDB
B = Estimated result between the method detection limit and the reporting limit
NA = Not analyzed

Table C-12 Analytical data for pesticides, herbicides, and PCB (Aroclors) in water samples from streams crossing the Edwards Aquifer Recharge Zone and springs discharging from the Edwards Aquifer, 2003 (cont'd)

Station Name	Date Sampled	Aldrin (µg/L)	alpha BHC (µg/L)	alpha-Chlordane (µg/L)	Aroclor 1016 (µg/L)	Aroclor 1221 (µg/L)	Aroclor 1232 (µg/L)	Aroclor 1242 (µg/L)
Blanco River at Wimberley [8171000]	04/16/03	<0.05	<0.05	<0.05	<0.5	<0.5	<0.5	<0.5
Blanco River at Wimberley [8171000]	09/16/03	<0.05	<0.05	<0.05	<0.5	<0.5	<0.5	<0.5
Dry Frio River at Reagan Wells [8196000]	04/09/03	<0.05	<0.05	<0.05	<0.5	<0.5	<0.5	<0.5
Dry Frio River at Reagan Wells [8196000]	09/10/03	<0.05	<0.05	<0.05	<0.5	<0.5	<0.5	<0.5
Frio River at Concan [8195000]	04/09/03	<0.05	<0.05	<0.05	<0.5	<0.5	<0.5	<0.5
Frio River at Concan [8195000]	09/10/03	<0.05	<0.05	<0.05	<0.5	<0.5	<0.5	<0.5
Hondo Creek near Tarpley [8200000]	04/17/03	<0.05	<0.05	<0.05	<0.5	<0.5	<0.5	<0.5
Hondo Creek near Tarpley [8200000]	09/15/03	<0.05	<0.05	<0.05	<0.5	<0.5	<0.5	<0.5
Medina River at Bandera [8178880]	04/17/03	<0.05	<0.05	<0.05	<0.5	<0.5	<0.5	<0.5
Medina River at Bandera [8178880]	09/15/03	<0.05	<0.05	<0.05	<0.5	<0.5	<0.5	<0.5
Nueces River at Laguna [8190000]	04/08/03	<0.05	<0.05	<0.05	<0.5	<0.5	<0.5	<0.5
Nueces River at Laguna [8190000]	09/09/03	<0.05	<0.05	<0.05	<0.5	<0.5	<0.5	<0.5
Sabinal River near Sabinal [8198000]	04/09/03	<0.05	<0.05	<0.05	<0.5	<0.5	<0.5	<0.5
Sabinal River near Sabinal [8198000]	09/10/03	<0.05	<0.05	<0.05	<0.5	<0.5	<0.5	<0.5
Seco Creek at Miller Ranch [8201500]	04/09/03	<0.05	<0.05	<0.05	<0.5	<0.5	<0.5	<0.5
Seco Creek at Miller Ranch [8201500]	09/10/03	<0.05	<0.05	<0.05	<0.5	<0.5	<0.5	<0.5
Comal Springs #1 (DX-68-23-301)	03/05/03	<0.05	<0.05	<0.05	<0.5	<0.5	<0.5	<0.5
Comal Springs #1 (DX-68-23-301)	10/10/03	<0.05	<0.05	<0.05	<0.5	<0.5	<0.5	<0.5
Comal Springs #1 (DX-68-23-301)	12/03/03	<0.05	<0.05	<0.05	<0.5	<0.5	<0.5	<0.5
Comal Springs #7	03/06/03	<0.05	<0.05	<0.05	<0.5	<0.5	<0.5	<0.5
Comal Springs #7	06/17/03	<0.05	<0.05	<0.05	<0.5	<0.5	<0.5	<0.5
Comal Springs #7	10/08/03	<0.05	<0.05	<0.05	<0.5	<0.5	<0.5	<0.5
Comal Springs #7	12/03/03	<0.05	<0.05	<0.05	<0.5	<0.5	<0.5	<0.5

NA = Not analyzed

J = Estimated result between the method detection limit and the reporting limit

Table C-12 Analytical data for pesticides, herbicides, and PCB (Aroclors) in water samples from streams crossing the Edwards Aquifer Recharge Zone and springs discharging from the Edwards Aquifer, 2003 (cont'd)

Station Name	Date Sampled	Aldrin (µg/L)	alpha BHC (µg/L)	alpha-Chlordane (µg/L)	Aroclor 1016 (µg/L)	Aroclor 1221 (µg/L)	Aroclor 1232 (µg/L)	Aroclor 1242 (µg/L)
Hueco Springs A (DX-68-15-901)	03/05/03	<0.05	<0.05	<0.05	<0.5	<0.5	<0.5	<0.5
Hueco Springs A (DX-68-15-901)	10/07/03	<0.05	<0.05	<0.05	<0.5	<0.5	<0.5	<0.5
Hueco Springs A (DX-68-15-901)	12/01/03	<0.05	<0.05	<0.05	<0.5	<0.5	<0.5	<0.5
Hueco Springs B	03/05/03	<0.05	<0.05	<0.05	<0.5	<0.5	<0.5	<0.5
Hueco Springs B	06/17/03	<0.05	<0.05	<0.05	<0.5	<0.5	<0.5	<0.5
Hueco Springs B	10/07/03	<0.05	<0.05	<0.05	<0.5	<0.5	<0.5	<0.5
Hueco Springs B	12/01/03	<0.05	<0.05	<0.05	<0.5	<0.5	<0.5	<0.5
San Antonio Springs	03/10/03	<0.05	<0.05	<0.05	<0.5	<0.5	<0.5	<0.5
San Antonio Springs	06/16/03	<0.05	<0.05	<0.05	<0.5	<0.5	<0.5	<0.5
San Antonio Springs	10/09/03	<0.05	<0.05	<0.05	<0.5	<0.5	<0.5	<0.5
San Antonio Springs	12/02/03	<0.05	<0.05	<0.05	<0.5	<0.5	<0.5	<0.5
San Marcos Springs-Catfish	12/19/03	<0.05	<0.05	<0.05	<0.5	<0.5	<0.5	<0.5
San Marcos Springs-Deep (LR-67-01-819)	03/12/03	<0.05	<0.05	<0.05	<0.5	<0.5	<0.5	<0.5
San Marcos Springs-Deep (LR-67-01-819)	06/23/03	<0.05	<0.05	<0.05	<0.5	<0.5	<0.5	<0.5
San Marcos Springs-Deep (LR-67-01-819)	10/06/03	<0.05	<0.05	<0.05	<0.5	<0.5	<0.5	<0.5
San Marcos Springs-Deep (LR-67-01-819)	12/29/03	<0.05	<0.05	<0.05	<0.5	<0.5	<0.5	<0.5
San Marcos Springs-Diversion	12/19/03	<0.05	<0.05	<0.05	<0.5	<0.5	<0.5	<0.5
San Marcos Springs-Hotel (LR-67-01-801)	03/12/03	<0.05	<0.05	<0.05	<0.5	<0.5	<0.5	<0.5
San Marcos Springs-Hotel (LR-67-01-801)	06/19/03	<0.05	<0.05	<0.05	<0.5	<0.5	<0.5	<0.5
San Marcos Springs-Hotel (LR-67-01-801)	10/10/03	<0.05	<0.05	<0.05	<0.5	<0.5	<0.5	<0.5
San Marcos Springs-Hotel (LR-67-01-801)	12/04/03	<0.05	<0.05	<0.05	<0.5	<0.5	<0.5	<0.5
San Marcos Springs-Weismueller (LR-67-01-820)	12/19/03	<0.05	<0.05	<0.05	<0.5	<0.5	<0.5	<0.5
San Pedro Springs	03/10/03	<0.05	<0.05	<0.05	<0.5	<0.5	<0.5	<0.5
San Pedro Springs	06/16/03	<0.05	<0.05	<0.05	<0.5	<0.5	<0.5	<0.5
San Pedro Springs	10/09/03	<0.05	<0.05	<0.05	<0.5	<0.5	<0.5	<0.5
San Pedro Springs	12/02/03	<0.05	<0.05	<0.05	<0.5	<0.5	<0.5	<0.5

NA = Not analyzed,

J = Estimated result between the method detection limit and the reporting limit

Table C-12 Analytical data for pesticides, herbicides, and PCB (Aroclors) in water samples from streams crossing the Edwards Aquifer Recharge Zone and springs discharging from the Edwards Aquifer, 2003 (cont'd)

Station Name	Date Sampled	Aroclor 1248 (µg/L)	Aroclor 1254 (µg/L)	Aroclor 1260 (µg/L)	Atrazine (µg/L)	Azinphos methyl (µg/L)	Bentazon (µg/L)	beta BHC (µg/L)	Bolstar (Sulprofos) (µg/L)
Blanco River at Wimberley [8171000]	04/16/03	<0.5	<0.5	<0.5	<2.0	<1.0	<2.0	<0.05	<1.0
Blanco River at Wimberley [8171000]	09/16/03	<0.5	<0.5	<0.5	<2.0	<1.0	<2.0	<0.05	<1.0
Dry Frio River at Reagan Wells [8196000]	04/09/03	<0.5	<0.5	<0.5	<2.0	<1.0	<2.0	<0.05	<1.0
Dry Frio River at Reagan Wells [8196000]	09/10/03	<0.5	<0.5	<0.5	<2.0	<1.0	<2.0	<0.05	<1.0
Frio River at Concan [8195000]	04/09/03	<0.5	<0.5	<0.5	<2.0	<1.0	<2.0	<0.05	<1.0
Frio River at Concan [8195000]	09/10/03	<0.5	<0.5	<0.5	<2.0	<1.0	<2.0	<0.05	<1.0
Hondo Creek near Tarpley [8200000]	04/17/03	<0.5	<0.5	<0.5	<2.0	<1.0	<2.0	<0.05	<1.0
Hondo Creek near Tarpley [8200000]	09/15/03	<0.5	<0.5	<0.5	<2.0	<1.0	<2.0	<0.05	<1.0
Medina River at Bandera [8178880]	04/17/03	<0.5	<0.5	<0.5	<2.0	<1.0	<2.0	<0.05	<1.0
Medina River at Bandera [8178880]	09/15/03	<0.5	<0.5	<0.5	<2.0	<1.0	<2.0	<0.05	<1.0
Nueces River at Laguna [8190000]	04/08/03	<0.5	<0.5	<0.5	<2.0	<1.0	<2.0	<0.05	<1.0
Nueces River at Laguna [8190000]	09/09/03	<0.5	<0.5	<0.5	<2.0	<1.0	<2.0	<0.05	<1.0
Sabinal River near Sabinal [8198000]	04/09/03	<0.5	<0.5	<0.5	<2.0	<1.0	<2.0	<0.05	<1.0
Sabinal River near Sabinal [8198000]	09/10/03	<0.5	<0.5	<0.5	<2.0	<1.0	<2.0	<0.05	<1.0
Seco Creek at Miller Ranch [8201500]	04/09/03	<0.5	<0.5	<0.5	<2.0	<1.0	<2.0	<0.05	<1.0
Seco Creek at Miller Ranch [8201500]	09/10/03	<0.5	<0.5	<0.5	<2.0	<1.0	<2.0	<0.05	<1.0
Comal Springs #1 (DX-68-23-301)	03/05/03	<0.5	<0.5	<0.5	<2.0	<1.0	<2.0	<0.05	<1.0
Comal Springs #1 (DX-68-23-301)	10/10/03	<0.5	<0.5	<0.5	<2.0	<1.0	<2.0	<0.05	<1.0
Comal Springs #1 (DX-68-23-301)	12/03/03	<0.5	<0.5	<0.5	<2.0	<1.0	<2.0	<0.05	<1.0
Comal Springs #7	03/06/03	<0.5	<0.5	<0.5	<2.0	<1.0	<2.0	<0.05	<1.0
Comal Springs #7	06/17/03	<0.5	<0.5	<0.5	<2.0	<1.0	<2.0	<0.05	<1.0
Comal Springs #7	10/08/03	<0.5	<0.5	<0.5	<2.0	<1.0	<2.0	<0.05	<1.0
Comal Springs #7	12/03/03	<0.5	<0.5	<0.5	<2.0	<1.0	<2.0	<0.05	<1.0

NA = Not analyzed

J = Estimated result between the method detection limit and the reporting limit

Table C-12 Analytical data for pesticides, herbicides, and PCB (Aroclors) in water samples from streams crossing the Edwards Aquifer Recharge Zone and springs discharging from the Edwards Aquifer, 2003 (cont'd)

Station Name	Date Sampled	Aroclor 1248 (µg/L)	Aroclor 1254 (µg/L)	Aroclor 1260 (µg/L)	Atrazine (µg/L)	Azinphos methyl (µg/L)	Bentazon (µg/L)	beta BHC (µg/L)	Bolstar (Sulprofos) (µg/L)
Hueco Springs A (DX-68-15-901)	03/05/03	<0.5	<0.5	<0.5	<2.0	<1.0	<2.0	<0.05	<1.0
Hueco Springs A (DX-68-15-901)	10/07/03	<0.5	<0.5	<0.5	<2.0	<1.0	<2.0	<0.05	<1.0
Hueco Springs A (DX-68-15-901)	12/01/03	<0.5	<0.5	<0.5	<2.0	<1.0	<2.0	<0.05	<1.0
Hueco Springs B	03/05/03	<0.5	<0.5	<0.5	<2.0	<1.0	<2.0	<0.05	<1.0
Hueco Springs B	06/17/03	<0.5	<0.5	<0.5	<2.0	<1.0	<2.0	<0.05	<1.0
Hueco Springs B	10/07/03	<0.5	<0.5	<0.5	<2.0	<1.0	<2.0	<0.05	<1.0
Hueco Springs B	12/01/03	<0.5	<0.5	<0.5	<2.0	<1.0	<2.0	<0.05	<1.0
San Antonio Springs	03/10/03	<0.5	<0.5	<0.5	<2.0	<1.0	<2.0	<0.05	<1.0
San Antonio Springs	06/16/03	<0.5	<0.5	<0.5	<2.0	<1.0	<2.0	<0.05	<1.0
San Antonio Springs	10/09/03	<0.5	<0.5	<0.5	<2.0	<1.0	<2.0	<0.05	<1.0
San Antonio Springs	12/02/03	<0.5	<0.5	<0.5	<2.0	<1.0	<2.0	<0.05	<1.0
San Marcos Springs-Catfish	12/19/03	<0.5	<0.5	<0.5	<2.0	<1.0	<2.0	<0.05	<1.0
San Marcos Springs-Deep (LR-67-01-819)	03/12/03	<0.5	<0.5	<0.5	<2.0	<1.0	<2.0	<0.05	<1.0
San Marcos Springs-Deep (LR-67-01-819)	06/23/03	<0.5	<0.5	<0.5	<2.0	<1.0	<2.0	<0.05	<1.0,
San Marcos Springs-Deep (LR-67-01-819)	10/06/03	<0.5	<0.5	<0.5	<2.0	<1.0	2.0	<0.05	<1.0
San Marcos Springs-Deep (LR-67-01-819)	12/29/03	<0.5	<0.5	<0.5	<2.0	<1.0	<2.0	<0.05	<1.0
San Marcos Springs-Diversion	12/19/03	<0.5	<0.5	<0.5	<2.0	<1.0	<2.0	<0.05	<1.0
San Marcos Springs-Hotel (LR-67-01-801)	03/12/03	<0.5	<0.5	<0.5	<2.0	<1.0	<2.0	<0.05	<1.0
San Marcos Springs-Hotel (LR-67-01-801)	06/19/03	<0.5	<0.5	<0.5	<2.0	<1.0	<2.0	<0.05	<1.0
San Marcos Springs-Hotel (LR-67-01-801)	10/10/03	<0.5	<0.5	<0.5	<2.0	<1.0	<2.0	<0.05	<1.0
San Marcos Springs-Hotel (LR-67-01-801)	12/04/03	<0.5	<0.5	<0.5	<2.0	<1.0	<2.0	<0.05	<1.0
San Marcos Springs-Weismueller (LR-67-01-820)	12/19/03	<0.5	<0.5	<0.5	<2.0	<1.0	<2.0	<0.05	<1.0
San Pedro Springs	03/10/03	<0.5	<0.5	<0.5	<2.0	<1.0	<2.0	<0.05	<1.0
San Pedro Springs	06/16/03	<0.5	<0.5	<0.5	<2.0	<1.0	<2.0	<0.05	<1.0
San Pedro Springs	10/09/03	<0.5	<0.5	<0.5	<2.0	<1.0	<2.0	<0.05	<1.0
San Pedro Springs	12/02/03	<0.5	<0.5	<0.5	<2.0	<1.0	<2.0	<0.05	<1.0

NA = Not analyzed,

J = Estimated result between the method detection limit and the reporting limit

Table C-12 Analytical data for pesticides, herbicides, and PCB (Aroclors) in water samples from streams crossing the Edwards Aquifer Recharge Zone and springs discharging from the Edwards Aquifer, 2003 (cont'd)

Station Name	Date Sampled	Carbo phenothion (µg/L)	Chlorpyrifos (µg/L)	Chlorpyrifos Methyl (µg/L)	Coumaphos (µg/L)	4,4'-D (µg/L)	4,4'-DDD (µg/L)	4,4'-DDE (µg/L)
Blanco River at Wimberley [8171000]	04/16/03	<1.0	<1.0	<1.0	<1.0	<0.5	<0.2	<0.1
Blanco River at Wimberley [8171000]	09/16/03	<1.0	<1.0	<1.0	<1.0	<0.5	<0.2	<0.1
Dry Frio River at Reagan Wells [8196000]	04/09/03	<1.0	<1.0	<1.0	<1.0	<0.5	<0.2	<0.1
Dry Frio River at Reagan Wells [8196000]	09/10/03	<1.0	<1.0	<1.0	<1.0	<0.5	<0.2	<0.1
Frio River at Concan [8195000]	04/09/03	<1.0	<1.0	<1.0	<1.0	<0.5	<0.2	<0.1
Frio River at Concan [8195000]	09/10/03	<1.0	<1.0	<1.0	<1.0	<0.5	<0.2	<0.1
Hondo Creek near Tarpley [8200000]	04/17/03	<1.0	<1.0	<1.0	<1.0	<0.5	<0.2	<0.1
Hondo Creek near Tarpley [8200000]	09/15/03	<1.0	<1.0	<1.0	<1.0	<0.5	<0.2	<0.1
Medina River at Bandera [8178880]	04/17/03	<1.0	<1.0	<1.0	<1.0	<0.5	<0.2	<0.1
Medina River at Bandera [8178880]	09/15/03	<1.0	<1.0	<1.0	<1.0	<0.5	<0.2	<0.1
Nueces River at Laguna [8190000]	04/08/03	<1.0	<1.0	<1.0	<1.0	<0.5	<0.2	<0.1
Nueces River at Laguna [8190000]	09/09/03	<1.0	<1.0	<1.0	<1.0	<0.5	<0.2	<0.1
Sabinal River near Sabinal [8198000]	04/09/03	<1.0	<1.0	<1.0	<1.0	<0.5	<0.2	<0.1
Sabinal River near Sabinal [8198000]	09/10/03	<1.0	<1.0	<1.0	<1.0	<0.5	<0.2	<0.1
Seco Creek at Miller Ranch [8201500]	09/10/03	<1.0	<1.0	<1.0	<1.0	<0.5	<0.2	<0.1
Seco Creek at Miller Ranch [8201500]	04/09/03	<1.0	<1.0	<1.0	<1.0	<0.5	<0.2	<0.1
Comal Springs #1 (DX-68-23-301)	03/05/03	<1.0	<1.0	<1.0	<1.0	<0.5	<0.2	<0.1
Comal Springs #1 (DX-68-23-301)	10/10/03	<1.0	<1.0	<1.0	<1.0	<0.5	<0.1	<0.1
Comal Springs #1 (DX-68-23-301)	12/03/03	<1.0	<1.0	<1.0	<1.0	<0.5	<0.1	<0.1
Comal Springs #7	03/06/03	<1.0	<1.0	<1.0	<1.0	<0.5	<0.2	<0.1
Comal Springs #7	06/17/03	<1.0	<1.0	<1.0	<1.0	<0.5	<0.2	<0.1
Comal Springs #7	10/08/03	<1.0	<1.0	<1.0	<1.0	<0.5	<0.1	<0.1
Comal Springs #7	12/03/03	<1.0	<1.0	<1.0	<1.0	<0.5	<0.1	<0.1

NA = Not analyzed

J = Estimated result between the method detection limit and the reporting limit

Table C-12 Analytical data for pesticides, herbicides, and PCB (Aroclors) in water samples from streams crossing the Edwards Aquifer Recharge Zone and springs discharging from the Edwards Aquifer, 2003 (cont'd)

Station Name	Date Sampled	Carbo phenothion (µg/L)	Chlor Pyrifos (µg/L)	Chlorpyrifos methyl (µg/L)	Coumaphos (µg/L)	4,4'-DDT (µg/L)	4,4'-DDD (µg/L)	4,4'-DDE (µg/L)
Hueco Springs A (DX-68-15-901)	03/05/03	<1.0	<1.0	<1.0	<1.0	<0.1	<0.2	<0.1
Hueco Springs A (DX-68-15-901)	10/07/03	<1.0	<1.0	<1.0	<1.0	<0.1	<0.1	<0.1
Hueco Springs A (DX-68-15-901)	12/01/03	<1.0	<1.0	<1.0	<1.0	<0.1	<0.1	<0.1
Hueco Springs B	03/05/03	<1.0	<1.0	<1.0	<1.0	<0.1	<0.2	<0.1
Hueco Springs B	06/17/03	<1.0	<1.0	<1.0	<1.0	<0.1	<0.2	<0.1
Hueco Springs B	10/07/03	<1.0	<1.0	<1.0	<1.0	<0.1	<0.1	<0.1
Hueco Springs B	12/01/03	<1.0	<1.0	<1.0	<1.0	<0.1	<0.1	<0.1
San Antonio Springs	03/10/03	<1.0	<1.0	<1.0	<1.0	<0.1	<0.2	<0.1
San Antonio Springs	06/16/03	<1.0	<1.0	<1.0	<1.0	<0.1	<0.2	<0.1
San Antonio Springs	10/09/03	<1.0	<1.0	<1.0	<1.0	<0.1	<0.1	<0.1
San Antonio Springs	12/02/03	<1.0	<1.0	<1.0	<1.0	<0.1	<0.1	<0.1
San Marcos Springs-Catfish	12/19/03	<1.0	<1.0	<1.0	<1.0	<0.1	<0.1	<0.1
San Marcos Springs-Deep (LR-67-01-819)	03/12/03	<1.0	<1.0	<1.0	<1.0	<0.1	<0.2	<0.1
San Marcos Springs-Deep (LR-67-01-819)	06/23/03	<1.0	<1.0	<1.0	<1.0	<0.1	<0.2	<0.1
San Marcos Springs-Deep (LR-67-01-819)	10/06/03	<1.0	<1.0	<1.0	<1.0	<0.1	<0.1	<0.1
San Marcos Springs-Deep (LR-67-01-819)	12/29/03	<1.0	<1.0	<1.0	<1.0	<0.1	<0.1	<0.1
San Marcos Springs-Diversion	12/19/03	<1.0	<1.0	<1.0	<1.0	<0.10	<0.1	<0.1
San Marcos Springs-Hotel (LR-67-01-801)	03/12/03	<1.0	<1.0	<1.0	<1.0	<0.1	<0.2	<0.1
San Marcos Springs-Hotel (LR-67-01-801)	06/19/03	<1.0	<1.0	<1.0	<1.0	<0.1	<0.2	<0.1
San Marcos Springs-Hotel (LR-67-01-801)	10/10/03	<1.0	<1.0	<1.0	<1.0	<0.1	<0.1	<0.1
San Marcos Springs-Hotel (LR-67-01-801)	12/04/03	<1.0	<1.0	<1.0	<1.0	<0.1	<0.1	<0.1
San Marcos Springs-Weismueller (LR-67-01-820)	12/19/03	<1.0	<1.0	<1.0	<1.0	<0.1	<0.1	<0.1
San Pedro Springs	03/10/03	<1.0	<1.0	<1.0	<1.0	<0.1	<0.2	<0.1
San Pedro Springs	06/16/03	<1.0	<1.0	<1.0	<1.0	<0.1	<0.2	<0.1
San Pedro Springs	10/09/03	<1.0	<1.0	<1.0	<1.0	<0.1	<0.1	<0.1
San Pedro Springs	12/02/03	<1.0	<1.0	<1.0	<1.0	<0.1	<0.1	<0.1

NA = Not analyzed,

J = Estimated result between the method detection limit and the reporting limit

Table C-12 Analytical data for pesticides, herbicides, and PCB (Aroclors) in water samples from streams crossing the Edwards Aquifer Recharge Zone and springs discharging from the Edwards Aquifer, 2003 (cont'd)

Station Name	Date Sampled	4,4'-DDT (µg/L)	delta BHC (µg/L)	Demeton (µg/L)	Diazinon (µg/L)	Dichlofenthion (µg/L)	Dichlorvos (µg/L)	Dieldrin (µg/L)
Blanco River at Wimberley [8171000]	04/16/03	<0.1	<0.05	<2.5	<1.0	<1.0	<2.0	<0.1
Blanco River at Wimberley [8171000]	09/16/03	<0.1	<0.05	<2.5	<1.0	<1.0	<2.0	<0.1
Dry Frio River at Reagan Wells [8196000]	04/09/03	<0.1	<0.05	<2.5	<1.0	<1.0	<2.0	<0.1
Dry Frio River at Reagan Wells [8196000]	09/10/03	<0.1	<0.05	<2.5	<1.0	<1.0	<2.0	<0.1
Frio River at Concan [8195000]	04/09/03	<0.1	<0.05	<2.5	<1.0	<1.0	<2.0	<0.1
Frio River at Concan [8195000]	09/10/03	<0.1	<0.05	<2.5	<1.0	<1.0	<2.0	<0.1
Hondo Creek near Tarpley [8200000]	04/17/03	<0.1	<0.05	<2.5	<1.0	<1.0	<2.0	<0.1
Hondo Creek near Tarpley [8200000]	09/15/03	<0.1	<0.05	<2.5	<1.0	<1.0	<2.0	<0.1
Medina River at Bandera [8178880]	04/17/03	<0.1	<0.05	<2.5	<1.0	<1.0	<2.0	<0.1
Medina River at Bandera [8178880]	09/15/03	<0.1	<0.05	<2.5	<1.0	<1.0	<2.0	<0.1
Nueces River at Laguna [8190000]	04/08/03	<0.1	<0.05	<2.5	<1.0	<1.0	<2.0	<0.1
Nueces River at Laguna [8190000]	09/09/03	<0.1	<0.05	<2.5	<1.0	<1.0	<2.0	<0.1
Sabinal River near Sabinal [8198000]	04/09/03	<0.1	<0.05	<2.5	<1.0	<1.0	<2.0	<0.1
Sabinal River near Sabinal [8198000]	09/10/03	<0.1	<0.05	<2.5	<1.0	<1.0	<2.0	<0.1
Seco Creek at Miller Ranch [8201500]	09/10/03	<0.1	<0.05	<2.5	<1.0	<1.0	<2.0	<0.1
Seco Creek at Miller Ranch [8201500]	04/09/03	<0.1	<0.05	<2.5	<1.0	<1.0	<2.0	<0.1
Comal Springs #1 (DX-68-23-301)	03/05/03	<0.1	<0.05	<2.5	<1.0	<1.0	<2.0	<0.1
Comal Springs #1 (DX-68-23-301)	10/10/03	<0.1	<0.05	<2.5	<1.0	<1.0	<2.0	<0.1
Comal Springs #1 (DX-68-23-301)	12/03/03	<0.1	<0.05	<2.5	<1.0	<1.0	<2.0	<0.1
Comal Springs #7	03/06/03	<0.1	<0.05	<2.5	<1.0	<1.0	<2.0	<0.1
Comal Springs #7	06/17/03	<0.1	<0.05	<2.5	<1.0	<1.0	<2.0	<0.1
Comal Springs #7	10/08/03	<0.1	<0.05	<2.5	<1.0	<1.0	<2.0	<0.1
Comal Springs #7	12/03/03	<0.1	<0.05	<2.5	<1.0	<1.0	<2.0	<0.1

NA = Not analyzed

J = Estimated result between the method detection limit and the reporting limit

Table C-12 Analytical data for pesticides, herbicides, and PCB (Aroclors) in water samples from streams crossing the Edwards Aquifer Recharge Zone and springs discharging from the Edwards Aquifer, 2003 (cont'd)

Station Name	Date Sampled	4,4'-DDT (µg/L)	delta BHC (µg/L)	Demeton (µg/L)	Diazinon (µg/L)	Dichlofenthion (µg/L)	Dichlorvos (µg/L)	Dieldrin (µg/L)
Hueco Springs A (DX-68-15-901)	03/05/03	<0.1	<0.05	<2.5	<1.0	<1.0	<2.0	<0.1
Hueco Springs A (DX-68-15-901)	10/07/03	<0.1	<0.05	<2.5	<1.0	<1.0	<2.0	<0.1
Hueco Springs A (DX-68-15-901)	12/01/03	<0.1	<0.05	<2.5	<1.0	<1.0	<2.0	<0.1
Hueco Springs B	03/05/03	<0.1	<0.05	<2.5	<1.0	<1.0	<2.0	<0.1
Hueco Springs B	06/17/03	<0.1	<0.05	<2.5	<1.0	<1.0	<2.0	<0.1
Hueco Springs B	10/07/03	<0.1	<0.05	<2.5	<1.0	<1.0	<2.0	<0.1
Hueco Springs B	12/01/03	<0.1	<0.05	<2.5	<1.0	<1.0	<2.0	<0.1
San Antonio Springs	03/10/03	<0.1	<0.05	<2.5	<1.0	<1.0	<2.0	<0.1
San Antonio Springs	06/16/03	<0.1	<0.05	<2.5	<1.0	<1.0	<2.0	<0.1
San Antonio Springs	10/09/03	<0.1	<0.05	<2.5	<1.0	<1.0	<2.0	<0.1
San Antonio Springs	12/02/03	<0.1	<0.05	<2.5	<1.0	<1.0	<2.0	<0.1
San Marcos Springs-Catfish	12/19/03	<0.1	<0.05	<2.5	<1.0	<1.0	<2.0	<0.1
San Marcos Springs-Deep (LR-67-01-819)	03/12/03	<0.1	<0.05	<2.5	<1	<1	<2	<0.1
San Marcos Springs-Deep (LR-67-01-819)	06/23/03	<0.1	<0.05	<2.5	<1.0	<1.0	<2.0	<0.1
San Marcos Springs-Deep (LR-67-01-819)	10/06/03	<0.1	<0.05	<2.5	<1.0	<1.0	<2.0	<0.1
San Marcos Springs-Deep (LR-67-01-819)	12/29/03	<0.1	<0.05	<2.5	<1.0	<1.0	<2.0	<0.1
San Marcos Springs-Diversion	12/19/03	<0.1	<0.05	<2.5	<1.0	<1.0	<2.0	<0.1
San Marcos Springs-Hotel (LR-67-01-801)	03/12/03	<0.1	<0.05	<2.5	<1	<1	<2	<0.1
San Marcos Springs-Hotel (LR-67-01-801)	06/19/03	<0.1	<0.05	<2.5	0.010J	<1.0	<2.0	<0.1
San Marcos Springs-Hotel (LR-67-01-801)	10/10/03	<0.1	<0.05	<2.5	<1.0	<1.0	<2.0	<0.1
San Marcos Springs-Hotel (LR-67-01-801)	12/04/03	<0.1	<0.05	<2.5	<1.0	<1.0	<2.0	<0.1
San Marcos Springs-Weismueller (LR-67-01-820)	12/19/03	<0.1	<0.05	<2.5	<1.0	<1.0	<2.0	<0.1
San Pedro Springs	03/10/03	<0.1	<0.05	<2.5	<1.0	<1.0	<2.0	<0.1
San Pedro Springs	06/16/03	<0.1	<0.05	<2.5	<1.0	<1.0	<2.0	<0.1
San Pedro Springs	10/09/03	<0.1	<0.05	<2.5	<1.0	<1.0	<2.0	<0.1
San Pedro Springs	12/02/03	<0.1	<0.05	<2.5	<1.0	<1.0	<2.0	<0.1

NA = Not analyzed

J = Estimated result between the method detection limit and the reporting limit

Table C-12 Analytical data for pesticides, herbicides, and PCB (Aroclors) in water samples from streams crossing the Edwards Aquifer Recharge Zone and springs discharging from the Edwards Aquifer, 2003 (cont'd)

Station Name	Date Sampled	Dimethoate (µg/L)	Dinoseb (µg/L)	Disulfoton (µg/L)	Endo sulfan I (µg/L)	Endo sulfan II (µg/L)	Endosulfan sulfate (µg/L)	Endrin (µg/L)	Endrin aldehyde (µg/L)
Blanco River at Wimberley [8171000]	04/16/03	<2.0	<6.0	<2.0	<0.05	<0.1	<0.1	<0.1	<0.1
Blanco River at Wimberley [8171000]	09/16/03	<2.0	<6.0	<2.0	<0.05	<0.1	<0.1	<0.1	<0.1
Dry Frio River at Reagan Wells [8196000]	04/09/03	<2.0	<6.0	<2.0	<0.05	<0.1	<0.1	<0.1	<0.1
Dry Frio River at Reagan Wells [8196000]	09/10/03	<2.0	<6.0	<2.0	<0.05	<0.1	<0.1	<0.1	<0.1
Frio River at Concan [8195000]	04/09/03	<2.0	<6.0	<2.0	<0.05	<0.1	<0.1	<0.1	<0.1
Frio River at Concan [8195000]	09/10/03	<2.0	<6.0	<2.0	<0.05	<0.1	<0.1	<0.1	<0.1
Hondo Creek near Tarpley [8200000]	04/17/03	<2.0	<6.0	<2.0	<0.05	<0.1	<0.1	<0.1	<0.1
Hondo Creek near Tarpley [8200000]	09/15/03	<2.0	<6.0	<2.0	<0.05	<0.1	<0.1	<0.1	<0.1
Medina River at Bandera [8178880]	04/17/03	<2.0	<6.0	<2.0	<0.05	<0.1	<0.1	<0.1	<0.1
Medina River at Bandera [8178880]	09/15/03	<2.0	<6.0	<2.0	<0.05	<0.1	<0.1	<0.1	<0.1
Nueces River at Laguna [8190000]	04/08/03	<2.0	<6.0	<2.0	<0.05	<0.1	<0.1	<0.1	<0.1
Nueces River at Laguna [8190000]	09/09/03	<2.0	<6.0	<2.0	<0.05	<0.1	<0.1	<0.1	<0.1
Sabinal River near Sabinal [8198000]	04/09/03	<2.0	<6.0	<2.0	<0.05	<0.1	<0.1	<0.1	<0.1
Sabinal River near Sabinal [8198000]	09/10/03	<2.0	<6.0	<2.0	<0.05	<0.1	<0.1	<0.1	<0.1
Seco Creek at Miller Ranch [8201500]	09/10/03	<2.0	<6.0	<2.0	<0.05	<0.1	<0.1	<0.1	<0.1
Seco Creek at Miller Ranch [8201500]	04/09/03	<2.0	<6.0	<2.0	<0.05	<0.1	<0.1	<0.1	<0.1
Comal Springs #1 (DX-68-23-301)	03/05/03	<2.0	<6.0	<2.0	<0.05	<0.1	<0.1	<0.1	<0.1
Comal Springs #1 (DX-68-23-301)	10/10/03	<2.0	<6.0	<2.0	<0.05	<0.1	<0.1	<0.1	<0.1
Comal Springs #1 (DX-68-23-301)	12/03/03	<2.0	<6.0	<2.0	<0.05	<0.1	<0.1	<0.1	<0.1
Comal Springs #7	03/06/03	<2.0	<6.0	<2.0	<0.05	<0.1	<0.1	<0.1	<0.1
Comal Springs #7	06/17/03	<2.0	<6.0	<2.0	<0.05	<0.1	<0.1	<0.1	<0.1
Comal Springs #7	10/08/03	<2.0	<6.0	<2.0	<0.05	<0.1	<0.1	<0.1	<0.1
Comal Springs #7	12/03/03	<2.0	<6.0	<2.0	<0.05	<0.1	<0.1	<0.1	<0.1

NA = Not analyzed

J = Estimated result between the method detection limit and the reporting limit

Table C-12 Analytical data for pesticides, herbicides, and PCB (Aroclors) in water samples from streams crossing the Edwards Aquifer Recharge Zone and springs discharging from the Edwards Aquifer, 2003 (cont'd)

Station Name	Date Sampled	Dimethoate (µg/L)	Dinoseb (µg/L)	Disulfoton (µg/L)	Endo sulfan I (µg/L)	Endo sulfan II (µg/L)	Endosulfan sulfate (µg/L)	Endrin (µg/L)	Endrin aldehyde (µg/L)
Hueco Springs A (DX-68-15-901)	03/05/03	<2.0	<6.0	<2.0	<0.05	<0.1	<0.1	<0.1	<0.1
Hueco Springs A (DX-68-15-901)	10/07/03	<2.0	<6.0	<2.0	<0.05	<0.1	<0.1	<0.1	<0.1
Hueco Springs A (DX-68-15-901)	12/01/03	<2.0	<6.0	<2.0	<0.05	<0.1	<0.1	<0.1	<0.1
Hueco Springs B	03/05/03	<2.0	<6.0	<2.0	<0.05	<0.1	<0.1	<0.1	<0.1
Hueco Springs B	06/17/03	<2.0	<6.0	<2.0	<0.05	<0.1	<0.1	<0.1	<0.1
Hueco Springs B	10/07/03	<2.0	<6.0	<2.0	<0.05	<0.1	<0.1	<0.1	<0.1
Hueco Springs B	12/01/03	<2.0	<6.0	<2.0	<0.05	<0.1	<0.1	<0.1	<0.1
San Antonio Springs	03/10/03	<2.0	<6.0	<2.0	<0.05	<0.1	<0.1	<0.1	<0.1
San Antonio Springs	06/16/03	<2.0	<6.0	<2.0	<0.05	<0.1	<0.1	<0.1	<0.1
San Antonio Springs	10/09/03	<2.0	<6.0	<2.0	<0.05	<0.1	<0.1	<0.1	<0.1
San Antonio Springs	12/02/03	<2.0	<6.0	<2.0	<0.05	<0.1	<0.1	<0.1	<0.1
San Marcos Springs-Catfish	12/19/03	<2.0	<6.0	<2.0	<0.05	<0.1	<0.1	<0.1	<0.1
San Marcos Springs-Deep (LR-67-01-819)	03/12/03	<2.0	<6.0	<2.0	<0.05	<0.1	<0.1	<0.1	<0.1
San Marcos Springs-Deep (LR-67-01-819)	06/23/03	<2.0	<6.0	<2.0	<0.05	<0.1	<0.1	<0.1	<0.1
San Marcos Springs-Deep (LR-67-01-819)	10/06/03	<2.0	0.76J	<2.0	<0.05	<0.1	<0.1	<0.1	<0.1
San Marcos Springs-Deep (LR-67-01-819)	12/29/03	<2.0	<6.0	<2.0	<0.05	<0.1	<0.1	<0.1	<0.1
San Marcos Springs-Diversion	12/19/03	<2.0	<6.0	<2.0	<0.05	<0.1	<0.1	<0.1	<0.1
San Marcos Springs-Hotel (LR-67-01-801)	03/12/03	<2.0	<6.0	<2.0	<0.05	<0.1	<0.1	<0.1	<0.1
San Marcos Springs-Hotel (LR-67-01-801)	06/19/03	<2.0	<6.0	<2.0	<0.05	<0.1	<0.1	<0.1	<0.1
San Marcos Springs-Hotel (LR-67-01-801)	10/10/03	<2.0	<6.0	<2.0	<0.05	<0.1	<0.1	<0.1	<0.1
San Marcos Springs-Hotel (LR-67-01-801)	12/04/03	<2.0	<6.0	<2.0	<0.05	<0.1	<0.1	<0.1	<0.1
San Marcos Springs-Weismueller (LR-67-01-820)	12/19/03	<2.0	<6.0	<2.0	<0.05	<0.1	<0.1	<0.1	<0.1
San Pedro Springs	03/10/03	<2.0	<6.0	<2.0	<0.05	<0.1	<0.1	<0.1	<0.1
San Pedro Springs	06/16/03	<2.0	<6.0	<2.0	<0.05	<0.1	<0.1	<0.1	<0.1
San Pedro Springs	10/09/03	<2.0	<6.0	<2.0	<0.05	<0.1	<0.1	<0.1	<0.1
San Pedro Springs	12/02/03	<2.0	<6.0	<2.0	<0.05	<0.1	<0.1	<0.1	<0.1

NA = Not analyzed

J = Estimated result between the method detection limit and the reporting limit

Table C-12 Analytical data for pesticides, herbicides, and PCB (Aroclors) in water samples from streams crossing the Edwards Aquifer Recharge Zone and springs discharging from the Edwards Aquifer, 2003 (cont'd)

Station Name	Date Sampled	Endrinketone (µg/L)	EPN (µg/L)	Ethion (µg/L)	Ethoprop (µg/L)	Ethylpara-thion (µg/L)	Famphur (µg/L)	Fensulfothion (µg/L)	Fenthion (µg/L)
Blanco River at Wimberley [8171000]	04/16/03	<0.1	<1.0	<0.5	<0.5	<1.0	<2.0	<5.0	<1.0
Blanco River at Wimberley [8171000]	09/16/03	<0.1	<1.0	<0.5	<0.5	<1.0	<2.0	<5.0	<1.0
Dry Frio River at Reagan Wells [8196000]	04/09/03	<0.1	<1.0	<0.5	<0.5	<1.0	<2.0	<5.0	<1.0
Dry Frio River at Reagan Wells [8196000]	09/10/03	<0.1	<1.0	<0.5	<0.5	<1.0	<2.0	<5.0	<1.0
Frio River at Concan [8195000]	04/09/03	<0.1	<1.0	<0.5	<0.5	<1.0	<2.0	<5.0	<1.0
Frio River at Concan [8195000]	09/10/03	<0.1	<1.0	<0.5	<0.5	<1.0	<2.0	<5.0	<1.0
Hondo Creek near Tarpley [8200000]	04/17/03	<0.1	<1.0	<0.5	<0.5	<1.0	<2.0	<5.0	<1.0
Hondo Creek near Tarpley [8200000]	09/15/03	<0.1	<1.0	<0.5	<0.5	<1.0	<2.0	<5.0	<1.0
Medina River at Bandera [8178880]	04/17/03	<0.1	<1.0	<0.5	<0.5	<1.0	<2.0	<5.0	<1.0
Medina River at Bandera [8178880]	09/15/03	<0.1	<1.0	<0.5	<0.5	<1.0	<2.0	<5.0	<1.0
Nueces River at Laguna [8190000]	04/08/03	<0.1	<1.0	<0.5	<0.5	<1.0	<2.0	<5.0	<1.0
Nueces River at Laguna [8190000]	09/09/03	<0.1	<1.0	<0.5	<0.5	<1.0	<2.0	<5.0	<1.0
Sabinal River near Sabinal [8198000]	04/09/03	<0.1	<1.0	<0.5	<0.5	<1.0	<2.0	<5.0	<1.0
Sabinal River near Sabinal [8198000]	09/10/03	<0.1	<1.0	<0.5	<0.5	<1.0	<2.0	<5.0	<1.0
Seco Creek at Miller Ranch [8201500]	09/10/03	<0.1	<1.0	<0.5	<0.5	<1.0	<2.0	<5.0	<1.0
Seco Creek at Miller Ranch [8201500]	04/09/03	<0.1	<1.0	<0.5	<0.5	<1.0	<2.0	<5.0	<1.0
Comal Springs #1 (DX-68-23-301)	03/05/03	<0.1	<1.0	<0.50	<0.50	<1.0	<2.0	<5.0	<1.0
Comal Springs #1 (DX-68-23-301)	10/10/03	<0.1	<1.0	<0.50	<0.50	<1.0	<2.0	<5.0	<1.0
Comal Springs #1 (DX-68-23-301)	12/03/03	<0.1	<1.0	<0.50	<0.50	<1.0	<2.0	<5.0	<1.0
Comal Springs #7	03/06/03	<0.1	<1.0	<0.5	<0.5	<1.0	<2.0	<5.0	<1.0
Comal Springs #7	06/17/03	<0.1	<1.0	<0.50	<0.50	<1.0	<2.0	<5.0	<1.0
Comal Springs #7	10/08/03	<0.1	<1.0	<0.5	<0.5	<1.0	<2.0	<5.0	<1.0
Comal Springs #7	12/03/03	<0.1	<1.0	<0.50	<0.50	<1.0	<2.0	<5.0	<1.0

NA = Not analyzed J = Estimated result between the method detection limit and the reporting limit

Table C-12 Analytical data for pesticides, herbicides, and PCB (Aroclors) in water samples from streams crossing the Edwards Aquifer Recharge Zone and springs discharging from the Edwards Aquifer, 2003 (cont'd)

Station Name	Date Sampled	Endrin ketone (µg/L)	EPN (µg/L)	Ethion (µg/L)	Ethoprop (µg/L)	Ethyl parathion (µg/L)	Famphur (µg/L)	Fensulfothion (µg/L)	Fenthion (µg/L)
Hueco Springs A (DX-68-15-901)	03/05/03	<0.1	<1.0	<0.50	<0.50	<1.0	<2.0	<5.0	<1.0
Hueco Springs A (DX-68-15-901)	10/07/03	<0.1	<1.0	<0.50	<0.50	<1.0	<2.0	<5.0	<1.0
Hueco Springs A (DX-68-15-901)	12/01/03	<0.1	<1.0	<0.50	<0.50	<1.0	<2.0	<5.0	<1.0
Hueco Springs B	03/05/03	<0.1	<1.0	<0.50	<0.50	<1.0	<2.0	<5.0	<1.0
Hueco Springs B	06/17/03	<0.1	<1.0	<0.50	<0.50	<1.0	<2.0	<5.0	<1.0
Hueco Springs B	10/07/03	<0.1	<1.0	<0.50	<0.50	<1.0	<2.0	<5.0	<1.0
Hueco Springs B	12/01/03	<0.1	<1.0	<0.50	<0.50	<1.0	<2.0	<5.0	<1.0
San Antonio Springs	03/10/03	<0.1	<1.0	<0.50	<0.50	<1.0	<2.0	<5.0	<1.0
San Antonio Springs	06/16/03	<0.1	<1.0	<0.50	<0.50	<1.0	<2.0	<5.0	<1.0
San Antonio Springs	10/09/03	<0.1	<1.0	<0.50	<0.50	<1.0	<2.0	<5.0	<1.0
San Antonio Springs	12/02/03	<0.1	<1.0	<0.50	<0.50	<1.0	<2.0	<5.0	<1.0
San Marcos Springs-Catfish	12/19/03	<0.1	<1.0	<0.50	<0.50	<1.0	<2.0	<5.0	<1.0
San Marcos Springs-Deep (LR-67-01-819)	03/12/03	<0.1	<1.0	<0.50	<0.50	<1.0	<2.0	<5.0	<1.0
San Marcos Springs-Deep (LR-67-01-819)	06/23/03	<0.1	<1.0	<0.50	<0.50	<1.0	<2.0	<5.0	<1.0
San Marcos Springs-Deep (LR-67-01-819)	10/06/03	<0.1	<1.0	<0.50	<0.50	<1.0	<2.0	<5.0	<1.0
San Marcos Springs-Deep (LR-67-01-819)	12/29/03	<0.1	<1.0	<0.50	<0.50	<1.0	<2.0	<5.0	<1.0
San Marcos Springs-Diversion	12/19/03	<0.1	<1.0	<0.50	<0.50	<1.0	<2.0	<5.0	<1.0
San Marcos Springs-Hotel (LR-67-01-801)	03/12/03	<0.1	<1.0	<0.50	<0.50	<1.0	<2.0	<5.0	<1.0
San Marcos Springs-Hotel (LR-67-01-801)	06/19/03	<0.1	<1.0	<0.50	<0.50	<1.0	<2.0	<5.0	<1.0
San Marcos Springs-Hotel (LR-67-01-801)	10/10/03	<0.1	<1.0	<0.50	<0.50	<1.0	<2.0	<5.0	<1.0
San Marcos Springs-Hotel (LR-67-01-801)	12/04/03	<0.1	<1.0	<0.50	<0.50	<1.0	<2.0	<5.0	<1.0
San Marcos Springs-Weismueller (LR-67-01-820)	12/19/03	<0.1	<1.0	<0.50	<0.50	<1.0	<2.0	<5.0	<1.0
San Pedro Springs	03/10/03	<0.1	<1.0	<0.50	<0.50	<1.0	<2.0	<5.0	<1.0
San Pedro Springs	06/16/03	<0.1	<1.0	<0.50	<0.50	<1.0	<2.0	<5.0	<1.0
San Pedro Springs	10/09/03	<0.1	<1.0	<0.50	<0.50	<1.0	<2.0	<5.0	<1.0
San Pedro Springs	12/02/03	<0.1	<1.0	<0.50	<0.50	<1.0	<2.0	<5.0	<1.0

NA = Not analyzed

J = Estimated result between the method detection limit and the reporting limit

Table C-12 Analytical data for pesticides, herbicides, and PCB (Aroclors) in water samples from streams crossing the Edwards Aquifer Recharge Zone and springs discharging from the Edwards Aquifer, 2003 (cont'd)

Station Name	Date Sampled	gamma BHC (Lindane) (µg/L)	gamma-Chlordane (µg/L)	Heptachlor (µg/L)	Heptachlor epoxide (µg/L)	Malathion (µg/L)	Merphos (µg/L)	Methoxychlor (µg/L)	Methyl parathion (µg/L)
Blanco River at Wimberley [8171000]	04/16/03	<0.1	<0.05	<0.05	<0.05	<1.0	<1.0	<0.5	<0.50
Blanco River at Wimberley [8171000]	09/16/03	<0.1	<0.05	<0.05	<0.05	<1.0	<1.0	<0.5	<0.50
Dry Frio River at Reagan Wells [8196000]	04/09/03	<0.1	<0.05	<0.05	<0.05	<1.0	<1.0	<0.5	<0.50
Dry Frio River at Reagan Wells [8196000]	09/10/03	<0.1	<0.05	<0.05	<0.05	<1.0	<1.0	<0.5	<0.50
Frio River at Concan [8195000]	04/09/03	<0.1	<0.05	<0.05	<0.05	<1.0	<1.0	<0.5	<0.50
Frio River at Concan [8195000]	09/10/03	<0.1	<0.05	<0.05	<0.05	<1.0	<1.0	<0.5	<0.50
Hondo Creek near Tarpley [8200000]	04/17/03	<0.1	<0.05	<0.05	<0.05	<1.0	<1.0	<0.5	<0.50
Hondo Creek near Tarpley [8200000]	09/15/03	<0.1	<0.05	<0.05	<0.05	<1.0	<1.0	<0.5	<0.50
Medina River at Bandera [8178880]	04/17/03	<0.1	<0.05	<0.05	<0.05	<1.0	<1.0	<0.5	<0.50
Medina River at Bandera [8178880]	09/15/03	<0.1	<0.05	<0.05	<0.05	<1.0	<1.0	<0.5	<0.50
Nueces River at Laguna [8190000]	04/08/03	<0.1	<0.05	<0.05	<0.05	<1.0	<1.0	<0.5	<0.50
Nueces River at Laguna [8190000]	09/09/03	<0.1	<0.05	<0.05	<0.05	<1.0	<1.0	<0.5	<0.50
Sabinal River near Sabinal [8198000]	04/09/03	<0.1	<0.05	<0.05	<0.05	<1.0	<1.0	<0.5	<0.50
Sabinal River near Sabinal [8198000]	09/10/03	<0.1	<0.05	<0.05	<0.05	<1.0	<1.0	<0.5	<0.50
Seco Creek at Miller Ranch [8201500]	09/10/03	<0.1	<0.05	<0.05	<0.05	<1.0	<1.0	<0.5	<0.50
Seco Creek at Miller Ranch [8201500]	04/09/03	<0.1	<0.05	<0.05	<0.05	<1.0	<1.0	<0.5	<0.50
Comal Springs #1 (DX-68-23-301)	03/05/03	<0.1	<0.05	<0.05	<0.05	<1.0	<1.0	<0.5	<0.50
Comal Springs #1 (DX-68-23-301)	10/10/03	<0.05	<0.05	<0.05	<0.05	<1.0	<1.0	<0.5	<0.50
Comal Springs #1 (DX-68-23-301)	12/03/03	<0.05	<0.05	<0.05	<0.05	<1.0	<1.0	<0.5	<0.50
Comal Springs #7	03/06/03	<0.1	<0.05	<0.05	<0.05	<1.0	<1.0	<0.5	<0.50
Comal Springs #7	06/17/03	<0.1	<0.05	<0.05	<0.05	<1.0	<1.0	<0.5	<0.50
Comal Springs #7	10/08/03	<0.05	<0.05	<0.05	<0.05	<1.0	<1.0	<0.5	<0.50
Comal Springs #7	12/03/03	<0.05	<0.05	<0.05	<0.05	<1.0	<1.0	<0.5	<0.50

NA = Not analyzed

J = Estimated result between the method detection limit and the reporting limit

Table C-12 Analytical data for pesticides, herbicides, and PCB (Aroclors) in water samples from streams crossing the Edwards Aquifer Recharge Zone and springs discharging from the Edwards Aquifer, 2003 (cont'd)

Station Name	Date Sampled	gamma BHC (Lindane) (µg/L)	gamma-Chlordane (µg/L)	Heptachlor (µg/L)	Heptachlor epoxide (µg/L)	Malathion (µg/L)	Merphos (µg/L)	Methoxychlor (µg/L)	Methyl parathion (µg/L)
Hueco Springs A (DX-68-15-901)	03/05/03	<0.1	<0.05	<0.05	<0.05	<1.0	<1.0	<0.5	<0.50
Hueco Springs A (DX-68-15-901)	10/07/03	<0.05	<0.05	<0.05	<0.05	<1.0	<1.0	<0.5	<0.50
Hueco Springs A (DX-68-15-901)	12/01/03	<0.05	<0.05	<0.05	<0.05	<1.0	<1.0	<0.5	<0.50
Hueco Springs B	03/05/03	<0.1	<0.05	<0.05	<0.05	<1.0	<1.0	<0.5	<0.50
Hueco Springs B	06/17/03	<0.1	<0.05	<0.05	<0.05	<1.0	<1.0	<0.5	<0.50
Hueco Springs B	10/07/03	<0.05	<0.05	<0.05	<0.05	<1.0	<1.0	<0.5	<0.50
Hueco Springs B	12/01/03	<0.05	<0.05	<0.05	<0.05	<1.0	<1.0	<0.5	<0.50
San Antonio Springs	03/10/03	<0.1	<0.05	<0.05	<0.05	<1.0	<1.0	<0.5	<0.50
San Antonio Springs	06/16/03	<0.1	<0.05	<0.05	<0.05	<1.0	<1.0	<0.5	<0.50
San Antonio Springs	10/09/03	<0.05	<0.05	<0.05	<0.05	<1.0	<1.0	<0.5	<0.50
San Antonio Springs	12/02/03	<0.05	<0.05	<0.05	<0.05	<1.0	<1.0	<0.5	<0.50
San Marcos Springs-Catfish	12/19/03	<0.05	<0.05	<0.05	<0.05	<1.0	<1.0	<0.5	<0.50
San Marcos Springs-Deep (LR-67-01-819)	03/12/03	<0.1	<0.05	<0.05	<0.05	<1.0	<1.0	<0.5	<0.50
San Marcos Springs-Deep (LR-67-01-819)	06/23/03	<0.1	0.01J	<0.05	<0.05	<1.0	<1.0	<0.5	<0.50
San Marcos Springs-Deep (LR-67-01-819)	10/06/03	<0.05	<0.05	<0.05	<0.05	<1.0	<1.0	<0.5	<0.50
San Marcos Springs-Deep (LR-67-01-819)	12/29/03	<0.05	<0.05	<0.05	<0.05	<1.0	<1.0	<0.5	<0.50
San Marcos Springs-Diversion	12/19/03	<0.05	<0.05	<0.05	<0.05	<1.0	<1.0	<0.5	<0.50
San Marcos Springs-Hotel (LR-67-01-801)	03/12/03	<0.1	<0.05	<0.05	<0.05	<1.0	<1.0	<0.5	<0.50
San Marcos Springs-Hotel (LR-67-01-801)	06/19/03	<0.1	<0.05	<0.05	<0.05	<1.0	<1.0	<0.5	<0.50
San Marcos Springs-Hotel (LR-67-01-801)	10/10/03	<0.05	<0.05	<0.05	<0.05	<1.0	<1.0	<0.5	<0.50
San Marcos Springs-Hotel (LR-67-01-801)	12/04/03	<0.05	<0.05	<0.05	<0.05	<1.0	<1.0	<0.5	<0.50
San Marcos Springs-Weismueller (LR-67-01-820)	12/19/03	<0.05	<0.05	<0.05	<0.05	<1.0	<1.0	<0.5	<0.50
San Pedro Springs	03/10/03	<0.1	<0.05	<0.05	<0.05	<1.0	<1.0	<0.5	<0.50
San Pedro Springs	06/16/03	<0.1	<0.05	<0.05	<0.05	<1.0	<1.0	<0.5	<0.50
San Pedro Springs	10/09/03	<0.05	<0.05	<0.05	<0.05	<1.0	<1.0	<0.5	<0.50
San Pedro Springs	12/02/03	<0.05	<0.05	<0.05	<0.05	<1.0	<1.0	<0.5	<0.50

NA = Not analyzed

J = Estimated result between the method detection limit and the reporting limit

Table C-12 Analytical data for pesticides, herbicides, and PCB (Aroclors) in water samples from streams crossing the Edwards Aquifer Recharge Zone and springs discharging from the Edwards Aquifer, 2003 (cont'd)

Station Name	Date Sampled	Mevinphos (µg/L)	Mononcrotophos (µg/L)	Naled (µg/L)	Pentachlorophenol (µg/L)	Phorate (µg/L)	Picloram (µg/L)	Ronnel (µg/L)
Blanco River at Wimberley [8171000]	04/16/03	<2.0	<10	<5.0	<1.0	<1.0	<0.5	<1.0
Blanco River at Wimberley [8171000]	09/16/03	<2.0	<10	<5.0	<1.0	<1.0	<0.5	<1.0
Dry Frio River at Reagan Wells [8196000]	04/09/03	<2.0	<10	<5.0	<1.0	<1.0	<0.5	<1.0
Dry Frio River at Reagan Wells [8196000]	09/10/03	<2.0	<10	<5.0	<1.0	<1.0	<0.5	<1.0
Frio River at Concan [8195000]	04/09/03	<2.0	<10	<5.0	<1.0	<1.0	<0.5	<1.0
Frio River at Concan [8195000]	09/10/03	<2.0	<10	<5.0	<1.0	<1.0	<0.5	<1.0
Hondo Creek near Tarpley [8200000]	04/17/03	<2.0	<10	<5.0	<1.0	<1.0	<0.5	<1.0
Hondo Creek near Tarpley [8200000]	09/15/03	<2.0	<10	<5.0	<1.0	<1.0	<0.5	<1.0
Medina River at Bandera [8178880]	04/17/03	<2.0	<10	<5.0	<1.0	<1.0	<0.5	<1.0
Medina River at Bandera [8178880]	09/15/03	<2.0	<10	<5.0	<1.0	<1.0	<0.5	<1.0
Nueces River at Laguna [8190000]	04/08/03	<2.0	<10	<5.0	<1.0	<1.0	<0.5	<1.0
Nueces River at Laguna [8190000]	09/09/03	<2.0	<10	<5.0	<1.0	<1.0	<0.5	<1.0
Sabinal River near Sabinal [8198000]	04/09/03	<2.0	<10	<5.0	<1.0	<1.0	<0.5	<1.0
Sabinal River near Sabinal [8198000]	09/10/03	<2.0	<10	<5.0	<1.0	<1.0	<0.5	<1.0
Seco Creek at Miller Ranch [8201500]	09/10/03	<2.0	<10	<5.0	<1.0	<1.0	<0.5	<1.0
Seco Creek at Miller Ranch [8201500]	04/09/03	<2.0	<10	<5.0	<1.0	<1.0	<0.5	<1.0
Comal Springs #1 (DX-68-23-301)	03/05/03	<2.0	<10	<5.0	<1.0	<1.0	<0.50	<1.0
Comal Springs #1 (DX-68-23-301)	10/10/03	<2.0	<10	<5.0	<1.0	<1.0	<0.50	<1.0
Comal Springs #1 (DX-68-23-301)	12/03/03	<2.0	<10	<5.0	<1.0	<1.0	<0.50	<1.0
Comal Springs #7	03/06/03	<2.0	<10	<5.0	<1.0	<1.0	<0.5	<10.
Comal Springs #7	06/17/03	<2.0	<10	<5.0	<1.0	<1.0	<0.5	<1.0
Comal Springs #7	10/08/03	<2.0	<10	<5.0	<1.0	<1.0	<0.5	<1.0
Comal Springs #7	12/03/03	<2.0	<10	<5.0	<1.0	<1.0	<0.50	<1.0

NA = Not analyzed

J = Estimated result between the method detection limit and the reporting limit

Table C-12 Analytical data for pesticides, herbicides, and PCB (Aroclors) in water samples from streams crossing the Edwards Aquifer Recharge Zone and springs discharging from the Edwards Aquifer, 2003 (cont'd)

Station Name	Date Sampled	Mevinphos (µg/L)	Mononcrotophos (µg/L)	Naled (µg/L)	Penta chlorophenol (µg/L)	Phorate (µg/L)	Picloram (µg/L)	Ronnel (µg/L)
Hueco Springs A (DX-68-15-901)	03/05/03	<2.0	<10	<5.0	<1.0	<1.0	<0.50	<1.0
Hueco Springs A (DX-68-15-901)	10/07/03	<2.0	<10	<5.0	<1.0	<1.0	<0.50	<1.0
Hueco Springs A (DX-68-15-901)	12/01/03	<2.0	<10	<5.0	<1.0	<1.0	<0.50	<1.0
Hueco Springs B	03/05/03	<2.0	<10	<5.0	<1.0	<1.0	<0.50	<1.0
Hueco Springs B	06/17/03	<2.0	<10	<5.0	<1.0	<1.0	<0.50	<1.0
Hueco Springs B	10/07/03	<2.0	<10	<5.0	<1.0	<1.0	<0.50	<1.0
Hueco Springs B	12/01/03	<2.0	<10	<5.0	<1.0	<1.0	<0.50	<1.0
San Antonio Springs	03/10/03	<2.0	<10	<5.0	<1.0	<1.0	<0.50	<1.0
San Antonio Springs	06/16/03	<2.0	<10	<5.0	<1.0	<1.0	<0.50	<1.0
San Antonio Springs	10/09/03	<2.0	<10	<5.0	<1.0	<1.0	<0.50	<1.0
San Antonio Springs	12/02/03	<2.0	<10	<5.0	<1.0	<1.0	<0.50	<1.0
San Marcos Springs-Catfish	12/19/03	<2.0	<10	<5.0	<1.0	<1.0	<0.50	<1.0
San Marcos Springs-Deep (LR-67-01-819)	03/12/03	<2.0	<10	<5.0	<1.0	<1.0	<0.50	<1.0
San Marcos Springs-Deep (LR-67-01-819)	06/23/03	<2.0	<10	<5.0	<1.0	<1.0	<0.50	<1.0
San Marcos Springs-Deep (LR-67-01-819)	10/06/03	<2.0	<10	<5.0	<1.0	<1.0	1.3	<1.0
San Marcos Springs-Deep (LR-67-01-819)	12/29/03	<2.0	<10	<5.0	<1.0	<1.0	<0.50	<1.0
San Marcos Springs-Diversion	12/19/03	<2.0	<10	<5.0	<1.0	<1.0	<0.50	<1.0
San Marcos Springs-Hotel (LR-67-01-801)	03/12/03	<2.0	<10	<5.0	<1.0	<1.0	<0.50	<1.0
San Marcos Springs-Hotel (LR-67-01-801)	06/19/03	<2.0	<10	<5.0	<1.0	<1.0	<0.50	<1.0
San Marcos Springs-Hotel (LR-67-01-801)	10/10/03	<2.0	<10	<5.0	<1.0	<1.0	<0.50	<1.0
San Marcos Springs-Hotel (LR-67-01-801)	12/04/03	<2.0	<10	<5.0	<1.0	<1.0	<0.50	<1.0
San Marcos Springs-Weismueller (LR-67-01-820)	12/19/03	<2.0	<10	<5.0	<1.0	<1.0	<0.50	<1.0
San Pedro Springs	03/10/03	<2.0	<10	<5.0	<1.0	<1.0	<0.50	<1.0
San Pedro Springs	06/16/03	<2.0	<10	<5.0	<1.0	<1.0	<0.50	<1.0
San Pedro Springs	10/09/03	<2.0	<10	<5.0	<1.0	<1.0	<0.50	<1.0
San Pedro Springs	12/02/03	<2.0	<10	<5.0	<1.0	<1.0	<0.50	<1.0

NA = Not analyzed

J = Estimated result between the method detection limit and the reporting limit

Table C-12 Analytical data for pesticides, herbicides, and PCB (Aroclors) in water samples from streams crossing the Edwards Aquifer Recharge Zone and springs discharging from the Edwards Aquifer, 2003 (cont'd)

Station Name	Date Sampled	Simazine (µg/L)	Sulfotepp (µg/L)	2,4,5-T (µg/L)	Terbufos (µg/L)	Tetrachlorvinphos (Stirophos) (µg/L)
Blanco River at Wimberley [8171000]	04/16/03	<2.0	<0.50	<0.50	<1.0	<1.0
Blanco River at Wimberley [8171000]	09/16/03	<2.0	<0.50	<0.50	<0.50	<1.0
Dry Frio River at Reagan Wells [8196000]	04/09/03	<2.0	<0.50	<0.50	<1.0	<1.0
Dry Frio River at Reagan Wells [8196000]	09/10/03	<2.0	<0.50	<0.50	<0.50	<1.0
Frio River at Concan [8195000]	04/09/03	<2.0	<0.50	<0.50	<1.0	<1.0
Frio River at Concan [8195000]	09/10/03	<2.0	<0.50	<0.50	<0.50	<1.0
Hondo Creek near Tarpley [8200000]	04/17/03	<2.0	<0.50	<0.50	<1.0	<1.0
Hondo Creek near Tarpley [8200000]	09/15/03	<2.0	<0.50	<0.50	<0.50	<1.0
Medina River at Bandera [8178880]	04/17/03	<2.0	<0.50	<0.50	<1.0	<1.0
Medina River at Bandera [8178880]	09/15/03	<2.0	<0.50	<0.50	<0.50	<1.0
Nueces River at Laguna [8190000]	04/08/03	<2.0	<0.50	<0.50	<1.0	<1.0
Nueces River at Laguna [8190000]	09/09/03	<2.0	<0.50	<0.50	<0.50	<1.0
Sabinal River near Sabinal [8198000]	04/09/03	<2.0	<0.50	<0.50	<1.0	<1.0
Sabinal River near Sabinal [8198000]	09/10/03	<2.0	<0.50	<0.50	<0.50	<1.0
Seco Creek at Miller Ranch [8201500]	09/10/03	<2.0	<0.50	<0.50	<1.0	<1.0
Seco Creek at Miller Ranch [8201500]	04/09/03	<2.0	<0.50	<0.50	<0.50	<1.0
Comal Springs #1 (DX-68-23-301)	03/05/03	<2.0	<0.50	<0.50	<1.0	<1.0
Comal Springs #1 (DX-68-23-301)	10/10/03	<2.0	<0.50	<0.50	<0.50	<1.0
Comal Springs #1 (DX-68-23-301)	12/03/03	<2.0	<0.50	<0.50	<0.50	<1.0
Comal Springs #7	03/06/03	<2.0	<0.50	<0.50	<1.0	<1.0
Comal Springs #7	06/17/03	<2.0	<0.50	<0.50	<1.0	<1.0
Comal Springs #7	10/08/03	<2.0	<0.50	<0.50	<0.50	<1.0
Comal Springs #7	12/03/03	<2.0	<0.50	<0.50	<0.50	<1.0

NA = Not analyzed

J = Estimated result between the method detection limit and the reporting limit

Table C-12 Analytical data for pesticides, herbicides, and PCB (Aroclors) in water samples from streams crossing the Edwards Aquifer Recharge Zone and springs discharging from the Edwards Aquifer, 2003 (cont'd)

Station Name	Date Sampled	Simazine (µg/L)	Sulfotepp (µg/L)	2,4,5-T (µg/L)	Terbufos (µg/L)	Tetrachlorvinphos (Stirophos) (µg/L)
Hueco Springs A (DX-68-15-901)	03/05/03	<2.0	<0.50	<0.50	<1.0	<1.0
Hueco Springs A (DX-68-15-901)	10/07/03	<2.0	<0.50	<0.50	<1.0	<1.0
Hueco Springs A (DX-68-15-901)	12/01/03	<2.0	<0.50	<0.50	<0.50	<1.0
Hueco Springs B	03/05/03	<2.0	<0.50	<0.50	<1.0	<1.0
Hueco Springs B	06/17/03	<2.0	<0.50	<0.50	<1.0	<1.0
Hueco Springs B	10/07/03	<2.0	<0.50	<0.50	<1.0	<1.0
Hueco Springs B	12/01/03	<2.0	<0.50	<0.50	<0.50	<1.0
San Antonio Springs	03/10/03	<2.0	<0.50	<0.50	<1.0	<1.0
San Antonio Springs	06/16/03	<2.0	<0.50	<0.50	<1.0	<1.0
San Antonio Springs	10/09/03	<2.0	<0.50	<0.50	<0.50	<1.0
San Antonio Springs	12/02/03	<2.0	<0.50	<0.50	<1.0	<1.0
San Marcos Springs-Catfish	12/19/03	<2.0	<0.50	<0.50	<1.0	<1.0
San Marcos Springs-Deep (LR-67-01-819)	03/12/03	<2.0	<0.50	<0.50	<1.0	<1.0
San Marcos Springs-Deep (LR-67-01-819)	06/23/03	<2.0	<0.50	<0.50	<1.0	<1.0
San Marcos Springs-Deep (LR-67-01-819)	10/06/03	<2.0	<0.50	1.7	<1.0	<1.0
San Marcos Springs-Deep (LR-67-01-819)	12/29/03	<2.0	<0.50	<0.50	<1.0	<1.0
San Marcos Springs-Diversion	12/19/03	<2.0	<0.50	<0.50	<1.0	<1.0
San Marcos Springs-Hotel (LR-67-01-801)	03/12/03	<2.0	<0.50	<0.50	<1.0	<1.0
San Marcos Springs-Hotel (LR-67-01-801)	06/19/03	<2.0	<0.50	<0.50	<1.0	<1.0
San Marcos Springs-Hotel (LR-67-01-801)	10/10/03	<2.0	<0.50	<0.50	<0.50	<1.0
San Marcos Springs-Hotel (LR-67-01-801)	12/04/03	<2.0	<0.50	<0.50	<0.50	<1.0
San Marcos Springs-Weismueller (LR-67-01-820)	12/19/03	<2.0	<0.50	<0.50	<1.0	<1.0
San Pedro Springs	03/10/03	<2.0	<0.50	<0.50	<1.0	<1.0
San Pedro Springs	06/16/03	<2.0	<0.50	<0.50	<1.0	<1.0
San Pedro Springs	10/09/03	<2.0	<0.50	<0.50	<0.5	<1.0
San Pedro Springs	12/02/03	<2.0	<0.50	<0.50	<1.0	<1.0

NA = Not analyzed

J = Estimated result between the method detection limit and the reporting limit

Table C-12 Analytical data for pesticides, herbicides, and PCB (Aroclors) in water samples from streams crossing the Edwards Aquifer Recharge Zone and springs discharging from the Edwards Aquifer, 2003 (cont'd)

Station Name	Date Sampled	Thionazin (µg/L)	Tokuthion (µg/L)	Toxaphene (µg/L)	2,4,5-TP (Silvex) (µg/L)	Trichloronate (µg/L)
Blanco River at Wimberley [8171000]	04/16/03	<1.0	<1.0	<0.6	<0.50	<1.0
Blanco River at Wimberley [8171000]	09/16/03	<1.0	<1.0	<0.6	<0.50	<1.0
Dry Frio River at Reagan Wells [8196000]	04/09/03	<1.0	<1.0	<0.6	<0.50	<1.0
Dry Frio River at Reagan Wells [8196000]	09/10/03	<1.0	<1.0	<0.6	<0.50	<1.0
Frio River at Concan [8195000]	04/09/03	<1.0	<1.0	<0.6	<0.50	<1.0
Frio River at Concan [8195000]	09/10/03	<1.0	<1.0	<0.6	<0.50	<1.0
Hondo Creek near Tarpley [8200000]	04/17/03	<1.0	<1.0	<0.6	<0.50	<1.0
Hondo Creek near Tarpley [8200000]	09/15/03	<1.0	<1.0	<0.6	<0.50	<1.0
Medina River at Bandera [8178880]	04/17/03	<1.0	<1.0	<0.6	<0.50	<1.0
Medina River at Bandera [8178880]	09/15/03	<1.0	<1.0	<0.6	<0.50	<1.0
Nueces River at Laguna [8190000]	04/08/03	<1.0	<1.0	<0.6	<0.50	<1.0
Nueces River at Laguna [8190000]	09/09/03	<1.0	<1.0	<0.6	<0.50	<1.0
Sabinal River near Sabinal [8198000]	04/09/03	<1.0	<1.0	<0.6	<0.50	<1.0
Sabinal River near Sabinal [8198000]	09/10/03	<1.0	<1.0	<0.6	<0.50	<1.0
Seco Creek at Miller Ranch [8201500]	09/10/03	<1.0	<1.0	<0.6	<0.50	<1.0
Seco Creek at Miller Ranch [8201500]	04/09/03	<1.0	<1.0	<0.6	<0.50	<1.0
Comal Springs #1 (DX-68-23-301)	03/05/03	<1.0	<1.0	<0.6	<0.50	<1.0
Comal Springs #1 (DX-68-23-301)	10/10/03	<1.0	<1.0	<0.6	<0.50	<1.0
Comal Springs #1 (DX-68-23-301)	12/03/03	<1.0	<1.0	<0.6	<0.50	<1.0
Comal Springs #7	03/06/03	<1.0	<1.0	<0.6	<0.50	<1.0
Comal Springs #7	06/17/03	<1.0	<1.0	<0.6	<0.50	<1.0
Comal Springs #7	10/08/03	<1.0	<1.0	<0.6	<0.50	<1.0
Comal Springs #7	12/03/03	<1.0	<1.0	<0.6	<0.50	<1.0

NA = Not analyzed

J = Estimated result between the method detection limit and the reporting limit

Table C-12 Analytical data for pesticides, herbicides, and PCB (Aroclors) in water samples from streams crossing the Edwards Aquifer Recharge Zone and springs discharging from the Edwards Aquifer, 2003

Station Name	Date Sampled	Thionazin (µg/L)	Tokuthion (µg/L)	Toxaphene (µg/L)	2,4,5-TP (Silvex) (µg/L)	Trichloronate (µg/L)
Hueco Springs A (DX-68-15-901)	03/05/03	<1.0	<1.0	<0.6	<0.50	<1.0
Hueco Springs A (DX-68-15-901)	10/07/03	<1.0	<1.0	<0.6	<0.50	<1.0
Hueco Springs A (DX-68-15-901)	12/01/03	<1.0	<1.0	<0.6	<0.50	<1.0
Hueco Springs B	03/05/03	<1.0	<1.0	<0.6	<0.50	<1.0
Hueco Springs B	06/17/03	<1.0	<1.0	<0.6	<0.50	<1.0
Hueco Springs B	10/07/03	<1.0	<1.0	<0.6	<0.50	<1.0
Hueco Springs B	12/01/03	<1.0	<1.0	<0.6	<0.50	<1.0
San Antonio Springs	03/10/03	<1.0	<1.0	<0.6	<0.50	<1.0
San Antonio Springs	06/16/03	<1.0	<1.0	<0.6	<0.50	<1.0
San Antonio Springs	10/09/03	<1.0	<1.0	<0.6	<0.50	<1.0
San Antonio Springs	12/02/03	<1.0	<1.0	<0.6	<0.50	<1.0
San Marcos Springs-Catfish	12/19/03	<1.0	<1.0	<0.6	<0.50	<1.0
San Marcos Springs-Deep (LR-67-01-819)	03/12/03	<1.0	<1.0	<0.6	<0.50	<1.0
San Marcos Springs-Deep (LR-67-01-819)	06/23/03	<1.0	<1.0	<0.6	<0.50	<1.0
San Marcos Springs-Deep (LR-67-01-819)	10/06/03	<1.0	<1.0	<0.6	1.4	<1.0
San Marcos Springs-Deep (LR-67-01-819)	12/29/03	<1.0	<1.0	<0.6	<0.50	<1.0
San Marcos Springs-Diversion	12/19/03	<1.0	<1.0	<0.6	<0.50	<1.0
San Marcos Springs-Hotel (LR-67-01-801)	03/12/03	<1.0	<1.0	<0.6	<0.50	<1.0
San Marcos Springs-Hotel (LR-67-01-801)	06/19/03	<1.0	<1.0	<0.6	<0.50	<1.0
San Marcos Springs-Hotel (LR-67-01-801)	10/10/03	<1.0	<1.0	<0.6	<0.50	<1.0
San Marcos Springs-Hotel (LR-67-01-801)	12/04/03	<1.0	<1.0	<0.6	<0.50	<1.0
San Marcos Springs-Weismueller (LR-67-01-820)	12/19/03	<1.0	<1.0	<0.6	<0.50	<1.0
San Pedro Springs	03/10/03	<1.0	<1.0	<0.6	<0.50	<1.0
San Pedro Springs	06/16/03	<1.0	<1.0	<0.6	<0.50	<1.0
San Pedro Springs	10/09/03	<1.0	<1.0	<0.6	<0.50	<1.0
San Pedro Springs	12/02/03	<1.0	<1.0	<0.6	<0.50	<1.0

NA = Not analyzed

J = Estimated result between the method detection limit and the reporting limit

Table C-13 Analytical data for volatile compounds (VOC) in water samples from springs discharging from the Edwards Aquifer, 2003 (cont'd)

Station Name	Date Sampled	Acetone (µg/L)	Benzene (µg/L)	Bromochloro Methane (µg/L)	Bromodichloro Methane (µg/L)	Bromoform (µg/L)	Bromo Methane (µg/L)	2-Butanone (µg/L)
Comal Springs #1 (DX-68-23-301)	03/05/03	<20	<1.0	<1.0	<1.0	<1.0	<2.0	<5.0
Comal Springs #1 (DX-68-23-301)	10/10/03	<20	<1.0	<1.0	<1.0	<1.0	0.5J	<5.0
Comal Springs #1 (DX-68-23-301)	12/03/03	<20	<1.0	<1.0	<1.0	<1.0	<2.0	<5.0
Comal Springs #2	10/08/03	<20	<1.0	<1.0	<1.0	<1.0	<2.0	<5.0
Comal Springs #3	10/08/03	<20	<1.0	<1.0	<1.0	<1.0	<2.0	<5.0
Comal Springs #5 (Duplicate)	10/10/03	<20	<1.0	<1.0	<1.0	<1.0	<2.0	<5.0
Comal Springs #5	10/10/03	<20	<1.0	<1.0	<1.0	<1.0	<2.0	<5.0
Comal Springs #7	03/06/03	<20	<1.0	<1.0	<1.0	<1.0	<2.0	<5.0
Comal Springs #7	06/17/03	<20	<1.0	<1.0	<1.0	<1.0	<2.0	<5.0
Comal Springs #7	10/08/03	<20	<1.0	<1.0	<1.0	<1.0	<2.0	<5.0
Comal Springs #7	12/03/03	2J,TB	<1.0	<1.0	<1.0	<1.0	<2.0	<5.0
Comal Springs A	10/10/03	<20	<1.0	<1.0	<1.0	<1.0	<2.0	<5.0
Comal Springs B1	06/18/03	<20	<1.0	<1.0	<1.0	<1.0	<2.0	<5.0
Comal Springs B1	10/08/03	<20	<1.0	<1.0	<1.0	<1.0	<2.0	<5.0
Comal Springs #5	10/10/03	<20	<1.0	<1.0	<1.0	<1.0	<2.0	<5.0
Comal Springs-Saltation	10/08/03	<20	<1.0	<1.0	<1.0	<1.0	0.7J	<5.0
Comal Springs-Spring Island (DX-68-23-320)	10/08/03	<20	<1.0	<1.0	<1.0	<1.0	0.7J	<5.0
Hueco Springs A (DX-68-15-901)	03/05/03	<20	<1.0	<1.0	<1.0	<1.0	<2.0	<5.0
Hueco Springs A (DX-68-15-901)	10/07/03	<20	<1.0	<1.0	<1.0	<1.0	<2.0	<5.0
Hueco Springs A (DX-68-15-901)	12/01/03	0.9J,TB	<1.0	<1.0	<1.0	<1.0	<2.0	<5.0
Hueco Springs B	03/05/03	<20	<1.0	<1.0	<1.0	<1.0	<2.0	<5.0
Hueco Springs B	06/17/03	<20	<1.0	<1.0	<1.0	<1.0	<2.0	<5.0
Hueco Springs B	10/07/03	<20	<1.0	<1.0	<1.0	<1.0	<2.0	<5.0
Hueco Springs B	12/01/03	1J	<1.0	<1.0	<1.0	<1.0	<2.0	<5.0

J = Estimated result between the method detection limit and the reporting limit

TB = Analyte detected in associated trip blank, NA = Not analyzed

Table C-13 Analytical data for volatile compounds (VOC) in water samples from springs discharging from the Edwards Aquifer, 2003 (cont'd)

Station Name	Date Sampled	Acetone (µg/L)	Benzene (µg/L)	Bromo Chloro Methane (µg/L)	Bromo Dichloro Methane (µg/L)	Bromoform (µg/L)	Bromo Methane (µg/L)	2-Butanone (µg/L)
San Antonio Springs	03/10/03	<20	<1.0	<1.0	<1.0	<1.0	<2.0	<5.0
San Antonio Springs	04/10/03	<20	0.2J,TB	<1.0	<1.0	<1.0	<2.0	<5.0
San Antonio Springs	06/16/03	<20	<1.0	<1.0	<1.0	<1.0	<2.0	<5.0
San Antonio Springs	10/09/03	<20	<1.0	<1.0	<1.0	<1.0	0.6J	<5.0
San Antonio Springs	12/02/03	<20	<1.0	<1.0	<1.0	<1.0	<2.0	<5.0
San Marcos Springs-Catfish	10/06/03	<20	<1.0	<1.0	<1.0	<1.0	<2.0	<5.0
San Marcos Springs-Catfish	12/19/03	0.6J,TB	<1.0	<1.0	<1.0	<1.0	<2.0	<5.0
San Marcos Springs-Deep (LR-67-01-819)	03/12/03	<20	<1.0	<1.0	<1.0	<1.0	<2.0	<5.0
San Marcos Springs-Deep (LR-67-01-819)	06/23/03	<20	<1.0	<1.0	<1.0	<1.0	<2.0	<5.0
San Marcos Springs-Deep (LR-67-01-819)	10/06/03	<20	<1.0	<1.0	<1.0	<1.0	0.8J	<5.0
San Marcos Springs-Deep (LR-67-01-819)	12/29/03	2J,TB	<1.0	<1.0	<1.0	<1.0	<2.0	<5.0
San Marcos Springs-Diversion	10/06/03	<20	<1.0	<1.0	<1.0	<1.0	0.7J	<5.0
San Marcos Springs-Diversion	12/19/03	0.9J,TB	<1.0	<1.0	<1.0	<1.0	<2.0	<5.0
San Marcos Springs-Hotel (LR-67-01-801)	03/12/03	<20	<1.0	<1.0	<1.0	<1.0	<2.0	<5.0
San Marcos Springs-Hotel (LR-67-01-801)	06/19/03	<20	<1.0	<1.0	<1.0	<1.0	<2.0	<5.0
San Marcos Springs-Hotel (LR-67-01-801)	10/10/03	<20	<1.0	<1.0	<1.0	<1.0	<2.0	<5.0
San Marcos Springs-Hotel (LR-67-01-801)	12/04/03	<20	<1.0	<1.0	<1.0	<1.0	<2.0	<5.0
San Marcos Springs-Weismueller (LR-67-01-820)	10/06/03	<20	<1.0	<1.0	<1.0	<1.0	0.5J	<5.0
San Marcos Springs-Weismueller (LR-67-01-820)	12/19/03	0.9J,TB	<1.0	<1.0	<1.0	<1.0	<2.0	<5.0
San Pedro Springs	03/10/03	<20	<1.0	<1.0	<1.0	<1.0	<2.0	<5.0
San Pedro Springs	04/10/03	<20	<1.0	<1.0	<1.0	<1.0	<2.0	<5.0
San Pedro Springs	06/16/03	<20	<1.0	<1.0	<1.0	<1.0	<2.0	<5.0
San Pedro Springs	10/09/03	1J,TB	<1.0	<1.0	<1.0	<1.0	<2.0	<5.0
San Pedro Springs	12/02/03	0.6J,TB	<1.0	<1.0	<1.0	<1.0	<2.0	<5.0

J = Estimated result between the method detection limit and the reporting limit
NA = Not analyzed
TB = Analyte detected in associated trip blank

Table C-13 Analytical data for volatile compounds (VOC) in water samples from springs discharging from the Edwards Aquifer, 2003 (cont'd)

Station Name	Date Sampled	Carbon disulfide (µg/L)	Carbontetra chloride (µg/L)	Chloro benzene (µg/L)	Chloro ethane (µg/L)	Chloroform (µg/L)	Chloro methane (µg/L)	cis-1,2-dichloro ethene (µg/L)	cis-1,3-dichloro propene (µg/L)
Comal Springs #1 (DX-68-23-301)	03/05/03	<1.0	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0
Comal Springs #1 (DX-68-23-301)	10/10/03	<1.0	<1.0	<1.0	<2.0	<1.0	0.2J	<1.0	<1.0
Comal Springs #1 (DX-68-23-301)	12/03/03	<1.0	<1.0	<1.0	<2.0	<1.0	0.2J	<1.0	<1.0
Comal Springs #2	10/08/03	<1.0	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0
Comal Springs #3	10/08/03	<1.0	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0
Comal Springs #5 (Duplicate)	10/10/03	14	<1.0	<1.0	<2.0	<1.0	0.2	<1.0	<1.0
Comal Springs #5	10/10/03	1	<1.0	<1.0	<2.0	<1.0	0.2	<1.0	<1.0
Comal Springs #7	03/06/03	<1.0	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0
Comal Springs #7	06/17/03	<1.0	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0
Comal Springs #7	10/08/03	<1.0	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0
Comal Springs #7	12/03/03	<1.0	<1.0	<1.0	<2.0	<1.0	0.3J	<1.0	<1.0
Comal Springs A	10/10/03	<1.0	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0
Comal Springs B1	06/18/03	<1.0	<1.0	<1.0	<2.0	<1.0	0.3J	<1.0	<1.0
Comal Springs B1	10/08/03	1	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0
Comal Springs #5	10/10/03	1	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0
Comal Springs-Saltation	10/08/03	<1.0	<1.0	<1.0	<2.0	<1.0	0.8J	<1.0	<1.0
Comal Springs-Spring Island (DX-68-23-320)	10/08/03	1J	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0
Hueco Springs A (DX-68-15-901)	03/05/03	<1.0	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0
Hueco Springs A (DX-68-15-901)	10/07/03	<1.0	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0
Hueco Springs A (DX-68-15-901)	12/01/03	<1.0	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0
Hueco Springs B	03/05/03	<1.0	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0
Hueco Springs B	06/17/03	3	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0

J = Estimated result between the method detection limit and the reporting limit
TB = Analyte detected in associated trip blank, NA = Not analyzed

Table C-13 Analytical data for volatile compounds (VOC) in water samples from springs discharging from the Edwards Aquifer, 2003 (cont'd)

Station Name	Date Sampled	Carbon disulfide (µg/L)	Carbontetra chloride (µg/L)	Chloro benzene (µg/L)	Chloro ethane (µg/L)	Chloroform (µg/L)	Chloro methane (µg/L)	cis-1,2-dichloro ethene (µg/L)	cis-1,3-dichloro propene (µg/L)
Hueco Springs B	10/07/03	<1.0	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0
Hueco Springs B	12/01/03	<1.0	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0
San Antonio Springs	03/10/03	<1.0	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0
San Antonio Springs	04/10/03	0.2J	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0
San Antonio Springs	06/16/03	5	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0
San Antonio Springs	10/09/03	19	<1.0	<1.0	<2.0	<1.0	0.3J	<1.0	<1.0
San Antonio Springs	12/02/03	<1.0	<1.0	<1.0	<2.0	<1.0	0.3J	<1.0	<1.0
San Marcos Springs-Catfish	10/06/03	0.6J	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0
San Marcos Springs-Catfish	12/19/03	<1.0	<1.0	<1.0	<2.0	<1.0	1J	<1.0	<1.0
San Marcos Springs-Deep (LR-67-01-819)	03/12/03	<1.0	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0
San Marcos Springs-Deep (LR-67-01-819)	06/23/03	4	<1.0	<1.0	<2.0	<1.0	0.7J,TB	<1.0	<1.0
San Marcos Springs-Deep (LR-67-01-819)	10/06/03	<1.0	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0
San Marcos Springs-Deep (LR-67-01-819)	12/29/03	<1.0	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0
San Marcos Springs-Diversion	10/06/03	3	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0
San Marcos Springs-Diversion	12/19/03	<1.0	<1.0	<1.0	<2.0	<1.0	0.4J	<1.0	<1.0
San Marcos Springs-Hotel (LR-67-01-801)	03/12/03	<1.0	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0
San Marcos Springs-Hotel (LR-67-01-801)	06/19/03	0.2J	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0
San Marcos Springs-Hotel (LR-67-01-801)	10/10/03	0.4J	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0
San Marcos Springs-Hotel (LR-67-01-801)	12/04/03	<1.0	<1.0	<1.0	<2.0	<1.0	0.2J	<1.0	<1.0
San Marcos Springs-Weismueller (LR-67-01-820)	10/06/03	2	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0
San Marcos Springs-Weismueller (LR-67-01-820)	12/19/03	<1.0	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0
San Pedro Springs	03/10/03	0.2J	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0
San Pedro Springs	04/10/03	0.6J	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0
San Pedro Springs	06/16/03	<1.0	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0
San Pedro Springs	10/09/03	5	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0
San Pedro Springs	12/02/03	<1.0	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0

J = Estimated result between the method detection limit and the reporting limit

TB = Analyte detected in associated trip blank, NA = Not analyzed

Table C-13 Analytical data for volatile compounds (VOC) in water samples from springs discharging from the Edwards Aquifer, 2003 (cont'd)

Station Name	Date Sampled	Cyclo hexane (µg/L)	1,2-Dibromo-3-chloro propane (µg/L)	Dibromo chloro methane (µg/L)	1,2-Dibromo ethane (µg/L)	1,2-Dichloro benzene (µg/L)	1,3-Dichloro benzene (µg/L)	1,4-Dichloro benzene(µg/L)	Dichloro difluoro methane (µg/L)
Comal Springs #1 (DX-68-23-301)	03/05/03	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
Comal Springs #1 (DX-68-23-301)	10/10/03	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
Comal Springs #1 (DX-68-23-301)	12/03/03	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
Comal Springs #2	10/08/03	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
Comal Springs #3	10/08/03	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
Comal Springs #5 (Duplicate)	10/10/03	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
Comal Springs #5	10/10/03	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
Comal Springs #7	03/06/03	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
Comal Springs #7	06/17/03	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
Comal Springs #7	10/08/03	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
Comal Springs #7	12/03/03	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
Comal Springs A	10/10/03	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
Comal Springs B1	06/18/03	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
Comal Springs B1	10/08/03	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
Comal Springs #5	10/10/03	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
Comal Springs-Saltation	10/08/03	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
Comal Springs-Spring Island (DX-68-23-320)	10/08/03	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
Hueco Springs A (DX-68-15-901)	03/05/03	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
Hueco Springs A (DX-68-15-901)	10/07/03	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
Hueco Springs A (DX-68-15-901)	12/01/03	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
Hueco Springs B	03/05/03	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
Hueco Springs B	06/17/03	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0

J = Estimated result between the method detection limit and the reporting limit

TB = Analyte detected in associated trip blank, NA = Not analyzed

Table C-13 Analytical data for volatile compounds (VOC) in water samples from springs discharging from the Edwards Aquifer, 2003 (cont'd)

Station Name	Date Sampled	Cyclo hexane (µg/L)	1,2-Dibromo-3-chloro propane (µg/L)	Dibromo chloro methane (µg/L)	1,2-Dibromo ethane (µg/L)	1,2-Dichloro benzene (µg/L)	1,3-Dichloro benzene (µg/L)	1,4-Dichloro benzene(µg/L)	Dichloro difluoro methane (µg/L)
Hueco Springs B	10/07/03	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
Hueco Springs B	12/01/03	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
San Antonio Springs	03/10/03	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
San Antonio Springs	04/10/03	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
San Antonio Springs	06/16/03	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
San Antonio Springs	10/09/03	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
San Antonio Springs	12/02/03	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
San Marcos Springs-Catfish	10/06/03	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
San Marcos Springs-Catfish	12/19/03	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
San Marcos Springs-Deep (LR-67-01-819)	03/12/03	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
San Marcos Springs-Deep (LR-67-01-819)	06/23/03	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
San Marcos Springs-Deep (LR-67-01-819)	10/06/03	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
San Marcos Springs-Deep (LR-67-01-819)	12/29/03	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
San Marcos Springs-Diversion	10/06/03	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
San Marcos Springs-Diversion	12/19/03	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
San Marcos Springs-Hotel (LR-67-01-801)	03/12/03	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
San Marcos Springs-Hotel (LR-67-01-801)	06/19/03	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
San Marcos Springs-Hotel (LR-67-01-801)	10/10/03	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
San Marcos Springs-Hotel (LR-67-01-801)	12/04/03	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
San Marcos Springs-Weismueller (LR-67-01-820)	10/06/03	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
San Marcos Springs-Weismueller (LR-67-01-820)	12/19/03	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
San Pedro Springs	03/10/03	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
San Pedro Springs	04/10/03	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
San Pedro Springs	06/16/03	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
San Pedro Springs	10/09/03	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
San Pedro Springs	12/02/03	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0

J = Estimated result between the method detection limit and the reporting limit

TB = Analyte detected in associated trip blank, NA = Not analyzed

Table C-13 Analytical data for volatile compounds (VOC) in water samples from springs discharging from the Edwards Aquifer, 2003 (cont'd)

Station Name	Date Sampled	1,1-Dichloroethene (µg/L)	1,2-Dichloroethane (µg/L)	1,1-Dichloroethane (µg/L)	1,2-Dichloropropane (µg/L)	Ethyl benzene (µg/L)	2-Hexanone (µg/L)	Isopropyl benzene (µg/L)	Methyl tert-butyl ether (µg/L)
Comal Springs #1 (DX-68-23-301)	03/05/03	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<10	<5.0
Comal Springs #1 (DX-68-23-301)	10/10/03	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<10	<5.0
Comal Springs #1 (DX-68-23-301)	12/03/03	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<10	<5.0
Comal Springs #2	10/08/03	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<10	<5.0
Comal Springs #3	10/08/03	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<10	<5.0
Comal Springs #5 (Duplicate)	10/10/03	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<10	<5.0
Comal Springs #5	10/10/03	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<10	<5.0
Comal Springs #7	03/06/03	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<10	<5.0
Comal Springs #7	06/17/03	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<10	<5.0
Comal Springs #7	10/08/03	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<10	<5.0
Comal Springs #7	12/03/03	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<10	<5.0
Comal Springs A	10/10/03	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<10	<5.0
Comal Springs B1	06/18/03	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<10	<5.0
Comal Springs B1	10/08/03	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<10	<5.0
Comal Springs #5	10/10/03	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<10	<5.0
Comal Springs-Saltation	10/08/03	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<10	<5.0
Comal Springs-Spring Island (DX-68-23-320)	10/08/03	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<10	<5.0
Hueco Springs A (DX-68-15-901)	03/05/03	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<10	<5.0
Hueco Springs A (DX-68-15-901)	10/07/03	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<10	<5.0
Hueco Springs A (DX-68-15-901)	12/01/03	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<10	<5.0
Hueco Springs B	03/05/03	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<10	<5.0
Hueco Springs B	06/17/03	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<10	<5.0

J = Estimated result between the method detection limit and the reporting limit
TB = Analyte detected in associated trip blank, NA = Not analyzed

Table C-13 Analytical data for volatile compounds (VOC) in water samples from springs discharging from the Edwards Aquifer, 2003 (cont'd)

Station Name	Date Sampled	1,1-Dichloroethene (µg/L)	1,2-Dichloroethane (µg/L)	1,1-Dichloroethane (µg/L)	1,2-Dichloropropane (µg/L)	Ethyl benzene (µg/L)	2-Hexanone (µg/L)	Isopropyl benzene (µg/L)	Methyl tert-butyl ether (µg/L)
Hueco Springs B	10/07/03	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<10	<5.0
Hueco Springs B	12/01/03	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<10	<5.0
San Antonio Springs	03/10/03	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<10	<5.0
San Antonio Springs	04/10/03	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<10	<5.0
San Antonio Springs	06/16/03	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<10	<5.0
San Antonio Springs	10/09/03	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<10	<5.0
San Antonio Springs	12/02/03	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<10	<5.0
San Marcos Springs-Catfish	10/06/03	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<10	<5.0
San Marcos Springs-Catfish	12/19/03	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<10	<5.0
San Marcos Springs-Deep (LR-67-01-819)	03/12/03	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<10	<5.0
San Marcos Springs-Deep (LR-67-01-819)	06/23/03	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<10	<5.0
San Marcos Springs-Deep (LR-67-01-819)	10/06/03	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<10	<5.0
San Marcos Springs-Deep (LR-67-01-819)	12/29/03	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<10	<5.0
San Marcos Springs-Diversion	10/06/03	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<10	<5.0
San Marcos Springs-Diversion	12/19/03	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<10	<5.0
San Marcos Springs-Hotel (LR-67-01-801)	03/12/03	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<10	<5.0
San Marcos Springs-Hotel (LR-67-01-801)	06/19/03	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<10	<5.0
San Marcos Springs-Hotel (LR-67-01-801)	10/10/03	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<10	<5.0
San Marcos Springs-Hotel (LR-67-01-801)	12/04/03	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<10	<5.0
San Marcos Springs-Weismueller (LR-67-01-820)	10/06/03	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<10	<5.0
San Marcos Springs-Weismueller (LR-67-01-820)	12/19/03	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<10	<5.0
San Pedro Springs	03/10/03	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<10	<5.0
San Pedro Springs	04/10/03	<1.0	0.3J	<1.0	<1.0	<1.0	<5.0	<10	<5.0
San Pedro Springs	06/16/03	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<10	<5.0
San Pedro Springs	10/09/03	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<10	<5.0
San Pedro Springs	12/02/03	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<10	<5.0

J = Estimated result between the method detection limit and the reporting limit

TB = Analyte detected in associated trip blank, NA = Not analyzed

Table C-13 Analytical data for volatile compounds (VOC) in water samples from springs discharging from the Edwards Aquifer, 2003 (cont'd)

Station Name	Date Sampled	4-Methyl-2-pentanone (µg/L)	Methylene chloride (µg/L)	Styrene (µg/L)	1,1,2,2-Tetra chloro ethane (µg/L)	Tetra chloro ethene (µg/L)	Toluene (µg/L)	trans-1,2-Dichloro ethane (µg/L)	trans-1,3-Dichloro propene (µg/L)
Comal Springs #1 (DX-68-23-301)	03/05/03	<5.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Comal Springs #1 (DX-68-23-301)	10/10/03	<5.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Comal Springs #1 (DX-68-23-301)	12/03/03	<5.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Comal Springs #2	10/08/03	<5.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Comal Springs #3	10/08/03	<5.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Comal Springs #5 (Duplicate)	10/10/03	<5.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Comal Springs #5	10/10/03	<5.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Comal Springs #7	03/06/03	<5.0	<2.0	<1.0	<1.0	0.2J	<1.0	<1.0	<1.0
Comal Springs #7	06/17/03	<5.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Comal Springs #7	10/08/03	<5.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Comal Springs #7	12/03/03	<5.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Comal Springs A	10/10/03	<5.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Comal Springs B1	06/18/03	<5.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Comal Springs B1	10/08/03	<5.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Comal Springs #5	10/10/03	<5.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Comal Springs-Saltation	10/08/03	<5.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Comal Springs-Spring Island (DX-68-23-320)	10/08/03	<5.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Hueco Springs A (DX-68-15-901)	03/05/03	<5.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Hueco Springs A (DX-68-15-901)	10/07/03	<5.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Hueco Springs A (DX-68-15-901)	12/01/03	<5.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Hueco Springs B	03/05/03	<5.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Hueco Springs B	06/17/03	<5.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0

J = Estimated result between the method detection limit and the reporting limit

TB = Analyte detected in associated trip blank. NA = Not analyzed

Table C-13 Analytical data for volatile compounds (VOC) in water samples from springs discharging from the Edwards Aquifer, 2003 (cont'd)

Station Name	Date Sampled	4-Methyl-2-pentanone (µg/L)	Methylene chloride (µg/L)	Styrene (µg/L)	1,1,2,2-Tetra chloro ethane (µg/L)	Tetra chloro ethene (µg/L)	Toluene (µg/L)	trans-1,2-Dichloro ethane (µg/L)	trans-1,3-Dichloro propene (µg/L)
Hueco Springs B	10/07/03	<5.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Hueco Springs B	12/01/03	<5.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
San Antonio Springs	03/10/03	<5.0	<2.0	<1.0	<1.0	0.4J	<1.0	<1.0	<1.0
San Antonio Springs	04/10/03	<5.0	<2.0	<1.0	<1.0	<1.0	0.3J	<1.0	<1.0
San Antonio Springs	06/16/03	<5.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
San Antonio Springs	10/09/03	<5.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
San Antonio Springs	12/02/03	<5.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
San Marcos Springs-Catfish	10/06/03	<5.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
San Marcos Springs-Catfish	12/19/03	<5.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
San Marcos Springs-Deep (LR-67-01-819)	03/12/03	<5.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
San Marcos Springs-Deep (LR-67-01-819)	06/23/03	<5.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
San Marcos Springs-Deep (LR-67-01-819)	10/06/03	<5.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
San Marcos Springs-Deep (LR-67-01-819)	12/29/03	<5.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
San Marcos Springs-Diversion	10/06/03	<5.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
San Marcos Springs-Diversion	12/19/03	<5.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
San Marcos Springs-Hotel (LR-67-01-801)	03/12/03	<5.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
San Marcos Springs-Hotel (LR-67-01-801)	06/19/03	<5.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
San Marcos Springs-Hotel (LR-67-01-801)	10/10/03	<5.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
San Marcos Springs-Hotel (LR-67-01-801)	12/04/03	<5.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
San Marcos Springs-Weismueller (LR-67-01-820)	10/06/03	<5.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
San Marcos Springs-Weismueller (LR-67-01-820)	12/19/03	<5.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
San Pedro Springs	03/10/03	<5.0	<2.0	<1.0	<1.0	0.2J	<1.0	<1.0	<1.0
San Pedro Springs	04/10/03	<5.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
San Pedro Springs	06/16/03	<5.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
San Pedro Springs	10/09/03	<5.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
San Pedro Springs	12/02/03	<5.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0

J = Estimated result between the method detection limit and the reporting limit

TB = Analyte detected in associated trip blank. NA = Not analyzed

Table C-13 Analytical data for volatile compounds (VOC) in water samples from springs discharging from the Edwards Aquifer, 2003 (cont'd)

Station Name	Date Sampled	1,1,2-Trichloro-1,2,2-trifluoroe (µg/L)	1,2,4-Trichloro benzene (µg/L)	1,1,1-Trichloro ethane (µg/L)	1,1,2-Trichloro ethane (µg/L)	Trichloro ethene (µg/L)	Trichloro Fluoro Methane (µg/L)	Vinyl chloride (µg/L)	Xylenes (total) (µg/L)
Comal Springs #1 (DX-68-23-301)	03/05/03	<10	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0
Comal Springs #1 (DX-68-23-301)	10/10/03	<50	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0
Comal Springs #1 (DX-68-23-301)	12/03/03	<50	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0
Comal Springs #2	10/08/03	<10	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0
Comal Springs #3	10/08/03	<10	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0
Comal Springs #5 (Duplicate)	10/10/03	<10	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0
Comal Springs #5	10/10/03	<10	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0
Comal Springs #7	03/06/03	<10	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0
Comal Springs #7	06/17/03	<10	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0
Comal Springs #7	10/08/03	<10	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0
Comal Springs #7	12/03/03	<50	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0
Comal Springs A	10/10/03	<50	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0
Comal Springs B1	06/18/03	<10	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0
Comal Springs B1	10/08/03	<10	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0
Comal Springs #5	10/10/03	<50	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0
Comal Springs-Saltation	10/08/03	<10	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0
Comal Springs-Spring Island (DX-68-23-320)	10/08/03	<10	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0
Hueco Springs A (DX-68-15-901)	03/05/03	<10	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0
Hueco Springs A (DX-68-15-901)	10/07/03	<10	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0
Hueco Springs A (DX-68-15-901)	12/01/03	<50	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0
Hueco Springs B	03/05/03	<10	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0
Hueco Springs B	06/17/03	<10	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0

J = Estimated result between the method detection limit and the reporting limit

TB = Analyte detected in associated trip blank, NA = Not analyzed

Table C-13 Analytical data for volatile compounds (VOC) in water samples from springs discharging from the Edwards Aquifer, 2003 (cont'd)

Station Name	Date Sampled	1,1,2-Trichloro-1,2,2-trifluoroe (µg/L)	1,2,4-Trichloro benzene (µg/L)	1,1,1-Trichloro ethane (µg/L)	1,1,2-Trichloro ethane (µg/L)	Trichloro ethene (µg/L)	Trichloro Fluoro methane (µg/L)	Vinyl chloride (µg/L)	Xylenes (total) (µg/L)
Hueco Springs B	10/07/03	<10	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0
Hueco Springs B	12/01/03	<50	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0
San Antonio Springs	03/10/03	<10	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0
San Antonio Springs	04/10/03	<10	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0
San Antonio Springs	06/16/03	<10	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0
San Antonio Springs	10/09/03	<50	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0
San Antonio Springs	12/02/03	<50	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0
San Marcos Springs-Catfish	10/06/03	<10	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0
San Marcos Springs-Catfish	12/19/03	<50	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0
San Marcos Springs-Deep (LR-67-01-819)	03/12/03	<10	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0
San Marcos Springs-Deep (LR-67-01-819)	06/23/03	<10	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0
San Marcos Springs-Deep (LR-67-01-819)	10/06/03	<10	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0
San Marcos Springs-Deep (LR-67-01-819)	12/29/03	<50	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0
San Marcos Springs-Diversion	10/06/03	<10	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0
San Marcos Springs-Diversion	12/19/03	<50	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0
San Marcos Springs-Hotel (LR-67-01-801)	03/12/03	<10	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0
San Marcos Springs-Hotel (LR-67-01-801)	06/19/03	<10	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0
San Marcos Springs-Hotel (LR-67-01-801)	10/10/03	<50	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0
San Marcos Springs-Hotel (LR-67-01-801)	12/04/03	<50	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0
San Marcos Springs-Weismueller (LR-67-01-820)	10/06/03	<10	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0
San Marcos Springs-Weismueller (LR-67-01-820)	12/19/03	<50	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0
San Pedro Springs	03/10/03	<10	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0
San Pedro Springs	04/10/03	<10	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0
San Pedro Springs	06/16/03	<10	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0
San Pedro Springs	10/09/03	<50	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0
San Pedro Springs	12/02/03	<50	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0

J = Estimated result between the method detection limit and the reporting limit

TB = Analyte detected in associated trip blank, NA = Not analyzed

Table C-14 Analytical data for semivolatile organic compounds (SVOC) in water samples from springs discharging from the Edwards Aquifer, 2003

Station Name	Date Sampled	3&4 Methyl phenol (µg/L)	Acenaphthene (µg/L)	Acenaphthylene (µg/L)	Acetophenone (µg/L)	Anthracene (µg/L)	Benzo(a) anthracene (µg/L)	Benzo(a) pyrene (µg/L)	Benzo(b) Fluoranthene (µg/L)	Benzo(ghi) perylene (µg/L)
Comal Springs #1 (DX-68-23-301)	03/05/03	<10	<10	<10	<10	<10	<10	<10	<10	<10
Comal Springs #1 (DX-68-23-301)	10/10/03	<10	<10	<10	<10	<10	<10	<10	<10	<10
Comal Springs #1 (DX-68-23-301)	12/03/03	<10	<10	<10	<10	<10	<10	<10	<10	<10
Comal Springs #7	03/06/03	<10	<10	<10	<10	<10	<10	<10	<10	<10
Comal Springs #7	06/17/03	<10	<10	<10	<10	<10	<10	<10	<10	<10
Comal Springs #7	10/08/03	<10	<10	<10	<10	<10	<10	<10	<10	<10
Comal Springs #7	12/03/03	<10	<10	<10	<10	<10	<10	<10	<10	<10
Hueco Springs A (DX-68-15-901)	03/05/03	<10	<10	<10	<10	<10	<10	<10	<10	<10
Hueco Springs A (DX-68-15-901)	10/07/03	<10	<10	<10	<10	<10	<10	<10	<10	<10
Hueco Springs A (DX-68-15-901)	12/01/03	<10	<10	<10	<10	<10	<10	<10	<10	<10
Hueco Springs B	03/05/03	<10	<10	<10	<10	<10	<10	<10	<10	<10
Hueco Springs B	06/17/03	<10	<10	<10	<10	<10	<10	<10	<10	<10
Hueco Springs B	10/07/03	<10	<10	<10	<10	<10	<10	<10	<10	<10
Hueco Springs B	12/01/03	<10	<10	<10	<10	<10	<10	<10	<10	<10
San Antonio Springs	03/10/03	<10	<10	<10	<10	<10	<10	<10	<10	<10
San Antonio Springs	06/16/03	<10	<10	<10	<10	<10	<10	<10	<10	<10
San Antonio Springs	10/09/03	<10	<10	<10	<10	<10	<10	<10	<10	<10
San Antonio Springs	12/02/03	<10	<10	<10	<10	<10	<10	<10	<10	<10
San Marcos Springs-Catfish	12/19/03	<10	<10	<10	<10	<10	<10	<10	<10	<10
San Marcos Springs-Deep (LR-67-01-819)	03/12/03	<10	<10	<10	<10	<10	<10	<10	<10	<10
San Marcos Springs-Deep (LR-67-01-819)	06/23/03	<10	<10	<10	<10	<10	<10	<10	<10	<10
San Marcos Springs-Deep (LR-67-01-819)	10/06/03	<13	<13	<13	<13	<13	<13	<13	<13	<13
San Marcos Springs-Deep (LR-67-01-819)	12/29/03	<10	<10	<10	<10	<10	<10	<10	<10	<10

J = Estimated result between the method detection limit and the reporting limit
NA = Not analyzed

Table C-14 Analytical data for semivolatile organic compounds (SVOC) in water samples from springs discharging from the Edwards Aquifer, 2003 (cont'd)

Station Name	Date Sampled	3&4 Methyl phenol (µg/L)	Acenaphthene (µg/L)	Acenaphthylene (µg/L)	Acetophenone (µg/L)	Anthracene (µg/L)	Benzo(a) anthracene (µg/L)	Benzo(a) pyrene (µg/L)	Benzo(b) Fluoranthene (µg/L)	Benzo(ghi) perylene (µg/L)
San Marcos Springs-Diversion	12/19/03	<10	<10	<10	<10	<10	<10	<10	<10	<10
San Marcos Springs-Hotel (LR-67-01-801)	03/12/03	<10	<10	<10	<10	<10	<10	<10	<10	<10
San Marcos Springs-Hotel (LR-67-01-801)	06/19/03	<10	<10	<10	<10	<10	<10	<10	<10	<10
San Marcos Springs-Hotel (LR-67-01-801)	10/10/03	<10	<10	<10	<10	<10	<10	<10	<10	<10
San Marcos Springs-Hotel (LR-67-01-801)	12/04/03	<10	<10	<10	<10	<10	<10	<10	<10	<10
San Marcos Springs-Weismueller (LR-67-01-820)	12/19/03	<10	<10	<10	<10	<10	<10	<10	<10	<10
San Pedro Springs	03/10/03	<10	<10	<10	<10	<10	<10	<10	<10	<10
San Pedro Springs	06/16/03	<10	<10	<10	<10	<10	<10	<10	<10	<10
San Pedro Springs	10/09/03	<10	<10	<10	<10	<10	<10	<10	<10	<10
San Pedro Springs	12/02/03	<10	<10	<10	<10	<10	<10	<10	<10	<10

J = Estimated result between the method detection limit and the reporting limit
NA = Not analyzed

Table C-14 Analytical data for semivolatile organic compounds (SVOC) in water samples from springs discharging from the Edwards Aquifer, 2003 (cont'd)

Station Name	Date Sampled	Benzo(k) Fluor anthene (µg/L)	bis (2-Chloro ethoxy) methane (µg/L)	Bis (2-Chloro ethyl) ether (µg/L)	Bis (2-Ethyl hexyl) phthalate (µg/L)	4-Bromo phenyl phenyl ether (µg/L)	Butyl benzyl phthalate (µg/L)	Carbazole (µg/L)	4-Chloro-3-methyl phenol (µg/L)	4-Chloro aniline (µg/L)
Comal Springs #1 (DX-68-23-301)	03/05/03	<10	<10	<10	<10	<10	<10	<10	<10	<10
Comal Springs #1 (DX-68-23-301)	10/10/03	<10	<10	<10	<10	<10	<10	<10	<10	<10
Comal Springs #1 (DX-68-23-301)	12/03/03	<10	<10	<10	0.6J	<10	<10	<10	<10	<10
Comal Springs #7	03/06/03	<10	<10	<10	<10	<10	<10	<10	<10	<10
Comal Springs #7	06/17/03	<10	<10	<10	<10	<10	<10	<10	<10	<10
Comal Springs #7	10/08/03	<10	<10	<10	1J	<10	<10	<10	<10	<10
Comal Springs #7	12/03/03	<10	<10	<10	<10	<10	<10	<10	<10	<10
Hueco Springs A (DX-68-15-901)	03/05/03	<10	<10	<10	<10	<10	<10	<10	<10	<10
Hueco Springs A (DX-68-15-901)	10/07/03	<10	<10	<10	0.6J	<10	<10	<10	<10	<10
Hueco Springs A (DX-68-15-901)	12/01/03	<10	<10	<10	4J	<10	<10	<10	<10	<10
Hueco Springs B	03/05/03	<10	<10	<10	<10	<10	<10	<10	<10	<10
Hueco Springs B	06/17/03	<10	<10	<10	13	<10	<10	<10	<10	<10
Hueco Springs B	10/07/03	<10	<10	<10	2J	<10	<10	<10	<10	<10
Hueco Springs B	12/01/03	<10	<10	<10	2J	<10	0.8J	<10	<10	<10
San Antonio Springs	03/10/03	<10	<10	<10	<10	<10	<10	<10	<10	<10
San Antonio Springs	06/16/03	<10	<10	<10	<10	<10	<10	<10	<10	<10
San Antonio Springs	10/09/03	<10	<10	<10	1J	<10	<10	<10	<10	<10
San Antonio Springs	12/02/03	<10	<10	<10	<10	<10	<10	<10	<10	<10
San Marcos Springs-Catfish	12/19/03	<10	<10	<10	1J	<10	<10	<10	<10	<10
San Marcos Springs-Deep (LR-67-01-819)	03/12/03	<10	<10	<10	<10	<10	<10	<10	<10	<10
San Marcos Springs-Deep (LR-67-01-819)	06/23/03	<10	<10	<10	<10	<10	<10	<10	<10	<10
San Marcos Springs-Deep (LR-67-01-819)	10/06/03	<13	<13	<13	4J	<13	<13	<13	<13	<13
San Marcos Springs-Deep (LR-67-01-819)	12/29/03	<10	<10	<10	4J	<10	<10	<10	<10	<10

J = Estimated result between the method detection limit and the reporting limit
NA = Not analyzed

Table C-14 Analytical data for semivolatile organic compounds (SVOC) in water samples from springs discharging from the Edwards Aquifer, 2003 (cont'd)

Station Name	Date Sampled	Benzo(k) Fluor anthene (µg/L)	bis (2-Chloro ethoxy) methane (µg/L)	Bis (2-Chloro ethyl) ether (µg/L)	Bis (2-Ethyl hexyl) phthalate (µg/L)	4-Bromo phenyl phenyl ether (µg/L)	Butyl benzyl phthalate (µg/L)	Carbazole (µg/L)	4-Chloro-3-methyl phenol (µg/L)	4-Chloro aniline (µg/L)
San Marcos Springs-Diversion	12/19/03	<10	<10	<10	2J	<10	<10	<10	<10	<10
San Marcos Springs-Hotel (LR-67-01-801)	03/12/03	<10	<10	<10	4J	<10	<10	<10	<10	<10
San Marcos Springs-Hotel (LR-67-01-801)	06/19/03	<10	<10	<10	1J	<10	<10	<10	<10	<10
San Marcos Springs-Hotel (LR-67-01-801)	10/10/03	<10	<10	<10	<10	<10	<10	<10	<10	<10
San Marcos Springs-Hotel (LR-67-01-801)	12/04/03	<10	<10	<10	<10	<10	<10	<10	<10	<10
San Marcos Springs-Weismueller (LR-67-01-820)	12/19/03	<10	<10	<10	0.9J	<10	<10	<10	<10	<10
San Pedro Springs	03/10/03	<10	<10	<10	<10	<10	<10	<10	<10	<10
San Pedro Springs	06/16/03	<10	<10	<10	4J	<10	<10	<10	<10	<10
San Pedro Springs	10/09/03	<10	<10	<10	<10	<10	<10	<10	<10	<10
San Pedro Springs	12/02/03	<10	<10	<10	3J	<10	<10	<10	<10	<10

J = Estimated result between the method detection limit and the reporting limit
NA = Not analyzed

Table C-14 Analytical data for semivolatile organic compounds (SVOC) in water samples from springs discharging from the Edwards Aquifer, 2003 (cont'd)

Station Name	Date Sampled	2-Chloro naphthalene (µg/L)	2-Chloro phenol (µg/L)	4-Chloro phenyl phenyl ether (µg/L)	Chrysene (µg/L)	Di-n-butyl phthalate (µg/L)	Di-n-octyl phthalate (µg/L)	Dibenzo (a,h) anthracene (µg/L)	Dibenzo furan (µg/L)	3,3'-Dichloro benzidine (µg/L)
Comal Springs #1 (DX-68-23-301)	03/05/03	<10	<10	<10	<10	<10	<10	<10	<10	<20
Comal Springs #1 (DX-68-23-301)	10/10/03	<10	<10	<10	<10	<10	<10	<10	<10	<20
Comal Springs #1 (DX-68-23-301)	12/03/03	<10	<10	<10	<10	<10	<10	<10	<10	<20
Comal Springs #7	03/06/03	<10	<10	<10	<10	<10	<10	<10	<10	<20
Comal Springs #7	06/17/03	<10	<10	<10	<10	<10	<10	<10	<10	<20
Comal Springs #7	10/08/03	<10	<10	<10	<10	<10	<10	<10	<10	<20
Comal Springs #7	12/03/03	<10	<10	<10	<10	<10	<10	<10	<10	<20
Hueco Springs A (DX-68-15-901)	03/05/03	<10	<10	<10	<10	<10	<10	<10	<10	<20
Hueco Springs A (DX-68-15-901)	10/07/03	<10	<10	<10	<10	<10	<10	<10	<10	<20
Hueco Springs A (DX-68-15-901)	12/01/03	<10	<10	<10	<10	<10	<10	<10	<10	<20
Hueco Springs B	03/05/03	<10	<10	<10	<10	<10	<10	<10	<10	<20
Hueco Springs B	06/17/03	<10	<10	<10	<10	<10	<10	<10	<10	<20
Hueco Springs B	10/07/03	<10	<10	<10	<10	<10	<10	<10	<10	<20
Hueco Springs B	12/01/03	<10	<10	<10	<10	<10	<10	<10	<10	<20
San Antonio Springs	03/10/03	<10	<10	<10	<10	<10	<10	<10	<10	<20
San Antonio Springs	06/16/03	<10	<10	<10	<10	<10	<10	<10	<10	<20
San Antonio Springs	10/09/03	<10	<10	<10	<10	<10	<10	<10	<10	<20
San Antonio Springs	12/02/03	<10	<10	<10	<10	<10	<10	<10	<10	<20
San Marcos Springs-Catfish	12/19/03	<10	<10	<10	<10	<10	<10	<10	<10	<20
San Marcos Springs-Deep (LR-67-01-819)	03/12/03	<10	<10	<10	<10	<10	<10	<10	<10	<20
San Marcos Springs-Deep (LR-67-01-819)	06/23/03	<10	<10	<10	<10	<10	<10	<10	<10	<20
San Marcos Springs-Deep (LR-67-01-819)	10/06/03	<13	<13	<13	<13	<13	<13	<13	<13	<26
San Marcos Springs-Deep (LR-67-01-819)	12/29/03	<10	<10	<10	<10	2J	<10	<10	<10	<20

J = Estimated result between the method detection limit and the reporting limit, NA = Not analyzed

Table C-14 Analytical data for semivolatile organic compounds (SVOC) in water samples from springs discharging from the Edwards Aquifer, 2003 (cont'd)

Station Name	Date Sampled	2-Chloro naphthalene (µg/L)	2-Chloro phenol (µg/L)	4-Chloro phenyl phenyl ether (µg/L)	Chrysene (µg/L)	Di-n-butyl phthalate (µg/L)	Di-n-octyl phthalate (µg/L)	Dibenzo (a,h) anthracene (µg/L)	Dibenzo furan (µg/L)	3,3'-Dichloro benzidine (µg/L)
San Marcos Springs-Diversion	12/19/03	<10	<10	<10	<10	<10	<10	<10	<10	<20
San Marcos Springs-Hotel (LR-67-01-801)	03/12/03	<10	<10	<10	<10	<10	<10	<10	<10	<20
San Marcos Springs-Hotel (LR-67-01-801)	06/19/03	<10	<10	<10	<10	<10	<10	<10	<10	<20
San Marcos Springs-Hotel (LR-67-01-801)	10/10/03	<10	<10	<10	<10	<10	<10	<10	<10	<20
San Marcos Springs-Hotel (LR-67-01-801)	12/04/03	<10	<10	<10	<10	<10	<10	<10	<10	<20
San Marcos Springs-Weismueller (LR-67-01-820)	12/19/03	<10	<10	<10	<10	<10	<10	<10	<10	<20
San Pedro Springs	03/10/03	<10	<10	<10	<10	<10	<10	<10	<10	<20
San Pedro Springs	06/16/03	<10	<10	<10	<10	<10	<10	<10	<10	<20
San Pedro Springs	10/09/03	<10	<10	<10	<10	<10	<10	<10	<10	<20
San Pedro Springs	12/02/03	<10	<10	<10	<10	<10	<10	<10	<10	<20

J = Estimated result between the method detection limit and the reporting limit
NA = Not analyzed

Table C-14 Analytical data for semivolatile organic compounds (SVOC) in water samples from springs discharging from the Edwards Aquifer, 2003 (cont'd)

Station Name	Date Sampled	2,4-Dichloro phenol (µg/L)	Diethyl phthalate (µg/L)	Dimethyl phthalate (µg/L)	2,4-Dimethyl phenol (µg/L)	2,4-Dinitro phenol (µg/L)	2,4-Dinitro toluene (µg/L)	2,6-Dinitro toluene (µg/L)	Diphenyl (µg/L)	Fluoranthene (µg/L)
Comal Springs #1 (DX-68-23-301)	03/05/03	<10	<10	<10	<10	<50	<10	<10	<10	<10
Comal Springs #1 (DX-68-23-301)	10/10/03	<10	<10	<10	<10	<50	<10	<10	<10	<10
Comal Springs #1 (DX-68-23-301)	12/03/03	<10	<10	<10	<10	<50	<10	<10	<10	<10
Comal Springs #7	03/06/03	<10	<10	<10	<10	<50	<10	<10	<10	<10
Comal Springs #7	06/17/03	<10	<10	<10	<10	<50	<10	<10	<10	<10
Comal Springs #7	10/08/03	<10	<10	<10	<10	<50	<10	<10	<10	<10
Comal Springs #7	12/03/03	<10	<10	<10	<10	<50	<10	<10	<10	<10
Hueco Springs A (DX-68-15-901)	03/05/03	<10	<10	<10	<10	<50	<10	<10	<10	<10
Hueco Springs A (DX-68-15-901)	10/07/03	<10	<10	<10	<10	<50	<10	<10	<10	<10
Hueco Springs A (DX-68-15-901)	12/01/03	<10	<10	<10	<10	<50	<10	<10	<10	<10
Hueco Springs B	03/05/03	<10	<10	<10	<10	<50	<10	<10	<10	<10
Hueco Springs B	06/17/03	<10	0.6J	<10	<10	<50	<10	<10	<10	<10
Hueco Springs B	10/07/03	<10	<10	<10	<10	<50	<10	<10	<10	<10
Hueco Springs B	12/01/03	<10	<10	<10	<10	<50	<10	<10	<10	<10
San Antonio Springs	03/10/03	<10	<10	<10	<10	<50	<10	<10	<10	<10
San Antonio Springs	06/16/03	<10	1J	<10	<10	<50	<10	<10	<10	<10
San Antonio Springs	10/09/03	<10	<10	<10	<10	<50	<10	<10	<10	<10
San Antonio Springs	12/02/03	<10	<10	<10	<10	<50	<10	<10	<10	<10
San Marcos Springs-Catfish	12/19/03	<10	<10	<10	<10	<50	<10	<10	<10	<10
San Marcos Springs-Deep (LR-67-01-819)	03/12/03	<10	<10	<10	<10	<50	<10	<10	<10	<10
San Marcos Springs-Deep (LR-67-01-819)	06/23/03	<10	0.8J	<10	<10	<50	<10	<10	<10	<10
San Marcos Springs-Deep (LR-67-01-819)	10/06/03	<13	0.9J	<13	<13	<66	<13	<13	<13	<13
San Marcos Springs-Deep (LR-67-01-819)	12/29/03	<10	<10	<10	<10	<50	<10	<10	<10	<10

J = Estimated result between the method detection limit and the reporting limit
NA = Not analyzed

Table C-14 Analytical data for semivolatile organic compounds (SVOC) in water samples from springs discharging from the Edwards Aquifer, 2003 (cont'd)

Station Name	Date Sampled	2,4-Dichlorophenol (µg/L)	Diethyl phthalate (µg/L)	Dimethyl phthalate (µg/L)	2,4-Dimethylphenol (µg/L)	2,4-Dinitrophenol (µg/L)	2,4-Dinitrotoluene (µg/L)	2,6-Dinitrotoluene (µg/L)	Diphenyl (µg/L)	Fluoranthene (µg/L)
San Marcos Springs-Diversion	12/19/03	<10	<10	<10	<10	<50	<10	<10	<10	<10
San Marcos Springs-Hotel (LR-67-01-801)	03/12/03	<10	<10	<10	<10	<50	<10	<10	<10	<10
San Marcos Springs-Hotel (LR-67-01-801)	06/19/03	<10	<10	<10	<10	<50	<10	<10	<10	<10
San Marcos Springs-Hotel (LR-67-01-801)	10/10/03	<10	<10	<10	<10	<50	<10	<10	<10	<10
San Marcos Springs-Hotel (LR-67-01-801)	12/04/03	<10	<10	<10	<10	<50	<10	<10	<10	<10
San Marcos Springs-Weismueller (LR-67-01-820)	12/19/03	<10	<10	<10	<10	<50	<10	<10	<10	<10
San Pedro Springs	03/10/03	<10	<10	<10	<10	<50	<10	<10	<10	<10
San Pedro Springs	06/16/03	<10	1J	<10	<10	<50	<10	<10	<10	<10
San Pedro Springs	10/09/03	<10	<10	<10	<10	<50	<10	<10	<10	<10
San Pedro Springs	12/02/03	<10	<10	<10	<10	<50	<10	<10	<10	<10

J = Estimated result between the method detection limit and the reporting limit
NA = Not analyzed

Table C-14 Analytical data for semivolatile organic compounds (SVOC) in water samples from springs discharging from the Edwards Aquifer, 2003 (cont'd)

Station Name	Date Sampled	Fluorene (µg/L)	Hexa chloro benzene (µg/L)	Hexa chloro butadiene (µg/L)	Hexa chloro cyclo pentadiene (µg/L)	Hexa chloro ethane (µg/L)	Indeno (1,2,3-cd) pyrene (µg/L)	Isophorone (µg/L)	m-Nitro aniline (µg/L)	2-Methyl-4,6-dinitro phenol (µg/L)
Comal Springs #1 (DX-68-23-301)	03/05/03	<10	<10	<10	<10	<10	<10	<10	<50	<50
Comal Springs #1 (DX-68-23-301)	10/10/03	<10	<10	<10	<10	<10	<10	<10	<50	<50
Comal Springs #1 (DX-68-23-301)	12/03/03	<10	<10	<10	<10	<10	<10	<10	<50	<50
Comal Springs #7	03/06/03	<10	<10	<10	<10	<10	<10	<10	<50	<50
Comal Springs #7	06/17/03	<10	<10	<10	<10	<10	<10	<10	<50	<50
Comal Springs #7	10/08/03	<10	<10	<10	<10	<10	<10	<10	<50	<50
Comal Springs #7	12/03/03	<10	<10	<10	<10	<10	<10	<10	<50	<50
Hueco Springs A (DX-68-15-901)	03/05/03	<10	<10	<10	<10	<10	<10	<10	<50	<50
Hueco Springs A (DX-68-15-901)	10/07/03	<10	<10	<10	<10	<10	<10	<10	<50	<50
Hueco Springs A (DX-68-15-901)	12/01/03	<10	<10	<10	<10	<10	<10	<10	<50	<50
Hueco Springs B	03/05/03	<10	<10	<10	<10	<10	<10	<10	<50	<50
Hueco Springs B	06/17/03	<10	<10	<10	<10	<10	<10	<10	<50	<50
Hueco Springs B	10/07/03	<10	<10	<10	<10	<10	<10	<10	<50	<50
Hueco Springs B	12/01/03	<10	<10	<10	<10	<10	<10	<10	<50	<50
San Antonio Springs	03/10/03	<10	<10	<10	<10	<10	<10	<10	<50	<50
San Antonio Springs	06/16/03	<10	<10	<10	<10	<10	<10	<10	<50	<50
San Antonio Springs	10/09/03	<10	<10	<10	<10	<10	<10	<10	<50	<50
San Antonio Springs	12/02/03	<10	<10	<10	<10	<10	<10	<10	<50	<50
San Marcos Springs-Catfish	12/19/03	<10	<10	<10	<10	<10	<10	<10	<50	<50
San Marcos Springs-Deep (LR-67-01-819)	03/12/03	<10	<10	<10	<10	<10	<10	<10	<50	<50
San Marcos Springs-Deep (LR-67-01-819)	06/23/03	<10	<10	<10	<10	<10	<10	<10	<50	<50
San Marcos Springs-Deep (LR-67-01-819)	10/06/03	<13	<13	<13	<13	<13	<13	<13	<66	<66
San Marcos Springs-Deep (LR-67-01-819)	12/29/03	<10	<10	<10	<10	<10	<10	<10	<50	<50

J = Estimated result between the method detection limit and the reporting limit, NA = Not analyzed

Table C-14 Analytical data for semivolatile organic compounds (SVOC) in water samples from springs discharging from the Edwards Aquifer, 2003 (cont'd)

Station Name	Date Sampled	Fluorene (µg/L)	Hexa chloro benzene (µg/L)	Hexa chloro butadiene (µg/L)	Hexa chloro cyclo pentadiene (µg/L)	Hexa chloro ethane (µg/L)	Indeno (1,2,3-cd) pyrene (µg/L)	Isophorone (µg/L)	m-Nitro aniline (µg/L)	2-Methyl-4,6-dinitro phenol (µg/L)
San Marcos Springs-Diversion	12/19/03	<10	<10	<10	<10	<10	<10	<10	<50	<50
San Marcos Springs-Hotel (LR-67-01-801)	03/12/03	<10	<10	<10	<10	<10	<10	<10	<50	<50
San Marcos Springs-Hotel (LR-67-01-801)	06/19/03	<10	<10	<10	<10	<10	<10	<10	<50	<50
San Marcos Springs-Hotel (LR-67-01-801)	10/10/03	<10	<10	<10	<10	<10	<10	<10	<50	<50
San Marcos Springs-Hotel (LR-67-01-801)	12/04/03	<10	<10	<10	<10	<10	<10	<10	<50	<50
San Marcos Springs-Weismueller (LR-67-01-820)	12/19/03	<10	<10	<10	<10	<10	<10	<10	<50	<50
San Pedro Springs	03/10/03	<10	<10	<10	<10	<10	<10	<10	<50	<50
San Pedro Springs	06/16/03	<10	<10	<10	<10	<10	<10	<10	<50	<50
San Pedro Springs	10/09/03	<10	<10	<10	<10	<10	<10	<10	<50	<50
San Pedro Springs	12/02/03	<10	<10	<10	<10	<10	<10	<10	<50	<50

J = Estimated result between the method detection limit and the reporting limit
NA = Not analyzed

Table C-14 Analytical data for semivolatile organic compounds (SVOC) in water samples from springs discharging from the Edwards Aquifer, 2003 (cont'd)

Station Name	Date Sampled	2-Methyl naphthalene (µg/L)	2-Methyl phenol (µg/L)	N-Nitro sodi-n-propyl amine (µg/L)	N-Nitro Sodiphenyl amine (µg/L)	Naphthalene (µg/L)	Nitro benzene (µg/L)	2-Nitro phenol (µg/L)	4-Nitro phenol (µg/L)	o,o,o-Triethyl phosphoro thioate (µg/L)
Comal Springs #1 (DX-68-23-301)	03/05/03	<10	<10	<10	<10	<10	<10	<10	<50	<10
Comal Springs #1 (DX-68-23-301)	10/10/03	<10	<10	<10	<10	<10	<10	<10	<50	<10
Comal Springs #1 (DX-68-23-301)	12/03/03	<10	<10	<10	<10	<10	<10	<10	<50	<10
Comal Springs #7	03/06/03	<10	<10	<10	<10	<10	<10	<10	<50	<10
Comal Springs #7	06/17/03	<10	<10	<10	<10	<10	<10	<10	<50	<10
Comal Springs #7	10/08/03	<10	<10	<10	<10	<10	<10	<10	<50	<10
Comal Springs #7	12/03/03	<10	<10	<10	<10	<10	<10	<10	<50	<10
Hueco Springs A (DX-68-15-901)	03/05/03	<10	<10	<10	<10	<10	<10	<10	<50	<10
Hueco Springs A (DX-68-15-901)	10/07/03	<10	<10	<10	<10	<10	<10	<10	<50	<10
Hueco Springs A (DX-68-15-901)	12/01/03	<10	<10	<10	<10	<10	<10	<10	<50	<10
Hueco Springs B	03/05/03	<10	<10	<10	<10	<10	<10	<10	<50	<10
Hueco Springs B	06/17/03	<10	<10	<10	<10	<10	<10	<10	<50	<10
Hueco Springs B	10/07/03	<10	<10	<10	<10	<10	<10	<10	<50	<10
Hueco Springs B	12/01/03	<10	<10	<10	<10	<10	<10	<10	<50	<10
San Antonio Springs	03/10/03	<10	<10	<10	<10	<10	<10	<10	<50	<10
San Antonio Springs	06/16/03	<10	<10	<10	<10	<10	<10	<10	<50	<10
San Antonio Springs	10/09/03	<10	<10	<10	<10	<10	<10	<10	<50	<10
San Antonio Springs	12/02/03	<10	<10	<10	<10	<10	<10	<10	<50	<10
San Marcos Springs-Catfish	12/19/03	<10	<10	<10	<10	<10	<10	<10	<50	<10
San Marcos Springs-Deep (LR-67-01-819)	03/12/03	<10	<10	<10	<10	<10	<10	<10	<50	<10
San Marcos Springs-Deep (LR-67-01-819)	06/23/03	<10	<10	<10	<10	<10	<10	<10	<50	<10
San Marcos Springs-Deep (LR-67-01-819)	10/06/03	<13	<13	<13	<13	<13	<13	<13	<66	<13
San Marcos Springs-Deep (LR-67-01-819)	12/29/03	<10	<10	<10	<10	<10	<10	<10	<50	<10

J = Estimated result between the method detection limit and the reporting limit, NA = Not analyzed

Table C-14 Analytical data for semivolatile organic compounds (SVOC) in water samples from springs discharging from the Edwards Aquifer, 2003 (cont'd)

Station Name	Date Sampled	2-Methyl naphthalene (µg/L)	2-Methyl phenol (µg/L)	N-Nitro sodi-n-propyl amine (µg/L)	N-Nitro Sodiphenyl amine (µg/L)	Naphthalene (µg/L)	Nitro benzene (µg/L)	2-Nitro phenol (µg/L)	4-Nitro phenol (µg/L)	o,o,o-Triethyl phosphoro thioate (µg/L)
San Marcos Springs-Diversion	12/19/03	<10	<10	<10	<10	<10	<10	<10	<50	<10
San Marcos Springs-Hotel (LR-67-01-801)	03/12/03	<10	<10	<10	<10	<10	<10	<10	<50	<10
San Marcos Springs-Hotel (LR-67-01-801)	06/19/03	<10	<10	<10	<10	<10	<10	<10	<50	<10
San Marcos Springs-Hotel (LR-67-01-801)	10/10/03	<10	<10	<10	<10	<10	<10	<10	<50	<10
San Marcos Springs-Hotel (LR-67-01-801)	12/04/03	<10	<10	<10	<10	<10	<10	<10	<50	<10
San Marcos Springs-Weismueller (LR-67-01-820)	12/19/03	<10	<10	<10	<10	<10	<10	<10	<50	<10
San Pedro Springs	03/10/03	<10	<10	<10	<10	<10	<10	<10	<50	<10
San Pedro Springs	06/16/03	<10	<10	<10	<10	<10	<10	<10	<50	<10
San Pedro Springs	10/09/03	<10	<10	<10	<10	<10	<10	<10	<50	<10
San Pedro Springs	12/02/03	<10	<10	<10	<10	<10	<10	<10	<50	<10

J = Estimated result between the method detection limit and the reporting limit
NA = Not analyzed

Table C-14 Analytical data for semivolatile organic compounds (SVOC) in water samples from springs discharging from the Edwards Aquifer, 2003 (cont'd)

Station Name	Date Sampled	o-Nitro aniline (µg/L)	p-Nitro aniline (µg/L)	Penta chloro phenol (µg/L)	Phenanthrene (µg/L)	Phenol (µg/L)	Pronamide (µg/L)	Pyrene (µg/L)	2,4,5-Trichloro phenol (µg/L)	2,4,6-Trichloro phenol (µg/L)
Comal Springs #1 (DX-68-23-301)	03/05/03	<50	<50	<50	<10	<10	<50	<10	<10	<10
Comal Springs #1 (DX-68-23-301)	10/10/03	<50	<50	<50	<10	<10	<10	<10	<10	<10
Comal Springs #1 (DX-68-23-301)	12/03/03	<50	<50	<50	<10	<10	<10	<10	<10	<10
Comal Springs #7	03/06/03	<50	<50	<50	<10	<10	<50	<10	<10	<10
Comal Springs #7	06/17/03	<50	<50	<50	<10	<10	<50	<10	<10	<10
Comal Springs #7	10/08/03	<50	<50	<50	<10	<10	<10	<10	<10	<10
Comal Springs #7	12/03/03	<50	<50	<50	<10	<10	<10	<10	<10	<10
Hueco Springs A (DX-68-15-901)	03/05/03	<50	<50	<50	<10	<10	<50	<10	<10	<10
Hueco Springs A (DX-68-15-901)	10/07/03	<50	<50	<50	<10	<10	<10	<10	<10	<10
Hueco Springs A (DX-68-15-901)	12/01/03	<50	<50	<50	<10	<10	<10	<10	<10	<10
Hueco Springs B	03/05/03	<50	<50	<50	<10	<10	<50	<10	<10	<10
Hueco Springs B	06/17/03	<50	<50	<50	<10	<10	<50	<10	<10	<10
Hueco Springs B	10/07/03	<50	<50	<50	<10	<10	<10	<10	<10	<10
Hueco Springs B	12/01/03	<50	<50	<50	<10	<10	<10	<10	<10	<10
San Antonio Springs	03/10/03	<50	<50	<50	<10	3J	<10	<10	<10	<10
San Antonio Springs	06/16/03	<50	<50	<50	<10	<10	<50	<10	<10	<10
San Antonio Springs	10/09/03	<50	<50	<50	<10	<10	<10	<10	<10	<10
San Antonio Springs	12/02/03	<50	<50	<50	<10	<10	<10	<10	<10	<10
San Marcos Springs-Catfish	12/19/03	<50	<50	<50	<10	<10	<10	<10	<10	<10
San Marcos Springs-Deep (LR-67-01-819)	03/12/03	<50	<50	<50	<10	<10	<50	<10	<10	<10
San Marcos Springs-Deep (LR-67-01-819)	06/23/03	<50	<50	<50	<10	<10	<50	<10	<10	<10
San Marcos Springs-Deep (LR-67-01-819)	10/06/03	<66	<66	<66	<13	<13	<13	<13	<13	<13
San Marcos Springs-Deep (LR-67-01-819)	12/29/03	<50	<50	<50	<10	<10	<10	<10	<10	<10

J = Estimated result between the method detection limit and the reporting limit
NA = Not analyzed

Table C-14 Analytical data for semivolatile organic compounds (SVOC) in water samples from springs discharging from the Edwards Aquifer, 2003

Station Name	Date Sampled	o-Nitro aniline (µg/L)	p-Nitro aniline (µg/L)	Penta chloro phenol (µg/L)	Phenanthrene (µg/L)	Phenol (µg/L)	Pronamide (µg/L)	Pyrene (µg/L)	2,4,5-Trichloro phenol (µg/L)	2,4,6-Trichloro phenol (µg/L)
San Marcos Springs-Diversion	12/19/03	<50	<50	<50	<10	<10	<10	<10	<10	<10
San Marcos Springs-Hotel (LR-67-01-801)	03/12/03	<50	<50	<50	<10	<10	<50	<10	<10	<10
San Marcos Springs-Hotel (LR-67-01-801)	06/19/03	<50	<50	<50	<10	<10	<50	<10	<10	<10
San Marcos Springs-Hotel (LR-67-01-801)	10/10/03	<50	<50	<50	<10	<10	<10	<10	<10	<10
San Marcos Springs-Hotel (LR-67-01-801)	12/04/03	<50	<50	<50	<10	<10	<10	<10	<10	<10
San Marcos Springs-Weismueller (LR-67-01-820)	12/19/03	<50	<50	<50	<10	<10	<10	<10	<10	<10
San Pedro Springs	03/10/03	<50	<50	<50	<10	3J	<10	<10	<10	<10
San Pedro Springs	06/16/03	<50	<50	<50	<10	<10	<50	<10	<10	<10
San Pedro Springs	10/09/03	<50	<50	<50	<10	<10	<10	<10	<10	<10
San Pedro Springs	12/02/03	<50	<50	<50	<10	<10	<10	<10	<10	<10

J = Estimated result between the method detection limit and the reporting limit
NA = Not analyzed

APPENDIX D – Conversion Factors

Volume	Equivalent Units
1 cubic foot	7.48 gallons
	62.41 lbs. of water
1 acre-foot	43,560 cubic feet
	325,851 gallons
	Covers one acre of land (209 feet by 209 feet) one foot deep
1 million gallons	3.07 acre-feet

Flow Rate	
1 cubic foot per second (cfs)	448.80 gallons per minute
	646,272 gallons per day
	1.98 acre-feet per day
	19.4 million gallons per day
	59.50 acre-feet per month
	236 million gallons per year
	723 acre-feet per year
1 million gallons per day (mgd)	3.07 acre-feet per day
	1,120.55 acre-feet per year
1,000 gallons per minute (gpm)	2.23 cfs
	4.42 acre-feet per day

Cost	
10 cents per 1,000 gallons	$100 per 1 million gallons
	$32.59 per acre foot
0.61 cents per 1,000 gallons	$2.00 per acre foot
7.7 cents per 1,000 gallons	$25.00 per acre foot

Metric conversions	
1 acre	0.4 hectares
1 gallon	3.8 liters
1 cubic foot	0.028 cubic meters
1 cubic meter per second	15,852 gallons per minute
	951,120 gallons per hour