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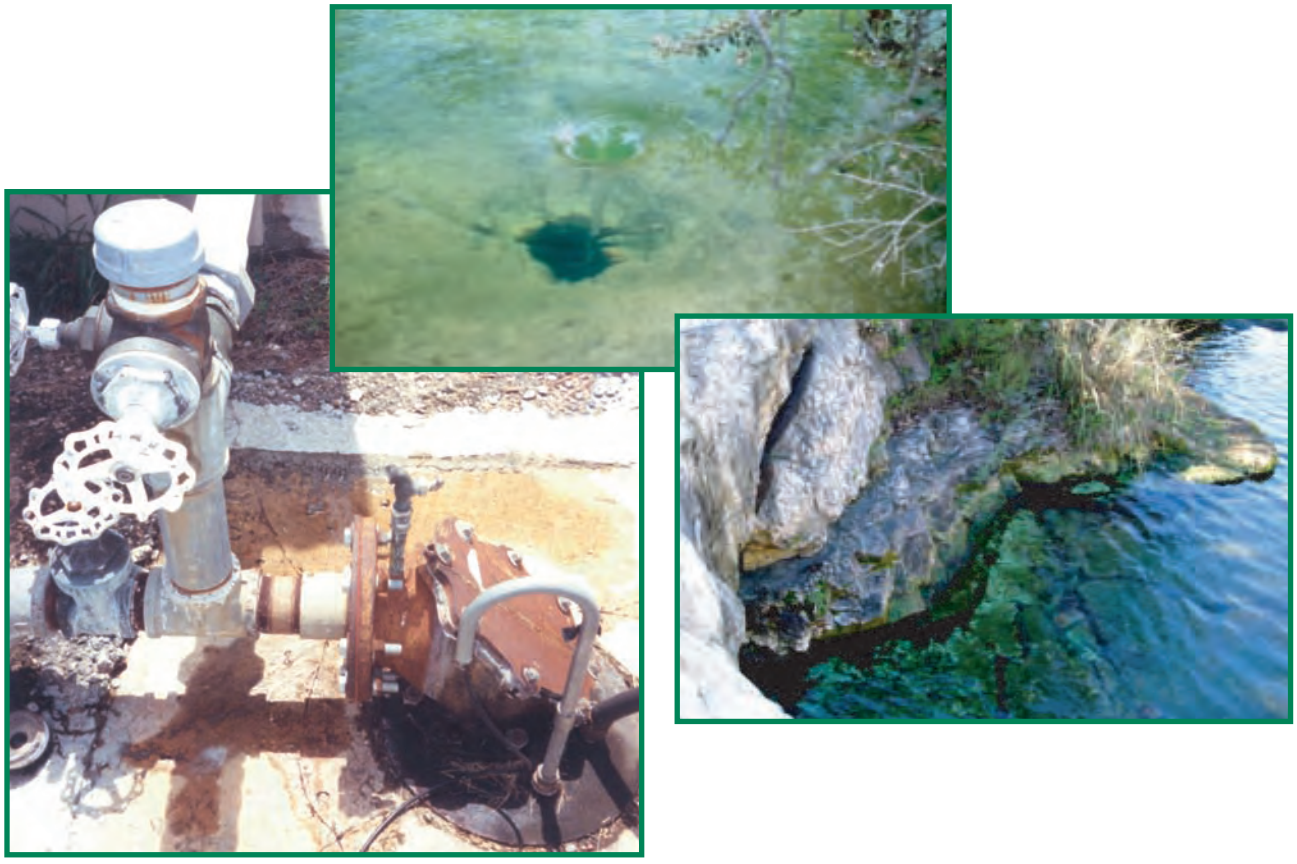
Relation of Specific Conductance in Ground Water to Intersection of Flow Paths by Wells, and Associated Major Ion and Nitrate Geochemistry, Barton Springs Segment of the Edwards Aquifer, Austin, Texas, 1978–2003



Scientific Investigations Report 2007–5002

U.S. Department of the Interior
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Cover.

Top: Surface water entering Cripple Crawfish sinkhole as recharge to the Barton Springs segment of the Edwards aquifer (photograph provided by Nico Hauwert, City of Austin).

Left: Well MCH (State well YD–58–50–704), one of the wells used for this report (photograph by Venezia Chavez, U.S. Geological Survey).

Right: Main Spring, a major discharge point for the Barton Springs segment of the Edwards aquifer; Main Spring discharges through fractured limestone.

Relation of Specific Conductance in Ground Water to Intersection of Flow Paths by Wells, and Associated Major Ion and Nitrate Geochemistry, Barton Springs Segment of the Edwards Aquifer, Austin, Texas, 1978–2003

By Bradley D. Garner and Barbara J. Mahler

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Conversion Factors, Abbreviations, and Datum

Multiply	By	To obtain
	Length	
Inch/Pound to SI		
cubic foot per second	0.02832	cubic meter per second
foot	0.3048	meter
gallon per year	0.003785	cubic meter per year
mile per day	1.609	kilometer per day
SI to Inch/Pound		
micrometer	3.937×10^{-5}	inch

Abbreviations:

microsiemens per centimeter at 25 degrees Celsius, µS/cm

milligram per liter, mg/L

Datum

Horizontal coordinate information is referenced to the North American Datum of 1927 (NAD 27).

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Relation of Specific Conductance in Ground Water to Intersection of Flow Paths by Wells, and Associated Major Ion and Nitrate Geochemistry, Barton Springs Segment of the Edwards Aquifer, Austin, Texas, 1978–2003

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Abstract

Understanding of karst flow systems can be complicated by the presence of solution-enlarged conduits, which can transmit large volumes of water through the aquifer rapidly. If the geochemistry at a well can be related to streamflow or spring discharge (springflow), or both, the relations can indicate the presence of recent recharge in water at the well, which in turn might indicate that the well intersects a conduit (and thus a major flow path). Increasing knowledge of the occurrence and distribution of conduits in the aquifer can contribute to better understanding of aquifer framework and function. To that end, 26 wells in the Barton Springs segment of the Edwards aquifer, Austin, Texas, were investigated for potential intersection with conduits; 26 years of arbitrarily timed specific conductance measurements in the wells were compared to streamflow in five creeks that provide recharge to the aquifer and were compared to aquifer flow conditions as indicated by Barton Springs discharge. A nonparametric statistical test (Spearman's rho) was used to divide the 26 wells into four groups on the basis of correlation of specific conductance of well water to streamflow or spring discharge, or both. Potential relations between conduit intersection by wells and ground-water geochemistry were investigated through analysis of historical major ion and nitrate geochemistry for wells in each of the four groups. Specific conductance at nine wells was negatively correlated with both streamflow and spring discharge, or streamflow only. These correlations were interpreted as evidence of an influx of surface-water recharge during periods of high streamflow and the influence at the wells of water from a large, upgradient part of the aquifer; and further interpreted as indicating that four wells intersect major aquifer flow paths and five wells intersect minor aquifer flow paths (short, tributary conduits). Specific conductance at six wells was positively correlated with spring discharge, which was interpreted as not intersecting a flow path (conduit). Of the 11 wells for which specific conductance did not correlate with either streamflow or spring discharge, no interpretations regarding flow-path intersection by wells were made. In some cases, specific conductance data might not have indicated intersection with a flow path because of small sample sets. Water in the Barton Springs segment generally is a calcium-magnesium-bicarbonate type, although some water compositions deviate from this. Multiple geochemical processes were identified that might affect geochemistry at the wells, but in general the geochemical composition of ground water, except for dilution by surface-water recharge, was not related to intersection of a well with a flow path. Some samples from wells indicate inflow of water from the saline zone to the east; this inflow is associated with low streamflow and spring discharge. Other samples indicate that the aquifer at some wells might be receiving water that has been in contact with rocks of the Trinity aquifer; this mixing is most evident when spring discharge is high. Occurrence of nitrate in ground water was unrelated to intersection of flow paths by wells and appeared to be the result of localized contamination. However, most of the wells with one or more samples contaminated by nitrate are in the more densely populated parts of the study area.

Introduction

Understanding of karst aquifer flow systems can be complicated by the presence of solution-enlarged conduits. If present, conduits can transmit large volumes of water through the aquifer rapidly and likely constitute the major flow paths. Some water in conduits can be recent surface-water recharge, and this recharge can have a markedly different geochemical signature than longer-residence-time ground water. As such,

ground water at wells that intersect conduits (and thus major flow paths) can be characterized by temporally variable geochemistry that is related to surface-water processes. If the geochemistry at a well can be related to streamflow or spring discharge (springflow), or both, the relations can indicate the presence of recent recharge in water at the well, which in turn might indicate that the well intersects a conduit. Increasing knowledge of the occurrence and distribution of conduits in the aquifer can contribute to better understanding of aquifer framework and function.

In the Barton Springs segment of the Edwards aquifer at Austin, Tex. (fig. 1), temporal variability of geochemistry at wells has been documented previously (Andrews and others, 1984; City of Austin, 1997). From 1978 through 2003, the U.S. Geological Survey (USGS), in cooperation with the City of Austin, sampled wells in the aquifer for a variety of water-quality constituents. For this report, the USGS, again in cooperation with the City of Austin, analyzed this historical water-quality dataset and contemporaneous datasets of streamflow and spring discharge to identify wells that intersect conduits.

Purpose and Scope

The primary purpose of this report is to identify wells that intersect conduits (major flow paths) in the Barton Springs segment of the Edwards aquifer by relating the geochemistry of water (specifically the geochemical signature of recent surface-water recharge) at wells to streamflow and spring discharge. A secondary purpose is to determine whether major ion geochemistry, which can indicate geochemical processes and other sources of water in addition to recent recharge, is related to intersection of flow paths by wells; a third purpose is to determine whether nitrate nitrogen occurrence is related to intersection of flow paths by wells. The data also yield information that allows hypotheses about which wells might intersect minor or tributary flow paths. The datasets used for the analysis, collected by the USGS from 1978 through 2003, comprise specific conductance, major ion, and nitrate data collected from 26 wells, streamflow from five creeks that provide recharge to the Barton Springs segment of the Edwards aquifer, and spring discharge from Barton Springs. The principal tool used to hypothesize recent recharge in the water, and thus the intersection of a well with a conduit, was correlation of specific conductance of water at wells with streamflow and spring discharge. Major ion geochemistry provided evidence to identify sources of water at the wells other than recent recharge, and nitrate geochemistry also was used to evaluate potential sources of nitrate.

Description of the Barton Springs Segment of the Edwards Aquifer

The Barton Springs segment of the Edwards aquifer (hereinafter, the Barton Springs segment) is a karst aquifer that extends south-southwest of Austin. It is bounded on the north by the Colorado River (Town Lake in Austin), on the south by a ground-water divide, on the west by with the fault-controlled outcrop of the Trinity aquifer, and on the east by a zone of low permeability containing saline water (greater than 1,000 milligrams per liter [mg/L] dissolved solids concentration) known as the saline zone (fig. 1) (Abbott, 1975; Sharp and Banner, 1997; Slade and others, 1986).

Previous studies have characterized the lithology, structure, and physical and chemical hydrogeology of the Barton Springs segment. The aquifer material primarily is limestone of Cretaceous age that has undergone multiple episodes of karstification (Maclay, 1995; Rose, 1972; Small and others, 1996). In the Miocene Epoch, tectonic activity caused faulting, which enhanced karstification and affected the aquifer structure that exists today (Slade and others, 1986). The aquifer generally is highly transmissive, with some measured straight-line transit times exceeding 6 miles per day (Hauwert and others, 2004). The Barton Springs segment comprises rocks of the Edwards Group and Georgetown Formation, as shown in the correlation chart in figure 2. In the recharge zone, which is essentially coincident with the outcrop of the aquifer, the aquifer is unconfined.

Water in the Barton Springs segment generally is a calcium-bicarbonate ($Ca\text{-}HCO_3$) to calcium-magnesium-bicarbonate ($Ca\text{-}Mg\text{-}HCO_3$) type that contains less than 500 mg/L dissolved solids, although appreciable variation in dissolved constituents and molar ratios have been observed (Senger and Kreitler, 1984). Studies such as Andrews and others (1984) have shown that some geochemical variability is attributable to episodic recharge of meteoric water in response to storms.

About 85 percent of the recharge to the aquifer is estimated to occur through karst features (fractures, faults, and sinkholes) in the beds of Barton, Williamson, Slaughter, Bear, and Onion Creeks (Slade and others, 1986), ephemeral creeks that cross the recharge zone from the west to the east (fig. 1). Additional potential sources of recharge include interstream infiltration through sinkholes and fractures, urban infrastructure, the saline zone, and the Trinity aquifer (Sharp and Banner, 1997). Flow in the aquifer generally is to the north-northeast, although direction of flow varies with changes in aquifer flow conditions and resulting changes in the potentiometric surface (Slade and others, 1986).

Discharge from the aquifer is from springs and wells. The primary discharge point is Barton Springs, which comprises several orifices. Combined long-term mean discharge from the three major orifices is about 50 cubic feet per second (Slade and others, 1986). Additional discharge is from domestic, livestock, and public-supply wells. In 2004 there were an estimated 970 active wells in the Barton Springs segment, which accounted for withdrawals of about 2.5 billion gallons per year (Smith and Hunt, 2004), or a continuous average discharge of about 11 cubic feet per second.

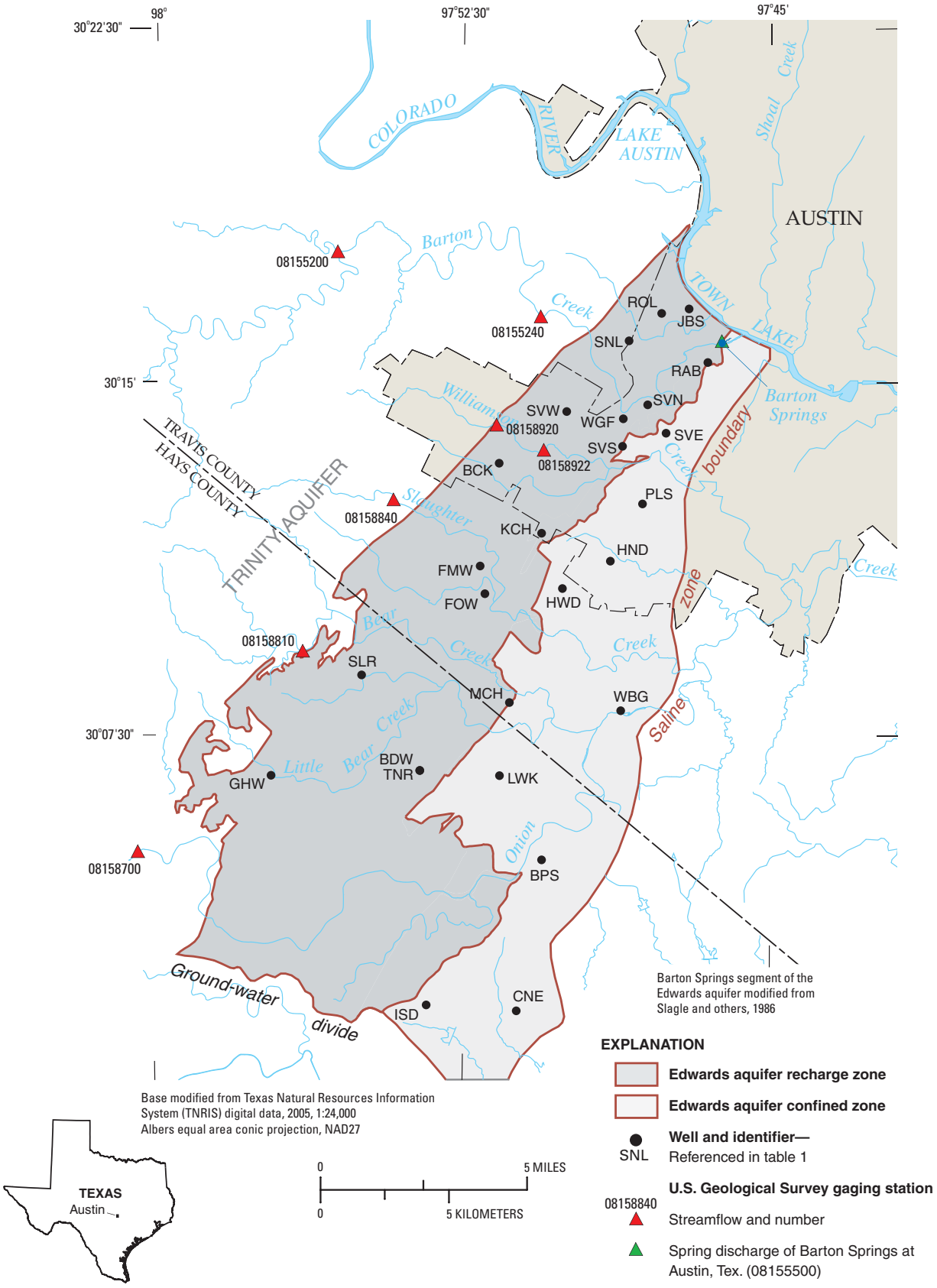
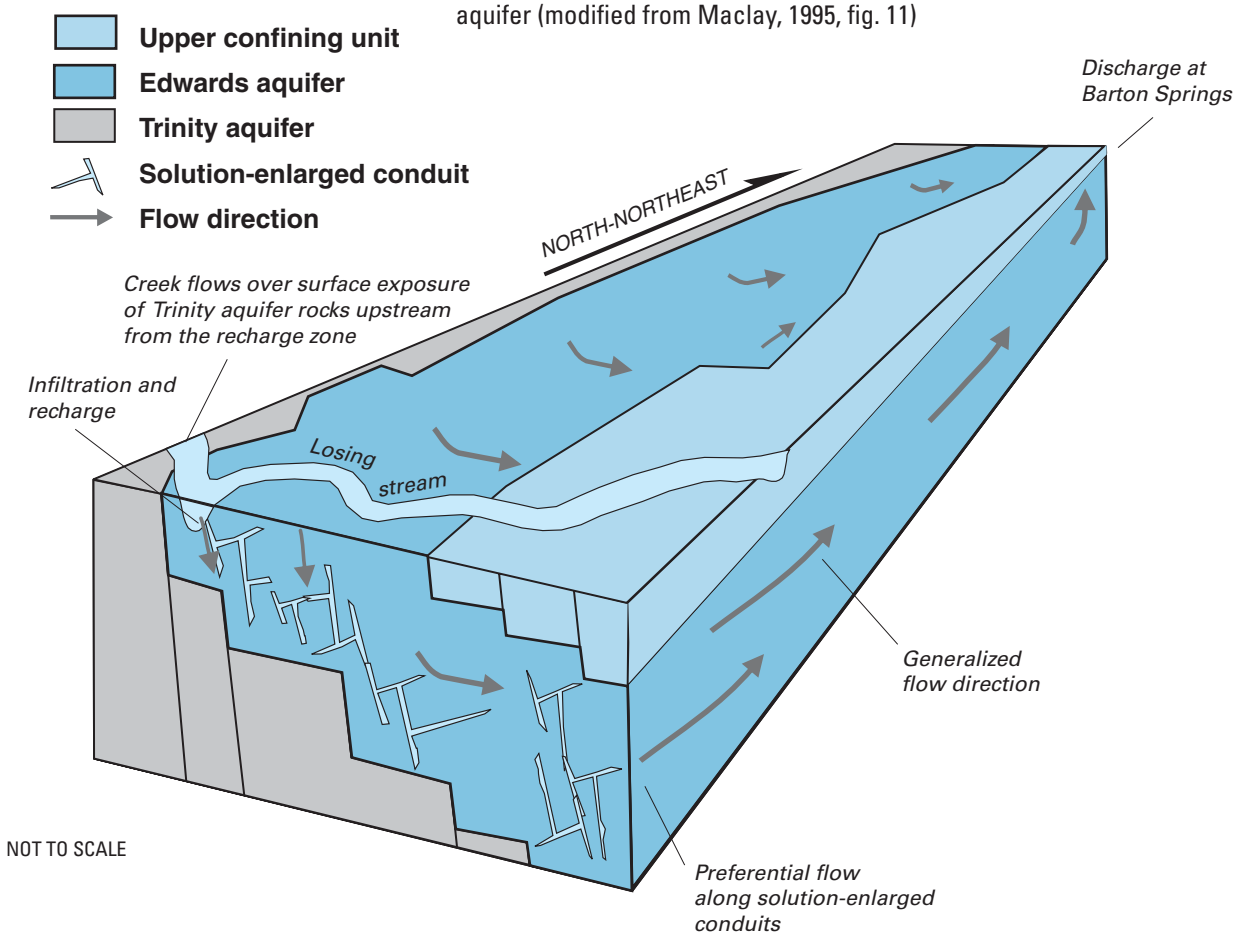


Figure 1. Location of Barton Springs segment of the Edwards aquifer, Austin, Texas, major creeks, and data-collection sites, 1978–2003.

HYDROGEOLOGIC UNIT	STRATIGRAPHIC UNIT	
Upper confining unit	Del Rio Clay	
Edwards aquifer, Barton Springs segment	Georgetown Formation	
	Edwards Group	Cyclic and marine members
		Leached and collapsed members
		Regional dense member
		Grainstone member
		Kirschberg evaporite and dolomitic members
		Basal nodular member
Trinity aquifer	Glen Rose Limestone	

Correlation between hydrogeologic and stratigraphics units associated with the Barton Springs segment of the Edwards aquifer (modified from Maclay, 1995, fig. 11)



Water flows across the surface exposure of Trinity aquifer rocks toward the recharge zone. Over the recharge zone, water enters the aquifer through the beds of creeks. Water in the aquifer flows north-northeast, likely along solution-enlarged conduits that create highly preferential flow paths. Most flow eventually discharges at the northeastern corner of the aquifer at Barton Springs.

Figure 2. Schematic diagram of Barton Springs segment of the Edwards aquifer, Austin, Texas.

Karst Aquifer Geochemistry and Its Relation to the Barton Springs Segment

The Barton Springs segment is a karst aquifer. In karst aquifers, surface water can enter the aquifer as focused recharge through fractures, cavities, or sinkholes and move rapidly through the aquifer by way of solution-enlarged fractures or conduits to discharge at a spring or well. Although ground water is stored throughout the pore spaces in the carbonate rock, most ground-water transport occurs through solution-enlarged cavities and conduits. As a result, recently recharged water moving through conduits has little time to equilibrate with the rock matrix and thus bears a geochemical signature similar to that of surface water.

Surface water, in general, has lower concentrations of dissolved solids than ground water and therefore has lower specific conductance. Specific conductance is a measure of the amount of electrical current water can transmit and a direct reflection of the ionic strength, or amount of dissolved solids, in the water (Hem, 1982). Typically, 95 percent or more of the dissolved solids in natural waters are a combination of calcium (Ca), magnesium (Mg), sodium (Na), potassium (K), bicarbonate (HCO_3), chloride (Cl), sulfate (SO_4), and nitrate (NO_3) (Herczeg and Edmunds, 2000). Rainfall has very low specific conductance (Herczeg and Edmunds, 2000); surface water has higher specific conductance than rainfall because of chemical reactions with the land surface, soils, and streambed; ground water typically has a higher specific conductance than surface water because of the dissolution of the rock matrix of the aquifer.

The geochemical signature of ground water reflects the initial geochemical signature of the recharging surface water, over which is imprinted the interaction of the water with the rock through which it flows (Kehew, 2001). Rainfall and recharging surface water contain carbonic acid, a weak acid that forms from the interaction of water with carbon dioxide in the atmosphere and in soils. In karst terrane, the acid dissolves the carbonate rock matrix, releasing Ca and HCO_3 ions (and Mg, if present in the rock) until an equilibrium concentration is reached, resulting in a Ca-HCO_3 water or a Ca-Mg-HCO_3 water. This process is not instantaneous; several days or more are required to approach within 90 percent of equilibrium (White, 1988). Therefore, water that has recharged the aquifer recently will have a lower dissolved solids concentration and specific conductance than water that has been in contact with the rock longer (Freeze and Cherry, 1979). In addition, water moving through conduits is likely to have a lower specific conductance than water moving through the rock matrix or microfractures because of the smaller surface area available, on a per volume basis, for water-rock interaction and shorter residence time. Other ions in karst ground water can come from trace elements in the limestone (for example, strontium) or from other minerals sometimes associated with limestone deposits, such as gypsum ($CaSO_4$), pyrite (FeS_2), and clay with iron or manganese oxide coatings. Surface recharge is an additional source of major ion species, as it contains ions associated with the soil zone through which the water has moved or with which the water has reacted. In agricultural or urbanized areas, an thropogenic contaminants such as fertilizers and wastewater effluent also might be sources of major ion species (Freeze and Cherry, 1979). In the Barton Springs segment, the saline zone to the east and the underlying Trinity aquifer both are potential sources of several ion species, including Na, Cl, and SO_4. Under some hydrologic conditions, water from the saline zone and Trinity aquifer has been hypothesized to flow into the Barton Springs segment (City of Austin, 1997; Slade and others, 1986; Smith and Hunt, 2004).

Because of their close connection with the surface-water system, karst springs can have extremely variable specific conductance (Shuster and White, 1971). In response to rain events, focused recharge (recharge entering into the subsurface through discrete openings such as fractures, sinkholes, and swallets) moves rapidly through fractures and conduits in the aquifer to springs. As a result, a rapid decrease in specific conductance commonly is observed at springs after a rain event, followed by a gradual increase to a value more representative of interaction with the rock matrix. Specific conductance thus can be considered as a tracer of recently infiltrated surface water; and the travel time of stormwater from a known recharge point to a discharge point along a flow path is reflected by the time it takes for specific conductance at a spring to decrease following a rain event (for example, Desmarais and Rojstaczer, 2002; Ryan and Meiman, 1996). This phenomenon is observed at Barton Springs after rain events, with specific conductance typically decreasing about 12 hours after rainfall (City of Austin, 1997; Mahler and others, 2006). For this report, the concept of specific conductance as a tracer is extended to wells, with the hypothesis that the geochemistry of water at a well intersecting a fracture or conduit connected to the surface should respond in a similar manner—that is, specific conductance should decrease in response to the influx of recharge.

Several approaches can be used to identify wells that intersect flow paths. Aquifer tests can identify very high transmissivity at a well, which might be related to intersection of large conduits. Monitoring of physical, chemical, and biological properties and constituents during stormflow conditions might also identify wells that intersect flow paths (Andrews and others, 1984; Mahler and others, 2000). Dye-trace studies that monitor the arrival or non-arrival of a dye injected at the surface in nearby wells provide information to map connections between specific recharge sites and wells (Hauwert and others, 2004). These methods are labor and resource intensive. If long-term datasets exist, it is useful to determine if those datasets contain some information concerning potential intersection of wells with flow paths, even if the data were not collected with that objective. The analysis in this report uses an existing long-term historical geochemical dataset and a statistical and geochemical approach to identify wells that intersect flow paths. Historical data on major ion and nitrate concentrations are examined to indicate whether flow-path intersection influences either major ion geochemistry or susceptibility to

Table 1. Wells sampled, range of sampling dates, and number of analyses available for each well, Barton Springs segment of the Edwards aquifer, Austin, Texas, 1978–2003.

[--, not available]

Well identifier (fig. 1)	State well number	USGS identifier	Depth (feet below land surface)	Range of years well was sampled	Number of specific conductance measurements	Number of major ion water analyses
BCK	YD–58–50–101	301317097513801	217	1978–83	6	3
BDW	LR–58–57–311	300646097533202	--	1990–2003	23	14
BPS	LR–58–58–403	300453097503301	390	1978–2003	53	35
CNE	LR–58–58–704	300138097511501	532	1978–83	6	5
FMW	YD–58–50–412	301106097520501	295	1981–94	31	19
FOW[1]	YD–58–50–408	301031097515801	439	1978–2003	43	27
GHW[1]	LR–58–57–202	300639097571001	200	1978–89	24	14
HND	YD–58–50–502	301113097485401	300	1978–87	15	9
HWD	YD–58–50–401	301038097500401	404	1978–83	6	5
ISD	LR–58–57–901	300148097532101	575	1978–83	6	5
JBS	YD–58–42–926	301634097470001	190	1978–83	13	5
KCH	YD–58–50–406	301148097503501	360	1978–99	60	38
LWK	LR–58–58–105	300640097513501	477	1978–83	6	5
MCH	YD–58–50–704	300813097512101	345	1978–2003	48	31
PLS	YD–58–50–520	301226097480701	315	1988–2003	32	20
RAB	YD–58–42–915	301526097463201	295	1993–2003	16	11
ROL	YD–58–42–813	301628097474001	300	1978–94	39	23
SLR[1]	LR–58–49–903	300847097545801	200	1978–89	18	11
SNL	YD–58–42–809	301553097482801	340	1978–83	6	6
SVE	YD–58–50–216	301356097473301	582	1978–2003	49	29
SVN	YD–58–50–217	301432097480001	214	1978–2003	35	20
SVS	YD–58–50–215	301339097483701	675	1978–2003	51	31
SVW	YD–58–50–211	301423097495901	282	1978–2003	65	46
TNR	LR–58–57–303	300646097533201	315	1978–92	26	15
WBG	YD–58–50–810	300803097483801	359	1978–83	6	5
WGF	YD–58–50–206	301414097483601	257	1978–83	6	6

[1]Drilled partly into the Trinity aquifer.

nitrate contamination in ground water in the Barton Springs segment.

Acknowledgments

The authors thank D.A. Johns (City of Austin) for providing insight into the Barton Springs segment of the Edwards aquifer. Also, thanks are extended to the many scientists and technicians who collected, analyzed, and archived the 26 years of data used for this report. Thanks also are extended to the landowners and municipal authorities who allowed sampling of their wells.

Methods

Approach

Historical geochemical data from 26 wells in the Barton Springs segment (table 1) were evaluated in the context of contemporaneous streamflow from five creeks and spring discharge from Barton Springs, under the hypothesis that recharging water and variable aquifer flow conditions result in related variations in geochemistry in water at those wells that intersect conduits (major flow paths). Specific conductance was used as an overall indicator of water chemistry. Discharges from

streamflow-gaging stations on Barton, Williamson, Slaughter, Bear, and Onion Creeks (fig. 1) were used to indicate rainfall events and associated recharge. The discharge of Barton Springs was used to indicate aquifer flow condition—that is, whether flow and storage in the aquifer were relatively high or low. Senger (1983) showed that the discharge of Barton Springs is controlled directly by the amount of water stored in the Barton Springs segment. Major ion and nitrate concentrations for samples from the 26 wells were interpreted in relation to intersection of conduits or major flow paths, other potential sources of water, and potential sources of nitrate.

Data Sources and Description

A large record of geochemical samples from wells, streamflow, and spring discharge (1978 through 2003) exists for the Barton Springs segment. These data were compiled from several USGS studies with various objectives and are in appendixes 1, 2, and 4.

The USGS study that produced much of the geochemical data used in this study began in 1978 (Slade and others, 1979). From 1978 through 1983, about 30 water wells were sampled several times a year for numerous water-quality properties and constituents, including specific conductance, major ions, and nitrate. After 1983, about 11 of the original 30 wells continued to be sampled periodically. Summaries of these data have been published (Senger, 1983; Slade and others, 1986), and most of the data are available from published USGS annual water-data reports (Barbie, 2001–04; Gandara and Barbie, 1999–2000; Gandara, Buckner, and Jones, 1993; Gandara and Jones, 1994–96; Gandara, Jones, and Barbie, 1997–98; Gordon, Pate, and Dorsey, 1985–87; Gordon, Pate, and Slagle, 1988; Slade, Dorsey, Gordon, and Mitchell, 1980; Slade, Dorsey, and others, 1981; Slade, Gaylord, and others, 1982; Slade, Gordon, and Mitchell, 1979; Slade, Veenhuis, Dorsey, Gardiner, and Smith, 1983; Slade, Veenhuis, Dorsey, Stewart, and Ruiz, 1984). Data for 1987–91 were not previously published and are included in appendixes 1 and 4.

The specific conductance dataset for the 26 wells of this report consists of 679 values ranging from 388 to 1,530 microsiemens per centimeter at 25 degrees Celsius (µS/cm) (appendix 1). Eight wells have only six specific conductance values, the minimum number required for inclusion in this report, and four wells have more than 50 values. The largest range (445 to 1,530 µS/cm) occurs at well SVE, and the smallest range (480 to 495 µS/cm) occurs at well ISD. One-half of the wells had less than 100 µS/cm variation. The median coefficient of variation (C_v), a statistic that reflects the degree of variation from the mean of numbers in a dataset and is defined as the standard deviation divided by the mean, for specific conductance for all wells is 0.035, with a range of 0.011 to 0.28 (table 2).

Streamflow has been measured by the USGS since 1978 at gaging stations on five creeks (fig. 1), the flow of which recharges the aquifer: Barton, Williamson, Slaughter, Bear, and Onion Creeks. Streamflow is computed from stage-discharge

Table 2. Coefficient of variation (C_v) for specific conductance of wells, Barton Springs segment of the Edwards aquifer, Austin, Texas, 1978–2003.

Group[1]	Well identifier (fig. 1)	C_v
C1		
	FMW	0.033
	KCH	.033
	SLR	.074
	SVE	.23
Median		**.053**
C2		
	BDW	.015
	HWD	.015
	MCH	.042
	SVN	.13
	SVW	.057
Median		**.042**
P		
	FOW	.106
	GHW	.022
	LWK	.015
	ROL	.17
	SVS	.028
	WGF	.038
Median		**.033**
N		
	BCK	.069
	BPS	.029
	CNE	.024
	HND	.065
	ISD	.011
	JBS	.020
	PLS	.025
	RAB	.28
	SNL	.054
	TNR	.026
	WBG	.055
Median		**.029**
Median, all wells		**.035**

[1]Group classifications shown in table 3.

relations that have been developed for each of the sites and that are updated regularly by manual discharge measurements. Although occasional gaps are in the data, in most cases the flow of recharging creeks for the 10 days preceding the date of collection of a water sample from a well is available. The streamflow dataset consists of about 9,000 daily mean streamflow values for each of the five creeks (appendix 2). The entire 1978–2003 period of streamflow measurements is available for Williamson Creek (two stations—08158920 Williamson Creek at Oak Hill, Tex., 1978–92 and 2003; 08158922 Williamson Creek at Brush Country Blvd., Oak Hill, Tex., 1993–2002) and for Slaughter Creek (station 08158840 Slaughter Creek at FM 1826 near Austin, Tex.); 94 percent of the 1978–2003 period is available for Bear Creek (station 08158810 Bear Creek below FM 1826 near Driftwood, Tex., 1979–2003) and for Onion Creek (station 08158700 Onion Creek near Driftwood, Tex., 1979–2003); and 76 percent of this period is available for Barton Creek (two stations—08155200 Barton Creek at SH 71 near Oak Hill, Tex., 1978–82; 08155240 Barton Creek at Lost Creek Blvd., Austin, Tex., 1989–2003). Streamflow for 1983–88 was not available for either of the two Barton Creek stations, thus 31 percent of specific conductance measurements could not be tested against Barton Creek streamflow.

Discharge from Barton Springs, used as an indicator of aquifer flow condition, has been measured by the USGS continuously since 1978. Discharge from Barton Springs is computed on the basis of water levels in a nearby well, similar to use of a stage-discharge relation to compute streamflow. Barton Springs discharges from four orifices, and the discharge reported by the USGS reflects the sum of the discharge from all but the smallest orifice (Upper Barton Spring). The largest orifice, Main Spring, discharges into Barton Springs Pool, a public swimming pool formed by dams upstream and downstream from Main Spring. The relation between the water level in the well and spring discharge is well defined provided that the water level in Barton Springs Pool remains constant. When the water level in the pool changes—for example if it decreases when the gates to the dam downstream from the pool are opened or rises when the dam upstream from the pool is overtopped by Barton Creek—the established rating cannot be used. The relation is verified periodically and refined through the use of manual discharge measurements.

The Barton Springs discharge dataset consists of about 9,000 daily mean discharge values (appendix 2). Data are available for the entire 1978–2003 period, beginning in March 1978. The largest spring discharges (in particular those from 1991 and 1992) are associated with record-setting rainfall events and major surface-water flooding; these discharges likely are underestimated, as flooding in Barton Creek reduces the accuracy of the stage-discharge relation used to compute Barton Springs discharge. However, because nonparametric methods (based on ranks) were used for interpretation of spring discharge, consistent underestimation does not affect the findings of this report.

Water-Quality Sample Collection

Sampled wells (table 1) were privately owned domestic and livestock wells and municipal wells. All wells except three were cased into and completed in the Edwards aquifer. Almost all of the wells were completed as open hole, and most wells do not penetrate the full thickness of the aquifer (Maclay, 1995). Three wells in the recharge zone (FOW, GHW, SLR) were drilled partly into the Trinity aquifer (N.A. Houston, U.S. Geological Survey, written commun., 2005).

Samples were collected from wells at points in the plumbing upstream from pressure tanks or treatment equipment to obtain a sample representative of aquifer water. Before June 2001, a bailer was used for sample collection at well sites where a down-hole pump was not installed. Beginning in June 2001, a submersible pump was used at those sites. Samples were collected after purging at least three casing volumes of water and after field measurements of properties (temperature, pH, and specific conductance) had stabilized. Before 1992, field properties were obtained by placing meter probes in a plastic bucket and filling the bucket from the bottom. Beginning in 1993, a flow-through cell was used to limit aeration and atmospheric exposure. Beginning in 2001, USGS National Water Quality Assessment Program sampling protocols and analytical schedules (Koterba and others, 1995) were incorporated into the sampling program.

Specific conductance was measured and recorded during all USGS sampling at wells. The instruments used to measure specific conductance changed over the years, but standard procedures were followed consistently (Radtke and others, 1998). Instruments were calibrated using at least two standard solutions of known specific conductance and calibration was documented. Specific conductance measurements were made after at least three casing volumes of water were pumped or bailed from wells. The final reported specific conductance typically was the median of five readings taken over a 15-minute period.

Water samples for major ion analysis were collected and filtered through 0.45-micrometer cellulose filters. Anion samples were dispensed into pre-rinsed polyethylene bottles. Cation samples were placed in pre-rinsed, acid-cleaned polyethylene bottles, and samples were preserved in the field with a strong acid to a pH of less than 2. Samples were chilled on ice, held in dark conditions, and shipped to the USGS National Water Quality Laboratory (NWQL) for analysis.

Analytical Methods

Analytical methods at the NWQL changed over the period of the historical dataset. Major cations were analyzed by atomic absorption spectroscopy (Fishman and Friedman, 1989), by atomic emission spectroscopy (Fishman, 1993), and most recently by inductively-coupled plasma mass spectroscopy. Before 1990, chloride concentration was measured using titrimetric or colorimetric methods (Fishman and Friedman, 1989), and sulfate concentration was measured using

turbidimetric analysis by formation of barium sulfate. After 1990, chloride and sulfate were measured using ion chromatography (Fishman, 1993). Nitrate was analyzed using ion chromatography or cadmium reduction-diazotization colorimetry (Fishman, 1993). On the basis of the findings of Andrews and others (1984), concentration of nitrite was assumed to be negligible, thus measured nitrite plus nitrate nitrogen was assumed to indicate solely nitrate concentration. Trace elements such as strontium were assumed to be of negligible concentration, and ion complexation was assumed to be negligible. Despite variations in analytical methods, the authors assume for this report that methods have been sufficiently consistent to allow side-by-side comparison of major ion and nitrate concentrations.

Quality Assurance

Specific Conductance Data

The quality of specific conductance data was monitored through the USGS National Field Quality Assurance program, which began in 1979. For a summary of results from 1979 through 1997, see Stanley and others (1998). Because quality control is maintained across the years and across different instruments, long-term measurement uncertainty is estimated at ±5 percent, and measurements made after 1999 should have uncertainties of ±3 percent (Wagner and others, 2000).

Analytical Methods

Field blanks and field replicates for major ion and nitrate analyses were collected infrequently until 2001 (M.E. Dorsey, U.S. Geological Survey, oral commun., 2005). However, the data record contains instances where multiple water samples were collected within several days of each other, with no intervening change in hydrologic condition. These samples, which can be considered sequential replicates, indicate that field techniques were carried out appropriately. From 2001 onward, results of quality-assurance results (appendix 5) indicate that analytical techniques were carried out appropriately.

Throughout the period of sample collection, the USGS NWQL engaged in ongoing internal quality control, including the use of standard reference materials, laboratory replicates, data review, blind samples, and performance evaluation studies (Pritt and Raese, 1995). The results of internal NWQL quality control are not part of the published USGS data record.

Data Screening

For this report, two criteria were used to screen some analytical results from the large historical record. First, water analyses with a charge balance error greater than ±5 percent were excluded. Second, wells with fewer than six specific conductance measurements were excluded, as they did not provide a sufficient record for statistical analysis.

Specific Conductance Related to Intersection of Flow Paths by Wells

Data for each well were tested to indicate whether there was a statistical relation between specific conductance and streamflow and a relation between specific conductance and aquifer flow (spring discharge) condition. The underlying hypothesis was that the specific conductance of water in those wells that intersect flow paths or conduits would decrease from a baseline value within 10 days following a rain event resulting in streamflow; thus for samples from those wells, there should be a relation between specific conductance and streamflow. It also was hypothesized that there might be a relation between specific conductance and spring discharge. For each specific conductance value, data for the previous 10 days of streamflow in the five creeks were inspected, and the maximum daily mean streamflow for each creek for the 10-day period (hereinafter, maximum 10-day streamflow) was recorded (appendix 1). The relation between the specific conductance and the corresponding maximum 10-day streamflow was tested using the nonparametric Spearman's rho correlation coefficient (Helsel and Hirsch, 1995). The test measures the strength of association between two variables. Similarly, for the comparison of specific conductance and spring discharge, Spearman's rho was used to test the relation between each specific conductance value and the maximum daily mean discharge for Barton Springs for the preceding 10-day period (hereinafter, maximum 10-day discharge) (appendix 1). A nonparametric correlation test was used because the streamflow and spring discharge are not normally distributed.

The statistical analyses produced some spurious correlations resulting from autocorrelation between the flow in the different creeks. Autocorrelation occurs when a widespread rainfall produces proportional changes in flow on all five creeks; the geochemistry in a well might be influenced by flow in only one or two of the creeks, but will be correlated to flow in all five. For example, the specific conductance of samples from well MCH (near the Travis-Hays County line, fig. 1) is correlated with flow in Barton, Williamson, and Slaughter Creeks, but as MCH is far upgradient from (south of) these creeks, it is unlikely that flow in these creeks has an influence on the geochemistry of the well. Spurious correlations were identified on the basis of location of the wells and creeks and existing information on direction of flow and then removed from further consideration. These identifications were made conservatively and with caution, as direction of flow in karst terrane often is difficult to ascertain and can vary temporally.

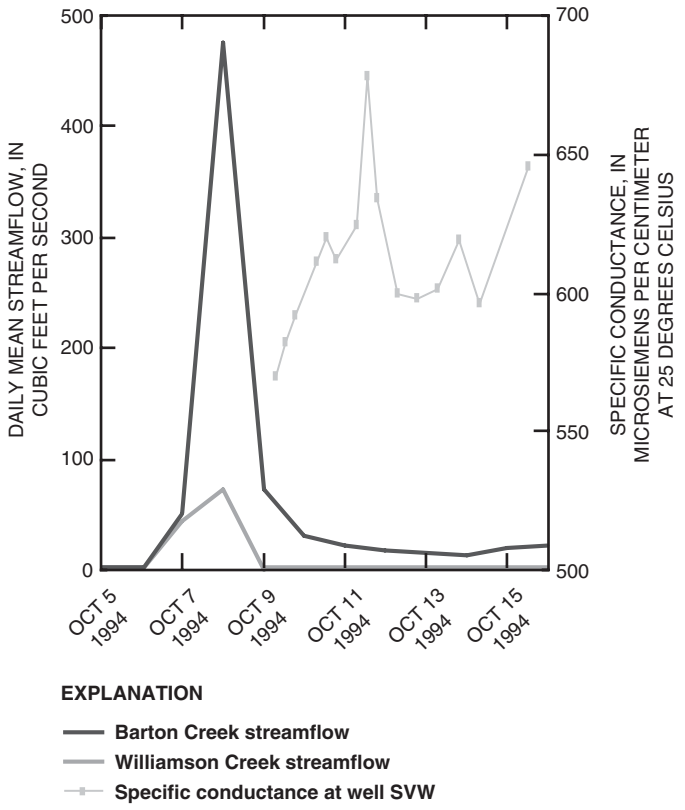


Figure 3. Specific conductance at well SVW and streamflow in Barton and Williamson Creeks during several days following a rain event, Barton Springs segment of the Edwards aquifer, Austin, Texas, October 1994.

Specific Conductance Variability at the Event Scale

A high sampling frequency (hours to days) is desirable for investigating the relation between surface water and ground water in a karst aquifer (for example, Dreiss, 1989; Lakey and Krothe 1996). However, as the dataset available for this report generally does not contain high-frequency sampling intervals, it was hypothesized that data obtained from infrequent and arbitrarily timed sampling carried out over a long period contain some of the same information as data obtained from high-frequency sampling. To provide a frame of reference for considering this hypothesis, a high-frequency sampling event dataset for this report is considered in this section.

In October 1994, well SVW was sampled at 6- to 12-hour intervals beginning 2 days after a rain event. The results of this sampling provide an opportunity to investigate how the specific conductance of a well changes in response to rainfall and resulting streamflow in a nearby creek at a short time scale. Flow in all five recharging creeks increased on October 9, 1994; the highest daily mean flow for that day was recorded at Barton Creek (476 cubic feet per second), followed by Slaughter Creek (99 cubic feet per second), Williamson Creek (73 cubic feet per second), Bear Creek (33 cubic feet per second), and Onion Creek (30 cubic feet per second). Sixteen samples were collected at well SVW from October 9 at 7:00 a.m. to October 15 at 12:30 p.m.

Over the sampling period, specific conductance in samples from well SVW ranged from 570 to 678 µS/cm (fig. 3). The large variation in specific conductance over such a short time period in response to rainfall and streamflow indicates that this well intersects a conduit or conduits. The rapid (less than 2 days) response to streamflow indicates that the 10-day criterion for response to streamflow for the statistical comparison of specific conductance to peak streamflow is reasonable.The lowest specific conductance was measured in the first sample, which was collected 2 days after maximum streamflow. From a comparison of flow in Barton and Williamson Creeks and specific conductance in well SVW (fig. 3), it appears that the well responded rapidly to an influx of recharge from one of the nearby creeks (Barton or Williamson, fig. 1). The data indicate that specific conductance probably had reached a minimum already and then had begun to rise before the first sample was collected. Thus, the lowest specific conductance and its timing in response to streamflow for this event is unknown.

The increase in specific conductance in well SVW was followed by a subsequent decrease, which indicates that the

aquifer near the well might receive recharge from more than one creek; the first decrease occurred less than 2 days after rainfall, and the second decrease occurred about 4 days after rainfall (fig. 3). Although Hauwert and others (2004) indicate that this well is in a small subbasin where the aquifer would not receive recharge from multiple creeks, it is possible that transient flow paths are activated during periods of high recharge. Alternatively, the aquifer could have received recharge from two different recharge points in the same creek.

Correlation Between Specific Conductance, Streamflow, and Spring Discharge

Results of Spearman's rho correlation tests between Edwards aquifer specific conductance and streamflow and between Edwards aquifer specific conductance and spring discharge were used to divide the 26 wells into four groups (fig. 4; table 3). Group C1 comprises those wells from which samples showed a significant ($p \leq .05$) negative correlation between specific conductance and both streamflow and spring discharge. Group C2 comprises those wells from which samples showed a significant negative correlation between specific conductance and streamflow only. Group P comprises those wells from which samples showed a significant positive correlation between specific conductance and spring discharge. Group N comprises those wells from which samples showed no significant correlation between specific conductance and either streamflow or spring discharge. Complete results of the statistical tests are in appendix 3.

Specific Conductance Negatively Correlated With Streamflow and Spring Discharge

Four wells in Group C1 (FMW, KCH, SLR, SVE) (fig. 4; table 3) yielded specific conductances that are negatively correlated with streamflow in one or more of the five recharging creeks and also are negatively correlated with discharge from Barton Springs. That is, when streamflow and spring discharge are high, specific conductance at the four wells is more likely to be lower than when streamflow and spring discharge are low. As an example, correlations between specific conductance at one of the wells in Group C1 (FMW) and maximum 10-day streamflow of Slaughter Creek and between specific conductance at well FMW and maximum 10-day discharge of Barton Springs are shown in figure 5. These correlations are interpreted as an indication that the four Group C1 wells intersect major flow paths or conduits that transport recharge from the surface through the aquifer and that these flow paths respond to overall aquifer flow conditions by transporting large amounts of water. The major flow paths likely integrate water from a large volume of the aquifer.

The Spearman's rho correlation coefficients associated with wells in Group C1 are among the highest for the samples in any of the four groups of wells tested; 43 percent of all correlation coefficients equal to or greater than .5 are from Group C1 (table 3). Except for well KCH, the negative correlations between specific conductance at the wells in Group C1 and spring discharge are at least as high as the negative correlations between specific conductance and streamflow, which again is interpreted as an indication that these wells intersect major flow paths that integrate flow from a large part of the aquifer. Of note is a strong correlation (rho = -.63) between specific conductance at well SLR and streamflow in Bear Creek. Specific conductance at well SLR decreases in response to increases in streamflow in Bear Creek to the north of that well (fig. 1), which is inconsistent with dye traces that have demonstrated eastward ground-water flow in the area of well SLR (Hauwert and others, 2004). One explanation for this inconsistency could be that north-south flow paths in the unsaturated zone transport water only when streamflow is high.

Specific conductance at Group C1 wells ranges from 445 to 1,530 µS/cm, with a median of 653 µS/cm. (Medians for groups of wells were computed using a two-step process. First, the median for each well was computed. Then, the median of these median values was computed, and this is the number reported. This two-step process was necessary to avoid sampling bias arising from variable numbers of samples taken from each well.) Specific conductances at wells in this group vary more than those at wells in the three other groups, with a median C_v of 0.053 (table 2). Within Group C1, well SVE yielded both the minimum and maximum specific conductances and the highest C_v (0.23) among the four wells.

Specific Conductance Negatively Correlated With Streamflow

At the five wells in Group C2 (BDW, HWD, MCH, SVN, SVW) (fig. 4; table 3), specific conductance is negatively correlated with streamflow in one or more recharging creeks but is not correlated with spring discharge. This finding is interpreted as indicating that these wells intersect surface water recharging from creeks, probably by way of short, tributary conduits with relatively small catchment areas, but are not connected to a major aquifer flow path or conduit in the aquifer.

Specific conductance at Group C2 wells ranges from 388 to 710 µS/cm, with a median of 560 µS/cm for the five wells. The minimum, maximum, and median for this group of wells are the lowest of the four groups, indicating that water at these wells is less mineralized than that at wells in the other groups. The median C_v for Group C2 specific conductance is 0.042 (table 2), second-highest variability after Group C1 wells. The minimum and maximum specific conductance was recorded at well SVN, and the C_v for well SVN specific conductance is the highest of Group C2 wells (0.13). Large changes in water level occur at well SVN. The well occasionally goes dry (M.E. Dorsey, U.S. Geological Survey, oral commun., 2005), and its water level changes rapidly in response to flow.

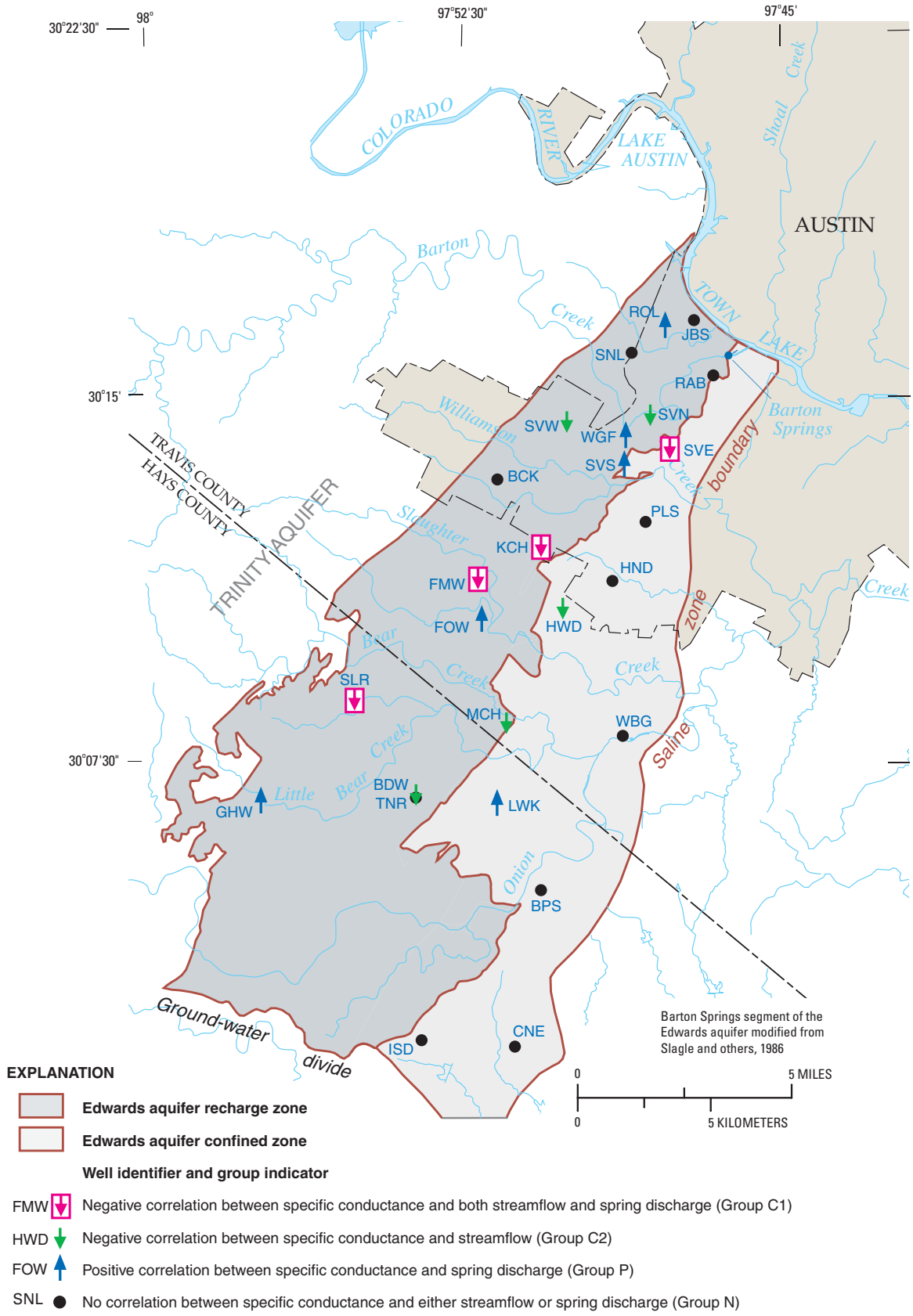


Figure 4. Wells grouped on the basis of negative, positive, or no significant correlation between ground-water specific conductance and streamflow or Barton Springs discharge, or both, Barton Springs segment of the Edwards aquifer, Austin, Texas, 1978–2003.

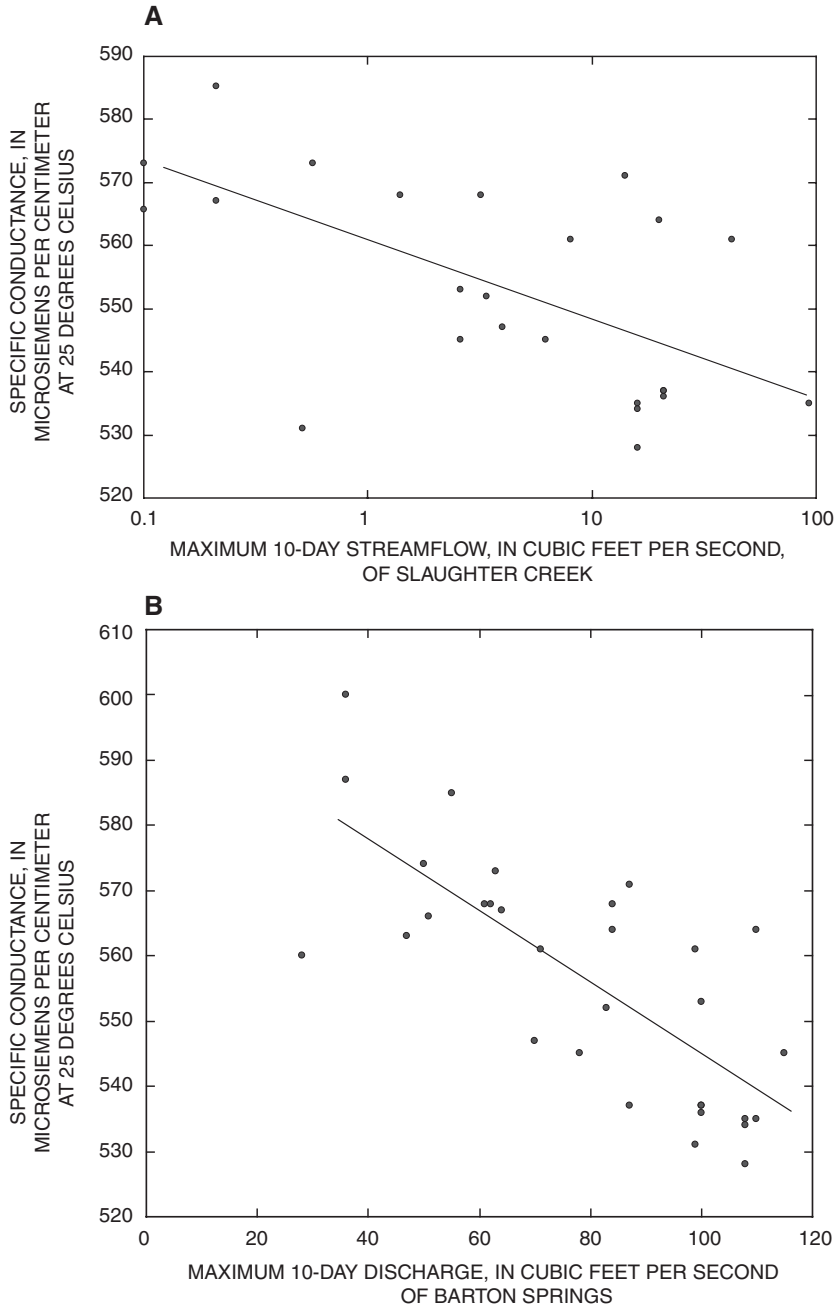


Figure 5. Specific conductance at well FMW as a function of (A) maximum 10-day streamflow of Slaughter Creek and (B) maximum 10-day discharge of Barton Springs, Barton Springs segment of the Edwards aquifer, Austin, Texas, 1978–2003.

Specific Conductance Positively Correlated With Spring Discharge

Six wells in Group P (FOW, GHW, LWK, ROL, SVS, WGF) (fig. 4; table 3) yielded specific conductances that were positively correlated with spring discharge. When spring discharge is high, specific conductance at these wells is more likely to be high than when spring discharge is low. This response is the inverse of that seen for water at Group C1 and C2 wells, where high aquifer flow conditions or streamflows are correlated with low specific conductance of ground water, and is interpreted to indicate that wells in Group P do not intersect major flow paths or conduits. Except for wells FOW and ROL, specific conductance at Group P wells is not correlated with streamflow. Only six specific conductance measurements each were available at wells LWK and WGF, the minimum for inclusion in the statistical analysis.

Specific conductance at Group P wells ranges from 480 to 1,160 µS/cm, with a median of 603 µS/cm. The median C_v for specific conductance at the six wells in Group P is 0.033

Table 3. Spearman's rho for significant ($p \leq .05$) correlations between ground-water specific conductance and streamflow and between ground-water specific conductance and Barton Springs discharge, for wells grouped on the basis of negative, positive, or no significant correlation, Barton Springs segment of the Edwards aquifer, Austin, Texas, 1978–2003.

[--, correlation not significant]

Group[1]	Well identifier (fig. 1)	Spearman's rho correlation coefficient					
		Streamflow					Barton Springs discharge
		Barton Creek	Williamson Creek	Slaughter Creek	Bear Creek	Onion Creek	
C1							
	FMW	--	--	-.55	--	-.47	-.71
	KCH	--	--	-.26	--	-.47	-.39
	SLR	--	--	--	-.63	--	-.63
	SVE	-.50	--	-.44	-.39	-.40	-.69
C2							
	BDW	--	--	--	-.47	--	--
	HWD	--	--	--	-.90	--	--
	MCH	-.46	-.42	-.43	-.44	-.42	--
	SVN	-.50	-.63	-.54	-.35	-.41	--
	SVW	-.39	-.28	-.41	-.47	-.31	--
P							
	FOW	.32	--	--	--	--	.50
	GHW	--	--	--	--	--	.41
	LWK	--	--	--	--	--	.88
	ROL	.53	--	.33	--	--	.46
	SVS	--	--	--	--	--	.29
	WGF	--	--	--	--	--	.94
N							
	BCK	--	--	--	--	--	--
	BPS	--	--	--	--	--	--
	CNE	--	--	--	--	--	--
	HND	--	--	--	--	--	--
	ISD	--	--	--	--	--	--
	JBS	--	--	--	--	--	--
	PLS	--	--	--	--	--	--
	RAB	--	--	--	--	--	--
	SNL	--	--	--	--	--	--
	TNR	--	--	--	--	--	--
	WBG	--	--	--	--	--	--

[1]C1, negative correlation between specific conductance and both streamflow and spring discharge;
C2, negative correlation between specific conductance and streamflow;
P, positive correlation between specific conductance and spring discharge;
N, no correlation between specific conductance and either streamflow or spring discharge.

(table 2), the lowest among Groups C1, C2, and P. The range of specific conductance at four of the wells (GHW, LWK, SVS, WGF) was less than 100 µS/cm. The range in specific conductance at well ROL (480 to 1,160 µS/cm) was the widest of any well in Group P and encompassed the full range of variation for this group of wells. The wide range in specific conductance at this well indicates that the well might be connected to an aquifer flow path, despite its lack of a negative correlation with streamflow or spring discharge. Wells ROL and FOW are the only wells in any group for which specific conductance is positively correlated to streamflow (Barton and Slaughter Creeks) (table 3). Well ROL is in a subbasin thought to be hydrologically isolated from Barton Springs and most of the aquifer (Hauwert and others, 2004). Well FOW is upgradient from Barton Creek, and specific conductance at this well is not correlated with flow in either Williamson or Slaughter Creek. The positive correlation between specific conductance at these two wells and streamflow likely is the result of autocorrelation between streamflow, spring discharge, and interstream recharge. The wells that yielded specific conductances with the strongest positive correlation with spring discharge in Group P are LWK (rho = .88) and WGF (rho = .94) (table 3). Correlations for specific conductance at wells LWK and WGF are based on the minimum six data points and less than 60 µS/cm of variation in specific conductance.

Specific Conductance Not Correlated With Streamflow or Spring Discharge

Specific conductance of water at the 11 wells in Group N (BCK, BPS, CNE, HND, ISD, JBS, PLS, RAB, SNL, TNR, and WBG) (fig. 4; table 3) does not show a statistically significant correlation with streamflow or spring discharge, so the interpretation is that none of these wells intersects a major flow path. However, of the 11 wells in Group N, five wells had the minimum number of specific conductance measurements for testing (six), and eight wells had fewer than the median number of specific conductance measurements for this study (23). Only three other wells from other groups had the minimum number of six conductance measurements. In effect, many of the wells in Group N might be in this group because the number and timing of samples was insufficient to correlate significantly with streamflow or spring discharge.

Specific conductance for water at wells in Group N ranges from 460 to 1,190 µS/cm, with a median of 581 µS/cm. The median C_v for specific conductance for Group N is 0.029 (table 2), the lowest of any group. This group also contains the well for which C_v was highest among all wells in this report (well RAB, $C_v = 0.28$). C_vs for specific conductance at wells BPS, PLS, and TNR were 0.029, 0.025, and 0.026 respectively; these low values are consistent with the hypothesis that the wells in Group N do not intersect flow paths.

Synthesis—Intersection of Flow Paths by Wells

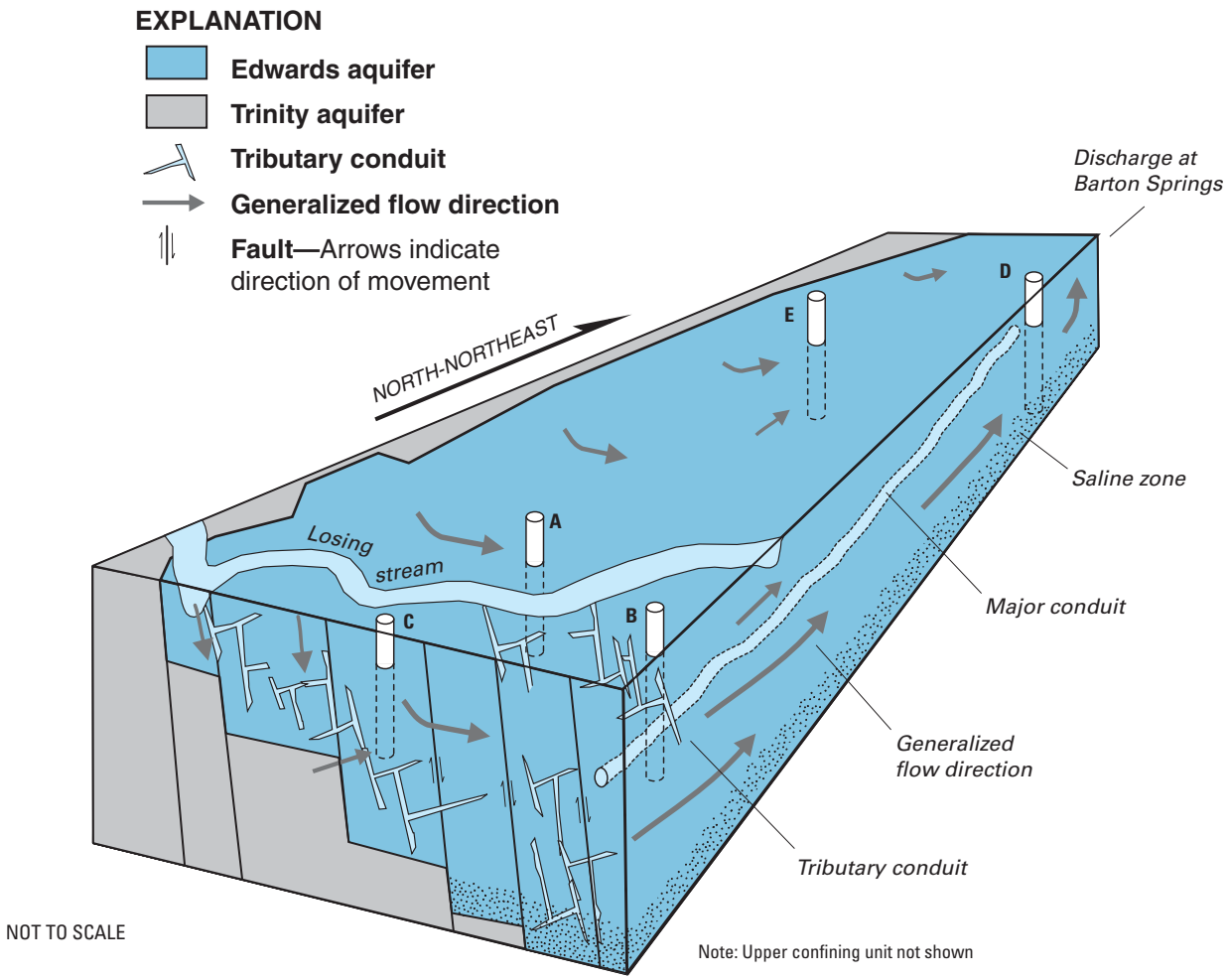
This section synthesizes the evidence for the intersection of aquifer flow paths by wells (table 4). A conceptual model of the aquifer as developed here is shown schematically in figure 6. Some wells intersect major flow paths (Group C1). The specific conductance at these wells is influenced by recharging surface water and by water from a large upgradient part of the aquifer, as reflected by a negative correlation between specific conductance and both streamflow in one or more recharging streams and Barton Springs discharge. Other wells (Group C2) intersect short, tributary flow paths that are well connected to the surface. The specific conductance at these wells is influenced by recharging surface water and water from a small, localized part of the aquifer, as reflected by a negative correlation with streamflow but not with spring discharge. Water in a third set of wells (Group P) is affected by an unidentified process that results in a positive correlation between specific conductance and spring discharge; these wells likely do not intersect a major flow path or conduit. A fourth set of wells (Group N) likely do not intersect a major flow path or conduit, as water at these wells shows no relation between specific conductance and either streamflow or spring discharge. Some wells might be classified in this group, however, because of small sample sizes rather than lack of intersection of a flow path or conduit.

Major Ion Geochemistry

Major ion geochemistry of the 26 wells was investigated to determine whether hydrochemical facies, major ion ratios, or variation in major ion concentrations were related to intersection of flow paths by wells, as classified by the specific conductance analysis. Three tools were used for this analysis: Trilinear diagrams, which indicate hydrogeochemical facies; graphs of concentration ratios of two major cations and two major anions; and Mg/Ca molar ratios.

The overall geochemical character, or facies, of a water sample can be represented visually with a trilinear diagram, which is a group of two triangle-shaped diagrams (one for cations and one for anions) and a diamond-shaped diagram representing the composition of the water for both cations and anions (Freeze and Cherry, 1979; Piper, 1944). The triangles and diamond are subdivided into smaller areas that indicate which groups of ions dominate the aqueous geochemistry. The trilinear diagram allows classification through visual inspection of the hydrochemical facies corresponding to each water sample. Trilinear diagrams have the advantage of allowing comparison of multiple water samples on the same diagram, so that mixing and evolution of waters is visually evident (fig. 7). Because trilinear diagrams display only relative proportions of ions, they are independent of the effects of dilution.

Changes in ratios of major ions sometimes are evidence of water sources and geochemical processes. An ion ratio often is



Well A intersects a tributary conduit and represents Group C2 wells—
negative correlation between specific conductance and streamflow
Well B intersects a tributary conduit and a major conduit and represents Group C1 wells—
negative correlation between specific conductance and both streamflow and spring discharge
Well C intersects a zone of cross-formational flow from the Trinity aquifer
Well D intersects a zone of mixing with water from the saline zone
Well E intersects only Edwards aquifer matrix

(Controls on wells in Groups P and N are unknown. See table 3 footnote for description of groups.)

Figure 6. Schematic diagram of conceptual model of the Barton Springs segment of the Edwards aquifer, Austin, Texas, showing wells and hypothesized controls on water at the wells.

more useful than ion concentrations alone when identifying water sources and geochemical processes because ion ratios are independent of the effects of dilution. In the Barton Springs segment, temporal changes in ion ratios at a well or spring might indicate an influx of water from the surface, the saline zone, or the Trinity aquifer, or might indicate the variable effects of geochemical processes in the aquifer. Saline zone water is distinguished by a higher Cl concentration relative to SO_4 and a higher Na concentration relative to Mg than either Edwards aquifer freshwater or Trinity aquifer water (Sharp and Clement, 1988) (fig. 7). Trinity aquifer water is characterized by a higher SO_4 concentration relative to Cl and a higher Mg concentration relative to Na than freshwater from the Barton Springs segment (fig. 7). If major ion data for samples from the Barton Springs segment, Trinity aquifer, and saline zone are viewed on graphs of log(SO_4/Cl concentration) relative to log(SO_4 concentration) and log(Mg/Na concentration) relative to log(Mg concentration), saline zone data points will plot in the lower-right region of both graphs, Trinity aquifer data points will plot in the upper-right region, and Barton Springs segment freshwater data points will plot in the middle. If water from a well in the Barton Springs segment has a geochemical

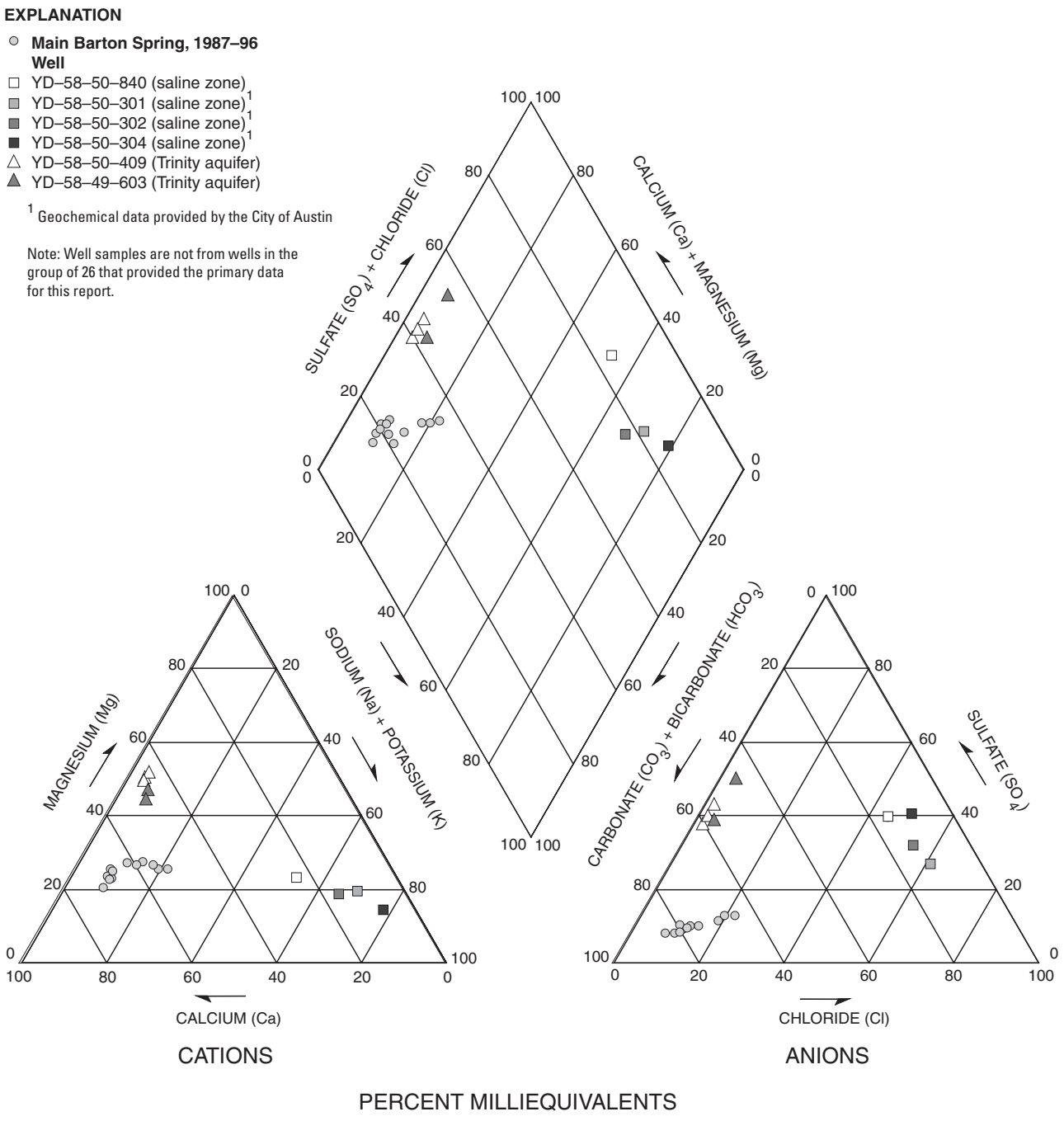


Figure 7. Trilinear diagram showing relations between compositions of major ions in water sampled from Main Barton Spring (1987–96) and wells completed in the saline zone of the Edwards aquifer and the underlying Trinity aquifer (1978–2003), Austin, Texas.

composition such that data points plot toward the lower-right regions of both graphs, it is interpreted as evidence of mixing with saline zone water; if the data points plot near the upper-right region of both graphs, it is interpreted as being affected by inflow of water from the Trinity aquifer. Multiple sources and geochemical processes can produce similar ion ratios. For example, elevated SO_4/Cl concentration ratios can arise from the dissolution of gypsum or oxidation of pyrite, and elevated Mg/Na concentration ratios can be the result of longer ground-water residence times in limestone (Musgrove and Banner, 2004).

In a karst aquifer with relatively uniform lithology, the Mg/Ca molar ratio can be used as an indicator of ground-water residence time (Musgrove and Banner, 2004). Recharging

Table 4. Summary of findings regarding intersection of flow paths by wells and Edwards aquifer water mixing with water from Trinity aquifer and saline zone, Barton Springs segment of the Edwards aquifer, Austin, Texas, 1978–2003.

Well identifier (fig. 1)	State well number	Trinity aquifer mixing?	Saline zone mixing?	Comments
				Wells intersecting major flow paths
FMW	YD–58–50–412	No	No	Residence time variation is source of geochemical variability.
KCH	YD–58–50–406	No	Small	Saline zone mixing indicated, although well KCH not near saline zone. High nitrate concentrations.
SLR	LR–58–49–903	Yes	No	Shallow well drilled into Trinity aquifer along western edge of study area.
SVE	YD–58–50–216	Small	Yes	Saline zone mixing at low aquifer flow conditions and streamflow.
				Wells intersecting minor flow paths
BDW	LR–58–57–311	No	No	Residence time variation is source of geochemical variability.
HWD	YD–58–50–401	No	No	Small dataset.
MCH	YD–58–50–704	Small	No	None.
SVN	YD–58–50–217	No	No	Can't be sampled under low aquifer water levels. Probably gets water directly from Barton Creek.
SVW	YD–58–50–211	No	Small	High nitrate concentrations. Identified as a flow-path well by another study.
				Unknown/no conclusions regarding flow paths
BCK	YD–58–50–101	Yes	No	Small dataset.
BPS	LR–58–58–403	No	No	Large, unvarying water-quality record. High residence time. No saline zone mixing despite proximity to saline zone.
CNE	LR–58–58–704	No	Yes	Small dataset. Pronounced mixing with nearby saline zone.
FOW	YD–58–50–408	Yes	No	Drilled into Trinity aquifer. Mixing from Trinity aquifer during high aquifer water levels.
GHW	LR–58–57–202	Yes	No	Shallow well, small dataset, drilled into Trinity aquifer at western edge of study area.
HND	YD–58–50–502	No	No	Small dataset.
ISD	LR–58–57–901	No	No	Small dataset.
JBS	YD–58–42–926	No	No	Relatively small dataset. High bacteria and nitrate levels, indicating local contamination source.
LWK	LR–58–58–105	No	No	Small dataset. Slight calcium and bicarbonate increases during high aquifer flow conditions.
PLS	YD–58–50–520	No	No	Large, unvarying water-quality record.
RAB	YD–58–42–915	Maybe	No	Unusual geochemistry controlled by unidentified processes.
ROL	YD–58–42–813	No	No	Unusual geochemistry. Excess chloride might be anthropogenic. Well was plugged because of bacterial contamination.
SNL	YD–58–42–809	No	No	Small dataset.
SVS	YD–58–50–215	Yes	No	Mixing with Trinity aquifer water during high aquifer water levels.
TNR	LR–58–57–303	Yes	No	Located 50 feet from well BDW but different geochemistry.
WBG	YD–58–50–810	No	Yes	Small dataset. Pronounced mixing with nearby saline zone.
WGF	YD–58–50–206	No	No	Small dataset. Slight calcium and bicarbonate increase during high aquifer water levels.

water that is undersaturated with respect to calcite will dissolve calcite and undergo a rapid increase in Ca concentration until calcite saturation is reached (Palmer, 1991). Subsequently, incongruent dissolution of meta-stable minerals such as high-magnesium calcite and dolomite ($CaMg(CO_3)_2$) will increase dissolved Mg concentrations, while Ca concentrations will remain essentially constant owing to the simultaneous reprecipitation of more stable minerals such as low-magnesium calcite (James and Choquette, 1984). Thus ground waters with a longer residence time will have a higher Mg/Ca molar ratio than those with a shorter residence time, as they have undergone more rock-water interaction.

Major Ion Geochemistry of 26 Wells by Group

The hydrochemical facies of water at Group C1 wells (FMW, KCH, SLR, SVE), except for well SVE, are Ca-HCO_3 to Ca-Mg-HCO_3 (fig. 8A). Water at well SVE trends toward a mixed-SO_4 or Na-mixed hydrochemical facies. Water at Group C1 wells, which were interpreted as intersecting major flow paths or conduits on the basis of specific conductance response to streamflow, shows some evidence of mixing with saline zone water and Trinity aquifer water (fig. 8B, C). Water at well SVE had the greatest range of SO_4/Cl and Mg/Na concentration ratios among Group C1 wells; during periods of low streamflow and spring discharge, water at well SVE appears to mix with water from the saline zone. Although SO_4 concentration at well SVE is not linearly correlated with streamflow, SO_4 concentrations greater than 100 mg/L occur almost exclusively during periods of low flow (less than 4 cubic feet per second) (fig. 9A) in all of the creeks except Onion Creek, and SO_4 concentration is inversely proportional to Barton Springs discharge (fig. 9B). These relations indicate that the source of the SO_4 at well SVE is inflow from the saline zone, which is suppressed when spring discharge and streamflow are high. This hypothesis is supported by the relative increase in Na concentration with respect to Mg (fig. 8C), and it is consistent with reports by Senger (1983) and Slade and others (1986) that the aquifer in the area of well SVE might receive some water from the saline zone. The aquifer at well SLR appears to be receiving some water from the Trinity aquifer, on the basis of slight enrichment in SO_4 relative to Cl (fig. 8B) and Mg relative to Na (fig. 8C). This likely is because well SLR is completed in the Trinity aquifer underlying the Barton Springs segment, as indicated by the driller's logs. Samples from wells KCH and FMW show little variability in their SO_4/Cl and Mg/Na concentration ratios, which indicates that variations in their geochemical composition is caused primarily by dilution from surface water during periods of high streamflow and spring discharge.

The Mg/Ca molar ratio for water at Group C1 wells ranges from about 0.3 to about 0.9 (fig. 8D). Medians of Mg/Ca generally increase from southwest to northeast, following the general gradient of flow in the aquifer (fig. 2). This is consistent with the concept of Mg/Ca increasing as a function of residence time; as ground water flows downgradient, its residence time, and thus its Mg/Ca molar ratio, increases. Water at wells SVE and, to a lesser extent, SLR show a correlation between Mg/Ca molar ratios and specific conductance when the highest 70 percent of specific conductances is considered. This correlation indicates that ionic strength is proportional to residence time for wells SVE and SLR during periods when there is little recharge (that is, during base-flow conditions). Wells FMW and KCH do not show this correlation.

The hydrochemical facies of water at Group C2 wells (BDW, HWD, MCH, SVN, SVW) are Ca-HCO_3 to Ca-Mg-HCO_3 (fig. 10A), which are similar to those at Group C1 wells (fig. 8A) but with less of a tendency toward a SO_4 facies. Generally, Group C2 well geochemical variability is more tightly constrained than that of Group C1 (fig. 10B, compared to fig. 8B, C), which is interpreted as an indication that fewer processes affect the geochemical composition of water at Group C2 wells; dilution by low-ionic-strength surface recharge appears to be a dominant process at most wells in Group C2. The major ion geochemistry of water from wells in Group C2 shows little or no evidence for mixing with water from the saline zone or Trinity aquifer (fig. 10B, C). Samples from wells BDW and HWD have the smallest variations in SO_4/Cl concentration ratios in this group but some variability in Mg/Na concentration ratios. These relations indicate that geochemical composition is affected by dilution from surface water during periods of high streamflow, as dilution decreases residence time, resulting in a decrease in Mg concentration. There is a slight evolution of the water at wells SVN and SVW toward a more Cl-SO_4 type water, indicating a contribution of ions from a source other than surface water. Water at well SVW is somewhat enriched in SO_4 relative to Cl, but its Mg/Na concentration ratio is relatively constant, which indicates that the SO_4 has a source other than the Trinity aquifer or the saline zone, possibly dissolution of gypsum. Thus the geochemistry of water from the Group C2 wells is consistent with the interpretation that wells in this group receive water from the surrounding Edwards aquifer matrix and short tributary conduits but are not connected to a major aquifer flow path or conduit in the aquifer.

Water at the wells in Group C2 has about the same range of Mg/Ca molar ratio as water at wells in Group C1; maximum range is at well BDW (fig. 10D). There is no apparent relation between Mg/Ca molar ratios and location for water at Group C2 wells, which is consistent with the hypothesis that Group C2 wells intersect minor flow paths with relatively small catchment areas. Unlike water at Group C1 wells, there is no apparent relation between Mg/Ca molar ratio and specific conductance at any Group C2 wells.

The hydrochemical facies of water at Group P (FOW, GHW, LWK, ROL, SVS, WGF) wells varies from Ca-HCO_3 to Ca-Mg-HCO_3 to Ca-Mg-SO_4 (fig. 11A). The specific conductance of water from Group P wells was positively correlated with aquifer flow condition, meaning that specific conductance was high when spring discharge was high. The process controlling this relation has not been identified. Four of the six Group P wells (GHW, LWK, SVS, WGF) contain Ca-HCO_3 to Ca-Mg-HCO_3 waters, similar to the dominant hydrochemical

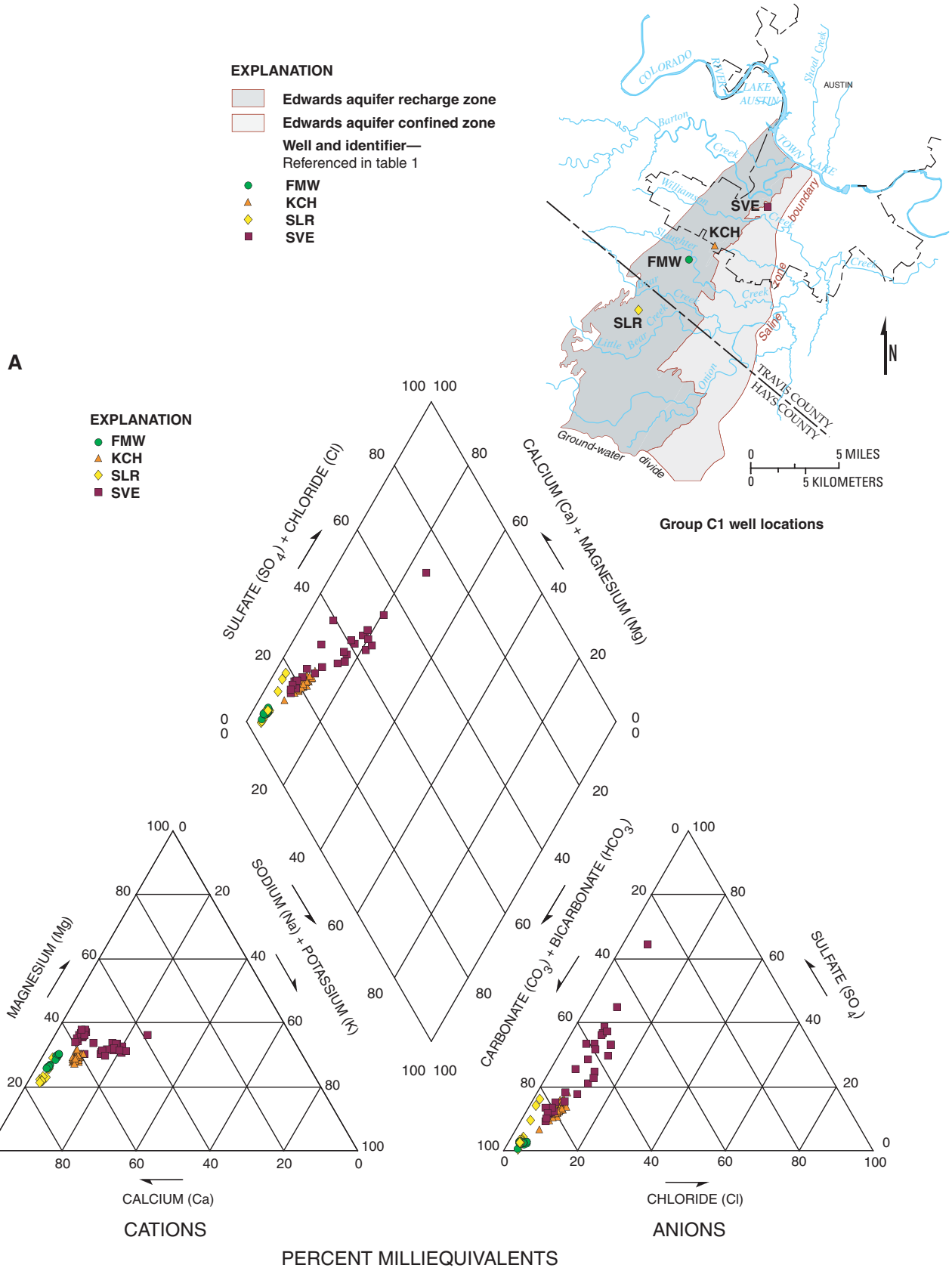
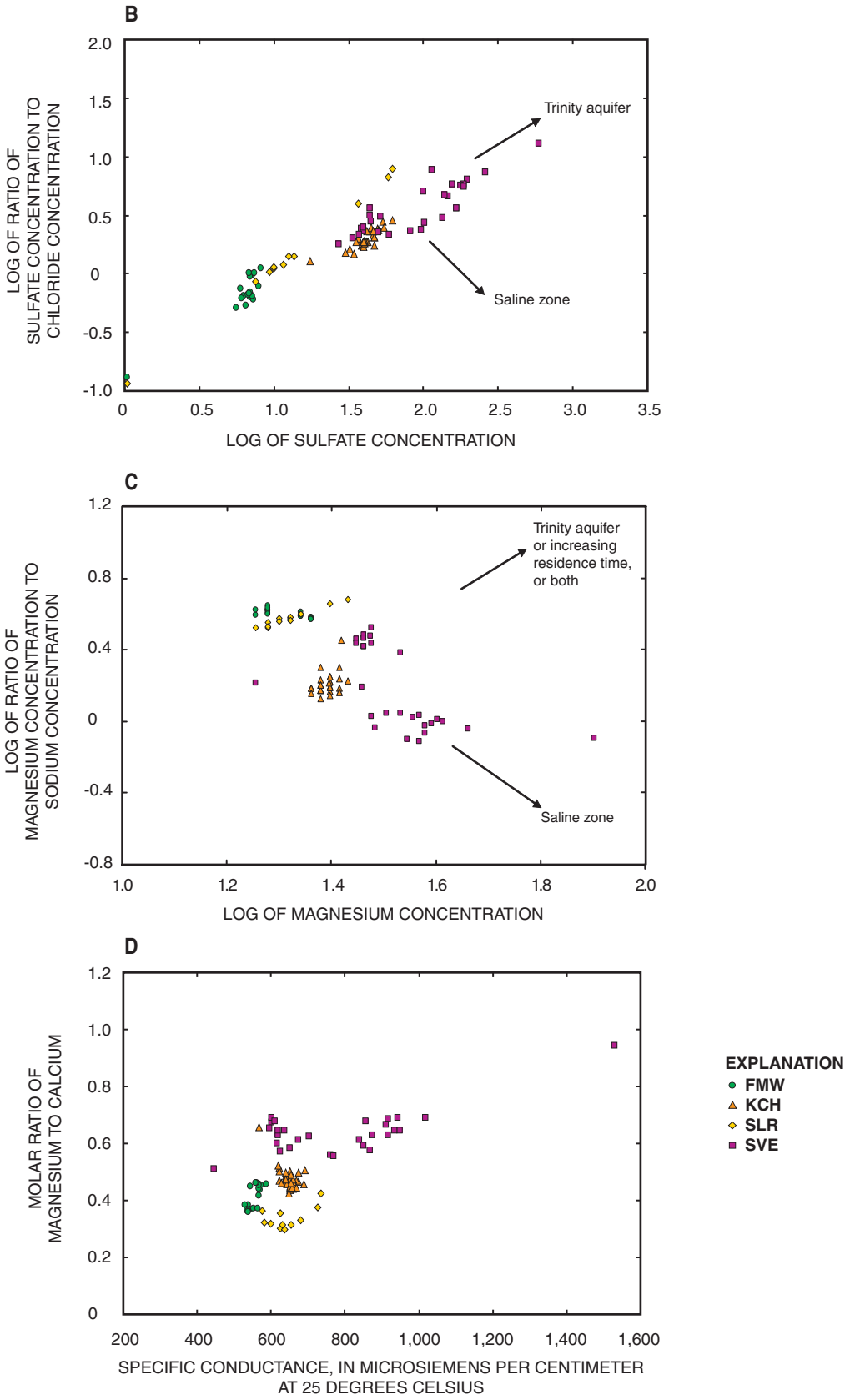


Figure 8. Trilinear diagram and graphs showing geochemistry for wells in Group C1 (specific conductance negatively correlated with both streamflow and spring discharge), Barton Springs segment of the Edwards aquifer, Austin, Texas, 1978–2003.



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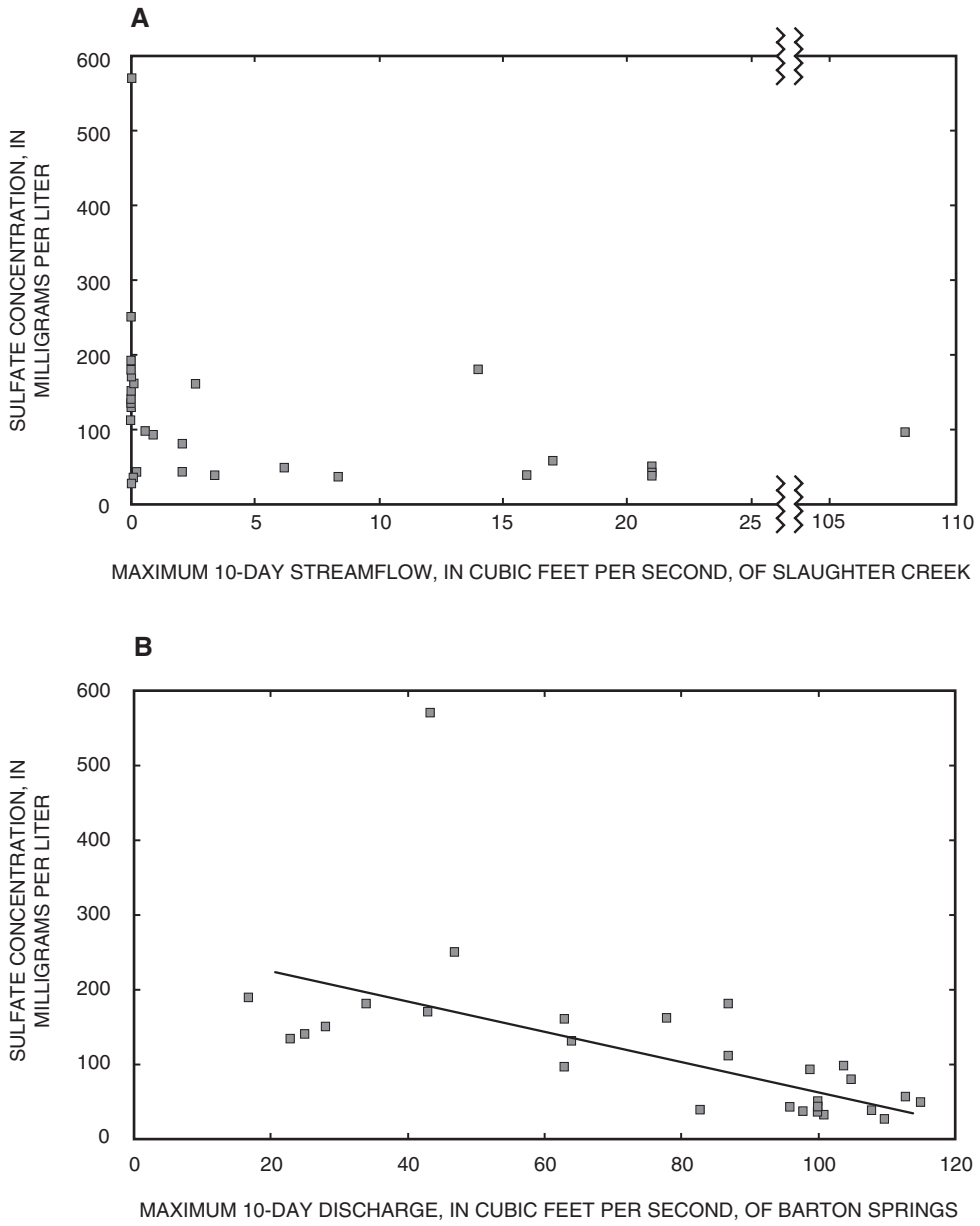


Figure 9. Sulfate concentration at well SVE as a function of (A) maximum 10-day streamflow of Slaughter Creek and (B) maximum 10-day discharge of Barton Springs, Barton Springs segment of the Edwards aquifer, Austin, Texas, 1978–2003.

facies of Groups C1 and C2. Although the driller's logs indicate that well GHW is completed in the Trinity aquifer, its Ca-Mg-HCO_3 chemistry indicates Edwards aquifer water. Most of the variation in relative proportions of major ions is accounted for by Ca and Mg. In contrast, water at wells FOW and ROL trends toward SO_4- and Cl-type facies, respectively. These two wells also have the largest C_v for specific conductance in Group P (table 2).

The water at some wells in Group P shows evidence of mixing with Trinity aquifer water; at other wells, there is no clear explanation for the geochemical variability. The water at wells FOW and SVS is enriched with SO_4 relative to Cl and Mg relative to Na under high-flow conditions, which is the geochemical signature of the underlying Trinity aquifer (fig. 11B, C). Sulfate concentrations at well FOW can increase to about four times the baseline maximum concentration (70 mg/L), but this occurs only when Barton Springs discharge exceeds about 85 cubic feet per second (fig. 12). Other studies also have indicated that sulfate-rich water from the Trinity aquifer enters the aquifer near well FOW when aquifer flow conditions are high (City of Austin, 1997; Hauwert and Vickers, 1994), and these findings are consistent with a driller's log

indicating that well FOW is completed in the Trinity aquifer (N.A. Houston, U.S. Geological Survey, written commun., 2005). Similar mixing with Trinity aquifer water is apparent at well SVS and is seen at well GHW to a lesser extent. Thus the positive correlation between specific conductance and spring discharge might be the result of mixing with high-sulfate Trinity aquifer water when aquifer flow conditions are high; this would result if, under high-flow conditions, hydraulic heads in the Trinity aquifer are proportionately higher than those in the Edwards aquifer, but the respective head differences have not been investigated. In contrast, water at well ROL has proportions of SO_4 relative to Cl (fig. 11B) and Mg relative to Na (fig. 11C) that are more or less constant, with perhaps a slight enrichment in Cl. This geochemical signature corresponds to neither the Trinity aquifer nor the saline zone. One explanation for excess Cl and increased specific conductance with high aquifer flow conditions is contamination from surface water; the use of well ROL was discontinued several years ago because of defective well casing that allowed contaminated surface water to reach the water table (City of Austin, 1997). Only small datasets are available for wells LWK and WGF, and they do not indicate a clear source of geochemical variability.

Given the positive correlation between specific conductance in water at Group P wells and spring discharge, an inverse relation between specific conductance and residence time (as indicated by Mg/Ca molar ratio) might be expected for wells in this group. However, Mg/Ca molar ratios generally are independent of specific conductance for water at most wells in Group P (fig. 11D). Well ROL is an exception in that Mg/Ca molar ratios at that well decrease as specific conductance increases. The fact that this is only observed at well ROL indicates that some process other than mixing might be occurring. The aquifer at well ROL is known to have a local source of anthropogenic contamination (City of Austin, 1997), which might be responsible for the inverse relation between specific conductance and Mg/Ca molar ratios. Water at well FOW has a direct relation between Mg/Ca molar ratios and specific conductance, but this is most likely because of mixing with Trinity aquifer water during high aquifer flow conditions.

Ground water represented by Group N (BCK, BPS, CNE, HND, ISD, JBS, PLS, RAB, SNL, TNR, and WBG) has diverse hydrochemical facies, from Ca-HCO_3 to Na-K-Cl-SO_4 (mixed) water types (fig. 13A). The waters at this group of wells do not fall into any of the other three groups, rather they are in a separate group by default, and therefore are not expected necessarily to have similar geochemical compositions or to be controlled by similar geochemical processes. Water at most of the wells is a Ca-HCO_3 to Ca-Mg-HCO_3 type, similar to that at most of the other wells in this report; but two wells, CNE and WBG, have hydrochemical facies unlike those of waters from any other wells in this report, which might be a result of their proximity to the saline zone. The geochemical compositions at wells CNE and WBG approach the geochemical composition of saline zone wells (fig. 7), indicating saline zone influence. Well RAB has variable hydrochemical facies that are similar to those of well SVE (Group C1).

On the basis of ion ratios (fig. 13B, C), water at some wells in Group N shows evidence of mixing with water from the saline zone. Water at well CNE is enriched with Cl relative to SO_4 and enriched with Na relative to Mg, indicating geochemical influence from the saline zone. Well WBG has a cation signature corresponding to saline zone influence (fig. 13C), but the anion signature is less conclusive (fig. 13B). The geochemistry of well RAB is extremely variable (fig. 13A, C, D). Although the concentration of SO_4 is elevated relative to Cl, the Mg/Na concentration ratio is not indicative of either a Trinity aquifer or saline zone source, which might indicate an alternative source of SO_4 such as dissolution of gypsum. Well TNR is only 50 feet from Group C2 well BDW, yet water at each well has a different geochemical composition. Such spatial heterogeneity often is observed in karst aquifers (for example, Mahler and others, 2000) and is a reminder that geographic patterns in karst aquifers are difficult to generalize.

Few generalizations can be made about water at the wells in Group N. Most of the wells in this group have fewer specific conductance measurements than the wells in the other groups, which decreases the likelihood that the samples would reflect periods when ground-water chemistry was influenced by recharge through streambeds. In other words, their sample sets might be too small to adequately capture the range of geochemical changes that occur. In other cases, unidentified processes might be affecting the geochemical composition of well water; for example, well RAB is thought to intersect a highly transmissive conduit system of the aquifer (Senger, 1983), but changes in geochemical composition of water at well RAB apparently are not correlated with streamflow or spring discharge.

Water at Group N wells has the largest range of Mg/Ca molar ratios (0.3 to 1.1) of the four groups (fig. 13D), indicating a wide range of residence times among the wells. Water at individual wells in Group N reflects smaller individual Mg/Ca molar ratio ranges than water of the groups as a whole; the greatest range occurs in water at well TNR (0.3–0.7). Water with the largest mean ratios is from wells CNE and WBG, further evidence that water at these wells has a different geochemical signature. The Mg/Ca molar ratio of water at well RAB is almost unvarying despite its range in hydrochemical facies.

Relation Between Major Ion Geochemistry and Intersection of Flow Paths by Wells

The major ion geochemistry of the well waters is not inconsistent with the interpretations regarding flow-path intersection by wells based on specific conductance analysis, but the geochemistry alone cannot be used to make those interpretations. The wells that were interpreted as intersecting only minor flow paths or conduits but otherwise receiving Edwards matrix water (Group C2) had the most typical carbonate geochemistry, the least variability, and the least evidence for contribution from water sources other than the Edwards. Some of the wells interpreted as intersecting a major flow path or conduit (Group C1) had waters with a geochemistry indicating

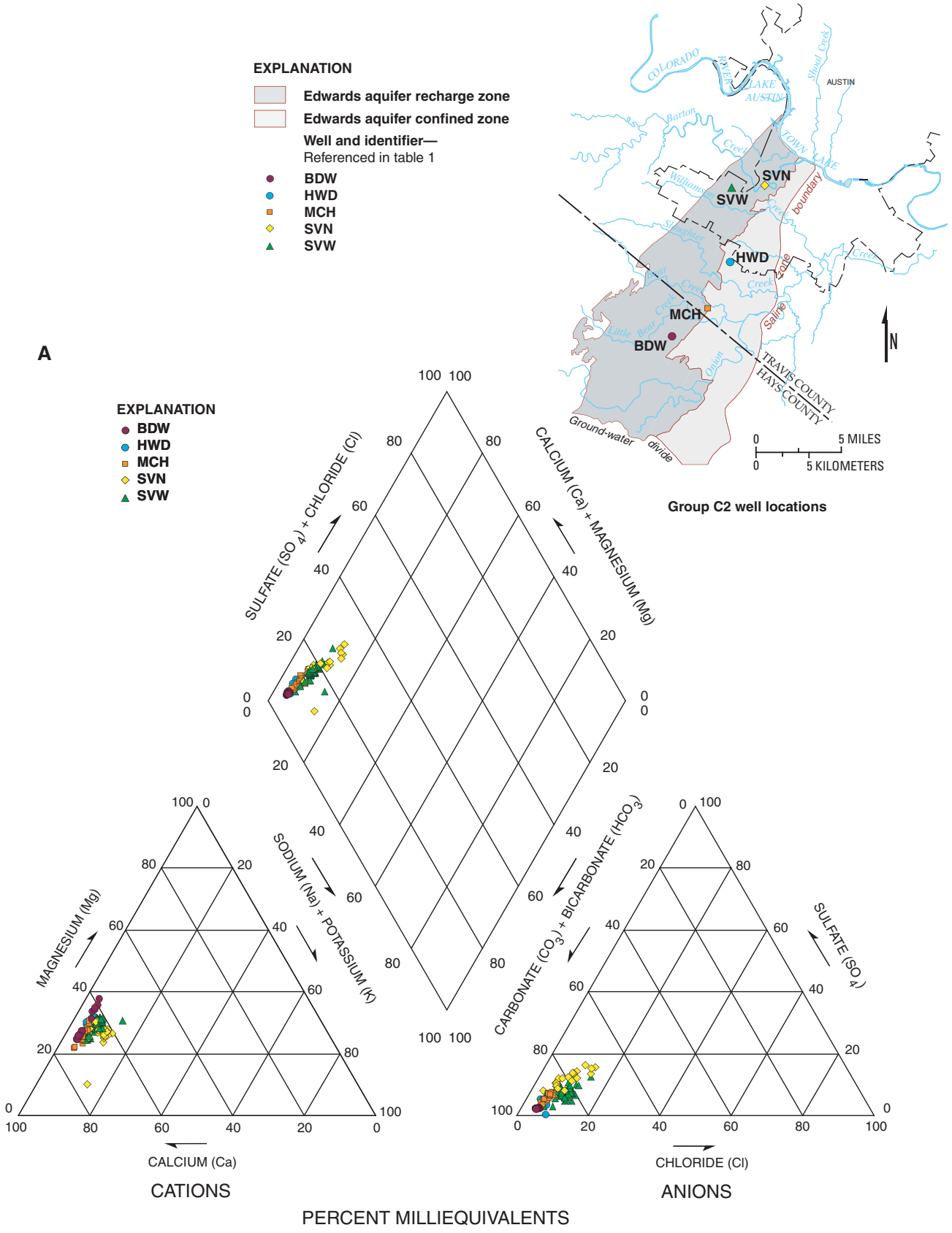
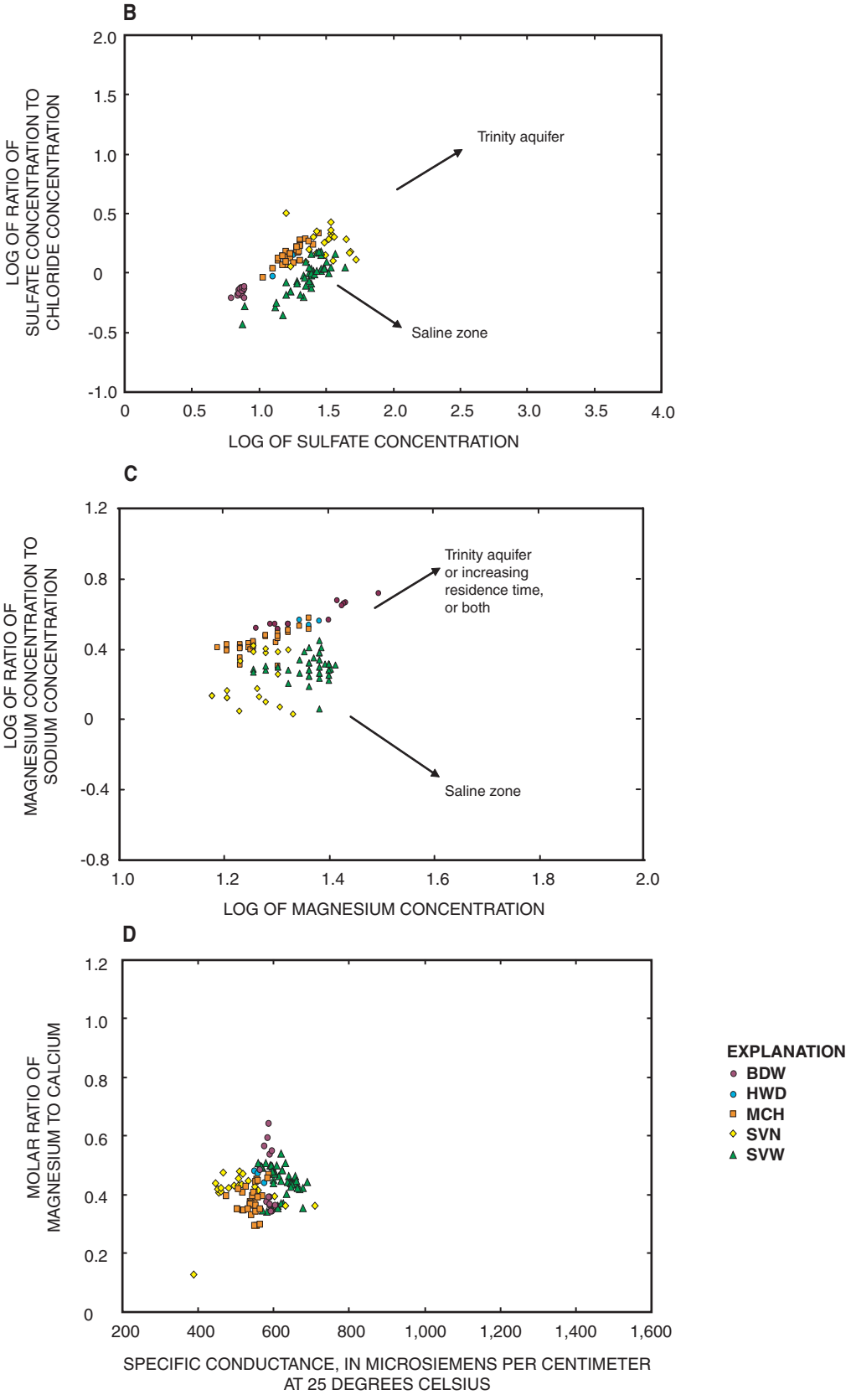


Figure 10. Trilinear diagram and graphs showing geochemistry for wells in Group C2 (specific conductance negatively correlated with streamflow only), Barton Springs segment of the Edwards aquifer, Austin, Texas, 1978–2003.



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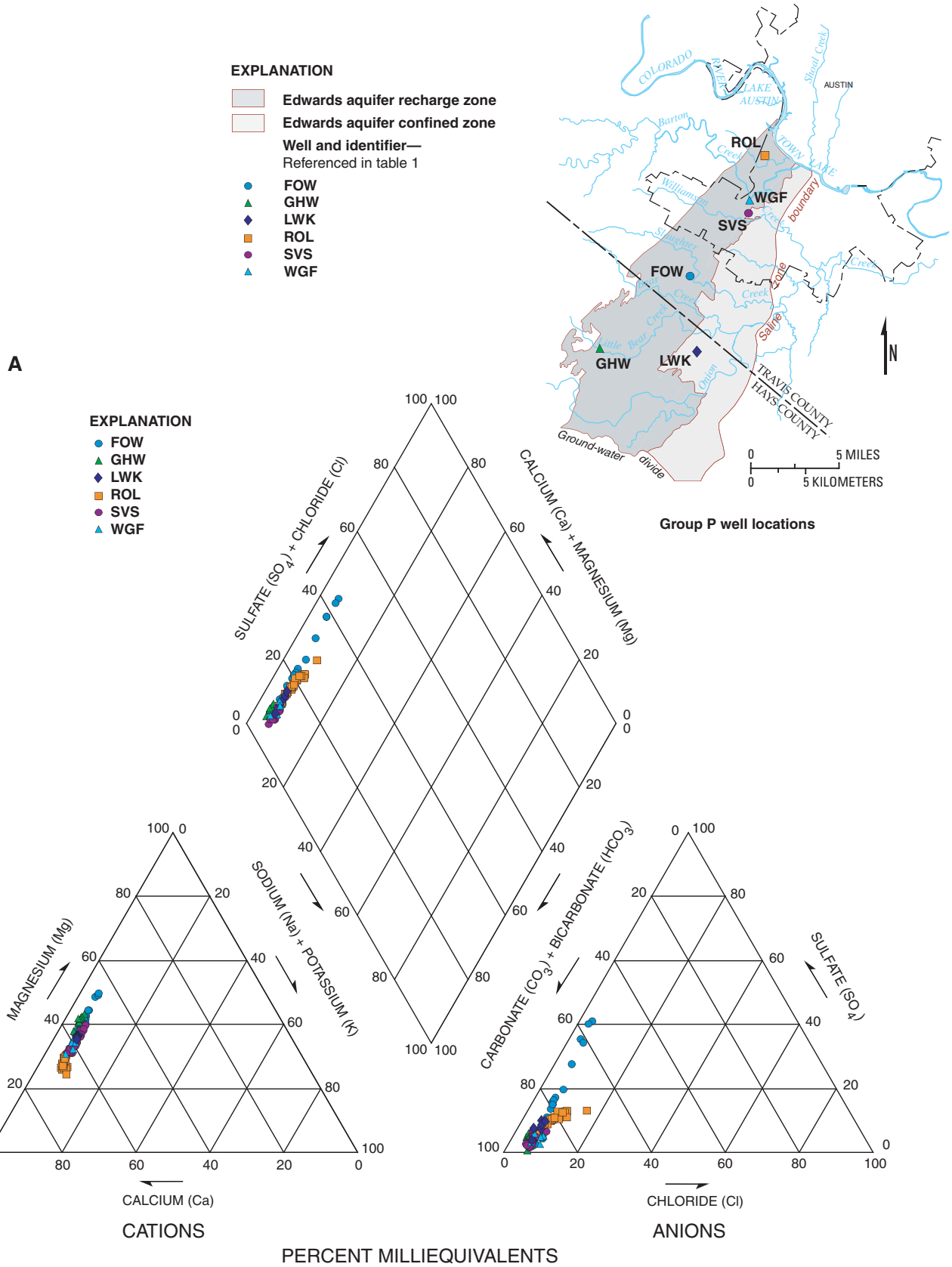
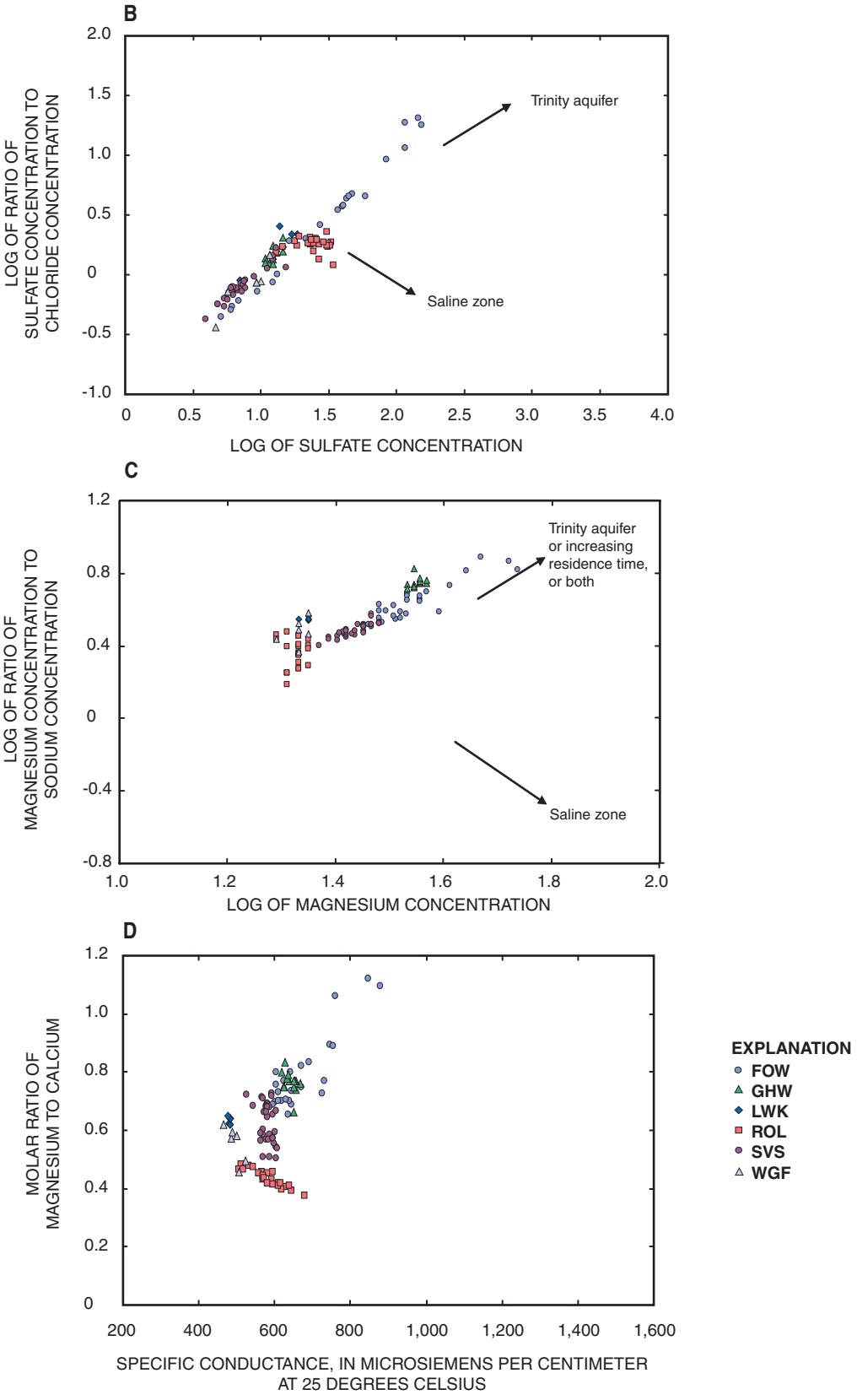


Figure 11. Trilinear diagram and graphs showing geochemistry for wells in Group P (specific conductance positively correlated with spring discharge), Barton Springs segment of the Edwards aquifer, Austin, Texas, 1978–2003.



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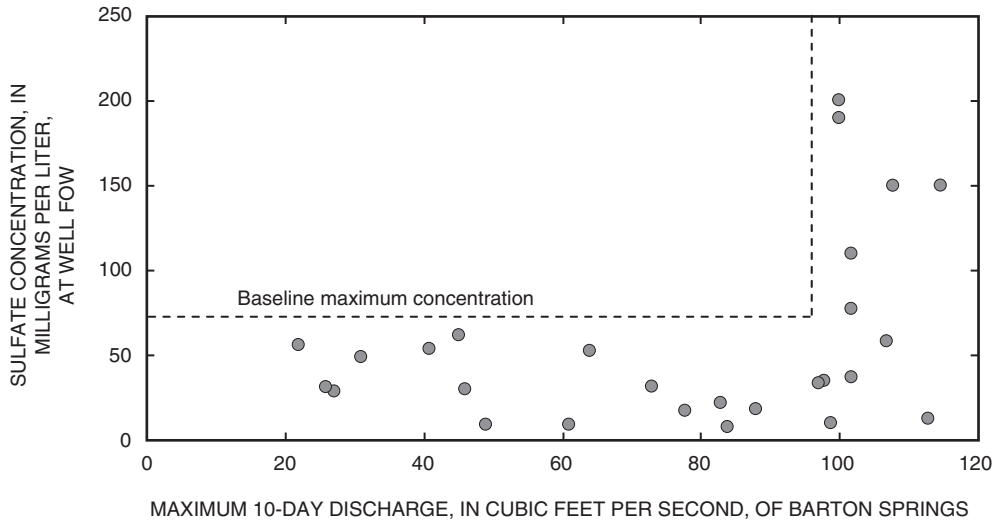


Figure 12. Sulfate concentration at well FOW relative to maximum 10-day discharge of Barton Springs, Barton Springs segment of the Edwards aquifer, Austin, Texas, 1978–2003.

contribution from the saline zone or the Trinity aquifer; major flow paths or conduits might be more likely to be connected to other water sources than minor flow paths or conduits. The positive correlation between aquifer flow condition and specific conductance in the Group P well waters appears in some cases to be associated with increased Mg and SO_4 concentrations when aquifer flow conditions are high. On the basis of ion ratios, the source of the ion enrichment might be leakage from the Trinity aquifer under high aquifer flow conditions, but the controlling processes have not been identified. All but two of the wells that showed no relation between specific conductance and either recent streamflow or aquifer flow condition (Group N) had samples with a geochemistry representative of carbonate systems, as would be expected from wells that intersect the matrix of the Edwards aquifer.

Mixing of Edwards Aquifer Water With Trinity Aquifer and Saline Zone Water

Evidence in this report indicates that Trinity aquifer water enters the Barton Springs segment under some hydrologic conditions, although the geographic source of this water is ambiguous in most cases. Trinity aquifer water is more likely to enter the Barton Springs segment when spring discharge is high, on the basis of geochemistry at three Group P wells (FOW, GHW, and SVS; table 4). Trinity aquifer water mixing at wells FOW, GHW, and SLR likely is because of upward leakage from the underlying Trinity aquifer, as drillers' logs indicate that these wells were completed in the upper zone of the underlying Trinity aquifer.

Water from the saline zone might mix with Edwards aquifer water in the Barton Springs segment, and this occurrence generally is associated with wells that intersect flow paths (wells KCH, SVE, SVW). The mixing is associated with low streamflow or low spring discharge, or both, which indicates that an absence of water recharging the aquifer or a reduction of the potentiometric surface associated with low aquifer flow conditions (Slade and others, 1986) allows influx of water from the saline zone. Well SVE, the second-deepest of the wells in this report (table 1), shows saline zone influence only under low aquifer flow conditions.

Geographic Patterns Relative to Major Ion Geochemistry

One of the most striking characteristics of karst aquifers is their extreme heterogeneity; wells in proximity can show very different hydrogeologic and geochemical characteristics (for example, Long and Putnam, 2004; Mahler and others, 2000; Malard and Chapuis, 1995). The intersection of a fracture or conduit by a well is likely to have a greater effect on the geochemistry of water at the well than the location of the well along the regional gradient. For example, wells BDW and TNR are 50 feet from one another, yet water samples from each have distinct geochemistries and were classified in different groups (Groups C2 and N, respectively). However, a few observations concerning geography and geochemistry can be made.

At Group C1 wells, Mg/Ca molar ratios tend to increase in a downgradient direction (fig. 8). This increase is interpreted as reflecting an increase in residence time with distance downgradient and is consistent with the hypothesis that Group C1 wells intersect major flow paths that integrate water from large volumes of the aquifer. Generalized aquifer flow paths were delineated by Hauwert and others (2004, p. 4), and the conclusion that Group C1 wells intersect major flow paths is mostly supported by their findings. An increase in Mg/Ca molar ratios

with distance downgradient is not observed for wells in the other three groups, where the water apparently is subject to more localized influences. In karst aquifers, fractures and conduits occupy a small proportion of the total aquifer volume, and the likelihood of a well intersecting a major flow path is relatively small.

Wells that intersect minor flow paths are, with one exception, in the recharge zone (fig. 10A). This is consistent with the conceptual model (fig. 6), in which minor flow paths are directly connected to and receiving recharge from the surface. As there is no direct connection between land surface and the confined zone, any confined-zone flow path must be long enough to have originated in the recharge zone. Longer flow paths are more likely to be major flow paths, in the same way that stream length in surface-water systems usually is proportional to the size of the catchment area.

Nitrate Geochemistry

Elevated concentrations of nitrate can result from anthropogenic contamination and also can indicate the presence of other anthropogenic contaminants. Nitrate is not naturally present in limestone and dolomite deposits, and its presence in ground water results from processes other than calcite/dolomite dissolution. Sources of nitrate include fertilizers, manure, septic tanks, municipal sewage treatment systems, decaying plant debris, and nitrogen oxide emissions. Nitrate is very soluble, and once present in aerated water, concentrations of nitrate generally can be lowered only by mixing with more dilute water or through uptake by plants or other organisms.

Nitrate concentrations less than 1.0 to 2.0 mg/L (measured as nitrogen [N] in this report) are assumed to originate from natural sources such as plants and soils (Freeze and Cherry, 1979; Wisconsin Department of Natural Resources, 2003). Nitrate concentrations in Barton Springs water are suspected to be increasing (Turner, 2000), although no measurable increase has been noted in data on dissolved nitrate collected since 1984 (Mahler and others, 2006). If such an increase were occurring, despite concentrations less than 2.0 mg/L, it might indicate an increasing contribution from an anthropogenic source. Elevated concentrations of nitrate at one of the Barton Springs orifices relative to those at the other three might be related to anthropogenic sources (Mahler and others, 2006). Excess nitrate in aquatic systems leads to eutrophication and has various adverse health effects on humans; the maximum contaminant level (MCL) allowed in drinking water is 10 mg/L (U.S. Environmental Protection Agency, 2005).

Nitrate concentrations and variations in those concentrations in samples from the 26 wells were investigated to determine whether there is a relation between occurrence of nitrate in samples from wells and intersection of flow paths by those wells. For example, if nitrate is elevated in surface runoff, then water at wells that intersect flow paths might be more likely to contain relatively high nitrate concentrations.

For Group C1 wells (FMW, KCH, SLR, SVE), specific conductance is inversely correlated with recent streamflow and aquifer flow condition, and the wells thus are interpreted as intersecting major flow paths; these wells have water with nitrate concentrations consistently less than 2.0 mg/L, except for well KCH, with nitrate concentrations ranging from 3.8 to 8.6 mg/L (fig. 14A). Nitrate concentrations at all four wells, however, are independent of specific conductance, which indicates that there is no relation between nitrate concentrations and recent recharge. The occurrence of elevated nitrate concentrations in only one of the Group C1 wells indicates that the nitrate occurrence more likely is related to localized sources rather than connection to focused recharge. However, given that the highest nitrate concentrations of all 26 wells in this report occurred at well KCH, the likelihood that well KCH (and other Group C1 wells) intersects a major flow path or conduit might cause it to be more vulnerable to localized sources of contamination than wells in the other groups. Although the source of nitrate in well KCH cannot be identified from the data reported here, historically, a goat ranch was near this well (D.A. Johns, City of Austin, written commun., 2005), and agricultural runoff is a known source of nitrate in ground water.

For Group C2 wells (BDW, HWD, MCH, SVN, SVW), specific conductance is inversely correlated with recent streamflow, and these wells thus are interpreted as intersecting minor flow paths; nitrate concentrations in water from these wells were consistently less than 2.0 mg/L except for well SVW, with concentrations from 1.4 to 2.8 mg/L, and well MCH, with one concentration of 4.0 mg/L (fig. 14B). For wells BDW, HWD, MCH, and SVW, nitrate concentrations are positively correlated with specific conductance. If specific conductance is interpreted as a measure of the proportion of ground water in relation to recharge water (less recharge water results in higher specific conductance), then an increase in nitrate with an increase in specific conductance indicates that the ground water at these wells has higher ambient concentrations of nitrate than the surface water. Water at well SVN has relatively constant nitrate concentrations over a wide range of specific conductances.

For Group P wells (FOW, GHW, LWK, ROL, SVS, WGF), specific conductance is positively correlated with spring discharge, and these wells thus are interpreted as not intersecting a flow path or conduit; nitrate concentrations in water from these wells are consistently 2.0 mg/L or less except for most samples at well SVS and one sample at well FOW (fig. 14C). Nitrate concentrations in water from well SVS had a median of 3.1 mg/L and were about two times higher than concentrations in water from the other Group P wells. Although the specific source of elevated nitrate at well SVS is not known, this well is in an urbanized region of the aquifer with numerous potential nitrate sources such as landscaping, septic systems, and wastewater infrastructure. Only well ROL shows a relation between nitrate concentration and specific conductance that might result from mixing of ground water with surface water.

For Group N wells (BCK, BPS, CNE, HND, ISD, JBS, PLS, RAB, SNL, TNR, WBG), specific conductance is not correlated with either recent streamflow or spring discharge, thus

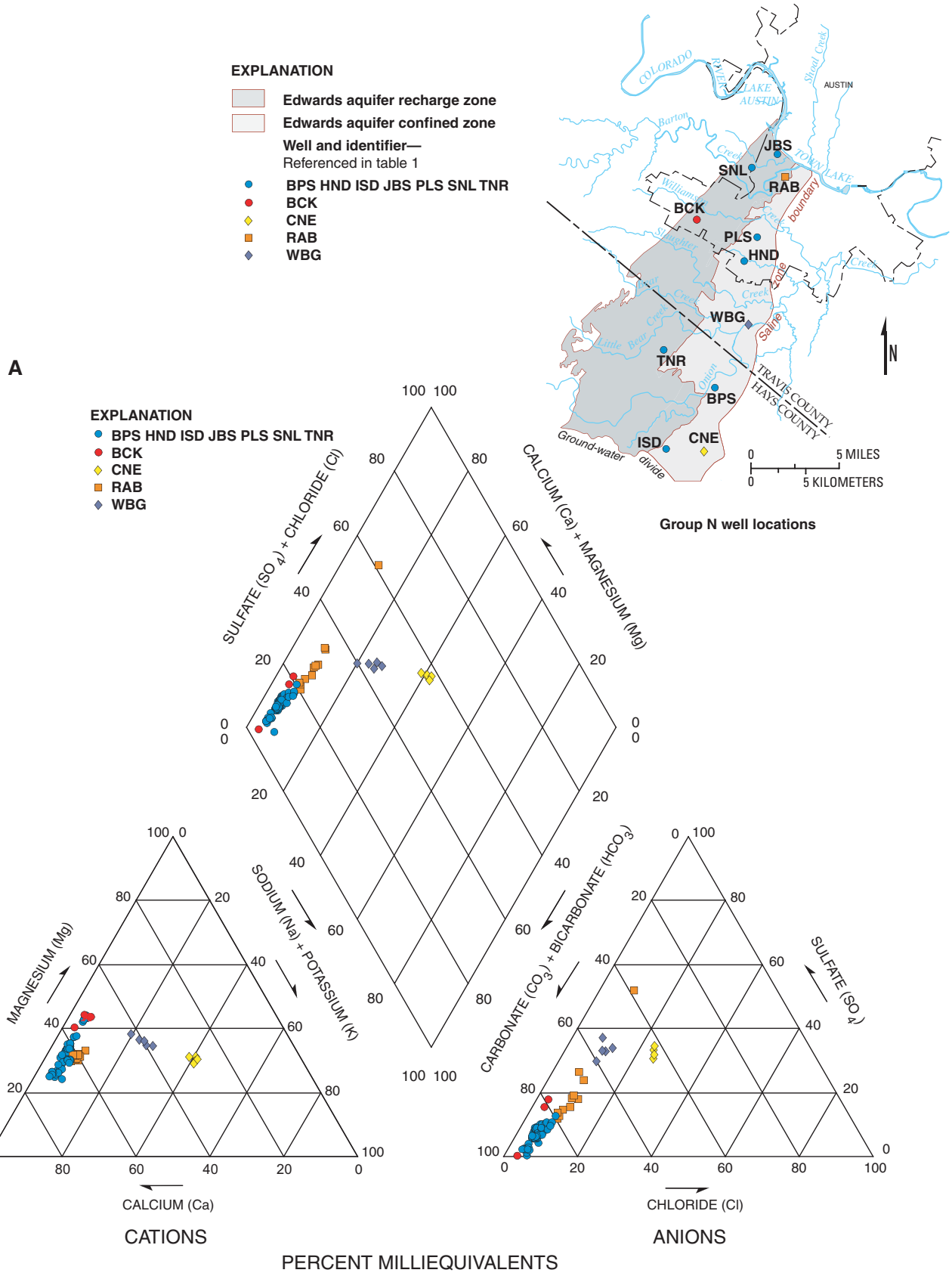
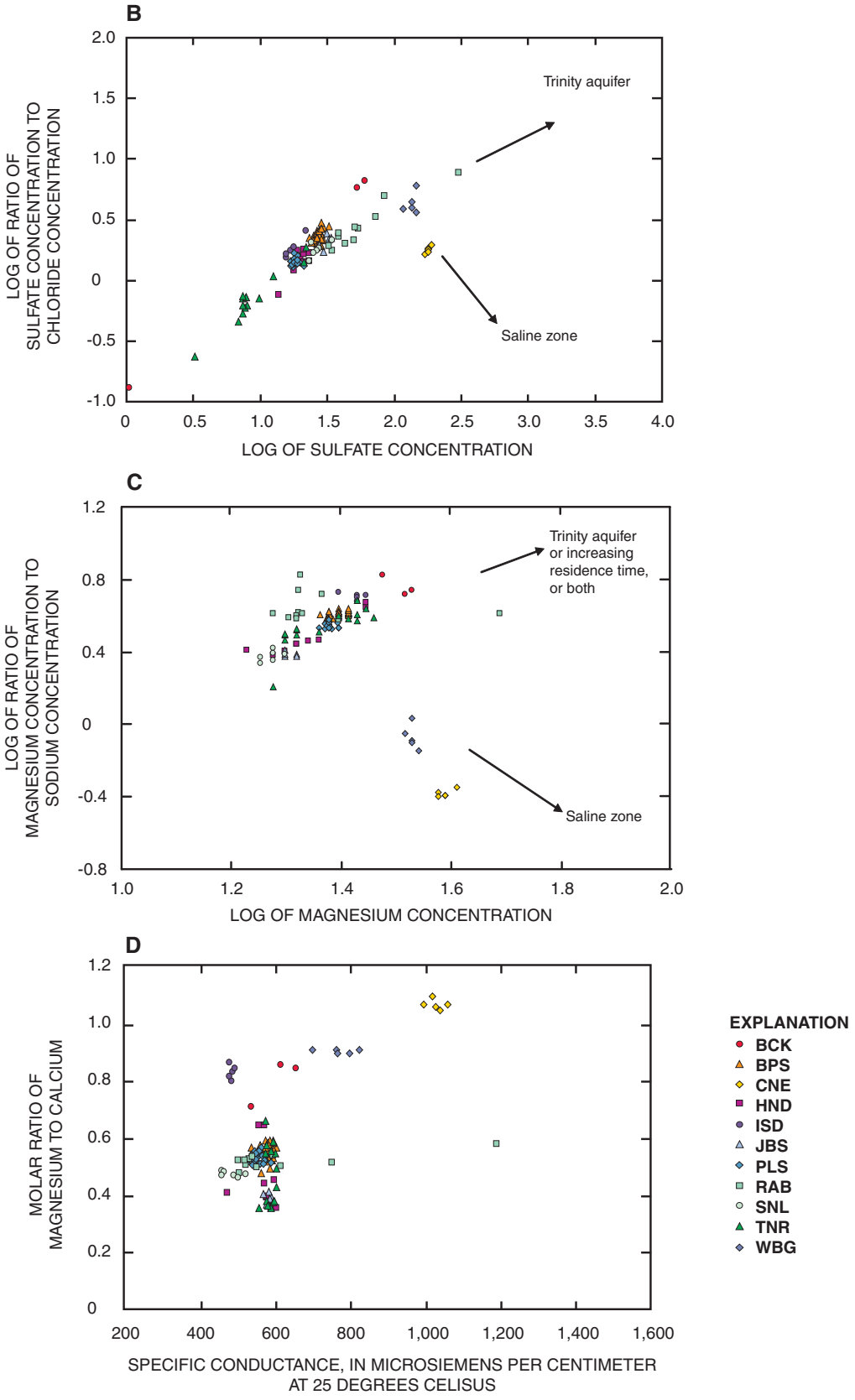


Figure 13. Trilinear diagram and graphs showing geochemistry for wells in Group N (specific conductance not correlated with either streamflow or spring discharge), Barton Springs segment of the Edwards aquifer, Austin, Texas, 1978–2003.



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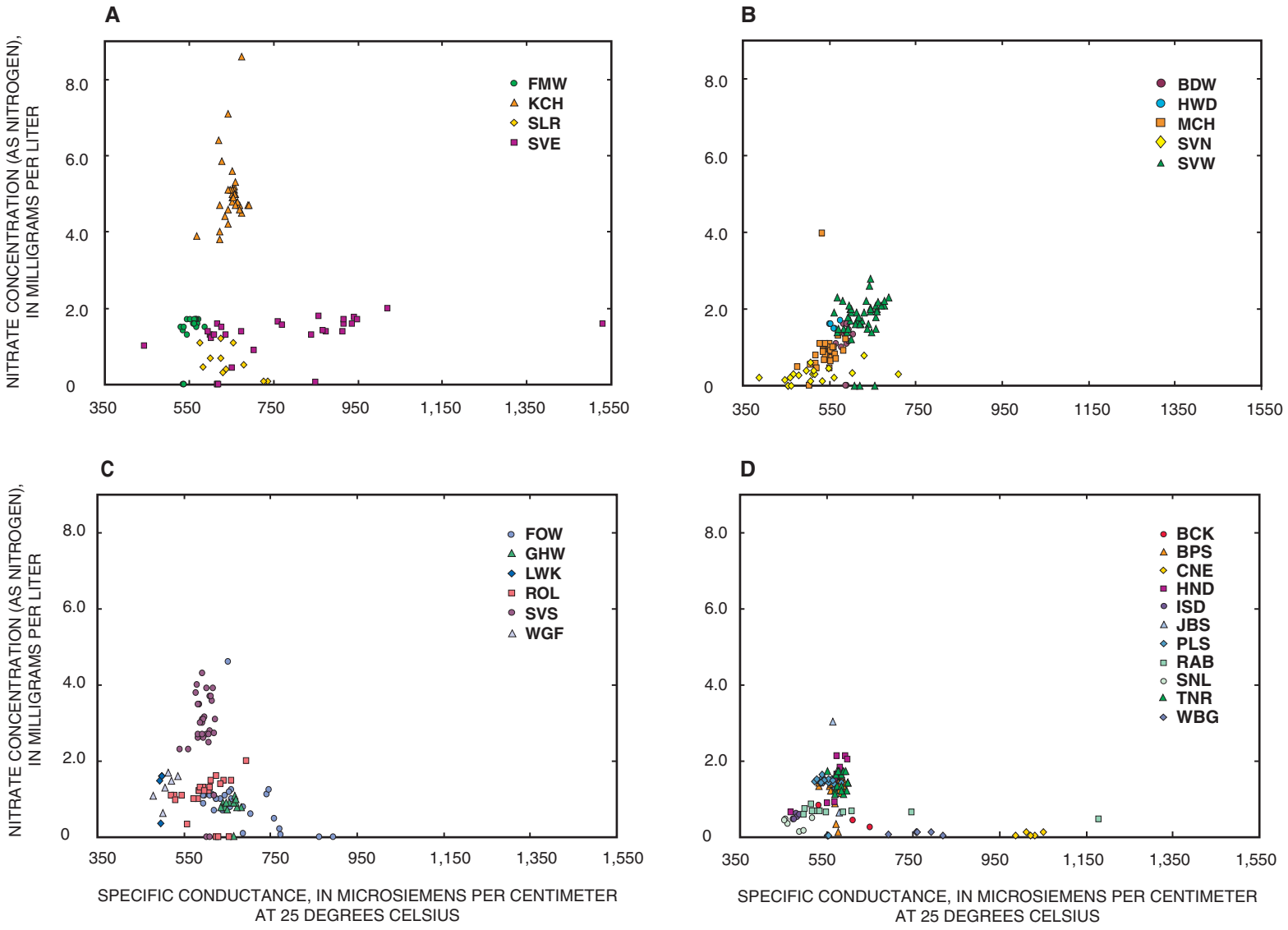


Figure 14. Nitrate nitrogen concentration relative to specific conductance for samples from wells in (A) Group C1 (specific conductance negatively correlated with both streamflow and spring discharge), (B) Group C2 (specific conductance negatively correlated with streamflow only), (C) Group P (specific conductance positively correlated with spring discharge), and (D) Group N (specific conductance not correlated with either streamflow or spring discharge), Barton Springs segment of the Edwards aquifer, Austin, Texas, 1978–2003.

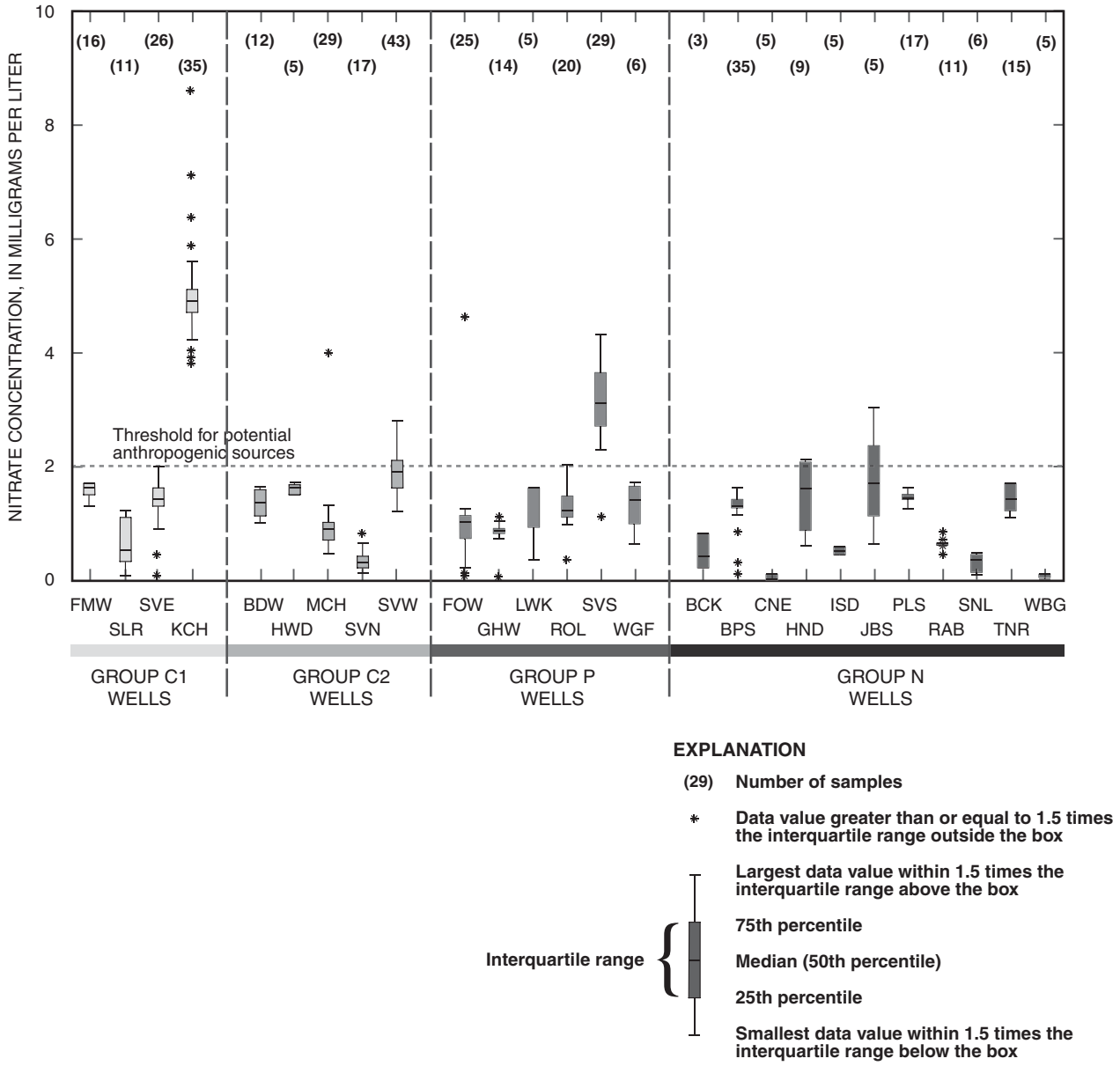


Figure 15. Distribution of nitrate nitrogen concentrations for wells in Group C1 (specific conductance negatively correlated with both streamflow and spring discharge), in Group C2 (specific conductance negatively correlated with streamflow only), in Group P (specific conductance positively correlated with spring discharge), and in Group N (specific conductance not correlated with either streamflow or spring discharge), Barton Springs segment of the Edwards aquifer, Austin, Texas, 1978–2003.

these wells are interpreted as not intersecting a flow path or conduit; nitrate concentrations at all wells in Group N are less than 2.0 mg/L except for one sample from well JBS and three samples from well HND (fig. 14D). Wells CNE and WBG have the lowest nitrate concentrations of the 26 wells in this report. These two wells are near the chemically reducing saline zone (Sharp and Clement, 1989), and the low nitrate concentrations might be the result of denitrification, a biological process that converts nitrate to nitrogen gas under reducing conditions (Freeze and Cherry, 1979).

Of the 26 wells from which data were analyzed for this study, seven had nitrate concentrations that exceeded 2.0 mg/L in one or more samples (wells FOW, HND, JBS, KCH, MCH, SVS, SVW) (fig. 15; appendix 4). Flow-path intersection by wells does not appear to be related to nitrate occurrence, as the seven wells are distributed evenly among the four groups of wells (C1, C2, P, and N). Geographic location and land use, however, might affect nitrate occurrence: If the 26 wells of this study are divided into two groups, 13 to the north (well HND and all those to the north) and 13 to the south (well FMW and all those to the south) (fig. 1), five of the seven wells with one

or more sample concentrations exceeding 2.0 mg/L are among the 13 wells to the north. The increased incidence of wells with nitrate concentrations greater than 2.0 mg/L to the north coincides with increased urban land use and increased population density to the north (Bio-West, 2001; Mahler and Massei, 2007). Water in only two wells, KCH and SVS, had chronic nitrate contamination, defined as a median concentration exceeding 2.0 mg/L (fig. 15).

Comparison of Findings With Those of Other Studies

Wells for which data were analyzed for this report have been sampled for other studies, the objective of which was to assess the relation of geochemistry to surface-water processes. Andrews and others (1984, p. 27) reported high counts of fecal streptococci bacteria in well JBS (44,000 colonies per 100 milliliters), indicating a connection to the surface or contamination from wastewater, or both. However, the methods of this report resulted in classification of well JBS in Group N, and no conclusions were made. One possibility is that well JBS does intersect a flow path, but the small specific conductance dataset (13 values) was not sufficient to establish a connection to a flow path. Another possibility is that bacterial contamination of well JBS is caused by a localized source such as a septic tank or leaking wastewater infrastructure. A sewage lift station in nearby Dry Creek historically has been responsible for accidental sewage releases (Hauwert and Vickers, 1994) and is a probable source for bacterial contamination in well JBS. Sewage contamination is consistent with the data of Andrews and others (1984), as specific conductance and bacteria levels do not co-vary in well JBS, as would be expected if it were receiving low-ionic-strength surface-water recharge.

Senger and Kreitler (1984) reported a hydrologic connection between wells RAB and SVE and Barton Springs Pool; water-level changes in the pool result in near-simultaneous water-level changes in these two wells. The responses indicate that these wells intersect transmissive conduits that connect to Barton Springs. Similarly, Hauwert and Vickers (1994, p. 13) indicated that well SVE has "good hydraulic connection to recharge areas" after observing a 1-foot rise in water levels following a rainfall event in August 1994. Hauwert and Vickers (1994) also reported that well RAB contained 2.1 mg/L total petroleum hydrocarbons in 1993, which indicates an anthropogenic source of contamination for this well. These findings are consistent with the conclusion of this report regarding major flow-path intersection by well SVE and are not contradicted by the inconclusive results of this report for well RAB.

Hauwert and Vickers (1994) reported several instances of sediment filling wells or discharging with pumped well water and hypothesized that sediment in a well or its water might indicate that such a well intersects a flow path with rapidly moving water carrying sediment. Sediment might also originate from within the aquifer itself (autochthonous) and might be mobilized by drilling in the aquifer. Hauwert and Vickers (1994) reported that well SVN accumulated more than 100 feet of sediment from 1978 to 1993, which is consistent with the conclusion of this report that well SVN intersects a minor flow path. Well SVS was reported to contain fine, cream-colored sediment in its pumped water, although the findings of this report are inconclusive for well SVS. Similarly, well HND was reported to have a small amount of sediment (less than 50 mg/L total suspended solids) in its pumped water, but the findings of this report are inconclusive for this well.

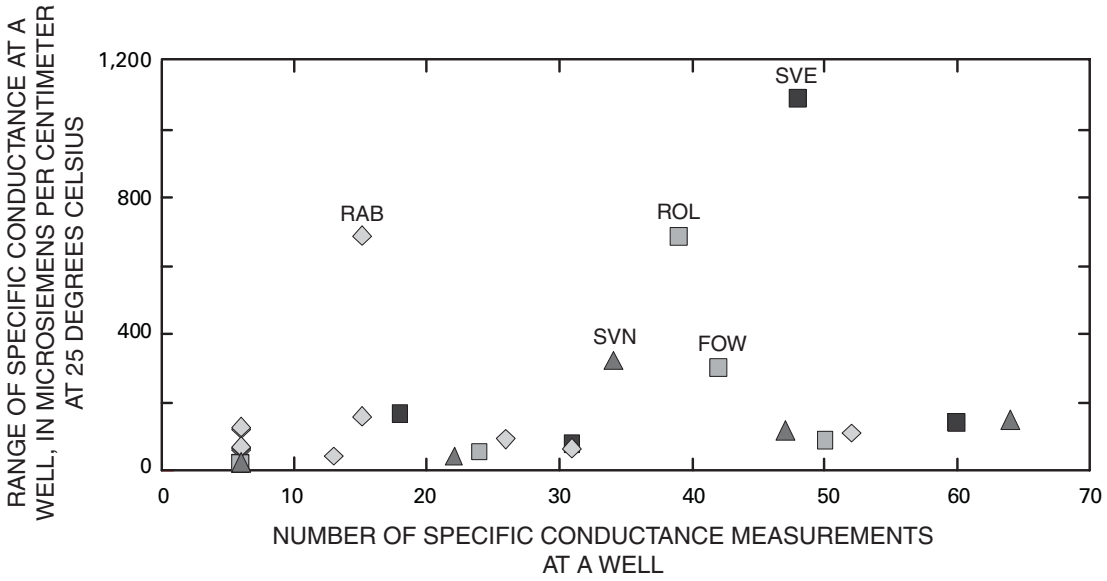
Hauwert and others (2004) reported detection of dye from a dye-trace at well SVW. The dye had been injected in Williamson Creek several days earlier, indicating that well SVW intersects a flow path that connects to Williamson Creek. This finding is consistent with the conclusions of this report.

The City of Austin (1997) conducted an investigation with some of the same major ion data used in this study. They concluded that wells BDW, FMW, KCH, ROL, and SVW might be affected by urbanization, which is consistent with the findings of this study that these wells intersect flow paths. The City of Austin also identified well SVS as potentially being affected by urbanization. Well SVS was classified in Group P for this report, and the processes controlling water in the aquifer at that well are not well understood. Finally, wells RAB and TNR were noted by the City of Austin (1997) as potentially having been affected by urbanization, although the findings of this report are inconclusive.

Value of Statistical Approach

The results of this investigation demonstrate that a long-term geochemical dataset can be of value in characterizing the degree to which wells intersect conduits and flow paths. Although analysis of multiple samples collected at intervals of hours to days after rainfall remains the most effective way to evaluate the influence of surface water on geochemistry, this study shows that if a sufficient amount of historical data exists, the data can be analyzed statistically to assess surface-water/ground-water interaction in a karst aquifer. However, there are some limitations on the statistical approach of this report.

In those parts of a karst aquifer where transport occurs, the geochemistry can vary greatly and rapidly. The effects of recharging surface water might be extreme but ephemeral, occurring during only a small part of the year. If the timing of sampling is random, many water samples might reflect baseflow conditions during which the geochemistry varies little. Thus either a large number of samples, or random chance, is required to collect samples that reflect the full range of geochemical variability that might occur at a site. Five of the 11 wells in the group for which no statistically significant correlations were observed (Group N) had the minimum number of specific conductance measurements (six) (fig. 16), which indicates that six specific conductance measurements might be too few to capture the range of geochemical variability possible at



EXPLANATION

Well, by group, and identifier—The five wells with the greatest geochemical variability are identified

SVE — Group C1—Negative correlation between specific conductance and both streamflow and spring discharge

SVN — Group C2—Negative correlation between specific conductance and streamflow

ROL — Group P—Positive correlation between specific conductance and spring discharge

RAB — Group N—No correlation between specific conductance and either streamflow or spring discharge

Figure 16. Relation between the number of specific conductance measurements at a well and the range of specific conductance at that well, Barton Springs segment of the Edwards aquifer, Austin, Texas, 1978–2003.

a well. Additional well sampling might have resulted in fewer wells placed in Group N. For example, many wells were no longer sampled after 1983, and continued sampling might have resulted in identifying them as intersecting flow paths. Thus wells with small sample sets and no statistically significant negative relation between specific conductance and either streamflow or aquifer flow condition cannot be definitively interpreted as not intersecting a flow path, but rather as having insufficient evidence to interpret as intersecting a flow path.

Four of the five wells in this report with the greatest geochemical variability (SVE [Group C1], SVN [Group C2], FOW [Group P], ROL [Group P], and RAB [Group N]) had more than 30 specific conductance measurements (fig. 16); all four of these wells had statistically significant correlations between specific conductance and streamflow or spring discharge, or both. This indicates that a large sample set might be necessary to capture short-term geochemical variability and evidence of connection to surface-water sources or flow-path intersection. However, another possible explanation is that wells with the largest sample sets were deliberately selected for extended sampling on the basis of variability in geochemical composition observed early on during the sampling program. In other words, large sample-set size and large geochemical variability might not be independent.

Finally, although an estimated 85 percent of aquifer recharge is from creeks, the authors were unable to quantitatively consider the remaining 15 percent of recharge (referred to as interstream recharge). There is some evidence that interstream recharge might rapidly reach the aquifer at some Groups C1 and C2 wells (particularly at shallow well SLR). The data available for this report cannot be used to determine the degree to which wells are affected by interstream recharge. However, it is likely that periods of interstream recharge and streamflow are correlated, and thus the statistical approach used here might have identified some sites as being affected by streamflow when in fact they are being affected by interstream recharge.

Summary

Understanding of karst flow systems is complicated by the presence of solution-enlarged conduits, which can transmit large volumes of water through the aquifer rapidly. Ground water at wells that intersect conduits (and thus major flow paths) can be characterized by temporally variable geochemistry that is related to surface-water processes. If the geochemistry at a well can be related to streamflow or spring discharge, or both, the relations can indicate the presence of recent recharge in water at the well, which in turn might indicate that the well intersects a conduit. Increasing knowledge of the occurrence and distribution of conduits in the aquifer can contribute to better understanding of aquifer framework and function.

The U.S. Geological Survey (USGS), in cooperation with the City of Austin, sampled 26 wells in the Barton Springs segment of the Edwards aquifer from 1978 through 2003 for a variety of water-quality constituents. In this report, this historical (1978–2003) dataset is used to identify wells that intersect flow paths in the aquifer. Statistical correlations between specific conductance at wells and streamflow or Barton Springs discharge, or both, are used to identify wells that intersect flow paths. Specific conductance, an overall indicator of water geochemistry, can act as a tracer of recently infiltrated surface water in a karst aquifer—recent recharge water will have a lower specific conductance than water that has been in the aquifer for a longer period of time. The specific conductance of water at a well that intersects a flow path thus should change in response to an inflow of recent recharge. Major ion geochemistry data also are interpreted to better understand aquifer processes; interpretive tools include summary statistics, trilinear diagrams, and concentration and molar ratios. Dissolved ions in Barton Springs segment ground water can originate from several sources including limestone, trace elements and minerals in limestone, surface water, the saline zone, and the Trinity aquifer. Finally, nitrate geochemistry is examined to determine whether there is a relation between flow-path intersection by wells and nitrate occurrence.

A large dataset consisting of geochemical, streamflow, and spring discharge data exists for the Barton Springs segment. A USGS study sampled about 30 water wells several times a year from 1978 through 1983 for numerous water-quality constituents, including specific conductance, major ions, and nitrate. From 1983 through 2003, about 11 of these wells continued to be sampled periodically. The specific conductance dataset for the 26 wells of this report consists of 679 values ranging from 388 to 1,530 µS/cm. Streamflow and spring discharge have been measured by the USGS since 1978, and each dataset consists of about 9,000 daily mean values. High streamflow and spring discharge were assumed to indicate high recharge rates and high aquifer flow conditions, respectively.

All wells except three were cased into and completed in the Edwards aquifer; three wells in the recharge zone were drilled partly into the Trinity aquifer. Specific conductance was measured during all USGS well samplings. Samples for major ion and nitrate analysis were analyzed by the USGS National Water Quality Laboratory after being collected, filtered, and acidified in the field. Analytical methods changed through the years, but methods were assumed to be consistent enough to allow a uniform comparison of all results.

Data for each well were tested to indicate whether there was a statistical relation between specific conductance and streamflow and a relation between specific conductance and Barton Springs discharge. For each specific conductance value, the maximum daily mean streamflow for each of the five recharging creeks and the maximum daily mean dischare for Barton Springs for the 10 days preceding the specific conductance measurement were recorded. The relations between specific conductance and the corresponding streamflow and between specific conductance and the corresponding spring discharge were tested using Spearman's rho correlation coefficient, a nonparametric test used when data are not normally distributed. Results of the Spearman's rho test were used to divide the 26 wells into four groups:

- Group C1 comprises four wells whose samples showed a significant ($p \leq .05$) negative correlation between specific conductance and both streamflow and spring discharge. These wells are hypothesized to intersect major flow paths, and these flow paths likely integrate water from a large volume of the aquifer. The hydrochemical facies of Group C1 wells, with one exception, are Ca-HCO_3 to Ca-Mg-HCO_3. The one exception trends toward mixed-SO_4 or Na-mixed facies and shows evidence of mixing with saline zone water, but only when streamflow and spring discharge are low.
- Group C2 comprises five wells whose samples showed a significant negative correlation between specific conductance and streamflow only. These wells are hypothesized to intersect minor flow paths (short, tributary conduits) that connect to the surface; minor flow paths probably have smaller catchment areas than major flow paths. Water at Group C2 wells shows little evidence of mixing with Trinity aquifer or saline zone water.
- Group P comprises six wells whose samples showed a significant positive correlation between specific conductance and spring discharge. These wells thus are interpreted as not intersecting a flow path (conduit). Water at Group P wells has a tendency to become more mineralized when Barton Springs discharge is high. In some cases, this might be caused by mixing with Trinity aquifer water. Water at four of these wells has a range in specific conductance of less than 100 µS/cm, thus the phenomenon of increased mineralization during high spring discharge is minor in some cases.
- Group N comprises 11 wells whose samples showed no significant correlation between specific conductance and either streamflow or spring discharge. Most wells in this group had a small number of specific conductance measurements and thus might have been classified in Group N because the full range of geochemical

variability at these wells is not reflected by the data. Unidentified processes unrelated to changes in streamflow or spring discharge also might affect water at Group N wells.

On the basis of statistical and geochemical analysis, four wells appear to intersect major flow paths, five appear to intersect minor flow paths, and no conclusions are made for the remaining wells. Wells that intersect major flow paths (Group C1 wells) integrate water from a large aquifer volume, and might be vulnerable to both localized and distant sources of contamination. Wells that intersect minor flow paths (Group C2 wells) integrate water only from a small catchment area, and are likely vulnerable to localized sources of contamination. Any well that intersects a flow path is affected by the geochemistry of recharging surface water. Wells in Groups P and N do not show evidence of flow-path intersection, but this could be the result of small sample sets or unknown geochemical processes, or both.

Water from the Trinity aquifer and the saline zone appears to mix with Barton Springs segment ground water under some hydrologic conditions. In a few areas, Trinity aquifer water might enter the Barton Springs segment by upward leakage from the underlying Trinity aquifer, and geochemical data indicate that this is more likely to occur when spring discharge is high. Saline zone water appears to mix with Barton Springs segment ground water; this phenomenon generally is associated with wells that intersect flow paths, and is associated with low streamflow and spring discharge.

Despite the spatial heterogeneity inherent in karst, some observations were made regarding geography and geochemistry. Mg/Ca molar ratios (residence-time indicators) at Group C1 wells increase in a downgradient direction, consistent with the hypothesis that Group C1 wells intersect major flow paths that integrate water from large volumes of the aquifer. Group C1 wells generally are near aquifer flow paths delineated by independent dye-tracing studies, supporting the hypothesis that these wells intersect major flow paths. Wells that intersect minor flow paths mostly are in the recharge zone; this is logical, given that minor flow paths are short by nature, and any flow path in the confined zone must be longer and thus a more major flow path.

Concentrations and variation in nitrate concentrations were investigated to determine whether there was a relation between occurrence of nitrate in samples from wells and intersection of flow paths by those wells. For example, if nitrate is elevated in surface runoff, then water at wells that intersect flow paths might be more likely to contain high nitrate concentrations. Of the 26 wells, seven had nitrate concentrations in one or more samples that exceeded 2.0 mg/L, considered the upper limit of concentrations from natural sources. Flow-path intersection by wells does not appear to be related to nitrate occurrence, as the seven wells are distributed evenly among the four groups of wells (C1, C2, P, and N). However, most of the wells with one or more samples contaminated by nitrate are in the more densely populated parts of the study area.

Other studies independently analyzed water at wells used in this report, and the findings in this report support or do not contradict findings of the other studies. This report demonstrates that a statistical and geochemical analysis of a historical dataset can be useful for determining the degree to which wells intersect karst features, although high-frequency sampling remains the most effective tool for karst geochemical investigation. This report necessarily relied upon a large dataset, as well as some degree of random chance to capture the full range of geochemical variability at a well. Wells with large sample sets generally show larger geochemical variability, but this might be the result of deliberate choices made by sampling personnel. This report was unable to quantitatively consider interstream recharge, although it is likely that interstream recharge and streamflow are correlated, and thus water at some wells might have been identified as being affected by streamflow when it was being affected by interstream recharge.

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Appendix 1—Specific Conductance Data

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Appendix 1. Specific conductance data for samples from wells in the Barton Springs segment of the Edwards aquifer and corresponding maximum 10-day streamflow for the five creeks and maximum 10-day discharge for Barton Springs, Austin, Texas, 1978–2003.

[µS/cm, microsiemens per centimeter at 25 degrees Celsius; ft^3/s, cubic feet per second; --, no data]

Well identifier (fig. 1)	Date	Time	Specific conductance (µS/cm)	Maximum 10-day streamflow or spring discharge (ft^3/s)					
				Barton Creek	Williamson Creek	Slaughter Creek	Bear Creek	Onion Creek	Barton Springs
BCK	6/28/1978	1000	630	0.7	0.2	0.1	--	--	31
BCK	7/17/1979	1230	630	17.0	.9	2.1	2.5	16.0	100
BCK	8/28/1980	1000	659	0	0	0	.1	1.1	41
BCK	8/11/1981	0830	538	11.0	0	.5	2.2	19.0	99
BCK	8/10/1982	0920	618	1.1	0	.1	.4	1.2	49
BCK	7/19/1983	0835	649	--	7.7	1.4	22.0	90.0	84
BDW	6/14/1990	1355	593	41.0	.5	.6	1.8	30.0	49
BDW	8/22/1990	1350	603	.6	.5	0	0	2.2	26
BDW	3/19/1991	1020	565	87.0	7.6	6.4	11.0	68.0	85
BDW	5/7/1991	1325	584	105.0	10.0	8.0	20.0	151.0	99
BDW	8/13/1991	1220	600	2.5	0	.2	.4	6.5	75
BDW	4/30/1992	1120	594	94.0	3.5	4.7	8.5	81.0	115
BDW	1/22/1993	1220	590	262.0	16.0	21.0	9.0	231.0	100
BDW	1/25/1993	1342	589	262.0	16.0	21.0	9.0	231.0	100
BDW	5/8/1993	1145	584	123.0	1.2	16.0	10.0	73.0	108
BDW	5/11/1993	1500	593	123.0	1.2	16.0	10.0	73.0	108
BDW	5/15/1993	0835	589	123.0	0	16.0	10.0	73.0	108
BDW	8/18/1993	1200	594	.5	0	0	.1	.5	86
BDW	4/15/1994	1000	591	6.7	0	0	.3	8.4	47
BDW	6/14/1995	1055	590	347.0	12.0	108.0	32.0	294.0	104
BDW	4/25/1996	0930	582	.7	0	0	.1	.9	25
BDW	7/8/1997	1615	585	322.0	.9	21.0	26.0	510.0	113
BDW	4/21/1998	1130	587	79.0	0	8.9	7.5	96.0	98
BDW	6/11/1999	0945	595	21.0	0	1.4	1.4	4.9	73
BDW	6/2/2000	1300	591	2.5	0	0	.1	1.2	22
BDW	6/5/2001	1300	595	43.0	0	1.7	3.3	71.0	103
BDW	6/5/2002	1300	606	7.2	0	.1	.7	3.8	88
BDW	5/20/2003	1300	577	12.0	0	.3	1.3	12.0	102
BPS	7/12/1978	1045	580	--	0	0	--	--	25
BPS	7/24/1978	1010	572	--	.3	1.1	--	--	21
BPS	8/24/1979	1410	588	9.6	1.8	1.8	4.1	10.0	94
BPS	8/1/1980	1315	583	.4	0	0	.3	1.3	54
BPS	8/29/1980	0815	578	0	0	0	.1	1.0	40
BPS	7/30/1981	1400	583	29.0	1.0	1.4	4.2	50.0	103
BPS	8/12/1981	0810	568	11.0	0	.4	2.1	17.0	98
BPS	7/19/1982	1130	586	4.1	0	.5	1.4	10.0	60
BPS	7/22/1983	1215	539	--	7.7	1.4	22.0	90.0	84
BPS	6/27/1984	1508	584	--	0	0	0	4.6	27
BPS	9/13/1984	1225	590	--	0	0	0	.2	26
BPS	2/20/1985	1159	586	--	6.3	1.6	8.3	93.0	72
BPS	6/19/1985	0830	580	--	2.4	4.0	5.6	145.0	70
BPS	8/9/1985	1345	598	--	0	.2	.9	15.0	64
BPS	1/14/1986	0845	579	--	1.5	2.6	5.2	54.0	78
BPS	5/3/1986	0855	500	--	59.0	3.2	6.4	38.0	62
BPS	6/24/1986	1420	591	--	13.0	20.0	16.0	216.0	84

Appendix 1. Specific conductance data for samples from wells in the Barton Springs segment of the Edwards aquifer and corresponding maximum 10-day streamflow for the five creeks and maximum 10-day discharge for Barton Springs, Austin, Texas, 1978–2003—Continued.

Well identifier (fig. 1)	Date	Time	Specific conductance (µS/cm)	Maximum 10-day streamflow or spring discharge (ft^3/s)					
				Barton Creek	Williamson Creek	Slaughter Creek	Bear Creek	Onion Creek	Barton Springs
BPS	6/25/1986	1240	592	--	13.0	20.0	16.0	216.0	84
BPS	9/3/1986	0849	589	--	0	0	.4	5.8	61
BPS	2/11/1987	0930	588	--	1.3	3.2	8.9	76.0	80
BPS	5/20/1987	1315	595	--	12.0	2.6	2.8	38.0	100
BPS	6/1/1987	0925	591	--	149.0	93.0	41.0	392.0	110
BPS	8/19/1987	1335	605	--	0	0	1.6	33.0	110
BPS	2/29/1988	0845	589	--	.1	.6	.9	8.5	61
BPS	5/3/1988	1355	575	--	1.4	.1	1.1	7.8	50
BPS	7/19/1988	1322	572	--	2.0	0	.8	7.5	45
BPS	8/17/1988	0955	597	--	1.2	0	0	3.2	45
BPS	2/27/1989	1520	596	1.0	.3	0	.1	2.4	27
BPS	5/3/1989	0930	583	15.0	.2	0	3.4	5.4	33
BPS	7/17/1989	1240	563	8.9	2.0	.2	2.9	12.0	55
BPS	8/29/1989	1145	581	.4	0	0	0	2.7	33
BPS	1/29/1990	1320	585	.6	0	0	0	.4	18
BPS	6/5/1990	1225	587	41.0	7.1	1.0	2.5	80.0	50
BPS	8/14/1990	1355	566	1.6	0	.1	0	2.2	31
BPS	3/22/1991	0825	586	87.0	7.6	6.4	11.0	68.0	85
BPS	5/15/1991	0850	569	261.0	68.0	38.0	48.0	218.0	99
BPS	8/13/1991	1305	591	2.5	0	.2	.4	6.5	75
BPS	4/30/1992	1240	589	94.0	3.5	4.7	8.5	81.0	115
BPS	8/28/1992	1100	584	4.2	0	0	.5	9.5	125
BPS	5/11/1993	1110	584	123.0	1.2	16.0	10.0	73.0	108
BPS	8/19/1993	1220	539	.4	0	0	0	.3	86
BPS	8/20/1993	0805	579	.4	0	0	0	.3	86
BPS	4/14/1994	1215	578	6.9	0	0	.3	9.5	47
BPS	6/14/1995	0930	585	347.0	12.0	108.0	32.0	294.0	104
BPS	5/9/1996	0900	576	.6	0	0	0	.5	25
BPS	7/8/1997	1435	575	322.0	.9	21.0	26.0	510.0	113
BPS	4/22/1998	0830	565	76.0	0	8.4	7.2	93.0	98
BPS	6/11/1999	0800	591	21.0	0	1.4	1.4	4.9	73
BPS	6/2/2000	1500	592	2.5	0	0	.1	1.2	22
BPS	6/12/2001	1100	593	21.0	0	1.0	2.2	41.0	100
BPS	6/6/2002	1100	596	7.2	0	.1	.7	3.8	88
BPS	5/22/2003	1100	591	11.0	0	.3	1.3	12.0	102
CNE	7/24/1978	1015	1,040		.3	1.1			21
CNE	7/11/1979	0950	1,060	27.0	5.2	4.7	2.6	18.0	102
CNE	9/4/1980	0900	1,030	0	0	0	0	.5	38
CNE	8/12/1981	1230	996	11.0	0	.4	2.1	17.0	98
CNE	8/11/1982	0930	1,020	1.1	0	0	.3	1.5	49
CNE	7/21/1983	1425	1,060	--	7.7	1.4	22.0	90.0	84
FMW	8/11/1981	0950	531	11.0	0	.5	2.2	19.0	99
FMW	8/4/1982	1340	566	1.1	0	.1	.5	2.0	51
FMW	7/19/1983	1245	568	--	7.7	1.4	22.0	90.0	84
FMW	6/19/1985	1200	547	--	2.4	4.0	5.6	145.0	70
FMW	8/8/1985	0930	567	--	0	.2	1.0	15.0	64
FMW	1/15/1986	1235	545	--	1.5	2.6	5.2	54.0	78
FMW	5/3/1986	1145	568	--	59.0	3.2	6.4	38.0	62
FMW	6/25/1986	0950	564	--	13.0	20.0	16.0	216.0	84
FMW	9/3/1986	1020	568	--	0	0	.4	5.8	61

Appendix 1. Specific conductance data for samples from wells in the Barton Springs segment of the Edwards aquifer and corresponding maximum 10-day streamflow for the five creeks and maximum 10-day discharge for Barton Springs, Austin, Texas, 1978–2003—Continued.

Well identifier (fig. 1)	Date	Time	Specific conductance (µS/cm)	Maximum 10-day streamflow or spring discharge (ft^3/s)					
				Barton Creek	Williamson Creek	Slaughter Creek	Bear Creek	Onion Creek	Barton Springs
FMW	2/9/1987	1230	552	--	1.3	3.4	9.3	81.0	83
FMW	5/21/1987	0815	553	--	12.0	2.6	2.8	38.0	100
FMW	6/1/1987	1305	535	--	149.0	93.0	41.0	392.0	110
FMW	8/18/1987	1410	564	--	0	0	1.6	34.0	110
FMW	2/25/1988	0910	573	--	.1	.6	1.2	8.6	63
FMW	5/3/1988	1120	574	--	1.4	.1	1.1	7.8	50
FMW	2/23/1989	1335	560	0.9	.3	0	.1	1.4	28
FMW	5/1/1989	1210	600	19.0	.3	0	3.7	7.3	36
FMW	7/17/1989	1410	585	8.9	2.0	.2	2.9	12.0	55
FMW	8/21/1989	1345	587	.6	0	0	0	3.5	36
FMW	3/5/1991	1320	571	106.0	8.5	14.0	15.0	82.0	87
FMW	5/7/1991	1000	561	105.0	10.0	8.0	20.0	151.0	99
FMW	8/19/1991	1250	561	467.0	107.0	42.0	11.0	58.0	71
FMW	4/28/1992	1130	545	115.0	4.7	6.2	11.0	98.0	115
FMW	1/21/1993	1550	536	262.0	16.0	21.0	9.0	231.0	100
FMW	1/24/1993	1215	537	262.0	16.0	21.0	9.0	231.0	100
FMW	1/28/1993	0830	537	262.0	16.0	21.0	9.0	231.0	100
FMW	5/8/1993	0820	535	123.0	1.2	16.0	10.0	73.0	108
FMW	5/11/1993	1614	534	123.0	1.2	16.0	10.0	73.0	108
FMW	5/15/1993	1036	528	123.0	0	16.0	10.0	73.0	108
FMW	8/16/1993	1230	537	.5	0	0	.1	.5	87
FMW	4/8/1994	0750	563	6.9	0	0	.3	9.5	47
FOW	6/28/1978	1255	620	.7	.2	.1			31
FOW	7/10/1979	1340	620	27.0	5.2	4.7	2.6	18.0	102
FOW	8/28/1980	1145	686	0	0	0	.1	1.1	41
FOW	8/11/1981	1055	595	11.0	0	.5	2.2	19.0	99
FOW	8/10/1982	1115	595	1.1	0	.1	.4	1.2	49
FOW	7/19/1983	1330	597	--	7.7	1.4	22.0	90.0	84
FOW	8/8/1985	0915	641	--	0	.2	1.0	15.0	64
FOW	1/14/1986	0700	624	--	1.5	2.6	5.2	54.0	78
FOW	5/1/1986	1515	635	--	59.0	3.2	6.4	26.0	62
FOW	6/25/1986	0800	748	--	13.0	20.0	16.0	216.0	84
FOW	9/3/1986	0700	610	--	0	0	.4	5.8	61
FOW	2/10/1987	1030	625	--	1.3	3.4	9.3	81.0	83
FOW	5/20/1987	1450	647	--	12.0	2.6	2.8	38.0	100
FOW	6/1/1987	1445	630	--	149.0	93.0	41.0	392.0	110
FOW	8/26/1987	1055	687	--	0	0	1.1	21.0	107
FOW	5/6/1988	1110	670	--	1.4	.1	1.1	7.8	50
FOW	7/18/1988	0845	643	--	2.0	0	.8	7.5	45
FOW	8/17/1988	0905	705	--	1.2	0	0	3.2	45
FOW	2/27/1989	1045	660	1.0	.3	0	.1	2.4	27
FOW	5/3/1989	0840	647	15.0	.2	0	3.4	5.4	33
FOW	7/26/1989	0935	602	2.5	.3	0	1.6	5.5	48
FOW	2/9/1990	0930	658	4.3	8.6	0	.1	1.5	22
FOW	6/19/1990	0840	645	7.0	0	.4	.5	16.0	47
FOW	8/14/1991	1045	648	4.1	12.0	5.9	1.7	6.5	75
FOW	5/1/1992	1130	771	85.0	3.4	4.2	8.1	75.0	115
FOW	1/21/1993	1225	863	262.0	16.0	21.0	9.0	231.0	100
FOW	1/24/1993	1015	895	262.0	16.0	21.0	9.0	231.0	100
FOW	1/28/1993	1000	784	262.0	16.0	21.0	9.0	231.0	100

Appendix 1. Specific conductance data for samples from wells in the Barton Springs segment of the Edwards aquifer and corresponding maximum 10-day streamflow for the five creeks and maximum 10-day discharge for Barton Springs, Austin, Texas, 1978–2003—Continued.

Well identifier (fig. 1)	Date	Time	Specific conductance (µS/cm)	Maximum 10-day streamflow or spring discharge (ft^3/s)					
				Barton Creek	Williamson Creek	Slaughter Creek	Bear Creek	Onion Creek	Barton Springs
FOW	5/7/1993	1135	775	123.0	1.2	16.0	10.0	73.0	108
FOW	5/14/1993	0900	791	123.0	1.2	16.0	10.0	73.0	108
FOW	5/27/1993	1040	758	42.0	0	5.0	5.2	32.0	108
FOW	8/17/1993	1215	697	.5	0	0	.1	.5	87
FOW	4/18/1994	1030	645	4.9	0	0	.3	8.2	46
FOW	6/19/1995	1110	760	281.0	12.0	108.0	32.0	172.0	102
FOW	5/7/1996	0845	635	.7	0	0	0	.5	26
FOW	7/9/1997	1310	616	273.0	0	17.0	23.0	455.0	113
FOW	4/23/1998	0730	652	73.0	0	7.9	6.8	90.0	98
FOW	6/11/1999	1100	654	21.0	0	1.4	1.4	4.9	73
FOW	6/1/2000	1700	712	2.7	0	0	.1	1.4	22
FOW	6/19/2001	1000	742	13.0	0	.8	1.7	29.0	97
FOW	6/5/2002	1000	660	7.2	0	.1	.7	3.8	88
FOW	5/21/2003	1000	747	12.0	0	.3	1.3	12.0	102
GHW	7/12/1978	0805	660	--	0	0	--	--	25
GHW	7/9/1979	0950	670	27.0	5.2	4.7	2.6	18.0	103
GHW	8/29/1980	1030	666	0	0	0	.1	1.0	40
GHW	8/12/1981	0905	650	11.0	0	.4	2.1	17.0	98
GHW	8/16/1982	1015	666	1.1	0	0	.2	1.9	46
GHW	7/21/1983	0950	667	--	7.7	1.4	22.0	90.0	84
GHW	6/19/1985	0930	659	--	2.4	4.0	5.6	145.0	70
GHW	8/9/1985	1245	648	--	0	.2	.9	15.0	64
GHW	1/13/1986	1210	644	--	1.5	3.0	5.7	61.0	78
GHW	5/1/1986	1635	677	--	59.0	3.2	6.4	26.0	62
GHW	6/25/1986	1345	676	--	13.0	20.0	16.0	216.0	84
GHW	9/2/1986	1320	671	--	0	0	.4	5.8	62
GHW	2/11/1987	1315	672	--	1.3	3.2	8.9	76.0	80
GHW	5/20/1987	1155	685	--	12.0	2.6	2.8	38.0	100
GHW	5/31/1987	1245	656	--	149.0	93.0	41.0	392.0	105
GHW	8/19/1987	1515	683	--	0	0	1.6	33.0	110
GHW	2/24/1988	1245	655	--	.1	.6	1.2	8.6	63
GHW	5/9/1988	1130	670	--	.2	.1	1.1	7.8	50
GHW	7/14/1988	1230	670	--	2.0	0	.8	7.5	47
GHW	8/10/1988	1115	635	--	0	0	0	11.0	43
GHW	2/23/1989	0950	640	.9	.3	0	.1	1.4	28
GHW	5/3/1989	1045	668	15.0	.2	0	3.4	5.4	33
GHW	7/26/1989	1100	638	2.5	.3	0	1.6	5.5	48
GHW	8/30/1989	1015	640	.4	0	0	0	2.7	32
HND	7/5/1978	1100	560	--	0	0	--	--	28
HND	7/11/1979	1400	580	27.0	5.2	4.7	2.6	18.0	102
HND	9/8/1980	1330	559	.1	8.8	0	.2	29.0	38
HND	8/11/1981	1440	589	11.0	0	.5	2.2	19.0	99
HND	8/10/1982	1430	575	1.1	0	.1	.4	1.2	49
HND	7/20/1983	1330	475	--	7.7	1.4	22.0	90.0	84
HND	6/18/1985	1355	516	--	3.4	5.5	6.1	186.0	70
HND	8/8/1985	1130	580	--	0	.2	1.0	15.0	64
HND	1/13/1986	1020	575	--	1.5	3.0	5.7	61.0	78
HND	5/2/1986	1730	559	--	59.0	3.2	6.4	38.0	62
HND	6/23/1986	1230	563	--	13.0	20.0	16.0	216.0	84
HND	9/3/1986	1140	600	--	0	0	.4	5.8	61

Appendix 1. Specific conductance data for samples from wells in the Barton Springs segment of the Edwards aquifer and corresponding maximum 10-day streamflow for the five creeks and maximum 10-day discharge for Barton Springs, Austin, Texas, 1978–2003—Continued.

Well identifier (fig. 1)	Date	Time	Specific conductance (µS/cm)	Maximum 10-day streamflow or spring discharge (ft^3/s)					
				Barton Creek	Williamson Creek	Slaughter Creek	Bear Creek	Onion Creek	Barton Springs
HND	2/11/1987	1145	607	--	1.3	3.2	8.9	76.0	80
HND	5/20/1987	0955	633	--	12.0	2.6	2.8	38.0	100
HND	6/1/1987	0930	564	--	149.0	93.0	41.0	392.0	110
HWD	6/28/1978	1215	560	0.7	.2	.1	--	--	31
HWD	7/9/1979	1310	560	27.0	5.2	4.7	2.6	18.0	103
HWD	8/28/1980	1115	575	0	0	0	.1	1.1	41
HWD	8/18/1981	1415	551	16.0	.3	.3	4.3	14.0	96
HWD	8/4/1982	1250	563	1.1	0	.1	.5	2.0	51
HWD	7/22/1983	0950	553	--	7.7	1.4	22.0	90.0	84
ISD	7/12/1978	0935	486	--	0	0	--	--	25
ISD	7/11/1979	0820	480	27.0	5.2	4.7	2.6	18.0	102
ISD	9/4/1980	1154	487	0	0	0	0	.5	38
ISD	8/12/1981	1340	482	11.0	0	.4	2.1	17.0	98
ISD	8/11/1982	1035	495	1.1	0	0	.3	1.5	49
ISD	7/22/1983	1130	489	--	7.7	1.4	22.0	90.0	84
JBS	7/17/1978	1330	550	0	0	0	--	--	24
JBS	7/16/1979	1440	580	27.0	.9	2.2	2.6	18.0	100
JBS	8/27/1980	1115	587	.1	0	0	.1	1.1	41
JBS	8/4/1981	0955	570	21.0	1.0	1.4	4.2	38.0	102
JBS	4/22/1982	0930	570	20.0	30.0	7.9	3.2	8.4	46
JBS	4/23/1982	0940	576	31.0	30.0	7.9	3.2	14.0	50
JBS	4/26/1982	1000	576	36.0	30.0	9.4	3.2	23.0	51
JBS	8/9/1982	1155	592	1.1	0	.1	.4	1.1	50
JBS	5/21/1983	1050	589	--	39.0	23.0	27.0	265.0	77
JBS	5/22/1983	0940	588	--	39.0	23.0	27.0	265.0	79
JBS	5/23/1983	0830	586	--	39.0	23.0	27.0	265.0	82
JBS	5/25/1983	1115	590	--	39.0	23.0	27.0	265.0	84
JBS	7/18/1983	1205	586	--	7.7	1.4	22.0	90.0	84
KCH	7/5/1978	1215	640	--	0	0	--	--	28
KCH	7/10/1979	1300	620	27.0	5.2	4.7	2.6	18.0	102
KCH	8/28/1980	1045	660	0	0	0	.1	1.1	41
KCH	8/11/1981	0925	621	11.0	0	.5	2.2	19.0	99
KCH	8/10/1982	1015	652	1.1	0	.1	.4	1.2	49
KCH	7/19/1983	1210	670	--	7.7	1.4	22.0	90.0	84
KCH	6/24/1985	1145	612	--	33.0	28.0	8.0	300.0	72
KCH	8/7/1985	1230	635	--	0	.2	1.0	16.0	65
KCH	5/1/1986	1120	676	--	59.0	3.2	6.4	26.0	62
KCH	6/24/1986	1020	651	--	13.0	20.0	16.0	216.0	84
KCH	8/29/1986	1400	674	--	0	0	.4	5.8	64
KCH	2/9/1987	1120	641	--	1.3	3.4	9.3	81.0	83
KCH	5/18/1987	1355	660	--	1.0	.5	2.3	38.0	100
KCH	6/1/1987	1540	644	--	149.0	93.0	41.0	392.0	110
KCH	8/19/1987	1125	675	--	0	0	1.6	33.0	110
KCH	3/9/1988	1030	655	--	.2	.6	1.1	7.8	58
KCH	5/10/1988	1015	703	--	0	.1	.7	4.7	50
KCH	7/11/1988	1340	672	--	1.0	0	.1	2.2	47
KCH	8/11/1988	1200	691	--	1.1	0	0	11.0	43
KCH	2/27/1989	1145	690	1.0	.3	0	.1	2.4	27
KCH	5/2/1989	1335	693	16.0	.3	0	3.5	5.6	35
KCH	7/21/1989	1330	676	5.8	2.0	.1	2.1	7.7	52

Appendix 1. Specific conductance data for samples from wells in the Barton Springs segment of the Edwards aquifer and corresponding maximum 10-day streamflow for the five creeks and maximum 10-day discharge for Barton Springs, Austin, Texas, 1978–2003—Continued.

Well identifier (fig. 1)	Date	Time	Specific conductance (µS/cm)	Maximum 10-day streamflow or spring discharge (ft^3/s)					
				Barton Creek	Williamson Creek	Slaughter Creek	Bear Creek	Onion Creek	Barton Springs
KCH	8/29/1989	1400	668	0.4	0	0	0	2.7	33
KCH	2/7/1990	1000	622	4.3	8.6	0	.1	1.5	22
KCH	6/5/1990	1145	665	41.0	7.1	1.0	2.5	80.0	50
KCH	8/15/1990	1400	657	1.2	0	0	0	2.2	30
KCH	3/11/1991	1150	642	95.0	6.7	11.0	14.0	75.0	87
KCH	5/6/1991	1400	636	105.0	10.0	8.0	20.0	151.0	99
KCH	8/13/1991	1030	650	2.5	0	.2	.4	6.5	75
KCH	4/29/1992	1130	623	104.0	4.0	5.2	9.8	90.0	115
KCH	1/20/1993	1115	652	262.0	16.0	21.0	9.0	231.0	98
KCH	1/23/1993	1000	650	262.0	16.0	21.0	9.0	231.0	100
KCH	1/26/1993	1300	652	262.0	16.0	21.0	9.0	231.0	100
KCH	5/6/1993	1507	641	123.0	1.2	16.0	10.0	73.0	108
KCH	5/9/1993	1015	639	123.0	1.2	16.0	10.0	73.0	108
KCH	5/12/1993	1349	641	123.0	1.2	16.0	10.0	73.0	108
KCH	5/27/1993	0945	644	42.0	0	5.0	5.2	32.0	108
KCH	8/18/1993	0745	664	.5	0	0	.1	.5	86
KCH	4/12/1994	1220	652	6.9	0	0	.3	9.5	47
KCH	10/10/1994	0930	652	476.0	73.0	99.0	33.0	30.0	39
KCH	10/10/1994	1500	660	476.0	73.0	99.0	33.0	30.0	39
KCH	10/10/1994	2020	651	476.0	73.0	99.0	33.0	30.0	39
KCH	10/11/1994	0820	657	476.0	73.0	99.0	33.0	30.0	39
KCH	10/11/1994	1500	654	476.0	73.0	99.0	33.0	30.0	39
KCH	10/11/1994	2030	652	476.0	73.0	99.0	33.0	30.0	39
KCH	10/12/1994	0850	653	476.0	73.0	99.0	33.0	30.0	39
KCH	10/12/1994	1230	653	476.0	73.0	99.0	33.0	30.0	39
KCH	10/12/1994	2030	653	476.0	73.0	99.0	33.0	30.0	39
KCH	10/13/1994	0830	655	476.0	73.0	99.0	33.0	30.0	39
KCH	10/13/1994	2045	655	476.0	73.0	99.0	33.0	30.0	39
KCH	10/14/1994	0840	657	476.0	73.0	99.0	33.0	30.0	39
KCH	10/14/1994	1900	657	476.0	73.0	99.0	33.0	30.0	39
KCH	10/15/1994	0830	658	476.0	73.0	99.0	33.0	30.0	39
KCH	10/15/1994	1900	658	476.0	73.0	99.0	33.0	30.0	39
KCH	10/16/1994	1230	660	476.0	73.0	99.0	33.0	30.0	39
KCH	6/19/1995	1300	641	281.0	12.0	108.0	32.0	172.0	102
KCH	5/6/1996	1200	648	.7	0	0	0	.5	26
KCH	7/8/1997	1350	568	322.0	.9	21.0	26.0	510.0	113
KCH	4/21/1998	0920	628	79.0	0	8.9	7.5	96.0	98
KCH	6/9/1999	1415	683	35.0	0	1.9	1.6	5.3	76
LWK	8/8/1978	1030	480	7.6	14.0	3.5	--	--	24
LWK	7/11/1979	1225	499	27.0	5.2	4.7	2.6	18.0	102
LWK	8/29/1980	0850	496	0	0	0	.1	1.0	40
LWK	8/18/1981	1020	499	16.0	.3	.3	4.3	14.0	96
LWK	8/17/1982	1130	493	1.1	0	0	.2	1.9	46
LWK	7/21/1983	1330	499	--	7.7	1.4	22.0	90.0	84
MCH	7/5/1978	1315	540	--	0	0	--	--	28
MCH	7/5/1979	0745	540	13.0	.8	2.9	--	14.0	105
MCH	8/28/1980	1245	570	0	0	0	.1	1.1	41
MCH	8/11/1981	1345	537	11.0	0	.5	2.2	19.0	99
MCH	8/11/1982	1255	528	1.1	0	0	.3	1.5	49
MCH	7/20/1983	0930	476	--	7.7	1.4	22.0	90.0	84

Appendix 1. Specific conductance data for samples from wells in the Barton Springs segment of the Edwards aquifer and corresponding maximum 10-day streamflow for the five creeks and maximum 10-day discharge for Barton Springs, Austin, Texas, 1978–2003—Continued.

Well identifier (fig. 1)	Date	Time	Specific conductance (µS/cm)	Maximum 10-day streamflow or spring discharge (ft^3/s)					
				Barton Creek	Williamson Creek	Slaughter Creek	Bear Creek	Onion Creek	Barton Springs
MCH	6/19/1985	1130	519	--	2.4	4.0	5.6	145.0	70
MCH	8/9/1985	1045	540	--	0	.2	.9	15.0	64
MCH	1/13/1986	1345	537	--	1.5	3.0	5.7	61.0	78
MCH	5/1/1986	1402	521	--	59.0	3.2	6.4	26.0	62
MCH	6/24/1986	1230	555	--	13.0	20.0	16.0	216.0	84
MCH	9/2/1986	1020	550	--	0	0	.4	5.8	62
MCH	2/10/1987	0930	554	--	1.3	3.4	9.3	81.0	83
MCH	5/18/1987	1230	553	--	1.0	.5	2.3	38.0	100
MCH	5/30/1987	1550	512	--	149.0	93.0	41.0	208.0	98
MCH	8/17/1987	1505	560	--	0	0	1.6	34.0	110
MCH	2/22/1988	1425	519	--	.2	.6	1.2	8.6	64
MCH	5/3/1988	1315	536	--	1.4	.1	1.1	7.8	50
MCH	7/11/1988	1515	557	--	1.0	0	.1	2.2	47
MCH	8/10/1988	1210	552	--	0	0	0	11.0	43
MCH	2/21/1989	1400	584	0.9	.2	0	.1	2.4	28
MCH	5/2/1989	1225	540	16.0	.3	0	3.5	5.6	35
MCH	7/24/1989	1320	538	3.7	0	.1	1.7	5.0	49
MCH	8/29/1989	1045	547	.4	0	0	0	2.7	33
MCH	1/31/1990	1005	587	.7	0	0	0	.4	17
MCH	6/12/1990	1055	485	41.0	3.8	.7	2.5	80.0	49
MCH	8/21/1990	1115	542	.9	.5	0	0	2.2	27
MCH	3/13/1991	1250	518	74.0	6.0	8.7	12.0	65.0	87
MCH	5/15/1991	1100	531	261.0	68.0	38.0	48.0	218.0	99
MCH	8/13/1991	1110	554	2.5	0	.2	.4	6.5	75
MCH	4/30/1992	0920	564	94.0	3.5	4.7	8.5	81.0	115
MCH	1/22/1993	1120	504	262.0	16.0	21.0	9.0	231.0	100
MCH	1/25/1993	1300	503	262.0	16.0	21.0	9.0	231.0	100
MCH	5/8/1993	1045	521	123.0	1.2	16.0	10.0	73.0	108
MCH	5/11/1993	1310	521	123.0	1.2	16.0	10.0	73.0	108
MCH	5/15/1993	0750	525	123.0	0	16.0	10.0	73.0	108
MCH	8/18/1993	0950	550	.5	0	0	.1	.5	86
MCH	4/15/1994	0820	506	6.7	0	0	.3	8.4	47
MCH	6/14/1995	1220	550	347.0	12.0	108.0	32.0	294.0	104
MCH	5/7/1996	1045	555	.7	0	0	0	.5	26
MCH	7/8/1997	1545	555	322.0	.9	21.0	26.0	510.0	113
MCH	4/22/1998	1350	534	76.0	0	8.4	7.2	93.0	98
MCH	6/6/1999	1150	545	76.0	.7	3.4	2.4	7.8	78
MCH	6/29/2000	0900	538	49.0	0	23.0	5.4	5.2	64
MCH	6/20/2001	1100	554	12.0	0	.8	1.6	26.0	96
MCH	6/4/2002	1100	558	7.2	0	.1	.7	3.8	88
MCH	5/20/2003	1200	565	12.0	0	.3	1.3	12.0	102
PLS	2/26/1988	0830	568	--	.1	.6	1.2	8.6	62
PLS	5/4/1988	1340	574	--	1.4	.1	1.1	7.8	50
PLS	7/14/1988	0913	551	--	2.0	0	.8	7.5	47
PLS	8/11/1988	0845	564	--	1.1	0	0	11.0	43
PLS	2/28/1989	1455	548	1.0	.3	0	.1	2.4	27
PLS	5/2/1989	1445	582	16.0	.3	0	3.5	5.6	35
PLS	7/25/1989	1350	572	3.1	0	.1	1.6	5.5	49
PLS	8/30/1989	1330	542	.4	0	0	0	2.7	32
PLS	2/7/1990	1500	550	4.3	8.6	0	.1	1.5	22

Appendix 1. Specific conductance data for samples from wells in the Barton Springs segment of the Edwards aquifer and corresponding maximum 10-day streamflow for the five creeks and maximum 10-day discharge for Barton Springs, Austin, Texas, 1978–2003—Continued.

Well identifier (fig. 1)	Date	Time	Specific conductance (µS/cm)	Maximum 10-day streamflow or spring discharge (ft^3/s)					
				Barton Creek	Williamson Creek	Slaughter Creek	Bear Creek	Onion Creek	Barton Springs
PLS	6/8/1990	0955	559	41.0	3.8	0.8	2.5	80.0	49
PLS	8/15/1990	1100	543	1.2	0	0	0	2.2	30
PLS	3/18/1991	1545	533	87.0	7.6	6.4	11.0	68.0	85
PLS	5/15/1991	1330	545	261.0	68.0	38.0	48.0	218.0	99
PLS	8/13/1991	0900	558	2.5	0	.2	.4	6.5	75
PLS	5/1/1992	0950	543	85.0	3.4	4.2	8.1	75.0	115
PLS	1/21/1993	1130	560	262.0	16.0	21.0	9.0	231.0	100
PLS	1/24/1993	0850	559	262.0	16.0	21.0	9.0	231.0	100
PLS	1/28/1993	1146	559	262.0	16.0	21.0	9.0	231.0	100
PLS	5/14/1993	1313	555	123.0	1.2	16.0	10.0	73.0	108
PLS	5/28/1993	1100	559	42.0	0	5.0	5.2	32.0	108
PLS	8/17/1993	1030	560	.5	0	0	.1	.5	87
PLS	4/12/1994	0900	546	6.9	0	0	.3	9.5	47
PLS	6/19/1995	1640	561	281.0	12.0	108.0	32.0	172.0	102
PLS	4/25/1996	1200	544	.7	0	0	.1	.9	25
PLS	7/8/1997	1220	550	322.0	.9	21.0	26.0	510.0	113
PLS	4/21/1998	1320	528	79.0	0	8.9	7.5	96.0	98
PLS	6/11/1999	1200	564	21.0	0	1.4	1.4	4.9	73
PLS	6/1/2000	1500	573	2.7	0	0	.1	1.4	22
PLS	6/8/2001	1100	590	26.0	0	1.2	2.7	55.0	102
PLS	5/23/2002	1100	570	1.9	0	.1	.4	4.2	92
PLS	5/21/2003	1200	576	12.0	0	.3	1.3	12.0	102
RAB	5/6/1993	1400	596	123.0	1.2	16.0	10.0	73.0	108
RAB	5/9/1993	1405	568	123.0	1.2	16.0	10.0	73.0	108
RAB	5/12/1993	1145	578	123.0	1.2	16.0	10.0	73.0	108
RAB	5/27/1993	1140	569	42.0	0	5.0	5.2	32.0	108
RAB	8/17/1993	0745	570	.5	0	0	.1	.5	87
RAB	4/15/1994	1215	522	6.7	0	0	.3	8.4	47
RAB	6/27/1995	1015	507	99.0	0	18.0	12.0	96.0	98
RAB	5/6/1996	0945	504	.7	0	0	0	.5	26
RAB	7/9/1997	0740	542	273.0	0	17.0	23.0	455.0	113
RAB	4/21/1998	0757	525	79.0	0	8.9	7.5	96.0	98
RAB	6/8/1999	0900	755	51.0	0	2.0	2.0	6.8	77
RAB	5/31/2000	1300	555	2.8	0	0	.1	1.4	23
RAB	6/7/2001	1600	532	30.0	0	1.3	2.8	58.0	102
RAB	6/3/2002	1100	617	7.2	0	.1	.7	3.8	88
RAB	5/30/2003	1000	1,190	14.0	0	.1	.7	6.1	98
ROL	6/26/1978	1135	490	1.2	.2	.1	--	--	32
ROL	7/10/1979	0950	521	27.0	5.2	4.7	2.6	18.0	102
ROL	8/27/1980	1045	559	.1	0	0	.1	1.1	41
ROL	8/4/1981	0915	528	21.0	1.0	1.4	4.2	38.0	102
ROL	8/9/1982	1110	532	1.1	0	.1	.4	1.1	50
ROL	7/18/1983	0845	546	--	7.7	1.4	22.0	90.0	84
ROL	6/20/1985	0925	480	--	1.9	3.2	5.2	116.0	71
ROL	8/7/1985	0900	586	--	0	.2	1.0	16.0	65
ROL	1/15/1986	1000	610	--	1.5	2.6	5.2	54.0	78
ROL	5/2/1986	1420	571	--	59.0	3.2	6.4	38.0	62
ROL	6/23/1986	0920	585	--	13.0	20.0	16.0	216.0	84
ROL	9/3/1986	1300	586	--	0	0	.4	5.8	61
ROL	2/9/1987	0830	624	--	1.3	3.4	9.3	81.0	83

Appendix 1. Specific conductance data for samples from wells in the Barton Springs segment of the Edwards aquifer and corresponding maximum 10-day streamflow for the five creeks and maximum 10-day discharge for Barton Springs, Austin, Texas, 1978–2003—Continued.

Well identifier (fig. 1)	Date	Time	Specific conductance (µS/cm)	Maximum 10-day streamflow or spring discharge (ft^3/s)					
				Barton Creek	Williamson Creek	Slaughter Creek	Bear Creek	Onion Creek	Barton Springs
ROL	5/18/1987	0950	608	--	1.0	0.5	2.3	38.0	100
ROL	6/1/1987	1230	598	--	149.0	93.0	41.0	392.0	110
ROL	8/17/1987	1010	642	--	0	0	1.6	34.0	110
ROL	2/22/1988	0910	587	--	.2	.6	1.2	8.6	64
ROL	5/6/1988	1215	622	--	1.4	.1	1.1	7.8	50
ROL	7/18/1988	1110	585	--	2.0	0	.8	7.5	45
ROL	8/16/1988	0920	596	--	1.2	0	0	3.2	45
ROL	2/27/1989	1245	583	1.0	.3	0	.1	2.4	27
ROL	5/1/1989	1015	579	19.0	.3	0	3.7	7.3	36
ROL	7/17/1989	1030	615	8.9	2.0	.2	2.9	12.0	55
ROL	8/25/1989	1115	607	.5	0	0	0	3.5	34
ROL	1/30/1990	1115	572	.6	0	0	0	.4	17
ROL	6/12/1990	0845	596	41.0	3.8	.7	2.5	80.0	49
ROL	8/14/1990	1035	608	1.6	0	.1	0	2.2	31
ROL	3/13/1991	0925	612	74.0	6.0	8.7	12.0	65.0	87
ROL	5/6/1991	1200	585	105.0	10.0	8.0	20.0	151.0	99
ROL	8/19/1991	1037	638	467.0	107.0	42.0	11.0	58.0	71
ROL	4/29/1992	1315	694	104.0	4.0	5.2	9.8	90.0	115
ROL	6/23/1992	0755	1,160	242.0	7.8	17.0	20.0	241.0	100
ROL	1/20/1993	1300	654	262.0	16.0	21.0	9.0	231.0	98
ROL	1/23/1993	1140	630	262.0	16.0	21.0	9.0	231.0	100
ROL	1/26/1993	1043	625	262.0	16.0	21.0	9.0	231.0	100
ROL	5/6/1993	1230	635	123.0	1.2	16.0	10.0	73.0	108
ROL	6/1/1993	1140	642	42.0	0	5.0	5.2	32.0	108
ROL	8/13/1993	1200	660	.5	0	0	.1	.5	88
ROL	4/12/1994	1130	597	6.9	0	0	.3	9.5	47
SLR	7/11/1978	1310	700	--	0	0	--	--	25
SLR	7/5/1979	0845	630	13.0	.8	2.9	--	14.0	105
SLR	9/4/1980	1306	680	0	0	0	0	.5	38
SLR	8/18/1981	0830	583	16.0	.3	.3	4.3	14.0	96
SLR	8/17/1982	0920	625	1.1	0	0	.2	1.9	46
SLR	7/20/1983	0830	600	--	7.7	1.4	22.0	90.0	84
SLR	5/1/1986	1330	656	--	59.0	3.2	6.4	26.0	62
SLR	6/24/1986	1250	640	--	13.0	20.0	16.0	216.0	84
SLR	9/2/1986	1130	655	--	0	0	.4	5.8	62
SLR	2/10/1987	0830	624	--	1.3	3.4	9.3	81.0	83
SLR	5/19/1987	1212	642	--	12.0	2.6	2.8	38.0	100
SLR	5/30/1987	1508	635	--	149.0	93.0	41.0	208.0	98
SLR	8/18/1987	0834	636	--	0	0	1.6	34.0	110
SLR	2/22/1988	1325	575	--	.2	.6	1.2	8.6	64
SLR	5/3/1988	1235	707	--	1.4	.1	1.1	7.8	50
SLR	7/11/1988	1440	721	--	1.0	0	.1	2.2	47
SLR	8/9/1988	1030	727	--	0	0	0	11.0	43
SLR	2/21/1989	1310	736	.9	.2	0	.1	2.4	28
SNL	6/26/1978	1220	460	1.2	.2	.1			32
SNL	7/10/1979	0900	525	27.0	5.2	4.7	2.6	18.0	102
SNL	8/27/1980	0930	503	.1	0	0	.1	1.1	41
SNL	8/4/1981	1045	462	21.0	1.0	1.4	4.2	38.0	102
SNL	8/9/1982	1020	468	1.1	0	.1	.4	1.1	50
SNL	7/18/1983	1045	494	--	7.7	1.4	22.0	90.0	84

Appendix 1. Specific conductance data for samples from wells in the Barton Springs segment of the Edwards aquifer and corresponding maximum 10-day streamflow for the five creeks and maximum 10-day discharge for Barton Springs, Austin, Texas, 1978–2003—Continued.

Well identifier (fig. 1)	Date	Time	Specific conductance (µS/cm)	Maximum 10-day streamflow or spring discharge (ft^3/s)					
				Barton Creek	Williamson Creek	Slaughter Creek	Bear Creek	Onion Creek	Barton Springs
SVE	10/12/1978	1205	820	0.4	0	0.3	--	--	24
SVE	7/18/1979	1230	445	17.0	.9	2.1	2.4	14.0	100
SVE	9/8/1980	1030	807	.1	8.8	0	.2	29.0	38
SVE	8/19/1981	1310	638	35.0	.3	.3	4.3	39.0	96
SVE	8/30/1982	1400	1,530	.2	0	0	.1	2.1	43
SVE	6/24/1985	1040	838	--	33.0	28.0	8.0	300.0	72
SVE	8/12/1985	1000	936	--	0	.1	.8	11.0	63
SVE	1/15/1986	1430	913	--	1.5	2.6	5.2	54.0	78
SVE	5/2/1986	0830	897	--	59.0	3.2	6.4	38.0	62
SVE	6/24/1986	0805	1,010	--	13.0	20.0	16.0	216.0	84
SVE	8/29/1986	0900	874	--	0	0	.4	5.8	64
SVE	2/10/1987	1130	610	--	1.3	3.4	9.3	81.0	83
SVE	5/19/1987	1330	614	--	12.0	2.6	2.8	38.0	100
SVE	5/31/1987	0900	602	--	149.0	93.0	41.0	392.0	105
SVE	8/19/1987	0815	603	--	0	0	1.6	33.0	110
SVE	2/24/1988	1435	704	--	.1	.6	1.2	8.6	63
SVE	5/3/1988	0850	833	--	1.4	.1	1.1	7.8	50
SVE	7/11/1988	1145	910	--	1.0	0	.1	2.2	47
SVE	8/9/1988	0850	917	--	0	0	0	11.0	43
SVE	2/21/1989	1030	857	.9	.2	0	.1	2.4	28
SVE	5/2/1989	1005	897	16.0	.3	0	3.5	5.6	35
SVE	7/21/1989	0945	975	5.8	2.0	.1	2.1	7.7	52
SVE	8/25/1989	0955	949	.5	0	0	0	3.5	34
SVE	1/30/1990	0945	942	.6	0	0	0	.4	17
SVE	6/6/1990	0810	979	41.0	7.1	.8	2.5	80.0	50
SVE	8/15/1990	0935	973	1.2	0	0	0	2.2	30
SVE	3/5/1991	0935	916	106.0	8.5	14.0	15.0	82.0	87
SVE	5/6/1991	0945	907	105.0	10.0	8.0	20.0	151.0	99
SVE	8/19/1991	0915	796	467.0	107.0	42.0	11.0	58.0	71
SVE	4/28/1992	1330	601	115.0	4.7	6.2	11.0	98.0	115
SVE	1/21/1993	0900	620	262.0	16.0	21.0	9.0	231.0	100
SVE	1/24/1993	0700	616	262.0	16.0	21.0	9.0	231.0	100
SVE	1/28/1993	1300	618	262.0	16.0	21.0	9.0	231.0	100
SVE	5/7/1993	1430	616	123.0	1.2	16.0	10.0	73.0	108
SVE	5/10/1993	1345	625	123.0	1.2	16.0	10.0	73.0	108
SVE	5/14/1993	1600	623	123.0	1.2	16.0	10.0	73.0	108
SVE	5/28/1993	0735	626	42.0	0	5.0	5.2	32.0	108
SVE	8/16/1993	0750	652	.5	0	0	.1	.5	87
SVE	4/12/1994	0735	1,020	6.9	0	0	.3	9.5	47
SVE	6/14/1995	1430	867	347.0	12.0	108.0	32.0	294.0	104
SVE	5/9/1996	1100	840	.6	0	0	0	.5	25
SVE	7/9/1997	1000	674	273.0	0	17.0	23.0	455.0	113
SVE	4/22/1998	1110	596	76.0	0	8.4	7.2	93.0	98
SVE	6/9/1999	0900	733	35.0	0	1.9	1.6	5.3	76
SVE	5/31/2000	0900	850	2.8	0	0	.1	1.4	23
SVE	6/14/2001	1200	770	15.0	0	.9	2.0	33.0	99
SVE	8/7/2002	1200	760	116.0	0	2.1	11.0	111.0	105
SVE	5/28/2003	1200	626	14.0	0	.1	.8	7.2	101
SVN	10/13/1978	1300	500	.4	0	.3	--	--	24
SVN	7/17/1979	0715	480	17.0	.9	2.1	2.5	16.0	100

Appendix 1. Specific conductance data for samples from wells in the Barton Springs segment of the Edwards aquifer and corresponding maximum 10-day streamflow for the five creeks and maximum 10-day discharge for Barton Springs, Austin, Texas, 1978–2003—Continued.

Well identifier (fig. 1)	Date	Time	Specific conductance (µS/cm)	Maximum 10-day streamflow or spring discharge (ft^3/s)					
				Barton Creek	Williamson Creek	Slaughter Creek	Bear Creek	Onion Creek	Barton Springs
SVN	8/19/1981	1210	517	35.0	0.3	0.3	4.3	39.0	96
SVN	5/17/1982	0835	506	1,720.0	194.0	249.0	258.0	1,960.0	72
SVN	6/20/1985	1115	410	--	1.9	3.2	5.2	116.0	71
SVN	8/7/1985	1005	496	--	0	.2	1.0	16.0	65
SVN	1/15/1986	0900	466	--	1.5	2.6	5.2	54.0	78
SVN	5/2/1986	0930	389	--	59.0	3.2	6.4	38.0	62
SVN	6/24/1986	0845	442	--	13.0	20.0	16.0	216.0	84
SVN	8/29/1986	1000	514	--	0	0	.4	5.8	64
SVN	2/10/1987	1200	388	--	1.3	3.4	9.3	81.0	83
SVN	5/19/1987	1415	480	--	12.0	2.6	2.8	38.0	100
SVN	5/31/1987	1130	409	--	149.0	93.0	41.0	392.0	105
SVN	8/19/1987	0915	630	--	0	0	1.6	33.0	110
SVN	2/24/1988	1530	510	--	.1	.6	1.2	8.6	63
SVN	3/5/1991	1020	560	106.0	8.5	14.0	15.0	82.0	87
SVN	5/6/1991	1100	547	105.0	10.0	8.0	20.0	151.0	99
SVN	8/19/1991	0825	480	467.0	107.0	42.0	11.0	58.0	71
SVN	4/29/1992	1000	469	104.0	4.0	5.2	9.8	90.0	115
SVN	1/20/1993	0945	453	262.0	16.0	21.0	9.0	231.0	98
SVN	1/23/1993	0800	461	262.0	16.0	21.0	9.0	231.0	100
SVN	1/26/1993	0930	455	262.0	16.0	21.0	9.0	231.0	100
SVN	5/6/1993	1610	447	123.0	1.2	16.0	10.0	73.0	108
SVN	5/9/1993	0845	471	123.0	1.2	16.0	10.0	73.0	108
SVN	5/12/1993	1505	480	123.0	1.2	16.0	10.0	73.0	108
SVN	6/1/1993	0740	464	42.0	0	5.0	5.2	32.0	108
SVN	8/16/1993	1000	549	.5	0	0	.1	.5	87
SVN	6/19/1995	0805	460	281.0	12.0	108.0	32.0	172.0	102
SVN	7/9/1997	1200	533	273.0	0	17.0	23.0	455.0	113
SVN	4/22/1998	1230	507	76.0	0	8.4	7.2	93.0	98
SVN	6/9/1999	1140	507	35.0	0	1.9	1.6	5.3	76
SVN	6/15/2001	1100	710	14.0	0	.9	2.0	33.0	98
SVN	8/7/2002	1000	507	116.0	0	2.1	11.0	111.0	105
SVN	5/28/2003	1000	603	14.0	0	.1	.8	7.2	101
SVS	8/8/1978	0750	540	7.6	14.0	3.5	--	--	24
SVS	7/17/1979	1200	580	17.0	.9	2.1	2.5	16.0	100
SVS	8/28/1980	0930	620	0	0	0	.1	1.1	41
SVS	8/10/1981	1407	585	11.0	.1	.6	2.3	20.0	99
SVS	10/7/1981	1420	600	854.0	12.0	3.2	19.0	1,150.0	84
SVS	10/8/1981	1130	588	854.0	12.0	3.2	19.0	1,150.0	86
SVS	8/9/1982	1355	584	1.1	0	.1	.4	1.1	50
SVS	7/19/1983	1000	582	--	7.7	1.4	22.0	90.0	84
SVS	6/19/1985	1415	584	--	2.4	4.0	5.6	145.0	70
SVS	8/7/1985	1100	592	--	0	.2	1.0	16.0	65
SVS	1/13/1986	0830	589	--	1.5	3.0	5.7	61.0	78
SVS	5/2/1986	1320	606	--	59.0	3.2	6.4	38.0	62
SVS	6/23/1986	1100	608	--	13.0	20.0	16.0	216.0	84
SVS	8/29/1986	1300	596	--	0	0	.4	5.8	64
SVS	2/9/1987	1015	578	--	1.3	3.4	9.3	81.0	83
SVS	5/18/1987	1120	616	--	1.0	.5	2.3	38.0	100
SVS	6/1/1987	1130	615	--	149.0	93.0	41.0	392.0	110
SVS	8/17/1987	1350	603	--	0	0	1.6	34.0	110

Appendix 1. Specific conductance data for samples from wells in the Barton Springs segment of the Edwards aquifer and corresponding maximum 10-day streamflow for the five creeks and maximum 10-day discharge for Barton Springs, Austin, Texas, 1978–2003—Continued.

Well identifier (fig. 1)	Date	Time	Specific conductance (µS/cm)	Maximum 10-day streamflow or spring discharge (ft^3/s)					
				Barton Creek	Williamson Creek	Slaughter Creek	Bear Creek	Onion Creek	Barton Springs
SVS	2/22/1988	1120	593	--	0.2	0.6	1.2	8.6	64
SVS	5/10/1988	0900	609	--	0	.1	.7	4.7	50
SVS	7/14/1988	1500	575	--	2.0	0	.8	7.5	47
SVS	8/11/1988	1100	607	--	1.1	0	0	11.0	43
SVS	2/21/1989	1140	607	0.9	.2	0	.1	2.4	28
SVS	5/1/1989	1400	586	19.0	.3	0	3.7	7.3	36
SVS	7/21/1989	1130	590	5.8	2.0	.1	2.1	7.7	52
SVS	8/25/1989	1320	595	.5	0	0	0	3.5	34
SVS	1/30/1990	1340	602	.6	0	0	0	.4	17
SVS	6/5/1990	1400	590	41.0	7.1	1.0	2.5	80.0	50
SVS	8/14/1990	0945	568	1.6	0	.1	0	2.2	31
SVS	3/5/1991	1130	560	106.0	8.5	14.0	15.0	82.0	87
SVS	5/13/1991	1320	581	261.0	68.0	38.0	48.0	218.0	99
SVS	8/14/1991	1200	608	4.1	12.0	5.9	1.7	6.5	75
SVS	5/1/1992	0820	584	85.0	3.4	4.2	8.1	75.0	115
SVS	1/22/1993	0825	603	262.0	16.0	21.0	9.0	231.0	100
SVS	1/25/1993	1020	610	262.0	16.0	21.0	9.0	231.0	100
SVS	5/7/1993	0946	614	123.0	1.2	16.0	10.0	73.0	108
SVS	5/10/1993	0925	613	123.0	1.2	16.0	10.0	73.0	108
SVS	5/14/1993	1050	614	123.0	1.2	16.0	10.0	73.0	108
SVS	5/28/1993	0940	615	42.0	0	5.0	5.2	32.0	108
SVS	8/17/1993	0915	618	.5	0	0	.1	.5	87
SVS	4/8/1994	0830	594	6.9	0	0	.3	9.5	47
SVS	6/19/1995	1440	611	281.0	12.0	108.0	32.0	172.0	102
SVS	5/2/1996	1100	592	.7	0	0	.1	.6	26
SVS	7/8/1997	1045	585	322.0	.9	21.0	26.0	510.0	113
SVS	4/22/1998	0931	616	76.0	0	8.4	7.2	93.0	98
SVS	6/11/1999	1340	599	21.0	0	1.4	1.4	4.9	73
SVS	6/1/2000	1400	610	2.7	0	0	.1	1.4	22
SVS	6/18/2001	1200	613	13.0	0	.9	1.9	31.0	97
SVS	6/6/2002	1300	622	7.2	0	.1	.7	3.8	88
SVS	5/19/2003	1300	620	13.0	0	.3	1.3	13.0	102
SVW	6/27/1978	1220	560	.9	.2	.1	--	--	32
SVW	7/12/1979	0900	620	27.0	5.2	4.7	2.6	18.0	101
SVW	8/28/1980	0900	592	0	0	0	.1	1.1	41
SVW	8/10/1981	1340	569	11.0	.1	.6	2.3	20.0	99
SVW	8/10/1982	0815	597	1.1	0	.1	.4	1.2	49
SVW	7/19/1983	0805	601	--	7.7	1.4	22.0	90.0	84
SVW	6/20/1985	1200	611	--	1.9	3.2	5.2	116.0	71
SVW	8/9/1985	0830	657	--	0	.2	.9	15.0	64
SVW	1/15/1986	1130	622	--	1.5	2.6	5.2	54.0	78
SVW	5/2/1986	1345	623	--	59.0	3.2	6.4	38.0	62
SVW	6/23/1986	1030	638	--	13.0	20.0	16.0	216.0	84
SVW	8/29/1986	1200	659	--	0	0	.4	5.8	64
SVW	2/9/1987	0915	591	--	1.3	3.4	9.3	81.0	83
SVW	5/18/1987	1020	661	--	1.0	.5	2.3	38.0	100
SVW	6/1/1987	1030	603	--	149.0	93.0	41.0	392.0	110
SVW	8/17/1987	1215	614	--	0	0	1.6	34.0	110
SVW	2/22/1988	1010	637	--	.2	.6	1.2	8.6	64
SVW	5/9/1988	0850	690	--	.2	.1	1.1	7.8	50

Appendix 1. Specific conductance data for samples from wells in the Barton Springs segment of the Edwards aquifer and corresponding maximum 10-day streamflow for the five creeks and maximum 10-day discharge for Barton Springs, Austin, Texas, 1978–2003—Continued.

Well identifier (fig. 1)	Date	Time	Specific conductance (µS/cm)	Maximum 10-day streamflow or spring discharge (ft^3/s)					
				Barton Creek	Williamson Creek	Slaughter Creek	Bear Creek	Onion Creek	Barton Springs
SVW	7/18/1988	1155	569	--	2.0	0	0.8	7.5	45
SVW	8/11/1988	1010	658	--	1.1	0	0	11.0	43
SVW	2/27/1989	1350	630	1.0	.3	0	.1	2.4	27
SVW	5/1/1989	1055	708	19.0	.3	0	3.7	7.3	36
SVW	7/17/1989	1115	650	8.9	2.0	.2	2.9	12.0	55
SVW	8/29/1989	0905	678	.4	0	0	0	2.7	33
SVW	1/30/1990	1250	688	.6	0	0	0	.4	17
SVW	6/8/1990	0715	705	41.0	3.8	.8	2.5	80.0	49
SVW	8/15/1990	1145	694	1.2	0	0	0	2.2	30
SVW	3/11/1991	1320	658	95.0	6.7	11.0	14.0	75.0	87
SVW	5/7/1991	1045	646	105.0	10.0	8.0	20.0	151.0	99
SVW	8/14/1991	1320	680	4.1	12.0	5.9	1.7	6.5	75
SVW	4/29/1992	0830	639	104.0	4.0	5.2	9.8	90.0	115
SVW	1/22/1993	0920	655	262.0	16.0	21.0	9.0	231.0	100
SVW	1/25/1993	1130	621	262.0	16.0	21.0	9.0	231.0	100
SVW	1/28/1993	1350	608	262.0	16.0	21.0	9.0	231.0	100
SVW	5/11/1993	0910	611	123.0	1.2	16.0	10.0	73.0	108
SVW	5/15/1993	0845	585	123.0	0	16.0	10.0	73.0	108
SVW	6/1/1993	0935	630	42.0	0	5.0	5.2	32.0	108
SVW	8/20/1993	1030	670	.4	0	0	0	.3	86
SVW	4/11/1994	0730	645	6.9	0	0	.3	9.5	47
SVW	10/9/1994	0700	570	476.0	73.0	99.0	33.0	30.0	35
SVW	10/9/1994	1305	582	476.0	73.0	99.0	33.0	30.0	35
SVW	10/9/1994	1855	592	476.0	73.0	99.0	33.0	30.0	35
SVW	10/10/1994	0710	611	476.0	73.0	99.0	33.0	30.0	39
SVW	10/10/1994	1300	620	476.0	73.0	99.0	33.0	30.0	39
SVW	10/10/1994	1905	612	476.0	73.0	99.0	33.0	30.0	39
SVW	10/11/1994	0705	624	476.0	73.0	99.0	33.0	30.0	39
SVW	10/11/1994	1305	678	476.0	73.0	99.0	33.0	30.0	39
SVW	10/11/1994	1900	634	476.0	73.0	99.0	33.0	30.0	39
SVW	10/12/1994	0730	600	476.0	73.0	99.0	33.0	30.0	39
SVW	10/12/1994	1900	598	476.0	73.0	99.0	33.0	30.0	39
SVW	10/13/1994	0700	601	476.0	73.0	99.0	33.0	30.0	39
SVW	10/13/1994	1930	619	476.0	73.0	99.0	33.0	30.0	39
SVW	10/14/1994	0730	596	476.0	73.0	99.0	33.0	30.0	39
SVW	10/14/1994	1800	594	476.0	73.0	99.0	33.0	30.0	39
SVW	10/15/1994	1230	645	476.0	73.0	99.0	33.0	30.0	39
SVW	6/27/1995	0820	647	99.0	0	18.0	12.0	96.0	98
SVW	5/2/1996	0900	643	.7	0	0	.1	.6	26
SVW	7/9/1997	1105	580	273.0	0	17.0	23.0	455.0	113
SVW	4/21/1998	1430	568	79.0	0	8.9	7.5	96.0	98
SVW	6/9/1999	1245	644	35.0	0	1.9	1.6	5.3	76
SVW	6/1/2000	1000	662	2.7	0	0	.1	1.4	22
SVW	6/6/2001	1200	659	36.0	0	1.4	2.9	64.0	103
SVW	6/3/2002	1400	646	7.2	0	.1	.7	3.8	88
SVW	5/19/2003	1000	644	13.0	0	.3	1.3	13.0	102
TNR	7/17/1978	0820	580	--	0	0	--	--	24
TNR	7/9/1979	1215	580	27.0	5.2	4.7	2.6	18.0	103
TNR	8/29/1980	0930	592	0	0	0	.1	1.0	40
TNR	8/18/1981	0920	576	16.0	.3	.3	4.3	14.0	96

Appendix 1. Specific conductance data for samples from wells in the Barton Springs segment of the Edwards aquifer and corresponding maximum 10-day streamflow for the five creeks and maximum 10-day discharge for Barton Springs, Austin, Texas, 1978–2003—Continued.

Well identifier (fig. 1)	Date	Time	Specific conductance (µS/cm)	Maximum 10-day streamflow or spring discharge (ft^3/s)					
				Barton Creek	Williamson Creek	Slaughter Creek	Bear Creek	Onion Creek	Barton Springs
TNR	8/16/1982	0915	584	1.1	0	0	0.2	1.9	46
TNR	7/21/1983	1115	590	--	7.7	1.4	22.0	90.0	84
TNR	6/19/1985	1045	588	--	2.4	4.0	5.6	145.0	70
TNR	8/9/1985	1145	604	--	0	.2	.9	15.0	64
TNR	1/13/1986	1310	576	--	1.5	3.0	5.7	61.0	78
TNR	5/3/1986	1040	592	--	59.0	3.2	6.4	38.0	62
TNR	6/25/1986	1030	646	--	13.0	20.0	16.0	216.0	84
TNR	9/2/1986	1215	607	--	0	0	.4	5.8	62
TNR	2/11/1987	1030	597	--	1.3	3.2	8.9	76.0	80
TNR	5/19/1987	1100	605	--	12.0	2.6	2.8	38.0	100
TNR	6/1/1987	1013	595	--	149.0	93.0	41.0	392.0	110
TNR	8/18/1987	1015	606	--	0	0	1.6	34.0	110
TNR	2/25/1988	1020	597	--	.1	.6	1.2	8.6	63
TNR	5/9/1988	1030	598	--	.2	.1	1.1	7.8	50
TNR	7/18/1988	1015	599	--	2.0	0	.8	7.5	45
TNR	8/9/1988	1125	600	--	0	0	0	11.0	43
TNR	2/23/1989	1130	579	.9	.3	0	.1	1.4	28
TNR	5/2/1989	1130	603	16.0	.3	0	3.5	5.6	35
TNR	7/26/1989	1345	592	2.5	.3	0	1.6	5.5	48
TNR	8/30/1989	1130	590	.4	0	0	0	2.7	32
TNR	2/7/1990	1330	558	4.3	8.6	0	.1	1.5	22
TNR	4/30/1992	1120	593	94.0	3.5	4.7	8.5	81.0	115
WBG	7/10/1978	0940	700		0	0	--	--	26
WBG	7/5/1979	1005	799	13.0	.8	2.9	--	14.0	105
WBG	8/28/1980	1330	826	0	0	0	.1	1.1	41
WBG	8/11/1981	1305	788	11.0	0	.5	2.2	19.0	99
WBG	8/10/1982	1330	766	1.1	0	.1	.4	1.2	49
WBG	7/20/1983	1415	767	--	7.7	1.4	22.0	90.0	84
WGF	6/28/1978	1100	480	.7	.2	.1			31
WGF	7/17/1979	1415	520	17.0	.9	2.1	2.5	16.0	100
WGF	8/27/1980	1415	500	.1	0	0	.1	1.1	41
WGF	8/10/1981	1315	537	11.0	.1	.6	2.3	20.0	99
WGF	8/9/1982	1320	505	1.1	0	.1	.4	1.1	50
WGF	7/19/1983	0918	514	--	7.7	1.4	22.0	90.0	84

Appendix 2—Discharge Data

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Appendix 2. Daily mean streamflow for the five creeks providing recharge to the Barton Springs segment of the Edwards aquifer and daily mean discharge for Barton Springs, Austin, Texas, 1978–2003.

[In cubic feet per second; --, no data]

Date	Barton Creek	Williamson Creek	Slaughter Creek	Bear Creek	Onion Creek	Barton Springs
3/1/1978	0	0	0	--	--	41
3/2/1978	0	0	0	--	--	41
3/3/1978	0	0	0	--	--	40
3/4/1978	0	0	0	--	--	40
3/5/1978	0	0	0	--	--	40
3/6/1978	.1	0	0	--	--	41
3/7/1978	.2	0	0	--	--	41
3/8/1978	.1	0	0	--	--	40
3/9/1978	0	0	0	--	--	40
3/10/1978	0	0	0	--	--	42
3/11/1978	0	0	0	--	--	41
3/12/1978	0	0	0	--	--	42
3/13/1978	0	0	0	--	--	40
3/14/1978	0	0	0	--	--	42
3/15/1978	0	0	0	--	--	41
3/16/1978	0	0	0	--	--	41
3/17/1978	0	0	0	--	--	39
3/18/1978	0	0	0	--	--	39
3/19/1978	.3	0	0	--	--	40
3/20/1978	.4	0	0	--	--	39
3/21/1978	.4	0	0	--	--	39
3/22/1978	.3	0	0	--	--	39
3/23/1978	.3	0	0	--	--	40
3/24/1978	.4	0	0	--	--	33
3/25/1978	.4	0	0	--	--	34
3/26/1978	.4	0	0	--	--	34
3/27/1978	.4	0	0	--	--	34
3/28/1978	.4	0	0	--	--	34
3/29/1978	.4	0	0	--	--	33
3/30/1978	.4	0	0	--	--	33
3/31/1978	.4	0	0	--	--	31
4/1/1978	.4	0	0	--	--	32
4/2/1978	.4	0	0	--	--	32
4/3/1978	.5	0	0	--	--	32
4/4/1978	.5	0	0	--	--	32
4/5/1978	.5	0	0	--	--	32
4/6/1978	.5	0	0	--	--	32
4/7/1978	.5	0	0	--	--	31
4/8/1978	.5	0	0	--	--	31
4/9/1978	.5	0	0	--	--	31
4/10/1978	9.8	3.8	.1	--	--	31
4/11/1978	1.5	0	0	--	--	32
4/12/1978	.9	0	0	--	--	32
4/13/1978	.9	0	0	--	--	31
4/14/1978	.9	0	0	--	--	30
4/15/1978	.9	0	0	--	--	31
4/16/1978	.9	0	0	--	--	31
4/17/1978	.9	0	0	--	--	31
4/18/1978	1.2	0	0	--	--	31
4/19/1978	1.2	0	0	--	--	31
4/20/1978	1.2	0	0	--	--	31
4/21/1978	1.1	0	0	--	--	30
4/22/1978	.9	0	0	--	--	30
4/23/1978	.9	0	0	--	--	30
4/24/1978	.9	0	0	--	--	30
4/25/1978	.8	0	0	--	--	30
4/26/1978	.6	0	0	--	--	31
4/27/1978	.6	0	0	--	--	30
4/28/1978	.5	0	0	--	--	30
4/29/1978	.5	0	0	--	--	31
4/30/1978	.4	0	0	--	--	31
5/1/1978	.4	0	0	--	--	31
5/2/1978	.4	.3	0	--	--	30
5/3/1978	.8	.3	0	--	--	30
5/4/1978	.5	0	0	--	--	30
5/5/1978	.4	0	0	--	--	30
5/6/1978	.3	0	0	--	--	31
5/7/1978	.4	0	0	--	--	31
5/8/1978	.3	0	0	--	--	31
5/9/1978	.2	0	0	--	--	31
5/10/1978	.2	0	0	--	--	31
5/11/1978	.1	0	0	--	--	31
5/12/1978	.1	0	0	--	--	30
5/13/1978	0	0	0	--	--	31
5/14/1978	0	0	0	--	--	31
5/15/1978	0	0	0	--	--	31
5/16/1978	0	0	0	--	--	31
5/17/1978	0	0	0	--	--	31
5/18/1978	0	0	0	--	--	30
5/19/1978	0	0	0	--	--	31
5/20/1978	.1	1.7	.1	--	--	31
5/21/1978	.1	.1	0	--	--	31
5/22/1978	0	0	0	--	--	32
5/23/1978	0	0	0	--	--	31
5/24/1978	0	0	0	--	--	31
5/25/1978	0	0	0	--	--	30
5/26/1978	.1	0	0	--	--	30
5/27/1978	.2	.2	0	--	--	31
5/28/1978	.1	0	0	--	--	31
5/29/1978	0	0	0	--	--	32
5/30/1978	0	0	0	--	--	32
5/31/1978	0	0	0	--	--	32
6/1/1978	0	0	0	--	--	32
6/2/1978	0	0	0	--	--	31
6/3/1978	0	0	.1	--	--	31
6/4/1978	0	0	0	--	--	31
6/5/1978	0	0	0	--	--	31
6/6/1978	2.6	28.0	6.9	--	--	31
6/7/1978	48.0	28.0	9.3	--	--	32
6/8/1978	13.0	5.4	.4	--	--	35

Appendix 2. Daily mean streamflow for the five creeks providing recharge to the Barton Springs segment of the Edwards aquifer and daily mean discharge for Barton Springs, Austin, Texas, 1978–2003—Continued.

Date	Barton Creek	Williamson Creek	Slaughter Creek	Bear Creek	Onion Creek	Barton Springs
6/9/1978	6.6	2.6	0.3	--	--	34
6/10/1978	2.8	2.1	.2	--	--	35
6/11/1978	2.2	1.5	.2	--	--	35
6/12/1978	2.1	1.7	.1	--	--	35
6/13/1978	1.9	1.7	.1	--	--	35
6/14/1978	1.7	1.2	.1	--	--	34
6/15/1978	1.6	.2	.1	--	--	33
6/16/1978	1.4	.2	.1	--	--	32
6/17/1978	1.2	.2	.1	--	--	32
6/18/1978	.9	.2	.1	--	--	32
6/19/1978	.7	.2	.1	--	--	31
6/20/1978	.5	.2	.1	--	--	31
6/21/1978	.3	.1	.1	--	--	30
6/22/1978	.1	0	0	--	--	29
6/23/1978	0	0	0	--	--	28
6/24/1978	0	0	0	--	--	29
6/25/1978	0	0	0	--	--	28
6/26/1978	0	0	0	--	--	28
6/27/1978	0	0	0	--	--	28
6/28/1978	0	0	0	--	--	27
6/29/1978	0	0	0	--	--	27
6/30/1978	0	0	0	--	--	27
7/1/1978	0	0	0	--	--	26
7/2/1978	0	0	0	--	--	25
7/3/1978	0	0	0	--	--	25
7/4/1978	0	0	0	--	--	25
7/5/1978	0	0	0	--	--	24
7/6/1978	0	0	0	--	--	21
7/7/1978	0	0	0	--	--	24
7/8/1978	0	0	0	--	--	24
7/9/1978	0	0	0	--	--	23
7/10/1978	0	0	0	--	--	23
7/11/1978	0	0	0	--	--	22
7/12/1978	0	0	0	--	--	21
7/13/1978	0	0	0	--	--	20
7/14/1978	0	0	0	--	--	20
7/15/1978	0	0	0	--	--	20
7/16/1978	0	0	0	--	--	20
7/17/1978	0	0	0	--	--	20
7/18/1978	0	0	0	--	--	20
7/19/1978	0	0	0	--	--	20
7/20/1978	0	0	0	--	--	20
7/21/1978	0	0	0	--	--	20
7/22/1978	0	0	0	--	--	20
7/23/1978	0	.3	1.1	--	--	21
7/24/1978	0	0	0	--	--	20
7/25/1978	0	0	0	--	--	19
7/26/1978	0	0	0	--	--	20
7/27/1978	0	0	0	--	--	19
7/28/1978	0	0	0	--	--	19
7/29/1978	0	0	0	--	--	19
7/30/1978	0	0	0	--	--	20
7/31/1978	0	0	0	--	--	20
8/1/1978	6.8	14.0	3.5	--	--	19
8/2/1978	2.4	1.5	.4	--	--	21
8/3/1978	.6	0	.2	--	--	20
8/4/1978	7.6	0	.2	--	--	20
8/5/1978	5.1	0	.2	--	--	20
8/6/1978	3.2	0	.1	--	--	21
8/7/1978	2.1	0	.1	--	--	22
8/8/1978	1.4	0	.1	--	--	24
8/9/1978	1.1	0	0	--	--	25
8/10/1978	1.0	0	0	--	--	24
8/11/1978	.9	0	0	--	--	24
8/12/1978	.6	0	0	--	--	25
8/13/1978	.4	0	0	--	--	24
8/14/1978	.4	0	0	--	--	23
8/15/1978	.3	0	0	--	--	22
8/16/1978	.3	0	0	--	--	22
8/17/1978	.2	0	0	--	--	21
8/18/1978	.1	0	0	--	--	21
8/19/1978	.1	0	0	--	--	22
8/20/1978	.1	0	0	--	--	22
8/21/1978	.1	0	0	--	--	22
8/22/1978	.1	0	0	--	--	22
8/23/1978	0	0	0	--	--	24
8/24/1978	0	0	0	--	--	23
8/25/1978	0	0	0	--	--	23
8/26/1978	0	0	0	--	--	23
8/27/1978	0	0	0	--	--	23
8/28/1978	0	0	0	--	--	23
8/29/1978	0	0	0	--	--	23
8/30/1978	0	0	0	--	--	24
8/31/1978	0	0	0	--	--	23
9/1/1978	0	0	0	--	--	22
9/2/1978	0	0	0	--	--	24
9/3/1978	0	0	0	--	--	24
9/4/1978	.3	.1	0	--	--	23
9/5/1978	.4	0	0	--	--	23
9/6/1978	0	0	0	--	--	23
9/7/1978	0	0	0	--	--	23
9/8/1978	.2	3.2	.1	--	--	23
9/9/1978	.2	.2	0	--	--	24
9/10/1978	.8	3.7	.2	--	--	24
9/11/1978	2.3	1.3	.1	--	--	25
9/12/1978	.8	.2	0	--	--	25
9/13/1978	1.3	3.2	.2	--	--	25
9/14/1978	1.7	1.0	.3	--	--	24
9/15/1978	1.3	.2	.3	--	--	23
9/16/1978	.9	.1	.3	--	--	26

Appendix 2. Daily mean streamflow for the five creeks providing recharge to the Barton Springs segment of the Edwards aquifer and daily mean discharge for Barton Springs, Austin, Texas, 1978–2003—Continued.

Date	Barton Creek	Williamson Creek	Slaughter Creek	Bear Creek	Onion Creek	Barton Springs
9/17/1978	0.2	0.2	0.3	--	--	26
9/18/1978	.2	.1	.3	--	--	26
9/19/1978	.2	.1	.3	--	--	26
9/20/1978	.2	0	.3	--	--	26
9/21/1978	.2	0	.3	--	--	25
9/22/1978	.2	0	.2	--	--	24
9/23/1978	.2	0	.3	--	--	25
9/24/1978	.2	0	.3	--	--	26
9/25/1978	.2	0	.3	--	--	26
9/26/1978	.2	0	.3	--	--	26
9/27/1978	.2	0	.3	--	--	26
9/28/1978	.2	.1	.3	--	--	25
9/29/1978	.2	0	.3	--	--	24
9/30/1978	.2	0	.3	--	--	25
10/1/1978	.5	0	.3	--	--	25
10/2/1978	.5	0	.3	--	--	24
10/3/1978	.4	0	.3	--	--	24
10/4/1978	.4	0	.3	--	--	24
10/5/1978	.4	0	.3	--	--	24
10/6/1978	.3	0	.2	--	--	22
10/7/1978	.3	0	.2	--	--	22
10/8/1978	.3	0	.2	--	--	23
10/9/1978	.3	0	.2	--	--	23
10/10/1978	.3	0	.2	--	--	23
10/11/1978	.3	0	.2	--	--	23
10/12/1978	.3	0	.2	--	--	23
10/13/1978	.3	0	.2	--	--	23
10/14/1978	.2	0	.1	--	--	25
10/15/1978	.2	0	0	--	--	25
10/16/1978	.2	0	0	--	--	24
10/17/1978	.2	0	0	--	--	24
10/18/1978	.2	0	0	--	--	25
10/19/1978	.2	0	0	--	--	24
10/20/1978	.2	0	0	--	--	23
10/21/1978	.2	0	0	--	--	25
10/22/1978	.2	0	0	--	--	26
10/23/1978	.1	0	0	--	--	26
10/24/1978	.2	0	0	--	--	26
10/25/1978	.2	0	0	--	--	26
10/26/1978	.2	0	0	--	--	23
10/27/1978	.2	0	0	--	--	25
10/28/1978	.2	0	0	--	--	27
10/29/1978	.2	0	0	--	--	27
10/30/1978	.2	0	0	--	--	28
10/31/1978	.1	0	0	--	--	29
11/1/1978	.1	0	0	--	--	32
11/2/1978	.1	0	0	--	--	30
11/3/1978	.1	0	0	--	--	30
11/4/1978	.2	0	0	--	--	28
11/5/1978	1.3	14.0	1.5	--	--	30
11/6/1978	1.2	4.0	1.6	--	--	30
11/7/1978	.8	.2	.4	--	--	28
11/8/1978	.6	.2	.4	--	--	31
11/9/1978	.5	.2	.4	--	--	31
11/10/1978	.5	0	.4	--	--	31
11/11/1978	.5	0	.4	--	--	31
11/12/1978	.6	.2	.5	--	--	31
11/13/1978	.5	0	.5	--	--	31
11/14/1978	.6	0	.5	--	--	31
11/15/1978	.6	1.5	.8	--	--	32
11/16/1978	1.1	1.9	1.1	--	--	32
11/17/1978	1.1	1.5	1.2	--	--	33
11/18/1978	.9	1.3	1.2	--	--	33
11/19/1978	1.0	2.5	1.6	--	--	34
11/20/1978	1.2	3.0	1.8	--	--	35
11/21/1978	1.5	3.3	2.5	--	--	35
11/22/1978	2.0	3.4	2.8	--	--	36
11/23/1978	3.0	3.3	2.9	--	--	38
11/24/1978	3.3	2.7	2.9	--	--	38
11/25/1978	3.6	2.7	3.1	--	--	39
11/26/1978	4.0	2.7	3.3	--	--	39
11/27/1978	4.8	2.7	3.4	--	--	40
11/28/1978	4.7	2.4	3.4	--	--	39
11/29/1978	4.6	2.0	3.4	--	--	38
11/30/1978	4.6	2.0	3.2	--	--	37
12/1/1978	4.6	2.0	3.1	--	--	37
12/2/1978	4.6	1.7	3.1	--	--	37
12/3/1978	5.8	2.7	3.7	--	--	37
12/4/1978	6.3	1.7	3.2	--	--	37
12/5/1978	5.8	1.7	3.1	--	--	37
12/6/1978	5.8	1.5	3.1	--	--	38
12/7/1978	5.8	1.5	2.9	--	--	37
12/8/1978	5.8	1.2	2.7	--	--	37
12/9/1978	5.8	1.0	2.4	--	--	37
12/10/1978	5.8	1.0	2.4	--	--	37
12/11/1978	5.8	1.0	2.4	--	--	37
12/12/1978	5.8	1.0	2.4	--	--	37
12/13/1978	5.8	1.0	2.4	--	--	36
12/14/1978	5.9	.7	2.4	--	--	36
12/15/1978	5.8	.9	2.4	--	--	36
12/16/1978	5.6	.9	2.4	--	--	36
12/17/1978	5.4	.8	2.0	--	--	36
12/18/1978	5.4	.8	2.1	--	--	36
12/19/1978	5.4	.8	2.2	--	--	37
12/20/1978	5.4	.8	2.2	--	--	36
12/21/1978	5.2	.8	2.0	--	--	35
12/22/1978	4.8	.8	2.0	--	--	35
12/23/1978	4.8	.8	2.0	--	--	35
12/24/1978	4.8	.8	2.0	--	--	36
12/25/1978	4.5	.8	2.0	--	--	35

Appendix 2. Daily mean streamflow for the five creeks providing recharge to the Barton Springs segment of the Edwards aquifer and daily mean discharge for Barton Springs, Austin, Texas, 1978–2003—Continued.

Date	Barton Creek	Williamson Creek	Slaughter Creek	Bear Creek	Onion Creek	Barton Springs
12/26/1978	4.4	0.8	1.9	--	--	36
12/27/1978	4.3	.7	1.8	--	--	35
12/28/1978	4.3	.6	1.8	--	--	35
12/29/1978	4.3	.5	1.8	--	--	35
12/30/1978	4.3	.5	1.8	--	--	35
12/31/1978	34.0	40.0	46.0	--	--	44
1/1/1979	60.0	35.0	28.0	--	--	50
1/2/1979	48.0	12.0	12.0	--	--	51
1/3/1979	40.0	9.0	11.0	--	--	52
1/4/1979	36.0	7.7	11.0	--	--	52
1/5/1979	36.0	8.1	12.0	--	--	52
1/6/1979	37.0	11.0	14.0	--	--	54
1/7/1979	39.0	10.0	13.0	--	--	55
1/8/1979	36.0	7.4	10.0	--	--	55
1/9/1979	34.0	6.4	9.8	--	--	53
1/10/1979	67.0	52.0	69.0	--	--	55
1/11/1979	369.0	67.0	101.0	--	--	64
1/12/1979	149.0	32.0	42.0	--	--	72
1/13/1979	119.0	22.0	26.0	--	--	71
1/14/1979	108.0	15.0	17.0	--	--	70
1/15/1979	100.0	12.0	16.0	--	--	68
1/16/1979	92.0	11.0	15.0	--	--	67
1/17/1979	85.0	9.2	13.0	--	--	70
1/18/1979	74.0	8.8	13.0	--	--	70
1/19/1979	68.0	8.1	12.0	--	--	70
1/20/1979	62.0	7.1	11.0	--	--	70
1/21/1979	55.0	5.9	9.2	--	--	69
1/22/1979	50.0	5.4	8.4	--	--	69
1/23/1979	48.0	4.4	7.8	--	--	69
1/24/1979	44.0	3.8	6.8	--	--	68
1/25/1979	44.0	3.4	7.1	--	--	70
1/26/1979	45.0	3.4	7.8	--	--	70
1/27/1979	41.0	3.2	7.0	--	--	69
1/28/1979	37.0	3.0	6.3	--	--	69
1/29/1979	36.0	3.0	6.2	--	--	69
1/30/1979	37.0	3.0	6.2	--	--	69
1/31/1979	34.0	2.4	5.5	--	--	69
2/1/1979	32.0	2.3	4.8	--	--	69
2/2/1979	32.0	2.3	4.4	--	--	69
2/3/1979	34.0	2.4	5.0	--	--	69
2/4/1979	43.0	10.0	13.0	--	--	69
2/5/1979	119.0	37.0	48.0	--	--	74
2/6/1979	327.0	67.0	91.0	--	--	84
2/7/1979	209.0	32.0	37.0	--	--	85
2/8/1979	162.0	23.0	26.0	--	--	77
2/9/1979	132.0	17.0	18.0	--	--	78
2/10/1979	122.0	15.0	16.0	--	--	78
2/11/1979	114.0	12.0	14.0	--	--	79
2/12/1979	104.0	10.0	12.0	--	--	80
2/13/1979	96.0	8.2	10.0	--	--	80
2/14/1979	90.0	7.9	9.7	--	--	80
2/15/1979	83.0	6.7	8.7	--	--	80
2/16/1979	72.0	5.5	6.8	--	--	80
2/17/1979	67.0	5.3	6.7	--	--	80
2/18/1979	66.0	4.9	6.2	--	--	79
2/19/1979	63.0	4.5	5.7	--	--	79
2/20/1979	62.0	4.3	5.7	--	--	81
2/21/1979	59.0	4.4	5.3	--	--	80
2/22/1979	56.0	4.0	5.3	--	--	79
2/23/1979	86.0	56.0	90.0	--	--	83
2/24/1979	84.0	20.0	22.0	--	--	86
2/25/1979	63.0	14.0	15.0	--	--	84
2/26/1979	59.0	7.7	13.0	--	--	84
2/27/1979	59.0	6.9	11.0	--	--	84
2/28/1979	56.0	5.4	9.6	--	--	84
3/1/1979	53.0	4.0	7.9	--	--	84
3/2/1979	52.0	3.9	7.3	--	--	84
3/3/1979	54.0	3.5	7.9	--	--	84
3/4/1979	48.0	2.7	6.2	--	--	84
3/5/1979	45.0	2.6	5.7	--	--	84
3/6/1979	42.0	2.3	5.6	--	--	85
3/7/1979	42.0	2.0	5.2	--	--	84
3/8/1979	41.0	1.7	4.8	--	--	84
3/9/1979	39.0	1.7	4.7	--	--	83
3/10/1979	37.0	1.5	4.1	--	--	82
3/11/1979	37.0	1.5	4.1	--	--	83
3/12/1979	36.0	1.3	4.1	--	--	83
3/13/1979	35.0	1.2	3.7	--	--	84
3/14/1979	33.0	1.1	3.5	--	--	83
3/15/1979	31.0	1.3	3.6	--	--	81
3/16/1979	39.0	3.0	5.2	--	--	81
3/17/1979	42.0	2.7	5.7	--	--	82
3/18/1979	41.0	2.4	5.6	--	--	82
3/19/1979	88.0	2.8	8.2	--	--	82
3/20/1979	158.0	6.6	13.0	--	--	83
3/21/1979	995.0	51.0	88.0	--	--	84
3/22/1979	643.0	45.0	66.0	--	--	84
3/23/1979	327.0	20.0	33.0	--	--	85
3/24/1979	259.0	14.0	23.0	--	--	85
3/25/1979	222.0	10.0	18.0	--	--	85
3/26/1979	201.0	7.7	15.0	--	--	86
3/27/1979	181.0	6.7	13.0	--	--	86
3/28/1979	170.0	6.1	12.0	--	--	86
3/29/1979	161.0	5.5	12.0	--	--	86
3/30/1979	215.0	12.0	20.0	--	--	92
3/31/1979	197.0	14.0	21.0	--	--	91
4/1/1979	368.0	18.0	28.0	--	--	91
4/2/1979	315.0	17.0	26.0	--	--	91
4/3/1979	248.0	15.0	24.0	--	--	92
4/4/1979	221.0	12.0	19.0	--	--	93

Appendix 2. Daily mean streamflow for the five creeks providing recharge to the Barton Springs segment of the Edwards aquifer and daily mean discharge for Barton Springs, Austin, Texas, 1978–2003—Continued.

Date	Barton Creek	Williamson Creek	Slaughter Creek	Bear Creek	Onion Creek	Barton Springs
4/5/1979	201.0	10.0	16.0	--	--	94
4/6/1979	181.0	9.5	13.0	--	--	94
4/7/1979	171.0	9.1	13.0	--	--	93
4/8/1979	176.0	12.0	14.0	--	--	93
4/9/1979	150.0	12.0	11.0	--	--	93
4/10/1979	146.0	12.0	11.0	--	--	95
4/11/1979	155.0	14.0	9.7	--	--	95
4/12/1979	141.0	14.0	8.1	--	--	94
4/13/1979	155.0	15.0	7.2	--	--	92
4/14/1979	145.0	18.0	6.7	--	--	92
4/15/1979	133.0	19.0	6.5	--	--	92
4/16/1979	121.0	21.0	6.2	--	--	92
4/17/1979	143.0	26.0	7.2	--	--	93
4/18/1979	146.0	102.0	161.0	--	--	93
4/19/1979	142.0	34.0	68.0	--	--	97
4/20/1979	137.0	26.0	39.0	--	--	98
4/21/1979	530.0	81.0	98.0	--	--	98
4/22/1979	229.0	26.0	45.0	--	--	98
4/23/1979	199.0	17.0	30.0	--	--	97
4/24/1979	182.0	11.0	23.0	--	--	98
4/25/1979	166.0	7.6	18.0	--	--	98
4/26/1979	149.0	5.3	15.0	--	--	98
4/27/1979	137.0	4.1	13.0	--	--	98
4/28/1979	125.0	3.3	11.0	--	--	99
4/29/1979	354.0	24.0	45.0	--	--	100
4/30/1979	204.0	9.0	20.0	--	--	100
5/1/1979	296.0	25.0	53.0	--	--	101
5/2/1979	244.0	16.0	33.0	--	--	102
5/3/1979	222.0	13.0	29.0	--	--	102
5/4/1979	203.0	8.1	22.0	--	--	101
5/5/1979	186.0	5.6	18.0	--	--	101
5/6/1979	173.0	4.2	15.0	--	--	101
5/7/1979	159.0	3.2	13.0	--	--	102
5/8/1979	146.0	2.7	11.0	--	--	102
5/9/1979	137.0	2.7	11.0	--	--	102
5/10/1979	130.0	2.2	10.0	--	--	102
5/11/1979	124.0	2.1	11.0	--	--	102
5/12/1979	118.0	1.7	9.4	--	--	101
5/13/1979	99.0	1.5	8.2	--	--	101
5/14/1979	86.0	1.4	7.2	--	--	101
5/15/1979	77.0	2.0	6.7	--	--	101
5/16/1979	73.0	2.8	6.6	--	--	101
5/17/1979	62.0	4.0	6.2	--	--	101
5/18/1979	59.0	5.8	6.1	--	--	101
5/19/1979	57.0	7.3	5.7	--	--	101
5/20/1979	53.0	8.3	5.6	--	--	101
5/21/1979	64.0	238.0	250.0	--	--	101
5/22/1979	767.0	140.0	196.0	--	--	103
5/23/1979	91.0	33.0	43.0	--	--	105
5/24/1979	61.0	23.0	27.0	--	--	107
5/25/1979	57.0	17.0	19.0	--	--	106
5/26/1979	51.0	14.0	16.0	--	--	106
5/27/1979	50.0	12.0	14.0	--	--	106
5/28/1979	49.0	10.0	13.0	--	--	106
5/29/1979	45.0	8.9	11.0	--	--	106
5/30/1979	42.0	11.0	16.0	--	--	106
5/31/1979	38.0	9.8	14.0	--	--	106
6/1/1979	55.0	33.0	68.0	--	--	105
6/2/1979	62.0	26.0	41.0	--	--	105
6/3/1979	47.0	20.0	27.0	--	--	106
6/4/1979	41.0	18.0	23.0	--	--	107
6/5/1979	48.0	21.0	28.0	--	--	106
6/6/1979	47.0	17.0	22.0	--	--	105
6/7/1979	39.0	13.0	17.0	--	--	105
6/8/1979	42.0	11.0	15.0	--	--	106
6/9/1979	41.0	8.8	13.0	--	--	108
6/10/1979	35.0	7.1	10.0	--	--	108
6/11/1979	32.0	6.2	9.4	--	--	108
6/12/1979	29.0	5.1	8.3	--	--	105
6/13/1979	27.0	4.3	7.7	--	--	105
6/14/1979	28.0	3.7	7.1	--	--	106
6/15/1979	26.0	3.2	6.6	--	--	107
6/16/1979	24.0	2.7	6.1	--	--	108
6/17/1979	20.0	2.5	5.3	--	--	107
6/18/1979	20.0	1.9	5.2	--	--	107
6/19/1979	18.0	1.7	4.8	--	--	107
6/20/1979	17.0	1.5	4.4	--	--	108
6/21/1979	16.0	1.4	4.1	--	--	108
6/22/1979	15.0	1.2	4.0	--	--	107
6/23/1979	13.0	1.2	3.7	--	--	107
6/24/1979	13.0	.9	3.4	--	--	107
6/25/1979	12.0	.8	3.1	--	--	106
6/26/1979	13.0	.7	2.9	--	--	105
6/27/1979	13.0	.8	2.9	--	--	105
6/28/1979	12.0	.7	2.8	--	--	104
6/29/1979	12.0	.5	2.5	--	--	103
6/30/1979	11.0	.4	2.0	--	--	103
7/1/1979	10.0	.4	2.0	--	14.0	102
7/2/1979	8.1	.4	1.8	--	14.0	102
7/3/1979	7.5	.4	1.5	--	14.0	101
7/4/1979	6.7	.4	1.5	--	14.0	101
7/5/1979	5.7	.3	1.6	--	13.0	101
7/6/1979	16.0	5.2	4.7	--	14.0	100
7/7/1979	27.0	.5	2.2	2.6	18.0	100
7/8/1979	17.0	.4	1.9	2.5	16.0	100
7/9/1979	13.0	.4	1.8	2.4	13.0	100
7/10/1979	17.0	.9	1.9	2.3	13.0	99
7/11/1979	12.0	.4	2.1	2.2	14.0	99
7/12/1979	10.0	.3	1.4	2.1	13.0	99
7/13/1979	8.7	.2	1.3	2.0	13.0	98

Appendix 2. Daily mean streamflow for the five creeks providing recharge to the Barton Springs segment of the Edwards aquifer and daily mean discharge for Barton Springs, Austin, Texas, 1978–2003—Continued.

Date	Barton Creek	Williamson Creek	Slaughter Creek	Bear Creek	Onion Creek	Barton Springs
7/14/1979	6.8	0.2	1.1	1.9	12.0	98
7/15/1979	6.5	.2	1.1	1.9	12.0	98
7/16/1979	6.5	.2	1.0	1.7	12.0	97
7/17/1979	6.1	.1	1.0	1.6	12.0	97
7/18/1979	5.8	.2	1.1	1.7	11.0	97
7/19/1979	12.0	.2	1.1	1.7	11.0	97
7/20/1979	37.0	6.9	11.0	1.7	12.0	96
7/21/1979	35.0	1.6	2.6	1.7	13.0	96
7/22/1979	16.0	.4	1.4	1.7	12.0	96
7/23/1979	10.0	.3	1.3	1.6	11.0	95
7/24/1979	7.6	.2	1.1	1.6	11.0	95
7/25/1979	6.3	.2	1.1	1.6	11.0	95
7/26/1979	5.7	.2	1.1	1.4	11.0	94
7/27/1979	26.0	44.0	83.0	156.0	216.0	96
7/28/1979	47.0	12.0	13.0	14.0	42.0	98
7/29/1979	15.0	5.9	7.0	10.0	7.8	99
7/30/1979	12.0	3.7	5.5	9.3	9.3	99
7/31/1979	11.0	2.9	4.4	8.7	3.7	97
8/1/1979	9.9	2.3	3.7	7.5	4.4	96
8/2/1979	8.9	2.3	3.1	7.2	5.4	96
8/3/1979	8.0	2.2	2.8	6.6	6.1	96
8/4/1979	7.4	1.5	2.6	5.7	9.0	96
8/5/1979	6.6	1.2	2.3	5.2	8.6	96
8/6/1979	5.9	1.2	2.0	4.6	8.2	96
8/7/1979	5.5	1.0	1.9	4.3	8.2	95
8/8/1979	5.2	.7	1.8	4.1	8.6	95
8/9/1979	5.1	.3	1.8	4.1	8.6	95
8/10/1979	4.7	.3	1.8	3.6	8.6	94
8/11/1979	26.0	3.9	6.1	7.2	9.4	94
8/12/1979	34.0	1.0	2.9	5.2	12.0	94
8/13/1979	18.0	.5	2.3	4.3	11.0	94
8/14/1979	11.0	.5	1.9	4.9	11.0	94
8/15/1979	9.6	.5	1.8	4.1	10.0	94
8/16/1979	7.8	.4	1.8	3.6	9.8	94
8/17/1979	6.3	.5	1.5	3.6	9.0	93
8/18/1979	5.4	.6	1.4	3.1	9.0	93
8/19/1979	4.6	.2	1.2	2.5	8.6	93
8/20/1979	4.5	.1	1.1	2.3	7.9	93
8/21/1979	3.9	.1	1.0	2.3	7.5	92
8/22/1979	3.6	.1	1.0	2.1	7.5	92
8/23/1979	3.4	1.8	1.0	1.9	6.5	91
8/24/1979	3.0	.3	.9	1.6	6.5	91
8/25/1979	2.8	.4	.8	1.9	6.5	91
8/26/1979	2.9	.1	.8	1.4	6.1	91
8/27/1979	2.9	.1	.7	1.3	5.2	91
8/28/1979	2.8	.1	.7	1.2	5.2	90
8/29/1979	2.4	.1	.7	1.2	5.2	90
8/30/1979	2.3	.1	.7	1.3	5.2	90
8/31/1979	2.2	.1	.6	1.4	5.2	89
9/1/1979	2.1	.1	.5	1.4	5.2	88
9/2/1979	2.0	0.1	.5	1.3	5.2	88
9/3/1979	1.8	0	.5	1.3	5.6	88
9/4/1979	1.9	.6	.5	1.3	5.2	87
9/5/1979	2.8	1.2	.6	2.9	5.2	87
9/6/1979	3.8	1.0	.5	1.9	5.2	87
9/7/1979	2.9	.6	.5	1.6	5.2	87
9/8/1979	2.7	.2	.5	1.4	5.2	86
9/9/1979	2.2	0	.4	1.3	4.8	86
9/10/1979	1.8	0	.4	1.2	4.3	85
9/11/1979	1.7	0	.4	1.2	3.8	85
9/12/1979	1.7	0	.4	1.2	3.8	85
9/13/1979	1.6	0	.3	1.0	3.7	85
9/14/1979	1.4	0	.3	1.0	3.2	85
9/15/1979	1.3	0	.3	.9	2.3	85
9/16/1979	1.3	0	.3	.9	2.5	84
9/17/1979	1.2	0	.3	.9	4.3	84
9/18/1979	1.8	1.7	.4	1.9	4.3	84
9/19/1979	2.2	.7	.4	1.4	4.0	83
9/20/1979	2.4	.1	.4	1.2	3.5	83
9/21/1979	2.2	0	.4	1.0	3.2	82
9/22/1979	1.8	0	.3	.9	3.8	82
9/23/1979	1.6	.1	.3	.8	3.8	82
9/24/1979	1.4	0	.3	.8	3.8	80
9/25/1979	1.3	0	.3	.7	3.8	80
9/26/1979	1.2	0	.3	.9	3.8	79
9/27/1979	1.1	0	.3	.8	3.8	79
9/28/1979	1.0	0	.3	.7	3.2	78
9/29/1979	.9	0	.3	.7	3.2	78
9/30/1979	.9	0	.3	.7	2.7	77
10/1/1979	.9	0	.3	.7	2.7	77
10/2/1979	.9	0	.2	.6	2.7	77
10/3/1979	.8	0	.2	.7	2.7	76
10/4/1979	.7	0	.2	.5	2.2	75
10/5/1979	.6	0	.2	.5	1.8	74
10/6/1979	.6	0	.2	.6	1.8	73
10/7/1979	.6	0	.2	.7	2.0	72
10/8/1979	.6	0	.2	.7	2.3	72
10/9/1979	.6	0	.1	.8	3.1	71
10/10/1979	.6	0	.1	.8	1.6	71
10/11/1979	.6	0	.1	.8	2.2	71
10/12/1979	.5	0	.1	.8	2.9	71
10/13/1979	.5	0	.1	.9	4.1	71
10/14/1979	.5	0	.1	.9	3.9	71
10/15/1979	.5	0	.1	.9	3.2	71
10/16/1979	.4	0	.1	.9	3.2	70
10/17/1979	.4	0	.1	.9	3.8	70
10/18/1979	.4	0	.1	1.0	3.8	69
10/19/1979	.4	0	.1	1.0	3.8	68
10/20/1979	.4	0	0	1.0	3.8	66
10/21/1979	.4	0	0	.9	3.8	66

Appendix 2. Daily mean streamflow for the five creeks providing recharge to the Barton Springs segment of the Edwards aquifer and daily mean discharge for Barton Springs, Austin, Texas, 1978–2003—Continued.

Date	Barton Creek	Williamson Creek	Slaughter Creek	Bear Creek	Onion Creek	Barton Springs
10/22/1979	0.4	0	0	0.9	3.5	65
10/23/1979	.3	0	0	.9	2.2	65
10/24/1979	.3	0	0	.8	2.2	64
10/25/1979	.3	0	0	.7	2.2	64
10/26/1979	.3	0	0	.6	2.2	63
10/27/1979	.3	0	0	.6	2.2	62
10/28/1979	.3	0	0	.5	2.2	62
10/29/1979	.3	0	0	.5	2.2	61
10/30/1979	.3	0	0	.4	3.8	61
10/31/1979	.3	0	0	.4	2.9	61
11/1/1979	.3	0	0	.4	1.4	60
11/2/1979	.3	0	0	.4	1.1	59
11/3/1979	.3	0	0	.4	1.1	59
11/4/1979	.3	0	0	.4	1.1	59
11/5/1979	.3	0	0	.5	1.1	59
11/6/1979	.3	0	0	.5	1.1	58
11/7/1979	.3	0	0	.5	1.1	58
11/8/1979	.3	0	0	.5	1.2	58
11/9/1979	.3	0	0	.5	1.3	57
11/10/1979	.3	0	0	.5	1.3	57
11/11/1979	.3	0	0	.5	1.3	56
11/12/1979	.3	0	0	.4	1.3	56
11/13/1979	.3	0	0	.4	1.3	55
11/14/1979	.3	0	0	.4	1.3	54
11/15/1979	.3	0	0	.4	1.3	54
11/16/1979	.3	0	0	.4	1.5	54
11/17/1979	.3	0	0	.4	1.6	54
11/18/1979	.3	0	0	.4	2.2	53
11/19/1979	.3	0	0	.5	2.4	53
11/20/1979	.3	0	0	.5	2.7	53
11/21/1979	.3	0	0	.5	2.7	53
11/22/1979	.3	0	0	.5	2.7	52
11/23/1979	.3	0	0	.5	2.7	52
11/24/1979	.3	0	0	.5	2.3	52
11/25/1979	.3	0	0	.5	3.2	52
11/26/1979	.3	0	0	.5	2.6	51
11/27/1979	.3	0	0	.5	2.2	51
11/28/1979	.3	0	0	.5	1.5	51
11/29/1979	.3	0	0	.5	1.3	50
11/30/1979	.3	0	0	.5	1.3	50
12/1/1979	.3	0	0	.5	1.3	50
12/2/1979	.3	0	0	.5	1.3	49
12/3/1979	.3	0	0	.5	1.3	49
12/4/1979	.3	0	0	.5	1.3	49
12/5/1979	.3	0	0	.5	1.3	48
12/6/1979	.3	0	0	.5	1.3	48
12/7/1979	.3	0	0	.5	1.6	47
12/8/1979	.2	0	0	.5	1.3	47
12/9/1979	.2	0	0	.5	1.3	46
12/10/1979	.2	0	0	.5	1.3	46
12/11/1979	0.2	0	0	0.5	1.3	46
12/12/1979	.3	2.2	0	.6	2.4	46
12/13/1979	.3	.1	0	1.0	3.7	46
12/14/1979	.3	0	0	.7	1.7	46
12/15/1979	.3	0	0	.6	1.6	46
12/16/1979	.2	0	0	.6	1.6	45
12/17/1979	.2	0	0	.6	1.6	45
12/18/1979	.2	0	0	.6	1.6	45
12/19/1979	.2	0	0	.6	1.6	44
12/20/1979	.2	0	0	.6	1.6	44
12/21/1979	.2	0	0	.6	1.6	44
12/22/1979	.3	0	0	.6	1.6	44
12/23/1979	.3	2.6	0	.6	1.8	44
12/24/1979	.3	0	0	.6	2.2	44
12/25/1979	.3	0	0	.5	2.1	44
12/26/1979	.2	0	0	.5	1.8	43
12/27/1979	.2	0	0	.5	1.8	43
12/28/1979	.5	5.5	0	.9	2.6	43
12/29/1979	1.4	.8	0	.7	4.0	44
12/30/1979	1.0	0	0	.6	1.8	44
12/31/1979	.9	0	0	.5	1.8	43
1/1/1980	1.0	0	0	.5	1.6	43
1/2/1980	1.1	0	0	.5	1.6	42
1/3/1980	1.1	0	0	.4	1.6	42
1/4/1980	1.1	0	0	.4	1.6	41
1/5/1980	1.1	0	0	.4	1.6	40
1/6/1980	1.0	0	0	.4	1.6	40
1/7/1980	1.0	0	0	.4	1.6	39
1/8/1980	.9	0	0	.4	1.6	39
1/9/1980	.9	0	0	.4	1.6	38
1/10/1980	1.0	0	0	.4	1.6	38
1/11/1980	1.0	0	0	.4	1.6	38
1/12/1980	1.0	0	0	.4	1.6	38
1/13/1980	.9	0	0	.4	1.6	38
1/14/1980	.9	0	0	.4	1.6	38
1/15/1980	.9	0	0	.3	1.6	37
1/16/1980	.9	0	0	.3	1.6	37
1/17/1980	.9	0	0	.4	2.2	37
1/18/1980	.9	0	0	.4	2.6	37
1/19/1980	.9	0	0	.4	2.2	38
1/20/1980	.9	.7	0	.4	2.2	38
1/21/1980	1.1	1.8	0	.9	3.0	37
1/22/1980	1.4	.8	0	.8	3.2	37
1/23/1980	1.5	0	0	.6	3.2	37
1/24/1980	1.3	0	0	.5	2.9	37
1/25/1980	1.2	0	0	.4	2.7	37
1/26/1980	1.1	0	0	.3	2.7	38
1/27/1980	1.0	0	0	.3	2.4	39
1/28/1980	1.0	0	0	.3	2.2	39
1/29/1980	.9	0	0	.3	2.2	38

Appendix 2. Daily mean streamflow for the five creeks providing recharge to the Barton Springs segment of the Edwards aquifer and daily mean discharge for Barton Springs, Austin, Texas, 1978–2003—Continued.

Date	Barton Creek	Williamson Creek	Slaughter Creek	Bear Creek	Onion Creek	Barton Springs
1/30/1980	0.9	0	0	0.3	2.2	38
1/31/1980	.9	0	0	.3	2.2	38
2/1/1980	.9	0	0	.3	2.2	38
2/2/1980	.9	0	0	.3	2.2	38
2/3/1980	.9	0	0	.3	2.2	38
2/4/1980	1.0	0	0	.3	2.2	38
2/5/1980	1.0	0	0	.3	2.2	37
2/6/1980	1.0	0	0	.3	2.2	36
2/7/1980	1.0	1.0	0	.3	2.3	36
2/8/1980	1.3	.5	0	.4	2.7	37
2/9/1980	1.9	5.9	0	.8	3.1	38
2/10/1980	2.5	1.2	0	.5	3.2	38
2/11/1980	1.7	1.0	0	.6	3.2	37
2/12/1980	1.5	.7	0	.6	3.2	37
2/13/1980	1.2	.5	0	.6	3.2	37
2/14/1980	1.3	.5	0	.6	3.2	36
2/15/1980	1.2	.3	0	.6	3.2	36
2/16/1980	1.8	3.5	.1	1.1	4.4	37
2/17/1980	1.8	1.2	.1	.8	3.2	37
2/18/1980	1.8	1.2	.1	.8	3.2	37
2/19/1980	1.7	1.1	.1	.8	2.7	37
2/20/1980	1.5	1.0	.1	.9	2.7	37
2/21/1980	1.5	1.0	.1	.9	2.7	37
2/22/1980	1.4	.8	.1	.9	2.7	37
2/23/1980	1.4	.7	.1	.9	2.7	36
2/24/1980	1.4	.6	.1	.9	2.7	36
2/25/1980	1.4	.5	.1	.9	2.7	35
2/26/1980	1.5	.4	.1	1.0	2.7	35
2/27/1980	1.4	.3	.1	1.0	2.7	35
2/28/1980	1.4	.3	.2	1.2	2.7	35
2/29/1980	1.4	3.2	.6	1.6	2.7	35
3/1/1980	2.8	1.8	.2	2.2	2.7	36
3/2/1980	2.6	.7	.1	1.3	2.7	36
3/3/1980	2.1	.7	.2	1.0	2.7	36
3/4/1980	1.7	.7	.2	1.0	2.7	36
3/5/1980	1.6	.7	.2	1.0	2.7	35
3/6/1980	1.5	.7	.2	1.0	2.7	35
3/7/1980	1.5	.7	.2	1.0	2.7	35
3/8/1980	1.5	.7	.2	.9	2.7	35
3/9/1980	1.5	.7	.2	.9	2.7	35
3/10/1980	1.5	.6	.2	.9	2.7	35
3/11/1980	1.5	.5	.2	.9	2.7	35
3/12/1980	1.5	.4	.2	1.0	3.4	35
3/13/1980	1.4	.3	.2	1.0	3.3	35
3/14/1980	1.4	.3	.2	1.0	3.2	34
3/15/1980	1.3	.3	.2	1.0	3.2	34
3/16/1980	1.4	.5	.2	1.0	3.2	34
3/17/1980	1.5	.5	.2	1.0	3.2	34
3/18/1980	1.5	.3	.2	.9	3.2	34
3/19/1980	1.5	.3	.2	.8	3.2	34
3/20/1980	1.4	0.4	0.2	0.8	3.2	34
3/21/1980	1.3	.3	.2	.8	2.8	34
3/22/1980	1.3	.3	.2	.8	2.7	34
3/23/1980	1.3	.4	.2	.8	3.0	34
3/24/1980	1.3	.4	.2	.8	2.8	34
3/25/1980	1.4	.8	.2	.8	2.7	34
3/26/1980	1.5	.9	.2	.8	2.7	34
3/27/1980	42.0	36.0	12.0	9.0	7.0	34
3/28/1980	52.0	9.3	1.4	6.9	8.3	36
3/29/1980	27.0	4.8	1.0	6.3	7.5	39
3/30/1980	20.0	3.2	.9	5.8	7.0	43
3/31/1980	19.0	2.7	.8	5.2	7.0	43
4/1/1980	18.0	4.3	1.5	4.9	7.7	43
4/2/1980	18.0	6.1	2.0	4.9	8.2	43
4/3/1980	17.0	3.6	1.2	4.3	8.3	42
4/4/1980	16.0	2.6	1.1	3.9	8.3	42
4/5/1980	15.0	2.3	1.1	3.5	8.3	42
4/6/1980	15.0	2.1	1.1	3.3	8.3	42
4/7/1980	15.0	2.0	1.1	3.2	8.1	41
4/8/1980	13.0	1.4	1.0	2.9	7.7	41
4/9/1980	13.0	1.2	1.0	2.6	6.5	41
4/10/1980	13.0	1.2	1.0	2.7	6.5	41
4/11/1980	12.0	1.2	1.0	2.7	6.5	40
4/12/1980	33.0	1.7	1.0	2.7	6.5	40
4/13/1980	71.0	3.1	1.7	2.7	32.0	40
4/14/1980	39.0	1.7	1.6	2.4	10.0	42
4/15/1980	30.0	1.5	1.5	2.3	10.0	43
4/16/1980	27.0	1.5	1.1	2.1	10.0	43
4/17/1980	24.0	1.5	1.0	1.7	10.0	43
4/18/1980	24.0	1.2	1.0	1.7	9.0	42
4/19/1980	22.0	1.2	.9	1.7	9.0	42
4/20/1980	22.0	1.2	.9	1.7	9.0	41
4/21/1980	20.0	1.2	.9	1.6	9.0	41
4/22/1980	20.0	1.2	.9	1.8	9.4	41
4/23/1980	19.0	1.1	.9	1.7	9.8	41
4/24/1980	18.0	1.0	.7	1.6	9.8	40
4/25/1980	51.0	10.0	3.9	4.0	13.0	41
4/26/1980	35.0	.2	1.3	1.7	14.0	43
4/27/1980	26.0	.2	1.1	1.5	13.0	44
4/28/1980	24.0	.2	1.0	1.5	12.0	44
4/29/1980	22.0	.2	1.0	1.4	11.0	44
4/30/1980	22.0	.2	.9	1.3	11.0	43
5/1/1980	35.0	.2	.9	1.3	11.0	42
5/2/1980	24.0	.1	.9	1.3	11.0	42
5/3/1980	22.0	.2	.9	1.3	11.0	42
5/4/1980	20.0	.2	.7	1.3	11.0	42
5/5/1980	20.0	.2	.7	1.2	11.0	42
5/6/1980	19.0	.2	.7	1.1	11.0	42
5/7/1980	24.0	2.7	1.1	1.6	11.0	42
5/8/1980	79.0	23.0	76.0	11.0	12.0	44

Appendix 2. Daily mean streamflow for the five creeks providing recharge to the Barton Springs segment of the Edwards aquifer and daily mean discharge for Barton Springs, Austin, Texas, 1978–2003—Continued.

Date	Barton Creek	Williamson Creek	Slaughter Creek	Bear Creek	Onion Creek	Barton Springs
5/9/1980	62.0	1.8	7.7	4.1	13.0	48
5/10/1980	41.0	1.3	4.7	3.1	13.0	51
5/11/1980	38.0	1.2	4.4	2.9	13.0	51
5/12/1980	186.0	63.0	104.0	41.0	91.0	54
5/13/1980	205.0	56.0	99.0	73.0	88.0	58
5/14/1980	333.0	51.0	134.0	51.0	225.0	61
5/15/1980	267.0	44.0	108.0	43.0	115.0	65
5/16/1980	257.0	42.0	94.0	43.0	101.0	68
5/17/1980	220.0	26.0	48.0	34.0	87.0	73
5/18/1980	183.0	17.0	28.0	29.0	77.0	74
5/19/1980	177.0	16.0	27.0	28.0	82.0	75
5/20/1980	146.0	11.0	19.0	23.0	74.0	75
5/21/1980	129.0	9.7	16.0	55.0	255.0	77
5/22/1980	115.0	8.8	12.0	18.0	145.0	77
5/23/1980	104.0	8.4	11.0	15.0	124.0	77
5/24/1980	91.0	8.8	9.1	14.0	114.0	77
5/25/1980	86.0	9.5	7.2	13.0	107.0	77
5/26/1980	81.0	11.0	6.7	12.0	101.0	77
5/27/1980	73.0	11.0	5.7	12.0	97.0	77
5/28/1980	67.0	12.0	4.8	11.0	90.0	77
5/29/1980	60.0	14.0	4.8	11.0	83.0	77
5/30/1980	54.0	13.0	4.1	11.0	72.0	78
5/31/1980	48.0	12.0	3.7	9.9	94.0	77
6/1/1980	42.0	12.0	3.1	9.7	91.0	77
6/2/1980	36.0	10.0	3.1	9.7	72.0	77
6/3/1980	30.0	10.0	2.9	9.7	69.0	77
6/4/1980	27.0	8.5	2.4	9.1	61.0	77
6/5/1980	26.0	7.8	2.2	8.5	53.0	77
6/6/1980	24.0	6.9	2.0	8.0	44.0	74
6/7/1980	21.0	6.2	2.0	7.3	42.0	73
6/8/1980	19.0	5.8	1.6	6.8	39.0	73
6/9/1980	19.0	6.0	1.6	6.3	37.0	73
6/10/1980	19.0	5.9	1.6	6.1	35.0	73
6/11/1980	16.0	5.4	1.6	5.5	32.0	73
6/12/1980	15.0	4.7	1.3	5.0	29.0	72
6/13/1980	15.0	4.2	1.2	4.6	28.0	71
6/14/1980	13.0	3.4	1.1	4.0	26.0	71
6/15/1980	11.0	2.6	1.1	3.7	26.0	70
6/16/1980	9.0	2.2	1.0	3.5	26.0	69
6/17/1980	8.1	1.7	.9	3.3	24.0	70
6/18/1980	7.8	1.1	.7	3.0	23.0	70
6/19/1980	5.8	.8	.7	2.8	23.0	70
6/20/1980	5.0	.5	.7	2.5	22.0	70
6/21/1980	3.9	.5	.6	2.2	21.0	71
6/22/1980	3.2	.5	.5	2.1	20.0	70
6/23/1980	2.4	.2	.5	1.9	18.0	69
6/24/1980	2.2	.1	.5	1.7	17.0	68
6/25/1980	2.1	0	.5	1.6	15.0	68
6/26/1980	2.1	0	.4	1.5	14.0	67
6/27/1980	2.1	0	.4	1.4	12.0	66
6/28/1980	2.1	0	0.3	1.2	10.0	67
6/29/1980	2.1	0	.3	1.1	9.0	66
6/30/1980	2.1	0	.3	1.1	7.9	65
7/1/1980	2.0	0	.3	1.0	7.5	64
7/2/1980	1.8	0	.2	1.0	6.1	64
7/3/1980	1.6	0	.2	.9	5.6	64
7/4/1980	1.4	0	.2	.8	4.8	62
7/5/1980	1.2	0	.2	.7	4.3	62
7/6/1980	1.0	0	.2	.7	3.8	62
7/7/1980	1.0	0	.2	.7	2.7	61
7/8/1980	.9	0	.2	.6	3.2	61
7/9/1980	.8	0	.2	.6	2.2	60
7/10/1980	.6	0	.1	.6	2.2	59
7/11/1980	.6	0	.1	.6	2.2	58
7/12/1980	.5	0	.1	.5	2.7	59
7/13/1980	.5	0	.1	.5	2.2	58
7/14/1980	.4	0	0	.4	2.7	58
7/15/1980	.4	0	0	.4	2.7	57
7/16/1980	.4	0	0	.4	1.5	57
7/17/1980	.4	0	0	.3	1.3	56
7/18/1980	.4	0	0	.3	1.1	55
7/19/1980	.3	0	0	.3	1.1	55
7/20/1980	.3	0	0	.3	1.1	55
7/21/1980	.3	0	0	.3	1.1	54
7/22/1980	.4	0	0	.3	1.3	54
7/23/1980	.4	0	0	.3	1.3	54
7/24/1980	.3	0	0	.3	1.0	53
7/25/1980	.3	0	0	.3	.9	52
7/26/1980	.3	0	0	.3	.9	51
7/27/1980	.3	0	0	.2	.9	51
7/28/1980	.3	0	0	.2	.8	51
7/29/1980	.3	0	0	.2	.8	51
7/30/1980	.2	0	0	.2	.8	51
7/31/1980	.2	0	0	.2	.8	51
8/1/1980	.2	0	0	.2	.8	51
8/2/1980	.2	0	0	.1	.8	46
8/3/1980	.2	0	0	.1	.9	45
8/4/1980	.2	0	0	.1	1.1	45
8/5/1980	.2	0	0	.1	1.1	44
8/6/1980	.2	0	0	.1	1.0	44
8/7/1980	.2	0	0	.1	1.0	44
8/8/1980	.2	0	0	.1	1.1	43
8/9/1980	.1	0	0	0	1.1	43
8/10/1980	.2	0	0	.1	1.8	42
8/11/1980	.2	0	0	.2	2.5	42
8/12/1980	.2	0	0	.1	1.5	42
8/13/1980	.2	0	0	.1	1.3	42
8/14/1980	.2	0	0	.1	1.2	42
8/15/1980	.1	0	0	.1	1.1	42
8/16/1980	.1	0	0	.1	1.3	42

Appendix 2. Daily mean streamflow for the five creeks providing recharge to the Barton Springs segment of the Edwards aquifer and daily mean discharge for Barton Springs, Austin, Texas, 1978–2003—Continued.

Date	Barton Creek	Williamson Creek	Slaughter Creek	Bear Creek	Onion Creek	Barton Springs
8/17/1980	0.1	0	0	0.1	.9	41
8/18/1980	.1	0	0	.1	1.0	41
8/19/1980	0	0	0	.1	1.1	41
8/20/1980	0	0	0	.1	1.0	40
8/21/1980	0	0	0	.1	.9	40
8/22/1980	0	0	0	.1	.9	40
8/23/1980	0	0	0	0	.8	40
8/24/1980	0	0	0	0	.7	40
8/25/1980	0	0	0	0	.6	40
8/26/1980	0	0	0	0	.5	38
8/27/1980	0	0	0	0	.5	38
8/28/1980	0	0	0	0	.4	37
8/29/1980	0	0	0	0	.4	38
8/30/1980	0	0	0	0	.4	38
8/31/1980	0	0	0	0	.4	38
9/1/1980	0	0	0	0	.4	37
9/2/1980	0	0	0	0	.4	37
9/3/1980	0	0	0	0	.3	37
9/4/1980	0	0	0	0	.3	37
9/5/1980	0	0	0	0	.3	36
9/6/1980	0	.3	0	0	.5	37
9/7/1980	0	8.8	0	.2	9.0	37
9/8/1980	.1	.5	0	.2	29.0	38
9/9/1980	7.0	0	0	.3	16.0	38
9/10/1980	4.2	0	0	.2	10.0	38
9/11/1980	2.3	0	0	.2	8.6	38
9/12/1980	1.4	0	0	.2	7.5	36
9/13/1980	.8	0	0	.2	5.2	37
9/14/1980	.7	0	0	.1	4.8	37
9/15/1980	.6	0	0	.1	4.3	36
9/16/1980	.5	0	0	.1	3.8	35
9/17/1980	.4	0	0	.1	2.7	35
9/18/1980	.4	0	0	.1	2.2	35
9/19/1980	.4	22.0	0	11.0	41.0	37
9/20/1980	1.1	0	0	.3	15.0	38
9/21/1980	3.3	0	0	.2	8.6	38
9/22/1980	2.3	0	0	.2	7.0	38
9/23/1980	1.5	0	0	.2	5.6	38
9/24/1980	1.2	0	0	.2	5.2	37
9/25/1980	.9	4.8	0	.3	5.2	37
9/26/1980	3.0	13.0	3.3	.6	4.3	37
9/27/1980	6.2	5.8	.2	1.0	6.5	37
9/28/1980	7.1	8.0	.4	1.9	9.8	37
9/29/1980	11.0	1.5	.1	2.1	14.0	37
9/30/1980	54.0	2.2	4.7	51.0	116.0	37
10/1/1980	31.0	.6	.7	15.0	51.0	39
10/2/1980	18.0	.5	.5	13.0	37.0	42
10/3/1980	14.0	.4	.3	11.0	30.0	45
10/4/1980	13.0	.2	.3	10.0	26.0	46
10/5/1980	11.0	.2	.3	9.5	22.0	47
10/6/1980	11.0	0.2	0.3	8.6	14.0	48
10/7/1980	9.5	.2	.3	7.6	18.0	48
10/8/1980	8.8	.2	.3	7.0	18.0	48
10/9/1980	8.6	.1	.3	6.4	17.0	47
10/10/1980	8.0	.1	.2	5.5	15.0	47
10/11/1980	7.3	.1	.2	5.0	15.0	47
10/12/1980	7.0	0	.2	4.5	13.0	46
10/13/1980	6.3	0	.2	4.3	12.0	46
10/14/1980	6.0	.1	.2	4.3	12.0	46
10/15/1980	5.8	0	.2	4.3	12.0	46
10/16/1980	785.0	.6	.4	4.6	198.0	48
10/17/1980	59.0	.1	.3	4.0	38.0	48
10/18/1980	40.0	.1	.3	3.5	27.0	47
10/19/1980	43.0	.1	.3	3.8	28.0	47
10/20/1980	28.0	.1	.3	3.9	24.0	47
10/21/1980	25.0	.1	.3	3.0	22.0	47
10/22/1980	23.0	.1	.3	2.7	21.0	47
10/23/1980	21.0	.1	.3	2.4	19.0	47
10/24/1980	20.0	.1	.3	1.9	16.0	46
10/25/1980	18.0	.1	.3	1.8	14.0	46
10/26/1980	18.0	.1	.3	1.7	14.0	46
10/27/1980	18.0	0	.3	1.7	15.0	46
10/28/1980	17.0	0	.3	1.7	15.0	45
10/29/1980	16.0	0	.3	1.6	15.0	45
10/30/1980	16.0	0	.3	1.5	16.0	45
10/31/1980	15.0	0	.3	1.4	16.0	45
11/1/1980	14.0	0	.3	1.3	15.0	45
11/2/1980	14.0	0	.3	1.2	15.0	44
11/3/1980	13.0	0	.3	1.1	15.0	44
11/4/1980	13.0	0	.3	1.0	14.0	44
11/5/1980	12.0	0	.3	.9	13.0	43
11/6/1980	12.0	0	.3	.9	13.0	43
11/7/1980	11.0	0	.3	.9	12.0	43
11/8/1980	11.0	0	.3	.8	13.0	43
11/9/1980	11.0	0	.3	.8	11.0	42
11/10/1980	11.0	0	.3	.8	11.0	42
11/11/1980	10.0	0	.3	.9	12.0	42
11/12/1980	9.9	0	.3	.9	13.0	42
11/13/1980	9.5	0	.3	.9	9.8	42
11/14/1980	9.6	0	.3	.9	9.8	42
11/15/1980	9.6	0	.3	.8	9.0	41
11/16/1980	15.0	3.2	1.0	2.3	13.0	43
11/17/1980	30.0	.3	.6	3.3	22.0	43
11/18/1980	19.0	0	.5	2.1	17.0	43
11/19/1980	15.0	0	.4	1.8	14.0	43
11/20/1980	14.0	0	.4	1.7	11.0	42
11/21/1980	13.0	0	.4	1.6	11.0	42
11/22/1980	14.0	0	.4	1.7	13.0	42
11/23/1980	15.0	0	.4	1.9	17.0	42
11/24/1980	17.0	0	.4	1.7	15.0	42

Appendix 2. Daily mean streamflow for the five creeks providing recharge to the Barton Springs segment of the Edwards aquifer and daily mean discharge for Barton Springs, Austin, Texas, 1978–2003—Continued.

Date	Barton Creek	Williamson Creek	Slaughter Creek	Bear Creek	Onion Creek	Barton Springs
11/25/1980	19.0	2.1	0.8	2.9	14.0	43
11/26/1980	44.0	1.0	1.2	5.5	37.0	44
11/27/1980	44.0	.2	1.5	5.3	40.0	45
11/28/1980	39.0	.2	1.6	4.7	38.0	46
11/29/1980	37.0	.2	1.6	4.6	36.0	46
11/30/1980	36.0	.2	1.6	4.6	35.0	51
12/1/1980	35.0	.2	1.6	4.6	37.0	47
12/2/1980	32.0	.2	1.4	4.3	37.0	47
12/3/1980	30.0	.2	1.2	4.1	37.0	47
12/4/1980	30.0	.2	1.3	4.2	37.0	48
12/5/1980	31.0	.2	1.6	4.6	39.0	48
12/6/1980	31.0	.2	1.6	4.3	38.0	48
12/7/1980	30.0	.2	1.6	4.1	37.0	48
12/8/1980	39.0	2.4	2.6	5.4	39.0	48
12/9/1980	61.0	1.3	3.3	6.3	45.0	49
12/10/1980	48.0	.8	3.1	6.3	41.0	49
12/11/1980	45.0	.7	3.1	6.3	39.0	49
12/12/1980	45.0	.7	3.1	6.3	39.0	50
12/13/1980	44.0	.6	3.1	6.2	39.0	50
12/14/1980	44.0	.6	3.1	6.0	38.0	50
12/15/1980	51.0	3.5	4.4	5.9	38.0	51
12/16/1980	51.0	1.5	3.8	5.9	37.0	52
12/17/1980	45.0	1.2	3.1	5.4	35.0	52
12/18/1980	44.0	1.1	3.1	5.4	34.0	51
12/19/1980	40.0	.9	2.7	5.1	31.0	51
12/20/1980	37.0	.8	2.4	4.8	29.0	51
12/21/1980	37.0	.7	2.4	4.6	28.0	51
12/22/1980	37.0	.7	2.4	4.6	27.0	51
12/23/1980	37.0	.7	2.4	4.6	27.0	51
12/24/1980	35.0	.6	2.2	4.4	27.0	51
12/25/1980	32.0	.6	1.7	4.1	27.0	51
12/26/1980	32.0	.6	1.6	4.1	27.0	50
12/27/1980	31.0	.6	1.6	3.8	25.0	50
12/28/1980	30.0	.6	1.6	3.8	24.0	50
12/29/1980	29.0	.6	1.6	3.7	24.0	50
12/30/1980	27.0	.6	1.5	3.3	23.0	51
12/31/1980	27.0	.6	1.6	3.3	23.0	51
1/1/1981	26.0	.6	1.6	3.1	23.0	51
1/2/1981	25.0	.6	1.6	2.7	23.0	50
1/3/1981	24.0	.6	1.6	2.8	23.0	50
1/4/1981	24.0	.5	1.6	2.7	24.0	50
1/5/1981	23.0	.5	1.6	2.7	25.0	50
1/6/1981	23.0	.5	1.6	2.7	25.0	50
1/7/1981	23.0	.5	1.6	2.5	26.0	49
1/8/1981	22.0	.6	1.7	2.5	26.0	49
1/9/1981	22.0	.5	2.0	2.7	27.0	49
1/10/1981	22.0	.4	1.6	2.4	27.0	49
1/11/1981	21.0	.4	1.5	2.3	26.0	48
1/12/1981	19.0	.4	1.2	2.1	26.0	48
1/13/1981	19.0	.4	1.2	2.1	26.0	47
1/14/1981	19.0	0.4	1.2	2.1	27.0	47
1/15/1981	18.0	.4	1.2	2.0	27.0	46
1/16/1981	18.0	.4	1.1	1.9	26.0	46
1/17/1981	17.0	.4	1.0	1.8	26.0	46
1/18/1981	16.0	.4	.9	1.7	26.0	46
1/19/1981	21.0	4.9	2.4	4.2	26.0	46
1/20/1981	33.0	.6	3.2	6.1	26.0	48
1/21/1981	27.0	.2	2.7	4.6	26.0	48
1/22/1981	23.0	.2	2.4	4.1	26.0	48
1/23/1981	22.0	.2	2.4	4.1	25.0	49
1/24/1981	22.0	.2	2.6	3.9	26.0	49
1/25/1981	21.0	.2	2.6	3.7	25.0	49
1/26/1981	21.0	.2	2.6	3.5	25.0	49
1/27/1981	20.0	.2	2.4	3.5	24.0	49
1/28/1981	19.0	.2	2.0	3.3	23.0	49
1/29/1981	19.0	.4	2.0	3.3	24.0	49
1/30/1981	19.0	.4	1.7	3.3	23.0	49
1/31/1981	19.0	.3	1.6	3.4	21.0	49
2/1/1981	20.0	1.2	2.5	3.8	23.0	49
2/2/1981	21.0	.3	1.7	3.1	23.0	49
2/3/1981	19.0	.2	1.6	3.1	22.0	49
2/4/1981	19.0	1.3	2.1	3.9	22.0	49
2/5/1981	24.0	3.1	2.5	5.4	22.0	49
2/6/1981	26.0	2.1	2.6	5.7	23.0	50
2/7/1981	25.0	2.0	2.6	5.7	23.0	51
2/8/1981	25.0	1.9	2.6	5.7	24.0	51
2/9/1981	24.0	1.7	2.6	5.7	24.0	52
2/10/1981	28.0	3.7	3.1	7.1	39.0	52
2/11/1981	29.0	1.5	2.5	6.1	38.0	53
2/12/1981	26.0	1.5	2.4	6.1	37.0	53
2/13/1981	26.0	1.5	2.4	6.3	38.0	53
2/14/1981	27.0	1.5	2.4	6.4	38.0	54
2/15/1981	27.0	1.5	2.5	6.6	38.0	54
2/16/1981	27.0	1.5	2.6	6.6	39.0	54
2/17/1981	28.0	1.5	2.6	6.5	39.0	55
2/18/1981	28.0	1.7	2.6	6.5	38.0	55
2/19/1981	26.0	2.0	2.5	6.4	37.0	55
2/20/1981	26.0	2.0	2.4	6.0	37.0	55
2/21/1981	26.0	1.9	2.4	6.1	37.0	55
2/22/1981	25.0	1.4	2.0	5.7	36.0	54
2/23/1981	24.0	1.2	2.0	5.5	34.0	54
2/24/1981	24.0	1.3	2.0	5.4	34.0	54
2/25/1981	24.0	1.7	2.0	5.4	34.0	54
2/26/1981	24.0	1.6	2.0	5.3	34.0	54
2/27/1981	24.0	1.5	2.0	5.4	34.0	54
2/28/1981	24.0	1.3	1.8	5.2	34.0	55
3/1/1981	24.0	2.9	2.3	6.3	38.0	55
3/2/1981	26.0	1.1	2.0	5.7	38.0	55
3/3/1981	87.0	80.0	79.0	30.0	57.0	55
3/4/1981	913.0	67.0	57.0	66.0	765.0	59

Appendix 2. Daily mean streamflow for the five creeks providing recharge to the Barton Springs segment of the Edwards aquifer and daily mean discharge for Barton Springs, Austin, Texas, 1978–2003—Continued.

Date	Barton Creek	Williamson Creek	Slaughter Creek	Bear Creek	Onion Creek	Barton Springs
3/5/1981	228.0	21.0	13.0	19.0	139.0	63
3/6/1981	187.0	14.0	10.0	18.0	117.0	67
3/7/1981	192.0	17.0	11.0	19.0	116.0	69
3/8/1981	171.0	11.0	9.0	18.0	112.0	70
3/9/1981	148.0	8.3	8.3	17.0	103.0	71
3/10/1981	138.0	6.3	7.9	16.0	100.0	70
3/11/1981	141.0	8.0	8.9	17.0	102.0	70
3/12/1981	166.0	14.0	15.0	19.0	114.0	71
3/13/1981	214.0	17.0	20.0	23.0	142.0	70
3/14/1981	177.0	12.0	16.0	21.0	122.0	70
3/15/1981	163.0	9.8	14.0	20.0	120.0	69
3/16/1981	146.0	7.9	12.0	19.0	113.0	69
3/17/1981	140.0	6.7	12.0	18.0	111.0	68
3/18/1981	126.0	5.1	11.0	17.0	106.0	67
3/19/1981	115.0	4.3	9.1	15.0	99.0	67
3/20/1981	111.0	3.9	9.1	15.0	98.0	66
3/21/1981	106.0	3.3	9.1	14.0	96.0	66
3/22/1981	94.0	2.4	7.2	13.0	91.0	66
3/23/1981	89.0	2.3	5.7	13.0	87.0	66
3/24/1981	86.0	2.1	5.7	12.0	85.0	66
3/25/1981	81.0	2.0	5.7	11.0	84.0	66
3/26/1981	77.0	1.8	4.8	11.0	83.0	67
3/27/1981	75.0	1.7	4.8	11.0	81.0	67
3/28/1981	72.0	1.6	4.8	10.0	80.0	67
3/29/1981	103.0	2.2	4.8	10.0	97.0	67
3/30/1981	78.0	1.5	4.1	9.4	85.0	67
3/31/1981	65.0	1.2	3.7	9.0	79.0	67
4/1/1981	61.0	1.2	3.1	8.7	77.0	67
4/2/1981	56.0	1.2	2.9	8.4	74.0	66
4/3/1981	56.0	1.0	2.9	8.4	73.0	66
4/4/1981	49.0	1.0	2.9	8.0	69.0	66
4/5/1981	34.0	.9	2.6	7.4	63.0	65
4/6/1981	35.0	1.1	2.4	7.2	61.0	65
4/7/1981	34.0	1.6	2.4	7.1	61.0	65
4/8/1981	33.0	2.0	2.4	6.9	60.0	65
4/9/1981	33.0	2.3	2.4	6.5	58.0	65
4/10/1981	31.0	2.3	2.4	6.3	57.0	65
4/11/1981	29.0	2.3	2.2	6.2	50.0	65
4/12/1981	28.0	2.7	2.2	6.0	53.0	64
4/13/1981	26.0	2.5	2.0	5.6	50.0	63
4/14/1981	25.0	2.1	2.0	5.4	49.0	63
4/15/1981	23.0	2.0	1.8	5.2	48.0	63
4/16/1981	23.0	2.3	1.8	5.1	47.0	63
4/17/1981	23.0	2.3	1.8	4.8	46.0	63
4/18/1981	23.0	2.4	2.0	6.0	44.0	63
4/19/1981	22.0	2.4	2.0	5.4	41.0	63
4/20/1981	21.0	1.7	1.6	4.9	38.0	63
4/21/1981	21.0	2.1	1.6	4.8	37.0	63
4/22/1981	21.0	2.3	1.5	4.4	36.0	62
4/23/1981	23.0	7.4	2.6	6.8	43.0	62
4/24/1981	25.0	0.3	1.6	5.2	43.0	62
4/25/1981	21.0	.3	1.5	4.8	38.0	62
4/26/1981	20.0	.4	1.5	4.5	35.0	62
4/27/1981	19.0	.4	1.3	3.9	32.0	61
4/28/1981	17.0	.4	1.3	3.8	32.0	61
4/29/1981	17.0	.6	1.2	3.8	30.0	61
4/30/1981	16.0	.7	1.1	3.5	29.0	61
5/1/1981	16.0	1.3	1.1	3.4	28.0	61
5/2/1981	16.0	2.5	1.1	3.5	27.0	61
5/3/1981	16.0	5.2	1.1	3.5	28.0	61
5/4/1981	17.0	2.5	1.2	3.5	28.0	61
5/5/1981	16.0	2.0	1.1	3.3	27.0	60
5/6/1981	14.0	2.1	.9	2.8	25.0	60
5/7/1981	12.0	2.2	.8	2.6	23.0	59
5/8/1981	12.0	2.1	.8	2.5	22.0	59
5/9/1981	11.0	2.2	.8	2.5	21.0	58
5/10/1981	10.0	2.0	.7	2.2	20.0	57
5/11/1981	9.3	1.3	.7	2.1	20.0	56
5/12/1981	8.4	1.3	.7	2.1	20.0	56
5/13/1981	8.4	1.1	.7	2.1	19.0	56
5/14/1981	7.8	.6	.7	1.9	18.0	56
5/15/1981	7.3	.5	.6	1.8	17.0	56
5/16/1981	13.0	10.0	1.0	3.1	21.0	56
5/17/1981	12.0	.1	.8	2.2	21.0	55
5/18/1981	7.5	.1	.7	1.8	19.0	55
5/19/1981	6.3	.1	.6	1.5	17.0	54
5/20/1981	5.6	0	.6	1.4	16.0	53
5/21/1981	5.0	0	.6	1.2	14.0	53
5/22/1981	5.0	0	.6	1.3	15.0	53
5/23/1981	5.2	0	.6	1.3	15.0	53
5/24/1981	90.0	175.0	12.0	6.8	139.0	53
5/25/1981	296.0	130.0	57.0	24.0	124.0	55
5/26/1981	36.0	6.5	2.4	5.4	46.0	57
5/27/1981	24.0	3.7	1.6	4.1	34.0	59
5/28/1981	20.0	2.7	1.3	3.4	31.0	61
5/29/1981	18.0	2.1	1.1	3.4	30.0	62
5/30/1981	36.0	33.0	4.4	8.7	34.0	63
5/31/1981	51.0	13.0	5.1	8.5	45.0	65
6/1/1981	37.0	5.8	3.4	7.4	42.0	66
6/2/1981	38.0	4.1	3.3	6.8	46.0	67
6/3/1981	51.0	4.0	3.7	12.0	52.0	67
6/4/1981	154.0	40.0	52.0	43.0	93.0	68
6/5/1981	243.0	65.0	75.0	41.0	101.0	69
6/6/1981	162.0	18.0	23.0	27.0	72.0	70
6/7/1981	114.0	9.2	13.0	24.0	63.0	71
6/8/1981	93.0	5.7	9.8	21.0	59.0	72
6/9/1981	76.0	4.0	7.5	18.0	55.0	73
6/10/1981	170.0	71.0	27.0	55.0	53.0	73
6/11/1981	3,000.0	977.0	901.0	915.0	1,990.0	74
6/12/1981	2,310.0	299.0	423.0	586.0	1,840.0	76

Appendix 2. Daily mean streamflow for the five creeks providing recharge to the Barton Springs segment of the Edwards aquifer and daily mean discharge for Barton Springs, Austin, Texas, 1978–2003—Continued.

Date	Barton Creek	Williamson Creek	Slaughter Creek	Bear Creek	Onion Creek	Barton Springs
6/13/1981	1,920.0	489.0	681.0	684.0	1,730.0	77
6/14/1981	2,930.0	233.0	336.0	696.0	1,390.0	78
6/15/1981	1,100.0	63.0	61.0	172.0	225.0	80
6/16/1981	1,950.0	156.0	191.0	350.0	1,810.0	81
6/17/1981	941.0	54.0	54.0	131.0	238.0	83
6/18/1981	607.0	35.0	32.0	98.0	551.0	84
6/19/1981	446.0	26.0	25.0	78.0	486.0	86
6/20/1981	356.0	19.0	18.0	64.0	352.0	87
6/21/1981	288.0	15.0	11.0	50.0	307.0	88
6/22/1981	247.0	12.0	12.0	41.0	276.0	90
6/23/1981	204.0	9.4	11.0	35.0	238.0	91
6/24/1981	176.0	8.1	9.5	30.0	204.0	92
6/25/1981	182.0	8.6	8.4	27.0	203.0	94
6/26/1981	163.0	7.1	7.8	25.0	198.0	94
6/27/1981	121.0	8.0	7.8	22.0	193.0	95
6/28/1981	117.0	6.5	7.5	20.0	176.0	95
6/29/1981	106.0	5.3	6.5	19.0	164.0	96
6/30/1981	88.0	4.4	6.1	18.0	171.0	98
7/1/1981	79.0	4.2	5.5	16.0	173.0	99
7/2/1981	66.0	3.8	4.8	14.0	163.0	100
7/3/1981	59.0	3.4	4.6	13.0	154.0	101
7/4/1981	56.0	3.3	4.1	12.0	148.0	101
7/5/1981	205.0	61.0	17.0	18.0	154.0	101
7/6/1981	115.0	16.0	7.8	13.0	139.0	102
7/7/1981	72.0	11.0	5.8	11.0	123.0	102
7/8/1981	68.0	7.7	5.4	11.0	119.0	102
7/9/1981	62.0	9.3	4.8	10.0	114.0	102
7/10/1981	56.0	5.4	4.3	9.3	105.0	102
7/11/1981	48.0	4.0	3.6	8.8	97.0	104
7/12/1981	46.0	3.7	3.1	8.3	91.0	105
7/13/1981	44.0	2.6	2.8	7.5	87.0	104
7/14/1981	42.0	2.4	2.6	7.0	81.0	104
7/15/1981	40.0	2.0	2.3	6.5	76.0	104
7/16/1981	38.0	1.7	2.1	5.9	71.0	103
7/17/1981	36.0	1.5	1.8	5.6	65.0	103
7/18/1981	34.0	1.4	1.6	5.2	62.0	103
7/19/1981	32.0	.9	1.6	4.7	58.0	103
7/20/1981	30.0	.8	1.4	4.0	54.0	102
7/21/1981	28.0	.6	1.3	3.8	50.0	102
7/22/1981	26.0	.4	1.2	3.7	47.0	103
7/23/1981	29.0	.3	1.1	3.3	42.0	103
7/24/1981	23.0	.2	1.0	3.0	39.0	102
7/25/1981	22.0	.2	.9	2.9	37.0	102
7/26/1981	21.0	1.0	1.0	3.9	38.0	102
7/27/1981	20.0	.5	1.4	4.2	35.0	101
7/28/1981	16.0	.2	1.1	3.3	33.0	100
7/29/1981	13.0	.2	.8	2.8	29.0	100
7/30/1981	13.0	.1	.7	2.6	25.0	99
7/31/1981	12.0	.1	.6	2.4	22.0	99
8/1/1981	11.0	.1	.6	2.3	20.0	99
8/2/1981	11.0	0	0.5	2.2	19.0	99
8/3/1981	11.0	0	.4	2.1	17.0	98
8/4/1981	10.0	0	.3	2.0	15.0	98
8/5/1981	10.0	0	.3	1.9	13.0	98
8/6/1981	9.6	0	.3	1.7	11.0	97
8/7/1981	9.0	0	.3	1.7	8.4	96
8/8/1981	8.7	0	.3	1.5	7.0	97
8/9/1981	8.0	0	.2	1.4	6.2	96
8/10/1981	7.3	0	.2	1.4	6.1	96
8/11/1981	7.3	0	.2	1.4	6.2	95
8/12/1981	7.3	0	.2	1.6	6.7	95
8/13/1981	6.8	0	.2	1.4	8.0	94
8/14/1981	5.8	0	.2	1.4	6.5	94
8/15/1981	5.4	0	.2	1.3	6.5	93
8/16/1981	4.8	0	.2	1.3	6.1	93
8/17/1981	5.4	0	.1	1.2	7.9	92
8/18/1981	16.0	.3	.3	4.3	14.0	92
8/19/1981	35.0	0	.2	2.8	39.0	92
8/20/1981	21.0	0	.2	1.6	23.0	92
8/21/1981	11.0	0	.2	1.4	16.0	92
8/22/1981	8.7	0	.2	1.3	13.0	92
8/23/1981	5.4	0	.2	1.3	12.0	92
8/24/1981	2.6	0	.1	1.3	9.8	91
8/25/1981	2.2	0	.1	1.3	8.6	91
8/26/1981	2.1	0	.1	1.3	8.6	91
8/27/1981	1.8	0	.1	1.1	8.3	91
8/28/1981	1.5	0	.1	1.1	7.9	91
8/29/1981	1.4	0	.2	1.3	8.6	91
8/30/1981	2.0	0	.1	1.7	9.8	91
8/31/1981	4.7	0	.1	1.9	13.0	90
9/1/1981	6.5	0	.1	1.2	12.0	90
9/2/1981	4.8	0	.1	1.2	12.0	90
9/3/1981	13.0	5.8	.4	2.6	14.0	90
9/4/1981	8.3	.2	.2	1.3	15.0	90
9/5/1981	5.2	0	.2	1.2	13.0	89
9/6/1981	3.8	0	.2	1.1	10.0	89
9/7/1981	2.9	0	.2	1.1	9.8	88
9/8/1981	2.2	0	.2	1.8	12.0	88
9/9/1981	1.8	0	.2	1.1	12.0	88
9/10/1981	1.4	0	.2	1.0	12.0	87
9/11/1981	1.3	0	.1	.9	10.0	87
9/12/1981	1.3	0	.1	.9	8.7	86
9/13/1981	1.2	0	.1	.8	7.6	86
9/14/1981	1.3	4.6	.4	6.3	6.5	86
9/15/1981	3.8	1.6	.2	4.0	31.0	86
9/16/1981	4.4	0	.2	2.2	19.0	86
9/17/1981	2.9	0	.1	1.6	14.0	86
9/18/1981	2.1	0	.1	1.4	11.0	85
9/19/1981	1.5	0	.1	1.3	10.0	85
9/20/1981	1.3	0	.1	1.3	9.0	85

Appendix 2. Daily mean streamflow for the five creeks providing recharge to the Barton Springs segment of the Edwards aquifer and daily mean discharge for Barton Springs, Austin, Texas, 1978–2003—Continued.

Date	Barton Creek	Williamson Creek	Slaughter Creek	Bear Creek	Onion Creek	Barton Springs
9/21/1981	1.1	0	0.1	1.3	8.3	84
9/22/1981	.9	0	.1	1.3	7.8	84
9/23/1981	.8	0	.1	1.2	8.0	84
9/24/1981	.8	0	.1	1.2	6.0	84
9/25/1981	.8	0	.1	1.1	5.2	83
9/26/1981	.7	0	.1	1.1	4.4	83
9/27/1981	.7	0	.1	1.1	3.6	83
9/28/1981	.7	0	.1	1.0	3.1	82
9/29/1981	.7	0	.1	1.0	1.8	82
9/30/1981	.6	0	.1	1.0	1.6	82
10/1/1981	.5	0	.1	1.0	1.8	81
10/2/1981	.4	0	0	.9	1.8	81
10/3/1981	.5	0	0	.9	1.8	81
10/4/1981	.5	0	0	.9	1.8	81
10/5/1981	.4	0	0	.9	1.8	81
10/6/1981	854.0	12.0	3.2	19.0	1,150.0	82
10/7/1981	176.0	3.6	2.5	8.1	139.0	84
10/8/1981	96.0	.1	2.0	6.1	93.0	86
10/9/1981	61.0	.1	.8	5.7	65.0	88
10/10/1981	47.0	0	.5	4.9	53.0	90
10/11/1981	43.0	2.3	1.8	4.7	45.0	91
10/12/1981	38.0	.1	.9	4.7	40.0	91
10/13/1981	37.0	.1	1.6	4.6	40.0	90
10/14/1981	34.0	0	2.1	4.5	43.0	90
10/15/1981	30.0	0	1.4	4.1	36.0	89
10/16/1981	28.0	0	1.2	4.0	30.0	88
10/17/1981	26.0	0	1.1	3.8	27.0	88
10/18/1981	25.0	0	.9	3.5	23.0	87
10/19/1981	23.0	0	.8	3.3	20.0	87
10/20/1981	22.0	0	.8	3.3	21.0	87
10/21/1981	22.0	0	.9	3.2	21.0	86
10/22/1981	24.0	.4	1.6	3.9	22.0	86
10/23/1981	27.0	.1	1.5	3.7	26.0	85
10/24/1981	24.0	0	1.2	3.3	26.0	84
10/25/1981	23.0	0	1.2	3.3	22.0	84
10/26/1981	21.0	0	1.0	3.1	20.0	85
10/27/1981	20.0	0	.9	2.9	18.0	85
10/28/1981	19.0	0	.9	2.8	17.0	85
10/29/1981	19.0	0	.9	2.8	16.0	85
10/30/1981	19.0	.1	1.0	2.7	18.0	85
10/31/1981	24.0	1.6	4.8	3.3	27.0	85
11/1/1981	33.0	.2	4.5	2.9	51.0	85
11/2/1981	27.0	.1	3.1	2.5	32.0	86
11/3/1981	24.0	.1	2.6	2.5	28.0	86
11/4/1981	23.0	0	2.4	2.3	27.0	86
11/5/1981	22.0	0	2.2	2.2	26.0	85
11/6/1981	22.0	0	2.0	2.1	25.0	85
11/7/1981	21.0	0	1.8	2.1	24.0	85
11/8/1981	26.0	.9	4.2	2.7	26.0	85
11/9/1981	30.0	.2	3.4	2.3	38.0	85
11/10/1981	23.0	0.1	2.5	2.3	28.0	85
11/11/1981	22.0	.1	2.4	2.3	27.0	85
11/12/1981	21.0	.1	2.4	2.3	26.0	85
11/13/1981	19.0	.1	2.4	2.1	26.0	84
11/14/1981	18.0	.1	2.0	2.1	27.0	84
11/15/1981	17.0	.1	2.0	2.1	25.0	84
11/16/1981	16.0	.1	1.8	2.1	25.0	84
11/17/1981	17.0	.1	1.8	2.1	24.0	84
11/18/1981	17.0	.2	1.8	2.1	24.0	84
11/19/1981	17.0	.1	1.7	2.1	23.0	83
11/20/1981	17.0	.1	1.5	1.9	22.0	82
11/21/1981	16.0	.1	1.5	1.9	21.0	82
11/22/1981	16.0	.1	1.5	1.7	21.0	81
11/23/1981	16.0	.1	1.5	1.7	21.0	81
11/24/1981	16.0	.1	1.4	1.7	20.0	81
11/25/1981	16.0	.1	1.3	1.7	20.0	81
11/26/1981	16.0	0	1.2	1.7	20.0	81
11/27/1981	16.0	0	1.1	1.7	20.0	80
11/28/1981	15.0	0	1.1	1.7	19.0	80
11/29/1981	15.0	0	1.1	1.7	19.0	80
11/30/1981	15.0	0	1.2	1.7	19.0	80
12/1/1981	15.0	0	1.1	1.6	18.0	80
12/2/1981	14.0	0	1.0	1.4	17.0	79
12/3/1981	14.0	0	.9	1.4	16.0	79
12/4/1981	13.0	0	.9	1.4	15.0	79
12/5/1981	12.0	0	.8	1.4	15.0	79
12/6/1981	11.0	0	.9	1.4	16.0	79
12/7/1981	11.0	0	.9	1.4	15.0	78
12/8/1981	11.0	0	.9	1.4	15.0	78
12/9/1981	11.0	0	.9	1.4	15.0	78
12/10/1981	11.0	0	.9	1.5	15.0	77
12/11/1981	11.0	0	.9	1.3	15.0	77
12/12/1981	10.0	0	.8	1.3	15.0	75
12/13/1981	9.6	0	.8	1.4	14.0	76
12/14/1981	8.7	0	.7	1.4	14.0	76
12/15/1981	9.0	0	.7	1.1	13.0	76
12/16/1981	9.5	0	.7	1.2	14.0	75
12/17/1981	9.6	0	.7	1.2	13.0	75
12/18/1981	8.6	0	.6	1.0	13.0	75
12/19/1981	7.8	0	.6	1.0	12.0	75
12/20/1981	8.4	0	.6	1.2	12.0	74
12/21/1981	9.0	0	.8	1.1	12.0	72
12/22/1981	9.0	0	.7	1.0	12.0	72
12/23/1981	7.8	0	.6	1.0	12.0	71
12/24/1981	7.6	0	.6	1.1	12.0	70
12/25/1981	7.1	0	.6	1.0	11.0	70
12/26/1981	7.3	0	.6	1.0	11.0	70
12/27/1981	7.0	0	.6	1.0	11.0	69
12/28/1981	7.0	0	.6	1.2	11.0	69
12/29/1981	6.8	0	.6	1.0	11.0	68

Appendix 2. Daily mean streamflow for the five creeks providing recharge to the Barton Springs segment of the Edwards aquifer and daily mean discharge for Barton Springs, Austin, Texas, 1978–2003—Continued.

Date	Barton Creek	Williamson Creek	Slaughter Creek	Bear Creek	Onion Creek	Barton Springs
12/30/1981	6.8	0	0.6	1.0	11.0	68
12/31/1981	6.9	0	.6	1.2	11.0	68
1/1/1982	7.0	0	.5	1.2	11.0	67
1/2/1982	7.0	0	.5	1.0	11.0	67
1/3/1982	6.7	0	.5	1.0	11.0	67
1/4/1982	5.8	0	.5	1.0	9.8	67
1/5/1982	5.6	0	.5	.9	9.8	66
1/6/1982	6.0	0	.5	.8	10.0	64
1/7/1982	6.1	0	.5	.9	9.7	63
1/8/1982	5.6	0	.4	.9	9.1	63
1/9/1982	5.6	0	.4	.8	8.6	62
1/10/1982	5.6	0	.4	.8	8.2	62
1/11/1982	5.6	0	.4	.9	7.8	62
1/12/1982	6.3	0	.6	1.2	9.8	62
1/13/1982	6.8	0	.5	.9	9.8	62
1/14/1982	7.0	0	.5	.9	9.8	62
1/15/1982	7.0	0	.5	.9	9.8	61
1/16/1982	6.3	0	.4	.9	9.8	61
1/17/1982	6.1	0	.4	.7	9.4	60
1/18/1982	5.8	0	.4	.7	9.4	59
1/19/1982	5.8	0	.4	.8	9.4	58
1/20/1982	5.8	0	.4	.8	9.4	58
1/21/1982	5.8	0	.4	.7	9.4	57
1/22/1982	5.8	0	.4	.7	9.4	57
1/23/1982	5.6	0	.4	.7	9.3	56
1/24/1982	5.4	0	.4	.7	9.0	56
1/25/1982	5.2	0	.4	.7	9.0	56
1/26/1982	4.8	0	.3	.6	9.0	55
1/27/1982	4.8	0	.3	.6	9.0	55
1/28/1982	4.8	0	.3	.6	8.6	55
1/29/1982	4.8	0	.3	.6	8.6	54
1/30/1982	5.2	0	.5	.8	8.6	55
1/31/1982	4.6	0	.4	.6	8.3	55
2/1/1982	4.1	0	.3	.6	8.3	56
2/2/1982	4.0	0	.3	.6	8.5	57
2/3/1982	3.5	0	.3	.6	8.6	56
2/4/1982	3.3	0	.3	.6	8.6	55
2/5/1982	3.2	0	.3	.6	8.6	55
2/6/1982	3.2	0	.3	.5	8.0	54
2/7/1982	3.1	0	.3	.6	7.9	54
2/8/1982	3.1	0	.3	.5	7.5	51
2/9/1982	3.1	0	.3	.5	7.4	50
2/10/1982	3.1	0	.3	.5	7.0	50
2/11/1982	3.1	0	.3	.5	7.0	49
2/12/1982	3.0	0	.3	.5	7.0	49
2/13/1982	2.9	0	.3	.5	7.0	50
2/14/1982	2.9	0	.3	.5	7.0	53
2/15/1982	2.9	0	.3	.5	7.0	53
2/16/1982	2.9	0	.3	.5	7.0	53
2/17/1982	2.9	0	.3	.5	7.0	53
2/18/1982	2.8	0	0.2	0.5	7.0	52
2/19/1982	2.7	0	.2	.5	6.5	52
2/20/1982	2.7	0	.2	.5	6.5	52
2/21/1982	2.7	0	.2	.5	6.6	52
2/22/1982	2.7	0	.2	.5	6.5	52
2/23/1982	2.8	0	.2	.5	6.5	52
2/24/1982	2.8	0	.2	.4	6.3	51
2/25/1982	2.8	0	.2	.5	6.1	50
2/26/1982	3.7	0	.4	.6	7.2	51
2/27/1982	3.2	0	.3	.5	6.5	52
2/28/1982	2.8	0	.2	.5	6.5	51
3/1/1982	3.1	0	.2	.5	6.5	51
3/2/1982	3.0	0	.2	.5	6.5	51
3/3/1982	2.9	0	.2	.5	6.1	51
3/4/1982	2.9	0	.2	.5	6.1	51
3/5/1982	2.8	0	.2	.5	6.1	51
3/6/1982	2.8	0	.2	.5	6.1	50
3/7/1982	2.8	0	.2	.4	6.2	49
3/8/1982	2.8	0	.2	.4	4.8	48
3/9/1982	2.8	0	.2	.4	4.8	48
3/10/1982	2.8	0	.2	.4	4.8	48
3/11/1982	2.9	0	.2	.4	4.8	47
3/12/1982	2.9	0	.2	.4	4.8	47
3/13/1982	2.9	0	.2	.5	4.8	46
3/14/1982	2.9	0	.2	.5	4.8	45
3/15/1982	2.9	0	.2	.5	4.8	45
3/16/1982	2.9	0	.2	.5	4.8	44
3/17/1982	2.9	0	.2	.5	3.8	44
3/18/1982	2.9	0	.2	.4	3.8	43
3/19/1982	2.9	0	.2	.4	3.8	42
3/20/1982	2.8	0	.2	.4	3.8	42
3/21/1982	2.8	0	.2	.4	3.8	42
3/22/1982	2.8	.2	.2	.4	3.2	46
3/23/1982	3.4	4.3	.7	.5	3.2	46
3/24/1982	3.5	.2	.3	.4	3.2	47
3/25/1982	3.4	0	.2	.4	3.2	46
3/26/1982	3.2	0	.2	.4	3.2	44
3/27/1982	3.3	.2	.3	.4	5.4	42
3/28/1982	3.3	.1	.3	.4	6.1	43
3/29/1982	3.4	.1	.3	.4	5.6	42
3/30/1982	3.5	.1	.3	.4	5.6	42
3/31/1982	3.4	0	.3	.4	5.2	42
4/1/1982	3.3	0	.3	.4	5.2	42
4/2/1982	3.2	.1	.3	.4	5.2	41
4/3/1982	3.1	0	.2	.3	5.2	41
4/4/1982	2.8	0	.2	.3	4.8	41
4/5/1982	2.8	0	.2	.3	4.8	41
4/6/1982	2.6	0	.2	.3	3.8	40
4/7/1982	2.6	0	.2	.3	3.4	40
4/8/1982	2.7	0	.2	.3	4.0	40

Appendix 2. Daily mean streamflow for the five creeks providing recharge to the Barton Springs segment of the Edwards aquifer and daily mean discharge for Barton Springs, Austin, Texas, 1978–2003—Continued.

Date	Barton Creek	Williamson Creek	Slaughter Creek	Bear Creek	Onion Creek	Barton Springs
4/9/1982	2.7	0.3	0.3	0.3	3.4	41
4/10/1982	2.7	.1	.3	.3	3.3	41
4/11/1982	2.7	0	.3	.3	2.6	40
4/12/1982	2.8	0	.3	.3	2.2	40
4/13/1982	2.5	0	.2	.3	2.2	40
4/14/1982	2.7	0	.2	.3	1.7	40
4/15/1982	2.7	0	.2	.3	2.0	38
4/16/1982	2.6	0	.2	.3	2.2	37
4/17/1982	2.5	0	.2	.3	2.0	38
4/18/1982	2.5	0	.2	.3	1.4	38
4/19/1982	2.9	0	.2	.3	2.0	38
4/20/1982	3.4	2.4	.5	.9	6.2	41
4/21/1982	3.9	.2	.1	.4	4.3	41
4/22/1982	20.0	30.0	7.9	3.2	8.4	46
4/23/1982	31.0	14.0	6.7	2.6	14.0	50
4/24/1982	31.0	15.0	9.4	2.8	20.0	51
4/25/1982	36.0	8.8	8.6	3.2	23.0	51
4/26/1982	29.0	6.7	5.9	3.0	19.0	51
4/27/1982	27.0	4.9	5.1	2.7	17.0	51
4/28/1982	25.0	4.4	4.7	2.6	16.0	51
4/29/1982	24.0	3.4	4.0	2.4	15.0	50
4/30/1982	23.0	3.0	3.7	2.3	15.0	50
5/1/1982	23.0	2.6	3.6	2.2	14.0	50
5/2/1982	22.0	2.4	3.1	2.0	13.0	49
5/3/1982	22.0	2.0	2.8	1.9	13.0	49
5/4/1982	20.0	1.7	2.6	1.7	12.0	48
5/5/1982	19.0	1.5	2.4	1.7	11.0	48
5/6/1982	29.0	14.0	7.7	3.4	16.0	48
5/7/1982	28.0	2.7	3.6	2.2	17.0	48
5/8/1982	23.0	2.0	3.1	1.8	15.0	48
5/9/1982	21.0	1.7	2.8	1.7	13.0	49
5/10/1982	21.0	1.7	2.6	1.7	13.0	49
5/11/1982	21.0	1.7	2.6	1.8	13.0	48
5/12/1982	22.0	4.9	3.4	2.0	14.0	48
5/13/1982	1,720.0	194.0	249.0	258.0	1,960.0	54
5/14/1982	298.0	27.0	31.0	22.0	201.0	60
5/15/1982	172.0	14.0	25.0	19.0	133.0	66
5/16/1982	145.0	12.0	44.0	21.0	115.0	71
5/17/1982	215.0	14.0	42.0	22.0	117.0	72
5/18/1982	150.0	7.4	23.0	19.0	109.0	72
5/19/1982	118.0	4.8	16.0	18.0	102.0	73
5/20/1982	98.0	3.2	12.0	16.0	96.0	73
5/21/1982	84.0	2.5	11.0	15.0	85.0	73
5/22/1982	75.0	2.0	9.1	14.0	78.0	73
5/23/1982	65.0	1.6	7.8	12.0	72.0	72
5/24/1982	78.0	9.5	16.0	14.0	74.0	72
5/25/1982	67.0	2.7	9.8	12.0	71.0	72
5/26/1982	54.0	2.0	7.8	11.0	62.0	72
5/27/1982	48.0	1.5	7.2	11.0	58.0	71
5/28/1982	44.0	1.2	6.2	10.0	55.0	71
5/29/1982	39.0	0.9	5.3	9.6	51.0	71
5/30/1982	35.0	.6	4.8	8.7	46.0	71
5/31/1982	31.0	.4	4.1	8.1	42.0	70
6/1/1982	27.0	.3	4.1	7.5	38.0	70
6/2/1982	26.0	.2	3.7	6.9	36.0	70
6/3/1982	24.0	.2	3.7	6.9	34.0	69
6/4/1982	30.0	.2	3.4	6.6	32.0	69
6/5/1982	39.0	.2	3.1	6.0	30.0	70
6/6/1982	30.0	.2	2.6	5.7	27.0	70
6/7/1982	25.0	.2	2.6	5.4	26.0	70
6/8/1982	22.0	.3	2.2	4.9	24.0	69
6/9/1982	20.0	.3	2.0	4.3	23.0	69
6/10/1982	21.0	.3	1.6	3.8	20.0	68
6/11/1982	18.0	.3	1.5	3.3	18.0	68
6/12/1982	25.0	.8	2.0	4.9	22.0	70
6/13/1982	29.0	.3	1.6	3.6	25.0	70
6/14/1982	22.0	.2	1.3	3.1	21.0	70
6/15/1982	19.0	.2	1.2	2.9	19.0	69
6/16/1982	21.0	2.3	1.8	3.6	21.0	69
6/17/1982	19.0	.2	1.2	2.9	21.0	68
6/18/1982	15.0	.1	1.0	2.7	17.0	67
6/19/1982	13.0	0	.8	2.5	15.0	66
6/20/1982	12.0	0	.7	2.3	14.0	65
6/21/1982	12.0	0	.7	2.1	13.0	64
6/22/1982	68.0	7.9	37.0	17.0	16.0	65
6/23/1982	83.0	.6	6.5	7.8	19.0	67
6/24/1982	22.0	0	1.9	4.1	18.0	67
6/25/1982	17.0	0	1.5	3.1	15.0	67
6/26/1982	16.0	0	1.4	2.7	15.0	67
6/27/1982	15.0	.7	2.1	5.2	16.0	67
6/28/1982	12.0	0	1.3	3.6	14.0	67
6/29/1982	11.0	0	1.1	2.9	12.0	67
6/30/1982	10.0	0	1.1	3.9	13.0	67
7/1/1982	9.9	0	1.2	3.4	12.0	66
7/2/1982	9.4	0	1.0	2.9	12.0	65
7/3/1982	8.7	0	.7	2.6	12.0	65
7/4/1982	8.2	0	.7	2.4	12.0	64
7/5/1982	8.1	0	.6	2.3	11.0	64
7/6/1982	7.8	0	.6	2.1	11.0	63
7/7/1982	7.0	0	.5	1.9	11.0	62
7/8/1982	5.6	0	.4	1.7	10.0	61
7/9/1982	4.3	0	.4	1.3	10.0	60
7/10/1982	4.1	0	.4	1.3	10.0	60
7/11/1982	3.6	0	.4	1.1	9.7	59
7/12/1982	3.6	0	.4	1.1	8.9	59
7/13/1982	3.6	0	.4	1.2	8.3	59
7/14/1982	3.5	0	.5	1.4	7.8	57
7/15/1982	3.1	0	.4	1.2	7.2	56
7/16/1982	2.9	0	.4	1.1	6.4	56
7/17/1982	2.7	0	.4	1.0	5.6	55

Appendix 2. Daily mean streamflow for the five creeks providing recharge to the Barton Springs segment of the Edwards aquifer and daily mean discharge for Barton Springs, Austin, Texas, 1978–2003—Continued.

Date	Barton Creek	Williamson Creek	Slaughter Creek	Bear Creek	Onion Creek	Barton Springs
7/18/1982	2.2	0	0.3	1.0	5.0	55
7/19/1982	1.9	0	.2	1.0	4.5	54
7/20/1982	1.8	0	.2	.9	4.3	54
7/21/1982	1.5	0	.2	.7	3.4	53
7/22/1982	1.5	0	.2	.7	2.8	53
7/23/1982	1.4	0	.2	.7	2.1	52
7/24/1982	1.3	0	.2	.6	3.6	52
7/25/1982	1.2	0	.2	.6	2.1	51
7/26/1982	1.1	0	.1	.5	2.0	51
7/27/1982	1.0	0	.1	.5	1.8	50
7/28/1982	.9	0	.1	.4	1.2	50
7/29/1982	.8	0	.1	.4	1.3	50
7/30/1982	.8	0	.1	.4	1.0	50
7/31/1982	.7	0	.1	.4	1.0	50
8/1/1982	.6	0	.1	.4	1.0	49
8/2/1982	.6	0	0	.3	1.1	49
8/3/1982	.6	0	0	.3	.9	47
8/4/1982	.5	0	0	.3	1.0	47
8/5/1982	.5	0	0	.3	.8	47
8/6/1982	.4	0	0	.3	.8	47
8/7/1982	.7	0	0	.2	.8	46
8/8/1982	1.1	0	0	.2	1.0	46
8/9/1982	.4	0	0	.2	.9	46
8/10/1982	.3	0	0	.2	1.2	45
8/11/1982	.3	0	0	.2	1.5	45
8/12/1982	.3	0	0	.2	1.8	45
8/13/1982	.2	0	0	.2	1.9	44
8/14/1982	.2	0	0	.2	1.6	44
8/15/1982	.2	0	0	.1	1.6	44
8/16/1982	.2	0	0	.1	1.5	44
8/17/1982	.2	0	0	.1	1.0	43
8/18/1982	5.6	31.0	0	.1	.8	43
8/19/1982	1.1	.1	0	.1	.7	43
8/20/1982	.2	0	0	.1	.7	43
8/21/1982	.2	0	0	.1	.7	43
8/22/1982	.2	0	0	.1	1.1	42
8/23/1982	.2	0	0	.1	1.6	42
8/24/1982	.2	0	0	.1	1.3	41
8/25/1982	.2	0	0	.1	1.2	41
8/26/1982	.2	0	0	.1	1.7	40
8/27/1982	.2	0	0	.1	1.6	40
8/28/1982	.1	0	0	.1	1.6	40
8/29/1982	.1	0	0	.1	1.7	40
8/30/1982	.1	0	0	0	2.1	40
8/31/1982	.1	0	0	0	2.2	39
9/1/1982	.1	0	0	0	2.2	38
9/2/1982	.1	0	0	0	2.1	38
9/3/1982	.1	0	0	0	4.1	38
9/4/1982	.1	0	0	0	4.1	38
9/5/1982	.1	0	0	0	2.4	38
9/6/1982	0.1	0	0	0	1.9	38
9/7/1982	.1	0	0	.1	1.5	38
9/8/1982	.1	0	0	0	1.6	37
9/9/1982	.1	0	0	0	1.6	37
9/10/1982	.1	0	0	0	1.5	37
9/11/1982	.1	0	0	0	1.3	36
9/12/1982	.1	0	0	0	1.3	37
9/13/1982	.1	0	0	0	1.0	36
9/14/1982	.1	0	0	0	1.2	36
9/15/1982	.1	0	0	0	1.4	35
9/16/1982	.1	0	0	0	1.6	35
9/17/1982	.1	0	0	0	1.5	35
9/18/1982	.1	0	0	0	1.2	35
9/19/1982	.2	0	0	0	1.2	35
9/20/1982	.2	.3	0	.1	3.2	35
9/21/1982	.1	0	0	.1	2.8	34
9/22/1982	.1	0	0	0	1.1	34
9/23/1982	0	0	0	0	1.1	34
9/24/1982	0	0	0	0	1.1	34
9/25/1982	0	0	0	0	1.0	34
9/26/1982	0	0	0	0	.7	34
9/27/1982	0	0	0	0	.6	34
9/28/1982	0	0	0	0	.5	35
9/29/1982	0	0	0	0	.5	36
9/30/1982	0	0	0	0	.5	36
10/1/1982	0	0	0	0	.6	35
10/2/1982	0	0	0	0	.6	33
10/3/1982	0	0	0	0	.6	33
10/4/1982	0	0	0	0	.6	34
10/5/1982	0	0	0	0	.6	33
10/6/1982	0	0	0	.1	.8	34
10/7/1982	.1	0	0	.4	1.7	34
10/8/1982	0	0	0	.3	3.9	35
10/9/1982	0	0	0	.2	2.0	34
10/10/1982	0	0	0	.2	1.6	33
10/11/1982	0	0	0	.2	1.3	33
10/12/1982	0	0	0	.2	1.7	33
10/13/1982	0	0	0	.2	1.7	34
10/14/1982	0	0	0	.2	1.2	34
10/15/1982	0	0	0	.2	.9	33
10/16/1982	--	0	0	.1	.8	32
10/17/1982	--	0	0	.1	.8	32
10/18/1982	--	0	0	.1	.8	33
10/19/1982	--	0	0	.1	.8	32
10/20/1982	--	0	0	.1	.7	32
10/21/1982	--	0	0	.1	.6	32
10/22/1982	--	0	0	.1	.7	31
10/23/1982	--	0	0	.1	.9	31
10/24/1982	--	0	0	.1	.8	31
10/25/1982	--	0	0	.1	.7	32

Appendix 2. Daily mean streamflow for the five creeks providing recharge to the Barton Springs segment of the Edwards aquifer and daily mean discharge for Barton Springs, Austin, Texas, 1978–2003—Continued.

Date	Barton Creek	Williamson Creek	Slaughter Creek	Bear Creek	Onion Creek	Barton Springs
10/26/1982	--	0	0	0.1	0.6	32
10/27/1982	--	0	0	.1	.6	32
10/28/1982	--	0	0	.1	.6	33
10/29/1982	--	0	0	.1	.7	34
10/30/1982	--	0	0	.1	.6	32
10/31/1982	--	0	0	.1	.6	32
11/1/1982	--	0	0	.1	.6	32
11/2/1982	--	0	0	.2	.9	32
11/3/1982	--	0	0	.6	3.2	32
11/4/1982	--	0	0	.2	.8	32
11/5/1982	--	0	0	.2	.6	32
11/6/1982	--	0	0	.3	.6	32
11/7/1982	--	0	0	.3	.8	32
11/8/1982	--	0	0	.3	.9	34
11/9/1982	--	0	0	.3	.8	39
11/10/1982	--	0	0	.3	1.3	36
11/11/1982	--	0	0	.4	2.8	32
11/12/1982	--	0	0	.4	1.2	32
11/13/1982	--	0	0	.3	.6	32
11/14/1982	--	0	0	.3	.6	32
11/15/1982	--	0	0	.3	.7	32
11/16/1982	--	0	0	.3	.8	32
11/17/1982	--	0	0	.3	.8	32
11/18/1982	--	0	0	.3	.9	32
11/19/1982	--	0	0	.4	1.5	32
11/20/1982	--	0	0	.4	1.3	31
11/21/1982	--	0	0	.4	1.0	31
11/22/1982	--	0	0	.4	.9	32
11/23/1982	--	0	0	.4	1.0	32
11/24/1982	--	.1	0	.4	2.0	33
11/25/1982	--	0	0	.4	1.4	33
11/26/1982	--	9.5	.1	3.1	4.7	34
11/27/1982	--	1.1	0	5.0	6.8	38
11/28/1982	--	0	0	4.6	5.5	42
11/29/1982	--	0	0	4.0	4.3	45
11/30/1982	--	0	0	3.5	3.8	49
12/1/1982	--	0	0	3.2	3.3	42
12/2/1982	--	.4	0	3.3	3.1	36
12/3/1982	--	6.9	.5	4.4	3.0	37
12/4/1982	--	0	.1	3.6	2.3	38
12/5/1982	--	0	.1	3.5	2.1	37
12/6/1982	--	0	0	3.3	1.6	36
12/7/1982	--	0	0	3.3	1.6	36
12/8/1982	--	0	0	3.3	1.6	36
12/9/1982	--	0	0	3.1	1.6	35
12/10/1982	--	.2	0	3.9	2.9	36
12/11/1982	--	.9	.1	4.2	2.5	37
12/12/1982	--	0	.1	3.8	2.0	38
12/13/1982	--	0	.1	3.8	1.8	39
12/14/1982	--	0	.1	4.0	2.4	42
12/15/1982	--	0	0.1	4.0	2.7	42
12/16/1982	--	0	.1	3.8	2.7	41
12/17/1982	--	0	.1	3.8	2.7	41
12/18/1982	--	0	.1	3.8	3.0	42
12/19/1982	--	0	.1	3.6	2.9	42
12/20/1982	--	0	.1	3.5	2.2	42
12/21/1982	--	0	.1	3.5	2.2	42
12/22/1982	--	0	.1	3.4	2.2	42
12/23/1982	--	0	.1	3.3	2.4	42
12/24/1982	--	0	.1	3.2	2.7	42
12/25/1982	--	0	.1	2.9	2.7	42
12/26/1982	--	0	.1	3.1	2.2	41
12/27/1982	--	.8	.3	4.3	4.7	43
12/28/1982	--	.2	.2	3.1	3.3	43
12/29/1982	--	.3	.2	2.4	2.7	42
12/30/1982	--	.1	.1	2.5	2.7	42
12/31/1982	--	1.5	.1	2.4	2.9	42
1/1/1983	--	4.0	.7	4.4	5.2	44
1/2/1983	--	3.0	.4	3.6	5.2	45
1/3/1983	--	2.7	.4	3.5	5.6	45
1/4/1983	--	2.7	.4	3.7	6.1	45
1/5/1983	--	2.7	.4	3.9	7.3	45
1/6/1983	--	2.7	.4	4.0	8.0	45
1/7/1983	--	2.4	.4	4.0	8.4	45
1/8/1983	--	2.3	.4	4.0	8.6	43
1/9/1983	--	2.2	.4	4.1	8.6	42
1/10/1983	--	2.0	.4	3.9	8.6	40
1/11/1983	--	2.0	.3	3.7	8.3	38
1/12/1983	--	2.0	.3	3.5	8.2	38
1/13/1983	--	1.6	.3	3.5	7.9	38
1/14/1983	--	1.7	.3	3.5	7.9	38
1/15/1983	--	1.7	.3	3.1	7.6	38
1/16/1983	--	1.7	.3	3.3	7.5	38
1/17/1983	--	1.5	.3	3.3	7.5	38
1/18/1983	--	2.0	.3	4.0	8.4	39
1/19/1983	--	1.9	.3	3.9	8.4	41
1/20/1983	--	1.7	.3	4.1	8.3	42
1/21/1983	--	2.2	.6	4.4	8.9	42
1/22/1983	--	2.0	.5	4.3	9.0	43
1/23/1983	--	1.7	.5	4.3	9.0	43
1/24/1983	--	1.7	.5	4.6	9.2	42
1/25/1983	--	1.5	.5	4.7	9.4	42
1/26/1983	--	1.5	.5	4.6	9.7	42
1/27/1983	--	1.5	.5	4.6	10.0	42
1/28/1983	--	1.5	.5	4.7	10.0	42
1/29/1983	--	1.5	.5	4.7	10.0	42
1/30/1983	--	1.2	.5	4.5	10.0	42
1/31/1983	--	1.2	.5	4.7	11.0	42
2/1/1983	--	1.2	.5	4.5	11.0	42
2/2/1983	--	1.2	.5	4.3	10.0	42

Appendix 2. Daily mean streamflow for the five creeks providing recharge to the Barton Springs segment of the Edwards aquifer and daily mean discharge for Barton Springs, Austin, Texas, 1978–2003—Continued.

Date	Barton Creek	Williamson Creek	Slaughter Creek	Bear Creek	Onion Creek	Barton Springs
2/3/1983	--	1.2	0.5	4.1	9.9	42
2/4/1983	--	1.1	.5	4.1	9.8	42
2/5/1983	--	1.8	.7	5.0	10.0	42
2/6/1983	--	1.1	.7	4.5	11.0	42
2/7/1983	--	1.0	.7	4.3	11.0	42
2/8/1983	--	1.0	.7	4.3	11.0	42
2/9/1983	--	5.1	2.7	7.1	13.0	42
2/10/1983	--	2.1	1.1	7.4	22.0	43
2/11/1983	--	1.8	1.1	7.2	21.0	43
2/12/1983	--	1.7	1.1	7.2	20.0	43
2/13/1983	--	1.5	1.1	6.9	19.0	44
2/14/1983	--	1.5	1.0	7.2	19.0	45
2/15/1983	--	3.9	4.0	13.0	48.0	45
2/16/1983	--	2.9	4.6	10.0	53.0	45
2/17/1983	--	2.7	3.8	10.0	49.0	46
2/18/1983	--	2.3	3.7	10.0	47.0	46
2/19/1983	--	2.3	3.7	10.0	45.0	47
2/20/1983	--	2.3	4.1	10.0	44.0	47
2/21/1983	--	2.0	4.1	10.0	43.0	47
2/22/1983	--	2.0	4.1	10.0	42.0	47
2/23/1983	--	1.8	4.1	9.9	41.0	48
2/24/1983	--	1.7	4.1	9.6	40.0	48
2/25/1983	--	1.7	3.7	9.6	39.0	48
2/26/1983	--	1.7	3.4	9.3	38.0	48
2/27/1983	--	1.7	3.4	9.3	37.0	48
2/28/1983	--	1.6	3.1	9.0	36.0	47
3/1/1983	--	1.5	3.1	9.0	36.0	47
3/2/1983	--	1.5	2.9	8.9	35.0	46
3/3/1983	--	1.5	2.9	8.7	34.0	46
3/4/1983	--	3.5	7.2	18.0	163.0	48
3/5/1983	--	1.8	6.2	14.0	136.0	50
3/6/1983	--	1.7	4.4	12.0	104.0	49
3/7/1983	--	1.6	3.7	12.0	90.0	49
3/8/1983	--	1.5	3.4	11.0	83.0	50
3/9/1983	--	1.8	3.1	11.0	81.0	51
3/10/1983	--	1.5	3.1	11.0	76.0	52
3/11/1983	--	1.5	2.9	10.0	75.0	54
3/12/1983	--	1.5	2.9	10.0	75.0	56
3/13/1983	--	1.7	2.9	10.0	75.0	57
3/14/1983	--	1.7	3.1	10.0	74.0	59
3/15/1983	--	2.8	3.4	10.0	76.0	61
3/16/1983	--	6.2	11.0	15.0	89.0	63
3/17/1983	--	3.1	7.2	14.0	93.0	65
3/18/1983	--	2.9	5.7	12.0	85.0	66
3/19/1983	--	2.7	5.7	12.0	82.0	68
3/20/1983	--	2.7	5.7	12.0	81.0	69
3/21/1983	--	2.4	4.6	12.0	79.0	69
3/22/1983	--	2.4	4.4	11.0	76.0	69
3/23/1983	--	20.0	35.0	23.0	114.0	72
3/24/1983	--	5.5	19.0	19.0	116.0	74
3/25/1983	--	4.8	17.0	18.0	110.0	75
3/26/1983	--	32.0	93.0	31.0	223.0	77
3/27/1983	--	5.9	27.0	19.0	156.0	79
3/28/1983	--	4.8	18.0	18.0	129.0	80
3/29/1983	--	4.4	16.0	17.0	137.0	80
3/30/1983	--	4.1	15.0	17.0	206.0	81
3/31/1983	--	3.5	14.0	16.0	135.0	81
4/1/1983	--	3.4	12.0	15.0	114.0	80
4/2/1983	--	3.0	9.0	14.0	101.0	80
4/3/1983	--	2.8	8.4	13.0	99.0	80
4/4/1983	--	3.0	8.3	13.0	96.0	80
4/5/1983	--	2.8	6.6	12.0	90.0	80
4/6/1983	--	3.0	5.7	12.0	85.0	80
4/7/1983	--	2.9	5.3	11.0	81.0	80
4/8/1983	--	2.7	4.9	11.0	78.0	79
4/9/1983	--	2.4	4.4	10.0	74.0	79
4/10/1983	--	2.3	4.2	10.0	72.0	79
4/11/1983	--	2.3	4.0	9.8	68.0	79
4/12/1983	--	2.3	3.7	9.5	67.0	79
4/13/1983	--	2.8	3.7	9.3	65.0	79
4/14/1983	--	3.1	3.1	8.8	60.0	79
4/15/1983	--	3.0	3.1	8.4	59.0	78
4/16/1983	--	3.0	2.9	8.0	56.0	78
4/17/1983	--	3.1	2.9	7.6	54.0	78
4/18/1983	--	3.2	2.9	7.3	53.0	78
4/19/1983	--	2.8	2.9	7.0	51.0	78
4/20/1983	--	2.7	2.9	6.5	50.0	77
4/21/1983	--	2.7	2.9	6.0	49.0	76
4/22/1983	--	2.1	2.9	5.6	49.0	75
4/23/1983	--	1.7	2.8	5.1	45.0	74
4/24/1983	--	1.5	2.6	4.6	43.0	74
4/25/1983	--	1.5	2.6	4.5	42.0	73
4/26/1983	--	1.5	2.4	4.3	40.0	73
4/27/1983	--	1.7	2.4	4.3	40.0	73
4/28/1983	--	1.7	2.1	4.0	38.0	72
4/29/1983	--	1.5	2.0	3.8	38.0	71
4/30/1983	--	1.4	2.0	3.8	38.0	71
5/1/1983	--	1.0	1.9	3.7	37.0	71
5/2/1983	--	.9	1.6	3.5	34.0	71
5/3/1983	--	.6	1.4	3.2	32.0	71
5/4/1983	--	.6	1.1	2.9	30.0	70
5/5/1983	--	.3	1.0	2.7	28.0	70
5/6/1983	--	.2	.8	2.7	28.0	69
5/7/1983	--	.2	.8	2.5	26.0	69
5/8/1983	--	.1	.6	2.3	24.0	69
5/9/1983	--	.2	.6	2.3	23.0	68
5/10/1983	--	.9	.8	2.6	23.0	67
5/11/1983	--	7.0	3.0	4.4	45.0	66
5/12/1983	--	0	.9	3.1	34.0	68
5/13/1983	--	0	.7	2.7	28.0	70

Appendix 2. Daily mean streamflow for the five creeks providing recharge to the Barton Springs segment of the Edwards aquifer and daily mean discharge for Barton Springs, Austin, Texas, 1978–2003—Continued.

Date	Barton Creek	Williamson Creek	Slaughter Creek	Bear Creek	Onion Creek	Barton Springs
5/14/1983	--	0	0.7	2.5	24.0	71
5/15/1983	--	0	.9	3.3	27.0	71
5/16/1983	--	0	.8	2.5	24.0	71
5/17/1983	--	0	.6	2.3	24.0	70
5/18/1983	--	1.9	1.1	3.2	24.0	70
5/19/1983	--	0	.7	2.4	22.0	72
5/20/1983	--	35.0	14.0	14.0	94.0	74
5/21/1983	--	39.0	23.0	27.0	265.0	77
5/22/1983	--	3.9	2.0	12.0	118.0	79
5/23/1983	--	2.7	1.0	11.0	79.0	82
5/24/1983	--	2.2	.9	9.9	66.0	83
5/25/1983	--	2.1	.7	9.0	59.0	84
5/26/1983	--	2.0	.6	8.7	54.0	83
5/27/1983	--	1.9	.7	7.8	49.0	83
5/28/1983	--	2.0	.6	7.2	47.0	83
5/29/1983	--	2.2	.6	6.9	44.0	83
5/30/1983	--	2.8	.5	6.6	41.0	82
5/31/1983	--	2.9	.5	6.3	39.0	82
6/1/1983	--	3.6	.5	6.3	39.0	81
6/2/1983	--	3.9	.5	6.0	38.0	81
6/3/1983	--	3.9	.5	5.4	37.0	81
6/4/1983	--	4.4	.5	5.2	36.0	82
6/5/1983	--	18.0	5.6	7.5	45.0	83
6/6/1983	--	4.6	1.7	7.5	50.0	84
6/7/1983	--	2.8	1.6	6.9	49.0	86
6/8/1983	--	2.5	1.2	6.3	42.0	85
6/9/1983	--	2.5	1.1	5.4	38.0	84
6/10/1983	--	2.4	1.1	5.2	36.0	83
6/11/1983	--	2.6	1.0	4.3	34.0	83
6/12/1983	--	2.6	.9	4.1	33.0	83
6/13/1983	--	2.4	.8	3.3	31.0	83
6/14/1983	--	8.6	3.9	17.0	71.0	84
6/15/1983	--	2.9	2.0	11.0	124.0	87
6/16/1983	--	4.4	4.8	8.4	85.0	86
6/17/1983	--	2.6	2.7	8.4	86.0	85
6/18/1983	--	2.3	2.3	7.8	62.0	85
6/19/1983	--	2.3	2.0	7.5	56.0	85
6/20/1983	--	2.0	1.9	7.2	52.0	85
6/21/1983	--	2.0	1.8	7.2	49.0	84
6/22/1983	--	1.7	1.6	6.6	46.0	84
6/23/1983	--	1.7	1.6	6.2	45.0	84
6/24/1983	--	1.7	1.5	5.8	42.0	84
6/25/1983	--	2.1	1.7	6.0	64.0	84
6/26/1983	--	1.5	1.4	5.4	60.0	84
6/27/1983	--	1.5	1.2	5.3	49.0	84
6/28/1983	--	1.4	1.0	4.8	42.0	83
6/29/1983	--	1.2	1.0	4.5	38.0	83
6/30/1983	--	1.0	.8	4.0	35.0	82
7/1/1983	--	1.2	.8	3.7	34.0	82
7/2/1983	--	1.0	.6	3.5	31.0	82
7/3/1983	--	0.9	0.5	3.3	27.0	81
7/4/1983	--	.8	.5	3.1	26.0	81
7/5/1983	--	1.4	.5	3.2	29.0	80
7/6/1983	--	1.0	.5	3.0	51.0	80
7/7/1983	--	.7	.5	2.6	41.0	79
7/8/1983	--	.7	.4	2.4	27.0	79
7/9/1983	--	.7	.4	2.2	25.0	79
7/10/1983	--	.6	.4	2.1	23.0	78
7/11/1983	--	.6	.3	2.0	23.0	78
7/12/1983	--	.9	.3	2.2	23.0	78
7/13/1983	--	.9	.5	2.7	23.0	78
7/14/1983	--	1.7	.7	3.1	30.0	78
7/15/1983	--	1.7	.6	2.8	34.0	78
7/16/1983	--	7.7	1.3	3.5	42.0	80
7/17/1983	--	2.4	1.4	22.0	90.0	82
7/18/1983	--	1.2	.7	8.3	64.0	84
7/19/1983	--	.9	.6	7.7	52.0	83
7/20/1983	--	.6	.5	7.1	45.0	82
7/21/1983	--	.6	.5	6.8	40.0	82
7/22/1983	--	.5	.5	6.5	36.0	81
7/23/1983	--	.5	.5	6.2	33.0	81
7/24/1983	--	.7	.4	5.8	28.0	81
7/25/1983	--	.7	.4	5.5	25.0	80
7/26/1983	--	.5	.4	5.1	24.0	79
7/27/1983	--	.4	.4	4.8	22.0	79
7/28/1983	--	.2	.4	4.6	20.0	78
7/29/1983	--	.1	.3	4.3	20.0	78
7/30/1983	--	0	.3	4.0	18.0	77
7/31/1983	--	0	.3	3.7	17.0	77
8/1/1983	--	0	.3	3.4	16.0	77
8/2/1983	--	0	.2	3.0	16.0	76
8/3/1983	--	0	.2	2.9	15.0	76
8/4/1983	--	0	.2	2.9	15.0	76
8/5/1983	--	0	.2	2.6	15.0	77
8/6/1983	--	0	.2	2.7	14.0	77
8/7/1983	--	1.8	.3	2.5	16.0	76
8/8/1983	--	35.0	51.0	15.0	17.0	77
8/9/1983	--	.3	1.4	5.5	16.0	79
8/10/1983	--	.2	1.0	4.2	19.0	78
8/11/1983	--	.1	.9	3.6	16.0	77
8/12/1983	--	.1	.8	3.3	14.0	76
8/13/1983	--	.1	.8	3.2	14.0	76
8/14/1983	--	0	.8	3.0	13.0	75
8/15/1983	--	0	.8	2.8	14.0	74
8/16/1983	--	0	.8	2.7	12.0	74
8/17/1983	--	0	.8	2.5	11.0	73
8/18/1983	--	0	.8	2.4	11.0	72
8/19/1983	--	0	.8	2.6	11.0	71
8/20/1983	--	0	.8	2.5	10.0	70
8/21/1983	--	0	.8	2.2	11.0	70

Appendix 2. Daily mean streamflow for the five creeks providing recharge to the Barton Springs segment of the Edwards aquifer and daily mean discharge for Barton Springs, Austin, Texas, 1978–2003—Continued.

Date	Barton Creek	Williamson Creek	Slaughter Creek	Bear Creek	Onion Creek	Barton Springs
8/22/1983	--	0	0.8	2.1	11.0	70
8/23/1983	--	0	.7	1.9	9.6	70
8/24/1983	--	0	.6	1.9	9.5	69
8/25/1983	--	0	.6	2.1	9.8	69
8/26/1983	--	0	.6	1.8	9.4	69
8/27/1983	--	0	.6	1.7	8.6	68
8/28/1983	--	4.0	.7	1.8	7.9	68
8/29/1983	--	.1	.7	1.8	8.5	67
8/30/1983	--	0	.6	1.6	7.3	67
8/31/1983	--	0	.6	1.6	6.4	66
9/1/1983	--	0	.5	1.5	5.9	66
9/2/1983	--	0	.5	1.5	5.5	66
9/3/1983	--	0	.5	1.4	4.3	65
9/4/1983	--	0	.5	1.4	4.1	65
9/5/1983	--	0	.4	1.3	3.8	65
9/6/1983	--	0	.4	1.2	3.2	65
9/7/1983	--	13.0	.4	1.1	2.6	64
9/8/1983	--	0	.2	1.0	4.1	64
9/9/1983	--	11.0	.5	1.4	6.2	63
9/10/1983	--	.1	.3	1.1	5.2	63
9/11/1983	--	0	.2	.9	4.2	62
9/12/1983	--	0	.2	.8	3.1	62
9/13/1983	--	0	.2	.5	1.8	62
9/14/1983	--	0	.2	.2	1.6	61
9/15/1983	--	0	.2	.2	1.6	60
9/16/1983	--	0	.2	.2	1.6	60
9/17/1983	--	0	.2	.1	1.6	59
9/18/1983	--	49.0	25.0	3.8	6.8	60
9/19/1983	--	48.0	27.0	4.0	86.0	63
9/20/1983	--	32.0	8.7	2.7	41.0	66
9/21/1983	--	9.6	5.0	2.1	22.0	69
9/22/1983	--	3.9	3.2	1.9	20.0	72
9/23/1983	--	1.7	2.8	1.7	18.0	71
9/24/1983	--	1.2	2.6	1.6	17.0	71
9/25/1983	--	1.0	2.2	1.6	15.0	70
9/26/1983	--	.7	2.2	1.6	14.0	69
9/27/1983	--	.6	2.0	1.6	13.0	68
9/28/1983	--	.4	1.9	1.6	12.0	66
9/29/1983	--	.3	1.6	1.7	11.0	66
9/30/1983	--	.2	1.5	1.6	9.8	64
10/1/1983	--	.2	1.5	1.6	9.2	63
10/2/1983	--	.1	1.4	1.5	8.7	63
10/3/1983	--	.1	1.2	1.4	8.6	62
10/4/1983	--	.1	1.1	1.4	8.2	62
10/5/1983	--	.1	1.1	1.4	7.8	61
10/6/1983	--	0	1.0	1.3	7.5	62
10/7/1983	--	0	1.0	1.3	7.5	60
10/8/1983	--	.1	1.0	1.3	7.8	59
10/9/1983	--	33.0	11.0	4.2	26.0	62
10/10/1983	--	2.0	3.7	2.5	21.0	64
10/11/1983	--	4.1	3.3	2.5	14.0	66
10/12/1983	--	6.8	4.0	2.3	14.0	67
10/13/1983	--	2.7	3.2	1.9	13.0	67
10/14/1983	--	2.0	2.8	1.9	12.0	66
10/15/1983	--	1.2	2.6	1.9	11.0	66
10/16/1983	--	1.2	2.6	1.7	11.0	66
10/17/1983	--	1.2	2.6	1.7	10.0	66
10/18/1983	--	1.2	2.5	1.9	9.8	66
10/19/1983	--	1.2	2.5	1.9	9.0	65
10/20/1983	--	20.0	11.0	3.5	13.0	67
10/21/1983	--	2.3	7.1	2.9	12.0	67
10/22/1983	--	1.5	4.8	2.5	10.0	67
10/23/1983	--	1.2	4.1	2.5	10.0	67
10/24/1983	--	1.2	4.0	2.3	10.0	67
10/25/1983	--	1.1	3.3	2.3	9.1	66
10/26/1983	--	1.0	3.1	2.3	9.0	65
10/27/1983	--	.9	2.6	2.3	9.0	64
10/28/1983	--	1.0	2.6	2.3	8.6	63
10/29/1983	--	1.1	2.4	2.1	8.6	62
10/30/1983	--	1.0	2.4	2.1	8.3	62
10/31/1983	--	1.8	2.4	2.1	8.2	61
11/1/1983	--	2.2	2.3	2.1	7.9	61
11/2/1983	--	2.2	2.2	1.9	7.6	61
11/3/1983	--	2.5	2.2	2.3	7.5	62
11/4/1983	--	3.3	2.1	2.3	7.5	63
11/5/1983	--	16.0	9.7	2.5	8.0	61
11/6/1983	--	30.0	9.3	2.3	7.9	61
11/7/1983	--	9.9	7.6	2.1	7.9	61
11/8/1983	--	5.1	5.6	2.1	7.6	62
11/9/1983	--	4.0	4.7	1.9	7.4	63
11/10/1983	--	2.9	3.7	1.7	6.9	62
11/11/1983	--	2.5	3.2	1.7	6.5	61
11/12/1983	--	2.2	3.1	1.7	7.0	61
11/13/1983	--	2.1	2.8	1.6	6.7	61
11/14/1983	--	2.0	2.6	1.6	6.9	60
11/15/1983	--	1.6	2.0	1.4	5.6	60
11/16/1983	--	1.8	2.0	1.4	5.2	59
11/17/1983	--	2.0	2.0	1.4	5.2	59
11/18/1983	--	1.7	2.0	1.4	5.2	59
11/19/1983	--	1.7	1.9	1.4	4.9	59
11/20/1983	--	1.5	1.6	1.4	4.3	59
11/21/1983	--	1.5	1.6	1.4	4.3	58
11/22/1983	--	1.5	1.8	1.4	4.6	58
11/23/1983	--	2.2	2.0	1.4	5.2	57
11/24/1983	--	1.2	1.6	1.2	3.8	56
11/25/1983	--	1.4	1.6	1.0	3.8	55
11/26/1983	--	1.5	1.6	1.0	4.1	55
11/27/1983	--	2.2	1.9	1.3	5.0	55
11/28/1983	--	1.7	1.3	1.0	4.2	54
11/29/1983	--	1.5	1.3	1.0	3.8	54

Appendix 2. Daily mean streamflow for the five creeks providing recharge to the Barton Springs segment of the Edwards aquifer and daily mean discharge for Barton Springs, Austin, Texas, 1978–2003—Continued.

Date	Barton Creek	Williamson Creek	Slaughter Creek	Bear Creek	Onion Creek	Barton Springs
11/30/1983	--	1.6	1.3	1.0	4.7	54
12/1/1983	--	1.5	1.2	.9	4.3	53
12/2/1983	--	1.5	1.4	.9	4.6	53
12/3/1983	--	12.0	12.0	1.9	8.4	54
12/4/1983	--	1.5	3.6	1.2	7.9	55
12/5/1983	--	1.4	3.2	1.2	7.6	54
12/6/1983	--	1.2	2.2	1.1	6.5	54
12/7/1983	--	1.0	2.0	1.0	6.1	53
12/8/1983	--	1.0	2.0	1.0	5.6	53
12/9/1983	--	.9	2.0	1.0	5.9	52
12/10/1983	--	.9	2.2	1.0	6.1	52
12/11/1983	--	.9	1.9	1.0	5.9	51
12/12/1983	--	.9	1.8	1.0	5.1	51
12/13/1983	--	.9	1.7	1.1	5.5	51
12/14/1983	--	.8	1.6	1.0	5.2	50
12/15/1983	--	.8	1.6	1.0	5.2	50
12/16/1983	--	.8	1.5	1.0	5.2	50
12/17/1983	--	.7	1.5	1.0	5.2	49
12/18/1983	--	.7	1.4	1.0	5.2	49
12/19/1983	--	.8	1.3	.9	5.2	48
12/20/1983	--	.9	1.3	.9	5.2	48
12/21/1983	--	.9	1.3	.9	5.2	48
12/22/1983	--	.6	1.1	.9	5.0	47
12/23/1983	--	.6	1.2	.9	4.8	47
12/24/1983	--	.6	1.0	.9	4.5	47
12/25/1983	--	.5	1.0	1.0	4.3	46
12/26/1983	--	.6	1.0	1.0	4.3	46
12/27/1983	--	.5	1.0	1.0	4.8	46
12/28/1983	--	.5	1.1	1.0	5.1	45
12/29/1983	--	.4	.9	.9	4.2	45
12/30/1983	--	.5	.9	.9	3.8	44
12/31/1983	--	.5	.9	.9	4.1	44
1/1/1984	--	.5	.9	.9	4.4	44
1/2/1984	--	.5	1.0	.9	4.6	43
1/3/1984	--	.6	1.0	.9	4.3	43
1/4/1984	--	.7	1.0	.9	4.3	43
1/5/1984	--	.8	.9	.8	4.9	43
1/6/1984	--	.9	.9	.8	4.8	43
1/7/1984	--	.9	.8	.7	4.3	43
1/8/1984	--	4.8	1.8	.9	4.7	43
1/9/1984	--	5.9	6.3	2.0	7.8	47
1/10/1984	--	.7	1.8	1.1	4.8	46
1/11/1984	--	.7	1.6	1.0	4.3	46
1/12/1984	--	.8	1.6	1.0	5.2	45
1/13/1984	--	.8	1.6	1.0	4.9	45
1/14/1984	--	.9	1.6	1.0	4.8	44
1/15/1984	--	.7	1.6	1.0	4.8	44
1/16/1984	--	.8	1.6	1.0	5.2	44
1/17/1984	--	.8	1.6	1.0	5.2	44
1/18/1984	--	.7	1.6	1.0	5.2	43
1/19/1984	--	0.6	1.5	1.0	4.8	43
1/20/1984	--	.6	1.5	1.0	4.8	43
1/21/1984	--	.6	1.5	1.0	4.8	43
1/22/1984	--	.8	1.6	1.1	5.3	43
1/23/1984	--	1.0	2.0	1.2	6.2	43
1/24/1984	--	.8	1.8	1.2	5.6	43
1/25/1984	--	.8	1.7	1.2	5.2	43
1/26/1984	--	.7	1.6	1.1	5.1	43
1/27/1984	--	.7	1.5	1.1	4.8	42
1/28/1984	--	.6	1.5	1.1	5.0	42
1/29/1984	--	.6	1.5	1.1	4.8	42
1/30/1984	--	.6	1.2	1.0	4.8	42
1/31/1984	--	.6	1.1	1.0	4.8	41
2/1/1984	--	.7	1.1	1.0	4.8	41
2/2/1984	--	.7	1.2	1.1	5.1	41
2/3/1984	--	.8	1.2	1.1	4.9	40
2/4/1984	--	.9	1.2	1.0	4.8	40
2/5/1984	--	.7	1.2	1.0	4.6	40
2/6/1984	--	.6	1.1	1.0	4.3	39
2/7/1984	--	.6	1.0	1.0	4.3	39
2/8/1984	--	.5	.9	1.0	4.4	39
2/9/1984	--	1.2	1.1	1.2	5.2	38
2/10/1984	--	1.0	1.1	1.2	4.9	38
2/11/1984	--	1.0	1.0	1.1	5.0	38
2/12/1984	--	.9	1.0	1.1	4.8	37
2/13/1984	--	.9	.9	1.0	4.1	37
2/14/1984	--	.8	.9	.9	3.8	36
2/15/1984	--	.8	.9	.9	4.2	36
2/16/1984	--	.7	.8	.9	4.2	36
2/17/1984	--	.7	.8	1.0	4.0	35
2/18/1984	--	1.0	.9	1.0	4.5	35
2/19/1984	--	.9	.6	.9	4.2	33
2/20/1984	--	.8	.6	1.0	3.8	34
2/21/1984	--	.7	.6	1.0	3.8	34
2/22/1984	--	.7	.6	.9	3.8	33
2/23/1984	--	.6	.6	.9	4.3	33
2/24/1984	--	.6	.5	.8	3.8	33
2/25/1984	--	.4	.5	.9	3.2	33
2/26/1984	--	.6	.8	2.1	6.1	34
2/27/1984	--	.2	.4	1.2	3.2	34
2/28/1984	--	.2	.4	1.2	2.7	34
2/29/1984	--	.3	.4	1.2	3.2	34
3/1/1984	--	.3	.4	1.2	4.3	34
3/2/1984	--	.3	.4	1.2	4.3	34
3/3/1984	--	.3	.4	1.2	4.3	34
3/4/1984	--	1.0	.6	2.9	4.3	34
3/5/1984	--	.3	.6	3.4	14.0	34
3/6/1984	--	.2	.5	1.9	9.8	34
3/7/1984	--	.2	.4	1.6	8.2	34
3/8/1984	--	.2	.4	1.4	7.9	34

Appendix 2. Daily mean streamflow for the five creeks providing recharge to the Barton Springs segment of the Edwards aquifer and daily mean discharge for Barton Springs, Austin, Texas, 1978–2003—Continued.

Date	Barton Creek	Williamson Creek	Slaughter Creek	Bear Creek	Onion Creek	Barton Springs
3/9/1984	--	0.2	0.4	1.3	6.5	34
3/10/1984	--	.2	.4	1.3	6.5	34
3/11/1984	--	.3	.4	1.3	6.1	34
3/12/1984	--	1.7	.8	1.6	6.1	34
3/13/1984	--	.3	.4	1.3	5.6	34
3/14/1984	--	.3	.5	1.3	5.6	34
3/15/1984	--	.3	.5	1.3	5.2	34
3/16/1984	--	.5	.5	1.3	5.2	34
3/17/1984	--	.4	.5	1.2	5.2	34
3/18/1984	--	.6	.5	1.2	5.2	34
3/19/1984	--	.4	.5	1.3	6.1	34
3/20/1984	--	.3	.4	1.2	5.2	34
3/21/1984	--	.2	.4	1.2	4.8	34
3/22/1984	--	.3	.4	1.2	5.2	34
3/23/1984	--	.4	.5	1.3	5.6	34
3/24/1984	--	.3	.5	1.2	4.8	34
3/25/1984	--	.3	.5	1.0	4.8	34
3/26/1984	--	.4	.5	1.0	4.8	34
3/27/1984	--	.4	.5	1.0	4.8	34
3/28/1984	--	.5	.3	1.0	4.8	34
3/29/1984	--	.5	.3	.9	4.3	34
3/30/1984	--	.4	.3	.9	4.3	33
3/31/1984	--	.5	.3	1.0	4.8	33
4/1/1984	--	.4	.3	.9	4.8	33
4/2/1984	--	.4	.4	1.0	4.8	33
4/3/1984	--	.5	.4	.9	4.3	33
4/4/1984	--	.4	.3	.8	3.2	32
4/5/1984	--	.6	.3	.8	3.2	32
4/6/1984	--	.5	.3	.8	3.8	33
4/7/1984	--	.6	.3	.8	4.7	33
4/8/1984	--	.5	.3	.8	4.7	33
4/9/1984	--	.4	.3	.7	3.8	32
4/10/1984	--	.4	.3	.7	4.3	32
4/11/1984	--	.3	.2	.7	3.8	32
4/12/1984	--	.3	.2	.6	3.2	32
4/13/1984	--	.3	.2	.6	2.7	32
4/14/1984	--	.3	.2	.6	2.6	32
4/15/1984	--	.3	.2	.6	2.7	31
4/16/1984	--	.3	.2	.5	2.2	31
4/17/1984	--	.3	.1	.5	2.2	31
4/18/1984	--	.3	.1	.6	2.8	31
4/19/1984	--	.3	.1	.6	3.8	31
4/20/1984	--	.2	.1	.6	4.0	31
4/21/1984	--	.2	.1	.5	3.7	31
4/22/1984	--	.2	.1	.4	2.7	31
4/23/1984	--	.1	.1	.4	2.2	31
4/24/1984	--	.1	.1	.4	2.6	31
4/25/1984	--	.1	.1	.4	2.7	31
4/26/1984	--	.2	.1	.4	1.7	31
4/27/1984	--	.1	.1	.4	1.8	30
4/28/1984	--	0	0.1	0.4	1.7	30
4/29/1984	--	.1	.1	.4	2.0	30
4/30/1984	--	0	.1	.3	1.0	30
5/1/1984	--	.1	.1	.3	1.5	30
5/2/1984	--	.1	.1	.3	2.7	30
5/3/1984	--	.1	.1	.3	2.9	30
5/4/1984	--	0	.1	.3	1.8	30
5/5/1984	--	0	.1	.3	1.8	30
5/6/1984	--	0	.1	.3	2.3	30
5/7/1984	--	0	0	.2	3.0	30
5/8/1984	--	0	0	.2	1.8	29
5/9/1984	--	0	0	.2	1.3	29
5/10/1984	--	0	0	.2	1.5	29
5/11/1984	--	0	0	.2	1.5	29
5/12/1984	--	0	0	.2	1.6	29
5/13/1984	--	0	0	.2	1.6	29
5/14/1984	--	0	0	.3	1.6	28
5/15/1984	--	0	0	.2	2.0	27
5/16/1984	--	0	0	.2	2.6	28
5/17/1984	--	0	0	.2	3.7	28
5/18/1984	--	.1	0	.2	4.1	29
5/19/1984	--	.1	0	.1	5.8	29
5/20/1984	--	0	0	.1	4.1	29
5/21/1984	--	0	0	.1	3.2	29
5/22/1984	--	0	0	.1	3.4	28
5/23/1984	--	0	0	0	3.2	27
5/24/1984	--	0	0	0	2.3	27
5/25/1984	--	0	0	0	2.2	27
5/26/1984	--	0	0	0	2.7	28
5/27/1984	--	0	0	0	2.5	28
5/28/1984	--	0	0	0	5.0	28
5/29/1984	--	0	0	0	3.7	28
5/30/1984	--	0	0	0	3.0	28
5/31/1984	--	0	0	0	2.3	28
6/1/1984	--	0	0	0	2.6	27
6/2/1984	--	0	0	0	2.2	27
6/3/1984	--	0	0	0	2.8	28
6/4/1984	--	0	0	0	3.8	28
6/5/1984	--	7.3	.1	0	7.5	28
6/6/1984	--	0	0	0	5.9	29
6/7/1984	--	0	0	0	7.8	29
6/8/1984	--	0	0	0	11.0	28
6/9/1984	--	0	0	0	10.0	28
6/10/1984	--	0	0	0	9.2	28
6/11/1984	--	0	0	0	7.9	28
6/12/1984	--	0	0	0	8.2	28
6/13/1984	--	0	0	0	7.4	28
6/14/1984	--	0	0	0	6.0	28
6/15/1984	--	0	0	0	5.6	27
6/16/1984	--	0	0	0	5.0	27

Appendix 2. Daily mean streamflow for the five creeks providing recharge to the Barton Springs segment of the Edwards aquifer and daily mean discharge for Barton Springs, Austin, Texas, 1978–2003—Continued.

Date	Barton Creek	Williamson Creek	Slaughter Creek	Bear Creek	Onion Creek	Barton Springs
6/17/1984	--	0	0	0	4.5	27
6/18/1984	--	0	0	0	4.6	27
6/19/1984	--	0	0	0	3.7	27
6/20/1984	--	0	0	0	3.1	27
6/21/1984	--	0	0	0	2.4	27
6/22/1984	--	0	0	0	2.5	27
6/23/1984	--	0	0	0	2.2	27
6/24/1984	--	0	0	0	2.3	27
6/25/1984	--	0	0	0	1.5	27
6/26/1984	--	0	0	0	1.3	27
6/27/1984	--	0	0	0	1.6	27
6/28/1984	--	0	.1	0	1.7	27
6/29/1984	--	0	0	0	2.1	27
6/30/1984	--	0	0	0	2.7	27
7/1/1984	--	0	0	0	2.3	27
7/2/1984	--	0	0	0	1.5	27
7/3/1984	--	0	0	0	1.5	27
7/4/1984	--	0	0	0	1.5	27
7/5/1984	--	0	0	0	1.6	27
7/6/1984	--	0	0	0	1.6	26
7/7/1984	--	0	0	0	1.6	26
7/8/1984	--	0	0	0	1.8	26
7/9/1984	--	0	0	0	1.6	26
7/10/1984	--	0	0	0	1.6	26
7/11/1984	--	0	0	0	1.3	26
7/12/1984	--	0	0	0	1.1	26
7/13/1984	--	0	0	0	1.2	26
7/14/1984	--	0	0	0	.9	26
7/15/1984	--	0	0	0	.9	26
7/16/1984	--	0	0	0	.6	26
7/17/1984	--	0	0	0	.4	26
7/18/1984	--	0	0	0	.4	26
7/19/1984	--	0	0	0	.3	26
7/20/1984	--	0	0	0	.2	26
7/21/1984	--	0	0	0	.1	26
7/22/1984	--	0	0	0	.2	26
7/23/1984	--	0	0	0	.1	26
7/24/1984	--	.1	0	0	.2	26
7/25/1984	--	0	0	0	.7	26
7/26/1984	--	0	0	0	.8	26
7/27/1984	--	0	0	0	2.1	26
7/28/1984	--	0	0	0	.8	26
7/29/1984	--	0	0	0	.4	26
7/30/1984	--	0	0	0	.4	26
7/31/1984	--	0	0	0	.3	26
8/1/1984	--	0	0	0	.2	26
8/2/1984	--	0	0	0	.2	26
8/3/1984	--	0	0	0	.1	26
8/4/1984	--	0	0	0	.2	25
8/5/1984	--	0	0	0	.2	25
8/6/1984	--	0	0	0	0.1	25
8/7/1984	--	0	0	0	.1	26
8/8/1984	--	0	0	0	.1	26
8/9/1984	--	0	0	0	.1	26
8/10/1984	--	0	0	0	.1	25
8/11/1984	--	0	0	0	.1	25
8/12/1984	--	0	0	0	.1	25
8/13/1984	--	0	0	0	.1	25
8/14/1984	--	.1	0	0	.1	25
8/15/1984	--	0	0	0	.2	27
8/16/1984	--	0	0	0	.1	26
8/17/1984	--	0	0	0	.1	26
8/18/1984	--	0	0	0	.1	26
8/19/1984	--	0	0	0	.1	26
8/20/1984	--	0	0	0	0	26
8/21/1984	--	0	0	0	0	26
8/22/1984	--	0	0	0	0	25
8/23/1984	--	0	0	0	0	25
8/24/1984	--	0	0	0	0	25
8/25/1984	--	0	0	0	.1	25
8/26/1984	--	0	0	0	.1	25
8/27/1984	--	0	0	0	.1	25
8/28/1984	--	0	0	0	.2	25
8/29/1984	--	0	0	0	.2	25
8/30/1984	--	0	0	0	.2	25
8/31/1984	--	0	0	0	.2	25
9/1/1984	--	0	0	0	.2	25
9/2/1984	--	0	0	0	.2	25
9/3/1984	--	0	0	0	.2	25
9/4/1984	--	0	0	0	.2	26
9/5/1984	--	0	0	0	.1	26
9/6/1984	--	0	0	0	.1	26
9/7/1984	--	0	0	0	.1	25
9/8/1984	--	0	0	0	.1	25
9/9/1984	--	0	0	0	.1	25
9/10/1984	--	0	0	0	.1	25
9/11/1984	--	0	0	0	.1	25
9/12/1984	--	0	0	0	.1	25
9/13/1984	--	0	0	0	.1	25
9/14/1984	--	0	0	0	0	24
9/15/1984	--	0	0	0	0	24
9/16/1984	--	0	0	0	0	24
9/17/1984	--	0	0	0	0	24
9/18/1984	--	0	0	0	0	24
9/19/1984	--	0	0	0	0	24
9/20/1984	--	0	0	0	0	24
9/21/1984	--	0	0	0	0	24
9/22/1984	--	0	0	0	0	24
9/23/1984	--	0	0	0	0	24
9/24/1984	--	0	0	0	0	25

Appendix 2. Daily mean streamflow for the five creeks providing recharge to the Barton Springs segment of the Edwards aquifer and daily mean discharge for Barton Springs, Austin, Texas, 1978–2003—Continued.

Date	Barton Creek	Williamson Creek	Slaughter Creek	Bear Creek	Onion Creek	Barton Springs
9/25/1984	--	0	0	0	0	25
9/26/1984	--	0	0	0	0	25
9/27/1984	--	0	0	0	0	25
9/28/1984	--	0	0	0	0	24
9/29/1984	--	0	0	0	0	24
9/30/1984	--	0	0	0	0	24
10/1/1984	--	0	0	0	0	24
10/2/1984	--	0	0	0	0	24
10/3/1984	--	0	0	0	0	24
10/4/1984	--	0	0	0	0	24
10/5/1984	--	0	0	0	0	24
10/6/1984	--	0	0	0	0	24
10/7/1984	--	16.0	.1	0	0	26
10/8/1984	--	0	0	0	0	28
10/9/1984	--	0	0	0	0	30
10/10/1984	--	87.0	.1	0	0	32
10/11/1984	--	5.8	0	0	75.0	34
10/12/1984	--	.2	0	0	27.0	34
10/13/1984	--	53.0	.7	0	18.0	36
10/14/1984	--	31.0	1.0	.2	26.0	36
10/15/1984	--	3.7	0	.2	30.0	38
10/16/1984	--	1.3	0	.1	15.0	38
10/17/1984	--	.6	0	0	9.4	40
10/18/1984	--	.4	0	0	8.3	40
10/19/1984	--	.4	0	0	4.1	42
10/20/1984	--	5.8	0	0	3.4	42
10/21/1984	--	98.0	27.0	8.1	169.0	44
10/22/1984	--	36.0	50.0	1.8	55.0	44
10/23/1984	--	29.0	26.0	2.0	56.0	48
10/24/1984	--	23.0	18.0	2.0	57.0	48
10/25/1984	--	18.0	15.0	2.1	78.0	48
10/26/1984	--	16.0	19.0	2.8	46.0	50
10/27/1984	--	13.0	21.0	3.4	43.0	50
10/28/1984	--	9.6	16.0	4.2	82.0	50
10/29/1984	--	7.8	11.0	4.5	206.0	51
10/30/1984	--	5.5	8.5	4.0	58.0	51
10/31/1984	--	5.7	6.9	3.5	44.0	51
11/1/1984	--	4.5	5.9	3.2	38.0	51
11/2/1984	--	4.1	4.7	2.6	35.0	50
11/3/1984	--	3.8	4.4	2.3	32.0	50
11/4/1984	--	3.2	4.1	2.2	30.0	49
11/5/1984	--	2.4	3.0	1.8	26.0	49
11/6/1984	--	2.3	2.6	1.7	23.0	48
11/7/1984	--	2.0	2.6	1.7	22.0	48
11/8/1984	--	2.0	2.6	1.7	21.0	47
11/9/1984	--	1.7	2.4	1.7	20.0	47
11/10/1984	--	1.4	1.7	1.4	18.0	46
11/11/1984	--	1.2	.9	1.2	16.0	46
11/12/1984	--	1.2	.9	1.3	16.0	46
11/13/1984	--	1.1	.9	1.2	16.0	45
11/14/1984	--	1.2	1.1	1.2	15.0	45
11/15/1984	--	1.2	1.2	1.2	15.0	45
11/16/1984	--	1.0	1.2	1.1	14.0	45
11/17/1984	--	.7	1.2	.9	14.0	45
11/18/1984	--	2.3	1.8	1.4	17.0	45
11/19/1984	--	1.2	1.2	.8	15.0	45
11/20/1984	--	1.0	1.0	.8	13.0	45
11/21/1984	--	1.0	1.0	.8	13.0	44
11/22/1984	--	.7	1.0	.6	12.0	44
11/23/1984	--	.9	1.0	.6	10.0	44
11/24/1984	--	9.5	13.0	2.1	14.0	44
11/25/1984	--	5.8	15.0	5.1	35.0	44
11/26/1984	--	1.9	5.2	2.7	28.0	45
11/27/1984	--	1.4	3.1	2.3	20.0	45
11/28/1984	--	1.2	2.6	2.2	18.0	46
11/29/1984	--	1.1	2.8	2.4	18.0	47
11/30/1984	--	.9	2.9	2.4	19.0	48
12/1/1984	--	.9	2.6	2.3	19.0	48
12/2/1984	--	.9	2.5	2.2	18.0	48
12/3/1984	--	.9	2.0	2.1	18.0	48
12/4/1984	--	1.1	2.2	2.3	18.0	48
12/5/1984	--	1.9	3.3	2.3	19.0	48
12/6/1984	--	1.0	2.7	2.1	20.0	49
12/7/1984	--	1.0	2.6	1.9	19.0	49
12/8/1984	--	1.2	2.6	2.0	19.0	50
12/9/1984	--	1.2	2.6	2.2	19.0	50
12/10/1984	--	1.0	2.4	2.1	19.0	51
12/11/1984	--	1.2	2.2	2.1	20.0	51
12/12/1984	--	1.6	2.2	2.1	20.0	52
12/13/1984	--	4.0	3.5	2.4	31.0	53
12/14/1984	--	2.1	2.5	2.1	42.0	54
12/15/1984	--	6.5	21.0	2.5	30.0	55
12/16/1984	--	9.2	32.0	9.4	209.0	55
12/17/1984	--	9.2	29.0	7.5	148.0	55
12/18/1984	--	8.5	39.0	9.9	149.0	55
12/19/1984	--	6.7	33.0	10.0	134.0	56
12/20/1984	--	5.9	31.0	10.0	123.0	56
12/21/1984	--	4.6	26.0	9.9	112.0	56
12/22/1984	--	3.3	20.0	9.4	101.0	56
12/23/1984	--	3.0	19.0	9.3	97.0	57
12/24/1984	--	3.2	19.0	8.9	94.0	57
12/25/1984	--	2.7	14.0	7.9	83.0	57
12/26/1984	--	2.7	14.0	7.8	78.0	57
12/27/1984	--	3.4	14.0	8.2	81.0	57
12/28/1984	--	3.3	15.0	8.9	86.0	58
12/29/1984	--	3.2	14.0	8.5	78.0	58
12/30/1984	--	8.6	52.0	19.0	79.0	58
12/31/1984	--	27.0	143.0	28.0	440.0	58
1/1/1985	--	10.0	44.0	18.0	220.0	60
1/2/1985	--	8.7	31.0	18.0	198.0	62

Appendix 2. Daily mean streamflow for the five creeks providing recharge to the Barton Springs segment of the Edwards aquifer and daily mean discharge for Barton Springs, Austin, Texas, 1978–2003—Continued.

Date	Barton Creek	Williamson Creek	Slaughter Creek	Bear Creek	Onion Creek	Barton Springs
1/3/1985	--	13.0	41.0	18.0	193.0	64
1/4/1985	--	10.0	45.0	19.0	197.0	68
1/5/1985	--	7.1	34.0	18.0	187.0	70
1/6/1985	--	5.3	21.0	17.0	177.0	70
1/7/1985	--	4.4	17.0	16.0	162.0	70
1/8/1985	--	2.4	15.0	15.0	149.0	70
1/9/1985	--	2.0	13.0	14.0	146.0	71
1/10/1985	--	1.5	10.0	13.0	142.0	71
1/11/1985	--	2.1	8.9	13.0	138.0	71
1/12/1985	--	3.0	8.4	13.0	140.0	71
1/13/1985	--	4.5	8.4	13.0	145.0	71
1/14/1985	--	6.5	12.0	14.0	147.0	71
1/15/1985	--	7.4	17.0	16.0	177.0	71
1/16/1985	--	18.0	53.0	20.0	208.0	71
1/17/1985	--	14.0	38.0	19.0	225.0	72
1/18/1985	--	11.0	25.0	18.0	209.0	74
1/19/1985	--	8.6	19.0	17.0	198.0	74
1/20/1985	--	6.0	11.0	15.0	183.0	74
1/21/1985	--	6.4	10.0	15.0	173.0	74
1/22/1985	--	6.3	9.8	15.0	173.0	74
1/23/1985	--	5.7	9.8	15.0	169.0	74
1/24/1985	--	8.1	8.1	14.0	161.0	74
1/25/1985	--	7.1	7.0	14.0	148.0	74
1/26/1985	--	7.0	5.7	13.0	143.0	74
1/27/1985	--	8.7	5.7	13.0	144.0	74
1/28/1985	--	7.3	4.8	12.0	140.0	74
1/29/1985	--	5.3	4.8	12.0	137.0	73
1/30/1985	--	6.5	4.7	12.0	137.0	73
1/31/1985	--	5.2	3.6	11.0	127.0	73
2/1/1985	--	4.3	2.9	11.0	121.0	72
2/2/1985	--	5.8	2.6	11.0	120.0	72
2/3/1985	--	5.0	2.6	11.0	115.0	72
2/4/1985	--	4.5	2.6	11.0	115.0	72
2/5/1985	--	5.4	2.6	11.0	120.0	72
2/6/1985	--	5.3	2.6	10.0	112.0	72
2/7/1985	--	5.5	2.3	9.6	104.0	72
2/8/1985	--	5.4	2.2	9.0	99.0	72
2/9/1985	--	5.9	2.2	9.0	97.0	72
2/10/1985	--	7.4	2.2	9.0	98.0	72
2/11/1985	--	6.3	1.6	8.3	93.0	72
2/12/1985	--	5.8	1.3	8.0	85.0	71
2/13/1985	--	6.0	1.3	8.1	83.0	71
2/14/1985	--	6.0	1.3	7.7	79.0	71
2/15/1985	--	6.1	1.2	7.5	75.0	71
2/16/1985	--	6.2	1.2	7.2	74.0	71
2/17/1985	--	5.9	1.0	7.2	70.0	71
2/18/1985	--	5.1	1.0	7.2	69.0	71
2/19/1985	--	5.0	1.0	7.2	67.0	71
2/20/1985	--	4.9	.9	7.0	66.0	71
2/21/1985	--	4.2	.9	6.9	67.0	75
2/22/1985	--	4.7	0.9	7.2	67.0	80
2/23/1985	--	71.0	241.0	360.0	1,710.0	85
2/24/1985	--	11.0	47.0	100.0	304.0	89
2/25/1985	--	7.8	27.0	43.0	253.0	90
2/26/1985	--	6.2	18.0	30.0	230.0	90
2/27/1985	--	5.5	15.0	20.0	212.0	88
2/28/1985	--	11.0	39.0	16.0	224.0	88
3/1/1985	--	8.0	34.0	40.0	250.0	87
3/2/1985	--	6.1	21.0	35.0	218.0	86
3/3/1985	--	6.4	17.0	20.0	212.0	85
3/4/1985	--	6.5	15.0	18.0	200.0	84
3/5/1985	--	5.9	11.0	16.0	185.0	83
3/6/1985	--	5.0	11.0	15.0	181.0	82
3/7/1985	--	5.8	10.0	14.0	180.0	81
3/8/1985	--	5.6	9.0	13.0	174.0	80
3/9/1985	--	5.5	8.3	13.0	168.0	80
3/10/1985	--	4.9	7.8	12.0	162.0	80
3/11/1985	--	4.9	7.0	12.0	165.0	80
3/12/1985	--	5.2	5.9	12.0	157.0	80
3/13/1985	--	5.2	5.7	12.0	153.0	80
3/14/1985	--	16.0	36.0	26.0	198.0	80
3/15/1985	--	9.2	15.0	18.0	198.0	80
3/16/1985	--	8.8	15.0	17.0	195.0	80
3/17/1985	--	7.7	13.0	16.0	185.0	80
3/18/1985	--	7.8	11.0	15.0	180.0	80
3/19/1985	--	7.9	11.0	15.0	177.0	80
3/20/1985	--	30.0	83.0	25.0	211.0	80
3/21/1985	--	11.0	32.0	17.0	189.0	80
3/22/1985	--	9.3	27.0	16.0	182.0	80
3/23/1985	--	7.6	23.0	16.0	175.0	80
3/24/1985	--	7.0	21.0	15.0	167.0	80
3/25/1985	--	7.1	18.0	14.0	160.0	80
3/26/1985	--	7.0	17.0	13.0	153.0	80
3/27/1985	--	8.9	20.0	15.0	185.0	80
3/28/1985	--	7.8	17.0	13.0	166.0	81
3/29/1985	--	7.5	16.0	12.0	155.0	81
3/30/1985	--	7.4	15.0	12.0	151.0	81
3/31/1985	--	7.2	13.0	11.0	141.0	81
4/1/1985	--	7.0	12.0	9.9	139.0	81
4/2/1985	--	7.3	11.0	9.6	136.0	81
4/3/1985	--	7.5	10.0	9.2	128.0	81
4/4/1985	--	7.8	9.6	9.0	123.0	81
4/5/1985	--	8.1	8.5	8.7	105.0	80
4/6/1985	--	7.3	7.7	8.1	104.0	80
4/7/1985	--	6.7	7.2	8.0	102.0	80
4/8/1985	--	5.9	6.5	7.5	91.0	80
4/9/1985	--	5.9	6.2	7.3	85.0	80
4/10/1985	--	6.7	7.2	7.0	98.0	80
4/11/1985	--	7.1	8.4	7.5	104.0	80
4/12/1985	--	3.3	7.3	7.1	96.0	80

Appendix 2. Daily mean streamflow for the five creeks providing recharge to the Barton Springs segment of the Edwards aquifer and daily mean discharge for Barton Springs, Austin, Texas, 1978–2003—Continued.

Date	Barton Creek	Williamson Creek	Slaughter Creek	Bear Creek	Onion Creek	Barton Springs
4/13/1985	--	3.5	6.7	10.0	99.0	80
4/14/1985	--	2.6	8.0	10.0	123.0	80
4/15/1985	--	2.0	5.6	7.2	95.0	80
4/16/1985	--	1.7	3.9	6.6	79.0	80
4/17/1985	--	1.8	3.0	6.3	70.0	80
4/18/1985	--	2.0	2.7	5.9	65.0	80
4/19/1985	--	1.7	2.0	5.8	70.0	79
4/20/1985	--	1.5	2.1	5.9	61.0	79
4/21/1985	--	1.5	2.5	6.0	57.0	79
4/22/1985	--	1.2	2.6	5.9	54.0	78
4/23/1985	--	1.0	2.4	5.3	51.0	78
4/24/1985	--	.9	2.1	4.9	43.0	78
4/25/1985	--	1.4	2.1	4.7	41.0	78
4/26/1985	--	2.9	3.0	5.7	45.0	77
4/27/1985	--	1.0	2.2	5.0	42.0	77
4/28/1985	--	3.3	2.5	4.6	40.0	77
4/29/1985	--	1.2	2.2	4.8	41.0	76
4/30/1985	--	.8	2.1	4.9	39.0	76
5/1/1985	--	.6	1.8	5.0	40.0	76
5/2/1985	--	.6	1.6	4.2	37.0	75
5/3/1985	--	.5	1.4	3.8	31.0	75
5/4/1985	--	.4	1.2	3.5	28.0	75
5/5/1985	--	.4	1.2	3.4	27.0	75
5/6/1985	--	.4	1.1	3.3	27.0	75
5/7/1985	--	.4	1.0	3.1	25.0	74
5/8/1985	--	.5	.9	3.0	25.0	74
5/9/1985	--	.5	.8	2.9	25.0	74
5/10/1985	--	.4	.8	2.9	25.0	73
5/11/1985	--	.4	.7	2.7	24.0	73
5/12/1985	--	.3	.7	2.7	25.0	72
5/13/1985	--	5.5	1.0	2.8	26.0	72
5/14/1985	--	1.4	1.9	3.4	32.0	73
5/15/1985	--	.7	1.0	2.7	26.0	73
5/16/1985	--	.6	.7	2.7	22.0	73
5/17/1985	--	.8	.7	3.1	24.0	72
5/18/1985	--	.4	.7	2.7	22.0	72
5/19/1985	--	.4	.7	2.5	19.0	71
5/20/1985	--	.3	.6	2.5	19.0	71
5/21/1985	--	1.0	.7	2.7	20.0	71
5/22/1985	--	.5	.6	2.5	21.0	70
5/23/1985	--	.4	.6	2.5	22.0	70
5/24/1985	--	.3	.5	2.3	18.0	69
5/25/1985	--	.3	.5	2.1	16.0	68
5/26/1985	--	.3	.5	1.9	15.0	68
5/27/1985	--	.3	.5	1.7	14.0	68
5/28/1985	--	.3	.5	1.7	14.0	68
5/29/1985	--	.3	.5	1.7	12.0	67
5/30/1985	--	.2	.4	1.4	12.0	67
5/31/1985	--	.1	.4	1.3	11.0	66
6/1/1985	--	.1	.4	1.3	10.0	66
6/2/1985	--	0.1	0.3	1.2	10.0	66
6/3/1985	--	.1	.3	1.1	9.3	66
6/4/1985	--	.1	.3	1.1	9.2	67
6/5/1985	--	13.0	3.2	5.0	14.0	67
6/6/1985	--	123.0	209.0	129.0	2,850.0	68
6/7/1985	--	9.1	17.0	9.1	264.0	68
6/8/1985	--	4.4	8.5	6.8	207.0	69
6/9/1985	--	3.4	5.5	6.1	186.0	69
6/10/1985	--	2.4	4.0	5.6	145.0	70
6/11/1985	--	1.7	3.2	5.2	116.0	70
6/12/1985	--	1.7	2.6	4.8	93.0	70
6/13/1985	--	1.5	2.4	4.5	83.0	69
6/14/1985	--	1.5	2.2	4.3	74.0	69
6/15/1985	--	1.0	1.9	4.1	59.0	69
6/16/1985	--	.7	1.6	4.0	44.0	69
6/17/1985	--	1.0	1.5	3.3	38.0	69
6/18/1985	--	1.4	1.4	3.5	43.0	70
6/19/1985	--	1.2	1.6	3.8	82.0	70
6/20/1985	--	1.9	1.4	3.4	42.0	71
6/21/1985	--	1.6	1.2	3.3	38.0	71
6/22/1985	--	14.0	28.0	8.0	38.0	72
6/23/1985	--	33.0	9.1	6.6	300.0	72
6/24/1985	--	10.0	5.6	5.4	200.0	72
6/25/1985	--	3.2	4.3	8.5	150.0	72
6/26/1985	--	2.0	3.6	8.7	120.0	72
6/27/1985	--	1.7	3.1	7.1	100.0	72
6/28/1985	--	1.7	2.7	6.5	90.0	72
6/29/1985	--	1.3	2.2	6.1	85.0	72
6/30/1985	--	1.0	2.0	5.6	80.0	72
7/1/1985	--	.9	1.8	5.2	70.0	72
7/2/1985	--	.8	1.5	4.8	65.0	71
7/3/1985	--	3.1	1.9	5.6	60.0	71
7/4/1985	--	4.3	2.9	6.6	100.0	72
7/5/1985	--	1.2	2.2	5.5	90.0	72
7/6/1985	--	1.5	1.6	5.2	80.0	72
7/7/1985	--	1.1	1.3	4.9	75.0	72
7/8/1985	--	1.1	1.2	4.3	70.0	72
7/9/1985	--	1.0	1.2	4.0	65.0	71
7/10/1985	--	.7	1.1	3.8	60.0	70
7/11/1985	--	.5	1.0	3.6	75.0	70
7/12/1985	--	.7	1.1	4.3	89.0	70
7/13/1985	--	.4	.8	3.4	75.0	70
7/14/1985	--	.3	.7	3.2	64.0	69
7/15/1985	--	.2	.7	3.0	53.0	69
7/16/1985	--	.2	.6	2.7	46.0	68
7/17/1985	--	.1	.5	2.5	41.0	68
7/18/1985	--	.1	.5	2.3	36.0	68
7/19/1985	--	.1	.4	2.1	35.0	68
7/20/1985	--	.1	.4	2.1	33.0	67
7/21/1985	--	0	.4	1.8	33.0	67

Appendix 2. Daily mean streamflow for the five creeks providing recharge to the Barton Springs segment of the Edwards aquifer and daily mean discharge for Barton Springs, Austin, Texas, 1978–2003—Continued.

Date	Barton Creek	Williamson Creek	Slaughter Creek	Bear Creek	Onion Creek	Barton Springs
7/22/1985	--	0	0.4	1.6	31.0	67
7/23/1985	--	0	.3	1.4	29.0	66
7/24/1985	--	0	.3	1.4	26.0	66
7/25/1985	--	0	.3	1.3	24.0	66
7/26/1985	--	0	.3	1.3	21.0	65
7/27/1985	--	0	.3	1.2	19.0	65
7/28/1985	--	0	.3	1.0	17.0	65
7/29/1985	--	0	.2	1.0	16.0	65
7/30/1985	--	0	.2	1.0	15.0	64
7/31/1985	--	0	.2	.9	15.0	64
8/1/1985	--	0	.2	.9	13.0	64
8/2/1985	--	0	.1	.8	12.0	63
8/3/1985	--	0	.1	.8	11.0	63
8/4/1985	--	0	.1	.7	10.0	63
8/5/1985	--	0	.1	.7	11.0	63
8/6/1985	--	0	.1	.6	11.0	62
8/7/1985	--	0	.1	.6	10.0	62
8/8/1985	--	0	.1	.6	9.6	62
8/9/1985	--	0	.1	.5	9.8	61
8/10/1985	--	0	.1	.5	8.7	61
8/11/1985	--	0	.1	.4	8.2	61
8/12/1985	--	0	0	.4	7.6	61
8/13/1985	--	0	0	.3	8.6	60
8/14/1985	--	0	0	.3	11.0	60
8/15/1985	--	0	0	.3	9.2	60
8/16/1985	--	0	0	.3	8.0	59
8/17/1985	--	0	0	.3	5.7	59
8/18/1985	--	0	0	.3	4.5	59
8/19/1985	--	0	0	.2	3.5	58
8/20/1985	--	0	0	.2	3.0	58
8/21/1985	--	0	0	.2	3.6	57
8/22/1985	--	0	0	.2	4.1	57
8/23/1985	--	0	0	.2	3.7	56
8/24/1985	--	0	0	.2	3.7	56
8/25/1985	--	0	0	.2	3.3	55
8/26/1985	--	0	0	.2	3.1	55
8/27/1985	--	0	0	.2	3.1	55
8/28/1985	--	0	0	.2	2.9	55
8/29/1985	--	0	0	.2	3.2	54
8/30/1985	--	0	0	.2	3.4	54
8/31/1985	--	0	0	.2	3.5	53
9/1/1985	--	0	0	.1	2.2	53
9/2/1985	--	0	0	.1	3.4	53
9/3/1985	--	0	0	.1	3.4	52
9/4/1985	--	0	0	.1	2.8	52
9/5/1985	--	0	0	.2	3.1	52
9/6/1985	--	2.6	0	.4	4.7	51
9/7/1985	--	0	0	.2	2.9	51
9/8/1985	--	0	0	.2	2.0	51
9/9/1985	--	0	0	.1	3.4	51
9/10/1985	--	0	0	0.4	3.2	50
9/11/1985	--	0	0	.7	4.0	50
9/12/1985	--	0	.1	1.1	4.2	50
9/13/1985	--	0	0	1.5	8.8	50
9/14/1985	--	3.4	.1	.8	10.0	51
9/15/1985	--	0	0	.6	6.3	51
9/16/1985	--	0	0	.5	4.0	51
9/17/1985	--	0	0	.4	3.4	51
9/18/1985	--	0	0	.4	3.0	50
9/19/1985	--	0	0	.4	3.2	50
9/20/1985	--	0	0	.3	2.4	49
9/21/1985	--	0	0	.3	2.0	48
9/22/1985	--	0	0	.3	1.9	48
9/23/1985	--	0	0	.3	2.0	47
9/24/1985	--	0	0	.2	1.3	47
9/25/1985	--	0	0	.2	2.1	46
9/26/1985	--	0	0	.2	1.3	46
9/27/1985	--	0	0	.2	1.2	45
9/28/1985	--	0	0	.3	2.5	45
9/29/1985	--	22.0	.5	1.9	8.9	45
9/30/1985	--	0	.1	1.0	4.6	45
10/1/1985	--	0	.1	1.0	3.6	47
10/2/1985	--	0	.1	.8	3.7	47
10/3/1985	--	0	0	.6	3.6	46
10/4/1985	--	0	0	.6	3.3	46
10/5/1985	--	0	0	.5	3.0	45
10/6/1985	--	0	0	.5	3.3	45
10/7/1985	--	0	0	.5	3.5	44
10/8/1985	--	0	0	.5	3.4	44
10/9/1985	--	0	0	.5	3.5	43
10/10/1985	--	0	0	.5	3.7	43
10/11/1985	--	0	0	.5	3.5	43
10/12/1985	--	0	0	.5	3.2	42
10/13/1985	--	0	0	.5	2.9	42
10/14/1985	--	16.0	.1	.6	3.2	45
10/15/1985	--	14.0	.5	1.3	21.0	50
10/16/1985	--	.1	.2	1.0	31.0	60
10/17/1985	--	.1	.2	.9	20.0	68
10/18/1985	--	.3	.2	1.1	18.0	72
10/19/1985	--	46.0	14.0	9.9	123.0	71
10/20/1985	--	2.4	1.6	6.2	120.0	70
10/21/1985	--	.9	1.2	4.4	49.0	67
10/22/1985	--	.3	1.2	4.1	41.0	65
10/23/1985	--	.2	1.1	3.6	39.0	61
10/24/1985	--	.1	.9	3.3	35.0	60
10/25/1985	--	.1	.9	3.0	30.0	58
10/26/1985	--	.1	.8	2.9	29.0	57
10/27/1985	--	0	.7	2.6	30.0	57
10/28/1985	--	0	.7	2.5	26.0	56
10/29/1985	--	.1	.6	2.5	25.0	55

Appendix 2. Daily mean streamflow for the five creeks providing recharge to the Barton Springs segment of the Edwards aquifer and daily mean discharge for Barton Springs, Austin, Texas, 1978–2003—Continued.

Date	Barton Creek	Williamson Creek	Slaughter Creek	Bear Creek	Onion Creek	Barton Springs
10/30/1985	--	0.1	0.6	2.5	34.0	55
10/31/1985	--	0	.5	2.3	30.0	55
11/1/1985	--	1.6	.7	2.5	25.0	55
11/2/1985	--	4.5	1.5	3.8	29.0	55
11/3/1985	--	.2	.9	2.8	28.0	56
11/4/1985	--	.1	.8	2.5	25.0	55
11/5/1985	--	.2	.8	2.5	24.0	54
11/6/1985	--	.1	.8	2.5	25.0	54
11/7/1985	--	.1	.7	2.3	26.0	53
11/8/1985	--	.1	.7	2.3	26.0	53
11/9/1985	--	.1	.7	2.3	26.0	52
11/10/1985	--	0	.7	2.3	26.0	52
11/11/1985	--	6.5	5.4	4.8	27.0	54
11/12/1985	--	.4	1.3	3.3	25.0	57
11/13/1985	--	.3	1.2	3.3	20.0	57
11/14/1985	--	.1	1.2	3.3	21.0	57
11/15/1985	--	.7	1.3	3.6	25.0	57
11/16/1985	--	1.2	1.7	3.5	25.0	57
11/17/1985	--	.6	1.6	3.5	31.0	58
11/18/1985	--	.6	1.6	3.7	30.0	58
11/19/1985	--	47.0	12.0	5.0	30.0	58
11/20/1985	--	15.0	4.9	4.8	40.0	60
11/21/1985	--	8.0	4.3	4.3	27.0	61
11/22/1985	--	5.5	3.8	4.3	25.0	62
11/23/1985	--	4.6	3.7	4.3	24.0	63
11/24/1985	--	60.0	55.0	7.2	107.0	64
11/25/1985	--	25.0	38.0	11.0	133.0	67
11/26/1985	--	20.0	26.0	9.9	112.0	70
11/27/1985	--	450.0	219.0	68.0	787.0	63
11/28/1985	--	200.0	76.0	23.0	326.0	54
11/29/1985	--	80.0	49.0	20.0	263.0	69
11/30/1985	--	40.0	39.0	19.0	238.0	77
12/1/1985	--	27.0	28.0	17.0	212.0	82
12/2/1985	--	20.0	22.0	15.0	190.0	83
12/3/1985	--	16.0	21.0	15.0	173.0	80
12/4/1985	--	12.0	19.0	15.0	161.0	77
12/5/1985	--	10.0	15.0	13.0	187.0	77
12/6/1985	--	9.0	13.0	13.0	143.0	78
12/7/1985	--	8.0	12.0	12.0	140.0	78
12/8/1985	--	7.2	11.0	11.0	132.0	78
12/9/1985	--	6.5	9.9	11.0	128.0	78
12/10/1985	--	12.0	11.0	12.0	211.0	77
12/11/1985	--	18.0	24.0	15.0	409.0	76
12/12/1985	--	11.0	16.0	13.0	244.0	80
12/13/1985	--	9.3	13.0	12.0	218.0	79
12/14/1985	--	8.0	11.0	11.0	196.0	79
12/15/1985	--	6.9	11.0	11.0	186.0	79
12/16/1985	--	6.5	9.9	11.0	172.0	79
12/17/1985	--	5.4	9.2	11.0	167.0	79
12/18/1985	--	4.7	8.4	9.9	157.0	79
12/19/1985	--	4.4	7.8	9.6	145.0	79
12/20/1985	--	4.0	7.3	9.4	141.0	79
12/21/1985	--	3.4	6.7	9.0	135.0	79
12/22/1985	--	3.0	6.6	9.0	137.0	79
12/23/1985	--	2.8	6.2	8.7	132.0	79
12/24/1985	--	2.6	5.5	8.2	124.0	79
12/25/1985	--	2.3	4.8	7.6	116.0	79
12/26/1985	--	2.3	4.6	7.5	102.0	79
12/27/1985	--	2.2	4.6	7.5	99.0	79
12/28/1985	--	1.6	4.5	7.2	95.0	79
12/29/1985	--	1.5	4.1	6.9	89.0	78
12/30/1985	--	1.5	4.1	6.9	81.0	78
12/31/1985	--	1.5	3.8	6.7	77.0	78
1/1/1986	--	1.6	3.4	6.3	71.0	78
1/2/1986	--	1.6	3.4	6.3	72.0	78
1/3/1986	--	1.2	3.2	6.1	66.0	78
1/4/1986	--	1.2	3.0	5.7	61.0	78
1/5/1986	--	.9	2.6	5.2	54.0	78
1/6/1986	--	.9	2.6	5.2	53.0	78
1/7/1986	--	.9	2.6	5.2	52.0	78
1/8/1986	--	1.5	2.6	5.2	53.0	78
1/9/1986	--	1.3	2.6	5.2	54.0	78
1/10/1986	--	.9	2.6	5.2	49.0	78
1/11/1986	--	.9	2.3	4.9	44.0	78
1/12/1986	--	.8	2.1	4.6	41.0	78
1/13/1986	--	.7	2.0	4.3	37.0	77
1/14/1986	--	.5	2.0	4.3	36.0	78
1/15/1986	--	.5	1.9	4.1	35.0	78
1/16/1986	--	.4	1.9	4.1	33.0	78
1/17/1986	--	.4	1.8	4.1	34.0	78
1/18/1986	--	.4	1.7	4.1	32.0	77
1/19/1986	--	.4	1.6	3.9	29.0	77
1/20/1986	--	.4	1.5	3.8	26.0	77
1/21/1986	--	.4	1.4	3.8	26.0	77
1/22/1986	--	.3	1.2	3.5	24.0	77
1/23/1986	--	.3	1.2	3.3	21.0	77
1/24/1986	--	.4	1.2	3.3	22.0	77
1/25/1986	--	.4	1.2	3.4	21.0	76
1/26/1986	--	.4	1.2	3.2	18.0	76
1/27/1986	--	.4	1.1	3.1	16.0	76
1/28/1986	--	.5	1.1	3.1	16.0	76
1/29/1986	--	.5	1.0	3.2	16.0	76
1/30/1986	--	.5	1.0	3.1	14.0	75
1/31/1986	--	.5	1.0	3.1	15.0	76
2/1/1986	--	.6	1.0	3.1	15.0	75
2/2/1986	--	.7	1.0	3.1	15.0	75
2/3/1986	--	23.0	4.7	7.4	223.0	77
2/4/1986	--	5.1	4.4	8.2	213.0	79
2/5/1986	--	2.9	2.4	5.8	121.0	80
2/6/1986	--	2.3	2.0	5.4	104.0	78

Appendix 2. Daily mean streamflow for the five creeks providing recharge to the Barton Springs segment of the Edwards aquifer and daily mean discharge for Barton Springs, Austin, Texas, 1978–2003—Continued.

Date	Barton Creek	Williamson Creek	Slaughter Creek	Bear Creek	Onion Creek	Barton Springs
2/7/1986	--	2.0	2.0	5.2	94.0	78
2/8/1986	--	1.6	1.8	4.7	89.0	78
2/9/1986	--	1.7	1.7	4.6	87.0	78
2/10/1986	--	1.7	1.7	4.6	87.0	78
2/11/1986	--	1.6	1.7	4.6	82.0	78
2/12/1986	--	1.1	1.6	4.3	80.0	77
2/13/1986	--	.9	1.5	4.3	77.0	77
2/14/1986	--	.9	1.5	4.4	79.0	76
2/15/1986	--	.8	1.4	4.2	77.0	76
2/16/1986	--	.8	1.4	4.3	75.0	77
2/17/1986	--	.8	1.3	4.3	73.0	75
2/18/1986	--	.7	1.2	4.1	70.0	73
2/19/1986	--	.7	1.2	3.8	65.0	72
2/20/1986	--	.7	1.2	3.5	62.0	71
2/21/1986	--	.7	1.1	3.3	58.0	69
2/22/1986	--	.8	1.0	3.1	56.0	68
2/23/1986	--	.8	1.0	3.1	55.0	73
2/24/1986	--	.9	1.0	3.1	54.0	74
2/25/1986	--	1.0	1.0	3.2	53.0	74
2/26/1986	--	1.0	1.0	3.1	51.0	75
2/27/1986	--	1.0	.9	3.1	50.0	75
2/28/1986	--	.9	.9	3.1	46.0	75
3/1/1986	--	.9	.9	2.9	45.0	74
3/2/1986	--	.7	.9	3.0	45.0	74
3/3/1986	--	.7	.9	3.3	48.0	74
3/4/1986	--	.5	.9	2.9	44.0	74
3/5/1986	--	.5	.9	2.9	42.0	74
3/6/1986	--	.5	.9	2.9	42.0	73
3/7/1986	--	.5	.8	2.7	41.0	73
3/8/1986	--	.5	.8	2.7	41.0	73
3/9/1986	--	.4	.8	2.7	39.0	73
3/10/1986	--	.4	.8	2.7	38.0	73
3/11/1986	--	.4	.8	2.5	36.0	73
3/12/1986	--	.6	.8	2.5	39.0	73
3/13/1986	--	.3	.8	2.3	36.0	72
3/14/1986	--	.3	.8	2.3	35.0	72
3/15/1986	--	.3	.7	2.1	34.0	72
3/16/1986	--	.3	.8	1.9	32.0	72
3/17/1986	--	.2	.8	2.0	31.0	72
3/18/1986	--	.3	.8	2.0	32.0	71
3/19/1986	--	.1	.6	1.7	29.0	71
3/20/1986	--	.1	.6	1.7	27.0	71
3/21/1986	--	.1	.6	1.7	26.0	70
3/22/1986	--	.1	.6	1.7	29.0	70
3/23/1986	--	.1	.6	1.7	26.0	70
3/24/1986	--	.1	.6	1.7	26.0	69
3/25/1986	--	.1	.6	1.7	26.0	69
3/26/1986	--	.1	.6	1.7	24.0	69
3/27/1986	--	.1	.6	1.8	23.0	68
3/28/1986	--	.1	.6	1.7	21.0	68
3/29/1986	--	0	0.5	1.7	20.0	67
3/30/1986	--	0	.5	1.6	19.0	67
3/31/1986	--	0	.5	1.6	18.0	67
4/1/1986	--	0	.5	1.6	15.0	67
4/2/1986	--	0	.5	1.5	14.0	67
4/3/1986	--	0	.5	1.5	13.0	67
4/4/1986	--	0	.5	1.6	14.0	66
4/5/1986	--	0	.5	1.4	12.0	66
4/6/1986	--	.1	.5	1.4	12.0	65
4/7/1986	--	0	.5	1.4	10.0	65
4/8/1986	--	0	.5	1.4	9.4	65
4/9/1986	--	.2	.5	1.2	11.0	65
4/10/1986	--	.1	.5	1.2	11.0	64
4/11/1986	--	0	.5	1.2	11.0	64
4/12/1986	--	0	.5	1.2	12.0	64
4/13/1986	--	0	.5	1.1	12.0	64
4/14/1986	--	0	.4	.9	10.0	64
4/15/1986	--	0	.4	.7	10.0	64
4/16/1986	--	0	.4	.7	11.0	64
4/17/1986	--	0	.4	.7	10.0	63
4/18/1986	--	0	.4	.7	9.6	63
4/19/1986	--	0	.4	.8	9.4	63
4/20/1986	--	0	.3	.7	11.0	62
4/21/1986	--	0	.3	.6	10.0	62
4/22/1986	--	0	.3	.6	12.0	62
4/23/1986	--	0	.3	.6	12.0	62
4/24/1986	--	0	.3	.6	15.0	61
4/25/1986	--	0	.3	.6	11.0	61
4/26/1986	--	0	.3	.5	11.0	60
4/27/1986	--	0	.3	.5	10.0	60
4/28/1986	--	0	.3	.5	11.0	60
4/29/1986	--	0	.2	.6	11.0	60
4/30/1986	--	5.3	.3	.6	11.0	59
5/1/1986	--	59.0	3.2	6.4	26.0	60
5/2/1986	--	.1	.7	1.8	38.0	61
5/3/1986	--	0	.6	1.3	21.0	62
5/4/1986	--	0	.5	1.2	17.0	62
5/5/1986	--	0	.5	1.2	16.0	62
5/6/1986	--	0	.5	1.1	15.0	61
5/7/1986	--	0	.5	1.2	15.0	61
5/8/1986	--	0	.5	1.2	14.0	60
5/9/1986	--	202.0	147.0	47.0	242.0	60
5/10/1986	--	41.0	43.0	16.0	1,500.0	62
5/11/1986	--	16.0	10.0	8.0	143.0	64
5/12/1986	--	7.9	7.1	7.0	105.0	67
5/13/1986	--	4.5	5.8	6.5	76.0	69
5/14/1986	--	3.0	5.0	6.3	68.0	71
5/15/1986	--	119.0	117.0	9.0	84.0	73
5/16/1986	--	31.0	36.0	7.3	78.0	76
5/17/1986	--	137.0	186.0	44.0	546.0	78

Appendix 2. Daily mean streamflow for the five creeks providing recharge to the Barton Springs segment of the Edwards aquifer and daily mean discharge for Barton Springs, Austin, Texas, 1978–2003—Continued.

Date	Barton Creek	Williamson Creek	Slaughter Creek	Bear Creek	Onion Creek	Barton Springs
5/18/1986	--	46.0	89.0	18.0	263.0	79
5/19/1986	--	29.0	44.0	16.0	160.0	79
5/20/1986	--	21.0	28.0	15.0	141.0	79
5/21/1986	--	16.0	21.0	14.0	132.0	79
5/22/1986	--	13.0	17.0	13.0	116.0	79
5/23/1986	--	9.9	13.0	12.0	112.0	79
5/24/1986	--	8.7	11.0	12.0	102.0	79
5/25/1986	--	7.6	9.0	11.0	95.0	79
5/26/1986	--	8.3	8.9	11.0	121.0	79
5/27/1986	--	6.5	8.9	11.0	119.0	79
5/28/1986	--	5.3	7.5	9.9	102.0	79
5/29/1986	--	4.7	6.4	9.4	101.0	79
5/30/1986	--	5.1	9.1	9.1	115.0	79
5/31/1986	--	9.8	12.0	10.0	103.0	79
6/1/1986	--	18.0	37.0	11.0	109.0	82
6/2/1986	--	11.0	20.0	9.8	112.0	82
6/3/1986	--	8.3	15.0	9.1	101.0	82
6/4/1986	--	10.0	15.0	9.5	104.0	82
6/5/1986	--	7.1	14.0	9.1	103.0	81
6/6/1986	--	5.4	11.0	8.6	89.0	81
6/7/1986	--	15.0	57.0	12.0	133.0	80
6/8/1986	--	13.0	43.0	12.0	137.0	81
6/9/1986	--	18.0	34.0	11.0	138.0	80
6/10/1986	--	9.8	23.0	9.9	114.0	79
6/11/1986	--	8.5	18.0	9.9	122.0	83
6/12/1986	--	15.0	16.0	10.0	350.0	82
6/13/1986	--	9.6	14.0	9.8	200.0	82
6/14/1986	--	7.4	11.0	9.1	143.0	83
6/15/1986	--	6.1	9.2	8.6	139.0	83
6/16/1986	--	4.9	7.9	8.3	129.0	75
6/17/1986	--	13.0	20.0	14.0	216.0	64
6/18/1986	--	6.5	11.0	16.0	153.0	58
6/19/1986	--	5.5	10.0	13.0	142.0	53
6/20/1986	--	3.7	8.4	12.0	127.0	65
6/21/1986	--	3.0	7.1	11.0	116.0	84
6/22/1986	--	2.5	6.3	11.0	106.0	84
6/23/1986	--	2.3	5.7	11.0	94.0	74
6/24/1986	--	2.7	4.9	11.0	84.0	78
6/25/1986	--	1.7	4.8	9.9	78.0	84
6/26/1986	--	1.4	4.0	9.5	73.0	85
6/27/1986	--	1.0	3.6	8.7	70.0	84
6/28/1986	--	.9	3.2	8.0	64.0	83
6/29/1986	--	.7	2.9	7.4	61.0	84
6/30/1986	--	.7	2.5	6.7	56.0	84
7/1/1986	--	.8	2.3	5.9	53.0	83
7/2/1986	--	.6	2.2	5.6	48.0	83
7/3/1986	--	.5	1.9	5.5	44.0	82
7/4/1986	--	.4	1.7	5.1	41.0	82
7/5/1986	--	.4	1.5	4.7	39.0	81
7/6/1986	--	.4	1.3	4.1	37.0	81
7/7/1986	--	0.4	1.2	3.8	36.0	80
7/8/1986	--	.3	1.3	3.5	35.0	79
7/9/1986	--	.2	.9	3.4	33.0	78
7/10/1986	--	.2	.8	3.2	31.0	78
7/11/1986	--	.2	.7	2.9	29.0	78
7/12/1986	--	.1	.6	2.8	27.0	78
7/13/1986	--	.1	.6	2.5	26.0	78
7/14/1986	--	.1	.5	2.5	25.0	78
7/15/1986	--	.1	.5	2.3	24.0	76
7/16/1986	--	.1	.4	2.3	23.0	74
7/17/1986	--	0	.4	2.1	21.0	73
7/18/1986	--	0	.4	2.1	22.0	71
7/19/1986	--	0	.3	2.1	22.0	70
7/20/1986	--	0	.4	2.0	20.0	69
7/21/1986	--	0	.3	1.7	19.0	67
7/22/1986	--	0	.3	1.7	18.0	65
7/23/1986	--	0	.3	1.7	17.0	64
7/24/1986	--	0	.2	1.7	16.0	63
7/25/1986	--	0	.2	1.7	15.0	62
7/26/1986	--	0	.2	1.6	14.0	60
7/27/1986	--	0	.2	1.6	13.0	59
7/28/1986	--	0	.2	1.4	12.0	58
7/29/1986	--	0	.1	1.4	12.0	57
7/30/1986	--	0	.1	1.3	12.0	55
7/31/1986	--	0	.1	1.3	11.0	54
8/1/1986	--	0	.1	1.3	10.0	53
8/2/1986	--	0	.1	1.2	9.5	52
8/3/1986	--	0	.1	1.0	9.5	51
8/4/1986	--	0	0	1.0	8.8	50
8/5/1986	--	0	0	1.0	8.6	50
8/6/1986	--	0	0	1.0	8.5	50
8/7/1986	--	0	0	1.0	7.8	52
8/8/1986	--	0	0	.9	8.2	53
8/9/1986	--	0	0	.9	8.4	55
8/10/1986	--	0	0	.8	6.9	57
8/11/1986	--	0	0	.8	7.9	58
8/12/1986	--	0	0	.8	8.8	59
8/13/1986	--	0	0	.7	7.5	60
8/14/1986	--	0	0	.7	6.8	61
8/15/1986	--	0	0	.6	6.2	62
8/16/1986	--	0	0	.6	5.6	63
8/17/1986	--	0	0	.6	5.6	63
8/18/1986	--	0	0	.5	4.9	64
8/19/1986	--	0	0	.4	4.2	64
8/20/1986	--	0	0	.4	3.9	64
8/21/1986	--	0	0	.4	4.4	63
8/22/1986	--	0	0	.4	4.4	63
8/23/1986	--	0	0	.4	4.7	62
8/24/1986	--	0	0	.4	5.2	62
8/25/1986	--	0	0	.4	5.8	61

Appendix 2. Daily mean streamflow for the five creeks providing recharge to the Barton Springs segment of the Edwards aquifer and daily mean discharge for Barton Springs, Austin, Texas, 1978–2003—Continued.

Date	Barton Creek	Williamson Creek	Slaughter Creek	Bear Creek	Onion Creek	Barton Springs
8/26/1986	--	0	0	0.4	4.3	61
8/27/1986	--	0	0	.4	3.6	61
8/28/1986	--	0	0	.3	3.4	60
8/29/1986	--	0	0	.3	3.4	60
8/30/1986	--	0	0	.3	2.8	60
8/31/1986	--	0	0	.3	2.7	59
9/1/1986	--	0	0	.3	2.9	58
9/2/1986	--	0	0	.4	3.6	58
9/3/1986	--	0	0	.3	2.6	57
9/4/1986	--	0	0	.3	2.2	57
9/5/1986	--	0	0	.4	2.3	57
9/6/1986	--	94.0	9.0	2.8	21.0	58
9/7/1986	--	.4	.3	1.2	5.8	58
9/8/1986	--	.1	.2	.8	7.4	58
9/9/1986	--	0	.1	.7	8.0	58
9/10/1986	--	0	.1	.6	7.1	59
9/11/1986	--	0	.1	.6	13.0	58
9/12/1986	--	0	.1	.5	8.5	57
9/13/1986	--	0	.1	.6	6.4	57
9/14/1986	--	0	.1	.5	5.4	56
9/15/1986	--	0	.1	.5	4.6	56
9/16/1986	--	0	.1	.5	4.6	55
9/17/1986	--	0	.1	.5	4.6	55
9/18/1986	--	0	.1	.5	4.3	55
9/19/1986	--	9.0	1.0	.5	4.3	54
9/20/1986	--	.4	.5	.5	4.4	54
9/21/1986	--	0	.3	.5	4.4	53
9/22/1986	--	0	.3	.5	4.2	53
9/23/1986	--	0	.3	.5	4.0	52
9/24/1986	--	0	.3	.5	3.6	51
9/25/1986	--	0	.2	.5	3.4	51
9/26/1986	--	0	.2	.5	3.4	51
9/27/1986	--	0	.2	.4	3.4	51
9/28/1986	--	0	.1	.4	3.5	51
9/29/1986	--	0	.1	.4	3.6	50
9/30/1986	--	0	.1	.4	3.4	50
10/1/1986	--	0	.1	.4	3.4	49
10/2/1986	--	0	.1	.4	4.1	49
10/3/1986	--	0	.1	.4	3.5	48
10/4/1986	--	0	.1	.4	3.4	48
10/5/1986	--	0	.1	.4	3.6	48
10/6/1986	--	5.7	.4	.6	4.3	48
10/7/1986	--	.2	.3	.5	4.5	48
10/8/1986	--	0	.3	.5	4.1	48
10/9/1986	--	0	.3	.4	3.4	48
10/10/1986	--	0	.3	.4	3.4	47
10/11/1986	--	6.2	.6	.7	7.7	47
10/12/1986	--	149.0	201.0	68.0	394.0	47
10/13/1986	--	20.0	28.0	9.3	156.0	48
10/14/1986	--	8.5	11.0	7.2	83.0	52
10/15/1986	--	5.7	7.0	5.9	57.0	46
10/16/1986	--	4.4	5.3	5.6	45.0	43
10/17/1986	--	3.6	4.9	5.1	38.0	64
10/18/1986	--	3.1	4.2	4.6	34.0	63
10/19/1986	--	2.6	4.1	4.5	31.0	63
10/20/1986	--	2.3	3.9	4.3	28.0	62
10/21/1986	--	4.2	4.3	4.6	28.0	61
10/22/1986	--	10.0	7.7	5.9	35.0	75
10/23/1986	--	310.0	516.0	321.0	1,060.0	89
10/24/1986	--	51.0	110.0	53.0	291.0	95
10/25/1986	--	27.0	56.0	40.0	218.0	100
10/26/1986	--	22.0	39.0	34.0	182.0	86
10/27/1986	--	15.0	29.0	29.0	156.0	79
10/28/1986	--	10.0	22.0	26.0	142.0	76
10/29/1986	--	7.4	17.0	23.0	133.0	76
10/30/1986	--	5.9	15.0	22.0	121.0	76
10/31/1986	--	4.7	13.0	20.0	111.0	76
11/1/1986	--	4.1	11.0	18.0	104.0	76
11/2/1986	--	4.0	9.4	16.0	98.0	73
11/3/1986	--	3.9	9.1	15.0	92.0	72
11/4/1986	--	11.0	17.0	21.0	104.0	70
11/5/1986	--	4.4	12.0	17.0	106.0	69
11/6/1986	--	3.9	9.8	15.0	90.0	67
11/7/1986	--	3.5	9.6	15.0	89.0	66
11/8/1986	--	3.5	9.5	14.0	84.0	65
11/9/1986	--	3.2	8.4	14.0	76.0	63
11/10/1986	--	2.7	7.8	13.0	70.0	62
11/11/1986	--	2.2	6.9	13.0	66.0	60
11/12/1986	--	2.9	6.5	12.0	64.0	77
11/13/1986	--	2.5	6.0	12.0	61.0	77
11/14/1986	--	2.2	5.9	12.0	59.0	78
11/15/1986	--	2.2	5.8	11.0	58.0	78
11/16/1986	--	2.1	5.5	11.0	56.0	78
11/17/1986	--	1.9	5.0	10.0	54.0	72
11/18/1986	--	1.8	4.6	8.9	51.0	72
11/19/1986	--	1.6	4.3	8.1	47.0	72
11/20/1986	--	1.6	3.9	7.7	45.0	71
11/21/1986	--	1.6	3.7	7.2	43.0	71
11/22/1986	--	1.5	3.7	7.4	44.0	72
11/23/1986	--	3.1	3.8	7.3	43.0	76
11/24/1986	--	7.3	5.1	7.6	46.0	77
11/25/1986	--	9.2	13.0	14.0	98.0	79
11/26/1986	--	2.8	6.3	9.0	72.0	78
11/27/1986	--	2.1	5.3	8.5	60.0	78
11/28/1986	--	2.2	5.0	8.1	57.0	77
11/29/1986	--	2.0	4.6	7.7	54.0	77
11/30/1986	--	1.9	4.4	7.7	53.0	76
12/1/1986	--	1.8	3.9	7.5	50.0	76
12/2/1986	--	1.6	3.6	7.3	47.0	75
12/3/1986	--	1.7	3.3	7.0	46.0	74

Appendix 2. Daily mean streamflow for the five creeks providing recharge to the Barton Springs segment of the Edwards aquifer and daily mean discharge for Barton Springs, Austin, Texas, 1978–2003—Continued.

Date	Barton Creek	Williamson Creek	Slaughter Creek	Bear Creek	Onion Creek	Barton Springs
12/4/1986	--	1.7	3.1	7.0	45.0	73
12/5/1986	--	1.7	2.8	7.0	43.0	73
12/6/1986	--	1.8	2.6	6.7	44.0	72
12/7/1986	--	2.0	2.6	7.0	47.0	72
12/8/1986	--	2.2	2.7	7.0	47.0	72
12/9/1986	--	3.2	3.6	8.3	49.0	72
12/10/1986	--	19.0	14.0	14.0	81.0	72
12/11/1986	--	12.0	13.0	16.0	167.0	73
12/12/1986	--	8.6	10.0	14.0	138.0	73
12/13/1986	--	6.6	9.1	14.0	131.0	72
12/14/1986	--	37.0	32.0	23.0	155.0	73
12/15/1986	--	57.0	85.0	40.0	261.0	76
12/16/1986	--	31.0	49.0	34.0	238.0	78
12/17/1986	--	22.0	37.0	32.0	231.0	75
12/18/1986	--	42.0	57.0	36.0	252.0	74
12/19/1986	--	26.0	41.0	33.0	246.0	74
12/20/1986	--	18.0	31.0	31.0	234.0	74
12/21/1986	--	15.0	25.0	29.0	224.0	71
12/22/1986	--	336.0	361.0	231.0	1,860.0	70
12/23/1986	--	110.0	142.0	111.0	1,480.0	111
12/24/1986	--	50.0	78.0	75.0	806.0	111
12/25/1986	--	30.0	52.0	60.0	615.0	97
12/26/1986	--	18.0	40.0	50.0	505.0	78
12/27/1986	--	11.0	31.0	43.0	410.0	78
12/28/1986	--	7.4	25.0	38.0	338.0	78
12/29/1986	--	5.6	24.0	35.0	311.0	80
12/30/1986	--	4.1	19.0	32.0	285.0	80
12/31/1986	--	3.0	17.0	29.0	273.0	79
1/1/1987	--	2.2	14.0	26.0	260.0	79
1/2/1987	--	1.8	12.0	24.0	250.0	79
1/3/1987	--	1.5	11.0	23.0	236.0	79
1/4/1987	--	1.2	10.0	21.0	217.0	78
1/5/1987	--	1.2	9.4	20.0	206.0	78
1/6/1987	--	1.1	8.9	19.0	198.0	78
1/7/1987	--	1.0	8.1	18.0	189.0	77
1/8/1987	--	.8	7.5	17.0	181.0	77
1/9/1987	--	3.5	9.2	18.0	179.0	77
1/10/1987	--	.9	7.5	15.0	164.0	76
1/11/1987	--	.8	6.6	14.0	152.0	75
1/12/1987	--	.9	6.2	14.0	147.0	75
1/13/1987	--	.9	5.7	13.0	144.0	74
1/14/1987	--	1.0	5.6	13.0	143.0	74
1/15/1987	--	1.1	5.4	12.0	140.0	74
1/16/1987	--	.9	5.2	12.0	137.0	74
1/17/1987	--	7.3	13.0	19.0	144.0	75
1/18/1987	--	2.6	9.9	16.0	142.0	76
1/19/1987	--	1.8	8.2	14.0	135.0	76
1/20/1987	--	1.4	7.5	14.0	127.0	77
1/21/1987	--	1.3	7.0	14.0	125.0	77
1/22/1987	--	1.1	6.3	13.0	121.0	78

Date	Barton Creek	Williamson Creek	Slaughter Creek	Bear Creek	Onion Creek	Barton Springs
1/23/1987	--	1.1	5.9	12.0	114.0	78
1/24/1987	--	1.1	5.8	12.0	111.0	79
1/25/1987	--	.9	4.7	12.0	104.0	79
1/26/1987	--	.9	4.6	11.0	99.0	80
1/27/1987	--	1.0	4.4	10.0	96.0	80
1/28/1987	--	1.1	4.3	10.0	94.0	81
1/29/1987	--	1.2	4.0	10.0	91.0	81
1/30/1987	--	1.2	3.6	9.2	84.0	82
1/31/1987	--	1.2	3.4	9.2	80.0	82
2/1/1987	--	1.2	3.4	9.3	81.0	83
2/2/1987	--	1.2	3.2	8.9	76.0	80
2/3/1987	--	1.1	3.1	8.9	73.0	80
2/4/1987	--	1.3	3.0	8.5	71.0	80
2/5/1987	--	1.0	2.8	8.5	68.0	80
2/6/1987	--	.8	2.7	8.0	70.0	79
2/7/1987	--	.8	2.4	7.7	66.0	79
2/8/1987	--	.6	2.3	7.3	62.0	79
2/9/1987	--	.5	2.1	6.8	58.0	78
2/10/1987	--	.4	2.1	6.7	56.0	78
2/11/1987	--	.5	2.1	6.6	56.0	78
2/12/1987	--	.4	2.0	6.5	54.0	77
2/13/1987	--	.3	1.9	6.7	52.0	77
2/14/1987	--	.3	1.9	6.2	51.0	77
2/15/1987	--	.7	2.1	6.5	53.0	76
2/16/1987	--	.1	1.6	5.7	47.0	76
2/17/1987	--	.1	1.5	5.4	44.0	76
2/18/1987	--	.1	1.5	5.3	43.0	75
2/19/1987	--	.2	1.6	5.4	43.0	75
2/20/1987	--	.6	2.6	6.8	64.0	74
2/21/1987	--	.1	2.2	6.0	63.0	74
2/22/1987	--	.1	1.8	5.4	52.0	73
2/23/1987	--	.1	1.6	4.9	47.0	73
2/24/1987	--	1.9	4.7	8.3	76.0	74
2/25/1987	--	8.8	16.0	14.0	92.0	78
2/26/1987	--	39.0	60.0	39.0	350.0	85
2/27/1987	--	22.0	40.0	28.0	268.0	94
2/28/1987	--	25.0	45.0	28.0	259.0	100
3/1/1987	--	13.0	24.0	24.0	233.0	99
3/2/1987	--	11.0	19.0	23.0	219.0	98
3/3/1987	--	9.0	15.0	21.0	204.0	99
3/4/1987	--	7.5	13.0	20.0	188.0	103
3/5/1987	--	6.6	11.0	18.0	173.0	109
3/6/1987	--	6.2	11.0	17.0	164.0	110
3/7/1987	--	5.6	9.7	16.0	155.0	109
3/8/1987	--	5.4	9.1	15.0	148.0	109
3/9/1987	--	5.0	8.4	15.0	145.0	109
3/10/1987	--	5.2	7.7	14.0	143.0	109
3/11/1987	--	6.9	9.7	15.0	155.0	109
3/12/1987	--	5.0	8.1	13.0	144.0	108
3/13/1987	--	4.6	7.8	12.0	140.0	108

Appendix 2. Daily mean streamflow for the five creeks providing recharge to the Barton Springs segment of the Edwards aquifer and daily mean discharge for Barton Springs, Austin, Texas, 1978–2003—Continued.

Date	Barton Creek	Williamson Creek	Slaughter Creek	Bear Creek	Onion Creek	Barton Springs
3/14/1987	--	4.7	7.4	12.0	138.0	108
3/15/1987	--	4.5	7.1	11.0	135.0	108
3/16/1987	--	4.3	6.6	11.0	132.0	108
3/17/1987	--	7.2	9.9	16.0	247.0	107
3/18/1987	--	3.3	7.1	12.0	187.0	107
3/19/1987	--	3.2	6.5	11.0	165.0	107
3/20/1987	--	3.2	6.2	11.0	158.0	107
3/21/1987	--	3.0	5.9	10.0	152.0	107
3/22/1987	--	3.3	5.8	10.0	148.0	106
3/23/1987	--	3.5	5.1	9.7	146.0	106
3/24/1987	--	3.1	4.7	8.9	142.0	106
3/25/1987	--	2.9	4.8	8.5	140.0	106
3/26/1987	--	2.8	4.6	8.1	138.0	106
3/27/1987	--	2.9	4.6	7.4	133.0	105
3/28/1987	--	4.4	4.6	7.4	129.0	105
3/29/1987	--	1.6	4.1	7.0	119.0	105
3/30/1987	--	1.5	3.9	6.6	114.0	105
3/31/1987	--	1.5	3.9	6.3	110.0	105
4/1/1987	--	1.6	3.7	6.2	106.0	105
4/2/1987	--	1.5	3.5	6.0	101.0	105
4/3/1987	--	1.3	3.2	5.6	95.0	104
4/4/1987	--	1.4	3.2	5.4	91.0	104
4/5/1987	--	1.5	3.1	5.2	88.0	104
4/6/1987	--	1.4	3.3	5.1	92.0	104
4/7/1987	--	1.3	3.2	4.8	85.0	103
4/8/1987	--	1.4	3.0	4.4	78.0	103
4/9/1987	--	1.3	3.0	4.2	73.0	102
4/10/1987	--	1.4	2.8	4.2	71.0	102
4/11/1987	--	1.4	2.7	4.1	70.0	102
4/12/1987	--	1.3	2.7	3.9	65.0	102
4/13/1987	--	1.8	2.6	4.0	62.0	102
4/14/1987	--	.8	2.2	3.5	55.0	101
4/15/1987	--	.6	1.8	3.4	52.0	101
4/16/1987	--	.6	1.8	3.2	50.0	101
4/17/1987	--	.4	1.6	3.4	48.0	101
4/18/1987	--	.4	1.5	3.4	48.0	100
4/19/1987	--	.3	1.5	3.2	46.0	100
4/20/1987	--	.3	1.4	3.2	43.0	100
4/21/1987	--	.3	1.3	3.0	41.0	100
4/22/1987	--	.3	1.1	3.0	40.0	100
4/23/1987	--	.2	1.0	2.9	40.0	100
4/24/1987	--	.1	1.0	2.8	39.0	100
4/25/1987	--	.1	.9	2.8	37.0	100
4/26/1987	--	.1	.8	2.6	35.0	100
4/27/1987	--	.1	.8	2.4	33.0	100
4/28/1987	--	0	.7	2.4	31.0	100
4/29/1987	--	0	.7	2.3	30.0	100
4/30/1987	--	0	.6	2.2	29.0	100
5/1/1987	--	0	.6	2.2	28.0	99
5/2/1987	--	0	.7	2.2	28.0	98
5/3/1987	--	0	0.7	2.2	28.0	98
5/4/1987	--	.6	.8	2.4	30.0	98
5/5/1987	--	.3	.6	2.3	30.0	98
5/6/1987	--	.2	.6	2.0	28.0	97
5/7/1987	--	.1	.5	2.0	26.0	97
5/8/1987	--	.3	.5	2.0	28.0	97
5/9/1987	--	.2	.5	1.9	29.0	96
5/10/1987	--	.1	.5	1.7	25.0	96
5/11/1987	--	.1	.5	1.7	25.0	96
5/12/1987	--	.2	.5	1.7	24.0	95
5/13/1987	--	.1	.4	1.7	21.0	95
5/14/1987	--	.1	.4	1.6	20.0	95
5/15/1987	--	.2	.4	1.5	21.0	94
5/16/1987	--	1.0	.5	2.3	22.0	96
5/17/1987	--	.5	.5	1.9	38.0	100
5/18/1987	--	.3	.5	1.5	30.0	100
5/19/1987	--	12.0	2.6	2.8	32.0	100
5/20/1987	--	1.3	1.0	2.5	35.0	99
5/21/1987	--	.6	.8	1.8	30.0	98
5/22/1987	--	.6	.8	1.7	28.0	94
5/23/1987	--	.5	.8	1.5	23.0	92
5/24/1987	--	3.6	.9	1.5	20.0	92
5/25/1987	--	.3	.8	1.5	19.0	92
5/26/1987	--	.3	.7	1.3	18.0	92
5/27/1987	--	.3	.6	1.2	17.0	91
5/28/1987	--	.3	.6	1.3	16.0	90
5/29/1987	--	149.0	93.0	41.0	208.0	90
5/30/1987	--	9.3	6.4	17.0	200.0	90
5/31/1987	--	5.0	5.2	32.0	392.0	105
6/1/1987	--	10.0	12.0	34.0	386.0	110
6/2/1987	--	65.0	87.0	65.0	1,430.0	108
6/3/1987	--	50.0	67.0	61.0	1,380.0	106
6/4/1987	--	285.0	651.0	419.0	2,510.0	101
6/5/1987	--	47.0	86.0	96.0	1,100.0	96
6/6/1987	--	24.0	33.0	71.0	740.0	109
6/7/1987	--	14.0	18.0	55.0	568.0	114
6/8/1987	--	14.0	15.0	47.0	506.0	106
6/9/1987	--	90.0	121.0	70.0	849.0	111
6/10/1987	--	94.0	170.0	89.0	1,170.0	100
6/11/1987	--	98.0	136.0	115.0	2,140.0	95
6/12/1987	--	121.0	212.0	191.0	1,580.0	94
6/13/1987	--	176.0	423.0	165.0	2,610.0	90
6/14/1987	--	58.0	90.0	96.0	1,320.0	88
6/15/1987	--	30.0	53.0	74.0	866.0	98
6/16/1987	--	20.0	31.0	59.0	661.0	105
6/17/1987	--	14.0	21.0	49.0	524.0	109
6/18/1987	--	84.0	55.0	49.0	530.0	113
6/19/1987	--	22.0	24.0	39.0	376.0	110
6/20/1987	--	14.0	15.0	33.0	317.0	109
6/21/1987	--	9.8	11.0	29.0	286.0	109

Appendix 2. Daily mean streamflow for the five creeks providing recharge to the Barton Springs segment of the Edwards aquifer and daily mean discharge for Barton Springs, Austin, Texas, 1978–2003—Continued.

Date	Barton Creek	Williamson Creek	Slaughter Creek	Bear Creek	Onion Creek	Barton Springs
6/22/1987	--	6.7	8.8	26.0	273.0	108
6/23/1987	--	5.5	7.8	23.0	259.0	109
6/24/1987	--	4.9	7.0	20.0	245.0	111
6/25/1987	--	4.7	5.9	19.0	228.0	110
6/26/1987	--	3.9	4.9	17.0	212.0	113
6/27/1987	--	3.1	4.0	15.0	195.0	113
6/28/1987	--	2.8	3.6	14.0	181.0	114
6/29/1987	--	2.5	3.4	13.0	168.0	115
6/30/1987	--	2.3	3.1	12.0	155.0	112
7/1/1987	--	2.8	2.6	11.0	148.0	110
7/2/1987	--	2.8	2.6	11.0	220.0	110
7/3/1987	--	1.8	1.9	9.4	145.0	109
7/4/1987	--	1.4	1.7	8.2	135.0	108
7/5/1987	--	1.3	1.5	7.3	122.0	106
7/6/1987	--	1.1	1.3	6.8	111.0	104
7/7/1987	--	1.0	1.3	6.1	102.0	102
7/8/1987	--	.9	1.4	5.8	96.0	100
7/9/1987	--	2.3	2.4	6.9	101.0	99
7/10/1987	--	1.2	4.1	6.3	128.0	98
7/11/1987	--	.9	2.3	5.4	93.0	97
7/12/1987	--	.8	1.6	4.9	83.0	96
7/13/1987	--	.7	1.3	4.6	73.0	95
7/14/1987	--	.7	1.2	4.4	70.0	94
7/15/1987	--	.7	1.4	4.0	71.0	93
7/16/1987	--	.6	1.2	4.0	67.0	92
7/17/1987	--	22.0	41.0	11.0	336.0	100
7/18/1987	--	1.3	2.5	6.2	153.0	114
7/19/1987	--	.9	1.5	5.0	96.0	114
7/20/1987	--	.8	1.4	4.2	73.0	96
7/21/1987	--	.7	2.0	4.0	67.0	100
7/22/1987	--	.7	2.3	3.8	70.0	114
7/23/1987	--	.6	1.7	3.5	56.0	100
7/24/1987	--	.7	1.9	3.3	50.0	97
7/25/1987	--	.7	2.4	3.3	67.0	114
7/26/1987	--	.6	1.9	3.3	60.0	114
7/27/1987	--	.6	1.8	3.1	53.0	103
7/28/1987	--	.5	1.4	2.8	49.0	108
7/29/1987	--	.4	1.2	2.5	45.0	113
7/30/1987	--	.4	.9	2.5	43.0	102
7/31/1987	--	.3	.6	2.3	41.0	100
8/1/1987	--	.3	.5	2.2	40.0	113
8/2/1987	--	.3	.3	2.1	43.0	112
8/3/1987	--	.2	.2	2.0	35.0	102
8/4/1987	--	.1	.1	1.9	32.0	106
8/5/1987	--	.1	0	1.8	30.0	111
8/6/1987	--	0	0	1.7	30.0	101
8/7/1987	--	0	0	1.7	36.0	105
8/8/1987	--	0	0	1.6	34.0	110
8/9/1987	--	0	0	1.6	34.0	110
8/10/1987	--	0	0	1.6	33.0	110
8/11/1987	--	0	0	1.5	30.0	109
8/12/1987	--	0	0	1.4	29.0	109
8/13/1987	--	0	0	1.3	28.0	109
8/14/1987	--	0	0	1.3	26.0	108
8/15/1987	--	0	0	1.2	24.0	107
8/16/1987	--	0	0	1.2	23.0	107
8/17/1987	--	0	0	1.1	21.0	107
8/18/1987	--	0	0	1.1	20.0	106
8/19/1987	--	0	0	1.0	18.0	106
8/20/1987	--	0	0	1.0	14.0	106
8/21/1987	--	0	0	1.0	11.0	106
8/22/1987	--	0	0	.9	9.1	106
8/23/1987	--	0	0	.9	8.3	106
8/24/1987	--	0	0	.9	7.8	106
8/25/1987	--	0	0	.8	7.4	105
8/26/1987	--	0	0	.8	7.2	105
8/27/1987	--	1.1	0	.8	6.2	105
8/28/1987	--	.2	0	.7	7.6	104
8/29/1987	--	0	0	.7	7.5	104
8/30/1987	--	.1	.9	1.6	12.0	104
8/31/1987	--	0	.3	1.0	19.0	103
9/1/1987	--	0	.2	.7	19.0	102
9/2/1987	--	0	.1	.7	15.0	102
9/3/1987	--	0	.1	.6	13.0	102
9/4/1987	--	0	.1	.6	10.0	101
9/5/1987	--	0	.1	.5	7.3	101
9/6/1987	--	0	.1	.3	5.2	101
9/7/1987	--	0	.1	.4	6.2	101
9/8/1987	--	0	.4	.4	6.0	100
9/9/1987	--	0	.2	.3	6.7	100
9/10/1987	--	14.0	.7	.5	7.2	100
9/11/1987	--	.5	.5	.6	18.0	100
9/12/1987	--	0	.4	.3	12.0	100
9/13/1987	--	0	.3	.3	10.0	100
9/14/1987	--	0	.3	.3	8.6	99
9/15/1987	--	0	.3	.2	8.3	99
9/16/1987	--	0	.2	.1	9.0	99
9/17/1987	--	0	.1	.1	7.0	98
9/18/1987	--	.7	.3	.2	5.0	97
9/19/1987	--	0	.1	.1	3.7	97
9/20/1987	--	0	.1	.1	3.0	97
9/21/1987	--	0	.1	.1	2.6	97
9/22/1987	--	0	.1	.1	2.7	97
9/23/1987	--	0	.1	.1	2.7	97
9/24/1987	--	0	.1	.1	2.9	96
9/25/1987	--	0	.1	.1	2.0	95
9/26/1987	--	0	.1	.1	1.0	95
9/27/1987	--	0	.1	.2	1.5	95
9/28/1987	--	0	.1	.2	1.7	95
9/29/1987	--	0	.1	.1	.8	95

Appendix 2. Daily mean streamflow for the five creeks providing recharge to the Barton Springs segment of the Edwards aquifer and daily mean discharge for Barton Springs, Austin, Texas, 1978–2003—Continued.

Date	Barton Creek	Williamson Creek	Slaughter Creek	Bear Creek	Onion Creek	Barton Springs
9/30/1987	--	0	0.1	0.1	0.5	95
10/1/1987	--	0	.1	.1	.4	95
10/2/1987	--	0	.1	.1	.5	94
10/3/1987	--	0	.1	.1	.4	94
10/4/1987	--	0	.1	.1	.5	94
10/5/1987	--	0	.1	0	.5	93
10/6/1987	--	0	.1	0	.5	93
10/7/1987	--	0	.1	0	.4	93
10/8/1987	--	0	.1	0	.4	92
10/9/1987	--	0	.1	0	.6	92
10/10/1987	--	0	.1	0	.4	91
10/11/1987	--	0	.1	0	.1	91
10/12/1987	--	0	.1	0	.1	91
10/13/1987	--	0	.1	.1	.2	91
10/14/1987	--	0	.1	0	.2	91
10/15/1987	--	0	.1	0	.2	92
10/16/1987	--	0	.1	0	.2	92
10/17/1987	--	0	.1	0	.3	93
10/18/1987	--	0	.1	0	.3	93
10/19/1987	--	0	.1	0	.5	93
10/20/1987	--	0	.1	0	.4	93
10/21/1987	--	0	.1	0	.2	93
10/22/1987	--	0	.1	0	.8	93
10/23/1987	--	0	.1	0	.9	91
10/24/1987	--	0	.1	.1	1.0	89
10/25/1987	--	0	.1	0	1.1	89
10/26/1987	--	0	.1	0	1.0	89
10/27/1987	--	0	.1	0	.7	89
10/28/1987	--	0	.1	0	1.0	89
10/29/1987	--	0	.1	.1	1.9	89
10/30/1987	--	0	.1	.1	2.3	87
10/31/1987	--	0	.1	.1	3.1	85
11/1/1987	--	0	.1	0	3.2	86
11/2/1987	--	0	.1	.1	3.3	86
11/3/1987	--	0	.1	.1	3.3	85
11/4/1987	--	0	.1	0	3.3	85
11/5/1987	--	0	.1	0	2.7	84
11/6/1987	--	0	.1	0	2.5	82
11/7/1987	--	0	.1	0	3.3	83
11/8/1987	--	18.0	.3	.3	18.0	83
11/9/1987	--	.5	.1	.4	9.2	83
11/10/1987	--	0	.1	.3	6.3	83
11/11/1987	--	0	.1	.2	9.0	82
11/12/1987	--	0	.1	.2	10.0	82
11/13/1987	--	0	.1	.2	9.7	82
11/14/1987	--	0	.1	.2	9.1	81
11/15/1987	--	.6	.2	.8	12.0	81
11/16/1987	--	6.0	.2	1.2	7.6	80
11/17/1987	--	.1	.1	.7	9.0	80
11/18/1987	--	0	.1	.6	11.0	79
11/19/1987	--	0	0.1	0.6	11.0	79
11/20/1987	--	0	.1	.4	10.0	78
11/21/1987	--	0	.1	.3	13.0	78
11/22/1987	--	0	.1	.2	5.6	79
11/23/1987	--	0	.1	.3	8.9	79
11/24/1987	--	0	.1	.3	9.0	79
11/25/1987	--	21.0	22.0	8.3	316.0	80
11/26/1987	--	.2	.2	2.3	28.0	81
11/27/1987	--	2.7	.4	2.3	20.0	82
11/28/1987	--	.3	.2	2.0	17.0	82
11/29/1987	--	.2	.2	1.8	15.0	82
11/30/1987	--	.2	.2	1.6	12.0	82
12/1/1987	--	.1	.2	1.5	9.6	82
12/2/1987	--	.1	.2	1.5	8.2	82
12/3/1987	--	.1	.2	1.3	6.4	81
12/4/1987	--	.1	.2	1.2	5.6	81
12/5/1987	--	0	.2	1.1	5.3	81
12/6/1987	--	0	.2	1.1	5.1	80
12/7/1987	--	0	.2	.9	4.5	78
12/8/1987	--	0	.2	.9	4.1	75
12/9/1987	--	0	.2	.8	3.1	73
12/10/1987	--	0	.2	.8	2.9	73
12/11/1987	--	0	.2	.7	2.9	73
12/12/1987	--	0	.2	.7	2.2	73
12/13/1987	--	0	.2	.7	2.3	74
12/14/1987	--	0	.3	.9	2.5	74
12/15/1987	--	0	.1	1.1	1.3	74
12/16/1987	--	0	.2	1.1	1.0	74
12/17/1987	--	0	.2	1.1	1.2	74
12/18/1987	--	.1	.2	1.1	1.9	74
12/19/1987	--	6.3	.7	2.8	9.4	75
12/20/1987	--	.5	.4	1.5	11.0	75
12/21/1987	--	.4	.3	1.5	14.0	76
12/22/1987	--	.2	.3	1.5	13.0	76
12/23/1987	--	.2	.3	1.4	13.0	76
12/24/1987	--	.6	.4	1.4	13.0	75
12/25/1987	--	.8	.5	1.4	12.0	75
12/26/1987	--	1.2	.6	1.3	11.0	75
12/27/1987	--	.6	.5	1.4	11.0	75
12/28/1987	--	.5	.6	1.4	11.0	75
12/29/1987	--	.5	.6	1.2	11.0	74
12/30/1987	--	.5	.6	1.2	11.0	74
12/31/1987	--	.5	.7	1.2	11.0	74
1/1/1988	--	.4	.6	1.2	10.0	74
1/2/1988	--	.3	.6	1.2	10.0	74
1/3/1988	--	.4	.6	1.2	11.0	74
1/4/1988	--	.4	.6	1.2	10.0	74
1/5/1988	--	.4	.6	1.1	9.6	73
1/6/1988	--	.8	.7	1.4	11.0	73
1/7/1988	--	.5	.7	1.4	11.0	73

Appendix 2. Daily mean streamflow for the five creeks providing recharge to the Barton Springs segment of the Edwards aquifer and daily mean discharge for Barton Springs, Austin, Texas, 1978–2003—Continued.

Date	Barton Creek	Williamson Creek	Slaughter Creek	Bear Creek	Onion Creek	Barton Springs
1/8/1988	--	0.4	0.7	1.2	9.5	73
1/9/1988	--	.4	.7	1.2	9.5	73
1/10/1988	--	.4	.7	1.1	9.7	73
1/11/1988	--	.4	.7	1.1	10.0	72
1/12/1988	--	.4	.7	1.1	10.0	72
1/13/1988	--	.4	.6	1.1	9.1	72
1/14/1988	--	.4	.6	.9	9.6	72
1/15/1988	--	.4	.6	.9	9.8	71
1/16/1988	--	.4	.6	1.1	9.8	71
1/17/1988	--	.4	.6	1.1	9.4	71
1/18/1988	--	.4	.7	1.1	9.2	70
1/19/1988	--	.4	.6	1.1	8.8	70
1/20/1988	--	.3	.5	1.1	8.0	69
1/21/1988	--	.3	.5	1.1	7.9	68
1/22/1988	--	.3	.5	1.1	7.9	68
1/23/1988	--	.4	.5	1.1	6.8	67
1/24/1988	--	.3	.5	.9	6.7	67
1/25/1988	--	.3	.5	.9	6.5	67
1/26/1988	--	.3	.5	1.0	6.8	66
1/27/1988	--	.3	.4	1.1	6.8	66
1/28/1988	--	.3	.4	1.1	7.1	66
1/29/1988	--	.2	.4	1.1	7.5	66
1/30/1988	--	.3	.4	1.1	7.5	66
1/31/1988	--	.2	.4	1.1	7.5	66
2/1/1988	--	.2	.4	1.1	8.1	65
2/2/1988	--	.2	.4	1.1	7.6	65
2/3/1988	--	.1	.5	.9	6.8	64
2/4/1988	--	.2	.5	.9	6.3	63
2/5/1988	--	.2	.5	1.0	7.1	62
2/6/1988	--	.1	.5	1.1	7.3	62
2/7/1988	--	.2	.5	1.1	6.8	62
2/8/1988	--	.1	.5	1.1	7.1	62
2/9/1988	--	.1	.5	1.1	7.5	61
2/10/1988	--	.1	.6	.9	7.5	61
2/11/1988	--	.1	.5	.9	7.1	63
2/12/1988	--	.1	.5	.8	6.5	64
2/13/1988	--	.1	.5	.8	6.8	64
2/14/1988	--	.2	.5	.8	6.8	63
2/15/1988	--	.1	.5	.8	6.0	63
2/16/1988	--	.1	.5	.8	6.3	63
2/17/1988	--	.1	.5	.8	7.7	62
2/18/1988	--	.1	.6	1.2	8.6	62
2/19/1988	--	.1	.6	1.0	7.8	62
2/20/1988	--	.1	.6	.9	7.9	61
2/21/1988	--	0	.6	.8	8.5	61
2/22/1988	--	0	.6	.8	8.4	60
2/23/1988	--	0	.5	.8	7.7	60
2/24/1988	--	0	.5	.8	5.8	60
2/25/1988	--	0	.5	.8	5.1	59
2/26/1988	--	0	.5	.8	5.1	59
2/27/1988	--	0	0.5	0.8	6.0	59
2/28/1988	--	0	.5	.8	6.0	58
2/29/1988	--	0	.5	.8	6.3	58
3/1/1988	--	0	.5	.8	6.2	58
3/2/1988	--	.2	.6	1.1	7.8	57
3/3/1988	--	0	.5	.9	6.7	57
3/4/1988	--	0	.5	.8	6.2	56
3/5/1988	--	0	.6	.8	5.9	57
3/6/1988	--	0	.6	.7	5.3	56
3/7/1988	--	0	.6	.7	5.4	56
3/8/1988	--	0	.6	.7	6.5	55
3/9/1988	--	0	.5	.7	4.6	55
3/10/1988	--	0	.6	.7	4.5	54
3/11/1988	--	0	.6	.7	5.0	54
3/12/1988	--	0	.5	.7	4.6	54
3/13/1988	--	0	.5	.6	4.1	53
3/14/1988	--	0	.5	.6	4.5	53
3/15/1988	--	0	.5	.6	4.2	53
3/16/1988	--	0	.5	.6	4.2	52
3/17/1988	--	8.3	.6	1.5	8.1	52
3/18/1988	--	.3	.5	.9	13.0	60
3/19/1988	--	.2	.5	.7	16.0	58
3/20/1988	--	.1	.4	.7	13.0	57
3/21/1988	--	.1	.4	.7	11.0	57
3/22/1988	--	.1	.4	.7	10.0	57
3/23/1988	--	.1	.4	.7	9.6	57
3/24/1988	--	.1	.4	.7	9.0	56
3/25/1988	--	0	.4	.7	8.4	56
3/26/1988	--	0	.4	.7	8.0	55
3/27/1988	--	0	.3	.7	7.8	55
3/28/1988	--	0	.3	.7	7.6	55
3/29/1988	--	.1	.3	.7	7.4	55
3/30/1988	--	0	.3	.6	6.1	54
3/31/1988	--	0	.3	.7	6.2	54
4/1/1988	--	.1	.3	.7	5.9	54
4/2/1988	--	.1	.3	.7	5.7	54
4/3/1988	--	0	.3	.7	7.6	54
4/4/1988	--	0	.3	.7	7.7	54
4/5/1988	--	0	.3	.7	7.1	54
4/6/1988	--	.1	.3	.7	6.2	54
4/7/1988	--	0	.3	.7	5.6	54
4/8/1988	--	0	.2	.7	5.2	54
4/9/1988	--	1.6	.3	1.0	5.7	53
4/10/1988	--	.3	.2	.8	7.4	54
4/11/1988	--	.2	.2	.7	5.5	53
4/12/1988	--	.2	.1	.7	6.2	53
4/13/1988	--	.1	.1	.7	5.6	53
4/14/1988	--	.1	.1	.7	5.9	53
4/15/1988	--	0	.1	.7	6.2	52
4/16/1988	--	0	.1	.7	6.2	52

Appendix 2. Daily mean streamflow for the five creeks providing recharge to the Barton Springs segment of the Edwards aquifer and daily mean discharge for Barton Springs, Austin, Texas, 1978–2003—Continued.

Date	Barton Creek	Williamson Creek	Slaughter Creek	Bear Creek	Onion Creek	Barton Springs
4/17/1988	--	0	0.1	0.7	6.2	52
4/18/1988	--	0	.1	.7	5.1	51
4/19/1988	--	0	.1	.6	3.9	51
4/20/1988	--	0	.1	.6	4.2	51
4/21/1988	--	0	.1	.5	4.3	51
4/22/1988	--	0	.1	.5	4.6	50
4/23/1988	--	0	.1	.5	4.6	50
4/24/1988	--	0	.1	.3	3.8	50
4/25/1988	--	0	.1	.3	4.1	50
4/26/1988	--	0	.1	.2	3.6	50
4/27/1988	--	0	.1	.1	3.5	50
4/28/1988	--	0	.1	.1	3.6	50
4/29/1988	--	1.4	.1	1.0	5.4	50
4/30/1988	--	.2	.1	1.1	7.8	50
5/1/1988	--	0	.1	.7	4.7	50
5/2/1988	--	0	.1	.7	3.8	49
5/3/1988	--	0	.1	.6	4.0	49
5/4/1988	--	0	.1	.5	3.4	48
5/5/1988	--	0	.1	.5	3.3	48
5/6/1988	--	0	.1	.4	3.8	48
5/7/1988	--	0	.1	.3	4.2	48
5/8/1988	--	0	.1	.3	4.4	48
5/9/1988	--	0	.1	.3	3.9	48
5/10/1988	--	0	.1	.3	3.9	48
5/11/1988	--	1.6	.1	.6	5.5	48
5/12/1988	--	.3	.1	.6	6.1	48
5/13/1988	--	0	.1	.4	3.2	48
5/14/1988	--	0	.1	.3	3.1	48
5/15/1988	--	0	.1	.1	3.2	48
5/16/1988	--	0	.1	.3	6.4	48
5/17/1988	--	0	.1	.1	4.4	48
5/18/1988	--	0	.1	.1	3.7	48
5/19/1988	--	0	.1	.1	3.3	48
5/20/1988	--	4.6	.1	.5	3.5	50
5/21/1988	--	8.8	.2	1.5	18.0	54
5/22/1988	--	0	.1	.7	7.1	52
5/23/1988	--	0	.1	.5	5.6	51
5/24/1988	--	0	.1	.5	5.1	50
5/25/1988	--	0	.1	.5	5.1	49
5/26/1988	--	0	.1	.5	3.9	49
5/27/1988	--	0	.1	.4	1.2	49
5/28/1988	--	0	.1	.4	3.5	48
5/29/1988	--	0	.1	.3	4.0	48
5/30/1988	--	0	.1	.4	6.9	48
5/31/1988	--	.6	.1	.4	3.4	48
6/1/1988	--	.5	.1	.5	4.5	48
6/2/1988	--	1.2	.1	.4	3.8	50
6/3/1988	--	3.3	.2	.7	3.7	50
6/4/1988	--	0	.2	.4	3.7	49
6/5/1988	--	0	.2	.4	3.7	49
6/6/1988	--	0	0.1	0.2	3.7	48
6/7/1988	--	0	.1	.2	3.4	48
6/8/1988	--	0	.1	.2	3.4	48
6/9/1988	--	0	0	.1	3.2	48
6/10/1988	--	0	0	.1	3.0	47
6/11/1988	--	0	0	.1	3.1	47
6/12/1988	--	0	0	.1	2.5	47
6/13/1988	--	0	0	.1	2.6	47
6/14/1988	--	0	0	.1	2.7	46
6/15/1988	--	0	0	.1	2.7	46
6/16/1988	--	0	0	.1	2.7	46
6/17/1988	--	0	0	.1	2.2	46
6/18/1988	--	0	0	.1	2.2	45
6/19/1988	--	0	0	0	2.7	45
6/20/1988	--	0	0	0	2.7	45
6/21/1988	--	0	0	0	1.7	45
6/22/1988	--	0	.1	0	1.1	45
6/23/1988	--	0	0	0	1.1	45
6/24/1988	--	0	0	0	1.1	45
6/25/1988	--	0	0	0	1.0	45
6/26/1988	--	1.2	0	.1	6.7	46
6/27/1988	--	0	0	.1	5.3	46
6/28/1988	--	0	0	.1	3.6	46
6/29/1988	--	0	0	.1	3.0	45
6/30/1988	--	0	0	0	2.7	45
7/1/1988	--	0	0	0	2.6	45
7/2/1988	--	0	0	0	2.2	45
7/3/1988	--	0	0	0	2.2	45
7/4/1988	--	.4	0	0	2.2	45
7/5/1988	--	0	0	0	2.2	45
7/6/1988	--	0	0	.1	2.2	47
7/7/1988	--	0	0	.1	2.2	46
7/8/1988	--	0	0	0	2.2	44
7/9/1988	--	0	0	.1	2.0	45
7/10/1988	--	1.0	0	0	1.8	45
7/11/1988	--	.2	0	0	1.8	45
7/12/1988	--	2.0	0	.8	7.5	45
7/13/1988	--	.1	0	.2	2.4	45
7/14/1988	--	0	0	.1	1.1	45
7/15/1988	--	0	0	.1	1.0	45
7/16/1988	--	0	0	.1	.8	45
7/17/1988	--	0	0	0	.9	45
7/18/1988	--	0	0	0	.6	45
7/19/1988	--	0	0	0	.5	44
7/20/1988	--	0	0	0	.6	44
7/21/1988	--	0	0	0	.9	44
7/22/1988	--	0	0	0	.7	44
7/23/1988	--	0	0	0	.4	44
7/24/1988	--	0	0	0	.4	44
7/25/1988	--	0	0	0	.4	43

Appendix 2. Daily mean streamflow for the five creeks providing recharge to the Barton Springs segment of the Edwards aquifer and daily mean discharge for Barton Springs, Austin, Texas, 1978–2003—Continued.

Date	Barton Creek	Williamson Creek	Slaughter Creek	Bear Creek	Onion Creek	Barton Springs
7/26/1988	--	0	0	0	0.4	41
7/27/1988	--	0	0	0	1.6	43
7/28/1988	--	0	0	0	5.2	42
7/29/1988	--	0	0	0	.9	41
7/30/1988	--	0	0	0	1.2	43
7/31/1988	--	0	0	0	1.2	43
8/1/1988	--	0	0	0	.9	42
8/2/1988	--	0	0	0	4.6	41
8/3/1988	--	0	0	0	11.0	43
8/4/1988	--	0	0	0	2.4	43
8/5/1988	--	0	0	0	2.0	42
8/6/1988	--	0	0	0	2.1	43
8/7/1988	--	0	0	0	1.8	43
8/8/1988	--	0	0	0	1.6	42
8/9/1988	--	0	0	0	1.4	41
8/10/1988	--	0	0	0	1.4	42
8/11/1988	--	1.1	0	0	1.3	43
8/12/1988	--	0	0	0	3.2	44
8/13/1988	--	0	0	0	1.6	45
8/14/1988	--	0	0	0	1.1	45
8/15/1988	--	0	0	0	.9	44
8/16/1988	--	1.2	0	0	.9	43
8/17/1988	--	0	0	0	.9	43
8/18/1988	--	0	0	0	.9	43
8/19/1988	--	0	0	0	1.1	43
8/20/1988	--	0	0	0	1.1	43
8/21/1988	--	0	0	0	1.1	43
8/22/1988	--	0	0	0	.9	42
8/23/1988	--	0	0	0	.7	41
8/24/1988	--	0	0	0	.6	42
8/25/1988	--	0	0	0	.6	41
8/26/1988	--	0	0	0	.6	41
8/27/1988	--	0	0	0	.6	42
8/28/1988	--	0	0	0	.5	42
8/29/1988	--	0	0	0	.5	42
8/30/1988	--	0	0	0	.5	41
8/31/1988	--	0	0	0	.5	41
9/1/1988	--	0	0	0	.4	41
9/2/1988	--	0	0	0	.5	40
9/3/1988	--	0	0	0	.4	40
9/4/1988	--	0	0	0	.3	40
9/5/1988	--	0	0	0	.2	40
9/6/1988	--	0	0	0	.2	40
9/7/1988	--	0	0	0	.2	40
9/8/1988	--	0	0	0	.2	39
9/9/1988	--	0	0	0	.2	39
9/10/1988	--	0	0	0	.2	40
9/11/1988	--	0	0	0	.2	40
9/12/1988	--	0	0	0	.2	40
9/13/1988	--	0	0	0	.2	40
9/14/1988	--	0	0	0	0.2	40
9/15/1988	--	0	0	0	.2	40
9/16/1988	--	0	0	0	.2	40
9/17/1988	--	4.0	0	0	1.2	41
9/18/1988	--	0	0	0	2.0	41
9/19/1988	--	0	0	0	.8	41
9/20/1988	--	0	0	0	.6	41
9/21/1988	--	0	0	0	.4	40
9/22/1988	--	0	0	0	.3	40
9/23/1988	--	0	0	0	.2	39
9/24/1988	--	0	0	0	.2	40
9/25/1988	--	0	0	0	.2	40
9/26/1988	--	0	0	0	.2	40
9/27/1988	--	0	0	0	.2	40
9/28/1988	--	0	0	0	.2	40
9/29/1988	--	0	0	0	.2	39
9/30/1988	--	0	0	0	.3	38
10/1/1988	--	0	0	0	.3	31
10/2/1988	--	0	0	0	.3	31
10/3/1988	--	0	0	0	.3	31
10/4/1988	--	0	0	0	.3	30
10/5/1988	--	0	0	0	.3	29
10/6/1988	--	0	0	0	.3	28
10/7/1988	--	0	0	0	.3	28
10/8/1988	--	0	0	0	.3	28
10/9/1988	--	0	0	0	.3	28
10/10/1988	--	0	0	0	.3	28
10/11/1988	--	0	0	0	.3	28
10/12/1988	--	0	0	0	.3	28
10/13/1988	--	0	0	0	.3	28
10/14/1988	--	0	0	0	.3	27
10/15/1988	--	0	0	0	.3	27
10/16/1988	--	0	0	0	.3	27
10/17/1988	--	0	0	0	.2	27
10/18/1988	--	0	0	0	.2	27
10/19/1988	--	0	0	0	.2	27
10/20/1988	--	0	0	0	.2	27
10/21/1988	--	0	0	0	.2	26
10/22/1988	--	0	0	0	.2	26
10/23/1988	--	0	0	0	.2	27
10/24/1988	--	0	0	0	.2	27
10/25/1988	--	0	0	0	.1	27
10/26/1988	--	0	0	0	.1	28
10/27/1988	--	0	0	0	.1	28
10/28/1988	--	0	0	0	.1	27
10/29/1988	--	0	0	0	.1	27
10/30/1988	--	0	0	0	.1	27
10/31/1988	--	2.0	0	0	.2	27
11/1/1988	--	0	0	0	.2	26
11/2/1988	--	0	0	0	.2	26

Appendix 2. Daily mean streamflow for the five creeks providing recharge to the Barton Springs segment of the Edwards aquifer and daily mean discharge for Barton Springs, Austin, Texas, 1978–2003—Continued.

Date	Barton Creek	Williamson Creek	Slaughter Creek	Bear Creek	Onion Creek	Barton Springs
11/3/1988	--	0	0	0	0.2	25
11/4/1988	--	0	0	0	.1	25
11/5/1988	--	0	0	0	.1	26
11/6/1988	--	0	0	0	.1	27
11/7/1988	--	0	0	0	.1	25
11/8/1988	--	0	0	0	.1	24
11/9/1988	--	0	0	0	.1	23
11/10/1988	--	0	0	0	.1	23
11/11/1988	--	0	0	0	.1	23
11/12/1988	--	0	0	0	.1	24
11/13/1988	--	0	0	0	.1	24
11/14/1988	--	0	0	0	.1	24
11/15/1988	--	0	0	0	.1	24
11/16/1988	--	0	0	0	.1	25
11/17/1988	--	0	0	0	.1	25
11/18/1988	--	0	0	0	.1	25
11/19/1988	--	0	0	0	.1	25
11/20/1988	--	0	0	0	.1	26
11/21/1988	--	0	0	0	.1	26
11/22/1988	--	0	0	0	.1	27
11/23/1988	--	0	0	0	.1	26
11/24/1988	--	0	0	0	.1	26
11/25/1988	--	0	0	0	.1	26
11/26/1988	--	0	0	0	.1	26
11/27/1988	--	0	0	0	.1	26
11/28/1988	--	0	0	0	.1	26
11/29/1988	--	0	0	0	.1	26
11/30/1988	--	0	0	0	.1	26
12/1/1988	--	0	0	0	.1	26
12/2/1988	--	0	0	0	.1	26
12/3/1988	--	0	0	0	.1	26
12/4/1988	--	0	0	0	.1	26
12/5/1988	--	0	0	0	.1	26
12/6/1988	--	0	0	0	.1	26
12/7/1988	--	0	0	0	.1	25
12/8/1988	--	0	0	0	.1	23
12/9/1988	--	0	0	0	.1	25
12/10/1988	--	0	0	0	.1	25
12/11/1988	--	0	0	0	.1	26
12/12/1988	--	0	0	0	.1	25
12/13/1988	--	0	0	0	.1	25
12/14/1988	--	0	0	0	.1	25
12/15/1988	--	0	0	0	.1	24
12/16/1988	--	0	0	0	.1	24
12/17/1988	--	0	0	0	.1	24
12/18/1988	--	0	0	0	.1	24
12/19/1988	--	0	0	0	.1	24
12/20/1988	--	0	0	0	.1	24
12/21/1988	--	0	0	0	.1	24
12/22/1988	--	0	0	0	.1	24
12/23/1988	--	0	0	0	0.1	24
12/24/1988	--	0	0	0	.1	24
12/25/1988	--	0	0	0	.1	24
12/26/1988	--	0	0	0	.1	24
12/27/1988	--	0	0	0	.1	24
12/28/1988	.3	0	0	0	.1	24
12/29/1988	.3	0	0	0	.1	24
12/30/1988	.3	0	0	0	.1	24
12/31/1988	.3	0	0	0	.1	24
1/1/1989	.4	0	0	0	.1	24
1/2/1989	.4	0	0	0	.1	24
1/3/1989	.4	0	0	0	.1	24
1/4/1989	.3	0	0	0	.1	24
1/5/1989	.3	0	0	0	.1	24
1/6/1989	.3	0	0	0	.1	24
1/7/1989	.3	.1	0	0	.1	24
1/8/1989	.3	0	0	0	.1	24
1/9/1989	.3	0	0	0	.1	24
1/10/1989	.3	0	0	0	.2	24
1/11/1989	.3	0	0	0	.2	24
1/12/1989	.4	0	0	0	.2	24
1/13/1989	.4	.7	0	0	.2	24
1/14/1989	.4	.1	0	0	.2	25
1/15/1989	.3	0	0	0	.2	24
1/16/1989	.3	0	0	0	.2	24
1/17/1989	.3	0	0	0	.2	24
1/18/1989	.4	0	0	0	.2	24
1/19/1989	.5	1.9	.1	0	.2	25
1/20/1989	.4	.5	0	0	.2	27
1/21/1989	.4	0	0	0	.2	26
1/22/1989	.4	0	0	0	.2	26
1/23/1989	.4	0	0	0	.2	25
1/24/1989	.5	.4	0	0	.2	25
1/25/1989	.5	.5	0	0	.2	26
1/26/1989	3.2	22.0	.3	0	1.6	28
1/27/1989	1.2	.2	0	0	2.5	30
1/28/1989	2.2	2.8	.1	0	1.2	32
1/29/1989	7.5	9.4	.2	0	8.0	34
1/30/1989	3.0	.7	0	0	7.4	36
1/31/1989	1.6	.3	0	0	3.8	34
2/1/1989	1.3	.2	0	0	2.7	32
2/2/1989	1.3	.7	.1	0	2.7	31
2/3/1989	1.5	.5	0	0	6.3	30
2/4/1989	1.1	.1	0	0	5.4	29
2/5/1989	1.0	.2	0	0	5.0	29
2/6/1989	1.0	.2	0	0	4.3	29
2/7/1989	1.0	.1	0	0	3.6	29
2/8/1989	.9	.1	0	0	3.1	29
2/9/1989	1.0	.1	0	0	2.6	29
2/10/1989	.9	.1	0	0	2.2	29

Appendix 2. Daily mean streamflow for the five creeks providing recharge to the Barton Springs segment of the Edwards aquifer and daily mean discharge for Barton Springs, Austin, Texas, 1978–2003—Continued.

Date	Barton Creek	Williamson Creek	Slaughter Creek	Bear Creek	Onion Creek	Barton Springs
2/11/1989	0.9	0.1	0	0	1.8	28
2/12/1989	.9	.1	0	0	1.6	28
2/13/1989	.9	.1	0	0	2.4	28
2/14/1989	.9	0	0	0	1.2	28
2/15/1989	.8	0	0	0	.9	28
2/16/1989	.8	0	0	0	.9	27
2/17/1989	.9	.2	0	.1	1.1	27
2/18/1989	.9	.1	0	.1	1.4	26
2/19/1989	.9	.1	0	.1	1.4	27
2/20/1989	.9	0	0	.1	1.3	27
2/21/1989	.9	.2	0	.1	1.1	27
2/22/1989	.9	.3	0	.1	1.1	26
2/23/1989	.9	0	0	.1	1.1	26
2/24/1989	.9	0	0	.1	1.3	26
2/25/1989	1.0	0	0	.1	1.9	25
2/26/1989	1.0	0	0	.1	2.4	26
2/27/1989	1.0	0	0	.1	2.2	26
2/28/1989	1.0	0	0	.1	1.6	26
3/1/1989	1.4	.1	0	.1	1.8	26
3/2/1989	6.9	.1	0	.2	2.2	27
3/3/1989	6.9	0	0	.3	2.3	26
3/4/1989	7.1	.5	0	.4	2.7	25
3/5/1989	6.6	0	0	.2	2.3	26
3/6/1989	6.1	0	0	.2	1.4	26
3/7/1989	5.6	0	0	.3	1.9	26
3/8/1989	5.1	0	0	.3	1.1	25
3/9/1989	4.0	0	0	.3	1.2	25
3/10/1989	3.9	0	0	.3	1.4	25
3/11/1989	4.5	0	0	.3	1.4	25
3/12/1989	4.5	0	0	.3	1.2	24
3/13/1989	4.3	0	0	.4	1.2	24
3/14/1989	4.4	0	0	.3	1.5	24
3/15/1989	4.7	0	0	.3	1.8	24
3/16/1989	4.5	0	0	.2	1.5	23
3/17/1989	4.3	0	0	.3	1.4	23
3/18/1989	4.3	0	0	.3	1.4	23
3/19/1989	4.3	0	0	.3	1.4	24
3/20/1989	6.1	.2	0	.4	2.7	25
3/21/1989	6.9	1.0	0	.2	2.0	27
3/22/1989	7.3	.1	0	.2	1.4	27
3/23/1989	6.9	0	0	.2	1.1	26
3/24/1989	6.4	0	0	.2	1.3	25
3/25/1989	6.2	0	0	.4	1.8	24
3/26/1989	6.3	0	0	.5	2.2	25
3/27/1989	7.5	0	0	.5	2.2	25
3/28/1989	14.0	9.1	0	1.3	6.7	27
3/29/1989	24.0	.4	0	1.5	6.1	27
3/30/1989	24.0	.2	0	1.2	6.8	27
3/31/1989	15.0	.2	0	1.1	5.6	27
4/1/1989	12.0	.1	0	1.3	5.1	27
4/2/1989	11.0	0.1	0	1.4	4.8	27
4/3/1989	11.0	.1	0	1.4	4.5	27
4/4/1989	11.0	0	0	1.3	4.3	26
4/5/1989	9.9	0	0	1.3	4.1	26
4/6/1989	9.4	0	0	1.1	3.8	26
4/7/1989	9.1	0	0	1.1	3.7	25
4/8/1989	8.8	0	0	1.1	3.7	25
4/9/1989	8.0	0	0	1.1	3.7	26
4/10/1989	7.4	0	0	1.0	3.6	26
4/11/1989	7.5	0	0	.9	3.4	26
4/12/1989	7.7	0	0	.9	3.4	26
4/13/1989	9.0	.1	0	.9	3.4	26
4/14/1989	15.0	3.2	0	2.2	4.4	26
4/15/1989	16.0	.1	0	1.3	3.8	27
4/16/1989	14.0	0	0	1.1	3.7	27
4/17/1989	11.0	0	0	.9	3.7	27
4/18/1989	10.0	0	0	.9	3.7	27
4/19/1989	26.0	20.0	.9	40.0	11.0	28
4/20/1989	33.0	.7	0	5.0	8.7	37
4/21/1989	23.0	.4	0	4.3	8.4	38
4/22/1989	19.0	.3	0	3.7	7.3	36
4/23/1989	16.0	.3	0	3.5	5.6	35
4/24/1989	15.0	.2	0	3.4	4.6	33
4/25/1989	14.0	.1	0	3.2	4.9	32
4/26/1989	14.0	.1	0	3.2	5.4	32
4/27/1989	14.0	.1	0	3.0	5.1	31
4/28/1989	13.0	0	0	3.0	4.6	30
4/29/1989	12.0	.1	0	3.0	4.6	29
4/30/1989	11.0	.2	0	3.0	4.2	30
5/1/1989	11.0	0	0	2.8	3.6	30
5/2/1989	9.9	0	0	2.6	4.2	30
5/3/1989	9.1	0	0	2.4	3.0	30
5/4/1989	8.6	0	0	2.4	3.0	29
5/5/1989	27.0	15.0	.3	4.1	8.5	33
5/6/1989	21.0	.3	0	2.9	4.7	32
5/7/1989	15.0	.1	0	2.6	4.1	31
5/8/1989	12.0	.1	0	2.5	2.9	30
5/9/1989	9.9	.1	0	2.4	3.0	30
5/10/1989	814.0	87.0	23.0	137.0	480.0	46
5/11/1989	200.0	12.0	4.3	18.0	85.0	45
5/12/1989	120.0	7.5	3.9	16.0	47.0	43
5/13/1989	180.0	72.0	19.0	17.0	37.0	41
5/14/1989	349.0	40.0	13.0	16.0	36.0	43
5/15/1989	278.0	34.0	11.0	17.0	102.0	41
5/16/1989	184.0	20.0	9.7	16.0	83.0	39
5/17/1989	1,790.0	134.0	76.0	48.0	1,430.0	88
5/18/1989	699.0	44.0	24.0	27.0	297.0	84
5/19/1989	356.0	25.0	10.0	23.0	186.0	78
5/20/1989	246.0	16.0	7.0	19.0	147.0	75
5/21/1989	188.0	11.0	5.5	19.0	251.0	72

Appendix 2. Daily mean streamflow for the five creeks providing recharge to the Barton Springs segment of the Edwards aquifer and daily mean discharge for Barton Springs, Austin, Texas, 1978–2003—Continued.

Date	Barton Creek	Williamson Creek	Slaughter Creek	Bear Creek	Onion Creek	Barton Springs
5/22/1989	158.0	8.5	4.1	16.0	157.0	71
5/23/1989	140.0	6.4	3.1	14.0	137.0	70
5/24/1989	128.0	4.8	2.6	13.0	120.0	70
5/25/1989	117.0	4.1	2.2	11.0	105.0	70
5/26/1989	106.0	3.3	1.7	9.5	88.0	69
5/27/1989	91.0	3.0	1.6	8.1	74.0	69
5/28/1989	80.0	2.5	1.4	7.7	69.0	68
5/29/1989	69.0	2.2	1.3	6.9	61.0	68
5/30/1989	62.0	2.0	1.2	6.4	56.0	67
5/31/1989	54.0	1.9	1.1	5.7	50.0	66
6/1/1989	50.0	1.9	.9	5.2	45.0	65
6/2/1989	47.0	2.3	.7	4.6	42.0	64
6/3/1989	44.0	2.7	.7	4.5	38.0	64
6/4/1989	40.0	2.7	.7	4.2	34.0	64
6/5/1989	38.0	2.8	.6	4.0	32.0	64
6/6/1989	35.0	2.5	.4	3.5	29.0	63
6/7/1989	33.0	2.4	.4	3.3	25.0	63
6/8/1989	31.0	1.8	.4	2.8	22.0	62
6/9/1989	28.0	1.4	.4	2.6	19.0	62
6/10/1989	28.0	1.3	.4	2.5	18.0	61
6/11/1989	41.0	11.0	1.1	3.9	24.0	63
6/12/1989	34.0	1.0	.5	2.5	23.0	63
6/13/1989	30.0	2.9	.5	2.2	19.0	70
6/14/1989	159.0	48.0	7.6	13.0	115.0	75
6/15/1989	92.0	1.7	1.7	7.4	56.0	73
6/16/1989	53.0	1.3	1.2	6.6	32.0	71
6/17/1989	43.0	1.3	.9	6.1	27.0	70
6/18/1989	39.0	1.3	.9	5.8	24.0	70
6/19/1989	36.0	1.2	.9	5.3	24.0	69
6/20/1989	34.0	1.0	.7	5.0	23.0	69
6/21/1989	31.0	1.1	.3	4.8	21.0	68
6/22/1989	28.0	1.0	.3	4.7	20.0	67
6/23/1989	26.0	1.1	.3	4.7	20.0	66
6/24/1989	27.0	2.7	.3	5.0	19.0	65
6/25/1989	26.0	1.4	.4	5.3	20.0	64
6/26/1989	27.0	1.8	.4	5.0	20.0	64
6/27/1989	29.0	1.2	.4	4.5	19.0	63
6/28/1989	27.0	.9	.3	4.1	19.0	62
6/29/1989	23.0	.7	.3	4.1	18.0	61
6/30/1989	20.0	.6	.3	4.2	17.0	60
7/1/1989	19.0	.5	.3	4.0	17.0	59
7/2/1989	17.0	.4	.2	3.7	16.0	58
7/3/1989	15.0	.2	.2	3.7	15.0	58
7/4/1989	13.0	.2	.2	3.4	15.0	57
7/5/1989	12.0	.1	.2	3.4	14.0	57
7/6/1989	11.0	0	.1	2.9	13.0	56
7/7/1989	9.5	0	.2	3.0	13.0	56
7/8/1989	8.9	0	.2	2.9	12.0	55
7/9/1989	8.1	0	.1	2.7	11.0	54
7/10/1989	7.3	0	.1	2.4	10.0	54
7/11/1989	6.7	0	0.1	2.3	9.1	53
7/12/1989	5.8	0	.1	2.1	7.7	52
7/13/1989	4.9	0	.1	2.0	6.7	51
7/14/1989	4.3	2.0	.1	2.0	6.0	50
7/15/1989	3.7	0	.1	1.7	5.0	49
7/16/1989	3.1	0	.1	1.6	5.0	49
7/17/1989	2.5	0	0	1.2	5.0	48
7/18/1989	1.9	0	0	1.1	4.2	48
7/19/1989	1.6	0	0	.9	3.8	47
7/20/1989	1.3	0	0	.8	3.0	46
7/21/1989	1.2	0	0	.7	2.9	46
7/22/1989	1.1	0	0	1.1	3.4	45
7/23/1989	.9	0	0	1.6	3.5	45
7/24/1989	.9	0	0	.9	5.0	45
7/25/1989	.9	0	0	.7	5.5	44
7/26/1989	.9	.3	0	.8	4.3	44
7/27/1989	.9	0	0	.7	4.0	43
7/28/1989	.8	0	0	.7	4.2	42
7/29/1989	.8	0	0	.6	3.3	42
7/30/1989	.8	0	0	.3	3.0	41
7/31/1989	.7	0	0	.2	3.0	41
8/1/1989	.8	0	0	.2	2.8	40
8/2/1989	1.5	3.4	0	.9	9.5	39
8/3/1989	1.4	0	0	.5	3.8	39
8/4/1989	1.2	0	0	.2	3.0	39
8/5/1989	1.0	0	0	.1	2.5	38
8/6/1989	.9	0	0	.1	2.2	38
8/7/1989	.9	0	0	.1	1.8	37
8/8/1989	.8	0	0	.1	2.5	37
8/9/1989	.8	0	0	.1	2.2	37
8/10/1989	.7	0	0	.1	1.4	37
8/11/1989	.7	0	0	.1	1.6	36
8/12/1989	.6	0	0	0	1.5	36
8/13/1989	.5	0	0	0	1.1	35
8/14/1989	.5	0	0	0	1.0	35
8/15/1989	.5	0	0	0	1.1	34
8/16/1989	.5	0	0	0	1.5	34
8/17/1989	.4	0	0	0	2.4	34
8/18/1989	.4	0	0	0	3.1	33
8/19/1989	.4	0	0	0	3.5	33
8/20/1989	.4	0	0	0	2.7	33
8/21/1989	.3	0	0	0	2.7	32
8/22/1989	.3	0	0	0	2.4	32
8/23/1989	.3	0	0	0	2.0	31
8/24/1989	.4	0	0	0	1.6	31
8/25/1989	.3	0	0	0	1.5	30
8/26/1989	.2	0	0	0	1.1	30
8/27/1989	.2	0	0	0	.6	30
8/28/1989	.2	0	0	0	.5	29
8/29/1989	.2	0	0	0	.5	29

Appendix 2. Daily mean streamflow for the five creeks providing recharge to the Barton Springs segment of the Edwards aquifer and daily mean discharge for Barton Springs, Austin, Texas, 1978–2003—Continued.

Date	Barton Creek	Williamson Creek	Slaughter Creek	Bear Creek	Onion Creek	Barton Springs
8/30/1989	0.2	0	0	0	0.4	29
8/31/1989	.2	0	0	0	.4	29
9/1/1989	.2	0	0	0	.4	28
9/2/1989	.2	0	0	0	.3	28
9/3/1989	.2	0	0	0	.3	29
9/4/1989	.2	0	0	0	.3	28
9/5/1989	.2	0	0	0	.3	29
9/6/1989	.2	0	0	0	.4	28
9/7/1989	.2	0	0	0	.3	28
9/8/1989	.1	0	0	0	.2	27
9/9/1989	.1	0	0	0	.2	27
9/10/1989	.1	0	0	0	.2	27
9/11/1989	.1	0	0	0	.1	27
9/12/1989	.2	0	0	0	.1	27
9/13/1989	.7	0	0	0	.1	27
9/14/1989	.2	0	0	0	.2	26
9/15/1989	.2	0	0	0	.3	26
9/16/1989	.2	0	0	0	.3	26
9/17/1989	.2	0	0	0	.4	26
9/18/1989	.2	0	0	0	.4	26
9/19/1989	.2	0	0	0	.4	26
9/20/1989	.2	0	0	0	.5	26
9/21/1989	.2	0	0	0	.4	26
9/22/1989	.2	0	0	0	.3	25
9/23/1989	.2	0	0	0	.3	25
9/24/1989	.2	0	0	0	.3	24
9/25/1989	.2	0	0	0	.3	24
9/26/1989	.1	0	0	0	.3	24
9/27/1989	.1	0	0	0	.3	24
9/28/1989	.1	0	0	0	.3	24
9/29/1989	.1	0	0	0	.2	23
9/30/1989	.1	0	0	0	.2	23
10/1/1989	.1	0	0	0	.2	19
10/2/1989	.1	0	0	0	.2	19
10/3/1989	.1	0	0	0	.2	18
10/4/1989	.1	0	0	0	.2	18
10/5/1989	.1	0	0	0	.2	18
10/6/1989	.1	0	.2	0	.2	18
10/7/1989	.4	49.0	0	.6	1.3	19
10/8/1989	.1	0	0	.1	.4	19
10/9/1989	.1	0	0	0	.3	19
10/10/1989	.1	0	0	0	.3	19
10/11/1989	.1	0	0	0	.3	19
10/12/1989	.1	0	0	.1	.3	19
10/13/1989	.1	0	0	.1	.2	18
10/14/1989	.1	0	0	.1	.2	18
10/15/1989	.1	0	0	.1	.2	18
10/16/1989	.1	0	0	.1	.2	18
10/17/1989	.1	0	0	0	.1	18
10/18/1989	.1	0	0	0	.1	18
10/19/1989	0.1	0	0	0	0.1	18
10/20/1989	.1	0	0	0	.1	18
10/21/1989	.2	0	0	0	.1	18
10/22/1989	.2	0	0	0	.1	18
10/23/1989	.2	0	0	0	.1	18
10/24/1989	.2	0	0	0	.1	18
10/25/1989	.2	0	0	0	.1	18
10/26/1989	.2	0	0	0	.1	18
10/27/1989	.2	0	0	0	.1	18
10/28/1989	.3	0	0	0	.2	18
10/29/1989	.2	0	0	0	.2	18
10/30/1989	.4	6.2	0	.2	.3	21
10/31/1989	.2	0	0	.1	.2	24
11/1/1989	.2	0	0	.1	.2	23
11/2/1989	.2	0	0	0	.2	23
11/3/1989	.2	0	0	0	.2	22
11/4/1989	.2	0	0	0	.1	21
11/5/1989	.2	0	0	0	.1	21
11/6/1989	.2	0	0	0	.1	20
11/7/1989	.2	0	0	0	.2	19
11/8/1989	.2	0	0	0	.2	19
11/9/1989	.2	0	0	0	.2	18
11/10/1989	.2	0	0	0	.3	18
11/11/1989	.2	0	0	0	.3	18
11/12/1989	.2	0	0	0	.3	19
11/13/1989	.3	0	0	0	.3	19
11/14/1989	.3	0	0	0	.3	19
11/15/1989	.3	0	0	0	.3	19
11/16/1989	.2	0	0	0	.3	19
11/17/1989	.2	0	0	0	.3	20
11/18/1989	.2	0	0	0	.3	20
11/19/1989	.2	0	0	0	.3	20
11/20/1989	.2	0	0	0	.3	20
11/21/1989	.3	0	0	0	.3	20
11/22/1989	.5	2.3	0	.1	.4	23
11/23/1989	.2	0	0	0	.3	25
11/24/1989	.2	0	0	0	.3	23
11/25/1989	.2	0	0	0	.3	22
11/26/1989	.3	0	0	0	.3	22
11/27/1989	.4	0	0	0	.3	21
11/28/1989	.3	0	0	0	.3	21
11/29/1989	.2	0	0	0	.3	22
11/30/1989	.2	0	0	0	.3	21
12/1/1989	.2	0	0	0	.3	19
12/2/1989	.2	0	0	0	.3	20
12/3/1989	.2	0	0	0	.3	20
12/4/1989	.2	0	0	0	.3	20
12/5/1989	.2	0	0	0	.3	20
12/6/1989	.2	0	0	0	.3	19
12/7/1989	.2	0	0	0	.3	18

Appendix 2. Daily mean streamflow for the five creeks providing recharge to the Barton Springs segment of the Edwards aquifer and daily mean discharge for Barton Springs, Austin, Texas, 1978–2003—Continued.

Date	Barton Creek	Williamson Creek	Slaughter Creek	Bear Creek	Onion Creek	Barton Springs
12/8/1989	0.2	0	0	0	0.3	19
12/9/1989	.2	0	0	0	.3	19
12/10/1989	.2	0	0	0	.3	19
12/11/1989	.2	0	0	0	.3	19
12/12/1989	.2	0	0	0	.3	19
12/13/1989	.2	0	0	0	.3	19
12/14/1989	.2	0	0	0	.3	19
12/15/1989	.2	0	0	0	.3	19
12/16/1989	.2	0	0	0	.3	19
12/17/1989	.2	0	0	0	.3	19
12/18/1989	.2	0	0	0	.3	18
12/19/1989	.2	0	0	0	.3	18
12/20/1989	.2	0	0	0	.3	17
12/21/1989	.2	0	0	0	.3	17
12/22/1989	.2	0	0	0	.3	18
12/23/1989	.2	0	0	0	.4	18
12/24/1989	.2	0	0	0	.4	18
12/25/1989	.2	0	0	0	.4	18
12/26/1989	.2	0	0	0	.3	17
12/27/1989	.3	0	0	0	.2	18
12/28/1989	.3	0	0	0	.3	17
12/29/1989	.3	0	0	0	.3	15
12/30/1989	.3	0	0	0	.3	14
12/31/1989	.3	0	0	0	.3	15
1/1/1990	.3	0	0	0	.3	15
1/2/1990	.3	0	0	0	.4	15
1/3/1990	.4	0	0	0	.5	16
1/4/1990	.4	0	0	0	.4	16
1/5/1990	.3	0	0	0	.4	16
1/6/1990	.4	0	0	0	.6	17
1/7/1990	.4	0	0	0	.5	17
1/8/1990	.4	0	0	0	.6	16
1/9/1990	.4	0	0	0	.6	15
1/10/1990	.4	0	0	0	.5	15
1/11/1990	.4	0	0	0	.5	15
1/12/1990	.4	0	0	0	.5	15
1/13/1990	.3	0	0	0	.4	15
1/14/1990	.3	0	0	0	.4	15
1/15/1990	.3	0	0	0	.4	15
1/16/1990	.5	0	0	0	.4	15
1/17/1990	.4	0	0	0	.4	16
1/18/1990	.4	0	0	0	.4	16
1/19/1990	.5	0	0	0	.5	18
1/20/1990	.4	0	0	0	.4	18
1/21/1990	.4	0	0	0	.4	17
1/22/1990	.3	0	0	0	.4	16
1/23/1990	.3	0	0	0	.4	16
1/24/1990	.3	0	0	0	.4	15
1/25/1990	.4	0	0	0	.3	15
1/26/1990	.4	0	0	0	.4	15
1/27/1990	0.4	0	0	0	0.4	15
1/28/1990	.6	0	0	0	.4	16
1/29/1990	.6	0	0	0	.4	17
1/30/1990	.6	0	0	0	.4	17
1/31/1990	.7	0	0	0	.4	16
2/1/1990	4.3	8.6	0	.1	.8	22
2/2/1990	2.6	.2	0	0	1.5	20
2/3/1990	1.2	0	0	0	.8	18
2/4/1990	.8	0	0	0	.6	16
2/5/1990	.6	0	0	0	.4	17
2/6/1990	.6	0	0	0	.4	16
2/7/1990	.6	0	0	0	.4	16
2/8/1990	.6	0	0	0	.3	16
2/9/1990	.9	6.7	0	0	.5	17
2/10/1990	1.0	.3	0	0	.7	19
2/11/1990	.9	0	0	0	.6	19
2/12/1990	.8	0	0	0	.4	18
2/13/1990	.8	0	0	0	.4	17
2/14/1990	.7	0	0	0	.4	17
2/15/1990	.9	0	0	0	.4	16
2/16/1990	.8	0	0	0	.5	15
2/17/1990	.7	0	0	0	.5	15
2/18/1990	1.6	2.6	0	0	.7	15
2/19/1990	1.6	0	0	0	1.0	17
2/20/1990	1.1	0	0	0	.9	16
2/21/1990	2.3	5.5	0	0	3.4	18
2/22/1990	1.9	.4	0	0	2.8	17
2/23/1990	1.3	.2	0	0	1.0	16
2/24/1990	1.2	.1	0	0	.8	15
2/25/1990	1.2	0	0	0	.7	15
2/26/1990	1.3	0	0	0	.6	15
2/27/1990	1.4	0	0	0	.7	16
2/28/1990	2.1	3.5	0	0	2.4	16
3/1/1990	2.4	2.5	0	0	3.5	16
3/2/1990	2.0	.8	0	0	3.2	17
3/3/1990	1.8	.4	0	0	2.2	17
3/4/1990	1.9	.3	0	0	1.5	17
3/5/1990	1.9	.2	0	0	1.1	17
3/6/1990	1.8	.1	0	0	1.1	17
3/7/1990	2.1	1.4	0	.1	2.0	17
3/8/1990	2.8	.4	0	.1	2.6	16
3/9/1990	2.2	.2	0	.1	2.2	16
3/10/1990	2.0	.1	0	.1	1.8	16
3/11/1990	2.0	.4	0	.1	1.8	15
3/12/1990	2.0	.2	0	.1	1.7	15
3/13/1990	2.1	.2	0	.1	1.8	15
3/14/1990	23.0	34.0	.2	4.6	114.0	18
3/15/1990	75.0	6.4	0	4.8	53.0	25
3/16/1990	30.0	3.1	0	3.8	19.0	26
3/17/1990	20.0	1.9	0	3.3	12.0	27

Appendix 2. Daily mean streamflow for the five creeks providing recharge to the Barton Springs segment of the Edwards aquifer and daily mean discharge for Barton Springs, Austin, Texas, 1978–2003—Continued.

Date	Barton Creek	Williamson Creek	Slaughter Creek	Bear Creek	Onion Creek	Barton Springs
3/18/1990	16.0	1.4	0	2.8	10.0	28
3/19/1990	14.0	1.2	0	2.6	8.8	27
3/20/1990	12.0	1.2	0	2.4	8.0	26
3/21/1990	12.0	1.1	0	2.2	8.0	26
3/22/1990	11.0	1.1	0	2.2	8.0	26
3/23/1990	11.0	1.0	0	2.2	7.6	25
3/24/1990	10.0	.8	0	1.9	7.1	25
3/25/1990	9.6	.8	0	1.7	6.8	25
3/26/1990	9.3	.7	0	1.7	7.4	25
3/27/1990	9.3	.7	0	1.7	6.5	25
3/28/1990	10.0	1.3	0	1.7	7.3	26
3/29/1990	11.0	2.0	0	1.9	7.1	26
3/30/1990	11.0	1.3	0	1.6	8.2	27
3/31/1990	11.0	.6	0	1.5	8.8	27
4/1/1990	11.0	1.0	0	1.5	10.0	26
4/2/1990	11.0	.7	0	1.5	9.7	26
4/3/1990	9.6	.4	0	1.5	8.9	26
4/4/1990	9.0	.2	0	1.4	9.0	26
4/5/1990	8.9	.2	0	1.4	8.9	26
4/6/1990	15.0	5.5	0	1.8	8.8	27
4/7/1990	12.0	.5	0	1.6	8.0	27
4/8/1990	9.8	.3	0	1.5	8.0	27
4/9/1990	9.7	1.0	.1	1.4	12.0	26
4/10/1990	9.8	.6	.1	1.4	9.5	26
4/11/1990	9.5	.3	.1	1.4	8.5	26
4/12/1990	9.0	.2	.1	1.4	8.5	26
4/13/1990	8.7	.2	.1	1.4	8.9	26
4/14/1990	8.8	.3	.1	2.3	9.2	26
4/15/1990	8.9	.2	.1	1.7	8.5	26
4/16/1990	8.3	.1	.2	1.7	8.5	26
4/17/1990	8.1	.4	.2	1.7	8.5	26
4/18/1990	8.1	.3	.2	1.6	8.5	26
4/19/1990	8.4	.2	.2	1.5	8.5	26
4/20/1990	8.4	.1	.2	1.5	8.5	25
4/21/1990	8.1	.1	.2	1.5	8.9	25
4/22/1990	7.9	0	.1	1.5	9.5	26
4/23/1990	7.4	0	.1	1.5	9.5	26
4/24/1990	7.0	0	.2	1.5	9.5	26
4/25/1990	6.5	0	.3	1.5	9.5	28
4/26/1990	25.0	50.0	1.8	3.4	78.0	30
4/27/1990	76.0	7.4	.9	4.0	102.0	40
4/28/1990	34.0	2.8	.7	3.7	37.0	38
4/29/1990	25.0	1.8	.7	3.7	30.0	38
4/30/1990	21.0	1.3	.6	3.6	27.0	37
5/1/1990	22.0	10.0	.7	3.8	24.0	37
5/2/1990	79.0	45.0	3.1	4.6	25.0	36
5/3/1990	715.0	291.0	79.0	58.0	608.0	60
5/4/1990	197.0	51.0	17.0	13.0	217.0	72
5/5/1990	118.0	31.0	11.0	12.0	146.0	68
5/6/1990	98.0	19.0	8.5	10.0	125.0	64
5/7/1990	79.0	12.0	6.7	8.7	99.0	63
5/8/1990	68.0	8.8	5.6	8.0	80.0	61
5/9/1990	61.0	6.3	4.7	7.7	73.0	59
5/10/1990	53.0	4.0	3.7	6.6	63.0	59
5/11/1990	48.0	3.4	3.5	6.4	58.0	58
5/12/1990	48.0	3.7	3.4	6.0	61.0	58
5/13/1990	44.0	2.0	2.8	5.1	59.0	58
5/14/1990	39.0	1.7	2.5	5.0	54.0	57
5/15/1990	38.0	1.5	2.4	4.3	51.0	56
5/16/1990	36.0	1.1	2.1	4.2	47.0	56
5/17/1990	34.0	1.1	1.8	4.1	44.0	56
5/18/1990	33.0	3.6	1.9	3.8	43.0	55
5/19/1990	34.0	2.2	2.3	3.5	42.0	55
5/20/1990	31.0	1.4	1.8	3.3	37.0	55
5/21/1990	28.0	1.1	1.7	3.2	34.0	54
5/22/1990	26.0	.8	1.4	3.0	32.0	53
5/23/1990	23.0	.7	1.4	3.0	31.0	53
5/24/1990	22.0	.7	1.3	3.0	30.0	52
5/25/1990	20.0	.6	1.3	2.7	28.0	51
5/26/1990	18.0	.5	1.1	2.4	25.0	50
5/27/1990	16.0	.4	1.0	2.4	29.0	50
5/28/1990	21.0	7.1	.8	2.4	37.0	50
5/29/1990	17.0	.6	.8	2.0	37.0	50
5/30/1990	16.0	.5	.8	1.7	37.0	49
5/31/1990	15.0	.4	.7	1.5	34.0	48
6/1/1990	13.0	.3	.7	1.3	32.0	48
6/2/1990	12.0	.3	.6	1.1	26.0	47
6/3/1990	11.0	.2	.5	.9	16.0	47
6/4/1990	15.0	3.8	.7	2.5	80.0	47
6/5/1990	41.0	.3	.6	1.8	30.0	47
6/6/1990	20.0	.1	.5	1.4	25.0	49
6/7/1990	13.0	.1	.5	.9	20.0	48
6/8/1990	10.0	.5	.5	.7	18.0	48
6/9/1990	8.7	0	.4	.6	16.0	47
6/10/1990	7.0	0	.4	.5	16.0	47
6/11/1990	6.2	0	.4	.5	15.0	46
6/12/1990	5.0	0	.4	.5	14.0	45
6/13/1990	4.2	0	.4	.4	14.0	47
6/14/1990	3.5	0	.4	.4	14.0	46
6/15/1990	3.0	0	.4	.3	14.0	46
6/16/1990	2.7	0	.4	.3	13.0	45
6/17/1990	2.3	0	.3	.3	12.0	45
6/18/1990	1.9	0	.3	.2	13.0	45
6/19/1990	1.7	0	.2	.2	12.0	45
6/20/1990	1.3	0	.2	.2	12.0	44
6/21/1990	1.0	0	.2	.1	12.0	43
6/22/1990	.9	0	.2	.1	12.0	43
6/23/1990	.7	0	.2	.1	11.0	42
6/24/1990	.6	0	.1	.1	14.0	42
6/25/1990	.5	0	.1	.1	13.0	41

Appendix 2. Daily mean streamflow for the five creeks providing recharge to the Barton Springs segment of the Edwards aquifer and daily mean discharge for Barton Springs, Austin, Texas, 1978–2003—Continued.

Date	Barton Creek	Williamson Creek	Slaughter Creek	Bear Creek	Onion Creek	Barton Springs
6/26/1990	0.5	0	0.1	0.1	11.0	40
6/27/1990	.4	0	.1	.1	9.6	39
6/28/1990	.3	0	0	0	7.7	38
6/29/1990	.3	0	0	0	6.2	38
6/30/1990	.5	0	0	0	5.8	37
7/1/1990	.3	0	0	0	6.0	38
7/2/1990	.3	0	0	0	5.0	37
7/3/1990	.3	0	0	0	4.9	36
7/4/1990	.3	0	0	0	5.2	35
7/5/1990	.3	0	0	0	6.2	34
7/6/1990	.3	0	0	0	5.1	34
7/7/1990	.3	0	0	0	4.2	33
7/8/1990	.3	0	0	0	3.3	33
7/9/1990	.3	0	0	0	2.5	32
7/10/1990	.3	0	0	0	1.8	32
7/11/1990	.3	0	0	0	1.3	31
7/12/1990	.3	0	0	0	1.0	30
7/13/1990	.2	0	0	0	.9	30
7/14/1990	.2	0	0	0	.7	29
7/15/1990	8.0	24.0	.1	0	3.3	30
7/16/1990	5.6	2.7	0	0	6.5	31
7/17/1990	1.6	0	0	0	3.8	32
7/18/1990	5.1	0	0	0	3.2	33
7/19/1990	2.7	5.0	.2	.1	3.0	34
7/20/1990	2.5	.1	.1	.1	4.0	34
7/21/1990	6.6	0	.1	.3	2.2	36
7/22/1990	1.9	0	.1	.2	1.8	36
7/23/1990	6.2	7.7	.1	.2	3.2	36
7/24/1990	28.0	43.0	.2	.2	4.2	35
7/25/1990	12.0	.8	.2	.2	3.2	35
7/26/1990	5.6	.1	.2	.1	2.7	35
7/27/1990	3.5	0	.2	.1	2.2	35
7/28/1990	2.5	0	.2	0	1.8	34
7/29/1990	2.4	0	.2	0	1.6	34
7/30/1990	2.0	0	.2	0	1.1	34
7/31/1990	4.4	4.6	.2	0	1.0	33
8/1/1990	3.0	.5	.2	0	.7	33
8/2/1990	2.7	0	.2	0	.7	32
8/3/1990	2.6	0	.1	0	.9	32
8/4/1990	1.9	0	.1	0	1.1	31
8/5/1990	1.6	0	.1	0	1.1	31
8/6/1990	1.2	0	0	0	1.1	30
8/7/1990	.8	0	0	0	1.2	29
8/8/1990	.8	0	0	0	1.4	28
8/9/1990	.8	0	0	0	1.4	28
8/10/1990	1.2	0	0	0	2.1	27
8/11/1990	1.1	0	0	0	2.1	27
8/12/1990	.9	0	0	0	2.1	27
8/13/1990	.6	0	0	0	2.2	26
8/14/1990	.5	0	0	0	2.2	26
8/15/1990	0.5	0	0	0	1.9	26
8/16/1990	.5	0	0	0	1.9	25
8/17/1990	.5	0	0	0	2.0	25
8/18/1990	.5	0	0	0	1.4	25
8/19/1990	.5	0	0	0	1.4	25
8/20/1990	.5	.5	0	0	1.5	25
8/21/1990	.5	0	0	0	1.8	26
8/22/1990	.5	0	0	0	1.8	26
8/23/1990	.4	0	0	0	1.8	25
8/24/1990	.4	0	0	0	1.7	24
8/25/1990	.4	0	0	0	1.7	23
8/26/1990	.3	0	0	0	1.7	23
8/27/1990	.3	0	0	0	1.4	23
8/28/1990	.3	0	0	0	1.8	23
8/29/1990	.3	0	0	0	1.7	22
8/30/1990	.4	0	0	0	1.4	22
8/31/1990	.4	0	0	0	1.2	21
9/1/1990	.3	0	0	0	.8	21
9/2/1990	.4	0	.1	0	1.4	22
9/3/1990	.4	0	0	0	1.5	22
9/4/1990	.4	0	0	0	1.6	23
9/5/1990	.4	0	0	0	2.9	23
9/6/1990	.5	0	0	0	2.9	22
9/7/1990	.6	0	0	0	2.7	21
9/8/1990	.5	0	0	0	2.5	20
9/9/1990	.5	0	0	0	2.7	22
9/10/1990	.4	0	0	0	5.1	24
9/11/1990	.4	0	0	0	3.5	24
9/12/1990	.4	0	0	0	3.3	23
9/13/1990	.4	0	0	0	3.0	23
9/14/1990	.4	0	0	0	2.8	23
9/15/1990	.4	0	0	0	1.9	22
9/16/1990	1.1	2.1	0	0	1.7	22
9/17/1990	1.1	.2	0	0	1.4	22
9/18/1990	.9	0	0	0	1.3	23
9/19/1990	.6	0	0	0	1.1	23
9/20/1990	.5	0	0	0	1.1	23
9/21/1990	.5	0	0	0	1.0	23
9/22/1990	.4	0	0	0	.9	23
9/23/1990	.5	0	0	0	.9	22
9/24/1990	.5	0	0	0	.7	22
9/25/1990	.4	0	0	0	.6	21
9/26/1990	.4	0	0	0	.6	21
9/27/1990	.4	0	0	0	.6	21
9/28/1990	.4	0	0	0	.5	20
9/29/1990	.4	0	0	0	.4	20
9/30/1990	.4	0	0	0	.4	20
10/1/1990	.2	0	0	0	.1	20
10/2/1990	.2	0	0	0	.1	20
10/3/1990	.2	0	0	0	.1	20

Appendix 2. Daily mean streamflow for the five creeks providing recharge to the Barton Springs segment of the Edwards aquifer and daily mean discharge for Barton Springs, Austin, Texas, 1978–2003—Continued.

Date	Barton Creek	Williamson Creek	Slaughter Creek	Bear Creek	Onion Creek	Barton Springs
10/4/1990	0.2	0	0	0	0.1	20
10/5/1990	.3	0	0	0	.1	19
10/6/1990	.4	0	0	0	.1	19
10/7/1990	.3	0	0	0	.1	19
10/8/1990	.3	0	0	0	.1	19
10/9/1990	11.0	36.0	.4	0	1.7	23
10/10/1990	2.7	0	0	0	.7	22
10/11/1990	.7	0	0	0	.3	21
10/12/1990	.6	0	0	0	.2	21
10/13/1990	.5	0	0	0	.2	21
10/14/1990	.5	0	0	0	.2	21
10/15/1990	.5	0	0	0	.2	21
10/16/1990	.4	0	0	0	.2	20
10/17/1990	.5	0	0	0	.2	21
10/18/1990	.5	0	0	0	.1	20
10/19/1990	.5	0	0	0	.1	20
10/20/1990	.5	0	0	0	.1	20
10/21/1990	1.5	7.6	.2	0	.2	23
10/22/1990	1.7	.2	0	0	.2	26
10/23/1990	.9	0	0	0	.2	24
10/24/1990	.7	0	0	0	.2	23
10/25/1990	.6	0	0	0	.2	22
10/26/1990	.6	0	0	0	.2	20
10/27/1990	.6	0	0	0	.2	19
10/28/1990	.6	0	0	0	.2	19
10/29/1990	.7	0	0	0	.2	19
10/30/1990	.7	0	0	0	.2	19
10/31/1990	.6	0	0	0	.2	19
11/1/1990	.5	0	0	0	.2	19
11/2/1990	.5	0	0	0	.2	19
11/3/1990	.6	0	0	0	.2	19
11/4/1990	1.9	5.4	.1	0	.2	21
11/5/1990	2.0	0	0	0	.2	22
11/6/1990	1.2	0	0	0	.2	23
11/7/1990	1.0	0	0	0	.2	24
11/8/1990	8.8	32.0	.6	0	1.9	31
11/9/1990	6.2	1.7	0	0	2.6	30
11/10/1990	2.6	.2	0	0	.8	29
11/11/1990	2.0	0	0	0	1.0	28
11/12/1990	1.8	0	0	0	1.0	27
11/13/1990	1.7	0	0	0	1.0	26
11/14/1990	1.6	0	0	0	.9	25
11/15/1990	1.7	0	0	0	1.0	25
11/16/1990	1.8	0	0	0	1.0	24
11/17/1990	1.8	0	0	0	1.0	24
11/18/1990	1.8	0	0	0	.9	24
11/19/1990	2.0	0	0	0	.8	24
11/20/1990	2.1	0	0	0	.8	23
11/21/1990	1.9	0	0	0	.8	24
11/22/1990	2.0	0	0	0	.8	24
11/23/1990	2.2	0	0	0	0.8	25
11/24/1990	1.9	0	0	0	.8	25
11/25/1990	1.9	0	0	0	.8	24
11/26/1990	1.9	0	0	0	.7	22
11/27/1990	2.0	0	0	0	.7	20
11/28/1990	1.8	0	0	0	.7	21
11/29/1990	1.6	0	0	0	.6	21
11/30/1990	1.4	0	0	0	.4	21
12/1/1990	1.4	0	0	0	.4	21
12/2/1990	1.4	0	0	0	.4	21
12/3/1990	1.4	0	0	0	.6	22
12/4/1990	1.2	0	0	0	.7	22
12/5/1990	1.1	0	0	0	.7	23
12/6/1990	1.1	0	0	0	.7	22
12/7/1990	1.1	0	0	0	.7	22
12/8/1990	1.1	0	0	0	.6	22
12/9/1990	1.1	0	0	0	.5	21
12/10/1990	1.1	0	0	0	.5	21
12/11/1990	1.2	0	0	0	.5	20
12/12/1990	1.3	0	0	0	.6	20
12/13/1990	1.2	0	0	0	.7	20
12/14/1990	1.1	0	0	0	.8	20
12/15/1990	1.1	0	0	0	1.2	20
12/16/1990	1.1	0	0	0	1.0	20
12/17/1990	1.2	0	0	0	.8	20
12/18/1990	1.4	0	0	0	.5	19
12/19/1990	1.2	0	0	0	.5	19
12/20/1990	1.1	0	0	0	.5	18
12/21/1990	1.1	0	0	0	.5	19
12/22/1990	1.1	0	0	0	.5	19
12/23/1990	1.0	0	0	0	.5	19
12/24/1990	1.0	0	0	0	.5	19
12/25/1990	1.0	0	0	0	.6	20
12/26/1990	1.3	0	0	0	.9	20
12/27/1990	1.5	0	0	0	1.0	21
12/28/1990	1.1	0	0	0	1.0	20
12/29/1990	1.1	0	0	0	1.0	20
12/30/1990	1.1	0	0	0	1.0	20
12/31/1990	1.1	0	0	0	.8	20
1/1/1991	1.1	0	0	0	.7	20
1/2/1991	7.9	29.0	.4	0	6.4	35
1/3/1991	57.0	2.0	0	2.0	7.9	33
1/4/1991	32.0	.7	0	1.4	7.0	31
1/5/1991	20.0	.8	0	1.2	8.8	30
1/6/1991	18.0	1.4	0	1.2	11.0	29
1/7/1991	18.0	.5	0	1.2	11.0	28
1/8/1991	17.0	.4	0	1.2	11.0	27
1/9/1991	488.0	218.0	67.0	91.0	340.0	65
1/10/1991	476.0	38.0	26.0	26.0	218.0	85
1/11/1991	176.0	12.0	12.0	17.0	116.0	84

Appendix 2. Daily mean streamflow for the five creeks providing recharge to the Barton Springs segment of the Edwards aquifer and daily mean discharge for Barton Springs, Austin, Texas, 1978–2003—Continued.

Date	Barton Creek	Williamson Creek	Slaughter Creek	Bear Creek	Onion Creek	Barton Springs
1/12/1991	127.0	7.6	10.0	14.0	83.0	83
1/13/1991	106.0	5.8	8.4	13.0	64.0	81
1/14/1991	88.0	4.8	7.4	11.0	54.0	80
1/15/1991	79.0	4.0	5.7	10.0	44.0	79
1/16/1991	68.0	3.3	4.9	8.8	36.0	78
1/17/1991	62.0	2.9	4.2	8.1	32.0	77
1/18/1991	235.0	48.0	42.0	36.0	169.0	85
1/19/1991	269.0	15.0	23.0	23.0	146.0	81
1/20/1991	159.0	9.1	15.0	20.0	114.0	78
1/21/1991	133.0	6.8	13.0	17.0	91.0	79
1/22/1991	121.0	6.1	12.0	16.0	89.0	79
1/23/1991	112.0	6.0	12.0	15.0	82.0	79
1/24/1991	130.0	16.0	20.0	20.0	104.0	80
1/25/1991	128.0	8.1	15.0	17.0	93.0	81
1/26/1991	115.0	6.9	13.0	17.0	87.0	82
1/27/1991	111.0	6.4	12.0	17.0	87.0	82
1/28/1991	107.0	5.7	11.0	15.0	84.0	82
1/29/1991	102.0	5.5	11.0	15.0	80.0	82
1/30/1991	93.0	5.7	9.9	13.0	70.0	82
1/31/1991	92.0	4.9	9.8	13.0	64.0	82
2/1/1991	83.0	4.4	9.4	12.0	61.0	81
2/2/1991	80.0	4.2	9.2	12.0	62.0	81
2/3/1991	77.0	3.7	9.2	12.0	64.0	82
2/4/1991	293.0	40.0	37.0	38.0	217.0	90
2/5/1991	304.0	13.0	20.0	25.0	202.0	88
2/6/1991	191.0	9.8	15.0	23.0	163.0	87
2/7/1991	160.0	7.9	12.0	20.0	146.0	86
2/8/1991	146.0	6.9	11.0	18.0	135.0	85
2/9/1991	137.0	6.1	10.0	18.0	126.0	85
2/10/1991	128.0	5.5	8.9	17.0	118.0	85
2/11/1991	120.0	5.3	8.2	15.0	107.0	85
2/12/1991	113.0	5.4	7.9	15.0	103.0	84
2/13/1991	109.0	4.7	7.8	14.0	101.0	84
2/14/1991	102.0	4.4	7.2	12.0	93.0	83
2/15/1991	91.0	4.0	6.6	11.0	86.0	83
2/16/1991	83.0	3.9	6.5	11.0	82.0	83
2/17/1991	83.0	3.9	7.0	11.0	85.0	82
2/18/1991	87.0	6.6	7.5	11.0	85.0	82
2/19/1991	126.0	8.7	13.0	15.0	118.0	86
2/20/1991	112.0	4.9	8.5	11.0	96.0	86
2/21/1991	113.0	18.0	14.0	15.0	90.0	85
2/22/1991	123.0	10.0	13.0	15.0	90.0	87
2/23/1991	109.0	8.2	12.0	13.0	83.0	87
2/24/1991	106.0	7.3	10.0	12.0	82.0	86
2/25/1991	102.0	7.4	14.0	14.0	81.0	86
2/26/1991	103.0	6.3	12.0	14.0	80.0	86
2/27/1991	97.0	5.9	11.0	13.0	77.0	86
2/28/1991	94.0	7.5	12.0	14.0	75.0	86
3/1/1991	104.0	8.5	14.0	15.0	80.0	87
3/2/1991	95.0	6.7	11.0	14.0	75.0	87
3/3/1991	81.0	6.0	9.2	12.0	67.0	87
3/4/1991	74.0	6.0	8.7	12.0	64.0	87
3/5/1991	72.0	5.8	8.2	12.0	65.0	86
3/6/1991	68.0	5.7	7.7	11.0	63.0	86
3/7/1991	66.0	5.4	7.1	11.0	60.0	85
3/8/1991	62.0	5.6	6.6	11.0	58.0	85
3/9/1991	59.0	5.5	6.1	10.0	56.0	85
3/10/1991	57.0	5.7	5.9	9.0	55.0	85
3/11/1991	56.0	5.8	5.9	8.9	54.0	85
3/12/1991	55.0	5.5	5.5	9.6	54.0	85
3/13/1991	54.0	5.2	4.8	10.0	50.0	85
3/14/1991	52.0	4.8	4.3	8.9	48.0	84
3/15/1991	51.0	5.4	4.1	8.9	51.0	84
3/16/1991	61.0	7.6	5.9	9.7	58.0	85
3/17/1991	87.0	5.1	6.4	11.0	68.0	85
3/18/1991	63.0	4.5	4.7	9.0	59.0	85
3/19/1991	53.0	4.4	4.3	8.9	55.0	84
3/20/1991	51.0	4.2	3.5	8.5	52.0	84
3/21/1991	51.0	4.2	3.5	8.5	51.0	84
3/22/1991	49.0	3.8	3.3	8.2	49.0	84
3/23/1991	47.0	3.4	2.8	7.4	45.0	84
3/24/1991	46.0	3.3	2.8	7.4	44.0	83
3/25/1991	46.0	3.3	2.7	7.4	43.0	83
3/26/1991	46.0	3.5	2.7	7.4	45.0	83
3/27/1991	43.0	3.2	2.5	7.2	44.0	83
3/28/1991	40.0	3.1	2.6	6.5	40.0	83
3/29/1991	40.0	2.8	2.6	6.4	40.0	83
3/30/1991	39.0	2.5	2.3	6.4	38.0	82
3/31/1991	38.0	2.4	2.3	6.2	36.0	82
4/1/1991	36.0	2.4	2.3	6.1	35.0	82
4/2/1991	36.0	2.6	2.3	6.2	35.0	83
4/3/1991	36.0	2.4	1.8	5.9	35.0	82
4/4/1991	36.0	24.0	3.5	10.0	35.0	82
4/5/1991	125.0	64.0	53.0	79.0	211.0	99
4/6/1991	131.0	12.0	17.0	31.0	171.0	99
4/7/1991	133.0	32.0	45.0	50.0	207.0	98
4/8/1991	132.0	14.0	26.0	38.0	187.0	97
4/9/1991	114.0	11.0	18.0	33.0	158.0	95
4/10/1991	107.0	8.7	15.0	29.0	142.0	95
4/11/1991	106.0	9.0	15.0	29.0	138.0	95
4/12/1991	104.0	7.7	13.0	26.0	130.0	93
4/13/1991	95.0	7.6	11.0	24.0	127.0	94
4/14/1991	191.0	76.0	62.0	62.0	588.0	95
4/15/1991	152.0	12.0	22.0	32.0	273.0	99
4/16/1991	111.0	9.8	17.0	29.0	224.0	99
4/17/1991	106.0	8.8	15.0	30.0	223.0	99
4/18/1991	123.0	40.0	27.0	32.0	283.0	99
4/19/1991	204.0	26.0	30.0	30.0	223.0	99
4/20/1991	137.0	13.0	17.0	26.0	199.0	99
4/21/1991	121.0	11.0	15.0	24.0	188.0	101

Appendix 2. Daily mean streamflow for the five creeks providing recharge to the Barton Springs segment of the Edwards aquifer and daily mean discharge for Barton Springs, Austin, Texas, 1978–2003—Continued.

Date	Barton Creek	Williamson Creek	Slaughter Creek	Bear Creek	Onion Creek	Barton Springs
4/22/1991	119.0	9.0	13.0	23.0	181.0	100
4/23/1991	110.0	7.5	10.0	20.0	164.0	100
4/24/1991	106.0	6.8	9.7	20.0	153.0	99
4/25/1991	105.0	6.3	9.0	19.0	147.0	99
4/26/1991	97.0	5.6	8.2	16.0	138.0	99
4/27/1991	91.0	5.3	7.6	16.0	134.0	99
4/28/1991	91.0	6.7	7.5	15.0	130.0	99
4/29/1991	105.0	5.0	7.0	14.0	130.0	99
4/30/1991	81.0	4.1	5.8	12.0	109.0	99
5/1/1991	69.0	3.9	5.3	12.0	101.0	99
5/2/1991	68.0	5.1	5.5	12.0	102.0	99
5/3/1991	68.0	4.7	6.4	14.0	110.0	99
5/4/1991	76.0	10.0	7.6	20.0	104.0	99
5/5/1991	99.0	5.2	8.0	18.0	151.0	99
5/6/1991	82.0	3.4	5.2	13.0	103.0	99
5/7/1991	67.0	3.1	4.8	12.0	91.0	99
5/8/1991	250.0	68.0	38.0	48.0	217.0	99
5/9/1991	261.0	24.0	17.0	29.0	218.0	99
5/10/1991	150.0	15.0	13.0	25.0	168.0	99
5/11/1991	139.0	12.0	12.0	22.0	156.0	99
5/12/1991	131.0	9.2	10.0	20.0	143.0	99
5/13/1991	125.0	7.8	8.9	19.0	135.0	99
5/14/1991	118.0	7.0	8.2	17.0	126.0	96
5/15/1991	115.0	6.3	7.8	16.0	121.0	93
5/16/1991	112.0	7.6	7.3	15.0	119.0	93
5/17/1991	109.0	5.2	6.9	15.0	120.0	93
5/18/1991	105.0	4.1	6.1	13.0	108.0	93
5/19/1991	95.0	6.0	6.1	13.0	102.0	92
5/20/1991	85.0	3.3	5.6	12.0	100.0	93
5/21/1991	75.0	2.4	4.9	11.0	93.0	93
5/22/1991	67.0	2.0	4.5	10.0	88.0	93
5/23/1991	62.0	1.6	4.2	8.1	82.0	93
5/24/1991	60.0	1.3	3.7	8.1	77.0	93
5/25/1991	55.0	1.2	3.5	7.7	74.0	93
5/26/1991	50.0	1.0	3.2	7.4	68.0	93
5/27/1991	45.0	.8	2.8	6.8	62.0	93
5/28/1991	41.0	.7	2.5	6.0	57.0	93
5/29/1991	39.0	.7	2.5	5.7	54.0	93
5/30/1991	37.0	.6	2.4	5.8	53.0	92
5/31/1991	34.0	.6	2.3	5.5	49.0	90
6/1/1991	33.0	.6	2.2	5.4	46.0	92
6/2/1991	32.0	.5	2.1	5.2	43.0	92
6/3/1991	33.0	11.0	2.9	6.1	46.0	92
6/4/1991	41.0	1.9	3.1	6.3	58.0	92
6/5/1991	41.0	.7	2.3	4.9	45.0	92
6/6/1991	33.0	.5	2.1	4.8	41.0	92
6/7/1991	33.0	18.0	2.9	5.1	47.0	92
6/8/1991	37.0	1.0	2.3	4.6	51.0	91
6/9/1991	35.0	.8	2.1	4.6	42.0	90
6/10/1991	31.0	.8	2.1	4.5	41.0	91
6/11/1991	68.0	51.0	2.8	4.9	40.0	91
6/12/1991	80.0	31.0	16.0	7.4	65.0	91
6/13/1991	51.0	4.4	2.8	5.3	56.0	91
6/14/1991	40.0	2.5	1.9	4.6	45.0	91
6/15/1991	34.0	1.9	1.6	4.2	41.0	91
6/16/1991	46.0	4.7	1.5	4.1	42.0	91
6/17/1991	99.0	5.3	2.2	4.3	67.0	91
6/18/1991	66.0	1.9	1.7	3.9	55.0	91
6/19/1991	44.0	1.7	1.4	3.9	44.0	91
6/20/1991	37.0	1.7	1.3	3.7	38.0	91
6/21/1991	33.0	1.7	1.2	3.5	35.0	91
6/22/1991	31.0	1.8	1.1	3.4	34.0	90
6/23/1991	29.0	2.5	1.7	3.7	43.0	89
6/24/1991	36.0	1.0	1.2	3.3	43.0	89
6/25/1991	33.0	1.0	1.1	3.2	40.0	89
6/26/1991	29.0	1.1	1.1	2.9	41.0	89
6/27/1991	26.0	1.1	1.0	2.7	34.0	89
6/28/1991	23.0	1.1	.9	2.6	31.0	89
6/29/1991	25.0	5.5	1.6	2.9	32.0	88
6/30/1991	24.0	1.0	1.5	3.0	35.0	88
7/1/1991	25.0	.7	1.2	2.7	33.0	87
7/2/1991	25.0	.5	.9	2.3	30.0	87
7/3/1991	19.0	.6	.8	6.5	29.0	86
7/4/1991	19.0	.6	.8	3.6	29.0	86
7/5/1991	17.0	.6	.8	2.7	31.0	85
7/6/1991	16.0	.6	.7	2.5	26.0	85
7/7/1991	15.0	.5	.5	2.3	23.0	85
7/8/1991	18.0	.5	.6	2.6	24.0	84
7/9/1991	14.0	.3	.7	2.2	27.0	84
7/10/1991	12.0	.2	.5	1.8	26.0	84
7/11/1991	12.0	.1	.4	1.5	22.0	83
7/12/1991	11.0	0	.4	1.5	20.0	83
7/13/1991	8.6	0	.4	1.5	21.0	83
7/14/1991	7.3	0	.3	1.4	19.0	83
7/15/1991	6.5	0	.3	1.2	21.0	83
7/16/1991	5.6	0	.3	1.0	19.0	82
7/17/1991	4.9	0	.3	1.1	17.0	82
7/18/1991	5.1	0	.3	1.1	16.0	81
7/19/1991	4.8	0	.3	.8	15.0	81
7/20/1991	4.6	0	.3	.8	14.0	81
7/21/1991	4.6	0	.3	.8	15.0	81
7/22/1991	4.4	0	.7	.8	12.0	80
7/23/1991	4.2	0	.3	.9	13.0	80
7/24/1991	4.2	0	.3	.8	12.0	80
7/25/1991	4.2	0	.3	.7	11.0	75
7/26/1991	3.8	0	.3	.7	11.0	75
7/27/1991	3.6	0	.3	.7	11.0	79
7/28/1991	3.5	0	.3	.6	9.8	79
7/29/1991	4.8	0	.3	.6	11.0	79
7/30/1991	4.2	0	.2	.6	14.0	79

Appendix 2. Daily mean streamflow for the five creeks providing recharge to the Barton Springs segment of the Edwards aquifer and daily mean discharge for Barton Springs, Austin, Texas, 1978–2003—Continued.

Date	Barton Creek	Williamson Creek	Slaughter Creek	Bear Creek	Onion Creek	Barton Springs
7/31/1991	3.0	0	0.2	0.4	8.8	79
8/1/1991	2.8	0	.2	.5	7.3	76
8/2/1991	2.6	0	.2	.5	6.9	75
8/3/1991	2.6	0	.2	.4	6.7	75
8/4/1991	2.5	0	.2	.4	5.3	75
8/5/1991	2.5	0	.2	.3	4.9	75
8/6/1991	2.4	0	.2	.3	4.9	75
8/7/1991	2.2	0	.2	.2	5.2	73
8/8/1991	2.4	0	.2	.2	5.2	71
8/9/1991	2.4	0	.2	.1	6.5	71
8/10/1991	2.2	0	.2	.1	6.1	71
8/11/1991	2.0	0	.2	.1	5.7	71
8/12/1991	2.0	0	.2	.1	5.2	71
8/13/1991	1.9	0	.2	.1	4.8	71
8/14/1991	4.1	12.0	5.9	1.7	5.0	71
8/15/1991	467.0	107.0	42.0	11.0	58.0	71
8/16/1991	73.0	.2	1.2	1.1	14.0	71
8/17/1991	30.0	0	.3	.8	14.0	71
8/18/1991	20.0	0	.3	.8	14.0	71
8/19/1991	13.0	0	.3	.7	14.0	71
8/20/1991	9.6	0	.3	.7	12.0	71
8/21/1991	8.1	0	.3	.6	12.0	71
8/22/1991	6.7	0	.3	.5	11.0	71
8/23/1991	6.0	0	.3	.6	11.0	71
8/24/1991	9.2	0	.3	.7	10.0	72
8/25/1991	8.8	0	.3	.7	9.2	71
8/26/1991	7.4	0	.3	.6	8.3	70
8/27/1991	6.0	0	.3	.5	7.5	68
8/28/1991	5.3	0	.3	.6	7.0	70
8/29/1991	4.7	0	.3	.5	6.9	70
8/30/1991	4.3	0	.3	.3	6.5	70
8/31/1991	4.4	1.3	.8	.5	6.1	70
9/1/1991	4.8	0	.5	.8	8.8	70
9/2/1991	5.4	8.1	2.4	2.0	88.0	71
9/3/1991	67.0	.8	2.7	2.2	23.0	71
9/4/1991	23.0	0	1.6	1.4	14.0	71
9/5/1991	16.0	0	1.4	1.1	11.0	71
9/6/1991	19.0	.1	1.9	1.2	10.0	71
9/7/1991	25.0	0	1.9	1.1	8.3	71
9/8/1991	20.0	0	1.7	1.1	7.2	71
9/9/1991	16.0	0	1.7	1.1	6.1	70
9/10/1991	13.0	0	1.7	1.1	4.5	69
9/11/1991	11.0	0	1.6	1.1	5.4	69
9/12/1991	10.0	0	1.8	1.1	5.0	68
9/13/1991	11.0	0	1.7	1.1	4.6	67
9/14/1991	12.0	4.5	2.3	1.8	11.0	67
9/15/1991	22.0	.2	2.6	2.5	11.0	67
9/16/1991	19.0	0	2.0	2.2	11.0	65
9/17/1991	14.0	0	1.9	2.0	11.0	65
9/18/1991	11.0	0	4.3	2.3	12.0	67
9/19/1991	103.0	0	21.0	4.7	215.0	68
9/20/1991	63.0	0	13.0	4.9	53.0	69
9/21/1991	39.0	0	9.4	4.9	37.0	70
9/22/1991	33.0	0	7.6	4.8	32.0	70
9/23/1991	31.0	0	7.0	5.0	95.0	69
9/24/1991	36.0	.3	7.3	5.2	81.0	68
9/25/1991	29.0	0	6.6	4.4	65.0	70
9/26/1991	26.0	0	5.5	4.3	51.0	70
9/27/1991	24.0	0	4.8	4.2	45.0	69
9/28/1991	22.0	0	4.3	4.1	40.0	69
9/29/1991	21.0	0	3.8	3.8	37.0	68
9/30/1991	21.0	0	3.8	3.8	35.0	68
10/1/1991	19.0	0	3.3	3.7	33.0	61
10/2/1991	18.0	0	3.1	3.6	31.0	67
10/3/1991	15.0	0	3.1	3.6	29.0	67
10/4/1991	17.0	0	2.8	3.5	28.0	67
10/5/1991	16.0	.1	2.8	3.3	25.0	67
10/6/1991	12.0	0	2.7	3.2	23.0	66
10/7/1991	11.0	0	2.5	3.1	23.0	65
10/8/1991	11.0	0	2.5	2.8	22.0	65
10/9/1991	11.0	0	2.3	2.8	21.0	64
10/10/1991	11.0	0	2.3	2.6	20.0	64
10/11/1991	9.8	0	2.2	2.4	20.0	64
10/12/1991	9.1	0	1.8	2.4	19.0	64
10/13/1991	8.6	0	1.7	2.0	18.0	64
10/14/1991	8.3	0	1.5	2.0	17.0	63
10/15/1991	7.7	0	1.5	2.0	16.0	63
10/16/1991	7.4	0	1.4	2.0	15.0	63
10/17/1991	6.3	0	1.4	2.0	15.0	62
10/18/1991	6.2	0	1.4	2.0	14.0	62
10/19/1991	6.3	0	1.3	2.0	15.0	62
10/20/1991	5.9	0	1.3	1.6	14.0	62
10/21/1991	6.1	0	1.2	1.5	14.0	62
10/22/1991	6.2	0	1.1	1.6	13.0	62
10/23/1991	6.2	0	1.1	1.5	13.0	61
10/24/1991	6.0	0	1.1	1.5	13.0	61
10/25/1991	5.8	0	1.1	1.5	12.0	61
10/26/1991	5.8	0	1.1	1.5	12.0	60
10/27/1991	6.0	0	1.1	1.5	12.0	60
10/28/1991	9.8	2.9	1.2	1.6	12.0	60
10/29/1991	14.0	22.0	2.0	2.3	18.0	60
10/30/1991	11.0	.6	2.0	1.7	15.0	60
10/31/1991	12.0	2.6	2.0	1.7	13.0	60
11/1/1991	11.0	.2	1.6	1.5	13.0	60
11/2/1991	10.0	0	1.5	1.4	12.0	61
11/3/1991	8.5	0	1.3	1.4	12.0	61
11/4/1991	7.5	0	1.3	1.2	11.0	60
11/5/1991	7.2	0	1.3	1.2	12.0	60
11/6/1991	7.1	0	1.3	1.2	12.0	60
11/7/1991	7.1	0	1.2	1.2	12.0	59

Appendix 2. Daily mean streamflow for the five creeks providing recharge to the Barton Springs segment of the Edwards aquifer and daily mean discharge for Barton Springs, Austin, Texas, 1978–2003—Continued.

Date	Barton Creek	Williamson Creek	Slaughter Creek	Bear Creek	Onion Creek	Barton Springs
11/8/1991	6.9	0	1.0	1.1	11.0	59
11/9/1991	6.5	0	.8	1.1	11.0	58
11/10/1991	6.5	0	.8	1.1	11.0	58
11/11/1991	6.5	0	.8	1.1	11.0	58
11/12/1991	6.4	0	.8	1.1	10.0	57
11/13/1991	6.2	0	.8	1.1	10.0	57
11/14/1991	6.2	0	.9	1.1	10.0	57
11/15/1991	6.3	0	.9	1.1	10.0	57
11/16/1991	6.9	0	.9	1.1	10.0	57
11/17/1991	20.0	12.0	2.5	2.0	13.0	61
11/18/1991	15.0	.3	2.3	1.4	13.0	63
11/19/1991	14.0	0	1.7	1.4	12.0	62
11/20/1991	11.0	0	1.2	1.4	12.0	61
11/21/1991	9.7	0	1.2	1.4	12.0	59
11/22/1991	8.9	0	1.2	1.4	12.0	58
11/23/1991	8.0	0	.9	1.3	11.0	58
11/24/1991	6.9	0	.7	1.2	11.0	58
11/25/1991	6.6	0	.7	1.2	11.0	58
11/26/1991	6.5	0	.7	1.2	11.0	57
11/27/1991	6.5	0	.7	1.2	11.0	57
11/28/1991	6.5	0	.7	1.2	10.0	57
11/29/1991	6.5	0	.7	1.3	10.0	57
11/30/1991	6.5	0	.7	1.4	10.0	57
12/1/1991	6.4	0	.7	1.4	9.6	57
12/2/1991	6.2	0	.7	1.4	9.2	57
12/3/1991	6.0	0	.5	1.2	9.1	57
12/4/1991	6.3	0	.5	1.2	8.8	56
12/5/1991	5.8	0	.5	1.2	8.8	56
12/6/1991	5.8	0	.5	1.2	8.8	55
12/7/1991	5.8	0	.5	1.2	8.8	55
12/8/1991	6.1	.1	.5	1.2	8.8	55
12/9/1991	22.0	19.0	3.5	2.1	19.0	58
12/10/1991	21.0	.3	2.2	1.5	16.0	58
12/11/1991	17.0	.1	2.0	1.5	16.0	57
12/12/1991	14.0	.1	2.0	1.5	16.0	57
12/13/1991	13.0	1.6	2.5	2.0	20.0	58
12/14/1991	14.0	.3	2.5	2.0	21.0	58
12/15/1991	13.0	.1	2.5	2.0	21.0	57
12/16/1991	13.0	.1	2.3	2.4	21.0	57
12/17/1991	13.0	.6	2.3	2.8	22.0	57
12/18/1991	25.0	20.0	6.0	4.6	28.0	59
12/19/1991	325.0	182.0	184.0	100.0	370.0	59
12/20/1991	2,380.0	632.0	750.0	1,000.0	2,120.0	65
12/21/1991	7,000.0	426.0	548.0	632.0	5,060.0	100
12/22/1991	3,170.0	262.0	371.0	503.0	3,040.0	118
12/23/1991	1,410.0	52.0	108.0	112.0	1,440.0	125
12/24/1991	949.0	31.0	63.0	82.0	1,060.0	130
12/25/1991	760.0	28.0	53.0	71.0	864.0	130
12/26/1991	782.0	34.0	80.0	78.0	700.0	130
12/27/1991	701.0	25.0	46.0	62.0	540.0	128
12/28/1991	559.0	19.0	30.0	51.0	448.0	123
12/29/1991	452.0	15.0	24.0	45.0	394.0	113
12/30/1991	382.0	13.0	20.0	40.0	358.0	107
12/31/1991	341.0	11.0	16.0	36.0	333.0	101
1/1/1992	314.0	9.5	15.0	33.0	318.0	99
1/2/1992	475.0	30.0	57.0	39.0	376.0	109
1/3/1992	363.0	15.0	23.0	31.0	316.0	107
1/4/1992	315.0	13.0	20.0	29.0	293.0	103
1/5/1992	317.0	15.0	24.0	32.0	310.0	103
1/6/1992	292.0	12.0	18.0	32.0	286.0	100
1/7/1992	268.0	10.0	16.0	33.0	278.0	97
1/8/1992	263.0	9.7	15.0	32.0	273.0	96
1/9/1992	234.0	8.0	13.0	30.0	250.0	94
1/10/1992	209.0	6.6	10.0	29.0	237.0	90
1/11/1992	192.0	6.6	10.0	28.0	230.0	88
1/12/1992	204.0	7.7	14.0	31.0	244.0	85
1/13/1992	186.0	5.8	10.0	29.0	220.0	82
1/14/1992	163.0	5.5	8.7	26.0	203.0	80
1/15/1992	155.0	4.5	8.0	19.0	195.0	78
1/16/1992	146.0	3.9	7.8	19.0	183.0	75
1/17/1992	148.0	5.0	7.4	19.0	186.0	75
1/18/1992	199.0	12.0	6.9	24.0	238.0	75
1/19/1992	222.0	9.9	17.0	23.0	227.0	75
1/20/1992	184.0	8.3	16.0	22.0	212.0	75
1/21/1992	190.0	15.0	15.0	27.0	223.0	75
1/22/1992	262.0	15.0	28.0	29.0	258.0	75
1/23/1992	222.0	11.0	18.0	25.0	226.0	75
1/24/1992	198.0	8.9	15.0	24.0	217.0	75
1/25/1992	186.0	7.7	14.0	23.0	213.0	75
1/26/1992	381.0	50.0	74.0	82.0	697.0	84
1/27/1992	1,220.0	49.0	124.0	77.0	944.0	120
1/28/1992	613.0	26.0	53.0	55.0	571.0	101
1/29/1992	533.0	22.0	42.0	49.0	509.0	81
1/30/1992	468.0	18.0	33.0	43.0	461.0	85
1/31/1992	399.0	14.0	24.0	37.0	400.0	85
2/1/1992	357.0	12.0	20.0	35.0	362.0	85
2/2/1992	350.0	15.0	27.0	39.0	393.0	86
2/3/1992	893.0	125.0	159.0	128.0	701.0	114
2/4/1992	2,350.0	168.0	223.0	240.0	2,310.0	130
2/5/1992	1,670.0	56.0	133.0	107.0	1,400.0	130
2/6/1992	960.0	31.0	66.0	77.0	896.0	130
2/7/1992	721.0	22.0	41.0	61.0	729.0	130
2/8/1992	586.0	18.0	28.0	52.0	625.0	130
2/9/1992	506.0	15.0	22.0	46.0	557.0	130
2/10/1992	439.0	14.0	19.0	41.0	501.0	128
2/11/1992	388.0	13.0	20.0	38.0	463.0	122
2/12/1992	364.0	12.0	17.0	36.0	413.0	120
2/13/1992	329.0	11.0	15.0	33.0	366.0	119
2/14/1992	317.0	9.8	13.0	31.0	339.0	120
2/15/1992	299.0	8.4	12.0	28.0	316.0	120

Appendix 2. Daily mean streamflow for the five creeks providing recharge to the Barton Springs segment of the Edwards aquifer and daily mean discharge for Barton Springs, Austin, Texas, 1978–2003—Continued.

Date	Barton Creek	Williamson Creek	Slaughter Creek	Bear Creek	Onion Creek	Barton Springs
2/16/1992	279.0	7.6	10.0	27.0	295.0	120
2/17/1992	281.0	7.1	10.0	26.0	288.0	120
2/18/1992	258.0	6.2	8.7	24.0	266.0	119
2/19/1992	241.0	5.5	8.0	23.0	248.0	119
2/20/1992	237.0	5.1	7.6	21.0	235.0	119
2/21/1992	236.0	4.9	7.2	20.0	223.0	118
2/22/1992	458.0	20.0	26.0	29.0	293.0	118
2/23/1992	370.0	12.0	13.0	22.0	249.0	120
2/24/1992	637.0	58.0	96.0	70.0	485.0	122
2/25/1992	950.0	40.0	73.0	45.0	465.0	123
2/26/1992	676.0	25.0	37.0	38.0	342.0	123
2/27/1992	600.0	19.0	28.0	35.0	319.0	123
2/28/1992	556.0	16.0	20.0	32.0	305.0	123
2/29/1992	529.0	14.0	18.0	30.0	290.0	122
3/1/1992	502.0	12.0	16.0	28.0	278.0	122
3/2/1992	486.0	11.0	15.0	27.0	273.0	121
3/3/1992	510.0	15.0	19.0	29.0	282.0	122
3/4/1992	2,910.0	140.0	212.0	204.0	2,540.0	129
3/5/1992	1,060.0	37.0	60.0	64.0	785.0	130
3/6/1992	688.0	25.0	37.0	53.0	615.0	130
3/7/1992	547.0	19.0	26.0	46.0	525.0	130
3/8/1992	472.0	16.0	22.0	43.0	480.0	130
3/9/1992	430.0	16.0	20.0	40.0	444.0	130
3/10/1992	361.0	12.0	16.0	34.0	369.0	127
3/11/1992	323.0	11.0	16.0	32.0	340.0	120
3/12/1992	298.0	9.9	14.0	30.0	320.0	113
3/13/1992	266.0	8.2	12.0	28.0	299.0	104
3/14/1992	244.0	7.3	11.0	26.0	285.0	90
3/15/1992	223.0	6.2	10.0	24.0	270.0	87
3/16/1992	203.0	5.6	9.5	23.0	245.0	86
3/17/1992	193.0	5.8	8.7	21.0	228.0	87
3/18/1992	216.0	10.0	11.0	23.0	245.0	87
3/19/1992	166.0	4.8	7.2	19.0	202.0	85
3/20/1992	151.0	4.4	6.8	18.0	185.0	85
3/21/1992	148.0	4.4	6.8	17.0	181.0	89
3/22/1992	146.0	4.0	6.6	17.0	176.0	91
3/23/1992	133.0	3.5	6.0	16.0	156.0	88
3/24/1992	128.0	3.3	5.8	15.0	148.0	87
3/25/1992	125.0	3.4	5.5	14.0	140.0	89
3/26/1992	120.0	2.9	5.1	13.0	131.0	90
3/27/1992	119.0	4.6	5.8	15.0	134.0	88
3/28/1992	175.0	12.0	16.0	28.0	258.0	85
3/29/1992	191.0	5.7	9.2	20.0	209.0	86
3/30/1992	137.0	4.3	6.9	17.0	158.0	84
3/31/1992	125.0	3.9	6.4	16.0	144.0	85
4/1/1992	123.0	3.7	6.1	16.0	139.0	87
4/2/1992	119.0	3.5	5.5	15.0	133.0	88
4/3/1992	117.0	3.2	5.5	15.0	129.0	91
4/4/1992	115.0	2.9	5.5	14.0	121.0	94
4/5/1992	127.0	8.3	11.0	20.0	165.0	97
4/6/1992	146.0	4.3	7.5	16.0	163.0	99
4/7/1992	124.0	3.8	6.3	15.0	135.0	97
4/8/1992	117.0	3.7	5.9	14.0	125.0	101
4/9/1992	116.0	3.4	5.5	14.0	120.0	101
4/10/1992	114.0	3.0	5.1	14.0	116.0	99
4/11/1992	112.0	3.0	5.0	13.0	112.0	101
4/12/1992	108.0	2.9	4.6	12.0	106.0	103
4/13/1992	102.0	3.0	4.3	12.0	100.0	104
4/14/1992	94.0	2.9	4.2	11.0	95.0	106
4/15/1992	89.0	2.7	3.9	10.0	93.0	107
4/16/1992	82.0	2.2	3.6	9.7	89.0	109
4/17/1992	103.0	14.0	9.9	14.0	108.0	112
4/18/1992	137.0	6.5	8.7	14.0	123.0	111
4/19/1992	115.0	4.7	6.2	11.0	98.0	112
4/20/1992	104.0	4.0	5.2	9.8	90.0	112
4/21/1992	94.0	3.5	4.7	8.5	81.0	114
4/22/1992	85.0	3.4	4.2	8.1	75.0	115
4/23/1992	80.0	2.3	4.2	7.0	72.0	114
4/24/1992	75.0	2.5	4.2	7.0	70.0	110
4/25/1992	71.0	2.4	3.7	6.1	66.0	106
4/26/1992	68.0	2.0	3.6	6.1	64.0	103
4/27/1992	62.0	1.7	3.2	5.9	60.0	100
4/28/1992	58.0	1.3	3.1	5.3	57.0	97
4/29/1992	55.0	1.1	3.0	5.1	54.0	94
4/30/1992	51.0	.8	2.9	5.1	51.0	92
5/1/1992	49.0	1.0	2.7	4.9	49.0	88
5/2/1992	47.0	.8	2.6	4.6	47.0	85
5/3/1992	45.0	.6	2.4	4.6	46.0	83
5/4/1992	43.0	.5	2.4	4.2	43.0	88
5/5/1992	43.0	.5	2.4	4.6	41.0	91
5/6/1992	42.0	.3	2.0	4.0	38.0	94
5/7/1992	38.0	.2	1.6	3.4	36.0	96
5/8/1992	36.0	.2	1.7	3.2	36.0	99
5/9/1992	35.0	.3	1.6	3.2	36.0	97
5/10/1992	35.0	.2	2.0	3.4	36.0	99
5/11/1992	35.0	.1	1.9	3.4	36.0	98
5/12/1992	35.0	3.8	3.6	3.8	32.0	96
5/13/1992	38.0	.6	6.3	4.0	37.0	99
5/14/1992	48.0	14.0	26.0	12.0	145.0	99
5/15/1992	112.0	8.5	41.0	13.0	178.0	98
5/16/1992	197.0	49.0	27.0	8.2	90.0	98
5/17/1992	452.0	23.0	54.0	14.0	137.0	98
5/18/1992	528.0	328.0	155.0	68.0	96.0	97
5/19/1992	358.0	68.0	93.0	36.0	103.0	98
5/20/1992	253.0	30.0	56.0	39.0	185.0	104
5/21/1992	927.0	125.0	125.0	104.0	1,440.0	120
5/22/1992	1,070.0	53.0	98.0	69.0	661.0	130
5/23/1992	468.0	27.0	46.0	50.0	380.0	117
5/24/1992	353.0	17.0	31.0	42.0	313.0	110
5/25/1992	290.0	13.0	23.0	36.0	283.0	108

Appendix 2. Daily mean streamflow for the five creeks providing recharge to the Barton Springs segment of the Edwards aquifer and daily mean discharge for Barton Springs, Austin, Texas, 1978–2003—Continued.

Date	Barton Creek	Williamson Creek	Slaughter Creek	Bear Creek	Onion Creek	Barton Springs
5/26/1992	256.0	9.6	19.0	32.0	263.0	107
5/27/1992	348.0	45.0	32.0	33.0	290.0	107
5/28/1992	1,030.0	36.0	44.0	38.0	410.0	110
5/29/1992	382.0	17.0	22.0	30.0	278.0	101
5/30/1992	309.0	12.0	18.0	28.0	252.0	98
5/31/1992	285.0	16.0	19.0	30.0	248.0	97
6/1/1992	292.0	14.0	20.0	29.0	254.0	96
6/2/1992	1,470.0	20.0	30.0	58.0	1,360.0	118
6/3/1992	535.0	12.0	20.0	37.0	508.0	125
6/4/1992	390.0	8.0	16.0	33.0	403.0	111
6/5/1992	327.0	6.9	14.0	30.0	347.0	92
6/6/1992	297.0	12.0	22.0	31.0	318.0	90
6/7/1992	289.0	7.6	18.0	29.0	336.0	88
6/8/1992	254.0	5.6	16.0	26.0	289.0	84
6/9/1992	230.0	12.0	14.0	24.0	297.0	90
6/10/1992	215.0	5.6	13.0	22.0	285.0	96
6/11/1992	277.0	11.0	24.0	26.0	341.0	100
6/12/1992	501.0	28.0	50.0	26.0	305.0	109
6/13/1992	306.0	11.0	22.0	21.0	262.0	100
6/14/1992	242.0	7.8	17.0	20.0	241.0	99
6/15/1992	213.0	5.8	14.0	19.0	221.0	100
6/16/1992	185.0	4.4	12.0	17.0	201.0	99
6/17/1992	163.0	3.4	10.0	16.0	186.0	85
6/18/1992	151.0	3.0	8.4	15.0	172.0	85
6/19/1992	143.0	2.5	7.5	14.0	160.0	84
6/20/1992	132.0	2.2	7.0	12.0	149.0	83
6/21/1992	123.0	2.0	6.3	11.0	137.0	81
6/22/1992	115.0	1.7	5.5	9.9	106.0	80
6/23/1992	108.0	1.3	4.7	8.9	98.0	80
6/24/1992	99.0	1.3	4.4	7.9	90.0	79
6/25/1992	84.0	1.2	3.9	7.0	82.0	79
6/26/1992	72.0	1.1	3.6	6.4	88.0	80
6/27/1992	93.0	4.2	4.8	7.2	76.0	82
6/28/1992	69.0	1.1	4.2	6.0	70.0	83
6/29/1992	56.0	1.0	3.3	5.4	73.0	83
6/30/1992	50.0	.8	3.3	5.1	62.0	82
7/1/1992	50.0	.8	3.2	4.8	61.0	81
7/2/1992	47.0	.7	2.7	4.3	55.0	82
7/3/1992	41.0	.6	2.5	3.9	55.0	82
7/4/1992	37.0	.5	2.5	3.6	50.0	82
7/5/1992	35.0	.3	2.3	3.3	47.0	82
7/6/1992	31.0	0	2.0	2.9	43.0	81
7/7/1992	28.0	0	1.7	2.6	38.0	81
7/8/1992	27.0	0	1.5	2.3	35.0	81
7/9/1992	24.0	0	1.3	2.1	35.0	80
7/10/1992	22.0	0	1.1	1.9	31.0	78
7/11/1992	20.0	0	1.0	1.7	28.0	76
7/12/1992	18.0	0	.9	1.7	26.0	75
7/13/1992	16.0	0	.8	1.6	23.0	75
7/14/1992	14.0	0	.8	1.4	21.0	75
7/15/1992	13.0	0	0.8	1.3	20.0	75
7/16/1992	12.0	0	.8	1.1	18.0	75
7/17/1992	11.0	0	.8	1.1	17.0	77
7/18/1992	10.0	0	.7	1.0	16.0	85
7/19/1992	11.0	.5	2.0	4.8	25.0	112
7/20/1992	69.0	7.3	3.9	7.1	48.0	123
7/21/1992	39.0	.6	2.1	4.5	37.0	125
7/22/1992	24.0	0	1.5	3.9	38.0	122
7/23/1992	21.0	0	1.3	3.4	31.0	123
7/24/1992	18.0	0	1.2	2.9	24.0	127
7/25/1992	14.0	0	1.0	2.7	21.0	130
7/26/1992	12.0	0	1.0	2.5	18.0	130
7/27/1992	11.0	0	.9	2.4	18.0	130
7/28/1992	11.0	0	.8	2.3	17.0	130
7/29/1992	9.7	0	.7	2.1	15.0	130
7/30/1992	8.9	0	.6	2.0	14.0	130
7/31/1992	8.4	0	.5	1.9	14.0	130
8/1/1992	7.8	0	.5	1.8	14.0	130
8/2/1992	7.2	0	.5	1.7	13.0	130
8/3/1992	39.0	.2	.9	2.3	13.0	129
8/4/1992	11.0	0	.6	1.6	13.0	129
8/5/1992	8.8	0	.5	1.4	13.0	129
8/6/1992	7.7	0	.5	1.3	12.0	129
8/7/1992	7.0	0	.4	1.2	11.0	129
8/8/1992	6.5	0	.3	1.1	10.0	129
8/9/1992	6.0	0	.3	1.0	9.6	129
8/10/1992	5.6	0	.2	.8	9.0	129
8/11/1992	5.3	0	.2	.9	9.2	129
8/12/1992	5.4	0	.2	1.1	13.0	129
8/13/1992	5.1	0	.1	.9	11.0	128
8/14/1992	5.4	0	.1	.7	11.0	128
8/15/1992	5.6	0	.1	.7	11.0	127
8/16/1992	5.6	0	.1	.7	11.0	127
8/17/1992	5.2	0	.1	.6	10.0	126
8/18/1992	4.4	0	.1	.6	10.0	125
8/19/1992	4.2	0	0	.5	9.5	124
8/20/1992	4.0	0	0	.5	9.5	124
8/21/1992	3.5	0	0	.5	9.3	123
8/22/1992	3.1	0	0	.4	8.7	123
8/23/1992	2.8	0	0	.4	8.5	123
8/24/1992	2.6	0	0	.3	8.0	122
8/25/1992	2.3	0	0	.2	7.9	122
8/26/1992	2.0	0	0	.1	7.3	125
8/27/1992	1.9	0	0	.1	5.9	125
8/28/1992	1.9	0	0	.1	5.0	125
8/29/1992	1.6	0	0	.1	3.9	124
8/30/1992	1.4	0	0	.1	3.5	125
8/31/1992	1.3	0	0	.1	3.4	125
9/1/1992	1.3	0	0	.1	2.6	124
9/2/1992	1.2	0	0	.1	2.1	124

Appendix 2. Daily mean streamflow for the five creeks providing recharge to the Barton Springs segment of the Edwards aquifer and daily mean discharge for Barton Springs, Austin, Texas, 1978–2003—Continued.

Date	Barton Creek	Williamson Creek	Slaughter Creek	Bear Creek	Onion Creek	Barton Springs
9/3/1992	1.1	0	0	0.1	3.7	122
9/4/1992	1.3	0	0	.1	14.0	123
9/5/1992	1.2	0	0	.1	10.0	124
9/6/1992	1.2	0	0	.1	9.4	125
9/7/1992	1.7	0	0	.1	7.8	124
9/8/1992	2.0	0	0	.1	6.7	123
9/9/1992	2.0	0	0	.1	5.5	124
9/10/1992	1.8	0	0	.1	4.8	121
9/11/1992	1.8	0	0	.1	6.3	122
9/12/1992	1.6	0	0	.1	5.9	122
9/13/1992	1.4	0	0	.1	6.2	121
9/14/1992	1.4	0	0	.1	6.9	121
9/15/1992	1.5	0	0	.1	6.9	122
9/16/1992	1.5	0	0	0	5.7	124
9/17/1992	1.4	0	0	0	6.4	124
9/18/1992	1.4	0	0	0	7.5	124
9/19/1992	1.3	0	0	0	6.2	123
9/20/1992	1.0	0	0	0	5.5	123
9/21/1992	1.4	2.0	0	0	4.9	123
9/22/1992	5.8	3.7	0	0	4.6	123
9/23/1992	6.1	0	0	0	3.5	122
9/24/1992	3.3	0	0	0	3.5	122
9/25/1992	2.7	0	0	0	3.5	122
9/26/1992	2.1	0	0	0	3.5	122
9/27/1992	1.8	0	0	0	3.5	122
9/28/1992	1.5	0	0	0	3.5	121
9/29/1992	1.1	0	0	0	2.8	120
9/30/1992	.9	0	0	0	1.7	120
10/1/1992	.8	0	0	0	1.7	120
10/2/1992	.7	0	0	0	1.7	120
10/3/1992	.7	0	0	0	1.6	120
10/4/1992	.7	0	0	0	1.5	120
10/5/1992	.6	0	0	0	1.1	119
10/6/1992	.5	0	0	0	1.0	118
10/7/1992	.4	0	0	0	1.3	117
10/8/1992	.4	0	0	0	1.2	118
10/9/1992	.5	0	0	0	1.7	118
10/10/1992	.4	0	0	0	2.4	119
10/11/1992	.4	0	0	0	1.7	119
10/12/1992	.3	0	0	0	1.9	119
10/13/1992	.3	0	0	0	2.1	118
10/14/1992	.3	0	0	0	2.4	118
10/15/1992	.3	0	0	0	3.3	117
10/16/1992	.3	0	0	0	3.1	116
10/17/1992	.3	0	0	0	1.5	116
10/18/1992	.3	0	0	0	2.0	116
10/19/1992	.4	0	0	0	2.3	116
10/20/1992	.4	0	0	0	3.0	115
10/21/1992	.4	0	0	0	3.1	115
10/22/1992	.4	0	0	0	2.4	114
10/23/1992	0.5	0	0	0	2.1	114
10/24/1992	.4	0	0	0	2.0	114
10/25/1992	.4	0	0	0	1.7	114
10/26/1992	.4	0	0	0	1.8	114
10/27/1992	.4	0	0	0	1.9	113
10/28/1992	.3	0	0	0	2.1	113
10/29/1992	.4	0	0	0	2.6	112
10/30/1992	2.8	0	0	0	3.4	110
10/31/1992	.9	0	0	0	3.0	107
11/1/1992	2.3	1.6	0	.1	5.4	107
11/2/1992	1.2	0	0	.1	2.5	106
11/3/1992	1.0	0	0	.1	2.0	106
11/4/1992	.8	0	0	0	1.4	105
11/5/1992	.7	0	0	.1	1.8	105
11/6/1992	.7	0	0	.1	3.0	105
11/7/1992	.7	0	0	0	3.0	104
11/8/1992	.7	0	0	.1	3.8	104
11/9/1992	.7	0	0	.1	3.9	103
11/10/1992	.8	0	0	.1	4.0	102
11/11/1992	.8	0	0	.1	3.9	103
11/12/1992	1.1	0	0	.1	3.5	102
11/13/1992	.9	0	0	.1	3.3	102
11/14/1992	.8	0	0	.1	3.2	102
11/15/1992	.8	0	0	.1	2.9	102
11/16/1992	.8	0	0	.1	4.2	101
11/17/1992	.8	0	0	.1	2.9	101
11/18/1992	.8	0	0	.1	2.7	101
11/19/1992	52.0	23.0	.1	1.9	121.0	102
11/20/1992	115.0	6.0	0	1.6	80.0	105
11/21/1992	40.0	0	0	.7	30.0	105
11/22/1992	23.0	0	0	.4	18.0	104
11/23/1992	14.0	0	0	.4	14.0	103
11/24/1992	11.0	0	0	.6	13.0	103
11/25/1992	8.5	0	0	.5	11.0	102
11/26/1992	7.1	0	0	.4	11.0	102
11/27/1992	6.2	0	0	.3	10.0	101
11/28/1992	6.0	0	0	.3	9.7	101
11/29/1992	5.8	0	0	.3	9.5	100
11/30/1992	5.8	0	0	.3	9.5	99
12/1/1992	5.4	0	0	.3	9.0	98
12/2/1992	5.2	0	0	.2	8.8	98
12/3/1992	5.0	0	0	.2	8.8	98
12/4/1992	4.9	0	0	.3	8.6	98
12/5/1992	4.6	0	0	.2	8.5	98
12/6/1992	4.8	0	0	.3	8.8	98
12/7/1992	5.1	0	0	.3	8.5	97
12/8/1992	5.2	0	0	.3	8.5	97
12/9/1992	8.1	.2	0	.6	9.5	97
12/10/1992	7.1	0	0	.2	8.4	97
12/11/1992	6.5	0	0	.1	8.5	96

Appendix 2. Daily mean streamflow for the five creeks providing recharge to the Barton Springs segment of the Edwards aquifer and daily mean discharge for Barton Springs, Austin, Texas, 1978–2003—Continued.

Date	Barton Creek	Williamson Creek	Slaughter Creek	Bear Creek	Onion Creek	Barton Springs
12/12/1992	6.1	0	0	0.3	9.0	96
12/13/1992	6.0	0	0	.4	9.5	96
12/14/1992	16.0	2.2	0	1.8	14.0	95
12/15/1992	195.0	15.0	.2	7.6	176.0	97
12/16/1992	143.0	.7	.1	4.3	107.0	100
12/17/1992	87.0	.3	.2	3.6	70.0	100
12/18/1992	63.0	.1	.3	3.1	58.0	100
12/19/1992	56.0	0	.3	3.0	56.0	100
12/20/1992	51.0	.1	.3	2.7	49.0	100
12/21/1992	48.0	0	.4	2.6	47.0	100
12/22/1992	46.0	0	.4	2.6	44.0	99
12/23/1992	45.0	0	.4	2.4	43.0	99
12/24/1992	42.0	0	.4	2.2	41.0	99
12/25/1992	40.0	0	.4	2.2	39.0	99
12/26/1992	39.0	0	.4	2.2	38.0	98
12/27/1992	37.0	0	.4	2.0	37.0	98
12/28/1992	37.0	0	.5	2.0	36.0	98
12/29/1992	37.0	0	.5	2.0	36.0	97
12/30/1992	37.0	0	.5	2.0	35.0	96
12/31/1992	36.0	0	.5	1.8	34.0	96
1/1/1993	35.0	0	.5	1.8	33.0	96
1/2/1993	34.0	0	.5	1.7	32.0	96
1/3/1993	34.0	0	.5	1.5	32.0	96
1/4/1993	35.0	.2	.6	1.5	33.0	95
1/5/1993	34.0	0	.7	1.6	32.0	95
1/6/1993	33.0	.1	.7	1.5	29.0	95
1/7/1993	32.0	.1	.8	1.8	29.0	95
1/8/1993	33.0	.1	.9	1.7	30.0	95
1/9/1993	37.0	.9	1.3	2.1	32.0	95
1/10/1993	35.0	.3	1.4	2.2	31.0	95
1/11/1993	34.0	.3	1.4	2.2	31.0	95
1/12/1993	34.0	.3	2.1	2.3	32.0	95
1/13/1993	34.0	.4	2.4	2.2	33.0	94
1/14/1993	34.0	.3	2.4	2.2	33.0	94
1/15/1993	34.0	.3	2.5	2.3	33.0	94
1/16/1993	34.0	.3	2.6	2.5	33.0	94
1/17/1993	34.0	.3	2.6	2.6	32.0	94
1/18/1993	34.0	.3	2.6	2.5	32.0	94
1/19/1993	148.0	16.0	13.0	7.5	181.0	96
1/20/1993	262.0	12.0	21.0	9.0	231.0	98
1/21/1993	180.0	6.5	18.0	8.9	161.0	100
1/22/1993	148.0	4.7	15.0	8.9	134.0	100
1/23/1993	139.0	4.0	14.0	8.6	122.0	100
1/24/1993	123.0	3.1	11.0	7.5	105.0	100
1/25/1993	128.0	2.9	10.0	7.1	96.0	100
1/26/1993	123.0	2.8	9.4	7.0	92.0	100
1/27/1993	114.0	2.7	8.7	6.7	88.0	100
1/28/1993	114.0	2.8	8.1	6.7	84.0	100
1/29/1993	114.0	3.4	9.1	7.0	89.0	101
1/30/1993	120.0	2.6	9.2	6.5	90.0	101
1/31/1993	114.0	2.6	8.7	6.3	83.0	101
2/1/1993	110.0	2.6	8.7	6.3	80.0	101
2/2/1993	107.0	2.6	8.7	6.1	77.0	101
2/3/1993	108.0	3.0	8.7	6.1	78.0	101
2/4/1993	113.0	2.5	8.7	6.3	79.0	102
2/5/1993	121.0	5.5	16.0	7.5	95.0	102
2/6/1993	144.0	4.1	16.0	7.6	108.0	102
2/7/1993	137.0	3.9	15.0	7.7	101.0	103
2/8/1993	132.0	3.6	15.0	7.7	98.0	103
2/9/1993	138.0	9.8	22.0	10.0	104.0	103
2/10/1993	473.0	13.0	32.0	18.0	304.0	104
2/11/1993	317.0	8.2	18.0	15.0	217.0	106
2/12/1993	235.0	6.0	14.0	14.0	189.0	106
2/13/1993	206.0	5.6	13.0	14.0	178.0	106
2/14/1993	183.0	5.1	11.0	13.0	168.0	106
2/15/1993	175.0	5.2	12.0	13.0	166.0	107
2/16/1993	160.0	4.2	11.0	12.0	154.0	107
2/17/1993	144.0	3.9	8.4	12.0	138.0	107
2/18/1993	134.0	3.7	7.6	11.0	129.0	107
2/19/1993	127.0	3.5	7.6	11.0	126.0	107
2/20/1993	125.0	3.5	7.6	11.0	124.0	107
2/21/1993	120.0	3.2	6.9	10.0	117.0	108
2/22/1993	109.0	2.7	6.0	9.4	107.0	108
2/23/1993	98.0	2.6	4.5	8.9	102.0	108
2/24/1993	96.0	2.7	5.5	8.9	100.0	108
2/25/1993	95.0	2.5	5.3	8.7	98.0	107
2/26/1993	88.0	1.8	3.9	7.6	90.0	107
2/27/1993	82.0	1.7	4.3	7.0	85.0	107
2/28/1993	82.0	2.8	5.2	8.0	89.0	107
3/1/1993	101.0	2.1	7.1	9.4	111.0	107
3/2/1993	120.0	1.6	6.3	8.7	108.0	107
3/3/1993	94.0	1.3	5.3	7.6	93.0	107
3/4/1993	86.0	1.2	4.7	7.0	85.0	107
3/5/1993	82.0	1.0	4.3	6.9	81.0	106
3/6/1993	79.0	1.0	4.3	6.7	78.0	106
3/7/1993	77.0	1.0	4.3	6.5	76.0	106
3/8/1993	75.0	1.0	4.3	6.1	72.0	106
3/9/1993	72.0		4.3	5.9	70.0	105
3/10/1993	68.0		4.3	5.9	69.0	106
3/11/1993	64.0	0	4.0	5.6	66.0	106
3/12/1993	66.0	0	4.2	7.3	74.0	106
3/13/1993	71.0	0	4.2	5.9	69.0	106
3/14/1993	60.0	0	4.0	5.9	65.0	106
3/15/1993	59.0	0	4.1	5.9	66.0	106
3/16/1993	60.0	0	4.3	6.1	67.0	106
3/17/1993	58.0	0	4.0	5.6	61.0	106
3/18/1993	54.0	0	4.0	5.4	59.0	106
3/19/1993	52.0	0	5.0	6.4	62.0	106
3/20/1993	54.0	0	5.9	7.4	67.0	106
3/21/1993	65.0	0	5.1	6.7	61.0	107

Appendix 2. Daily mean streamflow for the five creeks providing recharge to the Barton Springs segment of the Edwards aquifer and daily mean discharge for Barton Springs, Austin, Texas, 1978–2003—Continued.

Date	Barton Creek	Williamson Creek	Slaughter Creek	Bear Creek	Onion Creek	Barton Springs
3/22/1993	59.0	0	5.1	6.9	62.0	107
3/23/1993	59.0	0	4.8	7.6	64.0	107
3/24/1993	56.0	0	4.7	7.2	60.0	107
3/25/1993	58.0	0	4.8	7.9	60.0	107
3/26/1993	62.0	0	5.1	8.4	60.0	106
3/27/1993	61.0	0	5.1	8.1	56.0	106
3/28/1993	55.0	0	5.1	8.1	56.0	106
3/29/1993	54.0	0	4.8	8.1	55.0	107
3/30/1993	54.0	0	4.7	8.4	61.0	107
3/31/1993	58.0	0	4.3	7.3	58.0	107
4/1/1993	51.0	0	4.3	7.0	53.0	107
4/2/1993	48.0	0	4.0	7.0	51.0	107
4/3/1993	48.0	0	4.0	7.0	52.0	107
4/4/1993	51.0	0	4.6	7.5	55.0	108
4/5/1993	49.0	0	4.0	6.9	51.0	108
4/6/1993	46.0	0	4.0	6.6	50.0	108
4/7/1993	79.0	.5	9.7	12.0	87.0	108
4/8/1993	142.0	0	5.6	9.1	95.0	108
4/9/1993	86.0	0	3.6	7.3	63.0	108
4/10/1993	77.0	0	3.3	6.9	55.0	108
4/11/1993	75.0	0	3.0	6.7	53.0	108
4/12/1993	75.0	0	2.8	6.4	54.0	108
4/13/1993	74.0	0	2.7	6.4	53.0	108
4/14/1993	82.0	0	3.2	7.0	61.0	108
4/15/1993	91.0	0	2.8	6.7	58.0	108
4/16/1993	77.0	0	2.6	6.1	51.0	108
4/17/1993	72.0	0	2.6	5.9	48.0	108
4/18/1993	70.0	0	2.6	5.9	47.0	108
4/19/1993	68.0	0	2.4	5.3	45.0	108
4/20/1993	60.0	0	2.0	5.1	43.0	107
4/21/1993	55.0	0	1.8	4.9	39.0	107
4/22/1993	52.0	0	1.8	4.9	38.0	107
4/23/1993	52.0	0	1.8	4.9	38.0	108
4/24/1993	50.0	0	1.7	4.9	38.0	108
4/25/1993	49.0	0	1.5	4.4	35.0	108
4/26/1993	45.0	0	1.3	3.8	33.0	108
4/27/1993	43.0	0	1.2	3.4	31.0	107
4/28/1993	43.0	0	1.3	3.4	31.0	107
4/29/1993	78.0	.2	3.7	5.3	40.0	107
4/30/1993	71.0	0	2.5	4.0	41.0	108
5/1/1993	51.0	0	2.0	3.8	35.0	108
5/2/1993	58.0	0	2.3	3.6	34.0	108
5/3/1993	53.0	0	2.0	3.4	31.0	108
5/4/1993	45.0	0	1.5	3.2	28.0	108
5/5/1993	57.0	1.2	4.4	8.8	52.0	108
5/6/1993	123.0	0	16.0	10.0	73.0	108
5/7/1993	99.0	0	7.8	6.7	52.0	108
5/8/1993	78.0	0	7.2	6.1	44.0	108
5/9/1993	73.0	0	7.0	6.7	42.0	108
5/10/1993	70.0	0	7.4	7.7	45.0	108
5/11/1993	62.0	0	6.4	6.1	39.0	108
5/12/1993	56.0	0	5.5	5.9	35.0	108
5/13/1993	52.0	0	5.1	5.9	33.0	108
5/14/1993	48.0	0	4.4	5.6	32.0	108
5/15/1993	46.0	0	4.1	5.6	30.0	108
5/16/1993	43.0	0	3.3	5.1	28.0	108
5/17/1993	41.0	0	3.0	4.9	26.0	108
5/18/1993	38.0	0	2.8	4.6	25.0	107
5/19/1993	35.0	0	2.8	4.2	24.0	107
5/20/1993	32.0	0	2.4	4.0	23.0	107
5/21/1993	31.0	0	2.4	4.0	22.0	108
5/22/1993	28.0	0	2.2	3.8	21.0	108
5/23/1993	37.0	0	5.0	5.2	30.0	108
5/24/1993	42.0	0	3.7	4.2	32.0	108
5/25/1993	34.0	0	2.8	4.0	26.0	108
5/26/1993	30.0	0	2.6	3.8	24.0	108
5/27/1993	26.0	0	2.3	3.6	22.0	108
5/28/1993	25.0	0	2.2	3.6	22.0	107
5/29/1993	25.0	0	2.2	3.4	23.0	107
5/30/1993	24.0	0	2.3	4.0	23.0	107
5/31/1993	23.0	0	2.1	3.2	22.0	107
6/1/1993	21.0	0	1.5	2.6	19.0	107
6/2/1993	19.0	0	1.3	2.4	18.0	106
6/3/1993	15.0	0	1.2	2.3	17.0	106
6/4/1993	13.0	0	1.1	2.1	16.0	106
6/5/1993	12.0	0	1.0	2.2	15.0	105
6/6/1993	11.0	0	1.0	2.1	14.0	104
6/7/1993	11.0	0	.9	2.0	14.0	104
6/8/1993	10.0	0	.9	2.0	13.0	103
6/9/1993	9.9	0	.9	1.9	13.0	103
6/10/1993	9.9	0	1.2	1.4	13.0	103
6/11/1993	11.0	0	1.0	1.6	16.0	102
6/12/1993	12.0	0	1.0	1.6	15.0	102
6/13/1993	12.0	0	1.0	1.8	18.0	102
6/14/1993	12.0	0	1.5	2.5	17.0	101
6/15/1993	18.0	0	2.4	2.0	16.0	101
6/16/1993	13.0	0	1.4	1.6	14.0	101
6/17/1993	11.0	0	1.2	1.5	13.0	100
6/18/1993	10.0	0	1.1	1.6	14.0	100
6/19/1993	9.8	0	1.4	1.8	15.0	100
6/20/1993	12.0	0	1.6	2.4	19.0	101
6/21/1993	20.0	0	2.0	2.8	25.0	102
6/22/1993	28.0	0	1.8	1.9	31.0	101
6/23/1993	23.0	0	1.7	1.8	25.0	100
6/24/1993	18.0	0	1.4	1.9	23.0	100
6/25/1993	17.0	0	1.4	1.8	22.0	99
6/26/1993	35.0	3.0	21.0	22.0	46.0	98
6/27/1993	38.0	0	6.9	8.0	136.0	100
6/28/1993	32.0	0	4.7	6.2	65.0	100
6/29/1993	26.0	0	3.8	5.5	48.0	99

Appendix 2. Daily mean streamflow for the five creeks providing recharge to the Barton Springs segment of the Edwards aquifer and daily mean discharge for Barton Springs, Austin, Texas, 1978–2003—Continued.

Date	Barton Creek	Williamson Creek	Slaughter Creek	Bear Creek	Onion Creek	Barton Springs
6/30/1993	22.0	0	3.2	5.1	45.0	99
7/1/1993	20.0	0	2.7	4.8	39.0	99
7/2/1993	18.0	0	2.6	4.5	33.0	98
7/3/1993	16.0	0	2.3	4.2	30.0	98
7/4/1993	15.0	0	2.2	4.0	28.0	98
7/5/1993	14.0	0	1.9	3.7	26.0	98
7/6/1993	13.0	0	1.5	3.4	24.0	98
7/7/1993	12.0	0	1.4	3.2	22.0	97
7/8/1993	11.0	0	1.1	3.1	21.0	97
7/9/1993	10.0	0	.9	2.9	20.0	96
7/10/1993	9.4	0	.8	2.7	19.0	96
7/11/1993	8.9	0	.8	2.5	18.0	96
7/12/1993	8.0	0	.7	2.4	17.0	96
7/13/1993	7.3	0	.6	2.1	16.0	95
7/14/1993	6.6	0	.6	1.9	15.0	95
7/15/1993	6.0	0	.6	1.7	13.0	95
7/16/1993	5.6	0	.5	1.9	13.0	94
7/17/1993	5.0	0	.5	1.5	12.0	94
7/18/1993	4.6	0	.5	1.4	11.0	94
7/19/1993	4.3	0	.5	1.3	10.0	94
7/20/1993	3.7	0	.4	1.2	10.0	94
7/21/1993	3.2	0	.4	1.2	9.5	93
7/22/1993	2.7	0	.4	1.1	8.8	93
7/23/1993	2.3	0	.3	1.0	8.4	92
7/24/1993	1.8	0	.2	.9	7.9	92
7/25/1993	1.5	0	.2	.7	7.4	92
7/26/1993	1.4	0	.1	.7	7.0	92
7/27/1993	1.3	0	.1	.7	6.4	92
7/28/1993	1.2	0	.1	.6	5.4	91
7/29/1993	1.1	0	.1	.6	4.4	91
7/30/1993	1.0	0	0	.5	2.9	90
7/31/1993	.8	0	0	.4	1.5	90
8/1/1993	.6	0	0	.3	1.2	90
8/2/1993	.5	0	0	.2	.7	89
8/3/1993	.5	0	0	.2	.5	88
8/4/1993	.5	0	0	.1	.4	88
8/5/1993	.4	0	0	.1	.3	88
8/6/1993	.4	0	0	.1	.2	87
8/7/1993	.4	0	0	.1	.3	87
8/8/1993	.5	0	0	.1	.5	87
8/9/1993	.5	0	0	.1	.5	86
8/10/1993	.4	0	0	0	.3	86
8/11/1993	.4	0	0	0	.3	86
8/12/1993	.4	0	0	0	.2	86
8/13/1993	.3	0	0	0	.2	85
8/14/1993	.3	0	0	0	.2	85
8/15/1993	.3	0	0	0	.2	84
8/16/1993	.2	0	0	0	.2	84
8/17/1993	.2	0	0	0	.1	83
8/18/1993	.2	0	0	0	.1	83
8/19/1993	0.2	0	0	0	0.1	83
8/20/1993	.1	0	0	0	.1	80
8/21/1993	.1	0	0	0	.1	82
8/22/1993	0	0	0	0	.2	81
8/23/1993	0	0	0	0	.2	81
8/24/1993	0	0	0	0	.2	80
8/25/1993	0	0	0	0	.2	80
8/26/1993	0	0	0	0	.2	80
8/27/1993	0	0	0	0	.2	77
8/28/1993	0	0	0	0	.2	78
8/29/1993	0	0	0	0	.3	78
8/30/1993	0	0	0	0	.4	78
8/31/1993	.1	0	0	0	.4	76
9/1/1993	.1	0	0	0	.4	78
9/2/1993	0	0	0	0	.4	76
9/3/1993	0	0	0	0	.4	74
9/4/1993	.1	0	0	0	.4	75
9/5/1993	.1	0	0	0	.4	75
9/6/1993	.1	0	0	0	.5	74
9/7/1993	.1	0	0	0	.6	74
9/8/1993	.2	0	0	0	.8	73
9/9/1993	.2	0	0	0	1.2	73
9/10/1993	.1	0	0	0	1.2	72
9/11/1993	.1	0	0	0	1.1	72
9/12/1993	.1	0	0	0	1.3	72
9/13/1993	.2	0	0	0	1.5	72
9/14/1993	.1	0	0	0	1.7	71
9/15/1993	.1	0	0	0	1.2	71
9/16/1993	.1	0	0	0	.9	71
9/17/1993	.1	0	0	0	.8	70
9/18/1993	.1	0	0	0	.8	70
9/19/1993	.1	0	0	0	.8	70
9/20/1993	0	0	0	0	.7	70
9/21/1993	0	0	0	0	.7	68
9/22/1993	0	0	0	0	.7	69
9/23/1993	0	0	0	0	.7	69
9/24/1993	0	0	0	0	.4	68
9/25/1993	0	0	0	0	.4	68
9/26/1993	0	0	0	0	.4	68
9/27/1993	0	0	0	0	.4	68
9/28/1993	0	0	0	0	.4	66
9/29/1993	0	0	0	0	.3	67
9/30/1993	0	0	0	0	.3	67
10/1/1993	0	0	0	0	.3	70
10/2/1993	0	0	0	0	.3	70
10/3/1993	0	0	0	0	.3	70
10/4/1993	0	0	0	0	.3	68
10/5/1993	0	0	0	0	.3	68
10/6/1993	0	0	0	0	.3	69
10/7/1993	0	0	0	0	.3	68

Appendix 2. Daily mean streamflow for the five creeks providing recharge to the Barton Springs segment of the Edwards aquifer and daily mean discharge for Barton Springs, Austin, Texas, 1978–2003—Continued.

Date	Barton Creek	Williamson Creek	Slaughter Creek	Bear Creek	Onion Creek	Barton Springs
10/8/1993	0	0	0	0	0.3	67
10/9/1993	0	0	0	0	.2	68
10/10/1993	0	0	0	0	.2	67
10/11/1993	0	0	0	0	.2	67
10/12/1993	0	0	0	0	.2	67
10/13/1993	0	0	0	0	1.7	67
10/14/1993	.1	0	0	0	.3	66
10/15/1993	.1	0	0	0	.2	65
10/16/1993	.1	0	0	0	.2	66
10/17/1993	.1	0	0	0	.2	66
10/18/1993	.1	0	0	0	.2	66
10/19/1993	.1	0	0	0	.1	66
10/20/1993	.6	1.1	.7	0	13.0	66
10/21/1993	.1	0	0	0	2.8	66
10/22/1993	.1	0	0	0	5.3	66
10/23/1993	.2	0	0	0	5.8	65
10/24/1993	.2	0	0	0	5.2	64
10/25/1993	.2	0	0	0	4.4	64
10/26/1993	.2	0	0	0	3.9	63
10/27/1993	.2	0	0	0	3.1	63
10/28/1993	.2	0	0	0	3.1	63
10/29/1993	.2	0	0	0	3.5	64
10/30/1993	.2	0	0	0	2.8	64
10/31/1993	.2	0	0	0	3.0	64
11/1/1993	.2	0	0	0	3.3	64
11/2/1993	.2	0	0	0	3.5	62
11/3/1993	.3	0	0	0	4.7	63
11/4/1993	.3	0	0	0	4.1	64
11/5/1993	.3	0	0	0	3.7	63
11/6/1993	.3	0	0	0	3.5	62
11/7/1993	.3	0	0	0	3.5	62
11/8/1993	.4	0	0	0	4.4	60
11/9/1993	.3	0	0	0	4.0	58
11/10/1993	.3	0	0	0	4.0	58
11/11/1993	.4	0	0	0	4.0	58
11/12/1993	.6	0	0	0	4.0	58
11/13/1993	.5	0	0	0	4.1	58
11/14/1993	.6	0	0	0	3.5	57
11/15/1993	.6	0	0	0	3.0	58
11/16/1993	.7	0	0	0	3.0	59
11/17/1993	.6	0	0	0	3.0	59
11/18/1993	.6	0	0	0	2.9	59
11/19/1993	.6	0	0	0	3.1	59
11/20/1993	.6	0	0	0	2.9	58
11/21/1993	.6	0	0	0	2.8	58
11/22/1993	.6	0	0	0	3.1	57
11/23/1993	.7	0	0	0	3.2	57
11/24/1993	.7	0	0	0	3.1	57
11/25/1993	.7	0	0	0	3.0	57
11/26/1993	.8	0	0	0	2.6	57
11/27/1993	0.8	0	0	0	2.9	57
11/28/1993	.7	0	0	0	2.9	57
11/29/1993	.8	0	0	0	2.6	56
11/30/1993	.8	0	0	0	2.1	56
12/1/1993	.7	0	0	0	2.1	56
12/2/1993	.8	0	0	0	2.3	55
12/3/1993	.8	0	0	0	2.4	55
12/4/1993	.8	0	0	0	2.0	55
12/5/1993	.8	0	0	0	1.7	55
12/6/1993	.8	0	0	0	1.8	54
12/7/1993	.8	0	0	0	2.1	54
12/8/1993	.9	0	0	0	2.4	54
12/9/1993	.9	0	0	0	2.6	54
12/10/1993	.9	0	0	0	2.5	54
12/11/1993	.9	0	0	0	2.1	54
12/12/1993	.9	0	0	0	2.2	54
12/13/1993	1.0	0	0	0	2.5	53
12/14/1993	.9	0	0	0	1.7	53
12/15/1993	.9	0	0	0	1.7	53
12/16/1993	.9	0	0	0	2.1	53
12/17/1993	1.0	0	0	0	2.6	53
12/18/1993	1.0	0	0	0	2.4	53
12/19/1993	1.0	0	0	0	2.1	53
12/20/1993	1.1	0	0	0	2.1	53
12/21/1993	1.0	0	0	0	2.3	53
12/22/1993	1.7	0	0	0	4.2	53
12/23/1993	1.7	0	0	0	3.0	53
12/24/1993	1.4	0	0	0	2.5	52
12/25/1993	1.1	0	0	0	2.1	52
12/26/1993	1.1	0	0	0	2.1	52
12/27/1993	1.1	0	0	0	2.1	52
12/28/1993	1.1	0	0	0	2.1	51
12/29/1993	1.2	0	0	0	2.1	51
12/30/1993	1.4	0	0	0	1.8	51
12/31/1993	1.4	0	0	0	1.7	51
1/1/1994	1.5	0	0	0	2.1	51
1/2/1994	1.5	0	0	0	2.5	50
1/3/1994	1.6	0	0	0	3.1	52
1/4/1994	1.7	0	0	0	2.6	53
1/5/1994	1.5	0	0	0	2.1	54
1/6/1994	1.5	0	0	0	2.3	54
1/7/1994	1.5	0	0	0	2.1	53
1/8/1994	1.5	0	0	0	2.1	53
1/9/1994	1.5	0	0	0	1.8	53
1/10/1994	1.5	0	0	0	2.0	52
1/11/1994	1.5	0	0	0	2.0	52
1/12/1994	1.6	0	0	0	1.7	52
1/13/1994	1.8	0	0	0	1.8	52
1/14/1994	1.7	0	0	0	1.7	52
1/15/1994	1.7	0	0	0	1.9	52

Appendix 2. Daily mean streamflow for the five creeks providing recharge to the Barton Springs segment of the Edwards aquifer and daily mean discharge for Barton Springs, Austin, Texas, 1978–2003—Continued.

Date	Barton Creek	Williamson Creek	Slaughter Creek	Bear Creek	Onion Creek	Barton Springs
1/16/1994	1.7	0	0	0	1.7	52
1/17/1994	1.7	0	0	0	1.6	51
1/18/1994	1.7	0	0	0	1.4	51
1/19/1994	1.5	0	0	0	1.4	51
1/20/1994	1.6	0	0	0	1.8	51
1/21/1994	2.3	0	0	0	2.1	51
1/22/1994	2.3	0	0	0	2.3	52
1/23/1994	2.2	0	0	0	2.1	52
1/24/1994	2.3	0	0	0	2.9	52
1/25/1994	2.5	0	0	0	2.3	52
1/26/1994	2.5	0	0	0	1.8	51
1/27/1994	2.7	0	0	0	1.8	51
1/28/1994	3.5	0	0	0	1.4	51
1/29/1994	3.0	0	0	0	1.6	51
1/30/1994	2.6	0	0	0	1.4	50
1/31/1994	2.5	0	0	0	1.4	50
2/1/1994	2.5	0	0	0	1.4	50
2/2/1994	2.5	0	0	0	1.4	50
2/3/1994	2.3	0	0	0	1.3	50
2/4/1994	2.4	0	0	0	1.1	50
2/5/1994	2.4	0	0	0	1.1	50
2/6/1994	2.4	0	0	0	1.1	49
2/7/1994	2.3	0	0	0	1.1	49
2/8/1994	2.3	0	0	0	1.1	49
2/9/1994	2.2	0	0	0	1.3	50
2/10/1994	2.1	1.6	0	0	1.6	50
2/11/1994	2.1	0	0	0	1.5	49
2/12/1994	2.0	0	0	0	1.4	49
2/13/1994	1.9	0	0	0	1.2	48
2/14/1994	1.8	0	0	0	1.0	48
2/15/1994	1.8	0	0	0	1.1	48
2/16/1994	1.8	0	0	0	1.1	48
2/17/1994	1.8	0	0	0	1.1	48
2/18/1994	1.8	0	0	0	1.3	48
2/19/1994	1.8	0	0	0	1.4	48
2/20/1994	1.9	0	0	0	1.8	50
2/21/1994	1.9	0	0	0	1.8	52
2/22/1994	3.9	0	0	.8	18.0	53
2/23/1994	3.0	0	0	.8	9.2	53
2/24/1994	2.4	0	0	.6	7.0	52
2/25/1994	2.5	0	0	.4	6.1	52
2/26/1994	3.4	0	0	.3	5.4	51
2/27/1994	3.4	0	0	.3	5.3	52
2/28/1994	3.3	0	0	.3	5.5	52
3/1/1994	6.9	0	0	.6	6.2	51
3/2/1994	5.3	0	0	.5	5.6	51
3/3/1994	4.1	0	0	.2	4.8	50
3/4/1994	5.0	0	0	.3	4.6	49
3/5/1994	5.2	0	0	.2	4.4	48
3/6/1994	4.9	0	0	.1	4.4	48
3/7/1994	4.6	0	0	0.1	4.4	48
3/8/1994	4.2	0	0	.1	4.5	48
3/9/1994	6.6	0	0	.2	5.2	47
3/10/1994	5.3	0	0	.1	4.4	47
3/11/1994	5.0	0	0	.1	4.4	47
3/12/1994	5.5	0	0	.1	4.9	47
3/13/1994	6.9	0	0	.2	5.7	47
3/14/1994	6.4	0	0	.2	6.0	47
3/15/1994	8.3	0	0	.3	7.2	47
3/16/1994	9.3	0	0	.4	8.9	47
3/17/1994	8.4	0	0	.4	9.3	47
3/18/1994	8.4	0	0	.4	10.0	47
3/19/1994	8.2	0	0	.5	10.0	47
3/20/1994	7.6	0	0	.4	11.0	48
3/21/1994	7.2	0	0	.3	10.0	47
3/22/1994	6.9	0	0	.3	9.9	47
3/23/1994	7.0	0	0	.4	10.0	47
3/24/1994	7.3	0	0	.5	10.0	47
3/25/1994	6.9	0	0	.2	9.3	47
3/26/1994	6.8	0	0	.5	9.2	47
3/27/1994	7.0	0	0	.4	9.4	47
3/28/1994	6.9	0	0	.3	8.9	47
3/29/1994	6.7	0	0	.4	8.8	47
3/30/1994	6.5	0	0	.3	8.6	47
3/31/1994	6.2	0	0	.1	8.3	47
4/1/1994	6.2	0	0	.1	8.3	47
4/2/1994	6.1	0	0	.1	8.3	47
4/3/1994	5.5	0	0	.1	8.2	47
4/4/1994	5.4	0	0	.1	8.3	47
4/5/1994	6.9	0	0	.2	9.5	47
4/6/1994	6.7	0	0	.3	8.4	47
4/7/1994	5.5	0	0	.2	8.3	46
4/8/1994	5.2	0	0	.2	8.3	46
4/9/1994	4.9	0	0	.3	8.2	46
4/10/1994	4.8	0	0	.3	8.0	46
4/11/1994	4.9	0	0	.3	8.1	46
4/12/1994	4.5	0	0	.3	8.0	46
4/13/1994	4.4	0	0	.2	7.9	46
4/14/1994	4.4	0	0	.2	7.9	45
4/15/1994	4.5	0	0	.2	8.1	45
4/16/1994	4.5	0	0	.2	7.7	45
4/17/1994	4.4	0	0	.1	7.8	45
4/18/1994	4.3	0	0	.1	7.5	44
4/19/1994	4.7	0	0	.1	7.8	44
4/20/1994	4.7	0	0	.2	7.9	44
4/21/1994	4.2	0	0	.2	7.8	45
4/22/1994	3.8	0	0	.2	7.6	45
4/23/1994	4.0	0	0	.2	7.5	45
4/24/1994	3.4	0	0	.2	7.5	45
4/25/1994	3.3	0	0	.2	7.5	44

Appendix 2. Daily mean streamflow for the five creeks providing recharge to the Barton Springs segment of the Edwards aquifer and daily mean discharge for Barton Springs, Austin, Texas, 1978–2003—Continued.

Date	Barton Creek	Williamson Creek	Slaughter Creek	Bear Creek	Onion Creek	Barton Springs
4/26/1994	3.2	0	0	0.1	7.3	44
4/27/1994	2.9	0	0	.1	7.0	44
4/28/1994	2.9	0	0	.1	7.2	45
4/29/1994	4.4	0	0	.4	7.7	46
4/30/1994	3.5	0	0	.3	7.3	45
5/1/1994	3.4	0	0	.1	7.1	44
5/2/1994	4.0	0	0	.2	7.5	43
5/3/1994	3.8	0	0	.2	7.2	42
5/4/1994	3.6	0	0	.2	7.0	42
5/5/1994	4.3	0	0	.2	7.6	43
5/6/1994	4.4	0	0	.1	7.8	43
5/7/1994	4.3	0	0	.1	7.6	43
5/8/1994	3.6	0	0	.1	7.3	43
5/9/1994	3.4	0	0	.1	6.7	42
5/10/1994	3.4	0	0	.1	6.1	42
5/11/1994	3.2	0	0	.1	5.9	42
5/12/1994	3.0	0	0	.1	5.8	42
5/13/1994	4.9	.2	.9	3.2	28.0	42
5/14/1994	7.4	0	.7	.7	26.0	42
5/15/1994	12.0	3.1	.2	6.8	46.0	43
5/16/1994	11.0	0	.1	3.0	35.0	43
5/17/1994	10.0	0	0	2.5	30.0	44
5/18/1994	9.9	0	0	2.1	26.0	44
5/19/1994	8.7	0	0	1.7	27.0	45
5/20/1994	7.2	0	0	1.5	23.0	45
5/21/1994	6.2	0	0	1.3	20.0	45
5/22/1994	5.4	0	0	1.0	17.0	45
5/23/1994	4.8	0	0	.9	16.0	45
5/24/1994	4.3	0	0	.8	15.0	45
5/25/1994	4.0	0	0	.7	14.0	45
5/26/1994	3.8	0	0	.7	14.0	45
5/27/1994	3.7	0	0	.7	12.0	45
5/28/1994	3.5	0	.3	.8	11.0	45
5/29/1994	3.4	0	.3	.7	11.0	45
5/30/1994	7.0	.2	.1	2.5	17.0	45
5/31/1994	4.5	0	0	.8	12.0	45
6/1/1994	3.8	0	0	.7	10.0	44
6/2/1994	3.8	0	0	.8	9.5	44
6/3/1994	16.0	0	0	.9	9.3	44
6/4/1994	7.2	0	0	.8	9.3	44
6/5/1994	5.4	0	0	.7	9.1	44
6/6/1994	4.5	0	0	.7	8.9	44
6/7/1994	4.0	0	0	.5	8.4	44
6/8/1994	3.6	0	.3	.4	8.2	44
6/9/1994	3.3	0	.5	.4	8.0	44
6/10/1994	3.0	0	.3	.5	6.1	44
6/11/1994	2.8	0	0	.4	6.3	44
6/12/1994	2.5	0	0	.4	6.3	44
6/13/1994	2.7	0	0	.4	6.7	44
6/14/1994	2.8	0	0	.7	6.6	44
6/15/1994	2.5	0	0	0.6	7.4	44
6/16/1994	2.1	0	0	.5	7.0	43
6/17/1994	1.7	0	0	.4	6.2	43
6/18/1994	1.7	0	0	.2	5.5	43
6/19/1994	1.4	0	0	.1	4.9	43
6/20/1994	1.3	0	.2	.1	5.4	43
6/21/1994	1.2	0	0	.3	6.1	43
6/22/1994	1.2	0	0	.3	6.4	43
6/23/1994	1.1	0	0	.3	5.2	43
6/24/1994	1.1	0	0	.2	4.4	43
6/25/1994	.9	0	0	.1	4.2	43
6/26/1994	.7	0	0	.1	3.5	43
6/27/1994	.6	0	0	.1	3.1	43
6/28/1994	.6	0	0	0	3.7	42
6/29/1994	.5	0	0	0	3.4	42
6/30/1994	.4	0	0	0	1.8	42
7/1/1994	.4	0	0	0	2.3	40
7/2/1994	.3	0	0	0	2.1	40
7/3/1994	.3	0	0	0	2.1	40
7/4/1994	.3	0	0	0	2.1	40
7/5/1994	.3	0	0	0	2.1	39
7/6/1994	.3	0	0	0	2.1	38
7/7/1994	.3	0	0	0	2.0	39
7/8/1994	.3	0	0	0	1.7	39
7/9/1994	.3	0	0	0	1.4	39
7/10/1994	.3	0	0	0	2.1	39
7/11/1994	.3	0	0	0	1.5	39
7/12/1994	.3	0	0	0	1.0	38
7/13/1994	.2	0	0	0	.9	39
7/14/1994	.2	0	0	0	.9	38
7/15/1994	.2	0	0	0	.8	38
7/16/1994	.2	0	0	0	.5	37
7/17/1994	.2	0	0	0	.5	37
7/18/1994	.2	0	0	0	.4	37
7/19/1994	.2	0	0	0	.3	36
7/20/1994	.2	0	0	0	.4	36
7/21/1994	.1	0	0	0	.4	36
7/22/1994	.1	0	0	0	.7	36
7/23/1994	.1	0	0	0	.6	36
7/24/1994	.1	0	0	0	.3	36
7/25/1994	.1	0	0	0	.2	35
7/26/1994	.1	0	0	0	.4	35
7/27/1994	.1	0	0	0	.3	35
7/28/1994	.1	0	0	0	.2	35
7/29/1994	.1	0	0	0	.2	34
7/30/1994	.1	0	0	0	.3	34
7/31/1994	.1	0	0	0	.3	34
8/1/1994	.1	0	0	0	.3	34
8/2/1994	.1	0	0	0	.5	33
8/3/1994	.1	0	0	0	.2	34

Appendix 2. Daily mean streamflow for the five creeks providing recharge to the Barton Springs segment of the Edwards aquifer and daily mean discharge for Barton Springs, Austin, Texas, 1978–2003—Continued.

Date	Barton Creek	Williamson Creek	Slaughter Creek	Bear Creek	Onion Creek	Barton Springs
8/4/1994	0.1	0	0	0	0.4	33
8/5/1994	.1	0	0	0	.6	33
8/6/1994	.1	0	0	0	1.9	33
8/7/1994	.1	0	0	0	.4	33
8/8/1994	.1	0	0	0	.7	33
8/9/1994	7.1	17.0	1.0	0	1.3	33
8/10/1994	2.1	0	0	0	2.0	33
8/11/1994	1.1	0	0	0	.1	33
8/12/1994	1.1	0	0	0	0	34
8/13/1994	1.1	0	0	0	0	34
8/14/1994	1.0	0	0	0	0	34
8/15/1994	.9	0	0	0	0	34
8/16/1994	.8	0	0	0	0	34
8/17/1994	.8	0	0	0	0	34
8/18/1994	.8	0	0	0	0	34
8/19/1994	.7	0	0	0	0	34
8/20/1994	.7	0	0	0	0	33
8/21/1994	.8	0	.1	0	0	32
8/22/1994	.8	0	0	0	0	32
8/23/1994	.5	0	0	0	0	32
8/24/1994	.5	0	0	0	0	32
8/25/1994	.5	0	0	0	0	32
8/26/1994	.5	0	0	0	0	32
8/27/1994	.5	0	0	0	0	30
8/28/1994	.4	0	0	0	0	30
8/29/1994	.4	0	0	0	0	30
8/30/1994	.4	0	0	0	0	30
8/31/1994	.4	0	0	0	0	30
9/1/1994	.4	0	0	0	0	30
9/2/1994	.4	0	0	0	0	29
9/3/1994	.4	0	0	0	0	29
9/4/1994	.4	0	0	0	0	29
9/5/1994	.4	0	0	0	0	29
9/6/1994	.3	0	0	0	0	29
9/7/1994	.3	0	0	0	0	29
9/8/1994	1.2	2.4	.5	0	0	29
9/9/1994	1.2	1.8	.5	0	0	29
9/10/1994	.6	0	0	0	0	29
9/11/1994	.5	0	0	0	0	30
9/12/1994	.5	0	0	0	0	30
9/13/1994	.6	0	0	0	0	29
9/14/1994	.6	0	0	0	0	29
9/15/1994	.8	0	0	0	0	29
9/16/1994	.7	0	0	.1	0	29
9/17/1994	.5	0	0	.1	0	29
9/18/1994	.4	0	0	0	0	28
9/19/1994	.4	0	0	0	0	28
9/20/1994	.4	0	0	0	0	28
9/21/1994	.4	0	0	0	0	27
9/22/1994	.4	0	0	0	0	27
9/23/1994	0.3	0	0	0	0	26
9/24/1994	.3	0	0	0	0	26
9/25/1994	.3	0	0	0	0	26
9/26/1994	.2	0	0	0	0	25
9/27/1994	.2	0	0	0	0	25
9/28/1994	.2	0	0	0	0	25
9/29/1994	.2	0	0	0	0	25
9/30/1994	.2	0	0	0	0	25
10/1/1994	.2	0	0	0	0	25
10/2/1994	.2	0	0	0	0	25
10/3/1994	.2	0	0	0	0	25
10/4/1994	.2	0	0	0	0	25
10/5/1994	.2	0	0	0	0	25
10/6/1994	.2	0	0	0	0	25
10/7/1994	51.0	43.0	4.9	.3	.3	25
10/8/1994	476.0	73.0	99.0	33.0	30.0	30
10/9/1994	72.0	0	0	22.0	28.0	35
10/10/1994	31.0	0	0	5.2	13.0	39
10/11/1994	22.0	0	0	1.4	8.9	35
10/12/1994	18.0	0	0	.2	6.3	33
10/13/1994	15.0	0	0	.1	5.5	33
10/14/1994	14.0	0	0	0	5.0	31
10/15/1994	19.0	0	0	0	7.3	33
10/16/1994	21.0	0	0	0	7.3	34
10/17/1994	22.0	0	0	0	5.7	34
10/18/1994	53.0	4.0	11.0	10.0	8.3	35
10/19/1994	61.0	0	10.0	4.5	16.0	39
10/20/1994	42.0	0	6.3	3.3	12.0	43
10/21/1994	38.0	0	4.2	2.8	11.0	42
10/22/1994	31.0	0	3.5	2.2	10.0	38
10/23/1994	25.0	0	2.5	1.8	9.3	37
10/24/1994	21.0	0	2.2	1.7	8.7	36
10/25/1994	214.0	33.0	135.0	23.0	792.0	51
10/26/1994	145.0	.9	35.0	18.0	174.0	51
10/27/1994	79.0	0	23.0	13.0	66.0	54
10/28/1994	65.0	0	20.0	9.8	56.0	55
10/29/1994	55.0	0	14.0	9.0	47.0	55
10/30/1994	49.0	0	9.3	8.0	40.0	54
10/31/1994	44.0	0	7.6	6.8	37.0	54
11/1/1994	40.0	0	6.7	6.0	34.0	53
11/2/1994	38.0	0	6.3	5.3	32.0	52
11/3/1994	37.0	0	5.4	4.9	30.0	51
11/4/1994	34.0	0	5.2	3.3	29.0	50
11/5/1994	74.0	5.0	70.0	21.0	95.0	57
11/6/1994	88.0	0	18.0	9.3	67.0	57
11/7/1994	54.0	0	14.0	5.6	49.0	58
11/8/1994	47.0	0	13.0	5.3	44.0	57
11/9/1994	41.0	0	10.0	5.2	41.0	58
11/10/1994	36.0	0	8.9	4.7	37.0	57
11/11/1994	34.0	0	7.9	4.5	35.0	56

Appendix 2. Daily mean streamflow for the five creeks providing recharge to the Barton Springs segment of the Edwards aquifer and daily mean discharge for Barton Springs, Austin, Texas, 1978–2003—Continued.

Date	Barton Creek	Williamson Creek	Slaughter Creek	Bear Creek	Onion Creek	Barton Springs
11/12/1994	33.0	0	7.2	4.0	34.0	56
11/13/1994	32.0	0	7.2	4.0	33.0	56
11/14/1994	32.0	0	6.8	4.0	33.0	55
11/15/1994	31.0	0	6.7	4.0	31.0	53
11/16/1994	32.0	0	7.1	3.8	33.0	53
11/17/1994	31.0	0	6.7	3.7	33.0	53
11/18/1994	30.0	0	6.5	3.8	31.0	53
11/19/1994	30.0	0	6.8	3.6	32.0	52
11/20/1994	28.0	0	6.1	3.2	31.0	52
11/21/1994	26.0	0	4.5	3.0	29.0	52
11/22/1994	25.0	0	4.0	3.0	27.0	50
11/23/1994	23.0	0	4.0	2.8	26.0	49
11/24/1994	22.0	0	4.0	2.6	25.0	48
11/25/1994	22.0	0	3.8	2.6	25.0	48
11/26/1994	21.0	0	3.6	2.4	24.0	47
11/27/1994	20.0	0	2.9	2.3	24.0	48
11/28/1994	18.0	0	2.6	2.2	23.0	49
11/29/1994	17.0	0	2.5	2.1	21.0	48
11/30/1994	17.0	0	2.1	1.9	21.0	48
12/1/1994	16.0	0	2.0	1.6	20.0	46
12/2/1994	16.0	0	2.3	1.9	20.0	46
12/3/1994	16.0	0	2.7	2.0	22.0	46
12/4/1994	15.0	0	2.2	1.7	21.0	46
12/5/1994	14.0	0	2.0	1.6	20.0	46
12/6/1994	14.0	0	2.0	1.5	20.0	45
12/7/1994	14.0	0	2.0	1.5	21.0	45
12/8/1994	13.0	0	1.8	1.5	22.0	45
12/9/1994	14.0	0	2.0	1.7	25.0	46
12/10/1994	17.0	0	2.1	1.3	28.0	45
12/11/1994	16.0	0	2.0	1.1	26.0	42
12/12/1994	16.0	0	2.0	1.1	25.0	40
12/13/1994	15.0	0	2.1	1.1	26.0	40
12/14/1994	15.0	0	2.7	1.6	27.0	40
12/15/1994	34.0	24.0	93.0	37.0	57.0	40
12/16/1994	109.0	14.0	90.0	22.0	209.0	40
12/17/1994	91.0	1.0	38.0	15.0	138.0	40
12/18/1994	66.0	0	24.0	14.0	114.0	40
12/19/1994	58.0	0	18.0	13.0	101.0	40
12/20/1994	54.0	0	15.0	12.0	93.0	40
12/21/1994	52.0	0	11.0	11.0	84.0	39
12/22/1994	50.0	0	7.9	10.0	76.0	40
12/23/1994	48.0	0	6.8	9.8	70.0	40
12/24/1994	47.0	0	6.2	9.3	68.0	40
12/25/1994	44.0	0	4.8	8.7	63.0	40
12/26/1994	44.0	0	4.4	8.1	59.0	40
12/27/1994	44.0	0	4.4	7.7	58.0	39
12/28/1994	210.0	22.0	127.0	48.0	370.0	39
12/29/1994	392.0	8.2	66.0	28.0	313.0	40
12/30/1994	193.0	3.2	41.0	24.0	235.0	40
12/31/1994	156.0	1.5	30.0	22.0	207.0	37

Date	Barton Creek	Williamson Creek	Slaughter Creek	Bear Creek	Onion Creek	Barton Springs
1/1/1995	138.0	0	21.0	20.0	178.0	33
1/2/1995	127.0	0	18.0	18.0	161.0	35
1/3/1995	126.0	0	16.0	18.0	151.0	35
1/4/1995	117.0	0	12.0	16.0	137.0	35
1/5/1995	107.0	0	11.0	15.0	124.0	35
1/6/1995	107.0	0	10.0	15.0	123.0	35
1/7/1995	97.0	0	7.3	13.0	106.0	35
1/8/1995	85.0	0	7.2	13.0	101.0	35
1/9/1995	79.0	0	6.4	12.0	96.0	35
1/10/1995	74.0	0	6.3	11.0	93.0	35
1/11/1995	70.0	0	6.0	10.0	90.0	35
1/12/1995	73.0	2.9	8.4	11.0	88.0	37
1/13/1995	76.0	.4	8.0	11.0	89.0	45
1/14/1995	69.0	0	5.2	9.6	81.0	45
1/15/1995	60.0	0	4.6	8.9	77.0	45
1/16/1995	56.0	0	4.0	8.8	76.0	42
1/17/1995	55.0	0	3.7	8.5	75.0	40
1/18/1995	52.0	0	3.5	7.9	72.0	40
1/19/1995	50.0	0	3.5	7.3	68.0	40
1/20/1995	47.0	0	3.6	6.9	66.0	44
1/21/1995	45.0	0	3.3	6.7	62.0	44
1/22/1995	44.0	0	3.0	6.6	62.0	43
1/23/1995	42.0	0	3.0	6.2	59.0	42
1/24/1995	40.0	0	3.0	5.9	58.0	41
1/25/1995	40.0	0	2.8	5.9	59.0	41
1/26/1995	41.0	0	2.9	6.0	62.0	41
1/27/1995	40.0	0	3.0	6.0	61.0	42
1/28/1995	38.0	0	2.9	5.4	55.0	42
1/29/1995	35.0	0	2.8	5.3	50.0	41
1/30/1995	31.0	0	2.8	5.1	48.0	41
1/31/1995	27.0	0	2.8	5.1	47.0	41
2/1/1995	27.0	0	2.8	4.8	46.0	41
2/2/1995	27.0	0	2.6	4.4	44.0	40
2/3/1995	26.0	0	2.6	4.2	42.0	39
2/4/1995	25.0	0	2.5	3.8	40.0	38
2/5/1995	23.0	0	2.7	3.8	39.0	37
2/6/1995	23.0	0	2.8	3.8	36.0	37
2/7/1995	23.0	0	2.8	3.7	36.0	35
2/8/1995	22.0	0	2.6	3.5	33.0	34
2/9/1995	22.0	0	2.6	3.6	31.0	34
2/10/1995	21.0	0	2.6	3.7	32.0	34
2/11/1995	21.0	0	2.6	3.6	31.0	34
2/12/1995	20.0	0	2.6	3.4	29.0	33
2/13/1995	20.0	0	2.5	3.5	29.0	33
2/14/1995	21.0	0	2.4	3.6	29.0	33
2/15/1995	21.0	0	2.5	3.5	30.0	33
2/16/1995	20.0	0	2.6	3.3	30.0	33
2/17/1995	19.0	0	2.6	3.1	28.0	33
2/18/1995	18.0	0	2.6	3.0	26.0	33
2/19/1995	17.0	0	2.6	3.0	26.0	32

Appendix 2. Daily mean streamflow for the five creeks providing recharge to the Barton Springs segment of the Edwards aquifer and daily mean discharge for Barton Springs, Austin, Texas, 1978–2003—Continued.

Date	Barton Creek	Williamson Creek	Slaughter Creek	Bear Creek	Onion Creek	Barton Springs
2/20/1995	17.0	0	2.6	2.8	24.0	32
2/21/1995	17.0	0	2.6	2.7	24.0	32
2/22/1995	16.0	0	2.4	2.6	24.0	32
2/23/1995	16.0	0	2.6	2.6	24.0	32
2/24/1995	16.0	0	2.6	4.9	22.0	32
2/25/1995	26.0	.2	2.6	5.7	22.0	34
2/26/1995	42.0	0	2.8	5.7	24.0	36
2/27/1995	36.0	0	2.8	5.0	30.0	38
2/28/1995	30.0	0	3.0	4.7	28.0	40
3/1/1995	26.0	0	3.0	4.6	26.0	42
3/2/1995	25.0	0	2.8	4.6	25.0	44
3/3/1995	26.0	0	2.8	4.6	25.0	44
3/4/1995	27.0	0	2.8	4.6	26.0	44
3/5/1995	28.0	0	2.8	4.8	26.0	46
3/6/1995	28.0	0	2.7	5.9	25.0	49
3/7/1995	30.0	.1	2.6	9.1	27.0	49
3/8/1995	34.0	0	2.6	6.5	27.0	54
3/9/1995	34.0	0	2.6	6.4	26.0	59
3/10/1995	31.0	0	2.6	6.5	27.0	59
3/11/1995	31.0	0	2.6	6.4	28.0	59
3/12/1995	31.0	0	2.6	7.3	29.0	59
3/13/1995	114.0	9.7	45.0	15.0	88.0	69
3/14/1995	109.0	0	11.0	10.0	77.0	84
3/15/1995	69.0	.5	9.4	9.8	60.0	86
3/16/1995	72.0	.4	10.0	9.8	61.0	84
3/17/1995	68.0	0	8.0	9.3	59.0	82
3/18/1995	63.0	0	7.3	9.1	57.0	81
3/19/1995	62.0	0	7.2	8.8	56.0	80
3/20/1995	61.0	0	6.9	8.5	54.0	79
3/21/1995	58.0	0	6.5	8.0	52.0	78
3/22/1995	56.0	0	6.4	7.7	51.0	78
3/23/1995	54.0	0	6.4	7.2	49.0	78
3/24/1995	52.0	0	6.4	7.1	47.0	77
3/25/1995	52.0	0	6.4	7.3	48.0	78
3/26/1995	51.0	0	6.2	7.4	47.0	77
3/27/1995	49.0	0	5.0	6.8	43.0	77
3/28/1995	46.0	0	4.5	6.6	41.0	77
3/29/1995	45.0	0	4.3	6.6	42.0	77
3/30/1995	44.0	0	4.3	6.6	41.0	77
3/31/1995	44.0	0	4.3	6.1	40.0	77
4/1/1995	44.0	0	4.3	6.2	41.0	77
4/2/1995	42.0	0	3.8	6.1	39.0	76
4/3/1995	41.0	0	3.7	6.0	39.0	76
4/4/1995	48.0	1.4	10.0	11.0	47.0	79
4/5/1995	126.0	4.7	45.0	57.0	460.0	79
4/6/1995	163.0	0	16.0	20.0	270.0	80
4/7/1995	95.0	0	12.0	18.0	170.0	83
4/8/1995	79.0	0	10.0	16.0	127.0	83
4/9/1995	71.0	0	9.1	15.0	118.0	83
4/10/1995	68.0	0	8.4	14.0	113.0	83
4/11/1995	65.0	0	7.9	13.0	90.0	83
4/12/1995	57.0	0	6.7	12.0	75.0	83
4/13/1995	52.0	0	6.4	11.0	68.0	83
4/14/1995	51.0	0	6.2	10.0	63.0	83
4/15/1995	49.0	0	5.5	10.0	60.0	80
4/16/1995	48.0	0	5.5	10.0	60.0	82
4/17/1995	48.0	0	5.6	9.8	59.0	83
4/18/1995	53.0	0	6.4	10.0	58.0	84
4/19/1995	61.0	.1	12.0	11.0	58.0	84
4/20/1995	67.0	3.1	35.0	20.0	58.0	86
4/21/1995	61.0	0	11.0	12.0	59.0	85
4/22/1995	51.0	0	10.0	12.0	58.0	85
4/23/1995	49.0	0	7.9	11.0	53.0	85
4/24/1995	46.0	0	7.5	10.0	50.0	84
4/25/1995	43.0	0	6.7	9.5	48.0	85
4/26/1995	41.0	0	6.5	9.2	47.0	85
4/27/1995	39.0	0	6.1	8.6	45.0	85
4/28/1995	38.0	0	5.3	8.1	43.0	85
4/29/1995	37.0	0	4.4	7.8	42.0	84
4/30/1995	35.0	0	4.0	7.5	40.0	85
5/1/1995	33.0	0	3.9	7.2	38.0	85
5/2/1995	31.0	0	3.6	6.5	35.0	85
5/3/1995	30.0	0	3.6	6.7	34.0	85
5/4/1995	30.0	0	3.5	6.7	34.0	85
5/5/1995	31.0	0	3.3	6.3	33.0	85
5/6/1995	32.0	0	3.4	6.2	32.0	83
5/7/1995	34.0	0	3.3	5.9	32.0	84
5/8/1995	214.0	26.0	111.0	22.0	89.0	86
5/9/1995	132.0	0	17.0	10.0	66.0	88
5/10/1995	67.0	0	12.0	8.6	42.0	89
5/11/1995	49.0	0	10.0	7.7	37.0	88
5/12/1995	45.0	0	10.0	9.6	35.0	88
5/13/1995	45.0	0	9.8	8.6	35.0	88
5/14/1995	44.0	0	7.2	7.5	33.0	88
5/15/1995	40.0	0	6.2	6.5	31.0	88
5/16/1995	38.0	0	5.5	6.0	29.0	88
5/17/1995	37.0	0	4.8	5.9	28.0	87
5/18/1995	35.0	0	5.9	7.1	34.0	87
5/19/1995	33.0	0	3.9	5.1	29.0	88
5/20/1995	31.0	0	3.6	5.0	25.0	87
5/21/1995	29.0	0	3.4	4.6	23.0	87
5/22/1995	27.0	0	3.3	4.6	22.0	87
5/23/1995	26.0	0	3.2	4.5	22.0	87
5/24/1995	27.0	0	3.4	4.5	23.0	87
5/25/1995	28.0	0	3.3	4.4	24.0	86
5/26/1995	26.0	0	3.0	4.1	22.0	86
5/27/1995	27.0	0	3.3	4.1	25.0	86
5/28/1995	29.0	0	3.0	3.9	29.0	86
5/29/1995	303.0	33.0	78.0	16.0	73.0	86
5/30/1995	1,340.0	169.0	400.0	244.0	3,400.0	87

Appendix 2. Daily mean streamflow for the five creeks providing recharge to the Barton Springs segment of the Edwards aquifer and daily mean discharge for Barton Springs, Austin, Texas, 1978–2003—Continued.

Date	Barton Creek	Williamson Creek	Slaughter Creek	Bear Creek	Onion Creek	Barton Springs
5/31/1995	920.0	46.0	288.0	56.0	1,400.0	90
6/1/1995	1,910.0	101.0	256.0	112.0	2,500.0	95
6/2/1995	708.0	18.0	167.0	52.0	515.0	100
6/3/1995	515.0	6.1	106.0	42.0	374.0	105
6/4/1995	416.0	1.3	71.0	36.0	326.0	105
6/5/1995	347.0	.1	57.0	32.0	294.0	104
6/6/1995	285.0	0	49.0	28.0	267.0	104
6/7/1995	236.0	0	40.0	25.0	239.0	104
6/8/1995	196.0	0	34.0	23.0	211.0	102
6/9/1995	163.0	0	27.0	20.0	178.0	102
6/10/1995	149.0	0	24.0	18.0	164.0	100
6/11/1995	281.0	12.0	108.0	32.0	160.0	102
6/12/1995	199.0	.6	43.0	21.0	172.0	102
6/13/1995	152.0	0	34.0	18.0	154.0	100
6/14/1995	140.0	0	28.0	17.0	140.0	99
6/15/1995	127.0	0	25.0	16.0	119.0	98
6/16/1995	117.0	0	21.0	14.0	109.0	98
6/17/1995	108.0	0	20.0	13.0	100.0	98
6/18/1995	99.0	0	18.0	12.0	96.0	98
6/19/1995	87.0	0	18.0	11.0	95.0	98
6/20/1995	77.0	0	18.0	10.0	88.0	98
6/21/1995	67.0	0	16.0	9.4	79.0	97
6/22/1995	59.0	0	15.0	8.4	71.0	97
6/23/1995	52.0	0	14.0	7.4	65.0	97
6/24/1995	49.0	0	14.0	6.5	60.0	97
6/25/1995	46.0	0	13.0	6.1	55.0	96
6/26/1995	42.0	0	9.5	5.7	50.0	96
6/27/1995	39.0	0	8.7	5.3	48.0	96
6/28/1995	37.0	0	8.7	5.2	45.0	96
6/29/1995	62.0	0	22.0	8.5	52.0	96
6/30/1995	83.0	0	15.0	6.2	57.0	96
7/1/1995	46.0	0	13.0	5.7	47.0	95
7/2/1995	39.0	0	11.0	5.2	42.0	95
7/3/1995	36.0	0	9.8	4.9	40.0	95
7/4/1995	31.0	0	7.7	4.6	38.0	95
7/5/1995	29.0	0	6.9	4.4	36.0	95
7/6/1995	28.0	0	7.2	4.3	34.0	94
7/7/1995	28.0	0	7.3	4.2	46.0	94
7/8/1995	30.0	0	5.1	3.9	37.0	94
7/9/1995	24.0	0	3.5	3.6	31.0	93
7/10/1995	21.0	0	2.7	3.3	28.0	93
7/11/1995	20.0	0	2.1	3.1	25.0	92
7/12/1995	17.0	0	1.4	3.0	23.0	92
7/13/1995	15.0	0	1.0	2.8	21.0	91
7/14/1995	14.0	0	.9	2.8	20.0	91
7/15/1995	13.0	0	.9	2.8	19.0	90
7/16/1995	12.0	0	.8	2.4	18.0	90
7/17/1995	11.0	0	.7	2.3	17.0	89
7/18/1995	11.0	0	.6	2.0	16.0	88
7/19/1995	10.0	0	.7	1.9	15.0	88
7/20/1995	9.1	0	0.7	1.8	14.0	88
7/21/1995	7.9	0	.6	1.8	13.0	89
7/22/1995	6.9	0	.6	1.6	13.0	89
7/23/1995	5.9	0	.5	1.5	12.0	87
7/24/1995	5.5	0	.4	1.4	11.0	88
7/25/1995	4.9	0	.3	1.4	10.0	87
7/26/1995	4.2	0	.2	1.3	10.0	87
7/27/1995	3.7	0	.2	1.1	10.0	86
7/28/1995	3.2	0	.1	1.0	9.6	86
7/29/1995	2.6	0	.1	1.0	8.8	86
7/30/1995	2.4	0	.2	1.1	8.3	85
7/31/1995	3.2	0	.4	1.6	9.9	86
8/1/1995	4.4	0	.4	1.3	9.4	84
8/2/1995	5.6	0	.4	1.1	9.9	83
8/3/1995	7.6	0	.4	1.2	10.0	82
8/4/1995	6.0	0	.3	1.0	13.0	85
8/5/1995	6.2	0	.1	.8	12.0	85
8/6/1995	5.3	0	.1	.7	11.0	83
8/7/1995	4.3	0	.1	.7	9.7	83
8/8/1995	3.6	0	0	.7	9.2	83
8/9/1995	3.0	0	0	.6	8.0	80
8/10/1995	2.5	0	0	.6	7.2	80
8/11/1995	2.0	0	0	.6	6.3	82
8/12/1995	1.8	0	0	.6	6.1	83
8/13/1995	1.8	0	0	.7	6.2	82
8/14/1995	2.0	0	0	.6	5.3	82
8/15/1995	1.6	0	0	.6	4.7	81
8/16/1995	1.5	0	0	.6	4.7	80
8/17/1995	1.3	0	0	.5	4.0	80
8/18/1995	1.2	0	0	.5	3.6	80
8/19/1995	1.0	0	0	.4	3.4	80
8/20/1995	.9	0	0	.3	3.1	80
8/21/1995	.8	0	0	.2	2.7	79
8/22/1995	.7	0	0	.2	2.8	78
8/23/1995	.7	0	0	.1	2.6	78
8/24/1995	.7	0	0	.1	2.6	78
8/25/1995	.7	0	0	.1	2.8	78
8/26/1995	.7	0	0	.3	2.5	78
8/27/1995	.7	0	0	.1	2.4	76
8/28/1995	.6	0	0	.1	2.9	77
8/29/1995	.6	0	0	.1	2.6	75
8/30/1995	.6	0	0	.1	2.2	73
8/31/1995	.6	0	.1	.1	13.0	73
9/1/1995	.6	0	0	.2	23.0	75
9/2/1995	.6	0	0	.1	13.0	76
9/3/1995	.6	0	0	.1	9.8	75
9/4/1995	.5	0	0	.1	7.9	73
9/5/1995	.5	0	0	.1	6.9	73
9/6/1995	.5	0	0	.1	5.9	73
9/7/1995	.5	0	0	.2	5.8	73

Appendix 2. Daily mean streamflow for the five creeks providing recharge to the Barton Springs segment of the Edwards aquifer and daily mean discharge for Barton Springs, Austin, Texas, 1978–2003—Continued.

Date	Barton Creek	Williamson Creek	Slaughter Creek	Bear Creek	Onion Creek	Barton Springs
9/8/1995	0.5	0	0	0.3	7.0	74
9/9/1995	.4	0	0	.1	5.3	73
9/10/1995	.5	0	0	.1	5.2	73
9/11/1995	.5	0	0	.1	5.3	72
9/12/1995	.5	0	0	.1	4.8	71
9/13/1995	.5	0	0	.1	4.4	69
9/14/1995	.5	0	0	0	5.7	70
9/15/1995	.4	0	0	0	6.5	68
9/16/1995	.4	0	0	.1	5.9	68
9/17/1995	.4	0	0	0	5.6	69
9/18/1995	.4	0	0	0	3.8	70
9/19/1995	.4	0	0	0	3.7	65
9/20/1995	.6	0	0	.1	5.4	68
9/21/1995	.6	0	0	.1	5.7	68
9/22/1995	.5	0	0	.1	5.3	63
9/23/1995	.6	0	0	.1	3.5	67
9/24/1995	.7	0	0	0	3.7	59
9/25/1995	.7	0	0	0	3.8	59
9/26/1995	.7	0	0	0	3.7	65
9/27/1995	.6	0	0	0	3.7	65
9/28/1995	.6	0	0	0	4.0	63
9/29/1995	.6	0	0	0	3.4	59
9/30/1995	.6	0	0	0	3.1	59
10/1/1995	.6	0	0	0	3.3	58
10/2/1995	.6	0	0	0	3.2	57
10/3/1995	.6	0	0	0	3.2	55
10/4/1995	.6	0	0	0	3.3	53
10/5/1995	.6	0	0	0	3.1	52
10/6/1995	.6	0	0	0	2.3	50
10/7/1995	.6	0	0	0	2.3	50
10/8/1995	.6	0	0	0	2.3	50
10/9/1995	.6	0	0	0	2.0	49
10/10/1995	.5	0	0	0	2.5	51
10/11/1995	.5	0	0	0	2.1	50
10/12/1995	.5	0	0	0	1.6	50
10/13/1995	.5	0	0	0	2.0	48
10/14/1995	.5	0	0	0	1.9	49
10/15/1995	.4	0	0	0	1.6	50
10/16/1995	.4	0	0	0	2.0	49
10/17/1995	.4	0	0	0	1.9	50
10/18/1995	.4	0	0	0	2.2	47
10/19/1995	.4	0	0	0	2.2	50
10/20/1995	.4	0	0	0	1.6	51
10/21/1995	.4	0	0	0	1.1	51
10/22/1995	.4	0	0	0	1.5	52
10/23/1995	.4	0	0	0	1.5	52
10/24/1995	.3	0	0	0	1.5	51
10/25/1995	.4	0	0	0	1.7	52
10/26/1995	.4	0	0	0	1.9	52
10/27/1995	.4	0	0	0	2.1	48
10/28/1995	0.4	0	0	0	1.6	48
10/29/1995	.4	0	0	0	2.1	48
10/30/1995	.4	0	0	0	2.5	48
10/31/1995	.5	0	0	.1	6.4	50
11/1/1995	3.2	1.6	.2	.9	24.0	55
11/2/1995	1.2	0	0	.4	6.5	56
11/3/1995	.6	0	0	.2	3.6	56
11/4/1995	.7	0	0	.1	3.7	55
11/5/1995	.7	0	0	.2	4.8	55
11/6/1995	.8	0	0	.1	4.6	55
11/7/1995	.9	0	0	.1	4.1	53
11/8/1995	.9	0	0	.1	3.3	53
11/9/1995	.9	0	0	.1	3.1	52
11/10/1995	1.0	0	0	.1	3.6	50
11/11/1995	.8	0	0	.1	2.7	49
11/12/1995	.8	0	0	.1	2.5	49
11/13/1995	.8	0	0	.1	2.6	49
11/14/1995	.9	0	0	.1	2.6	49
11/15/1995	.8	0	0	.1	2.6	49
11/16/1995	.8	0	0	.1	3.6	48
11/17/1995	2.3	0	0	.1	4.2	49
11/18/1995	3.4	0	0	.2	4.6	49
11/19/1995	1.7	0	0	.1	3.9	49
11/20/1995	1.7	0	0	.1	3.9	49
11/21/1995	1.5	0	0	.1	3.9	48
11/22/1995	1.3	0	0	.1	4.1	48
11/23/1995	1.2	0	0	.1	3.9	48
11/24/1995	1.2	0	0	.1	3.9	48
11/25/1995	1.3	0	0	.1	3.9	47
11/26/1995	1.2	0	0	.1	4.0	47
11/27/1995	1.2	0	0	.1	4.4	47
11/28/1995	1.0	0	0	.1	4.0	46
11/29/1995	1.1	0	0	.1	4.1	46
11/30/1995	1.1	0	0	.1	4.5	46
12/1/1995	1.2	0	0	.1	5.8	42
12/2/1995	1.3	0	0	.1	5.6	43
12/3/1995	1.3	0	0	.1	6.2	43
12/4/1995	1.2	0	0	.1	5.7	43
12/5/1995	1.2	0	0	0	5.9	43
12/6/1995	1.2	0	0	0	5.8	42
12/7/1995	1.1	0	0	0	5.3	42
12/8/1995	1.3	0	0	0	5.5	41
12/9/1995	1.3	0	0	.1	5.2	42
12/10/1995	1.3	0	0	.1	4.9	42
12/11/1995	1.2	0	0	.1	5.0	42
12/12/1995	1.2	0	0	.1	5.6	42
12/13/1995	1.2	0	0	.1	5.6	42
12/14/1995	1.2	0	0	.1	5.6	41
12/15/1995	1.2	0	0	.1	5.6	39
12/16/1995	1.1	0	0	.1	5.3	39

Appendix 2. Daily mean streamflow for the five creeks providing recharge to the Barton Springs segment of the Edwards aquifer and daily mean discharge for Barton Springs, Austin, Texas, 1978–2003—Continued.

Date	Barton Creek	Williamson Creek	Slaughter Creek	Bear Creek	Onion Creek	Barton Springs
12/17/1995	1.2	0	0	0.1	5.4	40
12/18/1995	1.2	0	0	.1	5.5	39
12/19/1995	1.1	0	0	.1	4.6	40
12/20/1995	1.2	0	0	.1	4.6	39
12/21/1995	1.1	0	0	.1	4.6	39
12/22/1995	1.3	0	0	.1	4.7	37
12/23/1995	1.2	0	0	.1	4.6	34
12/24/1995	1.1	0	0	.1	4.6	34
12/25/1995	1.2	0	0	.1	4.7	34
12/26/1995	1.1	0	0	.1	4.6	34
12/27/1995	1.2	0	0	.1	4.6	34
12/28/1995	1.1	0	0	.1	4.6	34
12/29/1995	1.1	0	0	.1	4.6	34
12/30/1995	1.2	0	0	.1	4.6	34
12/31/1995	1.2	0	0	.1	4.6	34
1/1/1996	1.1	0	0	.1	4.5	34
1/2/1996	1.1	0	0	.1	3.9	34
1/3/1996	1.0	0	0	.1	3.9	34
1/4/1996	1.1	0	0	.1	4.0	34
1/5/1996	1.0	0	0	.1	4.2	34
1/6/1996	1.0	0	0	.1	3.9	34
1/7/1996	1.0	0	0	.1	3.9	34
1/8/1996	.9	0	0	.1	3.9	33
1/9/1996	1.0	0	0	.1	3.9	33
1/10/1996	1.2	0	0	.1	3.9	33
1/11/1996	1.0	0	0	.1	3.8	33
1/12/1996	1.0	0	0	.1	3.4	33
1/13/1996	1.0	0	0	.1	3.2	33
1/14/1996	1.0	0	0	.1	3.2	33
1/15/1996	1.0	0	0	.1	3.3	33
1/16/1996	.9	0	0	.1	3.0	33
1/17/1996	1.0	0	0	.3	3.3	32
1/18/1996	.9	0	0	.6	3.2	32
1/19/1996	.8	0	0	.3	2.6	32
1/20/1996	.9	0	0	.4	2.6	33
1/21/1996	.9	0	0	.4	3.1	32
1/22/1996	1.0	0	0	.4	3.4	31
1/23/1996	1.0	0	0	.3	3.4	31
1/24/1996	.9	0	0	.1	3.7	31
1/25/1996	.9	0	0	.1	3.3	31
1/26/1996	.9	0	0	.1	3.7	30
1/27/1996	.9	0	0	.1	3.6	30
1/28/1996	.9	0	0	.1	3.2	30
1/29/1996	1.0	0	0	.1	3.5	30
1/30/1996	1.0	0	0	.1	3.9	30
1/31/1996	.9	0	0	.1	3.7	30
2/1/1996	.9	0	0	.1	3.6	30
2/2/1996	.9	0	0	.1	3.5	30
2/3/1996	.9	0	0	.1	2.6	30
2/4/1996	1.0	0	0	.1	2.7	30
2/5/1996	1.0	0	0	0.1	3.0	30
2/6/1996	1.0	0	0	.1	3.4	29
2/7/1996	1.0	0	0	.1	3.9	29
2/8/1996	1.2	0	0	.1	3.9	29
2/9/1996	1.0	0	0	.1	3.9	28
2/10/1996	1.0	0	0	.1	3.9	29
2/11/1996	1.0	0	0	.1	3.9	29
2/12/1996	.9	0	0	.1	3.7	29
2/13/1996	1.0	0	0	.1	3.6	29
2/14/1996	1.1	0	0	.1	3.6	29
2/15/1996	1.1	0	0	.1	3.6	29
2/16/1996	.8	0	0	.1	3.5	27
2/17/1996	.7	0	0	.1	3.5	28
2/18/1996	.8	0	0	.1	3.6	28
2/19/1996	.9	0	0	.1	3.6	28
2/20/1996	.9	0	0	.1	3.6	27
2/21/1996	1.0	0	0	.1	3.5	26
2/22/1996	1.0	0	0	.1	3.5	24
2/23/1996	.9	0	0	.1	3.5	22
2/24/1996	.9	0	0	.1	3.1	21
2/25/1996	.9	0	0	.1	3.5	23
2/26/1996	.9	0	0	.1	3.6	24
2/27/1996	1.0	0	0	.1	3.6	24
2/28/1996	.9	0	0	.1	3.3	23
2/29/1996	1.5	0	0	.1	3.5	22
3/1/1996	1.7	0	0	.1	3.9	22
3/2/1996	1.2	0	0	.1	3.6	21
3/3/1996	.9	0	0	.1	3.3	23
3/4/1996	.9	0	0	.1	3.2	23
3/5/1996	1.1	0	0	.1	3.6	22
3/6/1996	1.0	0	0	.1	3.6	22
3/7/1996	.9	0	0	.1	3.1	21
3/8/1996	.8	0	0	.1	2.7	21
3/9/1996	.8	0	0	.1	2.6	21
3/10/1996	.7	0	0	.1	2.4	22
3/11/1996	.7	0	0	.1	2.3	23
3/12/1996	.7	0	0	.1	2.4	22
3/13/1996	.8	0	0	.1	2.8	23
3/14/1996	.9	0	0	.1	2.9	24
3/15/1996	.8	0	0	.1	3.1	24
3/16/1996	.7	0	0	.1	3.2	25
3/17/1996	.8	0	0	.1	3.3	26
3/18/1996	.9	0	0	.1	2.9	26
3/19/1996	.7	0	0	.1	2.3	25
3/20/1996	.6	0	0	.1	2.4	25
3/21/1996	.6	0	0	.1	2.4	25
3/22/1996	.6	0	0	.1	2.5	25
3/23/1996	.6	0	0	.1	2.7	26
3/24/1996	.6	0	0	.1	2.7	26
3/25/1996	.6	0	0	.1	2.6	25

Appendix 2. Daily mean streamflow for the five creeks providing recharge to the Barton Springs segment of the Edwards aquifer and daily mean discharge for Barton Springs, Austin, Texas, 1978–2003—Continued.

Date	Barton Creek	Williamson Creek	Slaughter Creek	Bear Creek	Onion Creek	Barton Springs
3/26/1996	0.6	0	0	0.1	2.4	24
3/27/1996	.8	0	0	.1	2.2	25
3/28/1996	1.0	0	0	.1	2.1	26
3/29/1996	.9	0	0	.1	2.3	25
3/30/1996	.8	0	0	.1	2.5	25
3/31/1996	.8	0	0	.1	2.6	26
4/1/1996	.8	0	0	.1	2.6	26
4/2/1996	.8	0	0	.1	2.4	26
4/3/1996	.8	0	0	.1	2.3	25
4/4/1996	.9	0	0	.1	2.5	25
4/5/1996	1.1	0	0	.1	2.6	26
4/6/1996	1.8	0	0	.1	2.6	28
4/7/1996	1.3	0	0	.1	1.6	29
4/8/1996	1.1	0	0	.1	1.4	26
4/9/1996	1.0	0	0	.1	1.2	26
4/10/1996	1.0	0	0	.1	1.0	25
4/11/1996	1.0	0	0	.1	1.1	25
4/12/1996	.9	0	0	.1	1.1	25
4/13/1996	.9	0	0	.1	1.0	26
4/14/1996	.9	0	0	.1	1.0	26
4/15/1996	.7	0	0	0	1.0	25
4/16/1996	.7	0	0	0	.9	25
4/17/1996	.6	0	0	0	.9	24
4/18/1996	.7	0	0	0	.8	25
4/19/1996	.7	0	0	0	.8	24
4/20/1996	.6	0	0	0	.7	25
4/21/1996	.7	0	0	0	.6	25
4/22/1996	.7	0	0	0	.6	25
4/23/1996	.7	0	0	.1	.6	24
4/24/1996	.7	0	0	0	.6	24
4/25/1996	.7	0	0	0	.6	24
4/26/1996	.7	0	0	0	.5	23
4/27/1996	.7	0	0	0	.5	23
4/28/1996	.7	0	0	0	.5	24
4/29/1996	.6	0	0	0	.5	26
4/30/1996	.6	0	0	0	.5	25
5/1/1996	.6	0	0	0	.2	24
5/2/1996	.6	0	0	0	.4	24
5/3/1996	.5	0	0	0	.4	21
5/4/1996	.5	0	0	0	.4	21
5/5/1996	.4	0	0	0	.3	21
5/6/1996	.4	0	0	0	.3	19
5/7/1996	.4	0	0	0	.3	19
5/8/1996	.3	0	0	0	.3	19
5/9/1996	.3	0	0	0	.3	20
5/10/1996	.4	0	0	0	.3	20
5/11/1996	.3	0	0	0	.3	21
5/12/1996	.3	0	0	0	.3	20
5/13/1996	.3	0	0	0	.3	20
5/14/1996	.3	0	0	0	.3	19
5/15/1996	0.2	0	0	0	0.3	19
5/16/1996	.2	0	0	0	.3	19
5/17/1996	.2	0	0	0	.3	20
5/18/1996	.2	0	0	0	.3	19
5/19/1996	.2	0	0	0	.2	19
5/20/1996	.2	0	0	0	.3	19
5/21/1996	.2	0	0	0	.3	19
5/22/1996	.2	0	0	0	.3	19
5/23/1996	.2	0	0	0	.3	19
5/24/1996	.2	0	0	0	.2	19
5/25/1996	.2	0	0	0	.2	19
5/26/1996	.2	0	0	0	.2	19
5/27/1996	.4	0	0	0	.2	26
5/28/1996	.2	0	0	0	.2	26
5/29/1996	.2	0	0	0	.2	24
5/30/1996	3.3	7.7	.8	.1	.2	24
5/31/1996	1.1	0	0	0	.2	25
6/1/1996	.7	0	0	0	.2	26
6/2/1996	.5	0	0	0	.1	26
6/3/1996	.4	0	0	0	.1	26
6/4/1996	.5	0	0	0	.1	26
6/5/1996	.4	0	0	0	.1	25
6/6/1996	.4	0	0	0	.1	25
6/7/1996	12.0	3.0	.1	0	.1	33
6/8/1996	4.9	0	0	0	.1	34
6/9/1996	2.2	0	0	0	.1	31
6/10/1996	1.6	0	0	0	0	31
6/11/1996	1.3	0	0	0	.1	28
6/12/1996	1.2	0	0	0	.1	26
6/13/1996	1.2	0	0	0	.1	26
6/14/1996	1.2	0	0	0	.1	25
6/15/1996	1.1	0	0	0	.1	25
6/16/1996	.9	0	0	0	.1	24
6/17/1996	.8	0	0	0	.1	24
6/18/1996	.7	0	0	0	.1	23
6/19/1996	.6	0	0	0	.1	24
6/20/1996	.5	0	0	0	.1	24
6/21/1996	.5	0	0	0	.1	24
6/22/1996	.4	0	0	0	.1	24
6/23/1996	.4	0	0	0	.1	24
6/24/1996	.4	0	0	0	.1	24
6/25/1996	.4	0	0	0	.1	24
6/26/1996	2.9	.1	0	0	.1	25
6/27/1996	2.4	0	0	0	.1	29
6/28/1996	.8	0	0	0	.1	27
6/29/1996	.5	0	0	0	.1	26
6/30/1996	.5	0	0	0	0	26
7/1/1996	.4	0	0	0	0	26
7/2/1996	.4	0	0	0	0	25
7/3/1996	.3	0	0	0	0	24

Appendix 2. Daily mean streamflow for the five creeks providing recharge to the Barton Springs segment of the Edwards aquifer and daily mean discharge for Barton Springs, Austin, Texas, 1978–2003—Continued.

Date	Barton Creek	Williamson Creek	Slaughter Creek	Bear Creek	Onion Creek	Barton Springs
7/4/1996	0.3	0	0	0	0	23
7/5/1996	.3	0	0	0	0	22
7/6/1996	.3	0	0	0	0	22
7/7/1996	.3	0	0	0	0	23
7/8/1996	.2	0	0	0	0	24
7/9/1996	.2	0	0	0	0	22
7/10/1996	.2	0	0	0	0	21
7/11/1996	.2	0	0	0	0	21
7/12/1996	.2	0	0	0	.1	20
7/13/1996	.2	0	0	0	.1	20
7/14/1996	.2	0	0	0	.1	21
7/15/1996	.2	0	0	0	.1	21
7/16/1996	.1	0	0	0	.1	20
7/17/1996	.1	0	0	0	.1	19
7/18/1996	.1	0	0	0	.1	20
7/19/1996	.1	0	0	0	.1	19
7/20/1996	.1	0	0	0	.1	19
7/21/1996	.1	0	0	0	.1	19
7/22/1996	.1	0	0	0	.2	19
7/23/1996	.1	0	0	0	.3	19
7/24/1996	.1	0	0	0	.3	19
7/25/1996	.1	0	0	0	.3	20
7/26/1996	.1	0	0	0	.4	21
7/27/1996	.1	0	0	0	.4	21
7/28/1996	.1	0	0	0	.2	21
7/29/1996	.1	0	0	0	.4	21
7/30/1996	.1	0	0	0	.3	20
7/31/1996	.1	0	0	0	.2	19
8/1/1996	.1	0	0	0	.1	20
8/2/1996	.1	0	0	0	0	20
8/3/1996	.1	0	0	0	0	19
8/4/1996	.1	0	0	0	0	19
8/5/1996	0	0	0	0	0	19
8/6/1996	0	0	0	0	0	18
8/7/1996	0	0	0	0	0	18
8/8/1996	.2	0	0	0	0	18
8/9/1996	.2	0	0	0	0	18
8/10/1996	.2	0	0	0	0	18
8/11/1996	.2	0	0	0	0	18
8/12/1996	.2	0	0	0	0	19
8/13/1996	.2	0	0	0	0	18
8/14/1996	.2	0	0	0	0	18
8/15/1996	.2	0	0	0	0	18
8/16/1996	.2	0	0	0	0	18
8/17/1996	.2	0	0	0	0	18
8/18/1996	.2	0	0	0	0	18
8/19/1996	.2	0	0	0	0	18
8/20/1996	.2	0	0	0	0	17
8/21/1996	.2	0	0	0	0	17
8/22/1996	.3	0	0	0	0	29
8/23/1996	0.5	0	0	0	0	30
8/24/1996	.3	0	0	0	0	34
8/25/1996	.2	0	0	0	0	35
8/26/1996	.3	.7	0	0	0	27
8/27/1996	.3	0	0	0	0	27
8/28/1996	.3	0	0	0	0	26
8/29/1996	.7	0	0	0	0	25
8/30/1996	1.6	0	0	.1	0	24
8/31/1996	11.0	.1	0	.2	1.5	25
9/1/1996	34.0	.9	0	2.5	6.0	26
9/2/1996	7.8	0	0	1.2	1.8	26
9/3/1996	5.2	0	0	1.0	.9	26
9/4/1996	4.9	0	0	.9	.7	26
9/5/1996	4.9	0	0	.7	.6	26
9/6/1996	4.2	0	0	.6	.6	25
9/7/1996	3.8	0	0	.6	.6	25
9/8/1996	3.6	0	0	.6	.6	25
9/9/1996	3.3	0	0	.6	.6	28
9/10/1996	3.2	0	0	.5	.6	35
9/11/1996	3.1	0	0	.3	.7	35
9/12/1996	3.1	0	0	.1	.7	35
9/13/1996	3.2	0	0	.1	.7	33
9/14/1996	3.1	0	0	.1	.7	33
9/15/1996	2.8	0	0	.1	1.0	34
9/16/1996	2.5	0	0	0	1.0	34
9/17/1996	1.9	0	0	0	.8	34
9/18/1996	1.6	0	0	0	.9	34
9/19/1996	1.5	0	0	0	1.1	34
9/20/1996	2.6	.1	.1	1.1	2.8	35
9/21/1996	14.0	0	0	2.5	2.7	41
9/22/1996	5.8	0	0	1.2	2.2	41
9/23/1996	3.9	0	0	.9	1.7	39
9/24/1996	2.9	0	0	.8	1.6	36
9/25/1996	3.2	0	0	.7	1.6	36
9/26/1996	3.1	0	0	.7	1.5	36
9/27/1996	3.0	0	0	.7	1.7	35
9/28/1996	2.9	0	0	.7	1.4	35
9/29/1996	2.3	0	0	.7	1.3	35
9/30/1996	2.0	0	0	.7	1.2	34
10/1/1996	2.1	0	0	.7	1.2	34
10/2/1996	1.9	0	0	.6	1.1	34
10/3/1996	1.9	0	0	.5	1.0	34
10/4/1996	1.8	0	0	.5	1.2	33
10/5/1996	1.8	0	0	.5	1.7	32
10/6/1996	2.0	0	0	.6	1.2	32
10/7/1996	1.8	0	0	.6	1.2	32
10/8/1996	1.6	0	0	.5	1.1	32
10/9/1996	1.4	0	0	.4	.9	32
10/10/1996	1.3	0	0	.4	.9	32
10/11/1996	1.2	0	0	.2	.9	32

Appendix 2. Daily mean streamflow for the five creeks providing recharge to the Barton Springs segment of the Edwards aquifer and daily mean discharge for Barton Springs, Austin, Texas, 1978–2003—Continued.

Date	Barton Creek	Williamson Creek	Slaughter Creek	Bear Creek	Onion Creek	Barton Springs
10/12/1996	1.2	0	0	0.1	0.8	32
10/13/1996	1.2	0	0	.1	.7	32
10/14/1996	1.1	0	0	.1	.6	32
10/15/1996	1.1	0	0	.1	.5	31
10/16/1996	1.2	0	0	.1	.6	31
10/17/1996	1.1	0	0	.1	.6	31
10/18/1996	1.0	0	0	.2	.6	31
10/19/1996	.8	0	0	.1	.6	31
10/20/1996	.9	0	0	.1	.6	31
10/21/1996	.8	0	0	.1	.6	31
10/22/1996	.8	0	0	.1	.5	31
10/23/1996	.7	0	0	.1	.4	31
10/24/1996	.7	0	0	.1	.3	31
10/25/1996	.8	0	0	.1	.3	30
10/26/1996	.9	0	0	.2	.3	29
10/27/1996	.8	0	0	.2	.3	29
10/28/1996	1.0	0	0	.3	.3	29
10/29/1996	1.0	0	0	.3	.3	30
10/30/1996	.9	0	0	.1	.3	30
10/31/1996	.8	0	0	.1	.3	31
11/1/1996	.8	0	0	.1	.4	30
11/2/1996	.7	0	0	.1	.3	30
11/3/1996	.7	0	0	.1	.3	30
11/4/1996	.7	0	0	.1	.3	30
11/5/1996	.7	0	0	.1	.3	31
11/6/1996	.7	0	0	.1	.3	31
11/7/1996	1.3	0	0	.2	.4	31
11/8/1996	1.1	0	0	.2	.3	31
11/9/1996	.9	0	0	.1	.3	31
11/10/1996	.9	0	0	.1	.3	31
11/11/1996	.9	0	0	.1	.3	31
11/12/1996	.9	0	0	.1	.2	31
11/13/1996	.8	0	0	.1	.2	31
11/14/1996	.9	0	0	.1	.2	31
11/15/1996	.9	0	0	.1	.2	31
11/16/1996	.9	0	0	.1	.2	31
11/17/1996	1.0	0	0	.1	.2	32
11/18/1996	1.1	0	0	.1	.2	33
11/19/1996	1.1	0	0	.1	.2	33
11/20/1996	1.0	0	0	.1	.2	32
11/21/1996	1.0	0	0	.1	.2	32
11/22/1996	.9	0	0	.1	.2	31
11/23/1996	1.0	0	0	.1	.1	31
11/24/1996	4.1	0	.2	.9	.2	31
11/25/1996	2.6	0	0	.7	.2	31
11/26/1996	1.9	0	0	.4	.2	31
11/27/1996	2.0	0	0	.3	.2	31
11/28/1996	2.4	0	0	.3	.2	31
11/29/1996	7.6	0	.2	.8	.2	31
11/30/1996	8.1	0	0	.7	.3	31
12/1/1996	5.4	0	0	0.7	0.3	31
12/2/1996	4.4	0	0	.6	.3	31
12/3/1996	3.9	0	0	.7	.3	31
12/4/1996	4.0	0	0	.6	.3	31
12/5/1996	4.2	0	0	.6	.3	31
12/6/1996	3.9	0	0	.6	.3	31
12/7/1996	3.7	0	0	.5	.3	31
12/8/1996	3.5	0	0	.5	.5	31
12/9/1996	3.4	0	0	.5	.5	30
12/10/1996	3.4	0	0	.5	.5	30
12/11/1996	3.3	0	0	.5	.4	30
12/12/1996	3.1	0	0	.6	.4	30
12/13/1996	2.9	0	0	.6	.4	30
12/14/1996	2.8	0	0	.5	.4	30
12/15/1996	16.0	.5	.3	2.3	.5	36
12/16/1996	23.0	0	.1	1.5	.9	42
12/17/1996	22.0	0	0	1.3	1.3	42
12/18/1996	21.0	0	0	1.3	1.9	42
12/19/1996	18.0	0	0	1.3	2.0	38
12/20/1996	15.0	0	0	1.4	1.6	36
12/21/1996	14.0	0	0	1.4	1.4	36
12/22/1996	13.0	0	0	1.3	1.5	36
12/23/1996	12.0	0	0	1.2	1.5	36
12/24/1996	11.0	0	0	1.2	1.7	36
12/25/1996	11.0	0	0	1.1	1.8	36
12/26/1996	11.0	0	0	1.1	2.0	36
12/27/1996	10.0	0	0	1.1	2.2	36
12/28/1996	9.5	0	0	1.1	2.0	36
12/29/1996	9.3	0	0	1.0	1.8	36
12/30/1996	8.8	0	0	.9	1.7	36
12/31/1996	8.5	0	0	.9	2.0	36
1/1/1997	8.2	0	0	.9	2.0	36
1/2/1997	8.1	0	0	.9	2.1	36
1/3/1997	7.9	0	0	.9	2.2	36
1/4/1997	7.8	0	0	.9	2.5	36
1/5/1997	7.4	0	0	.9	2.5	36
1/6/1997	6.9	0	0	.8	3.3	36
1/7/1997	8.4	0	0	1.3	4.9	36
1/8/1997	11.0	0	0	1.5	5.2	36
1/9/1997	13.0	0	0	1.1	4.7	36
1/10/1997	13.0	0	0	1.1	5.5	36
1/11/1997	13.0	0	0	.9	5.7	36
1/12/1997	13.0	0	0	.9	6.1	36
1/13/1997	12.0	0	0	.9	5.7	36
1/14/1997	12.0	0	0	.9	5.8	36
1/15/1997	12.0	0	0	1.0	6.1	36
1/16/1997	12.0	0	0	1.1	6.1	36
1/17/1997	11.0	0	0	1.0	6.2	36
1/18/1997	11.0	0	0	.9	6.0	36
1/19/1997	11.0	0	0	.9	6.4	36

Appendix 2. Daily mean streamflow for the five creeks providing recharge to the Barton Springs segment of the Edwards aquifer and daily mean discharge for Barton Springs, Austin, Texas, 1978–2003—Continued.

Date	Barton Creek	Williamson Creek	Slaughter Creek	Bear Creek	Onion Creek	Barton Springs
1/20/1997	11.0	0	0	0.9	7.2	36
1/21/1997	11.0	0	0	.8	7.1	36
1/22/1997	11.0	0	0	.8	6.9	36
1/23/1997	11.0	0	0	.8	7.1	36
1/24/1997	10.0	0	0	.8	7.2	36
1/25/1997	9.7	0	0	.8	6.7	36
1/26/1997	9.5	0	0	.8	7.0	36
1/27/1997	9.4	0	0	.8	7.2	36
1/28/1997	11.0	0	0	.8	6.0	36
1/29/1997	8.0	0	0	.8	6.0	36
1/30/1997	7.8	0	0	.8	6.7	36
1/31/1997	7.7	0	0	.8	6.1	36
2/1/1997	7.3	0	0	.8	5.8	36
2/2/1997	7.3	0	0	.8	5.9	36
2/3/1997	7.1	0	0	.8	5.8	36
2/4/1997	6.9	0	0	.7	5.8	36
2/5/1997	6.6	0	0	.7	5.6	36
2/6/1997	6.6	0	0	.7	6.3	36
2/7/1997	8.7	0	0	2.4	6.9	37
2/8/1997	8.5	0	0	3.6	5.5	36
2/9/1997	8.9	0	0	3.2	6.3	36
2/10/1997	9.0	0	0	.8	6.4	36
2/11/1997	8.9	0	0	.9	6.5	36
2/12/1997	26.0	4.6	.5	4.0	11.0	36
2/13/1997	46.0	.1	.4	3.6	21.0	50
2/14/1997	43.0	0	.2	3.8	26.0	54
2/15/1997	35.0	0	.1	3.6	24.0	54
2/16/1997	31.0	0	0	3.4	22.0	54
2/17/1997	29.0	0	0	3.5	21.0	54
2/18/1997	28.0	0	0	3.5	21.0	54
2/19/1997	28.0	0	0	3.7	22.0	54
2/20/1997	36.0	0	.2	3.9	56.0	54
2/21/1997	64.0	0	.1	3.8	62.0	55
2/22/1997	44.0	0	.1	3.7	48.0	56
2/23/1997	39.0	0	.1	3.7	42.0	56
2/24/1997	38.0	0	.1	3.8	41.0	56
2/25/1997	41.0	0	.2	3.8	44.0	56
2/26/1997	49.0	0	.5	4.0	57.0	56
2/27/1997	59.0	0	.6	3.9	60.0	56
2/28/1997	54.0	0	.6	3.9	57.0	56
3/1/1997	52.0	0	1.1	3.8	56.0	56
3/2/1997	50.0	0	1.1	3.8	59.0	56
3/3/1997	48.0	0	1.2	3.8	56.0	56
3/4/1997	47.0	0	1.3	3.8	54.0	56
3/5/1997	45.0	0	1.3	3.8	54.0	56
3/6/1997	43.0	0	1.2	3.7	50.0	55
3/7/1997	41.0	0	1.3	3.7	49.0	55
3/8/1997	44.0	0	1.4	3.7	54.0	55
3/9/1997	47.0	0	1.4	3.6	59.0	55
3/10/1997	47.0	0	1.4	3.6	55.0	55
3/11/1997	52.0	0.1	1.9	5.1	58.0	54
3/12/1997	118.0	0	2.3	5.7	119.0	57
3/13/1997	124.0	0	2.4	6.8	108.0	58
3/14/1997	96.0	0	2.6	7.0	95.0	58
3/15/1997	77.0	0	2.6	7.1	86.0	58
3/16/1997	74.0	0	2.9	7.0	86.0	58
3/17/1997	75.0	0	3.3	7.1	90.0	59
3/18/1997	74.0	0	3.2	7.1	86.0	60
3/19/1997	67.0	0	3.0	7.3	78.0	59
3/20/1997	61.0	0	3.1	7.3	74.0	60
3/21/1997	57.0	0	3.0	7.1	72.0	60
3/22/1997	54.0	0	2.8	6.9	68.0	60
3/23/1997	51.0	0	2.7	6.8	65.0	60
3/24/1997	49.0	0	2.6	6.6	63.0	60
3/25/1997	54.0	.2	3.6	6.9	66.0	60
3/26/1997	66.0	0	3.4	6.3	75.0	62
3/27/1997	54.0	0	3.1	6.1	65.0	62
3/28/1997	50.0	0	2.9	6.1	62.0	61
3/29/1997	48.0	0	2.7	6.2	58.0	61
3/30/1997	46.0	0	2.6	6.2	56.0	60
3/31/1997	44.0	0	2.5	6.2	53.0	60
4/1/1997	45.0	0	2.8	6.1	55.0	60
4/2/1997	46.0	.1	3.0	6.3	56.0	62
4/3/1997	52.0	.1	7.0	9.7	76.0	62
4/4/1997	1,000.0	38.0	74.0	36.0	814.0	63
4/5/1997	995.0	28.0	59.0	41.0	768.0	64
4/6/1997	560.0	3.3	31.0	39.0	376.0	66
4/7/1997	412.0	0	22.0	36.0	301.0	68
4/8/1997	337.0	0	18.0	34.0	275.0	70
4/9/1997	283.0	0	15.0	32.0	255.0	72
4/10/1997	243.0	0	14.0	30.0	239.0	74
4/11/1997	218.0	0	13.0	29.0	230.0	76
4/12/1997	173.0	0	9.7	27.0	203.0	77
4/13/1997	151.0	0	8.4	25.0	184.0	76
4/14/1997	139.0	0	6.4	24.0	173.0	76
4/15/1997	126.0	0	4.6	23.0	162.0	76
4/16/1997	116.0	0	4.2	22.0	148.0	76
4/17/1997	105.0	0	3.7	20.0	135.0	77
4/18/1997	91.0	0	3.6	19.0	125.0	77
4/19/1997	82.0	0	3.6	19.0	119.0	77
4/20/1997	74.0	0	3.3	18.0	108.0	77
4/21/1997	69.0	0	3.1	17.0	104.0	77
4/22/1997	63.0	0	2.9	16.0	95.0	76
4/23/1997	57.0	0	2.8	15.0	86.0	76
4/24/1997	54.0	0	2.8	14.0	82.0	76
4/25/1997	73.0	2.4	8.0	15.0	113.0	76
4/26/1997	674.0	22.0	44.0	29.0	662.0	77
4/27/1997	462.0	8.0	23.0	18.0	311.0	78
4/28/1997	306.0	2.5	18.0	18.0	250.0	80
4/29/1997	222.0	0	13.0	17.0	220.0	81

Appendix 2. Daily mean streamflow for the five creeks providing recharge to the Barton Springs segment of the Edwards aquifer and daily mean discharge for Barton Springs, Austin, Texas, 1978–2003—Continued.

Date	Barton Creek	Williamson Creek	Slaughter Creek	Bear Creek	Onion Creek	Barton Springs
4/30/1997	169.0	0	10.0	16.0	209.0	82
5/1/1997	145.0	0	6.9	16.0	202.0	83
5/2/1997	137.0	0	5.7	15.0	196.0	83
5/3/1997	122.0	0	4.1	14.0	184.0	83
5/4/1997	112.0	0	3.8	14.0	176.0	83
5/5/1997	104.0	0	3.7	14.0	169.0	83
5/6/1997	95.0	0	3.6	14.0	162.0	82
5/7/1997	89.0	0	3.5	14.0	159.0	82
5/8/1997	84.0	0	3.3	14.0	152.0	82
5/9/1997	201.0	7.1	15.0	15.0	172.0	82
5/10/1997	181.0	.1	9.1	14.0	169.0	84
5/11/1997	126.0	0	4.9	14.0	136.0	85
5/12/1997	108.0	0	4.5	14.0	122.0	85
5/13/1997	92.0	0	4.1	14.0	113.0	85
5/14/1997	81.0	0	3.8	14.0	102.0	84
5/15/1997	78.0	7.9	14.0	13.0	95.0	84
5/16/1997	164.0	8.2	21.0	13.0	186.0	88
5/17/1997	118.0	0	10.0	13.0	94.0	88
5/18/1997	87.0	0	8.3	13.0	78.0	86
5/19/1997	83.0	16.0	15.0	18.0	70.0	87
5/20/1997	656.0	84.0	61.0	18.0	213.0	87
5/21/1997	308.0	18.0	36.0	15.0	110.0	88
5/22/1997	224.0	8.4	30.0	14.0	91.0	89
5/23/1997	295.0	66.0	59.0	25.0	112.0	89
5/24/1997	366.0	40.0	52.0	20.0	135.0	90
5/25/1997	282.0	15.0	38.0	18.0	103.0	91
5/26/1997	202.0	5.2	30.0	17.0	92.0	92
5/27/1997	259.0	19.0	67.0	56.0	256.0	93
5/28/1997	1,020.0	17.0	55.0	26.0	920.0	94
5/29/1997	465.0	5.7	37.0	23.0	271.0	95
5/30/1997	362.0	1.9	30.0	21.0	227.0	96
5/31/1997	302.0	0	27.0	19.0	195.0	97
6/1/1997	249.0	0	23.0	18.0	163.0	96
6/2/1997	207.0	0	20.0	17.0	145.0	97
6/3/1997	171.0	0	18.0	16.0	132.0	97
6/4/1997	151.0	0	17.0	15.0	112.0	97
6/5/1997	141.0	0	16.0	15.0	100.0	97
6/6/1997	161.0	3.3	41.0	120.0	460.0	97
6/7/1997	858.0	7.7	55.0	213.0	700.0	97
6/8/1997	392.0	1.3	40.0	224.0	335.0	97
6/9/1997	1,990.0	84.0	184.0	199.0	3,100.0	97
6/10/1997	3,680.0	76.0	564.0	250.0	2,610.0	97
6/11/1997	1,330.0	28.0	81.0	101.0	1,060.0	97
6/12/1997	862.0	14.0	55.0	86.0	710.0	97
6/13/1997	682.0	6.9	43.0	76.0	571.0	97
6/14/1997	588.0	3.2	34.0	66.0	487.0	97
6/15/1997	531.0	2.5	34.0	60.0	449.0	98
6/16/1997	441.0	.6	28.0	52.0	375.0	98
6/17/1997	438.0	.4	24.0	45.0	325.0	100
6/18/1997	335.0	0	20.0	38.0	291.0	102
6/19/1997	285.0	0	17.0	32.0	266.0	103
6/20/1997	244.0	0	15.0	28.0	240.0	105
6/21/1997	351.0	44.0	68.0	50.0	626.0	107
6/22/1997	2,270.0	58.0	87.0	90.0	3,610.0	108
6/23/1997	1,190.0	27.0	71.0	65.0	1,500.0	108
6/24/1997	855.0	16.0	61.0	50.0	953.0	109
6/25/1997	655.0	9.1	46.0	43.0	795.0	110
6/26/1997	539.0	5.4	35.0	37.0	707.0	110
6/27/1997	451.0	3.5	29.0	34.0	624.0	110
6/28/1997	382.0	2.0	25.0	29.0	564.0	111
6/29/1997	322.0	.9	21.0	26.0	510.0	111
6/30/1997	273.0	0	17.0	23.0	455.0	111
7/1/1997	228.0	0	15.0	20.0	390.0	112
7/2/1997	189.0	0	14.0	18.0	332.0	112
7/3/1997	160.0	0	13.0	17.0	305.0	112
7/4/1997	149.0	0	11.0	16.0	278.0	112
7/5/1997	137.0	0	9.9	15.0	254.0	112
7/6/1997	126.0	0	8.9	14.0	228.0	112
7/7/1997	118.0	0	7.6	13.0	196.0	112
7/8/1997	109.0	0	6.6	11.0	160.0	113
7/9/1997	97.0	0	6.0	10.0	130.0	113
7/10/1997	85.0	0	5.2	9.3	114.0	113
7/11/1997	75.0	0	4.6	8.8	101.0	113
7/12/1997	66.0	0	4.3	8.1	89.0	113
7/13/1997	59.0	0	4.0	7.6	80.0	113
7/14/1997	52.0	0	3.7	7.1	76.0	113
7/15/1997	49.0	0	3.5	6.7	69.0	113
7/16/1997	47.0	0	3.4	6.3	63.0	113
7/17/1997	42.0	0	3.1	6.0	56.0	113
7/18/1997	38.0	0	2.9	5.7	49.0	113
7/19/1997	34.0	0	2.8	5.3	45.0	113
7/20/1997	32.0	0	2.7	5.0	43.0	113
7/21/1997	29.0	0	2.6	4.8	39.0	112
7/22/1997	27.0	0	2.5	4.6	37.0	112
7/23/1997	24.0	0	2.4	4.4	34.0	112
7/24/1997	21.0	0	2.2	4.3	32.0	112
7/25/1997	19.0	0	2.1	4.1	29.0	112
7/26/1997	17.0	0	2.1	3.9	28.0	112
7/27/1997	15.0	0	2.0	3.8	27.0	111
7/28/1997	14.0	0	1.9	3.9	25.0	111
7/29/1997	14.0	0	1.8	3.7	24.0	110
7/30/1997	14.0	0	1.9	3.8	22.0	110
7/31/1997	16.0	0	2.2	3.5	24.0	110
8/1/1997	15.0	0	2.0	3.3	23.0	109
8/2/1997	14.0	0	1.9	3.2	21.0	109
8/3/1997	11.0	0	1.8	3.0	21.0	109
8/4/1997	10.0	0	1.7	2.8	20.0	108
8/5/1997	9.5	0	1.6	2.6	18.0	108
8/6/1997	8.6	0	1.6	2.4	17.0	107
8/7/1997	11.0	.2	1.7	2.4	17.0	107

Appendix 2. Daily mean streamflow for the five creeks providing recharge to the Barton Springs segment of the Edwards aquifer and daily mean discharge for Barton Springs, Austin, Texas, 1978–2003—Continued.

Date	Barton Creek	Williamson Creek	Slaughter Creek	Bear Creek	Onion Creek	Barton Springs
8/8/1997	13.0	0.2	1.9	2.5	20.0	109
8/9/1997	14.0	0	2.0	2.4	22.0	109
8/10/1997	13.0	0	1.8	2.1	20.0	109
8/11/1997	11.0	0	1.7	2.0	18.0	108
8/12/1997	9.4	0	1.6	1.9	16.0	106
8/13/1997	8.1	0	1.5	1.6	15.0	106
8/14/1997	7.3	0	1.5	1.2	13.0	106
8/15/1997	6.4	0	1.4	.9	12.0	105
8/16/1997	5.5	0	1.4	1.0	12.0	105
8/17/1997	4.5	0	1.3	.9	11.0	104
8/18/1997	4.1	0	1.3	.8	9.9	104
8/19/1997	3.7	0	1.3	.7	9.3	102
8/20/1997	3.3	0	1.2	.7	8.7	102
8/21/1997	2.6	0	1.2	.7	8.2	102
8/22/1997	2.2	0	1.1	.6	8.0	102
8/23/1997	2.4	0	1.2	.6	7.8	102
8/24/1997	2.9	0	1.1	.5	7.5	102
8/25/1997	2.1	0	1.1	.5	7.1	102
8/26/1997	1.7	0	1.0	.4	6.7	102
8/27/1997	1.5	0	.9	.4	6.6	102
8/28/1997	1.3	0	.9	.4	6.0	100
8/29/1997	1.1	0	.9	.3	5.4	98
8/30/1997	1.0	0	.8	.3	4.8	97
8/31/1997	.9	0	.8	.3	4.4	97
9/1/1997	.8	0	.7	.3	4.1	97
9/2/1997	.7	0	.7	.3	4.0	96
9/3/1997	.6	0	.7	.3	3.7	96
9/4/1997	.5	0	.6	.3	3.7	96
9/5/1997	.5	0	.6	.3	3.9	95
9/6/1997	.4	0	.4	.2	3.8	95
9/7/1997	.4	0	.4	.2	3.8	95
9/8/1997	.4	0	.3	.2	3.5	95
9/9/1997	.3	0	.2	.2	3.1	95
9/10/1997	.3	0	.1	.2	3.1	94
9/11/1997	.3	0	.1	.2	3.1	94
9/12/1997	.2	0	0	.2	2.6	93
9/13/1997	.2	0	0	.2	1.9	93
9/14/1997	.2	0	0	.2	1.4	93
9/15/1997	.2	0	0	.2	1.0	93
9/16/1997	.2	0	0	.1	.8	92
9/17/1997	.2	0	0	.1	.6	92
9/18/1997	.2	0	0	.1	.5	92
9/19/1997	.2	0	0	.1	.5	91
9/20/1997	.2	0	0	.1	.5	91
9/21/1997	.2	0	0	.1	.5	91
9/22/1997	.2	0	0	.2	1.9	91
9/23/1997	.2	0	0	.1	4.5	91
9/24/1997	.2	0	0	.1	2.6	91
9/25/1997	.2	0	0	.1	2.6	91
9/26/1997	.1	0	0	.1	2.6	90
9/27/1997	0.1	0	0	0.1	2.5	90
9/28/1997	.1	0	0	.1	2.6	90
9/29/1997	.2	0	0	.1	2.6	90
9/30/1997	.1	0	0	.1	2.3	90
10/1/1997	.1	0	0	0	1.7	90
10/2/1997	.1	0	0	0	1.5	90
10/3/1997	.1	0	0	.1	1.7	92
10/4/1997	.1	0	0	0	1.8	92
10/5/1997	.1	0	0	.1	1.7	92
10/6/1997	.2	0	0	0	1.6	92
10/7/1997	.4	.1	0	.1	2.0	92
10/8/1997	1.0	.1	0	.1	2.3	92
10/9/1997	1.1	0	0	.2	2.7	92
10/10/1997	2.1	.2	.2	.1	2.6	92
10/11/1997	5.5	.2	.1	.3	2.6	93
10/12/1997	7.0	.1	.2	1.0	2.6	95
10/13/1997	5.3	0	.1	1.4	3.0	95
10/14/1997	4.2	0	0	1.5	2.8	94
10/15/1997	3.7	0	0	1.5	2.5	93
10/16/1997	3.5	0	0	1.5	2.1	92
10/17/1997	3.4	0	0	1.5	2.1	91
10/18/1997	3.3	0	0	1.3	1.9	90
10/19/1997	4.0	0	0	1.2	1.7	90
10/20/1997	4.3	0	0	1.2	1.5	89
10/21/1997	4.3	0	0	1.1	1.6	89
10/22/1997	4.3	0	0	1.1	1.6	89
10/23/1997	4.3	0	0	1.1	1.8	89
10/24/1997	4.1	0	0	1.1	1.7	88
10/25/1997	4.0	0	0	1.0	1.8	88
10/26/1997	3.6	0	0	1.0	1.5	87
10/27/1997	3.5	0	0	1.0	1.7	87
10/28/1997	3.4	0	0	1.0	2.0	87
10/29/1997	3.4	0	0	1.0	2.2	86
10/30/1997	3.4	0	0	1.0	2.2	86
10/31/1997	3.3	0	0	.9	2.1	85
11/1/1997	3.0	0	0	.8	1.9	85
11/2/1997	2.7	0	0	.8	2.2	84
11/3/1997	2.6	0	0	.8	2.5	84
11/4/1997	2.7	0	0	.8	2.8	84
11/5/1997	2.6	0	0	.8	3.1	84
11/6/1997	2.4	0	0	.7	3.0	83
11/7/1997	2.4	0	0	.7	3.2	82
11/8/1997	2.4	0	0	.7	3.2	82
11/9/1997	2.8	.1	0	1.0	3.6	82
11/10/1997	5.8	0	.1	1.1	4.6	83
11/11/1997	5.0	.1	.1	1.1	3.4	82
11/12/1997	8.7	.1	.2	1.4	6.1	84
11/13/1997	11.0	.1	.1	1.3	5.3	84
11/14/1997	13.0	0	0	1.1	4.4	83
11/15/1997	12.0	0	0	1.1	4.8	82

Appendix 2. Daily mean streamflow for the five creeks providing recharge to the Barton Springs segment of the Edwards aquifer and daily mean discharge for Barton Springs, Austin, Texas, 1978–2003—Continued.

Date	Barton Creek	Williamson Creek	Slaughter Creek	Bear Creek	Onion Creek	Barton Springs
11/16/1997	11.0	0	0	1.1	6.7	81
11/17/1997	9.9	0	0	1.1	7.2	80
11/18/1997	9.3	0	0	1.1	7.7	80
11/19/1997	8.8	0	0	1.1	7.9	80
11/20/1997	8.5	0	0	1.1	9.3	79
11/21/1997	8.0	0	0	1.1	11.0	78
11/22/1997	7.6	0	0	1.1	10.0	78
11/23/1997	6.8	0	0	1.1	11.0	77
11/24/1997	6.6	0	0	1.1	10.0	77
11/25/1997	6.4	0	0	1.1	12.0	77
11/26/1997	6.2	0	0	1.1	12.0	76
11/27/1997	6.0	0	0	1.1	12.0	76
11/28/1997	7.3	0	0	1.2	13.0	76
11/29/1997	8.0	0	0	1.1	9.8	76
11/30/1997	6.7	0	0	1.2	12.0	76
12/1/1997	6.4	0	0	.9	13.0	75
12/2/1997	6.7	0	0	.9	13.0	75
12/3/1997	8.2	0	0	.9	14.0	75
12/4/1997	8.8	0	0	.7	14.0	74
12/5/1997	8.1	0	0	.7	12.0	72
12/6/1997	7.7	0	0	.7	12.0	72
12/7/1997	8.7	0	0	1.0	14.0	72
12/8/1997	8.3	0	0	.8	14.0	72
12/9/1997	7.4	0	0	.8	14.0	71
12/10/1997	7.1	0	0	.7	16.0	71
12/11/1997	6.5	0	0	.7	16.0	70
12/12/1997	6.2	0	0	.7	16.0	70
12/13/1997	6.1	0	0	.7	17.0	69
12/14/1997	6.0	0	0	.7	17.0	69
12/15/1997	6.0	0	0	.7	17.0	69
12/16/1997	6.0	0	0	.6	18.0	68
12/17/1997	5.8	0	0	.6	17.0	68
12/18/1997	5.8	0	0	.7	16.0	67
12/19/1997	6.0	0	0	.8	17.0	66
12/20/1997	52.0	27.0	43.0	173.0	80.0	68
12/21/1997	262.0	10.0	23.0	25.0	171.0	76
12/22/1997	94.0	0	3.3	8.2	74.0	79
12/23/1997	63.0	.1	3.7	8.2	57.0	80
12/24/1997	53.0	0	3.8	7.0	49.0	80
12/25/1997	47.0	0	3.2	6.3	41.0	80
12/26/1997	45.0	.1	4.1	7.2	41.0	80
12/27/1997	45.0	0	3.9	6.4	40.0	81
12/28/1997	43.0	0	3.6	6.1	39.0	81
12/29/1997	40.0	0	3.2	5.8	35.0	81
12/30/1997	38.0	0	3.1	5.4	33.0	81
12/31/1997	34.0	0	2.9	4.7	30.0	81
1/1/1998	32.0	0	3.0	4.9	29.0	81
1/2/1998	33.0	0	3.3	5.3	30.0	81
1/3/1998	33.0	0	3.2	4.8	30.0	81
1/4/1998	32.0	0	3.2	4.6	29.0	81
1/5/1998	31.0	0	3.2	4.5	28.0	82
1/6/1998	854.0	24.0	46.0	200.0	798.0	82
1/7/1998	754.0	18.0	43.0	30.0	341.0	83
1/8/1998	332.0	3.9	25.0	22.0	202.0	84
1/9/1998	226.0	.1	17.0	19.0	164.0	85
1/10/1998	180.0	0	13.0	17.0	141.0	85
1/11/1998	159.0	0	12.0	16.0	128.0	86
1/12/1998	149.0	0	11.0	14.0	115.0	87
1/13/1998	139.0	0	8.9	13.0	103.0	86
1/14/1998	130.0	0	8.5	13.0	97.0	87
1/15/1998	123.0	0	6.6	11.0	92.0	87
1/16/1998	115.0	0	5.1	9.9	83.0	86
1/17/1998	107.0	0	4.4	8.9	77.0	86
1/18/1998	100.0	0	4.2	8.4	70.0	86
1/19/1998	90.0	0	3.8	7.7	66.0	86
1/20/1998	85.0	0	4.0	7.8	65.0	86
1/21/1998	77.0	0	3.9	7.0	67.0	86
1/22/1998	71.0	0	3.6	6.3	63.0	86
1/23/1998	65.0	0	3.5	6.0	60.0	86
1/24/1998	59.0	0	3.3	5.5	57.0	86
1/25/1998	56.0	0	3.3	5.4	55.0	86
1/26/1998	53.0	0	3.2	4.9	53.0	86
1/27/1998	51.0	0	3.0	4.5	49.0	86
1/28/1998	47.0	0	3.0	4.4	47.0	86
1/29/1998	46.0	0	3.1	4.2	47.0	85
1/30/1998	43.0	0	3.1	4.0	45.0	86
1/31/1998	72.0	8.5	24.0	56.0	127.0	87
2/1/1998	123.0	.4	16.0	12.0	181.0	90
2/2/1998	86.0	0	13.0	9.7	114.0	89
2/3/1998	71.0	0	11.0	9.0	95.0	89
2/4/1998	67.0	0	9.7	8.2	89.0	89
2/5/1998	71.0	0	12.0	14.0	95.0	89
2/6/1998	100.0	0	13.0	12.0	111.0	89
2/7/1998	88.0	0	11.0	10.0	98.0	89
2/8/1998	77.0	0	10.0	10.0	95.0	89
2/9/1998	73.0	0	9.6	9.7	92.0	89
2/10/1998	94.0	.5	15.0	17.0	104.0	89
2/11/1998	114.0	0	13.0	14.0	104.0	90
2/12/1998	102.0	0	12.0	14.0	99.0	90
2/13/1998	104.0	0	13.0	15.0	107.0	90
2/14/1998	117.0	4.6	26.0	39.0	149.0	90
2/15/1998	190.0	3.3	33.0	29.0	239.0	92
2/16/1998	179.0	6.2	41.0	37.0	233.0	93
2/17/1998	172.0	2.5	32.0	29.0	220.0	93
2/18/1998	157.0	1.5	27.0	27.0	205.0	93
2/19/1998	152.0	1.2	24.0	24.0	196.0	94
2/20/1998	145.0	1.2	21.0	21.0	182.0	94
2/21/1998	198.0	184.0	41.0	72.0	364.0	95
2/22/1998	572.0	166.0	53.0	38.0	358.0	97
2/23/1998	302.0	12.0	36.0	31.0	241.0	97

Appendix 2. Daily mean streamflow for the five creeks providing recharge to the Barton Springs segment of the Edwards aquifer and daily mean discharge for Barton Springs, Austin, Texas, 1978–2003—Continued.

Date	Barton Creek	Williamson Creek	Slaughter Creek	Bear Creek	Onion Creek	Barton Springs
2/24/1998	247.0	3.7	29.0	28.0	224.0	97
2/25/1998	231.0	14.0	31.0	127.0	220.0	97
2/26/1998	495.0	28.0	72.0	75.0	477.0	98
2/27/1998	325.0	9.6	42.0	36.0	273.0	99
2/28/1998	269.0	5.9	32.0	31.0	251.0	99
3/1/1998	232.0	4.5	27.0	28.0	237.0	99
3/2/1998	210.0	3.5	24.0	25.0	225.0	99
3/3/1998	189.0	2.5	22.0	23.0	213.0	98
3/4/1998	174.0	1.9	21.0	21.0	205.0	98
3/5/1998	164.0	.8	20.0	19.0	194.0	98
3/6/1998	155.0	.4	19.0	17.0	177.0	98
3/7/1998	151.0	.8	18.0	19.0	177.0	98
3/8/1998	150.0	.8	16.0	16.0	184.0	98
3/9/1998	139.0	.1	14.0	14.0	156.0	98
3/10/1998	129.0	0	13.0	12.0	137.0	98
3/11/1998	122.0	0	12.0	12.0	130.0	98
3/12/1998	118.0	0	11.0	11.0	126.0	98
3/13/1998	116.0	0	12.0	11.0	126.0	98
3/14/1998	118.0	.9	15.0	12.0	135.0	98
3/15/1998	123.0	.9	18.0	45.0	145.0	98
3/16/1998	1,330.0	60.0	96.0	168.0	1,040.0	98
3/17/1998	513.0	26.0	46.0	34.0	371.0	99
3/18/1998	379.0	14.0	36.0	30.0	301.0	99
3/19/1998	321.0	9.9	30.0	27.0	280.0	99
3/20/1998	271.0	7.2	25.0	24.0	258.0	98
3/21/1998	240.0	5.3	23.0	22.0	243.0	98
3/22/1998	216.0	4.1	21.0	20.0	231.0	99
3/23/1998	195.0	2.7	19.0	18.0	220.0	99
3/24/1998	176.0	1.7	18.0	16.0	209.0	99
3/25/1998	163.0	.1	16.0	15.0	198.0	99
3/26/1998	155.0	0	16.0	14.0	188.0	98
3/27/1998	151.0	.6	15.0	13.0	180.0	98
3/28/1998	146.0	0	14.0	12.0	170.0	98
3/29/1998	140.0	0	14.0	11.0	161.0	98
3/30/1998	134.0	.8	17.0	12.0	155.0	98
3/31/1998	188.0	1.9	19.0	11.0	223.0	98
4/1/1998	144.0	0	13.0	9.2	164.0	98
4/2/1998	130.0	0	13.0	8.8	148.0	98
4/3/1998	125.0	0	13.0	11.0	137.0	98
4/4/1998	118.0	0	12.0	11.0	128.0	98
4/5/1998	116.0	0	12.0	10.0	123.0	98
4/6/1998	112.0	0	12.0	9.9	119.0	98
4/7/1998	109.0	0	11.0	9.6	115.0	98
4/8/1998	109.0	.1	12.0	11.0	137.0	98
4/9/1998	109.0	0	10.0	8.6	117.0	98
4/10/1998	92.0	0	9.3	8.1	104.0	98
4/11/1998	85.0	0	9.0	7.7	99.0	98
4/12/1998	79.0	0	8.9	7.5	96.0	98
4/13/1998	76.0	0	8.4	7.2	93.0	98
4/14/1998	73.0	0	7.9	6.8	90.0	98
4/15/1998	68.0	0	7.4	6.5	86.0	98
4/16/1998	64.0	0	5.7	5.9	82.0	98
4/17/1998	59.0	0	4.9	5.5	76.0	97
4/18/1998	55.0	0	4.8	5.4	74.0	97
4/19/1998	54.0	0	4.5	5.2	72.0	97
4/20/1998	51.0	0	4.2	5.0	69.0	97
4/21/1998	49.0	0	3.9	4.7	65.0	97
4/22/1998	46.0	0	3.7	4.5	62.0	97
4/23/1998	44.0	0	3.5	4.3	60.0	96
4/24/1998	42.0	0	3.3	4.1	57.0	96
4/25/1998	40.0	0	3.2	4.1	55.0	96
4/26/1998	40.0	0	3.5	4.3	56.0	96
4/27/1998	46.0	0	3.5	4.0	57.0	97
4/28/1998	39.0	0	3.1	3.8	54.0	97
4/29/1998	36.0	0	2.9	3.7	49.0	97
4/30/1998	33.0	0	2.8	3.4	46.0	97
5/1/1998	31.0	.1	2.8	3.4	43.0	96
5/2/1998	31.0	0	2.7	3.4	41.0	96
5/3/1998	30.0	0	2.7	2.9	40.0	96
5/4/1998	28.0	0	2.6	3.1	40.0	95
5/5/1998	26.0	0	2.6	3.0	38.0	95
5/6/1998	25.0	0	2.5	2.9	36.0	95
5/7/1998	23.0	0	2.3	2.5	34.0	94
5/8/1998	21.0	0	2.3	2.5	31.0	93
5/9/1998	19.0	0	2.2	2.2	30.0	93
5/10/1998	18.0	0	2.1	2.0	25.0	93
5/11/1998	16.0	0	2.1	1.7	21.0	92
5/12/1998	14.0	0	2.1	1.7	20.0	92
5/13/1998	14.0	0	2.1	1.9	19.0	92
5/14/1998	14.0	0	2.0	1.8	18.0	92
5/15/1998	13.0	0	2.0	1.5	19.0	91
5/16/1998	12.0	0	2.0	1.5	19.0	91
5/17/1998	12.0	0	1.9	1.4	18.0	91
5/18/1998	11.0	0	1.8	1.3	17.0	91
5/19/1998	10.0	0	1.7	1.2	17.0	91
5/20/1998	9.5	0	1.7	1.1	16.0	91
5/21/1998	8.7	0	1.6	1.1	16.0	91
5/22/1998	7.6	0	1.5	1.0	15.0	90
5/23/1998	6.8	0	1.5	1.1	14.0	90
5/24/1998	6.3	0	1.5	1.0	14.0	90
5/25/1998	6.0	0	1.5	1.0	13.0	90
5/26/1998	5.7	0	1.5	1.0	13.0	90
5/27/1998	6.3	.1	1.4	1.0	12.0	90
5/28/1998	6.4	0	1.4	.8	12.0	90
5/29/1998	6.0	0	1.3	.7	11.0	90
5/30/1998	5.6	0	1.2	.7	10.0	89
5/31/1998	5.0	0	1.2	.6	9.6	89
6/1/1998	4.2	0	1.1	.5	8.0	88
6/2/1998	3.4	0	1.0	.4	7.1	88
6/3/1998	2.8	0	1.0	.4	6.6	88

Appendix 2. Daily mean streamflow for the five creeks providing recharge to the Barton Springs segment of the Edwards aquifer and daily mean discharge for Barton Springs, Austin, Texas, 1978–2003—Continued.

Date	Barton Creek	Williamson Creek	Slaughter Creek	Bear Creek	Onion Creek	Barton Springs
6/4/1998	2.3	0	0.9	0.4	6.4	88
6/5/1998	1.9	0	.9	.6	6.0	88
6/6/1998	1.6	0	.9	.5	5.5	88
6/7/1998	1.4	0	.9	.5	5.1	87
6/8/1998	1.1	0	.9	.4	5.0	87
6/9/1998	.9	0	.9	.3	4.2	87
6/10/1998	.7	0	.8	.2	3.7	86
6/11/1998	1.5	.2	.9	.6	4.6	87
6/12/1998	1.3	0	.8	.3	4.3	87
6/13/1998	1.1	0	.7	.1	4.1	86
6/14/1998	.7	.1	.6	.1	4.1	86
6/15/1998	.5	0	.5	.1	3.7	85
6/16/1998	.5	0	.3	.1	3.5	85
6/17/1998	.3	0	.3	0	3.4	84
6/18/1998	.3	0	.2	0	3.3	84
6/19/1998	.2	0	.2	0	3.2	84
6/20/1998	.2	0	.1	0	3.0	83
6/21/1998	.2	0	0	0	2.8	83
6/22/1998	.2	0	0	0	2.7	83
6/23/1998	.1	0	0	0	2.4	82
6/24/1998	.1	0	0	0	2.7	82
6/25/1998	.1	0	0	0	2.8	82
6/26/1998	.1	0	0	0	2.7	81
6/27/1998	.1	0	0	0	2.7	81
6/28/1998	0	0	0	0	2.6	81
6/29/1998	0	0	0	0	3.0	81
6/30/1998	0	0	0	0	3.0	80
7/1/1998	0	0	0	0	2.3	80
7/2/1998	0	0	0	0	1.9	79
7/3/1998	0	0	.1	.1	2.3	80
7/4/1998	.2	.3	.2	.6	375.0	81
7/5/1998	38.0	0	0	.1	74.0	81
7/6/1998	22.0	0	0	.1	24.0	80
7/7/1998	12.0	0	0	.1	12.0	79
7/8/1998	7.5	0	0	0	8.2	78
7/9/1998	5.0	0	0	0	7.3	78
7/10/1998	3.2	0	0	0	5.9	77
7/11/1998	2.0	0	0	0	5.1	77
7/12/1998	1.3	0	0	0	4.4	77
7/13/1998	1.1	.1	.3	0	4.2	77
7/14/1998	1.2	0	0	.1	3.9	77
7/15/1998	1.0	0	0	.1	3.5	76
7/16/1998	.7	0	0	0	3.1	76
7/17/1998	.5	0	0	0	2.7	75
7/18/1998	.3	0	0	0	2.7	75
7/19/1998	.2	0	0	0	2.8	74
7/20/1998	.1	0	0	0	2.6	74
7/21/1998	.1	0	0	0	2.5	73
7/22/1998	.1	0	0	0	2.6	73
7/23/1998	0	0	0	0	2.5	73
7/24/1998	0	0	0	0	2.3	72
7/25/1998	0	0	0	0	2.1	71
7/26/1998	0	0	0	0	2.0	71
7/27/1998	0	0	0	0	2.1	70
7/28/1998	0	0	0	0	2.0	70
7/29/1998	0	0	0	0	1.9	69
7/30/1998	0	0	0	0	1.8	69
7/31/1998	0	0	0	0	1.6	68
8/1/1998	0	0	0	0	1.5	68
8/2/1998	0	0	0	0	1.4	67
8/3/1998	0	0	0	0	1.4	67
8/4/1998	0	0	0	0	1.4	66
8/5/1998	0	0	0	0	1.4	66
8/6/1998	0	.1	0	0	2.2	66
8/7/1998	0	0	0	0	2.0	65
8/8/1998	0	0	0	0	1.9	67
8/9/1998	0	0	0	0	1.7	66
8/10/1998	0	0	0	0	1.6	65
8/11/1998	0	0	0	0	1.4	64
8/12/1998	0	0	0	0	1.3	63
8/13/1998	0	0	0	0	1.3	63
8/14/1998	0	0	0	0	1.1	62
8/15/1998	0	0	0	0	1.4	62
8/16/1998	0	0	0	0	1.3	61
8/17/1998	0	0	0	0	1.6	62
8/18/1998	.1	0	0	0	1.8	61
8/19/1998	0	0	0	0	1.9	60
8/20/1998	0	0	0	0	1.5	60
8/21/1998	0	0	0	0	1.3	59
8/22/1998	0	.3	0	0	3.3	61
8/23/1998	0	.1	0	0	4.5	62
8/24/1998	0	0	0	0	7.0	62
8/25/1998	0	0	0	0	14.0	60
8/26/1998	0	0	0	0	7.7	59
8/27/1998	0	0	0	0	6.5	59
8/28/1998	0	0	0	0	5.9	59
8/29/1998	0	0	0	0	5.3	59
8/30/1998	0	0	0	0	5.0	58
8/31/1998	0	0	0	0	4.9	58
9/1/1998	0	0	0	0	4.8	57
9/2/1998	0	0	0	0	4.5	57
9/3/1998	0	0	0	0	4.2	56
9/4/1998	0	0	0	0	3.9	56
9/5/1998	0	0	0	0	3.9	56
9/6/1998	0	0	0	0	3.6	55
9/7/1998	0	0	0	0	3.3	55
9/8/1998	0	0	0	0	3.2	54
9/9/1998	0	0	0	0	3.0	54
9/10/1998	0	0	0	0	2.9	54
9/11/1998	.4	.9	.4	0	7.0	57

Appendix 2. Daily mean streamflow for the five creeks providing recharge to the Barton Springs segment of the Edwards aquifer and daily mean discharge for Barton Springs, Austin, Texas, 1978–2003—Continued.

Date	Barton Creek	Williamson Creek	Slaughter Creek	Bear Creek	Onion Creek	Barton Springs
9/12/1998	0.1	0.1	0	0	73.0	61
9/13/1998	.2	0	0	0	65.0	60
9/14/1998	.5	0	0	0	43.0	59
9/15/1998	.7	.1	0	0	81.0	60
9/16/1998	4.2	.4	.1	0	142.0	64
9/17/1998	4.4	0	0	0	201.0	65
9/18/1998	3.6	0	0	0	135.0	62
9/19/1998	3.9	0	0	0	106.0	61
9/20/1998	3.6	0	0	.1	89.0	60
9/21/1998	3.4	0	0	.1	76.0	60
9/22/1998	3.3	0	0	.1	68.0	59
9/23/1998	3.1	0	0	.1	62.0	59
9/24/1998	3.1	0	0	.1	56.0	59
9/25/1998	2.8	0	0	.1	51.0	59
9/26/1998	2.5	0	0	.1	47.0	58
9/27/1998	2.2	0	0	0	44.0	58
9/28/1998	1.9	0	0	0	41.0	58
9/29/1998	1.7	0	0	0	37.0	58
9/30/1998	1.5	0	0	0	34.0	58
10/1/1998	1.4	0	0	0	32.0	59
10/2/1998	1.5	0	0	.1	30.0	59
10/3/1998	1.4	0	0	.1	29.0	59
10/4/1998	1.2	0	0	.1	27.0	58
10/5/1998	1.2	0	0	0	26.0	58
10/6/1998	113.0	25.0	.5	7.9	174.0	76
10/7/1998	81.0	0	0	1.6	96.0	77
10/8/1998	35.0	0	0	1.4	63.0	75
10/9/1998	25.0	0	0	1.3	53.0	74
10/10/1998	20.0	0	0	1.1	49.0	73
10/11/1998	17.0	0	0	1.1	46.0	72
10/12/1998	16.0	0	0	1.0	43.0	71
10/13/1998	15.0	0	0	.9	40.0	70
10/14/1998	14.0	0	0	.9	38.0	70
10/15/1998	13.0	0	0	.9	36.0	69
10/16/1998	13.0	0	0	.9	33.0	69
10/17/1998	2,300.0	455.0	570.0	800.0	4,100.0	68
10/18/1998	1,590.0	136.0	112.0	147.0	1,900.0	99
10/19/1998	854.0	74.0	74.0	78.0	858.0	115
10/20/1998	783.0	48.0	61.0	66.0	644.0	116
10/21/1998	515.0	23.0	51.0	54.0	521.0	113
10/22/1998	392.0	7.4	32.0	45.0	472.0	106
10/23/1998	296.0	.7	21.0	38.0	436.0	100
10/24/1998	233.0	0	15.0	33.0	410.0	101
10/25/1998	188.0	0	11.0	29.0	359.0	100
10/26/1998	161.0	0	9.0	26.0	319.0	99
10/27/1998	148.0	0	7.5	24.0	289.0	99
10/28/1998	141.0	0	6.0	22.0	273.0	99
10/29/1998	134.0	0	4.8	20.0	255.0	99
10/30/1998	127.0	0	4.3	18.0	237.0	99
10/31/1998	121.0	0	4.0	17.0	223.0	98
11/1/1998	688.0	48.0	43.0	94.0	899.0	99
11/2/1998	373.0	12.0	7.9	39.0	424.0	107
11/3/1998	243.0	5.1	3.1	34.0	355.0	105
11/4/1998	197.0	1.9	2.7	30.0	316.0	103
11/5/1998	195.0	2.9	3.2	33.0	352.0	103
11/6/1998	167.0	1.3	2.4	29.0	308.0	102
11/7/1998	159.0	0	2.7	30.0	313.0	102
11/8/1998	157.0	0	2.5	28.0	304.0	102
11/9/1998	148.0	0	2.3	26.0	293.0	102
11/10/1998	142.0	0	2.1	24.0	276.0	102
11/11/1998	131.0	0	1.8	21.0	253.0	101
11/12/1998	132.0	4.9	4.4	28.0	266.0	101
11/13/1998	152.0	7.9	11.0	42.0	307.0	103
11/14/1998	247.0	20.0	31.0	54.0	429.0	103
11/15/1998	318.0	19.0	22.0	48.0	457.0	105
11/16/1998	246.0	8.6	8.8	42.0	422.0	106
11/17/1998	209.0	4.3	4.0	36.0	395.0	105
11/18/1998	185.0	1.7	3.1	33.0	350.0	105
11/19/1998	165.0	0	2.7	29.0	319.0	105
11/20/1998	154.0	.5	2.5	27.0	297.0	105
11/21/1998	146.0	1.2	2.4	24.0	280.0	105
11/22/1998	140.0	0	2.2	23.0	266.0	105
11/23/1998	135.0	0	2.0	21.0	255.0	106
11/24/1998	130.0	0	1.9	20.0	243.0	106
11/25/1998	126.0	0	1.9	18.0	230.0	106
11/26/1998	121.0	0	1.7	17.0	215.0	106
11/27/1998	116.0	0	1.7	16.0	207.0	106
11/28/1998	113.0	0	1.7	15.0	199.0	106
11/29/1998	110.0	0	1.6	14.0	189.0	106
11/30/1998	104.0	0	1.5	13.0	174.0	106
12/1/1998	96.0	0	1.4	13.0	160.0	106
12/2/1998	93.0	0	1.5	12.0	152.0	107
12/3/1998	90.0	0	1.5	12.0	149.0	107
12/4/1998	95.0	0	1.7	14.0	146.0	107
12/5/1998	83.0	0	1.5	11.0	133.0	107
12/6/1998	77.0	0	1.4	10.0	124.0	107
12/7/1998	72.0	0	1.4	9.4	114.0	107
12/8/1998	67.0	0	1.3	8.6	103.0	107
12/9/1998	64.0	0	1.3	8.5	97.0	107
12/10/1998	82.0	.2	1.8	12.0	122.0	108
12/11/1998	116.0	1.8	2.5	15.0	141.0	108
12/12/1998	109.0	0	2.0	12.0	122.0	108
12/13/1998	93.0	0	1.8	11.0	106.0	108
12/14/1998	85.0	0	1.7	10.0	98.0	107
12/15/1998	78.0	0	1.6	9.6	93.0	104
12/16/1998	75.0	0	1.5	9.3	89.0	104
12/17/1998	71.0	0	1.4	8.9	85.0	104
12/18/1998	70.0	0	1.5	9.0	84.0	104
12/19/1998	67.0	0	1.5	8.6	83.0	104
12/20/1998	63.0	0	1.4	8.1	79.0	104

Appendix 2. Daily mean streamflow for the five creeks providing recharge to the Barton Springs segment of the Edwards aquifer and daily mean discharge for Barton Springs, Austin, Texas, 1978–2003—Continued.

Date	Barton Creek	Williamson Creek	Slaughter Creek	Bear Creek	Onion Creek	Barton Springs
12/21/1998	62.0	0	1.4	8.1	78.0	104
12/22/1998	58.0	0	1.3	7.3	72.0	104
12/23/1998	57.0	0	1.4	7.5	72.0	104
12/24/1998	56.0	0	1.4	7.5	71.0	104
12/25/1998	54.0	0	1.4	7.3	69.0	104
12/26/1998	52.0	0	1.3	7.1	67.0	104
12/27/1998	52.0	0	1.3	6.9	67.0	104
12/28/1998	50.0	0	1.2	6.5	66.0	104
12/29/1998	49.0	0	1.2	6.2	64.0	104
12/30/1998	47.0	0	1.2	5.8	61.0	104
12/31/1998	46.0	0	1.2	5.8	61.0	103
1/1/1999	46.0	0	1.2	5.8	61.0	103
1/2/1999	45.0	0	1.1	5.3	59.0	103
1/3/1999	42.0	0	1.2	4.8	55.0	103
1/4/1999	40.0	0	1.3	4.7	53.0	103
1/5/1999	39.0	0	1.2	4.7	53.0	103
1/6/1999	39.0	0	1.2	4.7	53.0	102
1/7/1999	39.0	0	1.2	4.4	51.0	102
1/8/1999	39.0	0	1.1	4.3	52.0	102
1/9/1999	36.0	0	1.0	3.8	48.0	102
1/10/1999	33.0	0	1.0	3.7	46.0	102
1/11/1999	32.0	0	1.0	3.7	46.0	102
1/12/1999	33.0	0	1.0	3.8	46.0	102
1/13/1999	32.0	0	1.0	3.6	45.0	102
1/14/1999	30.0	0	.9	3.4	42.0	102
1/15/1999	29.0	0	1.0	3.3	40.0	102
1/16/1999	28.0	0	1.0	3.4	41.0	102
1/17/1999	27.0	0	.9	3.2	40.0	102
1/18/1999	26.0	0	.8	2.9	38.0	102
1/19/1999	25.0	0	.9	3.2	37.0	102
1/20/1999	25.0	0	.9	3.0	37.0	102
1/21/1999	25.0	0	.9	2.7	38.0	102
1/22/1999	25.0	0	.8	2.7	36.0	102
1/23/1999	23.0	0	.7	2.5	34.0	101
1/24/1999	21.0	0	.7	2.5	32.0	101
1/25/1999	21.0	0	.8	2.5	32.0	101
1/26/1999	20.0	0	.8	2.5	32.0	100
1/27/1999	20.0	0	.8	2.5	32.0	100
1/28/1999	20.0	0	.8	2.5	32.0	99
1/29/1999	21.0	0	.8	2.6	32.0	99
1/30/1999	21.0	0	.8	2.3	31.0	99
1/31/1999	20.0	0	.7	2.2	29.0	99
2/1/1999	19.0	0	.7	2.2	28.0	98
2/2/1999	18.0	0	.7	2.1	28.0	98
2/3/1999	17.0	0	.7	2.0	28.0	98
2/4/1999	17.0	0	.7	2.0	27.0	97
2/5/1999	17.0	0	.7	2.0	28.0	97
2/6/1999	17.0	0	.7	2.0	28.0	97
2/7/1999	16.0	0	.7	2.0	27.0	97
2/8/1999	16.0	0	.7	1.9	25.0	97
2/9/1999	16.0	0	0.7	1.9	25.0	96
2/10/1999	15.0	0	.7	1.9	24.0	96
2/11/1999	14.0	0	.6	1.8	24.0	96
2/12/1999	13.0	0	.6	1.7	22.0	95
2/13/1999	13.0	0	.6	1.7	21.0	95
2/14/1999	13.0	0	.6	1.7	21.0	95
2/15/1999	13.0	0	.6	1.7	21.0	95
2/16/1999	12.0	0	.6	1.7	21.0	95
2/17/1999	12.0	0	.6	1.7	21.0	95
2/18/1999	12.0	0	.6	1.7	20.0	95
2/19/1999	11.0	0	.6	1.7	19.0	95
2/20/1999	11.0	0	.6	1.7	19.0	95
2/21/1999	10.0	0	.5	1.6	18.0	95
2/22/1999	10.0	0	.6	1.6	18.0	95
2/23/1999	10.0	0	.5	1.6	18.0	94
2/24/1999	10.0	0	.5	1.7	18.0	94
2/25/1999	9.9	0	.5	1.6	18.0	94
2/26/1999	10.0	0	.6	1.5	18.0	93
2/27/1999	10.0	0	.6	1.5	18.0	93
2/28/1999	10.0	0	.5	1.4	17.0	92
3/1/1999	10.0	0	.6	1.4	16.0	92
3/2/1999	9.4	0	.5	1.4	16.0	91
3/3/1999	8.5	0	.5	1.3	15.0	91
3/4/1999	8.3	0	.5	1.4	16.0	91
3/5/1999	8.4	0	.6	1.5	16.0	91
3/6/1999	8.3	0	.5	1.4	16.0	90
3/7/1999	8.1	0	.5	1.3	15.0	91
3/8/1999	8.6	0	.6	1.4	16.0	90
3/9/1999	8.5	0	.5	1.3	15.0	90
3/10/1999	8.5	0	.5	1.3	17.0	90
3/11/1999	8.5	0	.6	1.3	16.0	90
3/12/1999	9.2	.1	.6	1.9	16.0	90
3/13/1999	11.0	0	.7	1.9	18.0	91
3/14/1999	9.4	0	.6	1.3	18.0	91
3/15/1999	9.0	0	.6	1.3	16.0	90
3/16/1999	7.6	0	.6	1.3	15.0	90
3/17/1999	7.3	0	.6	1.3	15.0	90
3/18/1999	8.3	.2	.9	2.7	17.0	90
3/19/1999	12.0	.9	1.6	2.8	26.0	92
3/20/1999	12.0	0	.9	1.7	25.0	92
3/21/1999	12.0	0	.8	1.6	19.0	92
3/22/1999	11.0	0	.8	1.6	17.0	91
3/23/1999	8.9	0	.8	1.6	17.0	90
3/24/1999	8.2	0	.7	1.6	15.0	90
3/25/1999	7.8	0	.7	1.5	15.0	90
3/26/1999	7.4	0	.7	1.5	14.0	89
3/27/1999	7.4	0	.7	1.7	14.0	89
3/28/1999	11.0	0	.9	2.6	18.0	89
3/29/1999	11.0	0	.8	1.7	22.0	89
3/30/1999	12.0	0	.8	1.7	19.0	88

Appendix 2. Daily mean streamflow for the five creeks providing recharge to the Barton Springs segment of the Edwards aquifer and daily mean discharge for Barton Springs, Austin, Texas, 1978–2003—Continued.

Date	Barton Creek	Williamson Creek	Slaughter Creek	Bear Creek	Onion Creek	Barton Springs
3/31/1999	11.0	0	0.7	1.7	17.0	88
4/1/1999	10.0	0	.7	1.7	17.0	88
4/2/1999	10.0	0	.7	1.7	16.0	88
4/3/1999	9.9	0	.7	1.7	16.0	88
4/4/1999	9.1	0	.7	1.6	15.0	88
4/5/1999	8.6	0	.7	1.6	15.0	87
4/6/1999	8.1	0	.6	1.5	14.0	87
4/7/1999	7.6	0	.6	1.5	14.0	87
4/8/1999	7.5	0	.6	1.5	13.0	87
4/9/1999	7.3	0	.6	1.4	13.0	86
4/10/1999	6.8	0	.6	1.4	12.0	86
4/11/1999	6.2	0	.6	1.4	10.0	86
4/12/1999	5.6	0	.6	1.4	10.0	85
4/13/1999	5.5	0	.6	1.5	9.8	85
4/14/1999	5.5	0	.6	1.4	9.6	85
4/15/1999	4.9	0	.6	1.3	8.3	85
4/16/1999	4.6	0	.6	1.2	8.1	85
4/17/1999	4.6	0	.6	1.3	7.7	84
4/18/1999	4.0	0	.5	1.2	7.3	84
4/19/1999	3.9	0	.5	1.2	7.3	84
4/20/1999	3.6	0	.5	1.2	7.2	84
4/21/1999	3.4	0	.5	1.2	7.2	84
4/22/1999	3.3	0	.5	1.2	7.1	83
4/23/1999	3.1	0	.5	1.2	6.8	83
4/24/1999	2.9	0	.4	1.2	6.2	83
4/25/1999	3.4	0	.5	1.3	7.2	82
4/26/1999	5.6	0	.6	1.4	7.7	83
4/27/1999	5.9	0	.5	1.2	6.5	83
4/28/1999	5.2	0	.5	1.1	6.1	82
4/29/1999	4.9	0	.4	1.0	6.2	82
4/30/1999	4.2	0	.4	1.0	6.1	82
5/1/1999	4.4	0	.4	.9	6.2	81
5/2/1999	4.1	0	.4	1.0	6.1	81
5/3/1999	3.8	0	.4	1.0	6.1	80
5/4/1999	3.7	0	.4	1.0	5.9	80
5/5/1999	3.2	0	.3	.9	5.0	79
5/6/1999	2.7	0	.3	.8	4.3	79
5/7/1999	2.5	0	.3	.8	4.2	78
5/8/1999	2.1	0	.3	.8	4.4	78
5/9/1999	2.0	0	.3	.8	4.3	78
5/10/1999	7.8	0	.5	2.0	8.6	77
5/11/1999	8.7	0	.4	1.2	6.7	77
5/12/1999	7.2	0	.4	1.0	6.3	76
5/13/1999	6.7	0	.4	.9	6.0	76
5/14/1999	6.9	0	.4	.9	5.6	76
5/15/1999	6.0	0	.3	.8	5.6	75
5/16/1999	5.0	0	.3	.8	5.4	75
5/17/1999	8.6	.1	.3	.8	5.1	74
5/18/1999	50.0	0	.5	.8	5.4	74
5/19/1999	17.0	0	.4	.8	4.8	74
5/20/1999	11.0	0	0.3	0.7	4.6	74
5/21/1999	8.3	0	.3	.7	4.4	73
5/22/1999	7.5	0	.3	.7	4.1	72
5/23/1999	6.6	0	.3	.6	3.9	71
5/24/1999	6.2	0	.4	2.3	3.9	71
5/25/1999	31.0	0	.5	2.6	9.8	74
5/26/1999	45.0	4.1	5.7	1.3	4.6	74
5/27/1999	106.0	.1	2.7	1.5	8.2	76
5/28/1999	54.0	.7	3.4	2.1	7.8	76
5/29/1999	76.0	0	2.4	2.4	7.4	78
5/30/1999	51.0	0	2.0	2.0	6.8	77
5/31/1999	35.0	0	1.9	1.6	5.3	76
6/1/1999	27.0	0	1.6	1.5	5.0	75
6/2/1999	21.0	0	1.4	1.4	4.9	73
6/3/1999	16.0	0	1.4	1.3	4.6	72
6/4/1999	14.0	0	1.3	1.3	4.3	71
6/5/1999	12.0	0	1.3	1.2	4.2	70
6/6/1999	10.0	0	1.3	1.1	3.8	70
6/7/1999	9.6	0	1.2	1.1	3.8	69
6/8/1999	8.4	0	1.2	1.0	3.5	68
6/9/1999	7.6	0	1.2	1.0	3.4	68
6/10/1999	6.9	0	1.1	1.0	3.4	67
6/11/1999	6.3	0	1.1	.9	3.3	66
6/12/1999	6.0	0	1.1	.9	3.2	65
6/13/1999	5.4	0	1.0	.9	3.2	65
6/14/1999	5.3	0	1.0	.9	3.4	66
6/15/1999	4.9	0	1.0	.9	3.3	65
6/16/1999	4.8	0	1.0	.8	3.3	68
6/17/1999	4.1	0	.9	.8	3.1	68
6/18/1999	3.7	0	.9	.8	3.1	67
6/19/1999	13.0	0	.9	.7	3.2	65
6/20/1999	32.0	0	1.0	3.9	14.0	65
6/21/1999	101.0	0	1.0	2.5	11.0	68
6/22/1999	75.0	0	1.0	1.8	34.0	70
6/23/1999	59.0	0	1.0	1.7	26.0	71
6/24/1999	48.0	0	.9	1.7	20.0	71
6/25/1999	52.0	.1	1.0	1.9	19.0	70
6/26/1999	42.0	0	1.0	1.8	17.0	71
6/27/1999	39.0	0	.9	1.7	15.0	71
6/28/1999	34.0	0	.8	1.6	13.0	70
6/29/1999	28.0	0	.8	1.6	11.0	69
6/30/1999	24.0	0	.8	1.6	9.7	68
7/1/1999	21.0	0	.7	1.5	8.0	67
7/2/1999	18.0	0	.7	1.4	6.7	67
7/3/1999	15.0	0	.7	1.4	5.9	66
7/4/1999	12.0	0	.7	1.6	6.4	65
7/5/1999	13.0	0	.8	1.6	6.7	65
7/6/1999	15.0	0	.7	1.4	5.7	64
7/7/1999	13.0	0	.7	1.4	5.2	65
7/8/1999	12.0	0	.7	1.3	5.0	64

Appendix 2. Daily mean streamflow for the five creeks providing recharge to the Barton Springs segment of the Edwards aquifer and daily mean discharge for Barton Springs, Austin, Texas, 1978–2003—Continued.

Date	Barton Creek	Williamson Creek	Slaughter Creek	Bear Creek	Onion Creek	Barton Springs
7/9/1999	11.0	0	0.7	1.2	4.5	64
7/10/1999	14.0	.1	.8	1.8	5.2	63
7/11/1999	38.0	.3	1.0	2.6	51.0	66
7/12/1999	63.0	0	1.0	11.0	71.0	68
7/13/1999	48.0	0	.9	4.6	39.0	69
7/14/1999	33.0	0	.9	3.9	30.0	69
7/15/1999	26.0	0	.8	3.4	26.0	69
7/16/1999	22.0	0	.8	3.0	23.0	68
7/17/1999	20.0	0	.8	3.0	22.0	67
7/18/1999	18.0	0	.8	3.1	21.0	68
7/19/1999	16.0	0	.8	4.0	20.0	67
7/20/1999	16.0	0	.8	3.3	19.0	67
7/21/1999	18.0	0	.8	3.0	18.0	67
7/22/1999	25.0	0	.8	2.7	22.0	68
7/23/1999	25.0	0	.7	2.3	20.0	67
7/24/1999	18.0	0	.7	2.0	18.0	67
7/25/1999	13.0	0	.7	1.9	16.0	66
7/26/1999	11.0	0	.6	1.8	15.0	65
7/27/1999	11.0	0	.6	1.7	14.0	64
7/28/1999	8.0	0	.6	1.6	12.0	64
7/29/1999	6.7	0	.5	1.4	11.0	63
7/30/1999	5.8	0	.5	1.2	10.0	63
7/31/1999	5.0	0	.5	1.1	8.9	62
8/1/1999	4.1	0	.4	1.0	7.4	62
8/2/1999	3.3	0	.4	1.0	6.2	61
8/3/1999	2.8	0	.4	.9	5.8	60
8/4/1999	2.4	0	.4	.8	5.3	60
8/5/1999	2.0	0	.4	.8	5.0	59
8/6/1999	1.5	0	.4	.7	4.4	59
8/7/1999	1.5	0	.3	.6	4.3	59
8/8/1999	1.2	0	.3	.6	3.7	58
8/9/1999	1.0	0	.3	.6	3.6	58
8/10/1999	.9	0	.2	.5	3.4	57
8/11/1999	.8	0	.1	.4	3.4	57
8/12/1999	.7	0	.1	.4	3.3	57
8/13/1999	.6	0	0	.4	3.2	56
8/14/1999	.5	0	0	.3	3.0	56
8/15/1999	.4	0	0	.3	2.9	56
8/16/1999	.4	0	0	.2	2.9	55
8/17/1999	.4	0	0	.2	2.8	54
8/18/1999	.3	0	0	.2	2.8	54
8/19/1999	.3	0	0	.2	2.8	53
8/20/1999	.3	0	0	.1	2.6	53
8/21/1999	.2	0	0	.1	2.5	53
8/22/1999	.2	0	0	.1	2.4	52
8/23/1999	.3	0	0	.1	2.5	52
8/24/1999	.2	0	0	.2	2.8	51
8/25/1999	.2	0	0	.2	2.4	51
8/26/1999	.2	0	0	.1	2.0	50
8/27/1999	.2	0	0	.2	2.1	50
8/28/1999	0.2	0	0	0.1	1.9	50
8/29/1999	.1	0	0	.1	1.9	49
8/30/1999	.1	0	0	.1	1.9	49
8/31/1999	.1	0	0	.1	1.8	49
9/1/1999	.1	0	0	0	1.7	48
9/2/1999	.1	0	0	0	1.7	48
9/3/1999	.1	0	0	0	2.0	49
9/4/1999	.1	0	0	0	1.9	49
9/5/1999	.1	0	0	0	1.9	47
9/6/1999	.1	0	0	0	2.1	46
9/7/1999	.1	0	0	0	2.2	46
9/8/1999	.1	0	0	0	2.1	45
9/9/1999	.1	0	0	0	2.3	45
9/10/1999	.1	0	0	0	2.5	44
9/11/1999	.1	0	0	0	2.5	43
9/12/1999	.1	0	0	0	2.3	43
9/13/1999	.1	0	0	0	2.2	43
9/14/1999	.1	0	0	0	2.0	42
9/15/1999	.1	0	0	0	1.7	42
9/16/1999	0	0	0	0	1.5	41
9/17/1999	0	0	0	0	1.3	41
9/18/1999	0	0	0	0	1.3	41
9/19/1999	0	0	0	0	1.2	40
9/20/1999	0	0	0	0	1.2	40
9/21/1999	0	0	0	0	1.2	39
9/22/1999	0	0	0	0	1.0	39
9/23/1999	0	0	0	0	1.0	39
9/24/1999	0	0	0	0	1.0	39
9/25/1999	0	0	0	0	1.1	38
9/26/1999	0	0	0	0	1.2	38
9/27/1999	0	0	0	0	1.3	37
9/28/1999	0	0	0	0	1.3	37
9/29/1999	0	0	0	0	1.3	38
9/30/1999	0	0	0	0	1.5	37
10/1/1999	0	0	0	0	.2	37
10/2/1999	0	0	0	0	.2	36
10/3/1999	0	0	0	0	.2	36
10/4/1999	0	0	0	0	.2	36
10/5/1999	0	0	0	0	.2	36
10/6/1999	0	0	0	0	.2	35
10/7/1999	0	0	0	0	.2	34
10/8/1999	0	0	0	0	.2	34
10/9/1999	0	0	0	0	.2	34
10/10/1999	0	0	0	0	.2	34
10/11/1999	0	0	0	0	.2	34
10/12/1999	0	0	0	0	.3	33
10/13/1999	0	0	0	0	.2	33
10/14/1999	0	0	0	0	.2	33
10/15/1999	0	0	0	0	.2	33
10/16/1999	0	0	0	0	.2	33

Appendix 2. Daily mean streamflow for the five creeks providing recharge to the Barton Springs segment of the Edwards aquifer and daily mean discharge for Barton Springs, Austin, Texas, 1978–2003—Continued.

Date	Barton Creek	Williamson Creek	Slaughter Creek	Bear Creek	Onion Creek	Barton Springs
10/17/1999	0	0	0	0	0.2	33
10/18/1999	.1	0	0	0	.2	33
10/19/1999	0	0	0	0	.2	33
10/20/1999	0	0	0	0	.2	33
10/21/1999	0	0	0	0	.2	33
10/22/1999	0	0	0	0	.2	32
10/23/1999	0	0	0	0	.2	32
10/24/1999	0	0	0	0	.2	32
10/25/1999	0	0	0	0	.2	32
10/26/1999	0	0	0	0	.2	32
10/27/1999	0	0	0	0	.2	32
10/28/1999	0	0	0	0	.2	31
10/29/1999	0	0	0	0	.2	31
10/30/1999	.2	0	0	0	.2	31
10/31/1999	0	0	0	0	.2	34
11/1/1999	0	0	0	0	.2	33
11/2/1999	0	0	0	0	.2	32
11/3/1999	.1	0	0	0	.2	33
11/4/1999	.1	0	0	0	.2	33
11/5/1999	.1	0	0	0	.2	31
11/6/1999	.1	0	0	0	.2	31
11/7/1999	.1	0	0	0	.2	31
11/8/1999	.1	0	0	0	.2	30
11/9/1999	.1	0	0	0	.2	30
11/10/1999	.2	0	0	0	.2	31
11/11/1999	.2	0	0	0	.2	31
11/12/1999	.2	0	0	0	.2	30
11/13/1999	.3	0	0	0	.2	30
11/14/1999	.3	0	0	0	.2	30
11/15/1999	.3	0	0	0	.2	30
11/16/1999	.3	0	0	0	.2	31
11/17/1999	.3	0	0	0	.2	31
11/18/1999	.3	0	0	0	.2	31
11/19/1999	.3	0	0	0	.2	31
11/20/1999	.3	0	0	0	.2	31
11/21/1999	.3	0	0	0	.2	31
11/22/1999	.3	0	0	0	.2	30
11/23/1999	.3	0	0	0	.2	30
11/24/1999	.3	0	0	0	.2	31
11/25/1999	.3	0	0	0	.2	31
11/26/1999	.3	0	0	0	.2	31
11/27/1999	.3	0	0	0	.2	31
11/28/1999	.3	0	0	0	.2	30
11/29/1999	.3	0	0	0	.2	29
11/30/1999	.3	0	0	0	.2	29
12/1/1999	.3	0	0	0	.2	29
12/2/1999	.3	0	0	0	.2	29
12/3/1999	.3	0	0	0	.2	30
12/4/1999	.3	0	0	0	.2	30
12/5/1999	.3	0	0	0	.2	29
12/6/1999	0.3	0	0	0	0.2	30
12/7/1999	.3	0	0	0	.2	30
12/8/1999	.4	0	0	0	.2	30
12/9/1999	.4	0	0	0	.2	30
12/10/1999	.4	0	0	0	.2	29
12/11/1999	.4	0	0	0	.2	29
12/12/1999	.6	0	0	0	.2	30
12/13/1999	.4	0	0	0	.2	30
12/14/1999	.4	0	0	0	.2	30
12/15/1999	.4	0	0	0	.2	30
12/16/1999	.5	0	0	0	.2	30
12/17/1999	.6	0	0	0	.2	29
12/18/1999	.5	0	0	0	.2	28
12/19/1999	.6	0	0	0	.2	28
12/20/1999	.6	0	0	0	.2	28
12/21/1999	.6	0	0	0	.2	29
12/22/1999	.6	0	0	0	.2	29
12/23/1999	.6	0	0	0	.2	28
12/24/1999	.6	0	0	0	.2	28
12/25/1999	.6	0	0	0	.2	28
12/26/1999	.6	0	0	0	.2	28
12/27/1999	.6	0	0	0	.2	28
12/28/1999	.6	0	0	0	.2	28
12/29/1999	.6	0	0	0	.2	29
12/30/1999	.7	0	0	0	.2	29
12/31/1999	.7	0	0	0	.2	28
1/1/2000	.7	0	0	0	.2	28
1/2/2000	.7	0	0	0	.2	28
1/3/2000	.7	0	0	0	.2	28
1/4/2000	.6	0	0	0	.2	28
1/5/2000	.7	0	0	0	.2	28
1/6/2000	1.0	0	0	0	.2	27
1/7/2000	1.4	.1	0	0	.2	29
1/8/2000	3.3	0	0	0	.3	34
1/9/2000	1.8	0	0	0	.3	33
1/10/2000	1.6	0	0	0	.3	31
1/11/2000	1.5	0	0	0	.3	30
1/12/2000	1.5	0	0	0	.3	30
1/13/2000	1.5	0	0	0	.3	29
1/14/2000	1.5	0	0	0	.2	29
1/15/2000	1.4	0	0	0	.2	29
1/16/2000	1.4	0	0	0	.3	29
1/17/2000	1.4	0	0	0	.3	28
1/18/2000	1.5	0	0	0	.3	28
1/19/2000	1.4	0	0	0	.3	28
1/20/2000	1.4	0	0	0	.3	28
1/21/2000	1.4	0	0	0	.3	29
1/22/2000	1.4	0	0	0	.3	29
1/23/2000	1.4	0	0	0	.3	29
1/24/2000	1.2	0	0	0	.3	28

Appendix 2. Daily mean streamflow for the five creeks providing recharge to the Barton Springs segment of the Edwards aquifer and daily mean discharge for Barton Springs, Austin, Texas, 1978–2003—Continued.

Date	Barton Creek	Williamson Creek	Slaughter Creek	Bear Creek	Onion Creek	Barton Springs
1/25/2000	1.3	0	0	0	0.3	28
1/26/2000	1.4	0	0	0	.3	27
1/27/2000	3.2	0	0	0	.3	28
1/28/2000	3.5	0	0	0	.3	30
1/29/2000	2.3	0	0	0	.3	29
1/30/2000	2.0	0	0	0	.3	29
1/31/2000	2.0	0	0	0	.3	28
2/1/2000	2.1	0	0	0	.3	28
2/2/2000	2.1	0	0	0	.3	29
2/3/2000	2.1	0	0	0	.3	29
2/4/2000	2.0	0	0	0	.3	28
2/5/2000	2.0	0	0	0	.3	28
2/6/2000	1.9	0	0	0	.3	27
2/7/2000	1.9	0	0	0	.3	27
2/8/2000	1.9	0	0	0	.3	27
2/9/2000	1.9	0	0	0	.3	27
2/10/2000	2.0	0	0	0	.3	27
2/11/2000	1.8	0	0	0	.3	26
2/12/2000	1.7	0	0	0	.3	26
2/13/2000	1.7	0	0	0	.3	26
2/14/2000	1.9	0	0	0	.3	26
2/15/2000	3.5	0	0	0	.3	25
2/16/2000	3.2	0	0	0	.3	25
2/17/2000	3.1	0	0	.1	.2	25
2/18/2000	3.0	0	0	.1	.2	25
2/19/2000	3.0	0	0	.1	.2	25
2/20/2000	2.5	0	0	0	.2	25
2/21/2000	1.6	0	0	.1	.2	25
2/22/2000	1.5	0	0	.1	.2	25
2/23/2000	2.4	0	.1	.2	.3	29
2/24/2000	1.7	0	0	.1	.3	29
2/25/2000	1.6	0	0	.1	.3	27
2/26/2000	3.9	0	.1	.1	.3	29
2/27/2000	2.7	0	0	.1	.3	29
2/28/2000	2.1	0	0	.1	.3	28
2/29/2000	2.0	0	0	.1	.4	28
3/1/2000	1.9	0	0	.1	.3	28
3/2/2000	1.8	0	0	.1	.3	28
3/3/2000	1.7	0	0	.1	.3	28
3/4/2000	1.7	0	0	.1	.3	28
3/5/2000	1.7	0	0	0	.3	28
3/6/2000	1.6	0	0	.1	.3	27
3/7/2000	1.6	0	0	.1	.3	27
3/8/2000	1.5	0	0	.1	.4	28
3/9/2000	1.5	0	0	.1	.4	28
3/10/2000	1.4	0	0	.1	.4	27
3/11/2000	1.3	0	0	.1	.4	27
3/12/2000	1.3	0	0	.1	.4	26
3/13/2000	1.3	0	0	.1	.3	26
3/14/2000	1.4	0	0	.1	.3	26
3/15/2000	1.4	0	0	0.1	0.3	26
3/16/2000	1.4	0	0	0	.3	26
3/17/2000	2.1	0	0	.1	.4	28
3/18/2000	1.7	0	0	.1	.3	29
3/19/2000	1.6	0	0	.1	.3	28
3/20/2000	1.6	0	0	.1	.3	28
3/21/2000	1.6	0	0	.1	.6	28
3/22/2000	1.7	0	0	.1	1.2	28
3/23/2000	1.7	0	0	.1	1.2	27
3/24/2000	1.7	0	0	.1	.5	26
3/25/2000	1.7	0	0	.1	.3	26
3/26/2000	1.7	0	0	.1	.3	26
3/27/2000	1.6	0	0	.1	.3	26
3/28/2000	1.6	0	0	.1	.3	26
3/29/2000	1.7	0	0	.2	.4	26
3/30/2000	1.7	0	0	.1	.5	26
3/31/2000	1.6	0	0	.1	.3	26
4/1/2000	1.6	0	0	.1	.3	25
4/2/2000	2.1	0	0	.1	.3	26
4/3/2000	3.9	0	.1	.2	.3	30
4/4/2000	3.3	0	0	.1	.4	31
4/5/2000	3.0	0	0	.1	.3	29
4/6/2000	2.9	0	0	.1	.3	28
4/7/2000	2.8	0	0	.1	.3	27
4/8/2000	2.8	0	0	.1	.3	26
4/9/2000	2.8	0	0	.1	.3	26
4/10/2000	2.8	0	0	0	.3	26
4/11/2000	2.8	0	0	.1	.3	26
4/12/2000	3.9	0	0	.1	.3	28
4/13/2000	3.3	0	0	.1	.3	28
4/14/2000	3.1	0	0	.1	.3	27
4/15/2000	3.0	0	0	.1	.3	27
4/16/2000	2.9	0	0	0	.3	26
4/17/2000	2.7	0	0	0	.2	26
4/18/2000	2.3	0	0	0	.2	26
4/19/2000	2.2	0	0	.1	.3	25
4/20/2000	2.1	0	0	0	.2	24
4/21/2000	2.0	0	0	0	.2	24
4/22/2000	1.9	0	0	0	.2	24
4/23/2000	1.7	0	0	0	.2	24
4/24/2000	1.6	0	0	0	.2	24
4/25/2000	1.5	0	0	0	.2	23
4/26/2000	1.5	0	0	0	.2	23
4/27/2000	1.5	0	0	0	.2	22
4/28/2000	1.3	0	0	0	.2	22
4/29/2000	1.2	0	0	0	.2	21
4/30/2000	1.2	0	0	0	.2	18
5/1/2000	5.3	1.4	.1	.1	.3	27
5/2/2000	22.0	5.6	.2	4.6	1.4	39
5/3/2000	11.0	0	0	.8	.7	39

Appendix 2. Daily mean streamflow for the five creeks providing recharge to the Barton Springs segment of the Edwards aquifer and daily mean discharge for Barton Springs, Austin, Texas, 1978–2003—Continued.

Date	Barton Creek	Williamson Creek	Slaughter Creek	Bear Creek	Onion Creek	Barton Springs
5/4/2000	8.4	0	0	0.6	0.4	35
5/5/2000	7.0	0	0	.5	.3	33
5/6/2000	6.3	0	0	.4	.3	31
5/7/2000	5.6	0	0	.3	.6	30
5/8/2000	5.1	0	0	.2	1.4	28
5/9/2000	4.8	0	0	.2	1.5	27
5/10/2000	4.7	0	0	.2	1.5	26
5/11/2000	4.4	0	0	.2	1.4	25
5/12/2000	4.3	0	0	.1	1.7	24
5/13/2000	4.7	0	0	.1	1.8	24
5/14/2000	4.4	0	0	.1	1.4	24
5/15/2000	4.0	0	0	.1	1.4	24
5/16/2000	3.6	0	0	.1	1.5	24
5/17/2000	3.3	0	0	.1	1.4	24
5/18/2000	3.0	0	0	.1	1.4	23
5/19/2000	3.3	.1	0	.1	1.4	23
5/20/2000	3.4	0	0	.1	1.8	25
5/21/2000	3.1	0	0	.1	1.6	24
5/22/2000	2.8	0	0	.1	1.4	23
5/23/2000	2.7	0	0	.1	1.4	22
5/24/2000	2.5	0	0	.1	1.2	22
5/25/2000	2.3	0	0	0	.8	21
5/26/2000	2.2	0	0	0	.7	22
5/27/2000	2.1	0	0	0	.8	22
5/28/2000	1.9	0	0	0	.9	22
5/29/2000	1.8	0	0	0	.8	22
5/30/2000	1.6	0	0	0	.8	21
5/31/2000	1.5	0	0	0	.7	21
6/1/2000	1.3	0	0	0	.5	20
6/2/2000	1.2	0	0	0	.4	20
6/3/2000	1.1	0	0	0	.4	21
6/4/2000	1.7	1.3	.1	.1	.6	23
6/5/2000	1.4	0	0	0	1.4	26
6/6/2000	.8	0	0	0	1.1	25
6/7/2000	.7	0	0	0	.7	24
6/8/2000	2.2	.1	0	0	.6	21
6/9/2000	276.0	79.0	151.0	57.0	28.0	37
6/10/2000	284.0	15.0	49.0	15.0	40.0	63
6/11/2000	107.0	2.6	31.0	12.0	69.0	65
6/12/2000	63.0	0	9.6	8.1	36.0	64
6/13/2000	44.0	0	5.1	6.5	25.0	63
6/14/2000	35.0	0	2.9	5.5	18.0	62
6/15/2000	28.0	0	2.4	4.7	14.0	61
6/16/2000	24.0	0	2.2	4.1	11.0	61
6/17/2000	20.0	0	2.0	3.8	8.4	60
6/18/2000	21.0	0	2.2	3.6	6.9	59
6/19/2000	47.0	0	36.0	9.9	6.6	59
6/20/2000	49.0	0	23.0	5.4	5.2	63
6/21/2000	36.0	0	14.0	4.6	4.2	64
6/22/2000	30.0	0	8.9	4.0	3.6	63
6/23/2000	25.0	0	5.9	3.4	3.1	61
6/24/2000	21.0	0	4.0	3.1	2.9	57
6/25/2000	17.0	0	3.4	2.7	2.7	56
6/26/2000	14.0	0	3.1	2.4	2.6	55
6/27/2000	12.0	0	2.8	2.2	2.3	54
6/28/2000	10.0	0	2.5	2.1	2.3	53
6/29/2000	9.3	0	2.2	1.9	2.2	51
6/30/2000	8.3	0	2.1	1.7	2.1	49
7/1/2000	7.3	0	1.9	1.6	1.2	48
7/2/2000	6.2	0	1.7	1.5	1.1	48
7/3/2000	5.6	0	1.6	1.4	.9	47
7/4/2000	4.9	0	1.5	1.3	.8	46
7/5/2000	4.4	0	1.4	1.1	.7	45
7/6/2000	4.0	0	1.3	1.0	.6	44
7/7/2000	3.5	0	1.1	.9	.7	43
7/8/2000	3.1	0	1.0	.8	.6	43
7/9/2000	2.7	0	.9	.7	.6	43
7/10/2000	2.4	0	.8	.7	.5	42
7/11/2000	2.2	0	.7	.6	.3	42
7/12/2000	2.0	0	.7	.6	.3	41
7/13/2000	1.9	0	.6	.5	.3	34
7/14/2000	1.8	0	.5	.5	.3	36
7/15/2000	1.7	0	.4	.4	.3	35
7/16/2000	1.6	0	.4	.4	.3	36
7/17/2000	1.5	0	.3	.4	.3	36
7/18/2000	1.5	0	.3	.4	.3	36
7/19/2000	1.3	0	.3	.4	.3	35
7/20/2000	1.2	0	.2	.3	.2	34
7/21/2000	1.1	0	.2	.3	.2	34
7/22/2000	1.0	0	.2	.3	.2	33
7/23/2000	1.1	0	.1	.3	.2	33
7/24/2000	1.0	0	.1	.2	.2	33
7/25/2000	.8	0	.1	.2	.2	33
7/26/2000	.7	0	0	.2	.2	32
7/27/2000	.7	0	0	.2	.2	32
7/28/2000	.6	0	0	.2	.2	32
7/29/2000	.5	0	0	.2	.2	33
7/30/2000	.4	0	0	.2	.2	33
7/31/2000	.3	0	0	.2	.2	33
8/1/2000	.3	0	0	.2	.2	32
8/2/2000	.2	0	0	.1	.2	32
8/3/2000	.2	0	0	.1	.2	31
8/4/2000	.2	0	0	.1	.2	29
8/5/2000	.1	0	0	.1	.2	29
8/6/2000	.1	0	0	.1	.2	28
8/7/2000	.1	0	0	.1	.2	28
8/8/2000	.1	0	0	.1	.1	28
8/9/2000	.1	0	0	.1	.1	29
8/10/2000	.1	0	0	.1	.1	29
8/11/2000	.1	0	0	.1	.1	28

Appendix 2. Daily mean streamflow for the five creeks providing recharge to the Barton Springs segment of the Edwards aquifer and daily mean discharge for Barton Springs, Austin, Texas, 1978–2003—Continued.

Date	Barton Creek	Williamson Creek	Slaughter Creek	Bear Creek	Onion Creek	Barton Springs
8/12/2000	0	0	0	0.1	0.1	28
8/13/2000	0	0	0	.1	.1	28
8/14/2000	0	0	0	0	.1	26
8/15/2000	0	0	0	0	.1	24
8/16/2000	0	0	0	0	.1	24
8/17/2000	0	0	0	0	.1	23
8/18/2000	0	0	0	0	.1	24
8/19/2000	0	0	0	0	.1	25
8/20/2000	0	0	0	0	.1	25
8/21/2000	0	0	0	0	.1	24
8/22/2000	0	0	0	0	.1	24
8/23/2000	0	0	0	0	.1	26
8/24/2000	0	0	0	0	.1	25
8/25/2000	0	0	0	0	.1	25
8/26/2000	0	0	0	0	.1	25
8/27/2000	0	0	0	0	.1	25
8/28/2000	0	0	0	0	.1	25
8/29/2000	0	0	0	0	.1	24
8/30/2000	0	0	0	0	.1	24
8/31/2000	0	0	0	0	.1	24
9/1/2000	0	0	0	0	.1	22
9/2/2000	0	0	0	0	.1	24
9/3/2000	0	0	0	0	0	23
9/4/2000	0	0	0	0	0	23
9/5/2000	0	0	0	0	0	22
9/6/2000	0	0	0	0	0	22
9/7/2000	0	0	0	0	0	21
9/8/2000	0	0	0	0	0	19
9/9/2000	0	0	0	0	0	20
9/10/2000	0	0	0	0	0	20
9/11/2000	0	0	0	0	0	21
9/12/2000	0	0	0	0	0	20
9/13/2000	0	0	0	0	0	22
9/14/2000	0	0	0	0	0	20
9/15/2000	0	0	0	0	0	19
9/16/2000	0	0	0	0	0	19
9/17/2000	0	0	0	0	0	25
9/18/2000	0	0	0	0	0	25
9/19/2000	0	0	0	0	0	24
9/20/2000	0	0	0	0	0	24
9/21/2000	0	0	0	0	0	21
9/22/2000	0	0	0	0	0	18
9/23/2000	0	0	0	0	0	19
9/24/2000	0	0	0	0	0	19
9/25/2000	0	0	0	0	0	19
9/26/2000	0	0	0	0	0	20
9/27/2000	0	0	0	0	0	21
9/28/2000	0	0	0	0	0	20
9/29/2000	0	0	0	0	0	19
9/30/2000	0	0	0	0	0	21
10/1/2000	0	0	0	0	0	20
10/2/2000	0	0	0	0	0	18
10/3/2000	0	0	0	0	0	17
10/4/2000	0	0	0	0	0	17
10/5/2000	0	0	0	0	0	16
10/6/2000	0	0	0	0	0	16
10/7/2000	0	0	0	0	0	18
10/8/2000	0	0	0	0	0	24
10/9/2000	0	0	0	0	0	24
10/10/2000	0	0	0	0	0	24
10/11/2000	0	0	0	0	0	22
10/12/2000	0	0	0	0	0	18
10/13/2000	0	0	0	0	0	18
10/14/2000	0	0	0	0	0	19
10/15/2000	0	0	0	0	0	20
10/16/2000	0	0	0	0	0	26
10/17/2000	0	0	0	0	0	26
10/18/2000	0	0	0	0	0	26
10/19/2000	0	0	0	0	0	24
10/20/2000	0	0	0	0	0	25
10/21/2000	.3	.1	0	.1	0	30
10/22/2000	3.8	.5	0	1.8	0	41
10/23/2000	4.7	0	0	3.0	0	47
10/24/2000	7.4	0	0	1.0	0	46
10/25/2000	5.8	0	0	.7	0	45
10/26/2000	4.0	0	0	.6	.1	44
10/27/2000	3.7	0	0	.5	.1	41
10/28/2000	3.9	0	0	.5	.1	41
10/29/2000	3.1	0	0	.5	.1	40
10/30/2000	2.1	0	0	.4	.1	38
10/31/2000	1.7	0	0	.4	.1	37
11/1/2000	1.5	0	0	.4	.1	37
11/2/2000	8.6	33.0	12.0	109.0	551.0	44
11/3/2000	454.0	179.0	113.0	127.0	615.0	51
11/4/2000	255.0	34.0	41.0	36.0	129.0	58
11/5/2000	118.0	26.0	29.0	66.0	103.0	62
11/6/2000	619.0	51.0	69.0	97.0	374.0	64
11/7/2000	307.0	21.0	46.0	52.0	148.0	67
11/8/2000	334.0	9.8	43.0	44.0	140.0	69
11/9/2000	232.0	3.5	20.0	32.0	106.0	70
11/10/2000	171.0	.1	10.0	26.0	90.0	72
11/11/2000	140.0	0	6.2	22.0	80.0	73
11/12/2000	115.0	.7	5.9	21.0	74.0	75
11/13/2000	98.0	0	3.7	17.0	66.0	76
11/14/2000	87.0	0	3.2	16.0	60.0	77
11/15/2000	81.0	0	3.1	15.0	58.0	78
11/16/2000	78.0	0	3.3	14.0	56.0	79
11/17/2000	73.0	0	3.2	13.0	52.0	79
11/18/2000	92.0	4.2	26.0	22.0	67.0	80
11/19/2000	126.0	1.8	26.0	21.0	94.0	80

Appendix 2. Daily mean streamflow for the five creeks providing recharge to the Barton Springs segment of the Edwards aquifer and daily mean discharge for Barton Springs, Austin, Texas, 1978–2003—Continued.

Date	Barton Creek	Williamson Creek	Slaughter Creek	Bear Creek	Onion Creek	Barton Springs
11/20/2000	115.0	0.5	15.0	17.0	81.0	81
11/21/2000	105.0	.1	10.0	16.0	75.0	81
11/22/2000	94.0	0	10.0	15.0	74.0	82
11/23/2000	97.0	0	14.0	16.0	77.0	82
11/24/2000	119.0	1.2	24.0	19.0	101.0	82
11/25/2000	112.0	.2	15.0	16.0	95.0	83
11/26/2000	99.0	0	11.0	15.0	87.0	83
11/27/2000	94.0	0	9.6	14.0	82.0	84
11/28/2000	90.0	0	9.9	13.0	79.0	84
11/29/2000	86.0	0	8.8	13.0	75.0	84
11/30/2000	78.0	0	7.4	12.0	71.0	84
12/1/2000	73.0	0	7.5	12.0	70.0	84
12/2/2000	68.0	0	5.2	11.0	65.0	84
12/3/2000	63.0	0	5.0	11.0	63.0	85
12/4/2000	62.0	0	5.3	11.0	63.0	84
12/5/2000	61.0	0	4.5	10.0	61.0	84
12/6/2000	59.0	0	4.4	10.0	60.0	84
12/7/2000	54.0	0	4.1	9.7	57.0	84
12/8/2000	51.0	0	3.9	9.6	54.0	84
12/9/2000	47.0	0	3.9	9.2	52.0	84
12/10/2000	44.0	0	3.8	9.0	52.0	84
12/11/2000	43.0	0	3.8	8.8	50.0	85
12/12/2000	34.0	0	3.5	8.2	44.0	85
12/13/2000	48.0	.4	15.0	11.0	66.0	86
12/14/2000	63.0	0	11.0	10.0	65.0	85
12/15/2000	58.0	0	8.7	10.0	59.0	85
12/16/2000	56.0	0	6.9	9.4	57.0	85
12/17/2000	51.0	0	4.8	8.9	50.0	85
12/18/2000	50.0	0	5.3	8.8	50.0	85
12/19/2000	50.0	0	3.9	8.5	47.0	85
12/20/2000	48.0	0	3.8	8.5	48.0	85
12/21/2000	48.0	0	3.4	8.2	45.0	85
12/22/2000	45.0	0	3.3	8.1	42.0	83
12/23/2000	45.0	0	3.4	8.1	43.0	83
12/24/2000	45.0	0	3.4	8.0	44.0	83
12/25/2000	46.0	3.7	19.0	16.0	62.0	83
12/26/2000	194.0	23.0	68.0	38.0	157.0	86
12/27/2000	156.0	14.0	51.0	29.0	155.0	90
12/28/2000	186.0	5.1	37.0	24.0	123.0	90
12/29/2000	150.0	1.8	28.0	21.0	109.0	90
12/30/2000	137.0	.8	24.0	19.0	102.0	90
12/31/2000	137.0	.5	21.0	18.0	99.0	90
1/1/2001	122.0	.3	18.0	16.0	95.0	90
1/2/2001	107.0	.1	16.0	15.0	90.0	90
1/3/2001	102.0	0	15.0	15.0	87.0	90
1/4/2001	99.0	0	13.0	14.0	85.0	90
1/5/2001	94.0	0	10.0	14.0	82.0	90
1/6/2001	87.0	0	9.3	13.0	79.0	89
1/7/2001	83.0	0	8.3	13.0	77.0	89
1/8/2001	77.0	0	6.3	12.0	72.0	89
1/9/2001	75.0	0	4.8	12.0	69.0	89
1/10/2001	137.0	17.0	45.0	45.0	214.0	89
1/11/2001	326.0	5.3	37.0	24.0	239.0	92
1/12/2001	174.0	2.3	27.0	20.0	149.0	93
1/13/2001	163.0	2.1	28.0	21.0	137.0	93
1/14/2001	156.0	1.4	25.0	19.0	128.0	93
1/15/2001	144.0	.9	20.0	17.0	119.0	94
1/16/2001	138.0	.5	19.0	17.0	115.0	94
1/17/2001	148.0	1.4	26.0	20.0	135.0	93
1/18/2001	199.0	2.7	35.0	21.0	159.0	94
1/19/2001	191.0	2.1	33.0	20.0	144.0	95
1/20/2001	164.0	1.0	26.0	19.0	128.0	95
1/21/2001	157.0	.6	23.0	17.0	125.0	95
1/22/2001	151.0	.3	20.0	16.0	119.0	96
1/23/2001	145.0	.1	19.0	16.0	116.0	96
1/24/2001	144.0	0	16.0	15.0	110.0	96
1/25/2001	139.0	0	14.0	14.0	105.0	96
1/26/2001	142.0	0	13.0	14.0	104.0	96
1/27/2001	147.0	.5	18.0	15.0	108.0	96
1/28/2001	160.0	.3	22.0	15.0	127.0	97
1/29/2001	175.0	2.7	31.0	16.0	138.0	98
1/30/2001	168.0	1.0	23.0	15.0	124.0	98
1/31/2001	149.0	.4	19.0	14.0	114.0	98
2/1/2001	139.0	.1	17.0	13.0	110.0	99
2/2/2001	134.0	.1	14.0	13.0	106.0	99
2/3/2001	126.0	0	14.0	13.0	104.0	99
2/4/2001	122.0	0	11.0	12.0	100.0	99
2/5/2001	114.0	0	9.7	12.0	97.0	99
2/6/2001	111.0	0	9.1	12.0	95.0	99
2/7/2001	106.0	0	7.8	11.0	93.0	99
2/8/2001	103.0	0	7.8	11.0	93.0	100
2/9/2001	103.0	0	6.9	11.0	90.0	100
2/10/2001	95.0	0	5.2	10.0	84.0	100
2/11/2001	91.0	0	5.2	10.0	83.0	100
2/12/2001	89.0	0	5.2	10.0	81.0	100
2/13/2001	85.0	0	5.2	10.0	80.0	100
2/14/2001	84.0	0	5.1	10.0	79.0	100
2/15/2001	82.0	0	4.9	10.0	78.0	99
2/16/2001	108.0	1.2	16.0	12.0	104.0	100
2/17/2001	114.0	0	8.9	10.0	86.0	100
2/18/2001	92.0	0	7.8	10.0	80.0	100
2/19/2001	87.0	0	7.5	10.0	79.0	100
2/20/2001	85.0	0	6.4	9.9	77.0	100
2/21/2001	83.0	0	6.3	9.6	76.0	100
2/22/2001	81.0	0	5.7	9.3	73.0	100
2/23/2001	81.0	0	6.9	9.5	73.0	99
2/24/2001	83.0	0	7.2	9.5	78.0	99
2/25/2001	77.0	0	5.2	8.9	71.0	99
2/26/2001	70.0	0	5.1	8.9	67.0	99
2/27/2001	70.0	0	5.2	8.9	67.0	99

Appendix 2. Daily mean streamflow for the five creeks providing recharge to the Barton Springs segment of the Edwards aquifer and daily mean discharge for Barton Springs, Austin, Texas, 1978–2003—Continued.

Date	Barton Creek	Williamson Creek	Slaughter Creek	Bear Creek	Onion Creek	Barton Springs
2/28/2001	71.0	0	5.1	8.9	65.0	99
3/1/2001	75.0	0	6.3	9.4	69.0	99
3/2/2001	81.0	0	7.2	9.3	71.0	99
3/3/2001	118.0	4.2	27.0	16.0	111.0	99
3/4/2001	159.0	1.0	24.0	13.0	113.0	99
3/5/2001	132.0	.1	20.0	12.0	98.0	99
3/6/2001	125.0	0	19.0	12.0	95.0	99
3/7/2001	122.0	0	18.0	12.0	94.0	99
3/8/2001	123.0	0	19.0	12.0	94.0	99
3/9/2001	124.0	0	18.0	12.0	93.0	100
3/10/2001	118.0	0	16.0	12.0	91.0	100
3/11/2001	116.0	0	16.0	12.0	90.0	100
3/12/2001	201.0	27.0	59.0	37.0	268.0	101
3/13/2001	170.0	2.1	32.0	15.0	225.0	101
3/14/2001	171.0	8.6	45.0	20.0	228.0	102
3/15/2001	209.0	4.2	40.0	19.0	227.0	102
3/16/2001	171.0	1.3	32.0	16.0	205.0	102
3/17/2001	160.0	.9	29.0	16.0	194.0	102
3/18/2001	185.0	3.3	34.0	19.0	197.0	102
3/19/2001	223.0	1.3	32.0	18.0	194.0	103
3/20/2001	175.0	.5	27.0	16.0	171.0	102
3/21/2001	173.0	.1	24.0	14.0	157.0	102
3/22/2001	161.0	0	22.0	13.0	150.0	102
3/23/2001	154.0	0	20.0	12.0	143.0	102
3/24/2001	151.0	.1	20.0	12.0	136.0	102
3/25/2001	141.0	0	18.0	11.0	124.0	102
3/26/2001	134.0	0	17.0	10.0	118.0	102
3/27/2001	188.0	4.3	30.0	12.0	126.0	103
3/28/2001	307.0	2.6	36.0	14.0	154.0	104
3/29/2001	240.0	1.2	29.0	12.0	133.0	103
3/30/2001	222.0	.7	26.0	12.0	118.0	103
3/31/2001	216.0	.3	24.0	11.0	111.0	103
4/1/2001	195.0	.1	22.0	11.0	105.0	103
4/2/2001	182.0	0	21.0	10.0	104.0	104
4/3/2001	170.0	0	20.0	10.0	101.0	103
4/4/2001	162.0	0	19.0	10.0	97.0	103
4/5/2001	157.0	0	18.0	9.5	93.0	103
4/6/2001	150.0	0	16.0	9.0	89.0	103
4/7/2001	143.0	0	15.0	8.5	84.0	103
4/8/2001	137.0	0	14.0	8.1	80.0	103
4/9/2001	128.0	0	13.0	7.9	75.0	103
4/10/2001	120.0	0	12.0	7.6	70.0	103
4/11/2001	114.0	0	11.0	7.2	66.0	103
4/12/2001	106.0	0	10.0	7.1	62.0	103
4/13/2001	102.0	0	9.6	7.0	61.0	103
4/14/2001	99.0	0	9.0	6.6	57.0	103
4/15/2001	92.0	0	7.6	6.1	52.0	103
4/16/2001	87.0	0	5.5	5.7	49.0	103
4/17/2001	81.0	0	4.9	5.5	46.0	102
4/18/2001	80.0	0	5.0	5.4	45.0	103
4/19/2001	76.0	0	4.7	5.3	43.0	103
4/20/2001	71.0	0	4.3	5.0	42.0	103
4/21/2001	68.0	0	3.9	4.7	39.0	103
4/22/2001	66.0	0	3.6	4.6	36.0	103
4/23/2001	79.0	0	4.6	5.7	55.0	103
4/24/2001	98.0	0	3.8	4.8	53.0	103
4/25/2001	69.0	0	3.3	4.5	38.0	103
4/26/2001	59.0	0	3.0	4.3	33.0	102
4/27/2001	53.0	0	2.9	4.1	30.0	102
4/28/2001	49.0	0	2.7	4.0	27.0	102
4/29/2001	46.0	0	2.5	3.9	25.0	102
4/30/2001	44.0	0	2.3	3.9	24.0	102
5/1/2001	43.0	0	2.2	3.8	23.0	102
5/2/2001	40.0	0	2.0	3.6	21.0	102
5/3/2001	39.0	0	1.9	3.6	19.0	102
5/4/2001	37.0	0	1.9	3.6	17.0	102
5/5/2001	52.0	0	3.0	4.5	33.0	103
5/6/2001	74.0	11.0	6.4	5.4	53.0	103
5/7/2001	257.0	9.1	20.0	13.0	1,040.0	105
5/8/2001	116.0	.9	5.4	7.9	215.0	105
5/9/2001	131.0	0	4.7	6.6	195.0	105
5/10/2001	84.0	0	3.5	5.4	162.0	105
5/11/2001	70.0	0	3.1	4.9	147.0	104
5/12/2001	64.0	0	2.9	4.7	159.0	104
5/13/2001	67.0	0	2.7	4.6	175.0	103
5/14/2001	65.0	0	2.6	4.4	135.0	103
5/15/2001	55.0	0	2.4	4.3	125.0	103
5/16/2001	50.0	0	2.4	4.1	116.0	103
5/17/2001	48.0	0	2.2	4.0	112.0	102
5/18/2001	43.0	0	2.1	3.8	106.0	102
5/19/2001	40.0	0	2.0	3.9	103.0	102
5/20/2001	38.0	0	2.1	3.8	101.0	102
5/21/2001	37.0	0	1.8	3.8	96.0	102
5/22/2001	34.0	0	1.6	3.4	87.0	102
5/23/2001	30.0	0	1.6	3.2	76.0	102
5/24/2001	28.0	0	1.5	3.1	72.0	102
5/25/2001	30.0	0	1.6	3.2	88.0	102
5/26/2001	39.0	0	1.8	3.4	79.0	102
5/27/2001	43.0	0	1.7	3.3	71.0	103
5/28/2001	36.0	0	1.4	2.9	64.0	103
5/29/2001	30.0	0	1.3	2.8	58.0	102
5/30/2001	26.0	0	1.2	2.7	55.0	102
5/31/2001	26.0	0	1.1	2.6	53.0	101
6/1/2001	22.0	0	1.1	2.5	53.0	100
6/2/2001	21.0	0	1.1	2.4	51.0	100
6/3/2001	21.0	0	1.0	2.2	41.0	100
6/4/2001	17.0	0	.9	2.1	36.0	99
6/5/2001	15.0	0	.9	2.0	33.0	99
6/6/2001	14.0	0	.9	2.0	33.0	98
6/7/2001	14.0	0	.8	1.9	30.0	98

Appendix 2. Daily mean streamflow for the five creeks providing recharge to the Barton Springs segment of the Edwards aquifer and daily mean discharge for Barton Springs, Austin, Texas, 1978–2003—Continued.

Date	Barton Creek	Williamson Creek	Slaughter Creek	Bear Creek	Onion Creek	Barton Springs
6/8/2001	13.0	0	0.9	2.0	29.0	97
6/9/2001	13.0	0	.9	1.9	31.0	97
6/10/2001	13.0	0	.8	1.7	29.0	97
6/11/2001	12.0	0	.8	1.6	26.0	96
6/12/2001	11.0	0	.7	1.5	24.0	96
6/13/2001	8.9	0	.7	1.3	23.0	96
6/14/2001	6.9	0	.7	1.2	21.0	95
6/15/2001	6.3	0	.7	1.3	20.0	95
6/16/2001	5.8	0	.7	1.1	20.0	95
6/17/2001	5.8	0	.6	1.0	18.0	95
6/18/2001	5.8	0	.6	.9	17.0	95
6/19/2001	5.0	0	.5	.8	16.0	94
6/20/2001	4.2	0	.5	.8	15.0	94
6/21/2001	3.4	0	.5	.7	14.0	94
6/22/2001	3.6	0	.5	.7	14.0	94
6/23/2001	3.3	0	.5	.6	13.0	94
6/24/2001	3.1	0	.4	.6	12.0	94
6/25/2001	2.8	0	.4	.5	12.0	94
6/26/2001	2.5	0	.3	.4	11.0	93
6/27/2001	2.1	0	.3	.4	9.3	93
6/28/2001	1.7	0	.3	.4	8.4	93
6/29/2001	1.3	0	.2	.3	7.8	93
6/30/2001	1.2	0	.2	.3	7.3	93
7/1/2001	1.3	0	.2	.3	7.5	93
7/2/2001	1.2	0	.2	.2	7.0	93
7/3/2001	1.3	0	.2	.2	6.5	93
7/4/2001	1.1	0	.2	.2	6.0	93
7/5/2001	1.2	0	.1	.2	5.6	92
7/6/2001	1.0	0	.1	.2	5.1	92
7/7/2001	1.0	0	0	.1	4.6	92
7/8/2001	.8	0	0	.1	4.3	91
7/9/2001	.7	0	0	.1	4.2	91
7/10/2001	.6	0	0	.1	4.3	91
7/11/2001	.5	0	0	0	4.4	90
7/12/2001	.4	0	0	.1	4.2	90
7/13/2001	.4	0	0	0	4.0	89
7/14/2001	.4	0	0	0	3.6	89
7/15/2001	.4	0	0	0	3.3	89
7/16/2001	.5	0	0	0	3.0	88
7/17/2001	.3	0	0	0	3.0	88
7/18/2001	.3	0	0	0	2.8	87
7/19/2001	.3	0	0	0	2.7	87
7/20/2001	.3	0	0	0	2.7	87
7/21/2001	.3	0	0	0	2.5	86
7/22/2001	.2	0	0	0	2.3	86
7/23/2001	.2	0	0	0	2.1	85
7/24/2001	.2	0	0	0	2.0	85
7/25/2001	.2	0	0	0	2.0	84
7/26/2001	.2	0	0	0	1.8	84
7/27/2001	.1	0	0	0	1.8	84
7/28/2001	0.1	0	0	0	1.8	83
7/29/2001	0	0	0	0	1.5	83
7/30/2001	0	0	0	0	1.2	83
7/31/2001	0	0	0	0	1.3	82
8/1/2001	0	0	0	0	1.3	82
8/2/2001	0	0	0	0	1.4	81
8/3/2001	0	0	0	0	1.3	80
8/4/2001	0	0	0	0	1.2	80
8/5/2001	0	0	0	0	1.2	79
8/6/2001	0	0	0	0	1.2	79
8/7/2001	0	0	0	0	1.2	78
8/8/2001	0	0	0	0	1.0	78
8/9/2001	0	0	0	0	1.0	78
8/10/2001	0	0	0	0	.8	77
8/11/2001	0	0	0	0	.7	77
8/12/2001	0	0	0	0	.6	76
8/13/2001	0	0	0	0	.5	76
8/14/2001	0	0	0	0	.4	75
8/15/2001	0	0	0	0	.4	75
8/16/2001	0	0	0	0	.4	74
8/17/2001	0	0	0	0	.5	73
8/18/2001	0	0	0	0	.5	73
8/19/2001	0	0	0	0	.4	72
8/20/2001	0	0	0	0	.4	72
8/21/2001	0	0	0	0	.3	71
8/22/2001	0	0	0	0	.3	71
8/23/2001	0	0	0	0	.3	70
8/24/2001	0	0	0	0	.3	70
8/25/2001	0	0	0	0	.3	69
8/26/2001	1.5	47.0	.1	0	3.0	69
8/27/2001	.6	.4	.1	1.2	5.0	76
8/28/2001	.1	0	0	.4	1.4	78
8/29/2001	.1	0	0	.5	1.4	79
8/30/2001	1.2	5.7	.2	1.3	3.2	80
8/31/2001	10.0	32.0	1.2	24.0	60.0	80
9/1/2001	3.0	0	0	2.7	64.0	80
9/2/2001	5.1	0	0	1.7	26.0	81
9/3/2001	4.0	0	0	1.3	13.0	81
9/4/2001	15.0	0	0	1.5	13.0	82
9/5/2001	21.0	1.0	.1	1.7	20.0	82
9/6/2001	15.0	0	0	1.8	15.0	81
9/7/2001	12.0	0	0	1.0	12.0	81
9/8/2001	9.8	0	0	.9	10.0	80
9/9/2001	8.5	0	0	.9	9.7	80
9/10/2001	8.4	0	0	.8	8.0	79
9/11/2001	8.0	0	0	.8	7.7	79
9/12/2001	8.2	0	0	.7	7.6	78
9/13/2001	7.5	0	0	.7	7.0	78
9/14/2001	7.2	0	0	.7	6.4	77
9/15/2001	6.3	0	0	.7	5.9	77

Appendix 2. Daily mean streamflow for the five creeks providing recharge to the Barton Springs segment of the Edwards aquifer and daily mean discharge for Barton Springs, Austin, Texas, 1978–2003—Continued.

Date	Barton Creek	Williamson Creek	Slaughter Creek	Bear Creek	Onion Creek	Barton Springs
9/16/2001	5.9	0	0	0.7	5.4	77
9/17/2001	5.4	0	0	.6	5.1	76
9/18/2001	4.7	0	0	.6	4.6	76
9/19/2001	4.4	0	0	.6	4.4	75
9/20/2001	4.0	0	0	.5	4.4	75
9/21/2001	4.3	0	.1	.6	4.3	75
9/22/2001	3.7	0	0	.6	4.1	75
9/23/2001	4.0	0	0	.6	3.7	75
9/24/2001	3.8	0	0	.5	3.8	75
9/25/2001	3.8	0	0	.5	3.6	74
9/26/2001	3.5	0	.1	.5	3.7	74
9/27/2001	3.8	0	.1	.5	3.9	73
9/28/2001	4.0	0	.1	.5	3.8	73
9/29/2001	3.5	0	.1	.4	3.6	72
9/30/2001	3.0	0	0	.4	3.2	72
10/1/2001	2.8	0	0	.4	3.2	71
10/2/2001	2.5	0	0	.4	3.2	70
10/3/2001	2.6	0	0	.4	3.2	70
10/4/2001	2.4	0	0	.4	3.3	70
10/5/2001	2.2	0	0	.3	3.4	69
10/6/2001	1.8	0	0	.3	3.5	69
10/7/2001	1.7	0	0	.3	3.4	68
10/8/2001	1.5	0	0	.3	3.4	68
10/9/2001	1.4	0	0	.3	3.7	67
10/10/2001	1.3	0	0	.3	3.7	67
10/11/2001	5.5	0	.1	.6	5.2	68
10/12/2001	13.0	0	0	.4	4.6	69
10/13/2001	57.0	1.5	.2	1.3	57.0	71
10/14/2001	52.0	0	.1	.7	37.0	72
10/15/2001	36.0	0	.1	.6	20.0	70
10/16/2001	25.0	0	.1	.5	14.0	70
10/17/2001	19.0	0	.1	.5	13.0	69
10/18/2001	16.0	0	.1	.6	12.0	69
10/19/2001	15.0	0	.1	.5	12.0	68
10/20/2001	14.0	0	.1	.5	11.0	68
10/21/2001	13.0	0	.1	.6	11.0	67
10/22/2001	11.0	0	.1	.6	10.0	67
10/23/2001	11.0	0	.1	.6	10.0	67
10/24/2001	11.0	0	.1	.6	9.7	66
10/25/2001	8.5	0	.1	.6	8.0	65
10/26/2001	8.0	0	.1	.5	7.8	65
10/27/2001	8.1	0	.1	.4	7.0	64
10/28/2001	7.7	0	.1	.4	6.7	64
10/29/2001	7.3	0	.1	.5	6.3	64
10/30/2001	6.7	0	.1	.5	5.6	64
10/31/2001	6.9	0	.1	.5	5.6	63
11/1/2001	7.9	0	.1	.5	5.2	63
11/2/2001	7.9	0	.1	.5	4.8	63
11/3/2001	7.2	0	.1	.7	4.6	62
11/4/2001	7.7	0	0	.6	4.9	62
11/5/2001	6.6	0	0	0.5	4.4	62
11/6/2001	6.5	0	0	.4	4.4	61
11/7/2001	5.9	0	0	.4	4.4	61
11/8/2001	5.4	0	0	.4	4.4	61
11/9/2001	6.4	0	0	.5	4.6	61
11/10/2001	5.4	0	0	.5	4.4	61
11/11/2001	5.0	0	0	.5	4.8	61
11/12/2001	5.1	0	0	.5	5.1	61
11/13/2001	4.7	0	0	.5	4.9	62
11/14/2001	3.9	0	.1	.6	5.2	62
11/15/2001	1,090.0	102.0	41.0	101.0	3,550.0	75
11/16/2001	2,930.0	90.0	23.0	30.0	815.0	88
11/17/2001	256.0	6.9	3.0	13.0	298.0	94
11/18/2001	182.0	0	2.5	11.0	196.0	95
11/19/2001	140.0	0	2.2	10.0	148.0	96
11/20/2001	119.0	0	2.0	8.9	130.0	97
11/21/2001	107.0	0	1.9	8.4	115.0	97
11/22/2001	97.0	0	1.9	8.1	106.0	98
11/23/2001	91.0	0	1.9	7.9	99.0	98
11/24/2001	85.0	0	1.8	6.9	89.0	98
11/25/2001	77.0	0	1.8	6.3	79.0	99
11/26/2001	73.0	0	1.7	6.2	75.0	99
11/27/2001	67.0	0	1.7	5.6	69.0	99
11/28/2001	70.0	13.0	8.0	17.0	94.0	100
11/29/2001	88.0	1.4	3.6	12.0	83.0	101
11/30/2001	83.0	0	3.1	11.0	74.0	102
12/1/2001	75.0	0	2.8	9.9	69.0	102
12/2/2001	82.0	5.9	13.0	28.0	119.0	103
12/3/2001	129.0	1.9	15.0	27.0	144.0	103
12/4/2001	121.0	.1	12.0	24.0	126.0	103
12/5/2001	116.0	0	8.8	21.0	114.0	103
12/6/2001	111.0	0	6.0	19.0	106.0	103
12/7/2001	106.0	0	4.6	18.0	102.0	103
12/8/2001	485.0	68.0	102.0	119.0	418.0	102
12/9/2001	268.0	18.0	45.0	42.0	215.0	103
12/10/2001	216.0	6.0	29.0	34.0	183.0	103
12/11/2001	207.0	17.0	42.0	43.0	184.0	103
12/12/2001	235.0	11.0	42.0	40.0	197.0	103
12/13/2001	211.0	9.0	42.0	39.0	187.0	103
12/14/2001	208.0	4.9	32.0	34.0	175.0	103
12/15/2001	351.0	67.0	145.0	170.0	289.0	103
12/16/2001	463.0	50.0	96.0	89.0	321.0	103
12/17/2001	337.0	19.0	62.0	58.0	240.0	103
12/18/2001	277.0	8.7	48.0	48.0	214.0	103
12/19/2001	241.0	3.5	38.0	39.0	194.0	103
12/20/2001	214.0	1.5	32.0	34.0	175.0	108
12/21/2001	196.0	1.0	30.0	31.0	165.0	109
12/22/2001	183.0	.6	28.0	28.0	154.0	110
12/23/2001	159.0	.3	24.0	25.0	133.0	110
12/24/2001	149.0	.2	22.0	23.0	120.0	110

Appendix 2. Daily mean streamflow for the five creeks providing recharge to the Barton Springs segment of the Edwards aquifer and daily mean discharge for Barton Springs, Austin, Texas, 1978–2003—Continued.

Date	Barton Creek	Williamson Creek	Slaughter Creek	Bear Creek	Onion Creek	Barton Springs
12/25/2001	143.0	0.1	21.0	21.0	114.0	110
12/26/2001	134.0	.1	19.0	19.0	109.0	110
12/27/2001	121.0	.1	17.0	18.0	106.0	110
12/28/2001	113.0	0	16.0	18.0	104.0	111
12/29/2001	104.0	0	15.0	16.0	99.0	111
12/30/2001	96.0	0	13.0	15.0	95.0	111
12/31/2001	91.0	0	13.0	14.0	92.0	111
1/1/2002	85.0	0	12.0	13.0	89.0	111
1/2/2002	82.0	0	11.0	13.0	86.0	111
1/3/2002	80.0	0	10.0	12.0	83.0	111
1/4/2002	77.0	0	9.7	12.0	81.0	111
1/5/2002	150.0	16.0	42.0	28.0	138.0	111
1/6/2002	135.0	1.7	21.0	16.0	103.0	111
1/7/2002	101.0	.8	17.0	14.0	92.0	111
1/8/2002	92.0	.5	17.0	14.0	88.0	112
1/9/2002	88.0	.3	16.0	13.0	85.0	112
1/10/2002	87.0	.1	15.0	13.0	83.0	112
1/11/2002	84.0	0	13.0	12.0	78.0	112
1/12/2002	79.0	0	13.0	11.0	76.0	112
1/13/2002	77.0	0	12.0	11.0	74.0	112
1/14/2002	72.0	0	9.9	10.0	71.0	112
1/15/2002	70.0	0	8.7	9.8	68.0	112
1/16/2002	68.0	0	8.6	9.6	68.0	112
1/17/2002	66.0	0	8.3	9.5	66.0	112
1/18/2002	64.0	0	7.8	8.9	64.0	112
1/19/2002	62.0	0	6.5	8.6	64.0	112
1/20/2002	60.0	0	5.6	8.2	61.0	112
1/21/2002	58.0	0	4.9	8.1	59.0	112
1/22/2002	55.0	0	5.0	8.1	58.0	112
1/23/2002	56.0	0	4.8	8.1	58.0	112
1/24/2002	56.0	0	4.6	7.5	56.0	112
1/25/2002	53.0	0	4.1	6.6	54.0	112
1/26/2002	49.0	0	3.9	6.1	51.0	112
1/27/2002	48.0	0	3.8	5.9	50.0	112
1/28/2002	47.0	0	3.8	5.9	49.0	112
1/29/2002	46.0	0	3.6	5.7	49.0	112
1/30/2002	47.0	0	3.5	5.5	48.0	112
1/31/2002	48.0	0	3.6	5.6	49.0	112
2/1/2002	44.0	0	3.2	5.0	45.0	112
2/2/2002	41.0	0	3.2	4.9	42.0	112
2/3/2002	41.0	0	3.2	4.9	43.0	112
2/4/2002	40.0	0	3.1	4.8	41.0	112
2/5/2002	47.0	0	5.3	5.9	46.0	112
2/6/2002	55.0	0	5.4	6.1	56.0	112
2/7/2002	52.0	0	3.7	5.4	48.0	112
2/8/2002	45.0	0	3.4	5.0	43.0	112
2/9/2002	42.0	0	3.3	4.9	43.0	111
2/10/2002	39.0	0	2.9	4.6	38.0	111
2/11/2002	38.0	0	2.9	4.4	35.0	111
2/12/2002	37.0	0	3.0	4.4	34.0	111
2/13/2002	36.0	0	2.8	4.3	35.0	111
2/14/2002	36.0	0	2.8	4.1	34.0	111
2/15/2002	34.0	0	2.7	4.1	33.0	111
2/16/2002	32.0	0	2.6	3.7	31.0	111
2/17/2002	31.0	0	2.7	3.7	31.0	110
2/18/2002	32.0	0	2.7	3.7	31.0	110
2/19/2002	31.0	0	2.7	3.7	32.0	110
2/20/2002	30.0	0	2.4	3.3	30.0	110
2/21/2002	27.0	0	2.3	3.2	29.0	109
2/22/2002	25.0	0	2.1	3.3	27.0	108
2/23/2002	24.0	0	2.1	3.2	27.0	108
2/24/2002	24.0	0	2.0	3.1	27.0	108
2/25/2002	24.0	0	2.0	3.0	26.0	97
2/26/2002	21.0	0	1.8	2.8	23.0	95
2/27/2002	21.0	0	1.8	2.9	22.0	95
2/28/2002	21.0	0	1.8	3.0	24.0	95
3/1/2002	22.0	0	1.9	3.2	26.0	95
3/2/2002	22.0	0	1.8	3.2	27.0	95
3/3/2002	21.0	0	1.5	2.8	23.0	95
3/4/2002	20.0	0	1.5	2.9	22.0	95
3/5/2002	26.0	0	1.5	2.9	22.0	96
3/6/2002	32.0	0	1.5	2.8	22.0	96
3/7/2002	32.0	0	1.5	2.7	23.0	95
3/8/2002	20.0	0	1.5	2.7	23.0	99
3/9/2002	18.0	0	1.4	2.5	22.0	106
3/10/2002	17.0	0	1.3	2.2	20.0	107
3/11/2002	17.0	0	1.4	2.4	21.0	107
3/12/2002	17.0	0	1.3	2.3	21.0	106
3/13/2002	17.0	0	1.3	2.2	19.0	106
3/14/2002	17.0	0	1.3	2.2	19.0	105
3/15/2002	16.0	0	1.3	2.2	19.0	105
3/16/2002	15.0	0	1.2	2.0	17.0	104
3/17/2002	14.0	0	1.2	2.1	17.0	104
3/18/2002	14.0	0	1.2	2.3	18.0	104
3/19/2002	18.0	1.2	1.3	2.9	19.0	104
3/20/2002	23.0	.6	1.4	3.2	27.0	104
3/21/2002	21.0	0	1.1	2.4	22.0	104
3/22/2002	19.0	0	1.1	2.2	19.0	103
3/23/2002	16.0	0	1.1	2.2	18.0	103
3/24/2002	18.0	0	1.0	2.2	18.0	103
3/25/2002	16.0	0	1.0	2.2	18.0	102
3/26/2002	14.0	0	.9	2.0	17.0	102
3/27/2002	14.0	0	.9	1.9	17.0	101
3/28/2002	14.0	0	.9	1.9	16.0	101
3/29/2002	13.0	0	.9	2.0	17.0	101
3/30/2002	23.0	.2	1.0	2.5	20.0	101
3/31/2002	29.0	0	.9	2.1	36.0	101
4/1/2002	29.0	0	.8	2.0	24.0	101
4/2/2002	23.0	0	.8	1.9	20.0	101
4/3/2002	18.0	0	.8	1.7	19.0	100

Appendix 2. Daily mean streamflow for the five creeks providing recharge to the Barton Springs segment of the Edwards aquifer and daily mean discharge for Barton Springs, Austin, Texas, 1978–2003—Continued.

Date	Barton Creek	Williamson Creek	Slaughter Creek	Bear Creek	Onion Creek	Barton Springs
4/4/2002	16.0	0	0.8	1.6	18.0	100
4/5/2002	15.0	0	.8	1.6	18.0	100
4/6/2002	14.0	0	.8	1.6	18.0	99
4/7/2002	16.0	0	.8	2.5	19.0	99
4/8/2002	21.0	0	.9	2.9	27.0	100
4/9/2002	25.0	0	.7	1.9	24.0	100
4/10/2002	23.0	0	.7	1.7	19.0	99
4/11/2002	19.0	0	.7	1.7	17.0	99
4/12/2002	18.0	0	.7	1.6	17.0	99
4/13/2002	17.0	0	.6	1.6	16.0	98
4/14/2002	16.0	0	.6	1.6	16.0	98
4/15/2002	15.0	0	.6	1.6	16.0	98
4/16/2002	14.0	0	.6	1.6	16.0	98
4/17/2002	14.0	0	.6	1.5	15.0	98
4/18/2002	13.0	0	.6	1.5	15.0	98
4/19/2002	12.0	0	.6	1.4	15.0	98
4/20/2002	12.0	0	.5	1.2	14.0	97
4/21/2002	11.0	0	.5	1.2	14.0	97
4/22/2002	11.0	0	.5	1.3	14.0	97
4/23/2002	11.0	0	.5	1.1	13.0	96
4/24/2002	11.0	0	.5	1.0	13.0	96
4/25/2002	10.0	0	.4	1.0	12.0	96
4/26/2002	9.9	0	.4	1.0	12.0	96
4/27/2002	9.5	0	.4	1.0	12.0	96
4/28/2002	8.7	0	.4	.9	12.0	95
4/29/2002	7.6	0	.4	.9	11.0	95
4/30/2002	6.6	0	.3	.8	10.0	95
5/1/2002	6.2	0	.3	.8	9.6	95
5/2/2002	5.9	0	.3	.7	9.1	94
5/3/2002	10.0	0	.3	.8	8.8	94
5/4/2002	8.9	0	.3	.8	8.6	94
5/5/2002	6.4	0	.3	.8	8.0	94
5/6/2002	5.2	0	.3	.7	7.7	93
5/7/2002	4.4	0	.2	.6	7.4	93
5/8/2002	4.1	0	.2	.6	7.1	93
5/9/2002	3.7	0	.2	.6	6.8	92
5/10/2002	3.2	0	.2	.5	6.3	92
5/11/2002	2.7	0	.2	.4	5.7	92
5/12/2002	2.4	0	.2	.4	5.2	92
5/13/2002	2.1	0	.1	.4	5.2	92
5/14/2002	1.9	0	.1	.4	4.2	92
5/15/2002	1.5	0	.1	.4	3.9	91
5/16/2002	1.7	0	.1	.4	4.0	91
5/17/2002	1.8	0	.1	.3	3.9	91
5/18/2002	1.2	0	.1	.3	3.7	90
5/19/2002	1.0	0	.1	.3	3.7	90
5/20/2002	1.1	0	.1	.2	3.4	89
5/21/2002	1.5	0	.1	.2	3.4	89
5/22/2002	1.4	0	.1	.2	3.4	88
5/23/2002	1.0	0	.1	.2	3.6	88
5/24/2002	.9	0	0.1	0.2	3.6	88
5/25/2002	.9	0	.1	.2	3.7	88
5/26/2002	.8	0	0	.2	3.4	87
5/27/2002	.8	0	0	.2	3.4	87
5/28/2002	3.7	0	.1	.7	3.8	88
5/29/2002	7.2	0	0	.6	3.5	87
5/30/2002	6.4	0	0	.4	3.5	87
5/31/2002	5.3	0	0	.3	3.0	86
6/1/2002	4.8	0	0	.2	2.9	86
6/2/2002	3.9	0	0	.2	2.7	85
6/3/2002	2.9	0	0	.3	2.6	85
6/4/2002	2.3	0	0	.1	2.5	84
6/5/2002	1.7	0	0	.1	2.3	83
6/6/2002	1.3	0	0	.1	2.2	83
6/7/2002	1.0	0	0	0	2.2	83
6/8/2002	1.1	0	0	0	2.2	83
6/9/2002	1.5	0	0	0	2.2	82
6/10/2002	1.4	0	0	0	2.3	82
6/11/2002	.8	0	0	0	2.2	82
6/12/2002	.6	0	0	0	2.1	81
6/13/2002	.6	0	0	0	2.0	80
6/14/2002	.5	0	0	0	1.9	80
6/15/2002	.4	0	0	0	1.8	79
6/16/2002	1.6	0	0	0	1.9	80
6/17/2002	1.1	0	0	0	2.2	80
6/18/2002	.8	0	0	0	2.0	79
6/19/2002	.6	0	0	0	1.8	78
6/20/2002	.5	0	0	0	1.7	77
6/21/2002	.4	0	0	0	1.7	77
6/22/2002	.4	0	0	0	1.5	76
6/23/2002	.3	0	0	0	1.2	76
6/24/2002	.4	0	0	0	1.1	75
6/25/2002	.3	0	0	0	1.0	75
6/26/2002	4.6	7.0	.1	0	1.2	74
6/27/2002	19.0	2.4	0	0	2.2	78
6/28/2002	7.1	0	0	.1	2.2	77
6/29/2002	3.9	0	0	.1	1.9	76
6/30/2002	551.0	50.0	1.4	164.0	694.0	76
7/1/2002	332.0	31.0	34.0	175.0	436.0	77
7/2/2002	5,770.0	177.0	396.0	997.0	3,790.0	79
7/3/2002	2,400.0	89.0	167.0	147.0	1,930.0	81
7/4/2002	1,060.0	27.0	83.0	59.0	597.0	83
7/5/2002	1,580.0	13.0	55.0	54.0	3,200.0	84
7/6/2002	751.0	4.0	36.0	42.0	916.0	87
7/7/2002	673.0	.7	24.0	35.0	664.0	88
7/8/2002	454.0	.2	16.0	30.0	489.0	89
7/9/2002	393.0	.4	14.0	26.0	435.0	90
7/10/2002	402.0	3.9	13.0	24.0	400.0	91
7/11/2002	391.0	1.2	11.0	22.0	353.0	93
7/12/2002	272.0	.4	5.9	22.0	299.0	94

Appendix 2. Daily mean streamflow for the five creeks providing recharge to the Barton Springs segment of the Edwards aquifer and daily mean discharge for Barton Springs, Austin, Texas, 1978–2003—Continued.

Date	Barton Creek	Williamson Creek	Slaughter Creek	Bear Creek	Onion Creek	Barton Springs
7/13/2002	237.0	0.1	4.4	21.0	299.0	96
7/14/2002	218.0	1.1	4.2	19.0	267.0	97
7/15/2002	189.0	.1	4.4	18.0	245.0	99
7/16/2002	311.0	5.6	20.0	21.0	312.0	100
7/17/2002	335.0	7.7	33.0	31.0	392.0	102
7/18/2002	383.0	3.3	31.0	25.0	372.0	103
7/19/2002	302.0	1.1	19.0	23.0	276.0	105
7/20/2002	260.0	.3	13.0	21.0	244.0	105
7/21/2002	240.0	0	11.0	19.0	222.0	105
7/22/2002	198.0	0	7.4	17.0	204.0	105
7/23/2002	165.0	0	4.5	16.0	187.0	105
7/24/2002	160.0	0	3.8	15.0	171.0	105
7/25/2002	135.0	0	3.3	14.0	158.0	105
7/26/2002	123.0	0	3.0	13.0	145.0	105
7/27/2002	146.0	0	2.6	12.0	134.0	105
7/28/2002	150.0	0	2.3	11.0	122.0	105
7/29/2002	104.0	0	2.1	11.0	111.0	105
7/30/2002	116.0	0	1.9	10.0	106.0	105
7/31/2002	114.0	0	1.7	9.2	98.0	105
8/1/2002	105.0	0	1.7	8.7	93.0	105
8/2/2002	95.0	0	1.5	8.1	88.0	105
8/3/2002	95.0	0	1.4	7.5	80.0	104
8/4/2002	69.0	0	1.3	7.2	73.0	104
8/5/2002	51.0	0	1.1	6.9	69.0	105
8/6/2002	48.0	0	1.1	6.3	65.0	104
8/7/2002	44.0	0	.9	5.7	62.0	104
8/8/2002	43.0	0	.9	5.4	59.0	104
8/9/2002	49.0	0	.9	5.2	66.0	104
8/10/2002	45.0	0	.9	4.9	59.0	104
8/11/2002	43.0	0	.8	4.8	63.0	103
8/12/2002	38.0	0	.7	4.5	58.0	103
8/13/2002	35.0	0	.6	4.1	49.0	102
8/14/2002	31.0	0	.6	3.8	44.0	102
8/15/2002	27.0	0	.5	3.7	41.0	102
8/16/2002	25.0	0	.5	3.4	39.0	101
8/17/2002	23.0	0	.4	3.1	36.0	101
8/18/2002	21.0	0	.4	2.9	34.0	100
8/19/2002	19.0	0	.4	2.7	32.0	100
8/20/2002	17.0	0	.4	2.5	30.0	99
8/21/2002	16.0	0	.4	2.4	27.0	99
8/22/2002	15.0	0	.3	2.2	26.0	98
8/23/2002	13.0	0	.3	2.1	24.0	98
8/24/2002	12.0	0	.3	1.9	23.0	97
8/25/2002	11.0	0	.3	1.8	21.0	98
8/26/2002	11.0	0	.3	1.6	18.0	97
8/27/2002	10.0	0	.2	1.4	16.0	96
8/28/2002	8.6	0	.2	1.4	15.0	96
8/29/2002	8.8	0	.3	2.2	19.0	96
8/30/2002	9.0	0	.2	1.7	25.0	95
8/31/2002	11.0	0	.2	1.5	23.0	95
9/1/2002	13.0	0	0.2	1.4	18.0	95
9/2/2002	9.6	0	.2	1.3	15.0	94
9/3/2002	7.5	0	.2	1.2	13.0	94
9/4/2002	6.5	0	.1	1.1	12.0	94
9/5/2002	6.0	0	.1	1.0	11.0	94
9/6/2002	5.6	0	.1	.9	11.0	95
9/7/2002	7.6	0	.3	2.8	23.0	95
9/8/2002	14.0	0	.3	4.7	44.0	96
9/9/2002	33.0	0	.3	3.4	41.0	96
9/10/2002	30.0	0	.2	2.1	31.0	95
9/11/2002	19.0	0	.2	1.8	23.0	94
9/12/2002	15.0	0	.2	1.5	20.0	94
9/13/2002	12.0	0	.2	1.3	18.0	94
9/14/2002	10.0	0	.2	1.1	16.0	94
9/15/2002	9.2	0	.2	1.1	15.0	93
9/16/2002	8.9	0	.2	1.2	16.0	93
9/17/2002	8.8	0	.2	1.2	18.0	92
9/18/2002	8.2	0	.2	1.1	17.0	91
9/19/2002	8.7	0	.4	3.3	43.0	90
9/20/2002	8.4	0	.3	2.1	47.0	92
9/21/2002	9.1	0	.2	1.3	28.0	91
9/22/2002	9.5	0	.2	1.1	21.0	91
9/23/2002	7.2	0	.2	1.1	18.0	91
9/24/2002	5.9	0	.2	1.0	16.0	90
9/25/2002	5.2	0	.2	.9	16.0	90
9/26/2002	4.7	0	.2	.9	16.0	89
9/27/2002	4.3	0	.2	.9	14.0	87
9/28/2002	3.8	0	.1	.8	13.0	85
9/29/2002	3.8	0	.1	.9	12.0	85
9/30/2002	3.6	0	.1	.9	12.0	85
10/1/2002	3.5	0	.1	.8	11.0	85
10/2/2002	3.5	0	.1	.8	9.6	85
10/3/2002	3.2	0	.1	.8	9.3	85
10/4/2002	3.2	0	.1	.7	9.4	85
10/5/2002	2.9	0	.1	.7	8.4	84
10/6/2002	2.7	0	.1	.6	8.4	84
10/7/2002	2.6	0	.1	.9	8.1	84
10/8/2002	3.0	0	.1	.8	38.0	84
10/9/2002	6.9	0	.1	1.7	73.0	85
10/10/2002	21.0	0	.1	1.1	39.0	84
10/11/2002	16.0	0	.1	.6	24.0	84
10/12/2002	11.0	0	.1	.7	19.0	83
10/13/2002	8.1	0	.1	.6	18.0	83
10/14/2002	7.0	0	.1	.7	18.0	82
10/15/2002	6.5	0	.1	.7	18.0	82
10/16/2002	6.2	0	.1	.6	15.0	81
10/17/2002	6.0	0	.1	.6	14.0	81
10/18/2002	6.1	0	.1	.6	14.0	80
10/19/2002	31.0	8.5	.5	10.0	183.0	82
10/20/2002	74.0	0	.3	4.9	102.0	85

Appendix 2. Daily mean streamflow for the five creeks providing recharge to the Barton Springs segment of the Edwards aquifer and daily mean discharge for Barton Springs, Austin, Texas, 1978–2003—Continued.

Date	Barton Creek	Williamson Creek	Slaughter Creek	Bear Creek	Onion Creek	Barton Springs
10/21/2002	40.0	0	0.2	2.7	47.0	85
10/22/2002	45.0	0	.5	4.8	72.0	86
10/23/2002	79.0	0	.7	7.1	93.0	87
10/24/2002	185.0	5.4	13.0	37.0	309.0	89
10/25/2002	269.0	.1	12.0	20.0	322.0	92
10/26/2002	148.0	0	8.0	21.0	244.0	92
10/27/2002	123.0	0	5.4	19.0	230.0	92
10/28/2002	113.0	0	4.9	18.0	213.0	92
10/29/2002	102.0	0	4.5	16.0	198.0	92
10/30/2002	90.0	0	3.9	15.0	179.0	93
10/31/2002	79.0	0	3.6	14.0	163.0	93
11/1/2002	75.0	0	3.5	14.0	155.0	93
11/2/2002	76.0	0	5.6	15.0	160.0	94
11/3/2002	106.0	0	11.0	18.0	200.0	95
11/4/2002	164.0	17.0	31.0	39.0	257.0	97
11/5/2002	286.0	10.0	33.0	38.0	298.0	100
11/6/2002	201.0	.3	23.0	31.0	243.0	101
11/7/2002	169.0	0	19.0	28.0	226.0	101
11/8/2002	151.0	0	17.0	26.0	214.0	101
11/9/2002	136.0	0	15.0	24.0	203.0	101
11/10/2002	126.0	0	14.0	22.0	191.0	98
11/11/2002	114.0	0	13.0	21.0	174.0	98
11/12/2002	105.0	0	11.0	18.0	161.0	98
11/13/2002	96.0	0	10.0	17.0	154.0	97
11/14/2002	90.0	0	9.7	17.0	148.0	96
11/15/2002	84.0	0	8.5	16.0	140.0	97
11/16/2002	77.0	0	6.7	15.0	131.0	97
11/17/2002	72.0	0	5.9	14.0	124.0	98
11/18/2002	69.0	0	5.0	14.0	119.0	99
11/19/2002	65.0	0	4.7	13.0	111.0	98
11/20/2002	62.0	0	4.4	13.0	107.0	98
11/21/2002	58.0	0	4.0	12.0	103.0	98
11/22/2002	55.0	0	3.8	11.0	99.0	97
11/23/2002	53.0	0	3.6	11.0	95.0	98
11/24/2002	51.0	0	3.5	10.0	94.0	98
11/25/2002	49.0	0	3.2	10.0	88.0	99
11/26/2002	68.0	0	5.4	13.0	117.0	99
11/27/2002	110.0	0	5.5	11.0	119.0	100
11/28/2002	72.0	0	3.7	10.0	96.0	100
11/29/2002	63.0	0	3.4	10.0	90.0	100
11/30/2002	59.0	0	3.2	9.6	86.0	100
12/1/2002	55.0	0	2.9	8.6	80.0	101
12/2/2002	51.0	0	2.9	8.5	78.0	101
12/3/2002	52.0	0	3.1	9.1	83.0	101
12/4/2002	58.0	0	3.7	10.0	90.0	101
12/5/2002	58.0	0	3.4	9.5	82.0	102
12/6/2002	52.0	0	3.2	9.0	79.0	102
12/7/2002	51.0	0	3.1	8.7	78.0	101
12/8/2002	51.0	0	3.4	9.3	80.0	101
12/9/2002	254.0	38.0	55.0	88.0	367.0	105
12/10/2002	289.0	11.0	31.0	38.0	279.0	105
12/11/2002	203.0	2.0	25.0	35.0	245.0	106
12/12/2002	203.0	4.6	29.0	38.0	246.0	106
12/13/2002	220.0	1.0	25.0	34.0	246.0	106
12/14/2002	182.0	.1	21.0	31.0	229.0	107
12/15/2002	167.0	0	19.0	29.0	222.0	108
12/16/2002	157.0	0	17.0	27.0	217.0	108
12/17/2002	148.0	0	16.0	26.0	212.0	108
12/18/2002	139.0	0	15.0	24.0	206.0	108
12/19/2002	127.0	0	14.0	22.0	194.0	108
12/20/2002	114.0	0	13.0	20.0	184.0	108
12/21/2002	109.0	0	13.0	19.0	180.0	108
12/22/2002	106.0	0	11.0	18.0	173.0	108
12/23/2002	146.0	3.2	15.0	20.0	198.0	109
12/24/2002	149.0	0	13.0	18.0	188.0	111
12/25/2002	122.0	0	12.0	17.0	169.0	111
12/26/2002	114.0	0	11.0	16.0	162.0	111
12/27/2002	110.0	0	9.7	15.0	156.0	110
12/28/2002	103.0	0	8.7	15.0	150.0	110
12/29/2002	100.0	0	8.7	15.0	149.0	110
12/30/2002	109.0	0	9.8	14.0	153.0	110
12/31/2002	218.0	0	11.0	15.0	222.0	110
1/1/2003	146.0	0	8.4	14.0	170.0	110
1/2/2003	120.0	0	5.8	13.0	154.0	109
1/3/2003	109.0	0	5.5	11.0	148.0	107
1/4/2003	110.0	0	5.3	11.0	144.0	107
1/5/2003	107.0	0	5.1	10.0	140.0	107
1/6/2003	107.0	0	4.7	10.0	135.0	107
1/7/2003	94.0	0	4.2	9.6	130.0	107
1/8/2003	91.0	0	4.1	9.4	129.0	107
1/9/2003	90.0	0	4.0	9.1	126.0	108
1/10/2003	85.0	0	3.4	8.5	116.0	107
1/11/2003	84.0	0	3.8	8.6	116.0	107
1/12/2003	172.0	6.5	16.0	18.0	181.0	109
1/13/2003	233.0	1.5	16.0	15.0	183.0	109
1/14/2003	183.0	.4	15.0	14.0	163.0	109
1/15/2003	164.0	.1	14.0	13.0	159.0	109
1/16/2003	155.0	0	13.0	13.0	156.0	109
1/17/2003	147.0	0	12.0	12.0	147.0	109
1/18/2003	139.0	0	11.0	12.0	147.0	109
1/19/2003	133.0	0	10.0	11.0	143.0	109
1/20/2003	129.0	0	9.5	11.0	141.0	109
1/21/2003	125.0	0	8.6	10.0	139.0	110
1/22/2003	115.0	0	6.4	9.4	130.0	110
1/23/2003	107.0	0	5.1	8.8	122.0	110
1/24/2003	95.0	0	5.2	8.5	119.0	110
1/25/2003	92.0	0	5.2	8.7	120.0	110
1/26/2003	95.0	0	6.2	8.9	120.0	110
1/27/2003	90.0	0	5.2	8.6	114.0	110
1/28/2003	88.0	0	5.0	8.5	113.0	110

Appendix 2. Daily mean streamflow for the five creeks providing recharge to the Barton Springs segment of the Edwards aquifer and daily mean discharge for Barton Springs, Austin, Texas, 1978–2003—Continued.

Date	Barton Creek	Williamson Creek	Slaughter Creek	Bear Creek	Onion Creek	Barton Springs
1/29/2003	83.0	0	4.6	8.2	109.0	110
1/30/2003	79.0	0	4.1	7.8	104.0	110
1/31/2003	77.0	0	4.0	7.6	102.0	110
2/1/2003	73.0	0	4.0	7.3	99.0	110
2/2/2003	72.0	0	4.1	6.6	98.0	110
2/3/2003	70.0	0	3.7	5.3	96.0	110
2/4/2003	67.0	0	3.4	4.8	90.0	110
2/5/2003	64.0	0	3.4	4.9	89.0	110
2/6/2003	69.0	0	4.7	5.6	98.0	111
2/7/2003	69.0	0	3.8	4.8	91.0	110
2/8/2003	66.0	0	3.7	4.8	88.0	110
2/9/2003	67.0	0	3.7	4.7	90.0	110
2/10/2003	61.0	0	3.3	4.1	85.0	110
2/11/2003	57.0	0	3.1	3.9	82.0	110
2/12/2003	57.0	0	3.1	3.9	81.0	110
2/13/2003	56.0	0	3.2	4.1	81.0	110
2/14/2003	57.0	0	3.4	4.1	83.0	110
2/15/2003	56.0	0	3.1	4.6	81.0	109
2/16/2003	52.0	0	2.8	5.0	74.0	109
2/17/2003	48.0	0	2.8	5.0	72.0	109
2/18/2003	46.0	0	2.8	5.0	74.0	109
2/19/2003	46.0	0	2.8	5.2	74.0	109
2/20/2003	537.0	69.0	81.0	162.0	630.0	111
2/21/2003	566.0	60.0	87.0	59.0	385.0	120
2/22/2003	454.0	31.0	56.0	46.0	314.0	125
2/23/2003	345.0	13.0	34.0	37.0	268.0	125
2/24/2003	294.0	6.9	26.0	33.0	252.0	125
2/25/2003	282.0	7.5	26.0	32.0	251.0	125
2/26/2003	265.0	5.7	26.0	31.0	246.0	124
2/27/2003	274.0	5.8	27.0	30.0	246.0	123
2/28/2003	254.0	2.2	23.0	27.0	236.0	122
3/1/2003	242.0	1.3	22.0	26.0	231.0	121
3/2/2003	228.0	1.0	20.0	25.0	225.0	120
3/3/2003	228.0	1.8	21.0	25.0	224.0	119
3/4/2003	234.0	1.2	20.0	24.0	222.0	118
3/5/2003	214.0	.7	18.0	22.0	213.0	117
3/6/2003	198.0	.4	16.0	21.0	205.0	116
3/7/2003	179.0	.2	15.0	19.0	197.0	116
3/8/2003	169.0	.1	14.0	18.0	192.0	116
3/9/2003	166.0	0	13.0	17.0	188.0	116
3/10/2003	157.0	0	12.0	17.0	181.0	116
3/11/2003	151.0	0	12.0	16.0	176.0	115
3/12/2003	142.0	0	12.0	16.0	174.0	115
3/13/2003	134.0	0	11.0	15.0	167.0	115
3/14/2003	129.0	0	10.0	14.0	160.0	115
3/15/2003	118.0	0	9.4	13.0	155.0	115
3/16/2003	116.0	0	8.6	12.0	151.0	115
3/17/2003	113.0	0	8.0	11.0	146.0	116
3/18/2003	118.0	0	8.7	11.0	144.0	116
3/19/2003	106.0	0	6.9	10.0	136.0	115
3/20/2003	98.0	0	5.2	10.0	126.0	114
3/21/2003	94.0	0	4.9	9.5	119.0	114
3/22/2003	91.0	0	4.8	9.3	117.0	114
3/23/2003	90.0	0	4.3	8.8	115.0	114
3/24/2003	85.0	0	4.0	8.4	109.0	113
3/25/2003	82.0	0	3.9	8.3	106.0	114
3/26/2003	81.0	0	3.7	8.0	104.0	114
3/27/2003	78.0	0	3.5	7.6	100.0	114
3/28/2003	75.0	0	3.3	7.1	95.0	114
3/29/2003	69.0	0	3.0	6.6	88.0	113
3/30/2003	66.0	0	2.8	6.4	86.0	113
3/31/2003	64.0	0	2.8	6.1	84.0	113
4/1/2003	64.0	0	2.7	5.7	81.0	113
4/2/2003	62.0	0	2.6	5.6	80.0	112
4/3/2003	61.0	0	2.5	5.5	78.0	112
4/4/2003	60.0	0	2.3	5.3	75.0	111
4/5/2003	60.0	0	2.2	5.1	72.0	111
4/6/2003	56.0	0	2.2	5.0	69.0	111
4/7/2003	54.0	0	2.0	4.9	67.0	111
4/8/2003	51.0	0	1.7	4.5	61.0	110
4/9/2003	49.0	0	1.7	4.3	58.0	110
4/10/2003	47.0	0	1.7	4.3	56.0	110
4/11/2003	47.0	0	1.6	4.2	56.0	110
4/12/2003	44.0	0	1.5	4.0	53.0	109
4/13/2003	42.0	0	1.4	3.8	51.0	109
4/14/2003	39.0	0	1.3	3.7	49.0	109
4/15/2003	36.0	0	1.3	3.7	46.0	109
4/16/2003	36.0	0	1.2	3.6	45.0	108
4/17/2003	34.0	0	1.1	3.6	42.0	108
4/18/2003	33.0	0	1.1	3.5	42.0	106
4/19/2003	32.0	0	1.1	3.5	42.0	102
4/20/2003	31.0	0	1.0	3.5	41.0	103
4/21/2003	30.0	0	.9	3.3	37.0	103
4/22/2003	29.0	0	.9	3.4	35.0	103
4/23/2003	28.0	0	.9	3.5	36.0	103
4/24/2003	28.0	0	.8	3.3	35.0	104
4/25/2003	26.0	0	.7	2.9	31.0	104
4/26/2003	24.0	0	.6	2.7	28.0	104
4/27/2003	23.0	0	.6	2.6	26.0	104
4/28/2003	21.0	0	.6	2.4	25.0	103
4/29/2003	20.0	0	.6	2.4	24.0	103
4/30/2003	20.0	0	.6	2.3	24.0	103
5/1/2003	19.0	0	.5	2.2	23.0	103
5/2/2003	18.0	0	.5	2.1	21.0	103
5/3/2003	18.0	0	.5	2.0	20.0	103
5/4/2003	17.0	0	.5	1.9	21.0	103
5/5/2003	16.0	0	.4	1.8	20.0	103
5/6/2003	16.0	0	.4	1.7	18.0	102
5/7/2003	15.0	0	.4	1.7	18.0	102
5/8/2003	15.0	0	.4	1.6	17.0	102

Appendix 2. Daily mean streamflow for the five creeks providing recharge to the Barton Springs segment of the Edwards aquifer and daily mean discharge for Barton Springs, Austin, Texas, 1978–2003—Continued.

Date	Barton Creek	Williamson Creek	Slaughter Creek	Bear Creek	Onion Creek	Barton Springs
5/9/2003	14.0	0	0.3	1.4	15.0	102
5/10/2003	13.0	0	.3	1.3	13.0	102
5/11/2003	12.0	0	.3	1.3	12.0	102
5/12/2003	12.0	0	.3	1.3	12.0	102
5/13/2003	11.0	0	.3	1.3	12.0	102
5/14/2003	10.0	0	.3	1.1	11.0	102
5/15/2003	9.4	0	.2	1.0	9.9	101
5/16/2003	8.7	0	.2	.9	8.7	101
5/17/2003	7.7	0	.2	.8	7.5	101
5/18/2003	6.9	0	.2	.8	7.2	101
5/19/2003	6.1	0	.1	.8	7.2	101
5/20/2003	5.6	0	.1	.7	6.7	99
5/21/2003	5.3	0	.1	.7	6.1	98
5/22/2003	5.1	0	.1	.7	5.9	98
5/23/2003	5.0	0	.1	.7	5.6	97
5/24/2003	4.7	0	.1	.6	5.4	97
5/25/2003	4.6	0	.1	.6	5.2	97
5/26/2003	8.2	0	.1	.6	6.0	97
5/27/2003	14.0	0	.1	.6	5.6	97
5/28/2003	9.4	0	.1	.5	5.5	97
5/29/2003	8.1	0	.1	.5	5.2	97
5/30/2003	6.7	0	.1	.5	5.0	97
5/31/2003	5.3	0	.1	.4	4.6	97

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Appendix 3—Results of Statistical Correlation Tests

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Appendix 3. Results of Spearman's rho correlation tests for samples from wells in the Barton Springs segment of the Edwards aquifer, Austin, Texas, 1978–2003.

[Bold—significant correlation, $p \leq .05$]

Well identifier (fig. 1)	Specific conductance compared to	Number of samples	Spearman's rho	p-value
BCK	Barton Springs discharge	6	-0.35	.50
BCK	Barton Creek streamflow	5	-.56	.32
BCK	Bear Creek streamflow	5	-.10	.87
BCK	Onion Creek streamflow	5	-.30	.62
BCK	Slaughter Creek streamflow	6	-.22	.67
BCK	Williamson Creek streamflow	6	.18	.74
BDW	Barton Springs discharge	22	-.20	.38
BDW	Barton Creek streamflow	22	-.39	.07
BDW	Bear Creek streamflow	22	-.47	**.03**
BDW	Onion Creek streamflow	22	-.38	.08
BDW	Slaughter Creek streamflow	22	-.37	.09
BDW	Williamson Creek streamflow	22	-.23	.31
BPS	Barton Springs discharge	52	.14	.33
BPS	Barton Creek streamflow	31	.10	.61
BPS	Bear Creek streamflow	50	-.07	.64
BPS	Onion Creek streamflow	50	0	.98
BPS	Slaughter Creek streamflow	52	-.03	.85
BPS	Williamson Creek streamflow	52	-.07	.62
CNE	Barton Springs discharge	6	.14	.78
CNE	Barton Creek streamflow	4	.20	.80
CNE	Bear Creek streamflow	5	.56	.32
CNE	Onion Creek streamflow	5	.56	.32
CNE	Slaughter Creek streamflow	6	.75	.08
CNE	Williamson Creek streamflow	6	.79	.06
FMW	Barton Springs discharge	31	-.72	**0**
FMW	Barton Creek streamflow	18	-.44	.07
FMW	Bear Creek streamflow	31	-.32	.08
FMW	Onion Creek streamflow	31	-.48	**.01**
FMW	Slaughter Creek streamflow	31	-.55	**0**
FMW	Williamson Creek streamflow	31	-.15	.41
FOW	Barton Springs discharge	42	.32	**.04**
FOW	Barton Creek streamflow	29	.50	**.01**
FOW	Bear Creek streamflow	41	.14	.40
FOW	Onion Creek streamflow	41	.21	.20
FOW	Slaughter Creek streamflow	42	.28	.07
FOW	Williamson Creek streamflow	42	.19	.24
GHW	Barton Springs discharge	24	.41	**.05**
GHW	Barton Creek streamflow	8	.48	.23
GHW	Bear Creek streamflow	23	.40	.06
GHW	Onion Creek streamflow	23	.34	.12
GHW	Slaughter Creek streamflow	24	.25	.25
GHW	Williamson Creek streamflow	24	.33	.11
HND	Barton Springs discharge	15	.30	.28
HND	Barton Creek streamflow	4	.80	.20
HND	Bear Creek streamflow	14	-.32	.27
HND	Onion Creek streamflow	14	-0.44	.11
HND	Slaughter Creek streamflow	15	-.14	.63
HND	Williamson Creek streamflow	15	-.34	.22
HWD	Barton Springs discharge	6	-.52	.29
HWD	Barton Creek streamflow	5	-.67	.22
HWD	Bear Creek streamflow	5	-.90	**.04**
HWD	Onion Creek streamflow	5	-.70	.19
HWD	Slaughter Creek streamflow	6	-.61	.20
HWD	Williamson Creek streamflow	6	-.76	.08
ISD	Barton Springs discharge	6	-.49	.33
ISD	Barton Creek streamflow	4	-.80	.20
ISD	Bear Creek streamflow	5	-.20	.75
ISD	Onion Creek streamflow	5	-.20	.75
ISD	Slaughter Creek streamflow	6	-.46	.35
ISD	Williamson Creek streamflow	6	-.27	.60
JBS	Barton Springs discharge	13	.16	.60
JBS	Barton Creek streamflow	8	.07	.86
JBS	Bear Creek streamflow	12	.20	.53
JBS	Onion Creek streamflow	12	.24	.46
JBS	Slaughter Creek streamflow	13	.32	.29
JBS	Williamson Creek streamflow	13	.27	.37
KCH	Barton Springs discharge	60	-.39	**0**
KCH	Barton Creek streamflow	45	.01	.96
KCH	Bear Creek streamflow	59	-.20	.14
KCH	Onion Creek streamflow	59	-.47	**0**
KCH	Slaughter Creek streamflow	60	-.26	**.05**
KCH	Williamson Creek streamflow	60	-.05	.71
LWK	Barton Springs discharge	6	.88	**.02**
LWK	Barton Creek streamflow	5	.56	.32
LWK	Bear Creek streamflow	5	.78	.12
LWK	Onion Creek streamflow	5	.78	.12
LWK	Slaughter Creek streamflow	6	.25	.64
LWK	Williamson Creek streamflow	6	0	1.00
MCH	Barton Springs discharge	47	-.12	.43
MCH	Barton Creek streamflow	31	-.46	**.01**
MCH	Bear Creek streamflow	45	-.44	**0**
MCH	Onion Creek streamflow	46	-.42	**0**
MCH	Slaughter Creek streamflow	47	-.43	**0**
MCH	Williamson Creek streamflow	47	-.42	**0**
PLS	Barton Springs discharge	31	.07	.70
PLS	Barton Creek streamflow	27	.02	.93
PLS	Bear Creek streamflow	31	-.02	.93
PLS	Onion Creek streamflow	31	-.09	.64
PLS	Slaughter Creek streamflow	31	-.09	.65
PLS	Williamson Creek streamflow	31	-.17	.37

Appendix 3. Results of Spearman's rho correlation tests for samples from wells in the Barton Springs segment of the Edwards aquifer, Austin, Texas, 1978–2003—Continued.

Well identifier (fig. 1)	Specific conductance compared to	Number of samples	Spearman's rho	p-value
RAB	Barton Springs discharge	15	0.18	.52
RAB	Barton Creek streamflow	15	.10	.72
RAB	Bear Creek streamflow	15	-.01	.98
RAB	Onion Creek streamflow	15	-.20	.46
RAB	Slaughter Creek streamflow	15	.01	.98
RAB	Williamson Creek streamflow	15	.40	.14
ROL	Barton Springs discharge	39	.46	**0**
ROL	Barton Creek streamflow	24	.53	**.01**
ROL	Bear Creek streamflow	38	.25	.14
ROL	Onion Creek streamflow	38	.30	.07
ROL	Slaughter Creek streamflow	39	.33	**.04**
ROL	Williamson Creek streamflow	39	.16	.33
SLR	Barton Springs discharge	18	-.63	**.01**
SLR	Barton Creek streamflow	5	-.80	.10
SLR	Bear Creek streamflow	16	-.63	**.01**
SLR	Onion Creek streamflow	17	-.41	.10
SLR	Slaughter Creek streamflow	18	-.44	.07
SLR	Williamson Creek streamflow	18	-.17	.50
SNL	Barton Springs discharge	6	.38	.46
SNL	Barton Creek streamflow	5	.10	.87
SNL	Bear Creek streamflow	5	-.30	.62
SNL	Onion Creek streamflow	5	-.21	.74
SNL	Slaughter Creek streamflow	6	.20	.70
SNL	Williamson Creek streamflow	6	.20	.70
SVE	Barton Springs discharge	48	-.69	**0**
SVE	Barton Creek streamflow	34	-.50	**0**
SVE	Bear Creek streamflow	47	-.39	**.01**
SVE	Onion Creek streamflow	47	-.40	**.01**
SVE	Slaughter Creek streamflow	48	-.44	**0**
SVE	Williamson Creek streamflow	48	-.15	.30
SVN	Barton Springs discharge	34	.02	.93
SVN	Barton Creek streamflow	23	-.50	**.01**
SVN	Bear Creek streamflow	33	-.35	**.04**
SVN	Onion Creek streamflow	33	-.41	**.02**
SVN	Slaughter Creek streamflow	34	-.54	**0**
SVN	Williamson Creek streamflow	34	-.63	**0**
SVS	Barton Springs discharge	50	.29	**.04**
SVS	Barton Creek streamflow	35	-.07	.67
SVS	Bear Creek streamflow	49	-.10	.49
SVS	Onion Creek streamflow	49	-.10	.49
SVS	Slaughter Creek streamflow	50	0	.98
SVS	Williamson Creek streamflow	50	-.23	.11
SVW	Barton Springs discharge	64	-.05	.68
SVW	Barton Creek streamflow	49	-.39	**.01**
SVW	Bear Creek streamflow	63	-.47	**0**
SVW	Onion Creek streamflow	63	-0.31	**.01**
SVW	Slaughter Creek streamflow	64	-.41	**0**
SVW	Williamson Creek streamflow	64	-.28	**.03**
TNR	Barton Springs discharge	26	.25	.22
TNR	Barton Creek streamflow	10	.07	.85
TNR	Bear Creek streamflow	25	.06	.77
TNR	Onion Creek streamflow	25	.21	.32
TNR	Slaughter Creek streamflow	26	0	.98
TNR	Williamson Creek streamflow	26	-.13	.53
WBG	Barton Springs discharge	6	.43	.40
WBG	Barton Creek streamflow	4	-.20	.80
WBG	Bear Creek streamflow	4	-.40	.60
WBG	Onion Creek streamflow	5	-.40	.50
WBG	Slaughter Creek streamflow	6	.09	.87
WBG	Williamson Creek streamflow	6	.21	.69
WGF	Barton Springs discharge	6	.94	**0**
WGF	Barton Creek streamflow	5	.80	.10
WGF	Bear Creek streamflow	5	.60	.28
WGF	Onion Creek streamflow	5	.67	.22
WGF	Slaughter Creek streamflow	6	.72	.10
WGF	Williamson Creek streamflow	6	.29	.58

Appendix 4—Major Ion and Nitrate Water Analysis Data

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Appendix 4. Charge balanced major ion and nitrate water analysis data from wells in the Barton Springs segment of the Edwards aquifer, Austin, Texas, 1978–2003.

[µS/cm, microsiemens per centimeter at 25 degrees Celsius; Ca, calcium; mg/L, milligrams per liter; Mg, magnesium; Na, sodium; K, potassium; HCO_3, bicarbonate; Cl, chloride; SO_4, sulfate; NO_3, nitrate; N, nitrogen; --, no data. Incomplete water analyses were excluded from this dataset (ignoring nitrate). Analyses with charge balance errors greater than 5 percent were excluded.]

Well identifier (fig. 1)	Date	Time	pH	Specific conductance (µS/cm)	Ca (mg/L)	Mg (mg/L)	Na (mg/L)	K (mg/L)	HCO_3 (mg/L)	Cl (mg/L)	SO_4 (mg/L)	NO_3-N (mg/L)
BCK	8/28/1980	1000	7.1	659	67	34	6.3	2.1	331	8.5	50.0	0.2
BCK	8/11/1981	0830	7.2	538	70	30	4.6	1.0	366	7.5	1.0	.8
BCK	8/10/1982	0920	6.8	618	64	33	6.5	2.1	329	8.6	58.0	.4
BDW	3/19/1991	1020	7.1	565	85	25	6.8	.8	366	12.0	7.3	1.1
BDW	1/22/1993	1220	6.8	590	88	21	6.0	.6	366	10.0	6.7	--
BDW	1/25/1993	1342	6.8	589	88	21	6.0	.6	366	10.0	7.0	--
BDW	8/18/1993	1200	6.8	594	96	20	6.1	.6	354	9.4	7.0	1.6
BDW	4/15/1994	1000	7.0	591	90	20	6.1	.6	366	10.0	7.3	1.6
BDW	6/14/1995	1055	7.2	590	83	27	5.8	.8	366	9.3	6.6	1.1
BDW	4/25/1996	0930	7.3	582	92	21	6.0	.6	342	9.9	6.5	1.6
BDW	7/8/1997	1615	7.2	585	75	27	5.9	.7	329	10.1	6.5	1.3
BDW	4/21/1998	1130	7.1	587	80	31	6.0	.8	366	10.2	7.2	1.4
BDW	6/11/1999	0945	7.0	595	88	18	5.5	.6	342	10.9	7.0	1.5
BDW	6/2/2000	1300	7.0	591	88	19	5.6	.6	354	9.2	6.8	1.4
BDW	6/5/2001	1300	7.0	595	79	27	6.0	.8	364	9.3	6.9	1.1
BDW	6/5/2002	1300	7.0	606	90	20	5.7	.6	362	9.6	7.3	1.3
BDW	5/20/2003	1300	7.1	577	76	26	5.5	.8	348	9.4	5.8	1.0
BPS	8/24/1979	1410	7.0	588	73	26	6.1	1.2	331	11.0	31.0	1.4
BPS	8/1/1980	1315	7.1	583	72	25	6.1	1.2	331	9.6	22.0	1.6
BPS	8/29/1980	0815	7.6	578	73	26	6.4	1.0	331	11.0	27.0	.3
BPS	7/30/1981	1400	7.0	583	74	26	6.5	1.2	329	10.0	28.0	.1
BPS	8/12/1981	0810	7.3	568	74	25	5.9	1.3	342	10.0	25.0	1.2
BPS	7/19/1982	1130	7.0	586	75	25	6.4	1.2	329	11.0	23.0	1.5
BPS	7/22/1983	1215	7.8	539	76	26	6.5	1.3	329	12.0	27.0	1.4
BPS	2/20/1985	1159	7.8	586	77	25	6.1	1.2	329	11.0	25.0	1.4
BPS	8/9/1985	1345	7.4	598	74	25	6.1	1.2	333	11.0	25.0	1.4
BPS	1/14/1986	0845	7.2	579	75	26	6.6	1.1	338	11.0	24.0	1.4
BPS	6/24/1986	1420	7.4	591	75	25	6.4	1.2	326	9.0	27.0	1.5
BPS	9/3/1986	0849	7.2	589	75	26	6.7	1.1	337	11.0	26.0	1.4
BPS	2/11/1987	0930	7.1	588	76	26	6.4	1.1	337	12.0	27.0	1.4
BPS	8/19/1987	1335	7.1	605	76	26	6.5	1.2	346	10.0	27.0	1.4
BPS	2/29/1988	0845	7.0	589	77	26	6.4	1.3	340	11.0	26.0	1.4
BPS	8/17/1988	0955	7.3	597	74	26	6.2	1.1	331	11.0	27.0	1.4
BPS	2/27/1989	1520	7.1	596	73	26	6.3	1.2	332	9.9	27.0	1.3
BPS	7/17/1989	1240	7.1	563	75	26	6.4	1.2	343	10.0	24.0	1.3
BPS	8/29/1989	1145	7.0	581	78	26	6.5	1.1	338	9.6	25.0	1.3
BPS	1/29/1990	1320	6.9	585	72	25	6.2	1.2	328	10.0	26.0	1.3
BPS	8/14/1990	1355	7.1	566	76	26	6.4	1.1	342	13.0	25.0	1.2
BPS	3/22/1991	0825	7.2	586	76	24	5.9	1.3	329	9.9	27.0	1.2
BPS	4/30/1992	1240	6.9	589	81	24	6.0	1.2	342	13.0	28.0	1.3
BPS	8/28/1992	1100	7.2	584	77	24	6.4	1.3	342	14.0	27.0	1.4
BPS	8/19/1993	1220	7.4	539	76	25	6.3	1.1	342	10.0	26.0	1.3
BPS	8/20/1993	0805	7.0	579	79	25	6.6	1.2	329	10.0	26.0	1.4
BPS	4/14/1994	1215	7.1	578	74	24	5.9	1.2	317	10.0	25.0	1.3
BPS	6/14/1995	0930	7.2	585	78	25	6.3	1.2	329	11.0	23.0	1.3

Appendix 4. Charge balanced major ion and nitrate water analysis data from wells in the Barton Springs segment of the Edwards aquifer, Austin, Texas, 1978–2003—Continued.

Well identifier (fig. 1)	Date	Time	pH	Specific conductance (µS/cm)	Ca (mg/L)	Mg (mg/L)	Na (mg/L)	K (mg/L)	HCO_3 (mg/L)	Cl (mg/L)	SO_4 (mg/L)	NO_3-N (mg/L)
BPS	5/9/1996	0900	7.2	576	76	26	6.3	1.1	317	11.0	25.0	0.8
BPS	7/8/1997	1435	7.2	575	72	24	6.2	1.2	317	10.7	23.6	1.3
BPS	4/22/1998	0830	7.1	565	80	23	5.9	1.1	329	10.4	23.8	1.4
BPS	6/11/1999	0800	7.0	591	74	24	6.4	1.1	329	12.3	25.1	1.3
BPS	6/2/2000	1500	7.1	592	74	24	6.2	1.1	329	10.9	25.4	1.1
BPS	6/12/2001	1100	7.1	593	77	24	6.5	1.3	333	10.3	25.3	1.3
BPS	6/6/2002	1100	7.1	596	75	24	6.3	1.1	343	11.3	25.0	1.3
CNE	7/24/1978	1015	7.3	1,040	65	41	93.0	7.8	290	96.0	160.0	0
CNE	9/4/1980	0900	7.5	1,030	61	39	99.0	7.9	293	98.0	170.0	0
CNE	8/12/1981	1230	7.8	996	59	38	92.0	8.2	281	92.0	170.0	0
CNE	8/11/1982	0930	7.7	1,020	59	39	98.0	7.3	281	91.0	180.0	.1
CNE	7/21/1983	1425	7.6	1,060	59	38	97.0	7.4	281	93.0	170.0	.1
FMW	8/11/1981	0950	7.2	531	82	19	4.6	.8	342	7.9	1.0	1.5
FMW	8/4/1982	1340	6.9	566	80	22	5.6	.6	342	12.0	7.0	1.7
FMW	7/19/1983	1245	7.0	568	83	23	6.2	.7	342	10.0	7.6	1.5
FMW	8/8/1985	0930	7.1	567	82	22	5.7	.6	350	9.8	5.8	1.7
FMW	1/15/1986	1235	7.1	545	81	22	5.4	.5	346	12.0	6.2	1.7
FMW	9/3/1986	1020	7.2	568	83	21	5.7	.6	353	10.0	6.4	1.7
FMW	2/9/1987	1230	7.4	552	84	19	4.3	.8	348	7.9	5.7	1.7
FMW	8/18/1987	1410	7.5	564	84	19	4.8	.8	350	7.3	7.1	1.6
FMW	2/25/1988	0910	7.1	573	84	23	6.1	.6	354	11.0	6.7	1.7
FMW	2/23/1989	1335	6.9	560	82	23	6.2	.6	340	10.0	6.5	1.6
FMW	8/21/1989	1345	7.3	587	83	23	6.0	.6	356	9.6	6.0	1.5
FMW	3/5/1991	1320	7.1	571	79	21	5.6	.6	354	11.0	5.4	1.6
FMW	4/28/1992	1130	7.2	545	81	18	4.6	.7	329	11.0	6.9	1.3
FMW	1/21/1993	1550	6.9	536	81	18	4.3	.8	342	7.3	7.8	--
FMW	1/24/1993	1215	7.0	537	82	19	4.5	.8	342	7.4	6.9	--
FMW	1/28/1993	0830	6.8	537	86	19	4.7	.8	342	7.4	6.7	--
FMW	5/8/1993	0820	7.3	535	86	19	4.5	.8	342	7.1	6.8	1.4
FMW	8/16/1993	1230	7.0	537	87	19	4.4	.8	329	6.6	6.5	1.5
FMW	4/8/1994	0750	7.1	563	79	22	5.7	.6	342	9.8	6.6	1.7
FOW	6/28/1978	1255	7.2	620	73	35	7.4	1.5	360	15.0	48.0	.7
FOW	7/10/1979	1340	6.6	620	77	35	7.6	1.2	350	15.0	36.0	1.1
FOW	8/28/1980	1145	7.2	686	78	35	8.0	1.2	360	15.0	53.0	.1
FOW	8/11/1981	1055	7.2	595	75	31	7.5	.8	366	16.0	9.0	.9
FOW	8/10/1982	1115	7.0	595	72	30	8.1	.7	354	16.0	8.0	1.1
FOW	7/19/1983	1330	7.1	597	75	31	8.1	.8	366	16.0	6.6	1.1
FOW	8/8/1985	0915	7.0	641	80	37	8.3	1.9	354	15.0	52.0	.7
FOW	1/14/1986	0700	7.1	624	75	33	8.0	.7	370	20.0	16.0	1.0
FOW	9/3/1986	0700	7.2	610	75	31	8.9	.8	354	17.0	7.9	1.1
FOW	2/10/1987	1030	7.5	625	76	32	8.4	.9	368	12.0	21.0	1.0
FOW	8/26/1987	1055	7.3	687	75	37	8.0	1.8	356	14.0	58.0	.8
FOW	8/17/1988	0905	7.2	705	76	38	7.8	1.9	350	14.0	61.0	.6
FOW	2/27/1989	1045	6.9	660	77	34	9.0	1.1	368	15.0	28.0	1.0
FOW	2/9/1990	0930	7.0	658	77	37	8.5	1.8	359	14.0	56.0	.8

Appendix 4. Charge balanced major ion and nitrate water analysis data from wells in the Barton Springs segment of the Edwards aquifer, Austin, Texas, 1978–2003—Continued.

Well identifier (fig. 1)	Date	Time	pH	Specific conductance (µS/cm)	Ca (mg/L)	Mg (mg/L)	Na (mg/L)	K (mg/L)	HCO_3 (mg/L)	Cl (mg/L)	SO_4 (mg/L)	NO_3-N (mg/L)
FOW	5/1/1992	1130	6.9	771	84	45	7.1	4.0	342	14.0	150.0	0.2
FOW	1/21/1993	1225	6.9	863	80	54	7.5	5.8	342	10.0	190.0	--
FOW	1/24/1993	1015	7.0	895	85	56	8.7	4.7	342	12.0	200.0	--
FOW	5/7/1993	1135	7.3	775	75	48	6.3	4.5	329	8.7	150.0	.1
FOW	4/18/1994	1030	6.9	645	78	33	9.2	1.0	366	18.0	30.0	1.1
FOW	6/19/1995	1110	7.1	760	78	42	7.9	3.2	342	13.0	110.0	.5
FOW	5/7/1996	0845	7.2	635	81	34	9.8	1.0	354	18.0	31.0	1.0
FOW	7/9/1997	1310	7.0	616	71	30	9.2	.8	329	18.3	12.3	1.1
FOW	4/23/1998	0730	7.1	652	89	35	9.4	.8	354	18.1	33.7	4.6
FOW	6/11/1999	1100	7.0	654	75	31	9.4	.9	329	18.8	31.2	1.2
FOW	6/19/2001	1000	7.0	742	77	33	9.7	.9	359	17.9	32.7	1.1
FOW	6/5/2002	1000	6.9	660	75	31	9.6	.8	357	18.3	17.1	1.2
FOW	5/21/2003	1000	6.9	747	87	40	10.6	1.7	367	18.5	76.8	1.2
GHW	7/9/1979	0950	7.2	670	80	37	6.4	1.6	410	13.0	19.0	1.0
GHW	8/29/1980	1030	7.9	666	78	36	5.5	1.3	410	12.0	14.0	0
GHW	8/12/1981	0905	7.2	650	78	37	6.6	1.7	415	16.0	1.0	.7
GHW	8/16/1982	1015	6.9	666	80	36	6.9	1.3	415	12.0	17.0	.9
GHW	7/21/1983	0950	7.2	667	88	35	6.9	1.3	415	14.0	16.0	1.1
GHW	8/9/1985	1245	7.1	648	75	35	6.5	1.5	394	10.0	19.0	.9
GHW	1/13/1986	1210	7.0	644	76	38	7.0	1.4	416	13.0	15.0	.8
GHW	9/2/1986	1320	7.3	671	81	36	7.0	1.3	416	12.0	16.0	.9
GHW	2/11/1987	1315	7.2	672	80	37	6.7	1.5	420	13.0	16.0	.8
GHW	8/19/1987	1515	7.1	683	81	37	6.8	1.5	403	11.0	17.0	.8
GHW	2/24/1988	1245	6.9	655	82	38	6.7	1.6	422	12.0	17.0	.9
GHW	8/10/1988	1115	7.1	635	77	37	6.5	1.4	410	11.0	15.0	.8
GHW	2/23/1989	0950	7.1	640	82	37	6.7	1.4	404	10.0	16.0	.9
GHW	8/30/1989	1015	7.1	640	80	36	6.7	1.4	412	11.0	14.0	.8
HND	7/11/1979	1400	6.6	580	88	21	7.8	1.1	320	15.0	22.0	2.1
HND	9/8/1980	1330	7.1	559	72	28	6.1	1.1	340	11.0	20.0	.9
HND	8/11/1981	1440	7.2	589	88	20	8.1	1.1	342	17.0	13.0	1.8
HND	8/10/1982	1430	7.1	575	72	28	6.5	1.1	342	12.0	19.0	.9
HND	7/20/1983	1330	7.4	475	69	17	6.8	1.2	268	10.0	18.0	.6
HND	8/8/1985	1130	7.1	580	89	21	7.8	1.1	351	13.0	22.0	1.6
HND	1/13/1986	1020	7.0	575	83	22	7.8	1.3	340	14.0	17.0	1.5
HND	9/3/1986	1140	7.2	600	84	23	8.1	1.2	338	14.0	20.0	2.1
HND	2/11/1987	1145	7.2	607	89	19	8.1	1.3	348	12.0	20.0	2.0
HWD	7/9/1979	1310	7.1	560	77	22	6.0	.9	331	12.0	17.0	1.5
HWD	8/28/1980	1115	7.1	575	79	21	6.4	.9	331	10.0	13.0	1.7
HWD	8/18/1981	1415	7.2	551	79	23	6.9	1.1	342	18.0	1.0	1.6
HWD	8/4/1982	1250	7.1	563	79	24	6.6	.9	329	11.0	12.0	1.5
HWD	7/22/1983	0950	7.5	553	85	23	6.7	.9	342	13.0	12.0	1.6
ISD	7/11/1979	0820	6.9	480	48	25	4.8	1.2	220	8.0	21.0	.4
ISD	9/4/1980	1154	7.3	487	56	27	5.4	1.0	300	9.6	15.0	.6
ISD	8/12/1981	1340	7.3	482	55	27	5.5	1.1	293	8.9	15.0	.4
ISD	8/11/1982	1035	7.0	495	53	27	5.8	1.0	293	9.0	17.0	.5

Appendix 4. Charge balanced major ion and nitrate water analysis data from wells in the Barton Springs segment of the Edwards aquifer, Austin, Texas, 1978–2003—Continued.

Well identifier (fig. 1)	Date	Time	pH	Specific conductance (µS/cm)	Ca (mg/L)	Mg (mg/L)	Na (mg/L)	K (mg/L)	HCO_3 (mg/L)	Cl (mg/L)	SO_4 (mg/L)	NO_3-N (mg/L)
ISD	7/22/1983	1130	7.8	489	56	28	5.6	1.2	293	9.0	16.0	0.5
JBS	7/16/1979	1440	6.7	580	90	20	8.0	1.2	320	14.0	32.0	1.7
JBS	8/27/1980	1115	7.4	587	86	20	8.4	1.1	320	13.0	26.0	.6
JBS	8/4/1981	0955	7.3	570	86	21	8.8	1.1	317	12.0	30.0	3.0
JBS	8/9/1982	1155	6.9	592	84	20	8.6	1.1	317	14.0	31.0	1.6
JBS	7/18/1983	1205	7.4	586	85	21	9.1	1.2	317	16.0	28.0	1.7
KCH	7/10/1979	1300	6.6	620	82	26	13.0	1.0	320	18.0	40.0	6.4
KCH	8/28/1980	1045	7.2	660	87	25	16.0	1.0	310	21.0	48.0	4.7
KCH	8/11/1981	0925	7.2	621	82	25	16.0	.9	329	19.0	42.0	4.0
KCH	8/10/1982	1015	7.0	652	83	24	16.0	.9	317	23.0	45.0	4.8
KCH	7/19/1983	1210	7.0	670	88	25	17.0	1.0	329	23.0	45.0	4.7
KCH	8/7/1985	1230	7.2	635	86	24	14.0	.9	322	19.0	35.0	4.4
KCH	8/29/1986	1400	7.3	674	89	25	15.0	.8	328	19.0	42.0	4.5
KCH	2/9/1987	1120	7.3	641	83	25	14.0	.9	325	18.0	35.0	7.1
KCH	8/19/1987	1125	7.4	675	83	25	14.0	.9	322	18.0	35.0	8.6
KCH	3/9/1988	1030	7.2	655	90	26	18.0	1.0	316	22.0	60.0	4.9
KCH	8/11/1988	1200	7.1	691	85	26	18.0	.8	318	22.0	52.0	4.7
KCH	2/27/1989	1145	6.9	690	90	25	18.0	.9	325	20.0	44.0	4.7
KCH	8/29/1989	1400	7.2	668	89	24	18.0	.9	326	27.0	45.0	4.6
KCH	2/7/1990	1000	7.0	622	88	25	15.0	1.0	325	20.0	31.0	4.7
KCH	3/11/1991	1150	7.1	642	90	25	14.0	1.0	342	20.0	29.0	4.2
KCH	4/29/1992	1130	6.5	623	77	24	12.0	.9	329	23.0	33.0	3.8
KCH	1/20/1993	1115	7.0	652	82	25	16.0	.8	317	20.0	44.0	--
KCH	1/23/1993	1000	6.9	650	83	25	15.0	.9	317	21.0	44.0	--
KCH	1/26/1993	1300	7.2	652	83	25	16.0	.9	317	20.0	47.0	--
KCH	5/6/1993	1507	7.2	641	88	26	15.0	.9	317	18.0	43.0	4.6
KCH	8/18/1993	0745	6.9	664	92	25	15.0	.9	317	19.0	51.0	4.8
KCH	4/12/1994	1220	7.0	652	91	24	15.0	.9	317	23.0	45.0	5.6
KCH	10/10/1994	0930	6.7	652	85	23	15.0	1.1	317	22.0	38.0	5.0
KCH	10/10/1994	1500	6.7	660	86	23	15.0	.8	329	22.0	37.0	5.0
KCH	10/10/1994	2020	6.7	651	86	23	15.0	.8	329	22.0	38.0	5.1
KCH	10/11/1994	0820	7.0	657	89	24	16.0	.9	329	22.0	38.0	5.0
KCH	10/11/1994	2030	6.8	652	88	24	16.0	1.0	317	21.0	39.0	5.1
KCH	10/12/1994	0850	6.8	653	90	25	16.0	.9	305	23.0	38.0	5.1
KCH	10/12/1994	2030	7.0	653	88	24	16.0	1.0	317	21.0	38.0	4.9
KCH	10/13/1994	0830	6.8	655	86	24	15.0	1.0	317	21.0	38.0	4.9
KCH	10/13/1994	2045	7.0	655	91	27	16.0	1.1	317	21.0	39.0	4.9
KCH	10/14/1994	1900	6.9	657	92	26	17.0	.9	317	22.0	40.0	5.2
KCH	10/15/1994	1900	7.9	658	89	24	16.0	.9	317	22.0	40.0	5.1
KCH	10/16/1994	1230	8.0	660	89	25	16.0	.9	317	23.0	41.0	5.3
KCH	6/19/1995	1300	7.1	641	84	24	15.0	.9	305	19.0	34.0	5.1
KCH	5/6/1996	1200	7.2	648	89	23	16.0	.8	305	22.0	39.0	5.1
KCH	7/8/1997	1350	7.5	568	66	26	9.2	.9	293	13.6	16.8	3.9
KCH	4/21/1998	0920	7.1	628	89	25	15.1	.9	305	21.4	37.3	5.9
LWK	7/11/1979	1225	6.9	499	60	23	6.4	1.3	270	12.0	24.0	1.6

Appendix 4. Charge balanced major ion and nitrate water analysis data from wells in the Barton Springs segment of the Edwards aquifer, Austin, Texas, 1978–2003—Continued.

Well identifier (fig. 1)	Date	Time	pH	Specific conductance (µS/cm)	Ca (mg/L)	Mg (mg/L)	Na (mg/L)	K (mg/L)	HCO_3 (mg/L)	Cl (mg/L)	SO_4 (mg/L)	NO_3-N (mg/L)
LWK	8/29/1980	0850	7.6	496	59	22	6.4	1.3	270	7.6	18.0	0.4
LWK	8/18/1981	1020	7.3	499	62	23	6.8	1.3	293	11.0	9.1	1.6
LWK	8/17/1982	1130	6.9	493	59	23	6.7	1.3	268	11.0	22.0	1.5
LWK	7/21/1983	1330	7.4	499	60	23	6.7	1.4	281	12.0	19.0	1.6
MCH	7/5/1979	0745	7.0	540	85	17	8.3	1.0	320	11.0	18.0	1.1
MCH	8/28/1980	1245	7.1	570	79	19	6.3	.9	320	11.0	12.0	1.3
MCH	8/11/1981	1345	7.1	537	82	18	6.5	.8	329	11.0	10.0	.9
MCH	8/11/1982	1255	7.6	528	77	20	6.5	1.0	329	10.0	14.0	1.1
MCH	7/20/1983	0930	7.5	476	71	17	6.6	1.2	268	11.0	16.0	.5
MCH	8/9/1985	1045	7.1	540	80	18	6.6	1.0	305	12.0	15.0	.8
MCH	1/13/1986	1345	7.1	537	79	18	6.9	.9	327	12.0	14.0	.9
MCH	9/2/1986	1020	7.2	550	85	21	6.7	3.3	338	12.0	15.0	1.1
MCH	2/10/1987	0930	7.1	554	87	18	6.7	.9	331	12.0	16.0	.9
MCH	8/17/1987	1505	7.2	560	84	20	6.7	1.0	342	11.0	16.0	1.0
MCH	2/22/1988	1425	7.1	519	81	20	6.9	1.0	312	12.0	22.0	.8
MCH	8/10/1988	1210	7.1	552	78	21	6.5	.9	328	11.0	15.0	1.0
MCH	2/21/1989	1400	7.2	584	83	23	7.0	1.1	334	11.0	21.0	.9
MCH	8/29/1989	1045	7.1	547	81	20	6.6	1.0	326	13.0	15.0	.9
MCH	1/31/1990	1005	6.9	587	81	23	6.1	.9	346	10.0	13.0	1.2
MCH	3/13/1991	1250	7.3	518	81	17	7.6	1.1	293	14.0	24.0	.6
MCH	4/30/1992	0920	6.9	564	94	17	6.4	.9	329	15.0	19.0	.8
MCH	1/22/1993	1120	6.9	504	75	16	6.5	1.0	293	11.0	18.0	--
MCH	1/25/1993	1300	6.9	503	75	16	6.4	.9	293	10.0	19.0	--
MCH	5/8/1993	1045	7.3	521	81	17	6.7	1.0	305	11.0	19.0	.5
MCH	8/18/1993	0950	6.8	550	83	19	6.4	1.3	317	10.0	15.0	.9
MCH	4/15/1994	0820	7.0	506	71	18	6.9	1.0	268	12.0	26.0	.5
MCH	6/14/1995	1220	7.1	550	89	16	6.0	.9	317	9.8	13.0	.5
MCH	5/7/1996	1045	7.6	555	80	22	6.5	.9	317	10.0	14.0	.9
MCH	7/8/1997	1545	7.2	555	87	15	6.0	.9	293	10.3	13.0	.7
MCH	4/22/1998	1350	7.0	534	83	18	7.1	.9	293	11.3	19.1	4.0
MCH	6/6/1999	1150	7.0	545	83	20	7.2	.9	305	12.3	18.2	.8
MCH	6/29/2000	0900	7.0	538	79	18	6.5	1.3	305	11.2	17.9	.7
MCH	6/20/2001	1100	6.8	554	80	18	6.8	1.0	311	11.7	18.0	.6
MCH	6/4/2002	1100	7.3	558	73	20	9.9	1.0	293	13.8	16.9	1.0
MCH	5/20/2003	1200	7.1	565	85	18	7.2	1.0	312	12.4	18.6	.7
PLS	2/26/1988	0830	7.1	568	74	24	6.7	1.2	332	12.0	17.0	1.5
PLS	8/11/1988	0845	7.2	564	73	25	6.7	1.1	320	11.0	16.0	1.4
PLS	2/28/1989	1455	7.1	548	75	25	7.5	1.2	328	11.0	18.0	1.4
PLS	8/30/1989	1330	7.0	542	76	24	6.8	1.1	328	11.0	17.0	1.4
PLS	2/7/1990	1500	7.0	550	76	24	6.9	1.3	328	10.0	17.0	1.5
PLS	3/18/1991	1545	7.2	533	76	24	7.2	1.0	317	12.0	18.0	1.5
PLS	5/1/1992	0950	7.0	543	79	24	6.5	1.1	317	15.0	20.0	1.4
PLS	1/21/1993	1130	6.8	560	72	24	6.9	1.1	329	12.0	17.0	--
PLS	1/24/1993	0850	7.0	559	73	24	7.2	1.1	329	12.0	17.0	--
PLS	1/28/1993	1146	6.8	559	77	25	7.5	1.1	329	12.0	17.0	--

Appendix 4. Charge balanced major ion and nitrate water analysis data from wells in the Barton Springs segment of the Edwards aquifer, Austin, Texas, 1978–2003—Continued.

Well identifier (fig. 1)	Date	Time	pH	Specific conductance (µS/cm)	Ca (mg/L)	Mg (mg/L)	Na (mg/L)	K (mg/L)	HCO_3 (mg/L)	Cl (mg/L)	SO_4 (mg/L)	NO_3-N (mg/L)
PLS	8/17/1993	1030	6.9	560	78	24	7.0	1.1	317	11.0	17.0	1.4
PLS	4/12/1994	0900	7.0	546	78	24	6.8	1.1	329	12.0	17.0	1.6
PLS	6/19/1995	1640	7.2	561	75	23	6.9	1.1	317	12.0	16.0	1.5
PLS	4/25/1996	1200	6.9	544	76	25	6.8	1.1	305	11.0	16.0	1.5
PLS	7/8/1997	1220	7.3	550	72	24	7.0	1.1	317	12.0	16.3	1.5
PLS	4/21/1998	1320	7.1	528	81	25	7.0	1.1	329	12.1	17.2	1.4
PLS	6/1/2000	1500	7.1	573	75	24	6.8	1.0	329	12.1	16.9	1.4
PLS	6/8/2001	1100	7.0	590	77	24	7.2	1.1	299	12.9	18.6	1.4
PLS	5/23/2002	1100	7.1	570	78	24	7.1	1.1	296	13.0	18.1	1.5
PLS	5/21/2003	1200	7.0	576	77	24	7.4	1.2	315	12.8	16.8	1.3
RAB	5/6/1993	1400	7.3	596	77	25	12.0	1.6	256	16.0	81.0	.6
RAB	4/15/1994	1215	7.3	522	67	21	8.7	1.2	268	15.0	37.0	.8
RAB	6/27/1995	1015	7.4	507	66	19	8.8	1.2	244	16.0	31.0	.7
RAB	5/6/1996	0945	7.3	504	67	21	9.5	1.2	244	16.0	37.0	.6
RAB	7/9/1997	0740	7.2	542	67	22	10.7	1.4	232	17.8	48.9	.6
RAB	4/21/1998	0757	7.3	525	66	20	10.5	1.3	281	18.4	32.8	.6
RAB	6/8/1999	0900	7.2	755	75	23	12.6	1.5	244	20.6	69.7	.6
RAB	5/31/2000	1300	7.2	555	71	21	11.0	1.3	256	19.0	51.2	.6
RAB	6/7/2001	1600	7.2	532	67	21	11.5	1.3	250	20.1	41.2	.6
RAB	6/3/2002	1100	7.3	617	70	21	12.0	1.5	239	21.9	47.9	.6
RAB	5/30/2003	1000	7.0	1,190	140	49	26.5	3.5	271	36.8	287.0	.4
ROL	7/10/1979	0950	6.7	521	72	20	7.1	1.0	290	13.0	23.0	1.1
ROL	8/27/1980	1045	7.3	559	74	21	7.2	1.2	320	12.0	17.0	.3
ROL	8/4/1981	0915	7.5	528	76	22	7.9	1.0	305	12.0	19.0	1.1
ROL	8/9/1982	1110	7.0	532	72	20	7.5	1.1	293	13.0	25.0	1.0
ROL	7/18/1983	0845	7.1	546	77	22	7.9	1.1	293	15.0	24.0	1.1
ROL	8/7/1985	0900	7.4	586	86	22	8.9	1.1	320	18.0	30.0	1.2
ROL	1/15/1986	1000	7.1	610	84	23	8.6	1.0	310	22.0	32.0	1.3
ROL	9/3/1986	1300	7.4	586	83	22	8.8	1.1	312	17.0	31.0	1.2
ROL	2/9/1987	0830	7.2	624	88	22	9.8	1.1	316	21.0	35.0	1.6
ROL	8/17/1987	1010	7.2	642	91	22	10.0	1.2	321	19.0	40.0	1.5
ROL	2/22/1988	0910	7.0	587	89	23	9.7	1.2	326	19.0	34.0	1.3
ROL	8/16/1988	0920	7.0	596	85	23	9.3	1.0	314	18.0	33.0	1.3
ROL	2/27/1989	1245	7.3	583	81	22	9.0	1.1	309	16.0	30.0	1.0
ROL	8/25/1989	1115	7.2	607	86	22	9.9	1.1	318	19.0	32.0	1.2
ROL	1/30/1990	1115	6.9	572	78	21	8.6	1.2	300	17.0	29.0	1.0
ROL	3/13/1991	0925	7.2	612	89	22	11.0	1.2	317	28.0	35.0	1.5
ROL	4/29/1992	1315	6.9	694	94	21	14.0	1.1	317	41.0	45.0	2.0
ROL	1/20/1993	1300	7.2	654	86	21	12.0	1.1	317	25.0	40.0	--
ROL	1/23/1993	1140	6.9	630	88	22	12.0	1.1	317	26.0	42.0	--
ROL	1/26/1993	1043	6.8	625	86	21	12.0	1.1	317	24.0	41.0	--
ROL	5/6/1993	1230	7.9	635	93	22	12.0	1.1	317	26.0	41.0	1.4
ROL	8/13/1993	1200	6.9	660	98	23	12.0	1.1	329	25.0	43.0	1.5
ROL	4/12/1994	1130	7.1	597	88	22	10.0	1.1	305	22.0	38.0	1.2
SLR	7/5/1979	0845	6.9	630	100	19	5.6	.5	400	8.8	7.2	.3

Appendix 4. Charge balanced major ion and nitrate water analysis data from wells in the Barton Springs segment of the Edwards aquifer, Austin, Texas, 1978–2003—Continued.

Well identifier (fig. 1)	Date	Time	pH	Specific conductance (µS/cm)	Ca (mg/L)	Mg (mg/L)	Na (mg/L)	K (mg/L)	HCO_3 (mg/L)	Cl (mg/L)	SO_4 (mg/L)	NO_3-N (mg/L)
SLR	9/4/1980	1306	7.1	680	100	20	5.5	0.6	400	9.2	35.0	0.5
SLR	8/18/1981	0830	7.1	583	97	19	5.7	.6	378	8.9	1.0	.5
SLR	8/17/1982	0920	7.0	625	98	21	5.7	.6	390	9.0	9.0	1.2
SLR	7/20/1983	0830	7.3	600	98	19	5.3	.6	378	8.7	9.6	.7
SLR	9/2/1986	1130	7.1	655	110	21	5.5	.6	414	9.5	11.0	1.1
SLR	2/10/1987	0830	7.0	624	110	20	5.3	.5	440	9.5	13.0	.7
SLR	8/18/1987	0834	7.1	636	100	18	5.4	.5	403	8.8	9.5	.4
SLR	2/22/1988	1325	7.1	575	100	22	5.5	.5	399	8.9	12.0	1.1
SLR	8/9/1988	1030	7.1	727	110	25	5.5	.6	416	8.8	56.0	.1
SLR	2/21/1989	1310	7.0	736	105	27	5.6	.9	409	8.0	60.0	.1
SNL	6/26/1978	1220	7.2	460	67	19	7.4	1.0	281	15.0	22.0	.4
SNL	7/10/1979	0900	6.8	525	70	20	8.4	1.0	260	15.0	33.0	.5
SNL	8/27/1980	0930	7.4	503	65	18	8.5	1.0	260	14.0	24.0	.1
SNL	8/4/1981	1045	7.6	462	65	19	7.9	1.0	281	11.0	23.0	.4
SNL	8/9/1982	1020	7.0	468	62	18	7.9	1.0	244	14.0	25.0	.3
SNL	7/18/1983	1045	7.8	494	67	19	8.6	1.1	256	14.0	26.0	.1
SVE	7/18/1979	1230	6.8	445	58	18	11.0	2.9	220	14.0	42.0	1.0
SVE	8/19/1981	1310	7.3	638	74	29	11.0	2.2	329	12.0	42.0	1.3
SVE	8/30/1982	1400	7.4	1,530	140	80	100.0	11.0	317	46.0	570.0	1.6
SVE	8/12/1985	1000	7.2	936	97	38	44.0	3.8	336	46.0	160.0	1.6
SVE	1/15/1986	1430	7.1	913	92	37	48.0	3.2	334	46.0	160.0	1.4
SVE	8/29/1986	0900	7.1	874	92	35	44.0	3.0	318	45.0	130.0	1.4
SVE	2/10/1987	1130	7.4	610	73	30	9.0	1.7	346	16.0	38.0	1.3
SVE	8/19/1987	0815	7.5	603	67	28	9.7	1.8	303	15.0	26.0	1.2
SVE	2/24/1988	1435	7.1	704	90	34	14.0	2.7	326	20.0	96.0	.9
SVE	8/9/1988	0850	7.0	917	96	40	39.0	3.7	332	31.0	170.0	1.7
SVE	2/21/1989	1030	6.9	857	90	37	34.0	3.5	334	27.0	150.0	1.8
SVE	8/25/1989	0955	6.9	949	100	39	40.0	4.0	326	34.0	180.0	1.7
SVE	1/30/1990	0945	6.9	942	98	41	41.0	4.3	332	31.0	190.0	1.8
SVE	3/5/1991	0935	7.3	916	100	38	40.0	4.2	342	32.0	180.0	1.6
SVE	4/28/1992	1330	7.1	601	71	29	11.0	2.0	305	22.0	48.0	1.3
SVE	1/21/1993	0900	6.9	620	74	29	10.0	1.5	329	16.0	43.0	--
SVE	1/24/1993	0700	7.0	616	75	29	11.0	2.3	329	17.0	50.0	--
SVE	1/28/1993	1300	6.9	618	76	29	9.6	1.5	342	16.0	37.0	--
SVE	5/7/1993	1430	7.3	616	80	29	10.0	1.5	329	17.0	38.0	1.6
SVE	8/16/1993	0750	7.1	652	85	30	11.0	2.8	256	15.0	110.0	.4
SVE	4/12/1994	0735	7.0	1,020	110	46	51.0	5.7	329	35.0	250.0	2.0
SVE	6/14/1995	1430	7.1	867	92	32	29.0	2.3	317	37.0	97.0	1.4
SVE	5/9/1996	1100	7.4	840	97	36	34.0	3.4	390	32.0	140.0	1.3
SVE	7/9/1997	1000	7.2	674	77	29	18.5	1.9	293	27.6	56.7	1.4
SVE	4/22/1998	1110	7.2	596	75	30	10.0	1.5	305	17.3	35.9	1.4
SVE	5/31/2000	0900	7.2	850	95	34	30.6	3.1	317	29.5	134.0	.1
SVE	6/14/2001	1200	7.1	770	90	31	33.3	.1	334	40.3	92.7	1.6
SVE	8/7/2002	1200	7.0	760	89	30	28.1	2.0	322	36.0	79.2	1.6
SVE	5/28/2003	1200	7.1	626	81	28	10.2	1.5	345	16.8	32.4	1.5

Appendix 4. Charge balanced major ion and nitrate water analysis data from wells in the Barton Springs segment of the Edwards aquifer, Austin, Texas, 1978–2003—Continued.

Well identifier (fig. 1)	Date	Time	pH	Specific conductance (µS/cm)	Ca (mg/L)	Mg (mg/L)	Na (mg/L)	K (mg/L)	HCO_3 (mg/L)	Cl (mg/L)	SO_4 (mg/L)	NO_3-N (mg/L)
SVN	7/17/1979	0715	6.8	480	70	18	6.8	1.4	260	11.0	25.0	0.3
SVN	8/19/1981	1210	7.2	517	70	20	8.2	1.3	293	14.0	16.0	.3
SVN	8/7/1985	1005	6.9	496	69	18	7.4	1.3	283	14.0	22.0	.4
SVN	1/15/1986	0900	7.4	466	66	19	7.9	1.0	259	17.0	21.0	.3
SVN	8/29/1986	1000	6.8	514	72	19	7.5	1.2	281	12.0	24.0	.4
SVN	2/10/1987	1200	7.3	388	58	5	5.4	13.0	212	4.7	15.0	.2
SVN	8/19/1987	0915	7.4	630	77	17	7.9	3.2	288	12.0	32.0	.8
SVN	2/24/1988	1530	7.2	510	72	21	8.4	1.3	281	14.0	32.0	.3
SVN	3/5/1991	1020	7.5	560	75	19	15.0	1.5	256	30.0	44.0	.2
SVN	1/20/1993	0945	6.9	453	59	15	11.0	1.4	220	16.0	32.0	--
SVN	1/23/1993	0800	6.8	461	60	15	11.0	1.4	232	16.0	31.0	--
SVN	1/26/1993	0930	6.8	455	65	16	12.0	1.6	232	15.0	32.0	--
SVN	5/6/1993	1610	7.5	447	60	16	11.0	1.2	220	16.0	29.0	.1
SVN	8/16/1993	1000	7.1	549	77	20	11.0	1.5	281	17.0	34.0	.5
SVN	6/19/1995	0805	7.1	460	62	16	12.0	2.0	232	17.0	25.0	.2
SVN	7/9/1997	1200	7.2	533	67	18	12.2	1.6	244	20.6	29.5	.1
SVN	4/22/1998	1230	7.4	507	67	18	13.7	1.2	244	21.8	42.2	.6
SVN	6/15/2001	1100	6.8	710	97	21	20.0	1.3	338	38.1	49.5	.3
SVN	8/7/2002	1000	7.2	507	64	17	15.2	1.6	231	26.1	33.3	.1
SVN	5/28/2003	1000	7.2	603	84	20	17.1	1.4	272	29.6	44.7	.3
SVS	8/8/1978	0750	7.0	540	69	30	8.4	1.3	360	12.0	6.3	2.3
SVS	7/17/1979	1200	6.8	580	71	25	9.1	1.2	331	11.0	17.0	4.0
SVS	8/28/1980	0930	7.0	620	70	28	9.4	1.2	350	13.0	5.1	1.1
SVS	8/10/1981	1407	7.3	585	77	27	9.9	1.2	342	14.0	7.0	3.5
SVS	8/9/1982	1355	6.7	584	68	29	9.0	1.3	342	12.0	7.0	2.7
SVS	7/19/1983	1000	6.9	582	70	30	9.3	1.3	342	13.0	8.8	2.6
SVS	8/7/1985	1100	7.1	592	73	29	9.3	1.3	360	12.0	6.3	2.7
SVS	1/13/1986	0830	7.0	589	73	29	9.1	1.0	356	14.0	9.4	3.0
SVS	8/29/1986	1300	7.2	596	75	29	10.0	1.2	356	13.0	8.1	3.1
SVS	2/9/1987	1015	7.1	578	77	26	9.9	1.3	350	14.0	10.0	3.8
SVS	8/17/1987	1350	7.3	603	79	24	9.7	1.2	350	12.0	16.0	3.9
SVS	2/22/1988	1120	7.1	593	82	28	10.0	1.2	362	13.0	16.0	4.3
SVS	8/11/1988	1100	7.2	607	72	31	9.5	1.1	353	11.0	7.9	2.7
SVS	2/21/1989	1140	7.1	607	71	31	9.4	1.3	348	11.0	8.1	2.5
SVS	8/25/1989	1320	7.0	595	71	29	9.8	1.2	356	12.0	8.0	2.6
SVS	1/30/1990	1340	6.9	602	71	29	9.2	1.2	356	11.0	8.0	2.7
SVS	3/5/1991	1130	7.1	560	73	30	9.3	1.3	354	13.0	7.4	2.3
SVS	5/1/1992	0820	7.1	584	82	25	9.3	1.1	342	19.0	20.0	3.5
SVS	1/22/1993	0825	6.7	603	77	27	8.9	1.1	366	12.0	9.6	--
SVS	1/25/1993	1020	7.0	610	79	27	9.1	1.1	366	12.0	9.8	--
SVS	5/7/1993	0946	7.1	614	78	26	9.3	1.1	366	12.0	10.0	3.7
SVS	8/17/1993	0915	7.0	618	83	27	9.3	1.1	366	12.0	9.3	3.9
SVS	4/8/1994	0830	7.0	594	71	29	9.2	1.2	354	12.0	8.3	3.1
SVS	6/19/1995	1440	7.1	611	79	27	9.6	1.1	342	12.0	8.6	3.7
SVS	5/2/1996	1100	7.7	592	73	30	9.5	1.2	329	12.0	8.1	3.0

Appendix 4. Charge balanced major ion and nitrate water analysis data from wells in the Barton Springs segment of the Edwards aquifer, Austin, Texas, 1978–2003—Continued.

Well identifier (fig. 1)	Date	Time	pH	Specific conductance (µS/cm)	Ca (mg/L)	Mg (mg/L)	Na (mg/L)	K (mg/L)	HCO_3 (mg/L)	Cl (mg/L)	SO_4 (mg/L)	NO_3-N (mg/L)
SVS	7/8/1997	1045	7.2	585	74	27	9.3	1.1	342	12.6	9.2	3.5
SVS	4/22/1998	0931	7.0	616	78	28	9.6	1.1	354	13.1	11.6	3.6
SVS	6/11/1999	1340	7.0	599	79	27	8.9	1.1	342	12.5	7.3	3.1
SVS	6/1/2000	1400	7.0	610	72	28	8.8	1.1	354	11.6	7.6	2.8
SVS	6/6/2002	1300	7.0	622	83	27	9.0	1.0	359	12.6	9.7	3.1
SVS	5/19/2003	1300	6.9	620	87	26	9.0	1.3	333	13.9	14.5	2.7
SVW	6/27/1978	1220	6.6	560	78	24	10.0	1.0	331	18.0	15.0	1.9
SVW	7/12/1979	0900	6.9	620	73	24	21.0	1.0	340	32.0	14.0	1.7
SVW	8/28/1980	0900	7.0	592	79	24	8.5	.9	342	14.0	7.3	1.8
SVW	8/10/1981	1340	7.2	569	77	23	9.0	.9	329	19.0	7.0	1.4
SVW	8/10/1982	0815	6.8	597	80	24	10.0	1.0	329	21.0	20.0	1.7
SVW	7/19/1983	0805	6.9	601	79	23	12.0	1.2	317	22.0	23.0	1.2
SVW	8/9/1985	0830	7.1	657	89	24	14.0	1.1	348	31.0	23.0	1.8
SVW	1/15/1986	1130	7.0	622	85	25	13.0	.8	331	32.0	20.0	1.6
SVW	8/29/1986	1200	7.0	659	91	24	12.0	1.0	359	22.0	22.0	2.0
SVW	2/9/1987	0915	7.4	591	79	24	11.0	.9	331	17.0	21.0	1.4
SVW	8/17/1987	1215	7.3	614	82	23	12.0	.9	337	21.0	18.0	1.9
SVW	2/22/1988	1010	7.1	637	93	25	14.0	1.1	354	24.0	35.0	1.5
SVW	8/11/1988	1010	7.1	658	89	25	12.0	1.0	353	21.0	23.0	2.1
SVW	2/27/1989	1350	7.1	630	81	25	12.0	1.0	337	23.0	23.0	1.9
SVW	8/29/1989	0905	7.1	678	93	24	13.0	1.0	360	28.0	23.0	2.1
SVW	1/30/1990	1250	6.8	688	93	25	14.0	1.2	368	26.0	27.0	2.3
SVW	3/11/1991	1320	7.2	658	90	25	15.0	.9	317	37.0	41.0	1.5
SVW	4/29/1992	0830	7.0	639	82	23	13.0	1.0	329	29.0	32.0	1.6
SVW	1/22/1993	0920	6.8	655	86	23	15.0	1.0	329	31.0	31.0	--
SVW	1/25/1993	1130	6.8	621	82	24	13.0	1.0	329	25.0	27.0	--
SVW	1/28/1993	1350	6.9	608	79	24	12.0	.9	329	24.0	23.0	--
SVW	8/20/1993	1030	6.9	670	98	25	13.0	.9	354	23.0	24.0	2.1
SVW	4/11/1994	0730	7.0	645	94	25	12.0	1.0	342	27.0	21.0	2.8
SVW	10/9/1994	0700	6.3	570	85	18	9.7	1.5	293	16.0	23.0	1.5
SVW	10/9/1994	1305	6.3	582	86	18	9.3	1.3	305	17.0	25.0	1.5
SVW	10/9/1994	1855	6.4	592	87	19	9.4	1.3	317	17.0	26.0	1.5
SVW	10/10/1994	0710	6.3	611	88	19	10.0	1.2	329	18.0	27.0	1.6
SVW	10/10/1994	1300	6.4	620	89	20	10.0	1.2	342	18.0	27.0	1.6
SVW	10/10/1994	1905	6.4	612	91	20	10.0	1.3	329	18.0	27.0	1.7
SVW	10/11/1994	0705	6.8	624	93	21	11.0	1.1	342	19.0	27.0	1.7
SVW	10/11/1994	1305	7.2	678	97	21	13.0	1.2	342	26.0	28.0	2.2
SVW	10/11/1994	1900	6.8	634	90	22	12.0	1.0	317	26.0	22.0	2.2
SVW	10/12/1994	0730	6.8	600	86	23	11.0	1.2	317	22.0	18.0	1.9
SVW	10/12/1994	1900	7.0	598	80	22	10.0	1.2	317	23.0	16.0	2.0
SVW	10/13/1994	0700	6.9	601	84	24	11.0	1.1	317	23.0	16.0	2.0
SVW	10/13/1994	1930	6.9	619	88	24	10.0	1.2	329	20.0	22.0	1.8
SVW	10/14/1994	0730	7.2	596	79	23	11.0	1.0	305	23.0	15.0	2.1
SVW	10/15/1994	1230	6.9	645	96	25	12.0	1.1	342	24.0	25.0	2.0
SVW	6/27/1995	0820	7.0	647	87	23	13.0	.9	329	24.0	30.0	1.4

Appendix 4. Charge balanced major ion and nitrate water analysis data from wells in the Barton Springs segment of the Edwards aquifer, Austin, Texas, 1978–2003—Continued.

Well identifier (fig. 1)	Date	Time	pH	Specific conductance (µS/cm)	Ca (mg/L)	Mg (mg/L)	Na (mg/L)	K (mg/L)	HCO_3 (mg/L)	Cl (mg/L)	SO_4 (mg/L)	NO_3-N (mg/L)
SVW	5/2/1996	0900	7.1	643	90	25	13.0	1.0	354	29.0	19.0	2.6
SVW	7/9/1997	1105	7.1	580	73	23	9.3	.9	281	22.4	12.5	2.2
SVW	4/21/1998	1430	7.2	568	80	24	9.4	.8	305	23.8	12.3	2.3
SVW	6/1/2000	1000	6.9	662	91	23	10.4	.9	354	22.6	20.4	2.2
SVW	6/6/2001	1200	6.8	659	95	26	12.7	1.0	348	26.5	28.9	1.9
SVW	6/3/2002	1400	7.0	646	92	25	11.9	1.0	331	24.6	24.2	2.0
SVW	5/19/2003	1000	6.9	644	93	25	13.0	1.1	364	25.9	28.6	1.9
TNR	7/9/1979	1215	6.9	580	78	27	5.7	.9	360	11.0	12.0	1.3
TNR	8/29/1980	0930	7.7	592	89	19	12.0	.6	360	13.0	3.1	1.3
TNR	8/18/1981	0920	7.1	576	79	26	7.0	.8	366	14.0	1.0	1.2
TNR	8/16/1982	0915	6.9	584	91	20	7.0	.6	366	11.0	7.0	1.7
TNR	7/21/1983	1115	7.4	590	81	27	7.4	.8	366	14.0	6.5	1.2
TNR	8/9/1985	1145	7.1	604	82	27	6.9	.8	366	14.0	20.0	1.2
TNR	1/13/1986	1310	7.0	576	73	29	7.7	.8	370	13.0	9.4	1.1
TNR	9/2/1986	1215	7.2	607	89	23	7.3	.8	368	13.0	7.0	1.4
TNR	2/11/1987	1030	7.1	597	79	28	6.6	.7	370	11.0	21.0	1.1
TNR	8/18/1987	1015	7.2	606	84	25	6.4	.8	368	12.0	7.3	1.4
TNR	2/25/1988	1020	7.1	597	93	21	6.9	.7	372	12.0	7.6	1.7
TNR	8/9/1988	1125	7.1	600	92	21	6.4	.7	368	10.0	7.4	1.7
TNR	2/23/1989	1130	6.9	579	92	21	6.5	.6	362	10.0	7.4	1.6
TNR	8/30/1989	1130	7.0	590	93	20	6.6	.5	368	9.7	7.0	1.6
TNR	2/7/1990	1330	6.9	558	94	20	6.5	.7	362	9.3	7.0	1.7
WBG	7/10/1978	0940	6.2	700	62	34	32.0	3.0	281	28.0	110.0	0
WBG	7/5/1979	1005	7.4	799	63	34	44.0	3.8	260	23.0	140.0	.1
WBG	8/28/1980	1330	7.5	826	64	35	50.0	4.2	281	38.0	140.0	0
WBG	8/10/1982	1330	6.9	766	62	34	43.0	3.3	281	32.0	130.0	.1
WBG	7/20/1983	1415	7.5	767	61	33	38.0	2.9	281	29.0	130.0	.1
WGF	6/28/1978	1100	6.7	480	62	23	6.2	1.3	290	15.0	12.0	1.1
WGF	7/17/1979	1415	6.9	520	73	20	7.5	1.4	300	11.0	15.0	1.5
WGF	8/27/1980	1415	7.4	500	64	22	6.7	1.2	290	11.0	7.4	.6
WGF	8/10/1981	1315	7.4	537	74	22	9.7	1.4	317	18.0	6.0	1.6
WGF	8/9/1982	1320	7.0	505	62	22	7.3	1.2	293	15.0	12.0	1.3
WGF	7/19/1983	0918	7.1	514	66	23	8.0	1.4	293	16.0	13.0	1.7

Appendix 5—Quality Assurance Data

Blank Page

Appendix 5. Quality assurance data, Barton Springs segment of the Edwards aquifer, Austin, Texas, 1978–2003.

[µS/cm, microsiemens per centimeter at 25 degrees Celsius; Ca, calcium; mg/L, milligrams per liter; Mg, magnesium; Na, sodium; K, potassium; HCO_3, bicarbonate; Cl, chloride; SO_4, sulfate; NO_3, nitrate; N, nitrogen; <, less than; --, no data; E, estimated. Blank samples show acceptably low background levels for samples collected from 2001 onward. Replicate samples suggest that collection and analysis procedures were reproducible. Sequential replicate samples, which were not truly designed as quality control samples, show that analytical methods have been reproducible thought the period of study, to within 5 percent.]

Well identifier (fig. 1)	Date	Specific conductance (µS/cm)	Ca (mg/L)	Mg (mg/L)	Na (mg/L)	K (mg/L)	HCO_3 (mg/L)	Cl (mg/L)	SO_4 (mg/L)	NO_3-N (mg/L)
					Blank samples					
SVE	6/14/2001	<3	0.02	<0.008	<0.06	<0.09	--	<0.08	<0.1	<0.05
SVE	8/8/2002	<3	E.01	<.008	<.09	<.1	--	<.3	<.1	<.05
					Replicate samples					
PLS	5/23/2002	570	78	24	7	1.1	296	13	18	1.5
PLS	5/23/2002	572	78	24	7	1.1	--	13	18	1.4
					Sequential samples					
BPS	8/1/1980	583	72	25	6	1.2	331	10	22	1.6
BPS	8/29/1980	578	73	26	6	1.0	331	11	27	.3
BPS	7/30/1981	583	74	26	7	1.2	329	10	28	.1
BPS	8/12/1981	568	74	25	6	1.3	342	10	25	1.2
BPS	7/17/1989	563	75	26	6	1.2	343	10	24	1.3
BPS	8/29/1989	581	78	26	7	1.1	338	10	25	1.3
BPS	8/19/1993	539	76	25	6	1.1	342	10	26	1.3
BPS	8/20/1993	579	79	25	7	1.2	329	10	26	1.4