RAINFALL, RUNOFF, AND WATER-QUALITY DATA FOR THE URBAN STORM-WATER PROGRAM IN THE ALBUQUERQUE, NEW MEXICO, METROPOLITAN AREA, WATER YEAR 2004

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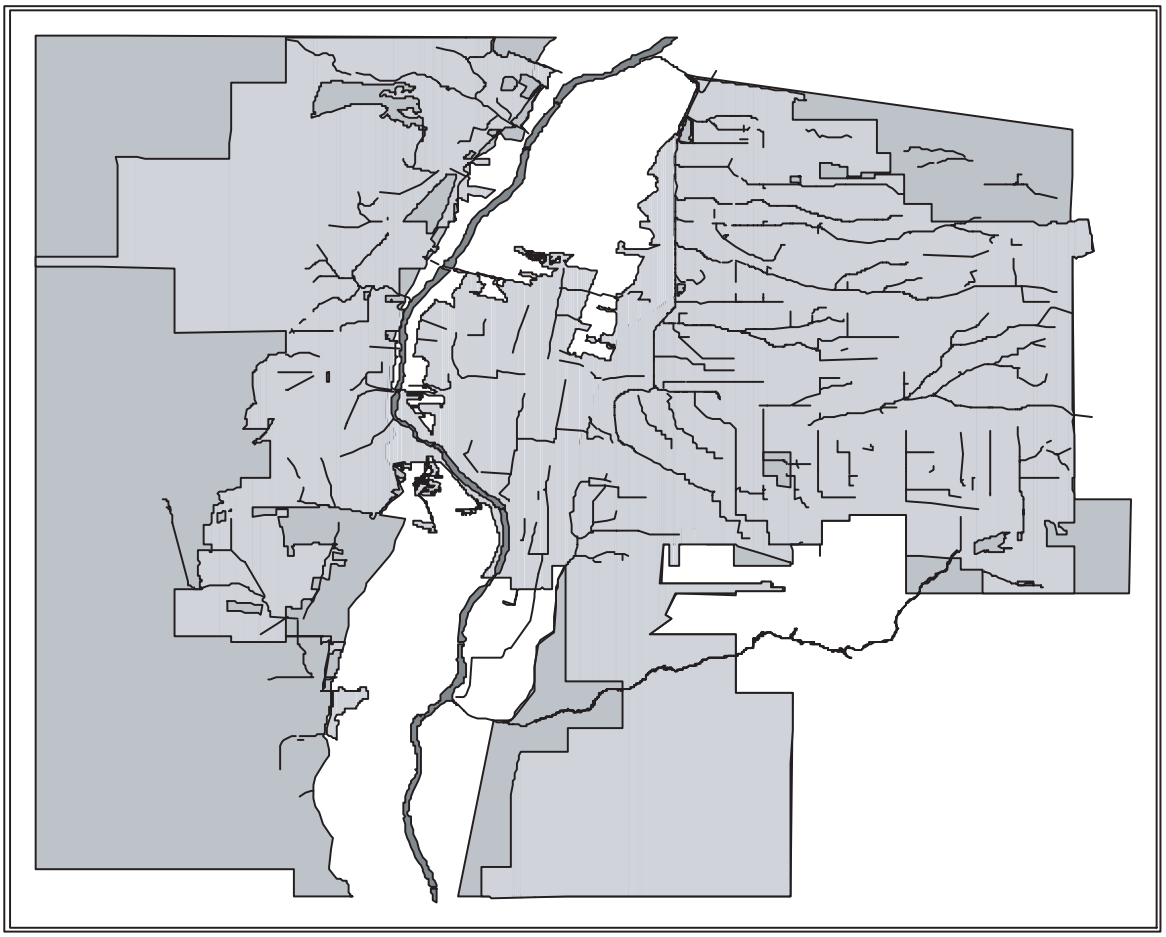

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Rainfall, Runoff, and Water-Quality Data for the Urban Storm-Water Program in the Albuquerque, New Mexico, Metropolitan Area, Water Year 2004

By Todd Kelly, Orlando Romero, and Mike Jimenez

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CONVERSION FACTORS, DATUMS, AND ABBREVIATIONS

Multiply	By	To obtain
cubic foot per second (ft^3/s)	0.02832	cubic meter per second (m^3/s)
foot (ft)	0.3048	meter (m)
inch (in.)	2.54	centimeter (cm)
mile (mi)	1.609	kilometer (km)
square mile (mi^2)	259.0	hectare (ha)
square mile (mi^2)	2.590	square kilometer (km^2)

Vertical coordinate information is referenced to the North American Vertical Datum of 1988 (NAVD 88).

Vertical coordinate information is referenced to the National Geodetic Vertical Datum of 1929 (NGVD 29).

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RAINFALL, RUNOFF, AND WATER-QUALITY DATA FOR THE URBAN STORM-WATER PROGRAM IN THE ALBUQUERQUE, NEW MEXICO, METROPOLITAN AREA, WATER YEAR 2004

By **Todd Kelly, Orlando Romero, and Mike Jimenez**

ABSTRACT

Urbanization has dramatically increased precipitation runoff to the system of drainage channels and natural stream channels in the Albuquerque, New Mexico, metropolitan area. Rainfall and runoff data are important for planning and designing future storm-water conveyance channels in newly developing areas. Storm-water quality also is monitored in accordance with the National Pollutant Discharge Elimination System mandated by the U.S. Environmental Protection Agency. The Albuquerque Metropolitan Arroyo Flood Control Authority, the City of Albuquerque, and the U.S. Geological Survey began a cooperative program to collect hydrologic data to assist in assessing the quality and quantity of surface-water resources in the Albuquerque area. This report presents water-quality, streamflow, and rainfall data collected from October 1, 2003, to September 30, 2004 (water year 2004). Also provided is a station analysis for each of the 18 streamflow-gaging sites and 39 rainfall-gaging sites, which includes a description of monitoring equipment, problems associated with data collection during the year, and other information used to compute streamflow discharges or rainfall records. A hydrographic comparison shows the effects that the largest drainage channel in the metropolitan area, the North Floodway Channel, has on total flow in the Rio Grande.

INTRODUCTION

The system of drainage channels and natural stream channels in the Albuquerque, New Mexico, metropolitan area is a source of concern because of potential local flooding and water-quality problems. Rapid urbanization since 1970 has dramatically increased precipitation runoff to these channels, which in many instances returns flow to the Rio Grande. As an important element of the City of Albuquerque's water resources management, accurate hydrologic data are needed for designing storm drainage and addressing storm-water-quality regulations established by the U.S. Environmental Protection Agency's National Pollutant Discharge Elimination System (NPDES). The NPDES was initiated to monitor the quality of storm-water runoff that flows into natural bodies of water from metropolitan areas. To meet regulatory requirements, long-term streamflow data can be analyzed in conjunction with water-quality sampling to compute constituent loading over time. Rainfall and runoff data for watersheds of various land uses are important for planning and designing future storm-water conveyance channels in newly developing areas of Albuquerque. In addition, accurate hydrologic data are necessary to calibrate

computer models that aid local engineers and city planners in the estimation of storm-water runoff.

With these needs in mind, the U.S. Geological Survey (USGS), in cooperation with the Albuquerque Metropolitan Arroyo Flood Control Authority (AMAFCA) and the City of Albuquerque, began a study in 1976 to collect hydrologic data to help assess surface-water resources in the Albuquerque area and to determine long-term trends. The information gained will better help AMAFCA and the City to manage and administer water resources. The program is reviewed and revised annually to meet AMAFCA's and the City's needs. Data collected also support digital modeling programs conducted by AMAFCA. Flood-frequency analyses of selected watersheds can be completed when sufficient data are available.

Historically, daily mean discharges at selected streamflow-gaging stations are published in the USGS annual Water-Data Report, but prior to the water year 2001 summary report (Kelly and Romero, 2003), no annual data summary report had been devoted exclusively to this study. Two previous reports (Fischer and others, 1984; Metzker and others, 1993) summarized rainfall and runoff data for selected storms during 1976-83 and 1984-88. Daily rainfall totals and intensities as well as annual water-quality sampling results are not included in the annual Water-Data Report but are provided to the cooperators on request. Instantaneous maximum stages for secondary peaks and all gage-height or rainfall values recorded at 5-minute intervals are available from the USGS database. The purpose of this cooperative program is to obtain rainfall and surface-water (water quality and streamflow) data for an assessment of water resources (quantity and quality), for determination of long-term trends, and for water management and administration purposes.

Purpose and Scope

This report presents water-quality, streamflow, and rainfall data collected from October 1, 2003, to September 30, 2004 (water year 2004). The report provides a station analysis for each data-collection site, which includes a description of monitoring equipment, problems associated with data collection during the year, and other information used to compute streamflow discharges or rainfall records. A daily values table showing daily mean discharge for gaging stations or daily total rainfall recorded at rain gages accompanies each station analysis. Detailed site descriptions, drainage-basin areas, and periods of record are also included in the daily values tables.

The locations of the current network of gaging stations, rain gages, and water-quality sampling sites in the Albuquerque area are shown in figure 1. Eleven of the 12 stations designated as water-quality sampling sites in figure 1 also have recording streamflow gages. Barelas pump station (#52) does not record flow data. Information about the sites is listed in table 1.

National Pollutant Discharge Elimination System Water-Quality Monitoring

The water-quality sampling program began in fiscal year 1992 under a separate cooperative agreement between AMAFCA, the City of Albuquerque, and the USGS. Surface-water-quality samples were collected at five gaging stations and two background sites in 1992.

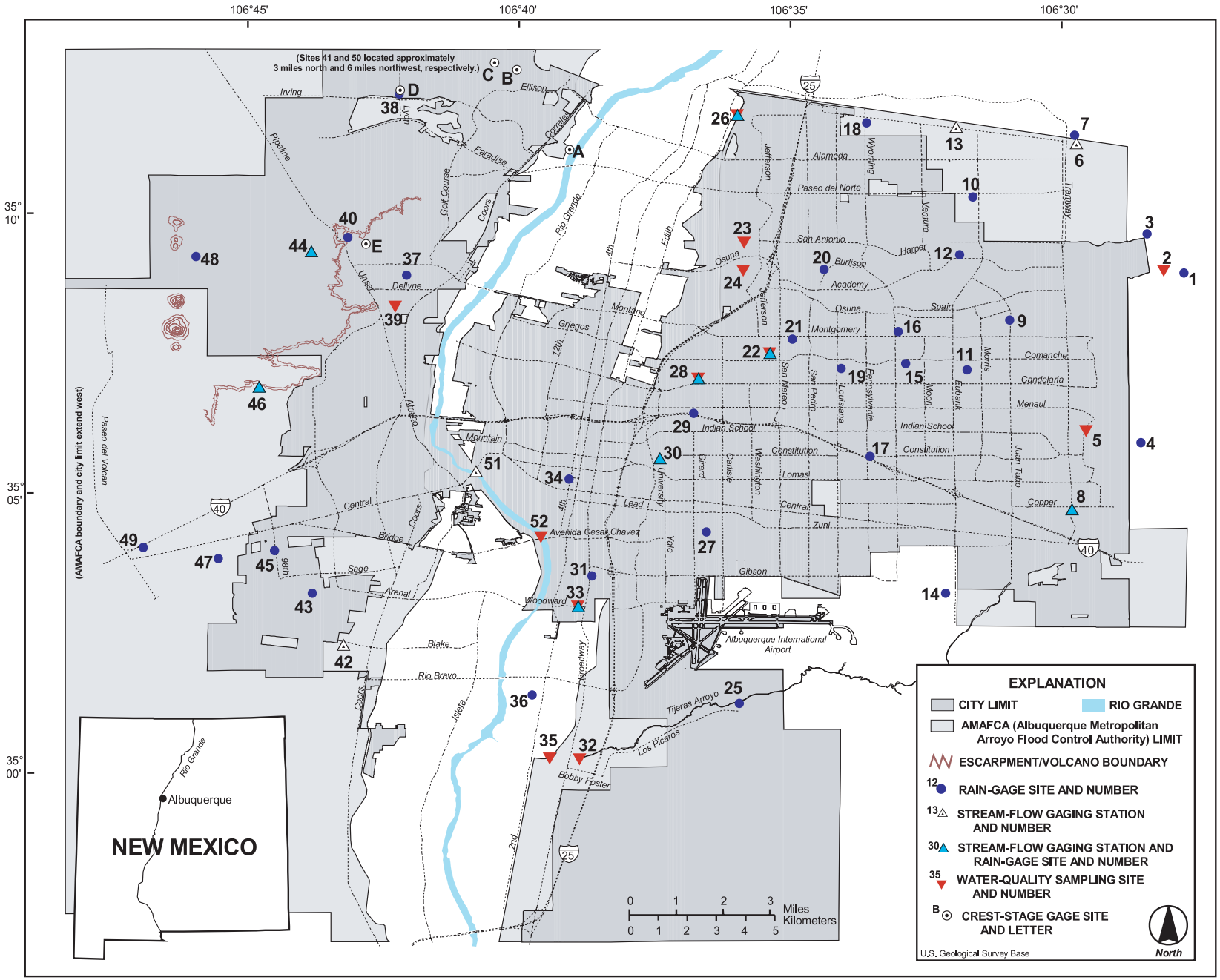

Figure 1. U.S. Geological Survey data-collection sites for 2004 Albuquerque Urban Runoff Program. Location numbers are in table 1.

Table 1. Map locations and station identification numbers

Site ID (fig. 1)	Name	U.S. Geological Survey station number	Latitude (degrees)	Longitude (degrees)	Streamflow-gaging station
1	Bear Canyon Rain Gage	350859106274330	35.1500	-106.4625	G30
2	Bear Canyon Arroyo nr. Albq.	08329868	35.1508	-106.4686	
3	Elena Gallegos Picnic Area Rain Gage	350954106282330	35.1619	-106.4739	G39
4	Embudo Canyon Rain Gage	350554106283230	35.0986	-106.4758	G44
5	Embudo Arroyo @ Albq.	08329720	35.1022	-106.4925	
6	La Cueva Arroyo Trib. (upper)	08329888	35.1894	-106.4956	
7	La Cueva Arroyo Trib. Rain Gage	08329890	35.1919	-106.4961	G9
8	Tramway Floodway Channel	08330540	35.0783	-106.4969	G53
9	Fire Station #16 Rain Gage	350756106305430	35.1358	-106.5161	G1
10	Walker Pump Rain Gage	351023106313930	35.1731	-106.5274	G55
11	Borland Rain Gage	350713106314230	35.1206	-106.5292	G23
12	Tanoan Rain Gage	350924106315630	35.1556	-106.5314	G34
13	N. Camino Arroyo at Sunset Hills	08329911	35.1944	-106.5325	
14	Kirtland AFB Rain Gage	350310106320930	35.0528	-106.5358	G50
15	Leonard Rain Gage	350722106325030	35.1225	-106.5481	G22
16	Thomas Pump Rain Gage	350755106325830	35.1322	-106.5503	G36
17	Love Pump Rain Gage	350540106333230	35.0944	-106.5589	G56
18	N. Camino Arroyo Trib. Rain Gage	08329914	35.1956	-106.56	G11
19	South Fork Hahn Arroyo Rain Gage	08329838	35.1211	-106.5678	G4
20	Academy Acres Drain Rain Gage	08329880	35.1511	-106.5731	G8
21	USGS Office Rain Gage	350748106345830	35.1300	-106.5828	G46
22	Hahn Arroyo @ Albq.	08329840	35.1258	-106.5897	G5
23	Pino Arroyo @ Jefferson St.	08329882	35.1594	-106.5975	
24	Bear Arroyo @ Jefferson St.	08329870	35.1508	-106.5978	
25	Tijeras Arroyo Rain Gage	08330580	35.0194	-106.5992	G32
26	N. Floodway Channel near Alameda	08329900	35.1981	-106.5997	G40
27	Orlando Romero Rain Gage	350417106363330	35.0714	-106.6092	G54
28	North Floodway Channel @ Albq.	08329835	35.1181	-106.6117	G45
29	AMAFCA Headqtrs. Rain Gage	350627106364630	35.1075	-106.6131	G43
30	Campus Wash @ Albq.	08329700	35.0939	-106.6236	G28
31	Bernalillo County Bldg. Rain Gage	350340106385230	35.0581	-106.6444	G42
32	Tijeras Arroyo near Albq.	08330600	35.0025	-106.6481	
33	San Jose Drain @ Woodward Road	08330200	35.0489	-106.6486	G38
34	Albuquerque City Hall Rain Gage	350448106390230	35.0875	-106.6514	G41
35	S. Diversion Channel abv. Tijeras Arr.	08330775	35.0028	-106.6572	
36	Wastewater Treatment Plant RG	350119106394630	35.0219	-106.6628	G51
37	Taylor Ranch Drain Rain Gage	08329936	35.1494	-106.7014	G15
38	Swinburn Dam Rain Gage	351216106421330	35.2044	-106.7036	G49
39	Mariposa Div. of San Antonio Arroyo	083299375	35.1400	-106.7047	
40	Petroglyphs Park Rain Gage	350939106430930	35.1608	-106.7194	G37

Table 1. Map locations and station identification numbers--Concluded.

Site ID (fig. 1)	Name	U.S. Geological Survey station number	Latitude (degrees)	Longitude (degrees)	Streamflow-gaging station
41	Todd Kelly Rain Gage	351516106431430	35.2544	-106.7206	G57
42	Amole del Norte Channel @ Albq.	08331118	35.0372	-106.7208	
43	Leavitt Pump Rain Gage	350310106434930	35.0528	-106.7303	G47
44	Arroyo 19A @ Albq.	08329935	35.1567	-106.7306	G13
45	Fire Station #14 Rain Gage	350357106443030	35.0658	-106.7419	G29
46	Ladera Arroyo @ Albq.	08329938	35.1156	-106.7467	G16
47	Emergency Dispatch Bldg. Rain Gage	350348106453230	35.0633	-106.7592	G52
48	La Boca Negra Rain Gage	350912106455630	35.1550	-106.7661	G12
49	Crown Towers Rain Gage	350400106465630	35.0667	-106.7822	G48
50	Rio Rancho Well #13	351631106481230	35.2753	-106.7933	G58
51	Rio Grande at Albuquerque	08330000	35.0835	-106.6780	
52	Barelas Pump Station (UR400)		35.0700	-106.6600	
	2004 Urban Project Crest-Stage Gages				
A	Calabacillas Arroyo below Coors Blvd.	08329926	35.1875	-106.6514	
B	7-Bar Arroyo above Black Arroyo	083299238	35.2117	-106.6675	
C	Black Arroyo below Golf Course Road	083299236	35.2139	-106.6744	
D	Calabacillas Arroyo @ Swinburn Dam	08329921	35.2058	-106.7036	
E	Boca Negra below Petroglyphs Park	08329937	35.1589	-106.7139	

Since 1994, the sampling program has been included as part of the urban storm-water data-collection program. Water-quality monitoring under the NPDES is now in a phase to better define the quality of storm-water runoff in individual drainage basins. To support this program, existing gaging stations may be moved or a specified drainage basin may be supplemented with new stations to provide the data necessary for constituent-loading computations. Eleven combination streamflow gages and water-quality sampling sites were operational in fiscal year 2004. The water-quality data collected at 10 of these stations during water year 2004, including mean concentrations for 12 priority constituents and bacteria concentrations, are summarized in table 2. Flow was not recorded at the eleventh site, Bear Canyon Arroyo near Albuquerque (08329868), during this time period. Three additional non-recording sites are also listed in the table; Barelas Pump Station, North Floodway Outfall, and the North Pino Arroyo Detention Pond.

A “complete” analysis for the 12 priority constituents is comprised of two types of samples - grab and composite - collected during each storm. A grab sample was collected within 20 minutes after the start of flow. Discrete storm-water samples were collected at intervals ranging from 5 to 20 minutes during the first 3 hours of runoff. The discrete samples were then mixed together; the volume of each discrete sample was added depending on the magnitude of discharge at the time of collection. The greater the discharge at the time of collection, the greater the volume of sample added to the mixture. This type of sample is referred to as a flow-weighted composite sample and represents flow during the first 3 hours of runoff (minus the grab sample). Grab and composite sample discharges are also shown in table 2.

All “complete analysis” samples were analyzed for trace elements, phenolics, major ions, chemical oxygen demand, biochemical oxygen demand, bacteria, and cyanide by the City of Albuquerque Water Quality Laboratory; nutrients, volatile organic compounds, pesticides, and semivolatile base neutral acids were analyzed by the New Mexico State Laboratory in Albuquerque. Two additional samples are collected as replicates at two random sites each fiscal year for quality assurance/quality control purposes and shipped to the USGS National Water Quality Laboratory in Denver, Colorado.

Table 2. Albuquerque Storm-Water Sampling Program - National Pollution Discharge Elimination System concentrations of 12 priority water-quality constituents plus bacteria for 2004.

[NPDES, National Pollutant Discharge Elimination System; ft^3/s, cubic feet per second; mg/L, milligrams per liter; µg/L, micrograms per liter; cols/100 ml, colonies per 100 milliliters; --, no data; <, less than; mpn, most probable numbers]

Sampling site and USGS number (cooperator number)	Date sampled	Grab sample discharge[1] (ft^3/s)	Composite sample discharge[2] (ft^3/s)	Dissolved solids (mg/L)	Suspended solids (mg/L)	Nitrogen, total Kehldahl (mg/L)	Nitrogen, total (mg/L)	Phos-phorus, dissolved (mg/L)	Phos-phorus, total (mg/L)
North Floodway nr. Alameda 08329900 (UR9900)	10/7/2003	42.4	1,310	105	1,040	3.17	3.72	0.206	5.45
	11/12/2003	342	408	170	1,548	4.6	5.47	.384	1.04
	3/4/2004	440	744	60	852	1.5	1.75	.116	.92
	4/8/2004	245	464	80	710	1.85	2.19	.125	.73
	7/12/2004	1,790	1,088	24	1,812	3.86	4.61	.208	1.92
South Diversion Channel nr. Albq. 08330775 (UR200)	10/7/2003	63.3	69.3	142	1,140	3.75	4.41	.153	1.4
	11/12/2003	15.4	19.2	202	140	1.3	1.83	.15	.306
	3/4/2004	5.8	90	92	776	2.26	2.67	.064	.82
	7/12/2004	14.9	17.1	148	632	3.5	4.5	.043	.726
	7/15/2004	24.1	30.4	----	----	3.95	4.95	.265	.965
San Jose Drain @ Woodward Rd. @ Albq. 08330200 (UR500)	10/7/2003	3.8	18.4	138	456	3.65	4.4	.26	1.22
	11/12/2003	4.9	6.6	200	176	3.95	4.94	.411	.742
	2/23/2004	2.3	8.3	206	560	5.03	5.75	.223	1.19
	3/4/2004	6.5	11.9	78	464	2.27	2.85	.144	.654
	6/29/2004	13.7	20.3	308	600	11	12.8	.693	1.82
	7/12/2004	10.7	28.2	60	532	5.28	6.48	.404	1.25
Mariposa Diversion of San Antonio Arroyo @ Albq. 083299375 (UR300)	10/7/2003	12.4	16.3	100	136	1.3	1.74	.24	.335
	9/29/2004	11.9	21.6	74	176	1.4	1.85	.184	.385
Barelas Pump Station (UR400)	10/7/2003	N/A	N/A	190	652	4.7	5.66	.289	1.51
	9/19/2004	N/A	N/A	92	120	2.7	3.42	.212	.507
North Floodway Outfall (UR9901)	10/7/2003	N/A	N/A	110	348	2.60	3.17	.213	.21
North Pino Arroyo Detention Pond (UR9884)	11/14/2003	N/A	N/A	76	74	1.04	1.54	.177	.224

Table 2. Albuquerque Storm-Water Sampling Program - National Pollution Discharge Elimination System concentrations of 12 priority water-quality constituents plus bacteria for 2004--Continued.

Sampling site and USGS number (cooperator number)	Biochem. oxygen demand (mg/L)	Chemical oxygen demand (mg/L)	Cadmium, total (µg/L)	Lead, total (µg/L)	Copper, total (µg/L)	Zinc (µg/L)	Coliform, fecal (cols/100 ml)	E. coli (mpn/100 ml)
North Floodway nr.	19	202	3.16	60.8	40	333.5	270,000	900
Alameda 08329900	60	245	.81	36.1	38.8	145	4,570	19,000
(UR9900)	----	220	.33	37.6	29.8	250	1,160	6,010
	16.1	66	.48	25.3	22.6	187	584	1,900
	13	480	1.13	94.5	56.7	345	27,124	18,983
South Diversion Channel	14	210	4.69	77.2	57.3	495.5	19,000	900
nr. Albq. 08330775	180	303	.19	13.7	24.1	.01	1,480	4,570
(UR200)	22.4	250	.55	90.4	38.7	346	273	45
	25	560	.63	57.7	25.3	139	43,840	9,492
	----	240	.62	62.8	27.9	164	9,492	9,492
San Jose Drain @	20	226	3.69	95.2	43.7	409	19,000	27,100
Woodward Rd. @ Albq.	60	256	.65	44	35.1	103	7,600	7,600
08330200 (UR500)	29.7	150	.93	118	57	478	230	220
	14.8	290	.44	54.6	35.3	339	1,160	522
	80	460	.92	108	52	331	43,800	27,100
	23	480	1.07	96.4	40.5	278	27,124	43,840
Mariposa Diversion of	----	92	<2	4.31	7.74	40.7	7,600	7,600
San Antonio Arroyo @	12	100	.2	8.54	13.2	40.9	500	500
Albq. 083299375								
(UR300)								
Barelas Pump Station	34	303	4.41	108.4	74	645	270,000	900
(UR400)	15.6	123	.31	20.8	19.5	144	1,600	1,600
North Floodway Outfall	17	161	2.57	28.1	22.5	137	19,000	27,100
(UR9901)								
North Pino Arroyo	14	130	.08	3.08	9.34	.01	2,860	300
Detention Pond								
(UR9884)								

Table 2. Albuquerque Storm-Water Sampling Program - National Pollution Discharge Elimination System concentrations of 12 priority water-quality constituents plus bacteria for 2004--Continued.

Sampling site and USGS number (cooperator number)	Date sampled	Time	Grab sample discharge (ft^3/s)	Coliform, fecal (cols/100 ml)	E. coli (mpn/100 ml)
Pino Arroyo at Jefferson St. 08329882	10/7/2003	16:10	90.1	12,400	27,100
(UR2020)	11/12/2003	19:40	34.7	44,000	950
Embudo Arroyo at Albq. 08329720	10/7/2003	19:55	.41	19,000	900
(UR650)	3/4/2004	7:05	.85	6,010	73
	6/28/2004	16:25	3.9	950	359
	7/27/2004	20:35	1.5	43,840	43,840
North Floodway Channel @ Albq. 08329835 (UR329835)	10/7/2003	15:05	1,120	270,000	900
Hahn Arroyo 08329840	10/7/2003	14:40	58.3	270,000	900
(UR08329840)	11/12/2003	16:45	71.5	950	4,570
	7/12/2004	17:55	337	7,599	3,875
	7/23/2004	16:42	52.1	2,862	4,571
Tijeras Arroyo nr. Albq.	10/7/2003	15:50	101	4,570	4,570
08330600	3/4/2004	10:35	91.8	23	273
(UR330600)	7/22/2004	19:25	2.5	5,842	2,862
Bear Arroyo at Jefferson	11/12/2003	21:52	10.5	7,600	950
Street (08329870)	2/23/2004	18:30	1.7	230	500
(UR329870)	4/8/2004	10:45	3.6	3,840	2,710
	6/29/2004	6:20	1.5	43,500	4,570
	7/12/2004	18:15	2.7	4,571	4,571
	7/22/2004	20:15	16.2	359	359

[1]Grab sample is collected within the first 20 minutes of stormflow.
[2]See composite sample definition on page 5.

RAINFALL AND RUNOFF DATA COLLECTION

During water year 2004, 18 streamflow-gaging stations, 39 rain gages, and 5 crest-stage gages were operational in the Albuquerque urban-data collection program. Five gaging stations measure runoff from undeveloped drainage basins, and the remaining 13 stations monitor runoff from urbanized watersheds. The streamflow gages at Academy Acres Drain, North Fork Hahn Arroyo, and South Fork Hahn Arroyo, all in urbanized watersheds, were discontinued in July 2003. Eleven gaging stations also are water-quality sampling sites. All data are recorded at 5-minute intervals and transferred from the field recorders to the USGS electronic database approximately every month. The period of record for data (unit values) digitally archived in electronic format and stored in the USGS database is listed in table 3. Data collected prior to the dates listed in table 3 are archived in paper-tape form at the USGS New Mexico Water Science Center in Albuquerque and can be converted to electronic format if needed. A similar period-of-record tabulation is available for rain gages and is listed in table 4. In the station analyses for rain-gage sites that are presented later in this report, the period of record refers only to data readily available in electronic format.

Six gaging stations were operated only from approximately October 1 to November 30, 2003, and March 1 to September 30, 2004, when the probability of rainfall is higher. These six seasonal sites are: EmbudoArroyo at Monte Largo, Ladera Arroyo, Arroyo 19A, Pino Arroyo at Jefferson St., La Cueva Arroyo Tributary, and North Camino Arroyo at Sunset Hills. Rainfall data are collected annually using tipping-bucket rain gages. A typical rainfall collection site and tipping-bucket rain gage are shown in figure 2.

Four of the five crest-stage gages only document the highest water level that had occurred between site visits. The Calabacillas Arroyo below Coors Blvd. crest-stage gage pipe shelter actually houses a small pressure transducer that also records water levels every 5 minutes. Only the peak flows for the 2004 water year are displayed in this report for each crest-stage gage.

ANNUAL DAILY MEAN FLOW HYDROGRAPH OF THE NORTH FLOODWAY CHANNEL AND THE RIO GRANDE AT ALBUQUERQUE GAGING STATIONS

The North Floodway Channel (not shown on map) drains the northeast quadrant of Albuquerque and is the largest of the concrete-lined drainage channels in the metropolitan area. Its confluence with the Rio Grande is located immediately north of the Albuquerque city limits near the small community of Alameda. North Floodway Channel discharges into the Rio Grande are measured at the North Floodway Channel near Alameda gaging station (08329900). A hydrographic comparison showing the effects of North Floodway flows on Rio Grande mean daily discharges measured at the Rio Grande at Albuquerque gaging station (08330000) is shown in figure 3. The Rio Grande gaging station is approximately 10 miles downstream from the confluence with the North Floodway Channel. The snowmelt runoff period from April through June, during which peak flows typically occur in any given year, was below normal in water year 2004. Average annual flow at the Rio Grande at Albuquerque gaging station was 683 cubic feet per second and at the North Floodway gaging station was 11.4 cubic feet per second, or slightly more than 1 percent of annual riverflow in water year 2004. The hydrograph shows that large stormflows from the North Floodway are usually reflected in the Rio Grande and that

the effects of North Floodway flows are more pronounced when total river discharge is low. Most North Floodway peaks occur during the summer thunderstorm season (July-October) when flow in the Rio Grande is typically at its lowest level. Therefore, the larger Albuquerque urban stormflows usually are a significant percentage of the mean daily discharge of the Rio Grande. The water year 2004 instantaneous peak discharge at the North Floodway gaging station was 5,700 cubic feet per second on July 23, 2004. The daily mean discharge of the North Floodway on that day was 371 cubic feet per second or approximately 59 percent of flow of the Rio Grande at Albuquerque gaging station. The water year 2004 maximum daily mean discharge for the North Floodway during the snowmelt period (April-May) was 309 cubic feet per second, which occurred on April 3. On that day, the North Floodway flow was only approximately 13 percent of the 2,310 cubic feet per second recorded at the Rio Grande at Albuquerque gage.

Table 3. Period of record of digitally archived unit values for urban streamflow-gaging stations.

[*, Unit values recorded only during water-quality sampling events prior to 1999]

Site ID (fig. 1)	Station name	Station number	Period of record[1]
30	Campus Wash @ Albq.	08329700	03/90 - 09/04
5	Embudo Arroyo @ Albq.	08329720	10/98 - 09/04
28	North Floodway Channel @ Albq.	08329835	03/90 - 09/04
19	South Fork Hahn Arroyo @ Albq.	08329838	06/92 - 07/03
not shown	North Fork Hahn Arroyo @ Albq.	08329839	06/92 - 07/03
22	Hahn Arroyo @ Albq.	08329840	06/92 - 09/04
not shown	Grant Line Arroyo @ Villa del Oso @ Albq.	08329860	03/84 - 07/98
2	Bear Canyon Arroyo near Albq.	08329868	10/99 - 09/04
24	Bear Arroyo at Jefferson St.	08329870	06/03 - 09/04
20	Academy Acres Drain @ Albq.	08329880	10/84 - 07/03
23	Pino Arroyo @ Jefferson St. @ Albq.	08329882	05/00 - 09/04
6	La Cueva Arroyo Tributary @ Albq.	08329888	05/99 - 09/04
7	La Cueva Arroyo Trib. near Albq. (@ Tramway Rd.)	08329890	09/90 - 07/95
26	N. Floodway Channel near Alameda	08329900	10/88 - 09/04
13	North Camino Arroyo @ Sunset Hills in Albq.	08329911	08/97 - 09/04
18	North Camino Arroyo Trib. @ Albq.	08329914	10/93 - 09/97
44	Arroyo 19A @ Albq.	08329935	10/91 - 09/04
37	Taylor Ranch Drain @ Albq.	08329936	10/91 - 07/98
39	Mariposa Diversion of San Antonio Arroyo @ Albq.	083299375	*10/94 - 09/04
46	Ladera Arroyo @ Albq.	08329938	10/91 - 09/04
33	San Jose Drain @ Woodward Road @ Albq.	08330200	*09/99 - 09/04
8	Tramway Floodway Channel @ Albq	08330540	10/94 - 09/04
32	Tijeras Arroyo near Albq.	08330600	03/96 - 09/04
35	South Diversion Channel above Tijeras Arroyo	08330775	10/94 - 09/04
42	Amole del Norte Channel @ Albq.	08331118	04/00 - 09/04

[1]Data collected prior to dates listed are archived in paper-tape format.

Table 4. Period of record of digitally archived unit values for urban rain-gage sites.

Site ID (fig. 1)	Station name	Station number	Period of record[1]
1	Bear Canyon in Albuquerque	350859106274330	10/84 - 09/04
3	Elena Gallegos Picnic Area @ Albq.	350954106282330	10/94 - 09/04
4	Embudo Canyon @ Albuquerque	350554106283230	06/99 - 09/04
7	La Cueva Arroyo Trib. nr. Albuquerque (@ Tramway Rd.)	08329890	07/77 - 09/04
8	Tramway Floodway Channel @ Albq.	08330540	04/01 - 09/04
9	Fire Station #16 in Albuquerque	350756106305430	10/84 - 09/04
10	Walker Pump Station	351023106313930	04/02 - 09/04
11	Borland Rain Gage in Albuquerque	350713106314230	10/84 - 09/04
12	Tanoan Rain Gage @ Albuquerque	350924106315630	04/91 - 09/04
14	Kirtland Air Force Base @ Eubank Gate, Albq.	350310106320930	06/01 - 09/04
15	Leonard Rain Gage in Albuquerque	350722106325030	04/84 - 09/04
16	Thomas Pump Station @ Albuquerque	350755106325830	10/94 - 09/04
17	Love Pump Station @ Albq.	350540106333230	09/02 - 09/04
18	North Camino Arroyo Trib. @ Albuquerque	08329914	06/79 - 09/04
19	South Fork Hahn Arroyo @ Albuquerque	08329838	10/78 - 09/04
not shown	North Fork Hahn Arroyo @ Albuquerque	08329839	06/79 - 07/03
not shown	Grant Line Arroyo @ Villa del Oso @ Albq.	08329860	06/76 - 07/03
20	Academy Acres Drain @ Albuquerque	08329880	07/76 - 09/04
21	USGS Office at Albq.	350748106345830	08/00 - 09/04
22	Hahn Arroyo @ Albuquerque	08329840	10/78 - 09/04
26	North Floodway Channel near Alameda	08329900	12/01 - 09/04
25	Tijeras Arroyo @ Montessa Park near Albq.	08330580	10/95 - 09/04
27	Orlando Romero Rain Gage in Albq.	350417106363330	03/01 - 09/04
28	North Floodway Channel @ Albuquerque	08329835	07/99 - 09/04
29	AMAFCA Headquarters near Albuquerque	350627106364630	09/97 - 09/04
30	Campus Wash @ Albuquerque	08329700	10/84 - 09/04
31	Bernalillo County Building near Albq.	350340106385230	09/97 - 09/04
33	San Jose Drain @ Woodward Road @ Albq.	08330200	12/94 - 09/04
34	Albuquerque City Hall @ Albuquerque	350448106390230	10/94 - 09/04
36	Wastewater Treatment Plant @ Albq.	350119106394630	08/00 - 09/04
37	Taylor Ranch Drain @ Albuquerque	08329936	08/78 - 09/04
38	Swinburn Dam Rain Gage @ Paradise Hills	351216106421330	08/00 - 09/04
40	Petroglyphs Park @ Albuquerque	350939106430930	02/95 - 09/04
41	Todd Kelly Rain Gage @ Rio Rancho	351516106431430	10/02 - 09/04
43	Leavitt Pump Station @ Albuquerque	350310106434930	08/00 - 09/04
44	Arroyo 19A @ Albuquerque	08329935	06/77 - 09/04
45	Fire Station #14 in Albuquerque	350357106434930	10/84 - 09/04
46	Ladera Arroyo @ Albuquerque	08329938	05/87 - 09/04
47	Emergency Dispatch Bldg. @ Albq.	350348106453230	10/00 - 09/04
48	La Boca Negra near Albuquerque	350912106455630	10/90 - 09/04
49	Crown Towers @ Nine Mile Hill @ Albq.	350400106465630	08/00 - 09/04
50	Rio Rancho Well #13	351631106481230	07/04 - 09/04

[1]Data collected prior to dates listed are archived in paper-tape format.

Figure 2. (A) La Cueva rain gage, (B) recorder next to rain gage, and (C) view inside of rain gage.

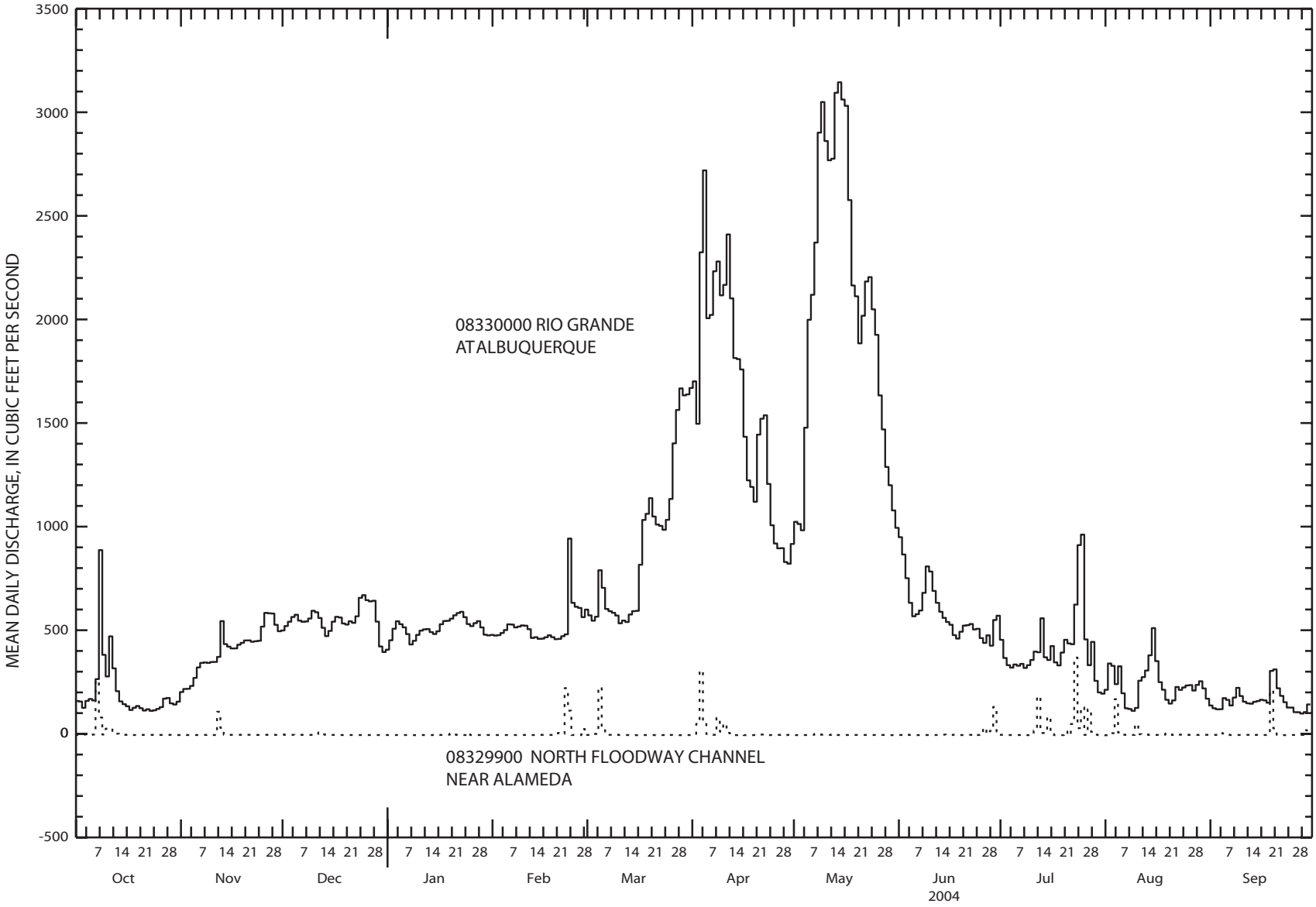

Figure 3. Discharge at the North Floodway Channel near Alameda in comparision to discahrge at the Rio Grande at Albuquerque streamflow-gaging stations.

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RUNOFF DATA SUMMARY,

WATER YEAR 2004

(arranged by station number)

SURFACE-WATER RUNOFF DATA FOR WATER YEAR 2004

This section presents the daily mean discharge tables for the 18 streamflow-gaging stations operating in water year 2004. Detailed location descriptions, drainage areas, periods of record, and statistical summaries are included in each table. No statistical analysis is computed for the gaging stations not operated continuously during water years 2003 and 2004. A station-specific analysis supplements each daily values table and includes a description of monitoring equipment, problems associated with data collection during the water year, and other information used to compute streamflow discharge. The annual maximum peak stage and annual maximum peak discharge for water year 2004 and for the period of record for all gaging stations are listed in table 5.

Table 5. Maximum flood peak stage and discharge for water year 2004 and for the period of record.

Station number	Station name	Date station was established	Water year 2004 Date of peak	Water year 2004 Maximum stage (ft)	Water year 2004 Maximum peak (ft^3/s)	Period of record Date of peak	Period of record Maximum stage (ft)	Period of record Maximum peak (ft^3/s)	Remarks
08329700	Campus Wash @ Albq.	Apr-82	7/23/2004	3.61	866	7/14/1990	4.50	1,230	
08329720	Embudo Arroyo @ Albq.	Oct-98	8/4/2004	3.31	16	8/4/2004	3.31	16	
08329835	N. Floodway Channel @ Albq.	May-82	7/23/2004	9.30	4,880	7/9/1988	12.10	8,180	
08329839	North Fork Hahn Arroyo	June-92	----	----	----	8/1/1993	1.90	219	Discontinued 7/03
08329838	South Fork Hahn Arroyo	June-92	----	----	----	6/16/1999	4.72	1,300	Discontinued 7/03
08329840	Hahn Arroyo @ Albq.	June-78	7/12/2004	2.33	676	6/16/1999	5.98	6,230	
08329868	Bear Canyon Arroyo nr. Albq.	Oct-99	----	----	----	----	0.00	0	No flows in 2004
08329870	Bear Arroyo at Jefferson Street	June-05	7/12/2004	4.66	567	7/12/2004	4.66	567	Discontinued 7/03
08329882	Pino Arroyo at Jefferson St.	May-00	7/12/2004	3.55	728	7/12/2004	3.55	728	
08329888	La Cueva Arroyo Trib. @ Albq.	May-99	8/14/2004	1.45	6.1	8/14/2001	1.56	12	
08329900	N. Floodway Channel nr. Alameda	July-68	7/23/2004	7.00	5,700	8/14/1980	10.40	12,300	
08329911	N. Camino Arroyo @ Sunset Hills	Aug-97	6/29/2004	1.20	10	7/23/2001	1.38	39	
08329935	Arroyo 19A @ Albq.	June-77	9/29/2004	1.08	0.11	8/2/1999	2.93	234	No flows in 2003
083299375	Mariposa Div. of San Antonio Arr.	June-92	4/3/2004	2.67	51	8/4/1999	4.80	251	
08329938	Ladera Arroyo @ Albq.	May-81	7/25/2004	2.43	4.8	8/2/1999	4.12	195	No flows in 2003
08330200	San Jose Drain at Woodward Rd.	Oct-93	7/23/2004	6.26	96	8/14/1994	6.57	99	
08330540	Tramway Floodway Channel	July-87	8/4/2004	2.58	233	7/9/1988	8.62	3,250	
08330600	Tijeras Arroyo near Albq.	Oct-51	8/4/2004	6.49	929	7/9/1988	9.60	2,930	
08330775	South Diversion Channel	June-88	7/23/2004	6.70	1,300	7/14/1990	6.30	1,960	
08331118	Amole del Norte Channel @ Albq.	Apr-00	7/22/2004	4.29	259	7/20/2003	4.81	366	
	Urban Crest-Stage Gages								
8329921	Calabacillas at Swinburne Dam	Oct-91	4/3/2004	approx.0.94	approx.40	6/14/2002	3.89	319	
8329926	Calabacillas Arroyo below Coors Blvd.	Jul-05	8/20/2004	1.09	363	8/20/2004	1.09	363	
83299236	Black Arroyo below Golf Course Rd.	Jul-92	4/3/2004	1.66	324	11/13/1993	5.36	2310	
83299238	Seven-Bar Arroyo abv Black Arroyo	Jul-92	4/3/2004	.89	91	11/13/1993	3.26	838	Peak possibly 5/25/94
8329937	Boca Negra below Petroglyphs Park	Jul-93	4/3/2004	<.36	<8.5	8/2/1999	.78	74	Discontinued 12/8/04

08329700 CAMPUS WASH AT ALBUQUERQUE, NEW MEXICO

STATION ANALYSIS

WATER YEAR 2004

Equipment.--An electronic datalogger, recording stage and rainfall on 5-minute intervals, and a pressure transducer are housed in a metal 5-foot by 5-foot walk-in shelter on the right bank of the concrete-lined channel. The reference gage is an outside staff gage painted on both sidewalls of the channel. High-water measurements can be made from a bridge located 600 feet upstream, but flow velocities are extrememly fast, so discharges computed from the theoretical rating is considered more accurate than measurements. A tipping-bucket rain gage is also located at this site. The datalogger was installed on July 22, 1996, and the pressure transducer on September 12, 1996. A crest-stage gage (CSG) was installed on the left bank, directly across from the gage house, on October 8, 1998. The elevation of the lower CSG cap is 1.75 ft. The pipe is mounted on the side-slope of the channel at an angle of 26.5 degrees from horizontal.

Gage-Height Record.-- The recorder, which is referenced to the outside staff gage, gave a complete and satisfactory record for water year 2004, except for the following time periods. Ice formed over the orifice tubing and affected gage height readings on November 27-29, December 10-11, 13, 16-20, 23-25, 27, and 30-31, 2003, and January 1, 6-10, 22-24, 26-30, and February 3-7, 2004. These estimated daily mean discharges were based on precipitation received at this site and base flows before and after each affected day. No comparison gage is located upstream from this gage and the downstream gage at the North Floodway Channel at Albuquerque (08329835) does not correlate well because most of its flow originates from an ungaged tributary. This gage is operational the entire year.

Rating.--The control for this station is the concrete-lined channel. The bottom width of the channel is 10 feet. The slope of the sides is 26.5 degrees from horizontal. The depth of the channel at this point is about 20 feet. The Point of Zero Flow (PZF) is 0.00 foot (1.00-foot recorded gage height because of the +1.00 foot datum added to true depths).

Rating No. 1 was developed in water year 1982. It was based on a step-backwater analysis of the concrete-lined channel using the software package WSPRO (Water Surface Profile Computations). Rating 1.0 did not compute any flow below a gage height of 0.15 foot, which corresponded to 3.29 cubic feet per second. This "nuisance flow" was not evaluated prior to October 1, 1996.

Beginning in water year 1997, the low end of rating 1.0 was extended and values of discharge were calculated for all gage heights above 0.00 foot. The resulting rating 2.0 also differs slightly from rating 1.0 in that a straight line, best-fit rating line was drawn as close as possible to the theoretical computed values. In rating 1.0, the theoretical values were actually used as input points, which do not plot as a straight line on a log-log scale. For a concrete-lined, trapezoidal-shaped channel such as this, the stage versus discharge relationship should plot as a straight line.

Discharge.--Discharge was computed from rating curve 2.0 directly. The channel in this reach creates extreme velocities which keep the channel bottom completely clean. For this reason, no shifting should occur in this uniformly-shaped channel. The rating curve discharges are considered to be more reliable than any individual measurement.

During water year 2004, 21 visits were made to the gaging station. The peak gage height for the water year occurred on July 23 and was 3.61 feet (4.61 on recorder), correlating to a maximum discharge of 866 cubic feet per second.

Remarks.--Records are good, except those that were estimated due to ice or recorder malfunctions, which are rated poor. Any estimated mean daily discharges are based on precipitation records from this site and base flows typical for the time of year. In recent years, low flow drainage has been increasing and some water is nearly always present in the channel that is not rainfall related ("nuisance flows"). Prior to water year 1997, all days with discharges determined to be only nuisance flow were labeled days of zero flow (gage heights less than 0.15 feet and less than 3.3 cubic feet per second on rating 1.0). Since October 1, 1996, all low-end flow has been calculated using the new rating 2.0 directly.

08329700 CAMPUS WASH AT ALBUQUERQUE, NM

LOCATION.--Lat 35°05'38", long 106°37'25", in SE 1/4 sec.16, T.10 N., R.3 E., Bernalillo County, Hydrologic Unit 13020203, on right bank 100 ft west of southwest corner of University of New Mexico North Golf Course, 200 ft downstream from Barelas Stormwater Pumping Station outfall, 600 ft downstream from Tucker Road bridge, and 1,500 ft northeast of intersection of Lomas and University Boulevards, in Albuquerque.

DRAINAGE AREA.--3.80 mi^2.

PERIOD OF RECORD.--April 1982 to September 1996 (seasonal records). October 1996 to current year.

GAGE.--Water-stage and rainfall recorder and concrete-lined channel. Elevation of gage is 5,143 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except for those estimated, which are poor. Recording rain gage at station. Prior to water year 1997, some minor streamflow may exist on days when daily mean discharges have been recorded as zero due to the sensitivity limits of the streamflow monitoring equipment. See tabulation below for monthly precipitation, in inches.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.45	0.49	0.22	e0.10	0.37	0.33	0.23	0.15	0.28	0.30	0.37	0.27
2	0.45	0.05	0.25	0.09	0.13	0.80	4.1	0.00	0.23	0.28	0.74	0.21
3	0.85	0.14	0.26	0.17	e0.10	0.44	31	0.24	0.27	0.15	0.40	0.24
4	0.60	0.22	0.19	0.00	e0.10	13	1.3	0.22	0.41	0.26	0.84	1.1
5	0.34	0.22	0.25	0.09	e0.10	1.2	0.24	0.27	0.34	0.31	0.37	0.23
6	0.52	0.33	0.16	e0.10	e0.10	0.08	0.19	0.28	0.29	0.21	0.26	0.15
7	19	0.22	0.03	e0.10	e0.10	0.00	0.16	0.27	0.46	0.24	0.23	0.25
8	3.1	0.11	0.21	e0.10	0.06	0.15	4.5	0.21	0.30	0.22	0.40	0.26
9	0.33	0.03	0.38	e0.10	0.08	0.16	0.40	0.13	0.52	0.21	0.36	0.35
10	3.4	0.11	e0.20	e0.10	0.06	0.17	2.0	0.17	0.27	0.17	2.6	0.28
11	0.67	0.27	e0.20	0.00	0.17	0.18	0.14	0.21	0.30	0.95	0.47	0.73
12	0.27	4.6	0.94	0.06	0.19	0.14	0.05	0.14	0.23	5.6	0.24	0.46
13	0.38	2.2	e0.20	0.16	0.00	0.32	0.19	0.17	0.22	0.26	0.24	0.27
14	0.25	0.20	0.10	0.17	0.11	0.25	0.24	0.23	0.29	0.24	0.17	0.22
15	0.29	0.09	0.20	0.39	0.00	0.28	0.18	0.09	0.20	6.9	0.26	0.22
16	0.36	0.20	e0.20	0.16	0.00	0.41	0.17	0.01	0.18	0.35	0.33	0.27
17	0.48	0.15	e0.20	0.09	0.12	0.31	0.09	0.22	0.24	0.17	0.19	0.23
18	0.10	0.20	e0.20	0.00	0.19	0.28	0.01	0.71	0.22	0.50	0.27	0.34
19	0.08	0.18	e0.10	0.18	0.38	0.22	0.06	0.21	0.24	0.67	0.35	14
20	0.22	0.13	e0.10	0.65	0.12	0.19	0.27	0.26	0.40	0.41	0.34	1.5
21	0.23	0.25	0.01	0.16	0.73	0.17	0.18	0.17	0.35	0.33	0.19	0.34
22	0.23	0.08	0.21	e0.10	0.06	0.51	0.18	0.10	0.35	5.5	0.36	0.24
23	0.19	0.08	e0.20	e0.10	18	0.63	0.28	0.14	0.39	47	0.24	0.23
24	0.18	0.12	e0.20	e0.10	5.0	0.30	0.08	0.22	0.31	2.2	0.28	0.27
25	0.24	0.24	e0.20	0.35	0.10	0.16	0.08	0.22	0.41	10	0.35	0.14
26	0.11	0.20	0.21	e0.20	0.07	0.70	0.23	0.27	0.27	0.34	0.23	0.20
27	0.23	e0.10	e0.10	e0.10	0.07	0.13	0.18	0.21	0.49	2.1	0.25	0.17
28	0.25	e0.10	0.00	e0.10	1.4	0.07	0.17	0.24	1.0	0.45	0.24	0.26
29	0.24	e0.10	0.05	e0.10	0.04	0.20	0.22	0.13	12	0.36	0.27	0.27
30	0.18	0.02	e0.10	e0.10	---	0.17	0.22	0.02	0.34	0.25	0.33	0.42
31	0.26	---	e0.10	0.10	---	0.23	---	0.25	---	0.30	0.24	---
TOTAL	34.48	11.43	5.97	4.32	27.95	22.18	47.34	6.16	21.80	87.23	12.41	24.12
MEAN	1.11	0.38	0.19	0.14	0.96	0.72	1.58	0.20	0.73	2.81	0.40	0.80
MAX	19	4.6	0.94	0.65	18	13	31	0.71	12	47	2.6	14
MIN	0.08	0.02	0.00	0.00	0.00	0.00	0.01	0.00	0.18	0.15	0.17	0.14
AC-FT	68	23	12	8.6	55	44	94	12	43	173	25	48

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1997 - 2004, BY WATER YEAR (WY)

MEAN	1.20	0.57	0.36	0.33	0.53	0.93	0.86	0.59	0.90	1.54	1.35	1.04
MAX	2.39	0.76	0.58	0.52	0.96	1.97	1.58	1.06	1.65	2.81	2.49	2.44
(WY)	(2001)	(2001)	(2002)	(2002)	(2004)	(1998)	(2004)	(1998)	(2000)	(2004)	(1999)	(1997)
MIN	0.54	0.38	0.10	0.14	0.15	0.26	0.43	0.20	0.35	0.25	0.40	0.51
(WY)	(1998)	(2004)	(1997)	(2004)	(1997)	(1997)	(2003)	(2004)	(2003)	(2003)	(2004)	(2003)

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1997 - 2004	
ANNUAL TOTAL	203.65		305.39			
ANNUAL MEAN	0.56		0.83		0.85	
HIGHEST ANNUAL MEAN					1.09	1997
LOWEST ANNUAL MEAN					0.58	2003
HIGHEST DAILY MEAN	19	Oct 7	47	Jul 23	47	Jul 23, 2004
LOWEST DAILY MEAN	0.00	Dec 28	0.00	Dec 28	0.00	Nov 28, 1996
ANNUAL SEVEN-DAY MINIMUM	0.08	Jan 29	0.08	Feb 10	0.05	Jan 6, 1997
MAXIMUM PEAK FLOW			866	Jul 23	1,230	Jul 14, 1990
MAXIMUM PEAK STAGE			3.61	Jul 23	4.50	Jul 14, 1990
ANNUAL RUNOFF (AC-FT)	404		606		618	
10 PERCENT EXCEEDS	0.75		0.72		1.1	
50 PERCENT EXCEEDS	0.29		0.23		0.44	
90 PERCENT EXCEEDS	0.10		0.09		0.13	

(+)Total precipitation accumulation, in inches.
e Estimated

08329720 EMBUDO ARROYO AT ALBUQUERQUE, NEW MEXICO

STATION ANALYSIS

WATER YEAR 2004

Equipment.--This station was established on October 2, 1998. An electronic datalogger and pressure transducer is housed in a metal 2.5- X 2.5- X 6-foot shelter anchored to a concrete pad on the left bank of the concrete-lined portion of the channel, approximately 90 feet upstream from the Monte Largo bridge. On September 12, 2001, an ISCO model 6712 automatic water-quality sampler was installed and housed in a separate metal shelter immediately adjacent to the gage shelter. The site is located east of Tramway Boulevard, between Indian School Road and Rover Street, on Albuquerque's far east side. The 30-foot-long orifice line is anchored immediately upstream from the 1-foot-wide, 26-inch-high concrete wall that spans the entire channel. A 12-inch-wide, U-shaped notch cut into the concrete wall acts as the low-flow control. An outside staff gage, with an attached crest-stage gage, is mounted approximately 24 inches upstream from the orifice and is the reference gage. The elevation of the crest-stage gage lower cap is 1.66 feet above the point of zero flow (PZF). High-water measurements are computed by indirect methods. Low-water wading measurements are made in the vicinity of the gage.

Gage-Height Record.-- The recorder gave a complete and satisfactory record during water year 2004. The recorder will only sense water levels above a stage of 1.05 feet, because the orifice is mounted 0.05 foot above the PZF. This prevents sediment from covering the orifice during flow events. At a stage of 1.05 feet, the computed discharge is 0.05 ccubic feet per second. The gage was shut down during the winter period December 5, 2003 to March 4, 2004. A few hours before the recorder was started up on March 4, a flow event occurred which left a high-water mark on the outside staff. This peak gage height was the basis for an estimated hydrograph that was graphed in the database and used to compute an estimated daily mean discharge.

Rating.--The channel below the gage orifice is trapezoidal shaped and concrete-lined. The bottom width is 39 feet. The channel continues straight downstream for 120 feet before gently bending toward the left bank after passing under the Monte Largo bridge. Upstream from the gage orifice, the channel consists of a wide, flat slope for approximately 50 feet and its bottom material is coarse sand. This approach immediately upstream from the gage is a settling area for stream sediments after passing over a 10-foot-high, concrete, stair-stepped wall. A 26-inch-high concrete wall separates the concrete-lined portion of the channel downstream and the natural channel upstream. A 1-foot wide notch cut into the concrete wall is the low-flow control. The concrete wall is 12 inches thick and flat-topped, so flows breaching this wall are effectively controlled by this broad-crested weir. For rating development purposes, the 1-foot-wide notch was treated as a one-foot-long box culvert in theoretical discharge computations. The rating breaks sharply to the right, at gage heights exceeding 3.17 feet, when flows begin to breach the entire concrete wall. Broad-crested weir flow equations were used to compute this portion of the rating. An offset of 2.5 was used for this middle section.

When flow depths exceed 1.5 feet above the wall, or gage heights over approximately 4.77 feet, the concrete wall acts as a sharp-crested weir, because the turbulence caused by the upstream face

of the vertical wall clears the downstream face, effectively converting flows to sharp-crested weir type. The upper section of the rating breaks even further to the right than the middle portion. Flows downstream from the concrete control wall are supercritical, but are subcritical in the approach section.

The extremely flashy nature of this stream makes it difficult to obtain discharge measurements, so the theoretical rating is most reliable until more measurements are available. In water year 2004, 21 site inspections were made; none during a time of flow. The peak stage and discharge recorded for water year 2004 was 3.31 feet and 16 cubic feet per second, respectively, on August4.

Discharge.--Discharges were calculated by applying rating 1.0 directly. The point of zero flow (PZF) is a gage height of 1.00 feet, but zero flow is also computed for any gage heights below 1.06 feet because the orifice is mounted 0.05 feet above the PZF.
No stations are available for comparison purposes.

08329720 EMBUDO ARROYO AT ALBUQUERQUE, NM

LOCATION.--Lat 35°06'08", long 106°29'33", in NW 1/4 NE 1/4 sec.14, T.10 N., R.4 E., Bernalillo County, Hydrologic Unit 13020203, on left bank of concrete-lined channel, approximately 90 ft upstream from Monte Largo bridge over Embudo Arroyo, between Indian School Rd to the south and Rover St to the north in Albuquerque.

DRAINAGE AREA.--3.8 mi^2.

PERIOD OF RECORD.--October 1998 to current year.

GAGE.--Water-stage recorder, crest-stage gage, and concrete weir control. Elevation of gage is 5,925 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good. Recording rain gage located in drainage basin, approximately 1 mi upstream. Site used for gathering water-quality data for undeveloped upper drainage basin, which represents undeveloped foothill east of Albuquerque.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	---	---	---	0.12	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	---	---	e0.13	0.01	0.00	0.00	0.00	0.41	0.00
5	0.00	0.00	0.00	---	---	0.03	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.01	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.01	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.02	0.00	0.00
15	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.01	0.00	0.00
28	0.00	0.00	---	---	---	0.00	0.00	0.00	0.03	0.00	0.00	0.00
29	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	---	---	---	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	0.02	0.00	---	---	---	---	0.13	0.00	0.03	0.03	0.41	0.00
MEAN	0.00	0.00	---	---	---	---	0.00	0.00	0.00	0.00	0.01	0.00
MAX	0.01	0.00	---	---	---	---	0.12	0.00	0.03	0.02	0.41	0.00
MIN	0.00	0.00	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	0.04	0.00	---	---	---	---	0.3	0.00	0.06	0.06	0.8	0.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1999 - 2004, BY WATER YEAR (WY)

MEAN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00
MAX	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00
(WY)	(2001)	(2001)	(1999)	(1999)	(1999)	(2003)	(2004)	(1999)	(2000)	(2000)	(1999)	(2001)
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(WY)	(2000)	(1999)	(1999)	(1999)	(1999)	(1999)	(1999)	(1999)	(1999)	(2002)	(2002)	(1999)

SUMMARY STATISTICS	WATER YEARS 1999 - 2004	
ANNUAL MEAN	0.00	
HIGHEST ANNUAL MEAN	0.00	2001
LOWEST ANNUAL MEAN	0.00	2002
HIGHEST DAILY MEAN	0.41	Aug 4, 2004
LOWEST DAILY MEAN	0.00	Oct 1, 1998
ANNUAL SEVEN-DAY MINIMUM	0.00	Oct 1, 1998
MAXIMUM PEAK FLOW	16	Aug 4, 2004
MAXIMUM PEAK STAGE	3.31	Aug 4, 2004
ANNUAL RUNOFF (AC-FT)	0.7	
10 PERCENT EXCEEDS	0.00	
50 PERCENT EXCEEDS	0.00	
90 PERCENT EXCEEDS	0.00	

e Estimated

08329835 NORTH FLOODWAY CHANNEL AT ALBUQUERQUE, NEW MEXICO

STATION ANALYSIS

WATER YEAR 2004

Equipment.--A pressure transducer and electronic datalogger with a speech/telephone modem were installed on July 22, 1999 and are housed in a metal 5- x 5-foot walk-in shelter on the right bank of the concrete-lined channel. A tipping-bucket rain gage was installed on the roof of the shelter on July 23, 1999 and is also recorded by the datalogger. Both water-stage and rainfall data are recorded on 5-minute intervals. An outside staff gage is painted on the inclined, channel side-slopes and is the reference gage. Since July 26, 2001, this site has been a test location for a prototype radar stage sensor developed by the USGS Hydrologic Instrumentation Facility (HIF). The radar is housed in a metal shelter mounted to the hand railing of the Candelaria Boulevard bridge and transmits data by radio to the gage house and datalogger.

Gage-height record.--The recorder, referenced to the outside staff gage, gave a complete and satisfactory record for water year 2004, except when the orifice was covered with ice on November 22-25, December 9-11, and 13-31, 2003, and January 1-11, 22-28, and February 1-15, 2004. All estimated mean daily discharges were based on flows before and after the affected period, flow records at the downstream Alameda gage (08329900) and upstream Campus Wash gage (08329700), and precipitation records. Instantaneous discharges remained near base flow (1.0 to 2.0 cubic feet per second) for all estimates except the rainy day of January 25, so mean daily discharges were not significantly affected. This station had previously been closed for winter months, but since water year 2000 has been operated all year.

Rating.--The control for the station is the concrete-lined channel. The bottom width of the channel is 30 feet. The slope of the sidewalls is approximatley 27 degrees from horizontal. The depth of the channel at this location is about 30 feet and its top width is 137 feet. The channel slope at this site is much less (0.0009 foot per foot) than the downstream gage near Alameda (approximately 0.0047 foot per foot). Flows are subcritical for all stages at this location, but the Alameda gage has supercritical flows at most gage heights.

During water year 2004, 37 inspections were made at the gaging station. Only extremely low-flow measurements are attempted at this location due to the dangers of floating debris during most flows. The theoretical rating for this uniformly-shaped, concrete-lined channel is considered more accurate than individual measurements.

Rating 1.0, effective in previous years, was replaced by a new rating, 2.0, in water year 2001. The old rating appeared to have been based on four low-flow discharge measurements. The channel was re-surveyed in December, 2001 and a step-backwater analysis was completed for this site using the USGS Water Surface Profile (WSPRO) software. The analysis assumed a Manning's n-value of 0.016 for channel bottom roughness, prorated to 0.014 over 4 feet of depth. Slight differences between the two ratings are apparent, especially at higher discharges. The old rating did not compute discharges for gage heights under 0.30 foot (11.4 cubic feet per second), whereas the new rating, 2.0, computes a discharge for all stages above the point of zero flow (0.00-foot gage height). Because the base flow at this location is approximately 0.5 to 3.0 cfs. year-round, the new rating computes a significantly larger volume of base-flow passing this gage each year and returning to the Rio Grande. All previous years' records (since 1982) containing have been revised using the new rating.

Discharge--Discharges were computed for water year 2004 using the new rating curve 2.0. The channel in this reach creates velocities that keep the channel bottom fairly clean, and for this reason, no shifting should occur. Discharges less than 11.4 cubic feet per second (gage heights

less than 0.30 foot) were reported as zero flow prior to water year 2001 and are generally not the result of rainfall runoff. Beginning in water year 2001, all discharges above the PZF have been computed. The maximum stage during water year 2004 was 9.30 feet, corresponding to a discharge of 4,880 cubic feet per second on July 23.

08329835 NORTH FLOODWAY CHANNEL AT ALBUQUERQUE, NM

LOCATION.--Lat 35°07'03", long 106°36'42", in SE 1/4 sec.3, T.10 N., R.3 E., Bernalillo County, Hydrologic Unit 13020203, on right bank of concrete lined drainage channel, 300 ft downstream (north) of bridge on Candelaria Boulevard NE, and 3,000 ft downstream from confluence of Campus Wash and Embudo Arroyo in Albuquerque.

DRAINAGE AREA.--40.0 mi^2.

PERIOD OF RECORD.--May 1982 to September 1999 (seasonal records). October 1999 to current year.

GAGE.--Water-stage recorder and recording tipping-bucket rain gage with 0.01-in. increment, and concrete lined channel. Elevation of gage is 5,110 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except for those estimated, which are poor. Prior to water year 2001, some minor streamflow may exist on days when daily mean discharges have been recorded as zero due to the sensitivity limits of the streamflow monitoring equipment. See tabulation below for monthly precipitation, in inches.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.81	3.4	2.0	e1.5	e1.5	1.5	1.4	1.4	1.0	1.6	1.2	1.2
2	0.92	2.9	2.0	e1.5	e1.5	2.6	27	1.2	1.1	1.3	6.1	1.2
3	1.6	2.0	2.3	e1.5	e1.5	3.6	255	1.1	1.2	1.2	3.0	0.98
4	2.4	2.5	2.5	e1.5	e1.5	144	39	1.5	1.3	1.4	145	6.8
5	1.3	2.2	2.4	e1.5	e1.5	13	1.7	0.90	1.4	1.3	2.8	1.5
6	1.2	2.3	2.5	e1.5	e1.5	2.3	1.4	3.7	1.2	1.1	1.7	0.89
7	193	2.1	2.7	e1.5	e1.5	1.8	1.4	4.4	1.2	1.3	1.7	0.83
8	39	2.9	2.1	e1.5	e1.5	1.3	56	1.5	1.1	2.2	0.98	0.91
9	2.2	3.1	e2.0	e1.5	e1.5	2.0	7.8	1.3	1.4	1.4	1.1	0.90
10	24	2.2	e2.0	e1.5	e1.5	1.3	23	1.8	1.2	1.0	40	0.86
11	7.6	2.3	e2.0	e2.0	e2.0	1.3	3.2	1.1	1.2	15	1.4	1.1
12	3.8	72	7.6	1.8	e1.5	1.8	1.4	2.9	1.4	54	1.9	1.4
13	2.3	27	e2.0	2.0	e1.5	1.7	1.1	1.1	1.6	2.1	1.5	0.94
14	2.0	2.3	e2.0	2.0	e1.5	1.6	1.4	1.2	3.5	9.3	1.1	1.1
15	1.9	2.6	e2.0	2.3	e2.0	1.2	3.0	1.3	1.2	75	0.98	0.87
16	2.8	3.6	e2.0	2.0	1.9	1.4	1.4	1.2	1.7	3.6	1.3	0.93
17	2.3	3.1	e2.0	2.2	1.7	1.5	1.3	1.2	2.1	1.9	0.96	0.93
18	2.3	2.7	e2.0	2.7	1.5	1.5	1.3	1.5	1.3	2.4	1.1	1.4
19	2.7	2.8	e2.0	2.3	1.7	1.4	1.1	1.1	1.2	2.4	1.7	122
20	2.0	2.4	e1.5	6.1	1.6	1.7	1.4	1.0	1.3	9.7	1.4	16
21	1.9	2.0	e1.5	2.2	8.4	1.5	3.0	1.4	1.1	1.9	1.8	1.4
22	1.9	e2.0	e1.5	e2.0	3.7	1.3	0.86	1.3	2.9	51	1.8	1.5
23	2.1	e2.0	e1.5	e2.0	185	2.0	1.1	1.1	1.7	261	1.1	1.2
24	2.1	e2.0	e1.5	e2.0	59	2.6	1.5	1.2	1.5	8.2	1.1	1.1
25	2.7	e2.0	e1.5	e5.0	1.3	1.4	1.1	1.1	1.4	91	1.0	1.3
26	2.9	2.5	e1.5	e2.0	1.2	1.5	0.98	1.2	19	2.5	0.87	1.7
27	2.2	2.4	e1.5	e2.0	1.1	1.4	0.95	1.2	2.1	62	1.0	1.2
28	2.3	2.2	e1.5	e2.0	15	1.6	1.2	1.1	20	3.6	1.1	1.3
29	2.1	2.7	e1.5	1.4	1.7	1.5	0.86	0.98	87	1.7	1.2	2.3
30	2.0	3.2	e1.5	2.2	---	1.3	1.0	1.4	2.5	1.3	1.2	1.2
31	2.0	---	e1.5	2.2	---	1.3	---	1.1	---	1.2	1.2	---
TOTAL	320.33	169.4	64.1	65.4	308.3	205.9	442.85	45.48	167.8	674.6	230.29	176.94
MEAN	10.3	5.65	2.07	2.11	10.6	6.64	14.8	1.47	5.59	21.8	7.43	5.90
MAX	193	72	7.6	6.1	185	144	255	4.4	87	261	145	122
MIN	0.81	2.0	1.5	1.4	1.1	1.2	0.86	0.90	1.0	1.0	0.87	0.83
AC-FT	635	336	127	130	612	408	878	90	333	1,340	457	351

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2000 - 2004, BY WATER YEAR (WY)

MEAN	9.54	5.06	2.52	2.48	5.01	7.43	5.92	2.52	4.68	8.95	8.47	5.28
MAX	26.2	8.68	3.25	3.88	10.6	12.5	14.8	4.07	7.95	21.8	11.7	10.0
(WY)	(2001)	(2001)	(2001)	(2001)	(2004)	(2000)	(2004)	(2001)	(2000)	(2004)	(2001)	(2002)
MIN	2.25	2.94	1.92	0.92	0.93	0.75	1.83	1.06	2.36	1.25	3.26	2.79
(WY)	(2002)	(2000)	(2003)	(2003)	(2002)	(2002)	(2000)	(2002)	(2003)	(2003)	(2003)	(2003)

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 2000 - 2004	
ANNUAL TOTAL	1,602.17		2,871.39			
ANNUAL MEAN	4.39		7.85		5.66	
HIGHEST ANNUAL MEAN					7.85	2004
LOWEST ANNUAL MEAN					3.62	2003
HIGHEST DAILY MEAN	193	Oct 7	261	Jul 23	261	Jul 23, 2004
LOWEST DAILY MEAN	0.03	Feb 3	0.81	Oct 1	0.03	Feb 3, 2003
ANNUAL SEVEN-DAY MINIMUM	0.36	Jan 30	0.98	Sep 6	0.36	Jan 30, 2003
MAXIMUM PEAK FLOW			4,880	Jul 23	8,180	Jul 9, 1988
MAXIMUM PEAK STAGE			9.30	Jul 23	12.10	Jul 9, 1988
ANNUAL RUNOFF (AC-FT)	3,180		5,700		4,100	
10 PERCENT EXCEEDS	6.4		7.0		6.8	
50 PERCENT EXCEEDS	1.5		1.6		2.0	
90 PERCENT EXCEEDS	0.59		1.1		0.84	

(+)Total precipitation accumulation, in inches.
e Estimated

08329840 HAHN ARROYO AT ALBUQUERQUE, NEW MEXICO

STATION ANALYSIS

WATER YEAR 2004

Equipment.--An electronic datalogger, recording stage and precipitation on 5-minute intervals, and pressure transducer was installed on September 11, 1996. An ISCO automatic pump sampler was installed in the same shelter in October, 2001. All recorders are housed in a metal 4- by 4- by 6-foot walk-in building anchored to a concrete pad on the right bank of the concrete-lined channel and all are solar powered. A roof-mounted, tipping-bucket rain gage has been operational since July 20, 1992. The reference gage is a staff gage painted on the channel sidewall near the orifice line. Water-depth measurements may be obtained near the orifice sump during low flows. A crest-stage gage with a lower cap elevation of 1.10 feet was installed on the right bank on October 8, 1998. The pipe is mounted 34 degrees from horizontal.

Gage-Height Record.-- The recorder, referenced to the outside staff gage or referenced to a direct measure-up from the bottom of the channel, gave a complete and satisfactory record for water year 2004 except for the following periods. Ice-affected gage heights occured on November 22-25, 28-29, December 16-20, and 28-31, 2003, and on January 1-7, 9-11, 22-23, 26-29, February 1-5, and 10-14, 2004. No precipition fell during these time periods except 0.04 inches on February 1. Estimated discharge values for this period of missing record only apply to base flows and were determined by averaging discharges recorded before and after the affected period. Two upstream gages, the North Fork and South Fork Hahn Arroyo (08329838 and 08329839), were discontinued in water year 2003, so they can no longer be used to estimate discharges at the Main Hahn gage. Storm-flows from the two upstream gages were previously combined and used as an approximation for this site. Since water year 1997, this station has been operated the entire year.

Rating.-- The control for this station is the concrete-lined channel. Rating 2.0 was developed by theoretical step-backwater computations after the gage was moved to its present location on July 20, 1992. After review of rating 2.0 in water year 1998, an error was discovered in the computations, resulting in a re-run of the step-backwater analysis and new rating 3.0. Water year records 1992-97 were revised using rating 3.0 and published in the water year 1999 USGS Annual Water-Data Report. In water year 2001, after further investigation of the theoretical rating analysis, a lower Manning's n-value of 0.015 was determined to be more accurate for the channel bottom roughness than the 0.018 used in the rating 3.0 analysis. The same survey points were used from ratings 2.0 and 3.0; only the Manning's n-value was changed in the theoretical computations. The resulting rating, 4.0, is retroactive to June 1992, requiring another slight revision to water years 1992-2000. Rating 4.0 computes approximately 10 percent more water than rating 3.0 for equivalent gage heights in the middle flow range.

Discharge.--Discharges were computed using the new rating 4.0 directly with no shifts. The curve is considered more reliable than any measurements. Significant flow in the channel is very swift and, therefore, nearly impossible to measure with conventional current meters. During water year 2004, 25 site visits were made. The instantaneous peak stage and discharge for the water year occurred on July 12, 2004, and were 2.33 feet and 676 cubic feet per second, respectively. Mean daily discharges were estimated for days mentioned in the "Gage Height Record"

paragraph, when ice affected gage height readings.

Remarks.--Record is good, except estimated days which are poor. The Hahn Arroyo is a drainage canal, nearly always containing small flows which are not rainfall related ("nuisance flows"). Prior to rating 4.0, all days with discharges determined to be only nuisance flow (gage heights less than 1.04 feet and discharge less than 2.0 cubic feet per second), were called days of zero flow. Now all flows above zero flow are computed. Nearly every day of the year shows a pulse of water usually occurring in the early morning and late evening. probably due to lawn irrigation runoff.

08329840 HAHN ARROYO AT ALBUQUERQUE, NM

LOCATION.--Lat 35°07'33", long 106°35'23", in SE 1/4 NE 1/4 sec.2, T.10 N., R.3 E., Bernalillo County, Hydrologic Unit 13020203, 860 ft below San Mateo Boulevard bridge on right bank, 750 ft north of Comanche Road, and 2,050 ft south of Montgomery Boulevard in Albuquerque.

DRAINAGE AREA.--4.23 mi^2.

PERIOD OF RECORD.--June 1978 to September 1996 (seasonal records), October 1996 to current year.

REVISED RECORD.--WDR NM-99-1: 1992-98(M) (mean daily values).

GAGE.--Water-stage and recording tipping-bucket rain gage with 0.01-in. increment and concrete-lined channel. Elevation of gage is 5,190 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to 1992, at site on downstream side of San Mateo Boulevard bridge, at different datum.

REMARKS.--Records good except for those estimated, which are poor. Some minor streamflow may exist on days when daily mean discharges have been recorded as zero due to the sensitivity limits of the streamflow-monitoring equipment. Recording rain gage at station. Development within basin is predominantly residential, but there are some commercial areas. See tabulation below for monthly precipitation, in inches.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.2	1.2	2.2	e1.0	e1.5	1.8	4.8	1.4	0.91	2.0	0.61	2.0
2	1.9	0.72	2.2	e1.0	e1.5	5.9	12	2.8	1.3	2.0	5.5	1.2
3	3.1	0.95	1.4	e1.0	e1.5	4.0	29	3.4	1.8	0.57	2.5	1.3
4	4.3	0.51	0.94	e1.0	e1.5	32	10	2.0	1.2	0.27	9.7	4.4
5	2.5	0.45	0.80	e1.0	e1.5	9.4	4.2	1.7	0.19	1.2	2.2	0.85
6	2.5	0.59	1.5	e1.0	1.4	2.5	2.6	1.7	0.29	1.1	1.5	1.8
7	20	0.90	0.94	e1.0	1.0	1.4	2.7	1.5	2.0	0.65	1.1	1.4
8	14	0.80	0.88	1.1	1.5	0.63	13	3.0	1.7	0.77	0.45	1.4
9	1.9	0.35	1.2	e1.0	1.1	1.5	6.0	0.31	1.9	1.3	1.3	1.3
10	6.0	0.75	0.68	e1.0	e1.5	1.6	9.9	2.5	2.2	0.87	5.7	1.7
11	4.2	0.40	1.2	e1.0	e1.5	2.1	2.1	1.7	1.9	3.4	1.6	0.75
12	2.4	18	2.6	1.1	e1.5	2.0	0.83	1.7	0.23	16	1.3	0.83
13	1.7	14	1.2	1.4	e1.5	1.3	1.3	2.9	0.37	2.2	1.1	7.6
14	1.1	2.2	0.43	1.2	e1.5	1.4	2.7	1.6	2.0	4.0	0.39	2.4
15	1.3	0.87	0.42	3.9	1.6	1.3	2.4	1.2	1.8	4.7	0.20	1.8
16	0.69	2.2	e1.0	3.6	0.93	2.0	1.0	2.3	1.5	3.0	1.6	2.2
17	0.99	1.1	e1.0	1.2	1.5	7.0	0.37	2.9	2.1	0.15	0.92	2.3
18	0.36	0.70	e1.0	0.91	2.6	6.2	1.7	1.6	2.2	0.31	1.3	2.3
19	1.8	1.1	e1.0	0.54	1.9	2.1	1.1	1.9	0.72	2.5	2.5	31
20	1.3	1.1	e1.0	3.5	2.2	1.0	1.2	1.9	1.2	6.5	1.3	8.4
21	1.1	1.5	1.3	1.8	5.9	1.1	0.83	1.9	3.5	1.7	1.7	1.3
22	1.2	e1.5	0.96	e1.5	0.79	2.7	0.79	1.3	3.6	2.7	1.7	1.4
23	1.3	e1.5	1.2	e1.5	24	3.2	0.99	0.62	2.5	18	1.9	1.1
24	1.9	e1.5	1.2	1.8	14	10	0.10	1.1	2.6	5.4	1.1	1.6
25	0.18	e1.5	1.3	3.0	3.0	11	0.85	0.95	3.1	13	1.3	0.54
26	0.51	1.5	1.1	e1.5	2.1	2.2	2.1	1.3	8.2	3.0	1.1	2.9
27	0.57	1.7	0.64	e1.5	3.6	0.78	1.6	1.2	0.84	18	1.4	2.6
28	0.47	e1.5	e1.0	e1.5	8.8	1.7	0.98	0.99	2.1	7.5	0.44	1.1
29	2.1	e1.5	e1.0	e1.5	0.64	3.8	1.8	0.13	14	1.6	0.74	1.9
30	1.5	1.9	e1.0	1.8	---	2.1	1.6	0.77	2.5	2.2	1.6	1.3
31	1.6	---	e1.0	1.3	---	2.2	---	2.0	---	0.39	1.2	---
TOTAL	85.67	64.49	35.29	47.15	93.56	127.91	120.54	52.27	70.45	126.98	56.95	92.67
MEAN	2.76	2.15	1.14	1.52	3.23	4.13	4.02	1.69	2.35	4.10	1.84	3.09
MAX	20	18	2.6	3.9	24	32	29	3.4	14	18	9.7	31
MIN	0.18	0.35	0.42	0.54	0.64	0.63	0.10	0.13	0.19	0.15	0.20	0.54
AC-FT	170	128	70	94	186	254	239	104	140	252	113	184
(+)	1.32	0.87	0.14	0.14	1.47	0.87	1.86	0.00	0.66	3.13	0.94	1.18

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1997 - 2004, BY WATER YEAR (WY)

MEAN	2.25	1.46	1.30	1.51	1.78	2.62	2.08	1.33	2.38	3.07	3.21	1.90
MAX	5.26	2.32	2.59	3.76	3.52	4.13	4.02	2.90	6.94	4.95	5.37	3.09
(WY)	(2001)	(2002)	(1998)	(2002)	(2001)	(2004)	(2004)	(2001)	(1999)	(1997)	(2001)	(2002)
MIN	0.82	0.21	0.08	0.58	0.43	1.00	1.09	0.73	0.68	1.44	1.84	0.63
(WY)	(1998)	(2000)	(2000)	(2003)	(1997)	(1997)	(2003)	(1998)	(1998)	(2000)	(2004)	(1998)

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1997 - 2004	
ANNUAL TOTAL	648.43		973.93			
ANNUAL MEAN	1.78		2.66		2.08	
HIGHEST ANNUAL MEAN					3.37	2001
LOWEST ANNUAL MEAN					1.24	2000
HIGHEST DAILY MEAN	20	Oct 7	32	Mar 4	170	Jun 16, 1999
LOWEST DAILY MEAN	0.01	Aug 16	0.10	Apr 24	0.00	Dec 15, 1996
ANNUAL SEVEN-DAY MINIMUM	0.39	Apr 1	0.61	Nov 5	0.00	Nov 23, 1999
MAXIMUM PEAK FLOW			676	Jul 12	6,230	Jun 16, 1999
MAXIMUM PEAK STAGE			2.33	Jul 12	5.98	Jun 16, 1999
ANNUAL RUNOFF (AC-FT)	1,290		1,930		1,510	
10 PERCENT EXCEEDS	2.8		5.4		4.3	
50 PERCENT EXCEEDS	1.1		1.5		1.0	
90 PERCENT EXCEEDS	0.38		0.65		0.14	

(+) Total precipitation accumulation, in inches.
e Estimated

08329868 BEAR CANYON ARROYO NEAR ALBUQUERQUE, NEW MEXICO

STATION ANALYSIS

WATER YEAR 2004

Equipment.--An electronic datalogger, recording on 5-minute intervals, and a pressure transducer and self-contained air compressor, are housed in a metal 2.5- by 2.5- by 6-foot shelter anchored to a concrete slab on the right bank of the channel. An outside staff gage is mounted on the right bank for reference. A crest-stage gage is mounted to the outside staff support and its bottom cap lip elevation is 3.90 feet referenced to the gage datum. A concrete control was constructed at the time of the gage installation on September 30, 1999. The point of zero flow (PZF) is the low point in this concrete control structure and is at an elevation of 3.47 feet. An ISCO model 3700 automatic sampler is housed in a separate metal shelter adjacent to the water-stage recorder enclosure. All instruments are powered by 12-volt batteries charged by solar panels.

Gage-Height Record.-- The water-stage recorder, referenced to the PZF or outside staff, gave a complete and satisfactory record for the entire water year.

Rating.--This natural channel is straight for approximately 50 feet upstream and 100 feet downstream from the gage. The channel bottom is composed of coarse-grained sand and pea-sized gravel which has eroded from nearby granite exposures of the Sandia Mountains foothills. A narrow, V-shaped main channel has incised approximately 6 to 8 feet into the terraced floodplain sediments. Large boulders are exposed in portions of both banks. The width of the main channel varies from approximately 6 feet immediately upstream from the gage to nearly 20 feet immediately downstream from the control. A mountain spring discharges into the stream nearly year-round, but the flow seeps into the unconsolidated, coarse-grained sediment before reaching the gage site.

Rating 1.0 was developed by a theoretical step-backwater analysis using HEC-RAS software model.

Discharge.-- During water year 2004, 15 no-flow inspections were made. No flows have occurred at this site since gage installation on September 30, 1999.

Remarks.-- Record is good. No flows occurred in water year 2004.

08329868 BEAR CANYON ARROYO NEAR ALBUQUERQUE,NM

LOCATION.--Lat 35°09'02", long 106°28'07", Bernalillo County, Hydrologic Unit 13020203, in Elena Gallegos Grant, on right bank of the arroyo approximately 1/2 mi east of gated and fenced property of High Resort Developement. Elena Galleogs open space land. The gage is approximately 1/4 mi south of the dirt access road which leads to an Albuquerque public water supply reservoir tank.

DRAINAGE AREA.--5.0 mi^2.

PERIOD OF RECORD.--October 1999 to current year.

GAGE.--Water-stage recorder. Rain gage is located approximatley 1/2 mi east. Elevation of gage is 6,395 ft above the National Vertical Datum of 1929, from topographic map.

REMARKS.--Records good.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MEAN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MAX	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2001 - 2004, BY WATER YEAR (WY)

MEAN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MAX	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(WY)	(2001)	(2001)	(2001)	(2001)	(2001)	(2001)	(2001)	(2001)	(2001)	(2001)	(2001)	(2001)
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(WY)	(2001)	(2001)	(2001)	(2001)	(2001)	(2001)	(2001)	(2001)	(2001)	(2001)	(2001)	(2001)

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 2001 - 2004	
ANNUAL TOTAL	0.00		0.00			
ANNUAL MEAN	0.00		0.00		0.00	
HIGHEST ANNUAL MEAN					0.00	2001
LOWEST ANNUAL MEAN					0.00	2001
HIGHEST DAILY MEAN	0.00	Jan 1	0.00	Oct 1	0.00	Oct 1, 2000
LOWEST DAILY MEAN	0.00	Jan 1	0.00	Oct 1	0.00	Oct 1, 2000
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00	Oct 1	0.00	Oct 1, 2000
MAXIMUM PEAK FLOW			0.00	Oct 1	0.00	Oct 1, 1999
MAXIMUM PEAK STAGE			3.43	Oct 1	3.43	Oct 1, 1999
ANNUAL RUNOFF (AC-FT)	0.00		0.00		0.00	
10 PERCENT EXCEEDS	0.00		0.00		0.00	
50 PERCENT EXCEEDS	0.00		0.00		0.00	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

08329870 BEAR ARROYO AT JEFFERSON ST. AT ALBUQUERQUE, NEW MEXICO

STATION ANALYSIS

WATER YEAR 2004

Equipment.-- The station was established on June 5, 2003. An electronic datalogger and pressure transducer, recording on 5-minute intervals, is housed in a 2.5- by 2.5- by 6 foot metal shelter anchored to a concrete pad. The gage is located on the right bank of the channel, immediately adjacent to a 30-foot wide concrete box culvert spillway drop-structure. A 1.5-foot high Ogee-type weir is the channel control at the downstream end of the 15-foot long box culvert. Two 1-foot wide notches are cut into the weir face allowing better control for low flows. The upstream face of the weir is rounded and 4-foot high by 5-foot wide energy dissipator plates are mounted on the downstream spillway which drops approximately 20 feet to the next level of natural-bottom channel. The channel is also unlined upstream of the concrete box culvert drop structure. An outside staff gage is mounted on the right and left side-walls of the weir approach for reference. Both staffs are referenced to a Point of Zero Flow (PZF) at 0.00 foot elevation in the bottom of the right-side low-flow notch, approximately 12 feet below the orifice. A crest stage gage is mounted vertically to the right side of the concrete box culvert. The crest stage gage cap lip is at an elevation of 1.97 feet. The pressure transducer orifice is mounted 0.30 foot above the PZF so all flows less than 1.1 cubic feet per second, or a stage of 0.31 foot, will not be recorded.

Gage-Height Record.-- The stage recorder is referenced to the tape-up point of zero flow, which is the chiseled square in the bottom of the right-side low-flow notch, or is referenced to the outside staff gage during periods of significant flows. The recorder gave a complete and satisfactory record this water year, except for September 19 when the nitrogen tank was inadvertently shut off. The day's daily mean discharge was estimated based on an accurate peak gage height recorded by the crest-stage gage.

Rating.-- A theoretical rating was developed based on actual water-surface elevations observed for known unit discharges in a Bureau of Reclamation hydraulic flume. The baffled chute with an Ogee weir design, which was modeled in the flume, was the basis of the Bear Arroyo drop structure designed by ASCG, Incorporated engineering firm in Albuquerque. Results of the flume tests are published in the Bureau of Reclamation, Water Resources Technical Publication entitled "Design of Small Dams". The final rating was modified by the discharges computed by the HEC-RAS hydraulic modeling software through the 2 low-flow notches. The trapezoidal-shaped, natural-bottom channel is straight for at least 1000 feet downstream and upstream of the gage. The rip-rapped banks are approximately 12 feet high and slope at approximately 20 degrees from horizontal. The channel bottom is about 40 feet wide. Flow measurements may be made near the gage for depths under 2 feet.

Discharge.--. Rating 1.0 was applied without shifts for the entire water year, since the control weir remained clear of debris. All flows below recorded gage heights of 0.31 feet (less than 1.1 cubic feet per second) are considered zero flow. A daily mean discharge was estimated only for September 19 as described in the "Gage Height Record" section above. No gage exists upstream for hydrographic comparisons, so only precipitation records within the drainage basin can be used for estimating discharges, and occasionally a high water mark or crest stage gage mark will indicate the peak stage.

During water year 2004, 31 inspections were made. The maximum gage height and discharge for water year 2004 was 4.66 feet and 567 cubic feet per second respectively, on July 12. This was also a new peak for the period of record.

08329870 BEAR ARROYO AT JEFFERSON STREET AT ALBUQUERQUE, NM

LOCATION.--Lat 35°09'03", long 106°35'52", Bernalillo County, Hydrologic Unit 13020203, in Elena Gallegos Grant, on the right bank, 1,320 ft downstream from the Jefferson Street bridge over Bear Arroyo, approximately 1/4 mi south of the intersection of Jefferson Street with Osuna Road in the northeast quadrant of Albuquerque.

DRAINAGE AREA.--Controlled by detention pond upstream.

PERIOD OF RECORD.--June 2003 to current year.

GAGE.--Water-stage recorder, crest-stage gage, and concrete control weir. Elevation of gage is 5,130 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except for those estimated, which are poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 567 ft^3/s, July 12, 2004, gage height, 4.66 ft, from standard design rating of concrete weir. No flow most of time.

EXTREMES FOR CURRENT YEAR.--Maximum discharge during period of seasonal operation, 567 ft^3/s, July 12, gage height, 4.66 ft. No flow most of time.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	17	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	13	2.6	0.00	0.00	0.00	5.0	0.00
5	0.00	0.00	0.00	0.00	0.00	0.56	0.00	0.00	0.00	0.00	0.28	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	8.2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	1.4	0.00	0.00	0.00	0.00	0.00	4.2	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	1.4	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.00	0.00	0.00	0.00	0.00
11	0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.35	0.00	0.00
12	0.00	2.3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	15	0.00	0.00
13	0.00	2.3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e11
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.84	0.00	0.00
23	0.00	0.00	0.00	0.00	9.6	0.00	0.00	0.00	0.00	12	0.00	0.00
24	0.00	0.00	0.00	0.00	3.0	0.00	0.00	0.00	0.00	0.05	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.4	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11	0.00	0.00
28	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.00	0.00	0.23	0.00	0.00
29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.0	0.00	0.00	0.37
30	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	9.88	4.60	0.00	0.00	12.76	13.56	28.44	0.00	2.00	43.87	5.28	11.41
MEAN	0.32	0.15	0.00	0.00	0.44	0.44	0.95	0.00	0.07	1.42	0.17	0.38
MAX	8.2	2.3	0.00	0.00	9.6	13	17	0.00	2.0	15	5.0	11
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	20	9.1	0.00	0.00	25	27	56	0.00	4.0	87	10	23

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2003 - 2004, BY WATER YEAR (WY)

MEAN	0.32	0.15	0.00	0.00	0.44	0.44	0.95	0.00	0.07	0.71	0.15	0.19
MAX	0.32	0.15	0.00	0.00	0.44	0.44	0.95	0.00	0.07	1.42	0.17	0.38
(WY)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)
MIN	0.32	0.15	0.00	0.00	0.44	0.44	0.95	0.00	0.07	0.00	0.12	0.01
(WY)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2003)	(2003)	(2003)

SUMMARY STATISTICS	FOR 2004 WATER YEAR		WATER YEARS 2003 - 2004	
ANNUAL TOTAL	131.80			
ANNUAL MEAN	0.36		0.36	
HIGHEST ANNUAL MEAN			0.36	2004
LOWEST ANNUAL MEAN			0.36	2004
HIGHEST DAILY MEAN	17	Apr 3	17	Apr 3, 2004
LOWEST DAILY MEAN	0.00	Oct 1	0.00	Jun 6, 2003
ANNUAL SEVEN-DAY MINIMUM	0.00	Oct 12	0.00	Jun 6, 2003
MAXIMUM PEAK FLOW	567	Jul 12	567	Jul 12, 2004
MAXIMUM PEAK STAGE	4.66	Jul 12	4.66	Jul 12, 2004
ANNUAL RUNOFF (AC-FT)	261		261	
10 PERCENT EXCEEDS	0.00		0.00	
50 PERCENT EXCEEDS	0.00		0.00	
90 PERCENT EXCEEDS	0.00		0.00	

e Estimated

08329882 PINO ARROYO AT JEFFERSON ST. AT ALBUQUERQUE, NEW MEXICO

STATION ANALYSIS

WATER YEAR 2004

Equipment.-- The station was established on May 18, 2000. An electronic datalogger and pressure transducer, recording on 5-minute intervals, is housed in a 2.5- by 2.5- by 6-foot metal shelter anchored to a concrete pad on the right bank of the concrete-lined channel. An outside staff gage is painted on the right and left side-walls of the channel for reference. A reference point for water depth tape-ups was also established as a 9/16-inch hex-head lag bolt anchored in the channel bottom about 12 inches from the orifice. This bolt represents the point of zero flow (PZF). A crest-stage gage is mounted to the side of the channel and is inclined 24.5 degrees from horizontal. The high point of the lower crest-stage gage cap lip is at an elevation of 2.10 feet (1.10 feet true depth with a 1.00-foot datum added to recorded gage heights to avoid negative values). On August 22, 2001, a large static tube was installed around the end of the pressure transducer line to slow down flow velocities passing over the orifice. Prior to this, the recorded gage heights during larger flows were much lower than true depths, reflecting the pressure draw-down that was occurring around the old orifice tube. In October, 2001, an ISCO automatic pump sampler was installed in a 36-inch diameter shelter 3 feet upstream from the stream-flow gage and is powered by a solar-panel charged deep-cycle marine battery.

Gage-Height Record.-- The stage recorder is referenced to the tape-up PZF, which is the lag bolt anchored in the bottom of the channel, or is referenced to the outside staff gage during periods of significant flows. The recorder will normally read 1.00 foot when the water level is even with the bottom of the channel at PZF; however, the installation of the static tube on August 22, 2001 raised the orifice line 0.03 feet above the PZF. Therefore, only flows over 0.03 foot deep (1.03 on recorder) will be recorded. The recorder gave a complete and satisfactory record this water year, except for the following periods. Gage-height readings were affected by sediment accumulation in the orifice sump on October 4-6, 2003. Gage-height readings were affected by ice on November 24, 26, 29, and December 3 and 4, 2003. October 4-6 were estimated by comparing base flows before and after the affected period, and by looking at rainfall in the watershed. All ice-affected daily mean discharges were estimated as zero in water year 2004. The gage was shut down for the winter period December 3, 2003 to March 2, 2004.

Rating.-- The steeply sloping channel (0.022 foot per foot) acts as the control. A theoretical rating was developed using the USGS software "Water Surface Profile" (WSPRO). Since flows are supercritical in this reach, a step-forward analysis was used. The trapezoidal-shaped channel is straight for at least 300 feet downstream and 1,200 feet upstream from the gage. Side walls are approximately 6.5 feet high and slope at 24.5 degrees from horizontal. The channel bottom is about 8 feet wide. This site will be nearly impossible to measure because of its flashy nature and extreme velocities.

During water year 2004, 20 inspections were made. Rating 2.0 was developed in water

year 2001 and is the same as rating 1.0, except that all flows below recorded gage heights of 1.04 feet (less than 0.90 cfs.) are considered zero flow. This change was required because flows below 0.04 feet deep could not be detected after the static tube was installed on August 22, 2001.

No sediment or debris accumulates in the channel due to its high flow velocity, so no shifts to the rating are needed.

Discharge.--. The extreme flow velocities at this site make the theoretical rating more reliable than any measurements. Wading measurements would be dangerous, even at shallow depths. Rating 2.0 was used directly for water year 2004 with no shifts applied.

Daily mean discharges were estimated for October 4-6 and the ice-affected days as described in the "Gage Height Record" section above. No gage exists upstream for hydrographic comparisons, so only precipitation records within the drainage basin can be used for estimating discharges, and occasionally a high-water mark or crest-stage gage mark indicates the peak stage.

The maximum gage height and discharge for the water year 2004 were 3.55 feet and 728 cubic feet per second respectively, on July 12. This was also a new peak for the period of record.

08329882 PINO ARROYO AT JEFFERSON STREET AT ALBUQUERQUE, NM

LOCATION.--Lat 35°09'34", long 106°35'51", Bernalillo County, Hydrologic Unit 13020203, in the Elena Gallegos Grant, on the right bank 1,200 ft downstream from the Jefferson Street culvert over Pino Arroyo, approximately 1,200 ft north of the intersection of Jefferson St. and Osuna Road in northeast Albuquerque.

DRAINAGE AREA.--8.3 mi^2 (but is controlled by detention pond upstream).

PERIOD OF RECORD.--May 18, 2000, to Dec. 4, 2003, March 2004 to current year (seasonal records).

GAGE.--Water-stage recorder, crest-stage gage, and concrete-lined channel. Elevation of gage is 5,119 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Water-stage records good except for those estimated, which are fair. Since installation of the large static tube around the orifice on Aug. 22, 2001, only flows more than about 0.03 ft deep (1.03 on recorder) will cover the orifice sufficiently to record true water depths. This channel often shows trickle flows not related to rainfall.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 728 ft^3/s, July 12, 2004, gage height, 3.55 ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge during period of seasonal operation, 728 ft^3/s, July 12, gage height, 3.55 ft.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.25	0.44	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
2	0.72	0.36	0.00	---	---	e1.5	1.7	0.00	0.00	0.00	0.78	0.00
3	0.82	0.26	e0.00	---	---	0.11	12	0.00	0.00	0.00	0.08	0.00
4	e1.0	0.09	e0.00	---	---	9.2	0.83	0.00	0.00	0.00	0.71	0.22
5	e0.50	0.00	---	---	---	0.37	0.00	0.00	0.01	0.00	0.09	0.02
6	e0.50	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	6.0	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	3.1	0.00	---	---	---	0.00	2.1	0.00	0.00	0.00	0.00	0.00
9	0.22	0.00	---	---	---	0.00	1.2	0.00	0.00	0.00	0.00	0.00
10	0.44	0.00	---	---	---	0.02	2.2	0.00	0.00	0.00	0.08	0.00
11	0.23	0.00	---	---	---	0.01	0.04	0.00	0.00	2.4	0.00	0.00
12	0.00	4.1	---	---	---	0.00	0.00	0.00	0.00	18	0.00	0.00
13	0.00	3.4	---	---	---	0.00	0.00	0.00	0.00	0.71	0.00	0.00
14	0.00	0.11	---	---	---	0.00	0.00	0.00	0.00	0.07	0.00	0.00
15	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.04	0.00	0.00
16	0.00	0.05	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.01	0.09	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.09	---	---	---	0.00	0.00	0.00	0.00	0.15	0.03	0.08
19	0.03	0.00	---	---	---	0.00	0.00	0.00	0.00	0.01	0.35	8.4
20	0.23	0.00	---	---	---	0.00	0.00	0.00	0.00	0.89	0.00	0.60
21	0.77	0.00	---	---	---	0.00	0.00	0.00	0.00	0.15	0.00	0.00
22	1.2	0.00	---	---	---	0.00	0.00	0.00	0.00	0.82	0.00	0.00
23	1.2	0.00	---	---	---	0.20	0.00	0.00	0.02	16	0.00	0.00
24	1.2	e0.00	---	---	---	0.02	0.00	0.00	0.00	1.3	0.00	0.00
25	1.1	0.00	---	---	---	0.00	0.00	0.00	0.00	2.5	0.00	0.00
26	1.1	e0.00	---	---	---	0.00	0.00	0.01	0.70	0.03	0.00	0.00
27	1.4	0.00	---	---	---	0.00	0.00	0.00	0.00	7.2	0.00	0.00
28	1.3	0.00	---	---	---	0.00	0.00	0.00	0.00	0.75	0.00	0.00
29	0.81	e0.00	---	---	---	0.00	0.00	0.00	5.2	0.00	0.00	3.3
30	0.75	0.00	---	---	---	0.00	0.00	0.00	0.03	0.00	0.00	0.00
31	0.44	---	---	---	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	25.32	8.99	---	---	---	---	20.07	0.01	5.96	51.02	2.12	12.62
MEAN	0.82	0.30	---	---	---	---	0.67	0.00	0.20	1.65	0.07	0.42
MAX	6.0	4.1	---	---	---	---	12	0.01	5.2	18	0.78	8.4
MIN	0.00	0.00	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	50	18	---	---	---	---	40	0.02	12	101	4.2	25

e Estimated

08329888 LA CUEVA ARROYO TRIBUTARY (UPPER) AT ALBUQUERQUE, NEW MEXICO

STATION ANALYSIS

WATER YEAR 2004

Equipment.-- An electronic datalogger, recording on 5-minute intervals, and pressure transducer are housed in a 2.5- by 2.5- by 5.5-foot metal shelter anchored to a concrete slab on the left bank of the channel, approximately 100 feet upstream of a concrete box culvert under Tramway Boulevard. An outside staff gage is mounted on the right and left bank for reference. High-water discharge measurements are computed by indirect methods. A crest-stage gage was installed on May 6, 1999 and its bottom cap lip elevation is 0.36 foot above the Point of Zero Flow (PZF). It is mounted to the left bank staff gage.

Gage-Height Record.-- The water-stage recorder, referenced to the PZF or outside staff, gave a complete and satisfactory record for the entire water year. Since this channel will not flow without significant precipitation, any days of missing record and no precipitation can be accurately interpreted as zero-flow days. A 1.00-foot datum is added to the recorded gage heights to avoid negative values during dry periods. The gage was shut down during the winter period December 2, 2003 to March 3, 2004.

Rating.-- The trapezoidal-shaped channel is straight for about 100 feet above and 100 feet below the gage before it drops sharply into a concrete box culvert which passes under Tramway Boulevard. This channel has a natural, course-grained sand bottom and concrete sidewalls. The concrete sidewalls extend from approximately 6 feet upstream of the gage to the box culvert downstream. Upstream from the concrete-lined channel, the side slopes are covered with cobble and boulder rip-rap. The channel bottom is about 12 feet wide at the gage, slightly narrower upstream, and has sidewalls about 4 feet high with 30 degree slopes. A concrete control structure was installed immediately downstream from the gage on May 6, 1999. The concrete slab is inclined from the right channel sidewall towards the left bank, where the gage is located. The PZF of the gage is located at the juncture of the concrete control with the left sidewall. Prior to the installation of this control, only high flows could reach the pressure transducer orifice because the channel bottom had severely scoured. The orifice was mounted approximately 0.08 foot above the PZF so sediment will not interfere with gage height recordings; therefore, only flow depths greater than 0.08 foot are recorded. Most flows are supercritical regime because of the steep channel slope.

Rating 1.0, used since the concrete control installation on May 6, 1999, was developed by step-forward analysis using the USGS WSPRO (Water Surface Profile) software. Water-surface elevations for flows less than 30 cubic feet per second could not be successfully computed because the energy equation for supercritical flow would not balance at the gage cross-section. These smaller flows are probably experiencing subcritical regimes. Additional measurements are needed to better define the rating, especially at the lower end. Two very low-flow measurements (#1 and #2) were made in water year 1999, but no measurements have been made since. Flow events are extremely flashy, normally existing less than an hour, so discharge measurements are difficult to obtain. The two measurements plot at 0.0 and - 46 percent from rating 1.0, respectively. Because both were made during extremely low flow, they are rated "poor" and serve only as a good estimate of discharge. High-water discharge measurements are computed by indirect methods.

The PZF is 1.00 foot on rating 1.0. A "dog leg" break to the left occurs at a gage height of 1.70 feet on the rating curve. This point represents the level when the concrete control is completely submerged and flows begin to be constricted by both concrete sidewalls.

Discharge.-- During the water year 2004, 13 no-flow inspections were completed. Rating 1.0 was used directly, without any shifts, for the water year. The maximum instantaneous stage and discharge recorded during the water year are 1.45 feet and 6.1 cubic feet per second, respectively, on August 14. This site will remain dry except during significant precipitation.

08329888 LA CUEVA ARROYO TRIBUTARY AT ALBUQUERQUE, NM

LOCATION.--Lat 35°11'22", long 106°29'43", Bernalillo County, Hydrologic Unit 13020203, in Elena Gallegos Grant, on the left bank of concrete-lined arroyo, approximately 100 ft upstream from a box culvert passing under Tramway Blvd., in the extreme northeast corner of Albuquerque city limits. This site is located approximately 0.2 mi south of the old gage site La Cueva Arroyo Tributary at Tramway Blvd. (08329890).

DRAINAGE AREA.--0.5103 mi^2.

PERIOD OF RECORD.--May 1999 to current year (seasonal records).

GAGE.--Water-stage recorder. A tipping-bucket rain gage recording in 0.01-inch increments is located approximately 0.25 mi north of gage. Elevation of gage is 6,080 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12 ft^3/s, Aug. 14, 2001, gage height, 1.56 ft. No flow most of time.

EXTREMES FOR CURRENT YEAR.--Maximum discharge during period of seasonal operation, 6.1 ft^3/s, Aug. 14, gage height, 1.45 ft.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	---	---	---	---	0.01	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	---	---	---	---	0.06	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	---	---	---	0.01	0.04	0.00	0.00	0.00	0.01	0.00
5	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.02	0.00
7	0.02	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	---	---	---	0.00	0.02	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	---	---	---	0.00	0.01	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.01	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.06	0.00
15	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.03
20	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.03	0.00	0.00
25	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.02	0.00	0.00
28	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	---	---	---	0.00	0.00	0.00	0.01	0.00	0.00	0.00
30	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	---	---	---	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	0.02	0.01	---	---	---	---	0.14	0.00	0.01	0.05	0.09	0.03
MEAN	0.00	0.00	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
MAX	0.02	0.01	---	---	---	---	0.06	0.00	0.01	0.03	0.06	0.03
MIN	0.00	0.00	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	0.04	0.02	---	---	---	---	0.3	0.00	0.02	0.1	0.2	0.06

08329900 NORTH FLOODWAY CHANNEL NEAR ALAMEDA, NEW MEXICO

STATION ANALYSIS

WATER YEAR 2004

Equipment.-- This station was established in July 1968. Since August 1998, an electronic datalogger with satellite transmitter and pressure transducer have been housed in a concrete 6- X 6-foot block shelter. A painted staff gage on the channel sidewall is the reference gage, which indicates the true vertical depth in the channel. A tipping-bucket rain gage, recording in 0.01-inch increments, was installed on the roof of the shelter on December 8, 2001. Both water-stage and rainfall data are recorded on 5-minute intervals. An ISCO automatic pump sampler is also housed in the shelter for water-quality sampling.

Gage-Height Record.--The recorder, referenced to the outside staff gage, gave a complete and satisfactory record for water year 2004 except for the following periods. Ice-affected gage heights occurred on November 22-25, and December 5, 14-31, 2003, and on January 1-7, 23-29, and February 1-10, 13-14, 2004. All days, except the rainy day of January 25, were considered base flow (0.5 to 2.0 cubic feet per second) because no precipitation occurred during these periods. Daily mean discharges were estimated for October 19-20, 2003 when the orifice pipe had been twisted out of the water and for the period November 11-18 when the recorder malfunctioned. Sand and debris are commonly transported by the North Floodway channel and it often-times catches on the pressure transducer orifice pipe or, because the orifice is mounted in a depression below the channel bottom elevation, accumulates in the orifice sump during flows. Erroneous gage height recordings result in either case and can cause recordings to drift higher or lower than true flow depths. The periods February 26 and July 1-7 experienced such "silting" problems, so their daily mean discharges were estimated. No precipitation fell during these estimated days so only base flows were expected (0.5 to 2.0 cubic feet per second). Very commonly the "silting" occurs during the receeding limb of a hydrograph so a gage height trace can be estimated by graphical methods. Estimated mean daily discharges are based on hydrographic comparison with a flow gage located approximately 5 miles upstream at the Candelaria bridge (N. Floodway at Albq. #08329835), precipitation records, and base flows before and after the estimated time periods. Occasionally, gage height recordings are slightly affected by debris accumulations after a flow event, but not to the extent of the "estimated" days. In this situation, graphing recorded gage heights clearly shows erroneous readings and the trace of actual flow depths is estimated with little loss in accuracy. The following dates experienced such minor gage height corrections, but were not labeled as "estimated" discharges: February 22-23, 27, March 3, 5, April 9, 11-13, 28, 30, May 11, June 1, 18, 27-28, July 13, 23, 26, August 5, 20, 30, and September 7, 24, and 30, 2004.

Rating.--The control for this station is the concrete-lined channel. The bottom width of the channel is 25 feet. The side slopes are approximately 35 degrees from horizontal. The depth of the channel at this point is about 23 feet, and top width is approximately 117 feet.

During water year 2004, 130 site visits and observations were made at this gaging station, ranging from storm-flows to base-flows.

Rating 1.0, used during water years 1968-99, was replotted in water year 2000, using only 2 points. The rating curve of a trapezoidal-shaped, concrete-lined channel with uniform side walls, such as the North Floodway, should plot as a straight line. The new plot was labeled rating 2.0. The old rating 1.0 had been plotted with many input points, resulting in an irregular line plot. The two ratings varied by less than 2 percent, except below 25 cubic feet per second, for which they vary by about 5 percent.

In water year 2001, the channel was resurveyed and the step-backwater analysis was recomputed using the software package HECRAS. Low-flow measurements prior to water year 2001 and four measurements (42-45) completed in December 2001 were also plotted on the new step-backwater rating. A new rating, 3.0, was developed and is significantly different from the previous ratings. The new rating 3.0 computes discharges over 100 percent less than the old rating at low flows, and about 35 percent less discharge is computed at a 2.00-foot stage (560 cubic feet per second). Rating 3.0 discharge actually equals the old rating discharge at a stage of approximately 8.0 feet (7,400 cubic feet per second). Also, rating 3.0 closely parallels the original design rating developed by the Corps of Engineers for planning purposes. The new rating computes discharges for all gage heights more than 0.01 foot deep (0.7 cubic feet per second), whereas the old rating did not compute flows less than 14.5 cubic feet per second (less than 0.14-foot stages). Three of the four new measurements completed in December 2001 plotted less than 10 percent different from the new rating. The poorly rated, very low flow measurement 44 plotted a negative 63 percent from the rated discharge. All four measurements completed in water year 2003 plot negative 8 to negative 20 percent from rating 3.0. The inherent errors in measuring very shallow water lead to the slight misfit from the new rating line. No shifting occurs in this concrete-lined channel because high flow velocities keep the channel bottom clear of sediment. Supercritical flow regimes occur here at all stages over 1.00 foot. Prior water year records have been revised using the new rating 3.0.

Discharge.--Discharge was computed using rating 3.0 directly. The rating curve discharge is considered to be better than any individual measurements. Wading at this site would be very dangerous at anything over 0.2-foot depths because of extreme velocities and floating debris during storm events. Bridge measurements are also not possible. Base-flow measurements are completed about 1000 feet downstream at the old low-flow gaging station (08329916), where flow is constricted. The low-flow gage was used to record discharges less than 15 cubic feet per second; these discharges were combined with this station's storm flows to complete the daily values table published in the USGS Annual Water-Data Reports for water years 1997-99.

The maximum gage height and discharge for the water year were 7.00 feet and 5,700 cubic feet per second, respectively, on July 23, 2004.

08329900 NORTH FLOODWAY CHANNEL NEAR ALAMEDA, NM

LOCATION.--Lat 35°11'53", long 106°35'59", Bernalillo County, Hydrologic Unit 13020203, in Elena Gallegos Grant, on left bank 0.5 mi upstream from Edith Boulevard, 1.1 mi upstream from mouth, and 1.2 mi northeast of Alameda.

DRAINAGE AREA.--87.9 mi^2.

PERIOD OF RECORD.--July 1968 to September 1989 (seasonal records). October 1989 to current year.

GAGE.--Water-stage recorder with satellite telemetry, recording rain gage, and concrete-lined channel. Elevation of gage is 5,015 ft above National Geodetic Vertical Datum of 1929, from U.S. Army Corps of Engineers plan and profile map. Recording tipping-bucket rain gage, recording in 0.01-in. increments, since Dec. 8, 2001.

REMARKS.--Water-discharge records good except for those estimated, which are poor. For water years 1997-99, low-flow values of 15 ft^3/s or less were obtained from gaging station (08329914), 1,000 ft downstream. Prior to water year 1997, any discharges below 15 ft^3/s were reported as "zero flow" in the mean daily values tables. Floodway channel intercepts flow of numerous arroyos in northeast Albuquerque and discharges into the Rio Grande at a point 1.6 mi north of Alameda. See tabulation below for monthly precipitation, in inches.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.5	1.7	3.3	e1.0	e1.0	1.5	1.2	0.73	1.2	e2.0	0.13	2.0
2	3.2	1.5	1.7	e1.0	e1.0	6.5	54	0.72	1.2	e1.0	6.8	1.9
3	3.1	1.1	1.9	e1.0	e1.0	6.2	309	1.0	2.8	e1.0	9.9	1.5
4	4.6	1.1	1.8	e1.0	e1.0	229	62	0.95	1.2	e1.0	172	10
5	1.9	1.0	e1.5	e1.0	e1.0	36	5.7	1.0	1.2	e1.0	13	7.9
6	3.2	e1.0	1.7	e1.0	e1.0	2.9	2.7	1.9	0.76	e1.0	2.6	3.3
7	262	e1.0	2.0	e1.0	e1.0	1.9	1.9	6.5	1.0	e1.0	1.8	1.2
8	85	e1.5	2.1	0.65	e1.0	1.1	83	3.5	0.92	1.8	0.96	1.1
9	3.2	e2.0	1.7	0.52	e1.0	2.3	17	2.6	0.99	0.50	1.5	1.2
10	31	e1.0	1.6	0.53	e1.0	1.1	55	2.4	1.1	0.11	52	1.2
11	34	e1.0	1.5	1.1	1.5	1.1	11	1.3	0.97	22	4.9	1.2
12	11	e112	13	0.83	0.72	0.94	1.6	3.9	1.2	185	2.9	1.9
13	7.3	e35	4.1	0.86	e1.0	0.76	0.52	1.4	1.1	11	3.4	3.1
14	5.5	e1.5	e2.0	0.74	e1.0	0.45	0.66	1.0	2.9	11	1.4	1.3
15	2.0	e1.5	e1.5	1.5	1.8	0.49	2.4	0.86	1.1	88	0.99	1.8
16	2.3	e2.0	e1.5	2.3	1.8	0.13	0.64	1.1	0.86	6.3	1.5	1.3
17	2.6	e2.0	e1.5	1.3	1.9	1.0	0.89	1.6	2.2	0.55	1.1	1.2
18	1.0	e2.0	e1.0	1.9	1.5	0.74	0.64	1.4	1.5	0.85	1.9	1.5
19	e1.5	2.1	e1.0	2.6	1.4	0.67	0.85	1.3	0.87	0.70	8.4	214
20	e1.0	1.3	e1.0	8.5	1.7	0.79	0.57	1.2	0.86	18	3.6	33
21	1.8	2.1	e1.0	3.2	11	0.63	3.3	1.2	0.93	0.45	1.3	2.2
22	1.7	e1.5	e1.0	0.97	5.8	0.95	0.43	1.2	1.8	54	3.9	0.46
23	1.8	e1.5	e1.0	e1.0	225	0.87	0.73	0.90	4.5	371	2.7	0.61
24	1.5	e1.5	e1.0	e1.0	117	3.1	1.00	1.2	1.1	34	1.4	1.1
25	1.2	e1.5	e1.0	e10	1.2	1.3	0.88	1.2	1.2	134	2.1	1.2
26	1.5	2.1	e1.0	e1.0	e1.0	1.2	1.7	1.5	34	1.8	1.5	1.2
27	1.8	1.5	e1.0	e1.0	0.73	0.92	1.9	1.3	6.8	124	1.6	1.9
28	1.7	1.9	e1.0	e1.0	30	0.50	0.41	1.2	21	16	1.4	1.6
29	1.7	1.9	e1.0	e1.0	1.3	1.2	1.8	0.71	135	2.6	2.1	24
30	1.3	2.9	e1.0	1.00	---	0.97	0.61	0.62	18	0.53	2.1	7.4
31	0.91	---	e1.0	1.1	---	0.74	---	1.3	---	0.28	1.9	---
TOTAL	483.81	191.7	58.4	52.60	417.35	307.95	624.03	48.69	250.26	1,092.47	312.78	333.27
MEAN	15.6	6.39	1.88	1.70	14.4	9.93	20.8	1.57	8.34	35.2	10.1	11.1
MAX	262	112	13	10	225	229	309	6.5	135	371	172	214
MIN	0.91	1.0	1.0	0.52	0.72	0.13	0.41	0.62	0.76	0.11	0.13	0.46
AC-FT	960	380	116	104	828	611	1,240	97	496	2,170	620	661
(+)	1.11	0.83	0.16	0.19	1.27	0.87	1.98	0.00	0.69	1.76	0.49	1.16

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 2004, BY WATER YEAR (WY)

MEAN	11.4	6.61	2.63	3.23	4.41	8.72	8.68	7.19	8.61	22.8	27.5	14.6
MAX	38.3	16.9	8.32	14.2	16.3	21.3	42.9	30.5	25.0	67.9	45.7	34.5
(WY)	(2001)	(1995)	(1994)	(1995)	(1993)	(2000)	(1997)	(1994)	(1996)	(1997)	(1994)	(1991)
MIN	2.16	0.00	0.00	0.00	0.00	0.55	0.78	0.92	1.42	1.17	6.54	2.15
(WY)	(1996)	(1990)	(1990)	(1990)	(1991)	(1991)	(2000)	(1998)	(1998)	(2003)	(2003)	(2000)

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1990 - 2004	
ANNUAL TOTAL	2,317.41		4,173.31			
ANNUAL MEAN	6.35		11.4		10.6	
HIGHEST ANNUAL MEAN					20.2	1997
LOWEST ANNUAL MEAN					5.52	2003
HIGHEST DAILY MEAN	266	Mar 21	371	Jul 23	961	Jul 14, 1990
LOWEST DAILY MEAN	0.00	Feb 17	0.11	Jul 10	0.00	Oct 1, 1989
ANNUAL SEVEN-DAY MINIMUM	0.03	Mar 26	0.61	Mar 13	0.00	Oct 5, 1989
MAXIMUM PEAK FLOW			5,700	Jul 23	12,300	Aug 14, 1980
MAXIMUM PEAK STAGE			7.00	Jul 23	10.40	Aug 14, 1980
ANNUAL RUNOFF (AC-FT)	4,600		8,280		7,670	
10 PERCENT EXCEEDS	9.5		14		15	
50 PERCENT EXCEEDS	1.5		1.5		1.7	
90 PERCENT EXCEEDS	0.09		0.74		0.09	

(+) Total precipitation accumulation, in inches.
e Estimated

08329911 NORTH CAMINO ARROYO AT SUNSET HILLS IN ALBUQUERQUE, NEW MEXICO

STATION ANALYSIS

WATER YEAR 2004

Equipment.--An electronic datalogger and pressure transducer, recording on 5-minute intervals, are housed in a metal 2.5- by 2.5- by 5.5-foot shelter anchored to a concrete slab on the right bank of the concrete-lined channel. An outside staff gage is painted on the right sidewall of the channel for reference. High-water measurements are determined by indirect methods. A crest-stage gage was installed on October 23, 1998, and is 0.42 foot above the bottom of the channel and mounted 32 degrees from horizontal.

Gage-Height Record.-- The water-stage recorder is referenced to the channel bottom or to the outside staff during flows. When the orifice sump is filled with water to the level of the channel bottom, or point of zero flow, the recorded gage height is 1.00 foot. The datalogger gave a complete and satisfactory record for water year 2004, except for September 19-20 when the nitrogen supply to the pressure transducer was accidentally shut off. Daily mean discharges for these two days were estimated based on precipitation accumulation at rain gages in the upper drainage basin. The gage will remain dry unless significant precipitation falls in the watershed. The station was not operated for the winter period December 5, 2003, to March 9, 2004..

Rating.-- The trapezoidal-shaped channel is straight for approximately 0.50 mile upstream from the gage and bends sharply to the right approximately 20 feet below the gage. Because flow regimes are supercritical in this steep channel, the downstream channel geometry is not necessary to compute the theoretical rating. The channel bottom is approximately 21 feet wide at the gage and has side walls about 7 feet high. The channel bottom is sloped towards the right bank (orifice side) at the gage.

Rating 1.0 was developed by a step-forward theoretical analysis during the 1997 water year. Because of extremely high flow velocities, discharge measurements at this site are nearly impossible with the current technology. Flows are very flashy, lasting less than an hour, so mean daily discharges are very small relative to the instantaneous peak discharges.

Discharge.-- Rating 1.0 was used directly, without any shifts, for water year 2004. This site will remain dry unless significant precipitation falls in the watershed. During water year 2004, 12 no-flow inspections were made at this site. The maximum instantaneous gage height and discharge for the water year were 1.20 feet and 10 cubic feet per second, respectively, on June 29, 2004.

08329911 NORTH CAMINO ARROYO AT SUNSET HILLS IN ALBUQUERQUE, NM

LOCATION.--Lat 35°11'40", long 106°31'57", Bernalillo County, Hydrologic Unit 13020203, in Elena Gallegos Grant, on right bank of concrete-lined arroyo, 10 ft above Holbrook Ave. bridge over North Camino Arroyo. This is located approximately 100 ft north of intersection of Holbrook Ave. and Elena Drive, and 1.3 mi north of Paseo del Norte, on the northern edge of Albuquerque.

DRAINAGE AREA.--2.06 mi^2.

PERIOD OF RECORD.--August 1997 to current year (seasonal records).

GAGE.--Water-stage recorder. Elevation of gage is 5,645 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except for those estimated, which are poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 39 ft^3/s, at 1955 hours, July 23, 2001, gage height, 1.38 ft, from step-forward analysis of concrete-lined stream channel; no flow most of time.

EXTREMES FOR CURRENT YEAR.--Maximum discharge during period of seasonal operation, 10 ft^3/s, June 29, gage height, 1.20 ft; no flow most of time.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	---	---	---	0.42	0.00	0.00	0.00	0.03	0.00
3	0.03	0.00	0.00	---	---	---	0.66	0.00	0.00	0.00	0.00	0.00
4	0.07	0.00	0.00	---	---	---	0.23	0.00	0.00	0.00	0.05	0.03
5	0.00	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.01	0.00
6	0.00	0.00	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
7	0.24	0.00	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
8	0.19	0.00	---	---	---	---	0.14	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	---	---	---	0.00	0.09	0.00	0.00	0.00	0.00	0.00
10	0.02	0.00	---	---	---	0.00	0.11	0.00	0.00	0.00	0.00	0.00
11	0.01	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.20	---	---	---	0.00	0.00	0.00	0.00	0.39	0.00	0.00
13	0.00	0.18	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.02	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.01	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.01	0.01	0.00
19	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	e0.10
20	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.03	0.00	e0.01
21	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.03	0.00
22	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	---	---	---	0.03	0.00	0.00	0.00	0.19	0.00	0.00
24	0.00	0.00	---	---	---	0.04	0.00	0.00	0.00	0.05	0.00	0.00
25	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.07	0.00	0.00
26	0.00	0.00	---	---	---	0.00	0.00	0.00	0.05	0.00	0.00	0.02
27	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.11	0.00	0.00
28	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	---	---	---	0.00	0.00	0.00	0.34	0.00	0.00	0.08
30	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	---	---	---	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	0.56	0.41	---	---	---	---	1.65	0.00	0.39	0.85	0.13	0.24
MEAN	0.02	0.01	---	---	---	---	0.06	0.00	0.01	0.03	0.00	0.01
MAX	0.24	0.20	---	---	---	---	0.66	0.00	0.34	0.39	0.05	0.10
MIN	0.00	0.00	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	1.1	0.8	---	---	---	---	3.3	0.00	0.8	1.7	0.3	0.5

e Estimated

08329926 CALABACILLAS ARROYO BELOW COORS BOULEVARD AT ALBUQUERQUE, NEW MEXICO

STATION ANALYSIS

WATER YEAR 2004

Equipment.-- This recording crest-stage gage was established in July 2003. A Win-situ Minitroll electronic datalogger and pressure transducer combination are housed in a 6-foot vertical 12-inch diameter iron pipe shelter that is concreted into the ground immediately upstream of the concrete equipment crossing. Water-stage is recorded on 5-minute intervals. The instrument is mounted on a 2-inch by 4-inch board which also acts as a crest-stage gage recording the high-water mark of each flow. The gage is approximately 0.4 miles downstream from Coors Blvd. and approximately 500 feet upstream from the Rio Grande. A highly developed commercial area around the Cottonwood Mall drains into this arroyo approximately 0.5 miles upstream from the gage.

Gage-Height Record.--The recorder, referenced to the outside Point of Zero Flow (PZF) on the concrete equipment crossing, gave a complete and satisfactory record for water year 2004 except for March 1-2 when the recorder batteries expired. No flows or precipitation occurred during these 2 partial days and because significant rainfall in the watershed is required to produce a flow at the gage, no estimation was necessary. Very commonly, "silting" of the well occurs during the receeding limb of a hydrograph and occasionally sediment covers the probe intakes which will affect recorded gage heights. In this situation, a gage height trace can often be estimated by graphical methods. Estimated mean daily discharges are based on precipitation records and high-water marks within the well casing or on the transducer mounting board.

Rating.-- The channel slope is approximately 0.008 feet per foot and the control for this station is the sandy-bottom braided channel. The bottom width of the channel is approximately 100 feet at the gage and will shift during most flow events. Concrete embankments line both sides of the channel and are approximately 3 feet high near the gage, gradually increasing upstream to approximately 7 feet. Flows are typically very wide and shallow. The channel is straight for 2000 feet upstream and 500 feet downstream to the Rio Grande.

Stage-discharge rating 1.0 is based on a theoretical step-backwater analysis and occasionally verified by a shallow-water measurement or slope-area indirect measurement. Shifts to the rating are based on sediment depths over the PZF after each flow.

During water year 2004, 11 site visits were made at this station.

Theoretical rating 1.0 was used during the entire water year with numerous shifts that are listed on the attached "Shift Curves" worksheet. All shifts are negative and based on the depth of sediment over the PZF after each flow event. One slope-area indirect measurement was computed for the flow of June 14, 2002. It's 460 cfs. plotted -5.3 percent different from the new rating for a flow depth of 1.11 feet. Continuous shifting occurs in this braided channel.

Discharge.--Discharge was computed using rating 1.0 with numerous negative shifts throughout the water year based on sediment depths over the PZF. The rating curve discharge is considered to be better than any individual measurements. Wading at this site would be very dangerous at any depths exceeding 1.0-foot because of high velocities and floating debris during storm events. Bridge measurements are also not possible.

The maximum gage height and discharge for water year 2004 were 1.09 feet and 363 cubic feet per second, respectively, on August 20, 2004.

Remarks.--Records fair due to the constant shifting of the channel bottom.

08329926 CALABACILLAS ARROYO BELOW COORS BLVD., NM

LOCATION.--Lat 35°11'15", long 106°39'05", Bernallio County, Hydrologic Unit 13020203, in the town of Alameda Land Grant, approximatly 0.4 mi downstream of Coors Blvd. and 500 ft above confluence with the Rio Grande, in Albuquerque.

DRAINAGE AREA.--77.0 mi^2 of natural drainage. Man-made diversions in lower part of the watershed contribute another 12.0 mi^2 for a total of 89.0 mi^2.

PERIOD OF RECORD.--July 23, 2003 to current year.

GAGE.--Mini-troll pressure transducer, recording in 5-minute intervals, is housed in a 1 ft diameter crest-stage gage pipe. Elevation of gage is 4,995 ft above National Geodectic Vertical Datum of 1929, from topographic map.

REMARKS.--Records fair due to constant shifting of channel bottom.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	4.7	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	49	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	6.7	16	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	2.4	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	9.9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.62	0.00	0.00	0.00	0.00	0.00	17	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.98	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	12	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.82	0.00	0.00	0.00	0.00	0.00
12	0.00	0.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.6
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	5.5	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	9.2	0.00	0.00	0.00	0.00	0.06	0.00	0.00
24	0.00	0.00	0.00	0.00	1.8	0.00	0.00	0.00	0.00	1.2	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	3.1	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.92	0.00	0.00	1.5
30	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	10.52	0.78	0.00	0.00	14.10	9.10	100.50	0.00	0.92	1.31	5.50	7.10
MEAN	0.34	0.03	0.00	0.00	0.49	0.29	3.35	0.00	0.03	0.04	0.18	0.24
MAX	9.9	0.74	0.00	0.00	9.2	6.7	49	0.00	0.92	1.2	5.5	5.6
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	21	1.5	0.00	0.00	28	18	199	0.00	1.8	2.6	11	14

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2003 - 2004, BY WATER YEAR (WY)

MEAN	0.34	0.03	0.00	0.00	0.49	0.29	3.35	0.00	0.03	0.04	0.11	0.12
MAX	0.34	0.03	0.00	0.00	0.49	0.29	3.35	0.00	0.03	0.04	0.18	0.24
(WY)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)
MIN	0.34	0.03	0.00	0.00	0.49	0.29	3.35	0.00	0.03	0.04	0.05	0.01
(WY)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2003)	(2003)

SUMMARY STATISTICS	FOR 2004 WATER YEAR		WATER YEARS 2003 - 2004	
ANNUAL TOTAL	149.83			
ANNUAL MEAN	0.41		0.41	
HIGHEST ANNUAL MEAN			0.41	2004
LOWEST ANNUAL MEAN			0.41	2004
HIGHEST DAILY MEAN	49	Apr 3	49	Apr 3, 2004
LOWEST DAILY MEAN	0.00	Oct 1	0.00	Jul 25, 2003
ANNUAL SEVEN-DAY MINIMUM	0.00	Oct 9	0.00	Jul 25, 2003
MAXIMUM PEAK FLOW	363	Aug 20	363	Aug 20, 2004
MAXIMUM PEAK STAGE	1.09	Aug 20	1.09	Aug 20, 2004
ANNUAL RUNOFF (AC-FT)	297		297	
10 PERCENT EXCEEDS	0.00		0.00	
50 PERCENT EXCEEDS	0.00		0.00	
90 PERCENT EXCEEDS	0.00		0.00	

08329935 ARROYO 19A AT ALBUQUERQUE, NEW MEXICO

STATION ANALYSIS

WATER YEAR 2004

Equipment.-- An electronic datalogger, recording on 5-minute intervals, is housed in a metal 15- by 15- by 18-inch shelter over a 12-inch diameter CMC stilling well attached to a 1-foot Parshall flume. An outside staff gage is mounted to the flume for reference. The intake pipe to the well is 0.03 foot above the floor of the flume. Because the point of zero flow is 1.00-foot, only flows above 1.03 feet (0.035 cubic feet per second) are recorded. A tipping-bucket rain gage is housed in a metal 15- by 15- by 18-inch shelter over a 3-inch diameter galvanized pipe located approximately 40 feet south of the flume.

Gage-Height Record.-- The water-stage recorder supplied a complete and satisfactory record for water year 2004. The station was not operated during the winter period December 3, 2003, to March 3, 2004.

Rating.-- The control for the site is a 1-foot-wide Parshall flume, which is 1.2 feet tall and has a capacity of 5.28 cubic feet per second. In water year 1999, flows exceeded the capacity of the Parshall flume for the first time since the 1986 installation. The flume was submerged on two occasions; August 2 and August 5, 1999. Results of each slope-area indirect measurement are:

August 2, 1999, flood: Gage Height = 2.93 feet Q = 235 cubic feet per second
August 5, 1999, flood: Gage Height = 2.63 feet Q = 100 cubic feet per second

Rating 1.0, used prior to water year 1999, did not extend beyond the flow capacity of the flume (5.28 cubic feet per second). Rating 2.0 was developed in 1999 and computes discharges up to 270 cubic feet per second. A breakpoint in the rating occurs at the gage height where the flume is filled to capacity (2.2 feet) and multiple offsets are used to plot the lower and upper portions of the stage-discharge relation.

No shifts are needed to rating 2.0 for water year 2004. The flume remains clear of debris or sediment. More high-water flows are needed to confirm the portion of rating 2.0 greater than the flume capacity.

During water year 2004, 11 no-flow visits were made at this site.

Discharge.-- Discharges are computed from rating 2.0 directly. Only one flow occurred in water year 2004. The maximum gage height and discharge were 1.08 feet and 0.11 cubic feet per second, respectively, on September 29. Flows at this site are rare and require a significant amount of rainfall in the upper watershed.

08329935 ARROYO 19A AT ALBUQUERQUE, NM

LOCATION.--Lat 35°09'24", long 106°43'50", in NE 1/4 NE 1/4 sec.28, T.11 N., R.2 E., Bernalillo County, Hydrologic Unit 13020203, on right bank 900 ft upstream from culvert under 81st Street, 1,200 ft south of city water tank, and 0.6 mi south of intersection of 81st Street and Atrisco Drive at Albuquerque.

DRAINAGE AREA.--1.50 mi^2.

PERIOD OF RECORD.--June 1977 to current year (seasonal records).

GAGE.--Water-stage recorder and recording tipping-bucket rain gage with 0.01-in. increment. The control at the site is a Parshall flume. Elevation of gage is 5,341 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to June 19, 1986, at site 450 ft downstream at different datum.

REMARKS.--Records good. Recording rain gage at station. The basin drains undeveloped semidesert terrain above the escarpment west of Albuquerque. See tabulation below for monthly precipitation, in inches. No flow most of time.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 234 ft^3/s, Aug. 2, 1999, gage height, 2.93 ft, on basis of 2 slope-area measurements of peak flow needed to extend rating beyond flume capacity. No flow most of time.

EXTREMES FOR CURRENT YEAR.--Only one flow in water year, discharge, 0.11 ft^3/s, Sept. 29, gage height, 1.08 feet.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	---	---	---	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	0.00	0.00	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
MEAN	0.00	0.00	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
MAX	0.00	0.00	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
MIN	0.00	0.00	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	0.00	0.00	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
(+)	1.16	0.75	0.14	0.16	1.22	0.92	2.81	0.00	0.58	1.66	0.23	1.39

(+) Total precipitation accumulation, in inches.

083299375 MARIPOSA DIVERSION OF SAN ANTONIO ARROYO AT ALBUQUERQUE, NEW MEXICO

STATION ANALYSIS

WATER YEAR 2004

Equipment.-- This station was established during the summer of 1993 exclusively for water-quality sampling. As desired of the cooperators, AMAFCA and City of Albuquerque Hydrology Department, only gage heights during sampling were recorded. No data for this site were published in the USGS Annual Water-Data Report prior to water year 2001. Complete water year discharge records were not calculated until water year 2000. On October 26, 1999, an electronic datalogger and pressure transducer became the primary water-stage recorder. The instruments are housed in a metal 2.5- by 2.5- by 6-foot shelter anchored to a concrete pad on the left bank, approximately 15 feet upstream from a 15-foot-diameter corrugated metal culvert. The culvert acts as the gage control. An outside staff with attached crest-stage gage is mounted approximately 10 feet upstream from the culvert. The pressure transducer orifice is mounted to the concrete pad immediately upstream from the culvert. The point of zero flow is a chiseled square on the concrete pad of the culvert entrance. Its given elevation is 1.00 foot.

Gage-Height Record.-- The recorder referenced to the outside staff gave a complete and satisfactory record during the entire water year, except September 19 to October 7, 2004, when the recorder malfunctioned. During this time period, flows occurred only on September 19-20 and 29-30 because no flows occur without a significant precipitation event in the watershed. The daily mean discharges for these four days were estimated based on rainfall in the basin and good peak gage heights recorded by the Sutron on September 19 and by field personnel during a water-quality sampling event on September 29. The sensor orifice is mounted in a depression upstream from the culvert lip, so all flow depths above the point of zero flow (PZF) are recorded.

Rating.-- The concrete lip at the culvert entrance acts as the low-flow control and PZF. Low flows are measured with a standard current-velocity meter and higher flows are calculated indirectly using culvert-flow computational methods. Rating 3.0 was in effect prior to water year 2001 and has a PZF of 0.00 foot. To avoid negative gage height readings during times of no flow, the recorders are set with a built-in 1.00-foot datum, or an effective PZF of 1.00 foot. Rating 4.0, which incorporates this 1.00-foot datum, was developed and started in water year 2001. The new rating is the same as rating 3.0 in all other aspects.

Discharge.-- Rating 4.0 was applied directly without shifts this water year. Rating shifts may be required if debris accumulates in the barrel or entrance of the culvert. Estimated discharges are based exclusively on precipitation records for the watershed, because no upstream or downstream gages are available for comparison purposes. The peak stage and discharge for this water year occurred on April 3, 2004, and were 2.67 feet and 51 cubic feet per second, respectively. Twenty no-flow inspections were made and 2 water-quality samples were taken at this site in water year 2004.

083299375 MARIPOSA DIVERSION OF SAN ANTONIO ARROYO AT ALBUQUERQUE

LOCATION.--Lat 35°08'24", long 106°42'17", in SE 1/4 NE 1/4 of sec.35, T.11 N., R.2 E., Bernalillo County, Hydrologic Unit 13020203, 1,500 ft upstream from the San Antonio underpass at Coors Blvd. on west side of Albuquerque, 1.1 mi north of Interstate 25 and Coors Blvd. intersection.

DRAINAGE AREA.--30.5 mi^2.

PERIOD OF RECORD.--Summer 1993 to September 1999 (only recorded flow events during water-quality sampling). October 1999 to current year.

GAGE.--Water-stage recorder and crest-stage gage referenced to outside staff gage. Elevation of gage is 5,100 ft above the National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except for those estimated, which are poor. No flows will occur unless significant precipitation falls in the watershed.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	1.4	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.11	19	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	5.4	4.6	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.45	0.21	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	4.9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	2.2	0.00	0.00	0.00	0.00	0.00	1.4	0.00	0.00	0.00	0.00	0.00
9	0.09	0.00	0.00	0.00	0.00	0.00	0.25	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.99	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	1.1	0.00	0.00	0.00	0.00	0.00
12	0.00	0.36	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00
13	0.00	1.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e1.4
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.9	0.00	0.00
23	0.00	0.00	0.00	0.00	2.7	0.00	0.00	0.00	0.00	0.65	0.00	0.00
24	0.00	0.00	0.00	0.00	4.8	0.00	0.00	0.00	0.00	0.08	0.00	0.00
25	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	3.2	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.3	0.00	0.00	e3.9
30	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.01	0.00	0.00	e1.6
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	7.19	1.89	0.00	0.00	7.55	5.96	28.96	0.00	2.31	5.92	0.00	6.90
MEAN	0.23	0.06	0.00	0.00	0.26	0.19	0.97	0.00	0.08	0.19	0.00	0.23
MAX	4.9	1.5	0.00	0.00	4.8	5.4	19	0.00	2.3	3.2	0.00	3.9
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	14	3.7	0.00	0.00	15	12	57	0.00	4.6	12	0.00	14

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2000 - 2004, BY WATER YEAR (WY)

MEAN	0.22	0.07	0.01	0.01	0.05	0.15	0.20	0.00	0.08	0.09	0.14	0.13
MAX	0.55	0.25	0.03	0.03	0.26	0.28	0.97	0.01	0.30	0.19	0.36	0.42
(WY)	(2001)	(2001)	(2003)	(2001)	(2004)	(2003)	(2004)	(2001)	(2000)	(2004)	(2002)	(2002)
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(WY)	(2002)	(2000)	(2002)	(2000)	(2000)	(2002)	(2002)	(2000)	(2001)	(2002)	(2004)	(2000)

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 2000 - 2004	
ANNUAL TOTAL	22.05		66.68			
ANNUAL MEAN	0.06		0.18		0.10	
HIGHEST ANNUAL MEAN					0.18	2004
LOWEST ANNUAL MEAN					0.07	2002
HIGHEST DAILY MEAN	4.9	Oct 7	19	Apr 3	19	Apr 3, 2004
LOWEST DAILY MEAN	0.00	Jan 1	0.00	Oct 1	0.00	Oct 1, 1999
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00	Oct 10	0.00	Oct 1, 1999
MAXIMUM PEAK FLOW			51	Apr 3	251	Aug 2, 1999
MAXIMUM PEAK STAGE			2.67	Apr 3	4.80	Aug 2, 1999
ANNUAL RUNOFF (AC-FT)	44		132		69	
10 PERCENT EXCEEDS	0.00		0.00		0.00	
50 PERCENT EXCEEDS	0.00		0.00		0.00	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

e Estimated

08329938 LADERA ARROYO AT ALBUQUERQUE, NEW MEXICO

STATION ANALYSIS

WATER YEAR 2004

Equipment.-- An electronic datalogger, recording on 5-minute intervals, is housed in a metal shelter over an 18-inch-diameter corrugated metal stilling well. Inside and outside staff gages are available as references. An electric-tape gage was installed as an additional inside reference gage on September 12, 2000. A peak stage indicator clip was attached to the float tape on April 23, 1998. A tipping-bucket rain gage is housed in a metal 15- by 15- by 18-inch shelter attached to a 3-inch-diameter galvanized pipe and is located approximately 75 feet south of the water-stage recorder.

Gage-Height Record.-- The water-stage recorder referenced to the inside staff and electric-tape gage gave a complete and satisfactory record for the entire water year. This station was not operated during the winter period from December 3, 2003, to March 3, 2004.

Rating.--The channel is straight for approximately 40 feet upstream and 300 feet downstream from the gage. The channel bottom is plane-bedded, loose sand and is approximately 15-20 feet wide with no vegetation. Light to moderate vegetation exists on both banks, mostly small weeds and shrubs. An occasional desert willow shrub grows on the right overbank area. Both banks are generally less than 2 feet high and contain most flows.

Rating 5.0 was developed in water year 1999 and was based on the 4 measurements completed during that year. Measurements 5 and 6, along with the approximate PZF for most of that water year (2.20 feet) defined the lower end of the new rating and the two slope-area indirect measurements (4 and 7) defined the upper end. The rating breaks to the right at about the 3.3- to 3.4-foot gage height range because this represents the level when flows start to top the channel banks and spill over to a flatter, wider flood plain.

The channel bottom (PZF) was at approximately 2.00 feet on the outside staff at the close of water year 2001 and because the PZF for rating 5.0 is 2.20 feet, a +0.20 shift to the rating is required. No flows occurred in water years 2002-03, so the same +0.20-foot shift effective at the close of water year 2001 was carried through water years 2002 and 2003. Only one flow occurred in water year 2004, on July 24-25. The +.20-foot shift was continued up until that time. The channel bottom (PZF) was approximately 2.00 feet on the outside staff prior to July 24, 2004. After the flow of July 24-25, 2004, the channel bottom aggraded to a level of 2.25 feet (+/- 0.10 feet), which indicates a shift of approximately zero to rating 5.0. Because the field measurement of PZF, or channel bottom elevation, is only an approximation to within the nearest 0.10 feet, a zero shift was applied for the remainder of water year 2004. This shift diagram was derived from 3 points of reference; the low end point is, obviously, below the PZF; the mid point (3.4 feet) represents the break in the rating where flows begin to overtop the small banks and spill out onto a broader flood plain; and the upper input point represents the top of the rating, which was defined by the water year 1999 flood event. The shift value is held constant through the mid-point break of 3.4 feet because a change in bed elevation affects all flows within the confines of the small banks. The shift value returns to zero by the top of the rating, at a gage height of 4.1 feet.

Discharge.-- During water year 2004, 11 no-flow site visits were made. Only one flow occurred this water year, on July 24-25. The maximum gage height and discharge for the water year was 2.43 feet and 4.8 cubic feet per second, respectively, on July 25. Because of its flashy nature, with flows lasting less than an hour, actually observing any flow is difficult. Usually, only points of zero flow (channel bottom elevations) are available to define shifts. This channel does not flow until significant thunderstorms occur in the watershed.

08329938 LADERA ARROYO AT ALBUQUERQUE, NM

LOCATION.--Lat 35°06'56", long 106°44'48", in Town of Atrisco Land Grant, Bernalillo County, Hydrologic Unit 13020203, on left bank, 0.25 mi northwest of City of Albuquerque water storage tank, on dirt road extension of 98th Street, and 2.3 mi west of North Coors Road in Albuquerque.

DRAINAGE AREA.--0.34 mi^2.

PERIOD OF RECORD.--May 1981 to current year (seasonal records).

GAGE.--Water-stage recorder and recording tipping-bucket rain gage with 0.01-in. increment. Elevation of gage is 5,312 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to June 5, 1986, at site 0.2 mi downstream at different datum.

REMARKS.--Records fair. Recording rain gage at station. The basin is undeveloped semidesert terrain, part of which is above the escarpment west of Albuquerque. See tabulation below for monthly precipitation in inches.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 195 ft^3/s, Aug. 2, 1999, gage height, 4.12 ft, from slope-area indirect measurement; no flow most of time.

EXTREMES FOR CURRENT YEAR.--Only one flow this water year. Maximum discharge, 4.8 ft^3/s, July 25, gage height, 2.43 ft; no flow most of time.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.02	0.00	0.00
25	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.08	0.00	0.00
26	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	---	---	---	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	0.00	0.00	---	---	---	---	0.00	0.00	0.00	0.10	0.00	0.00
MEAN	0.00	0.00	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
MAX	0.00	0.00	---	---	---	---	0.00	0.00	0.00	0.08	0.00	0.00
MIN	0.00	0.00	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	0.00	0.00	---	---	---	---	0.00	0.00	0.00	0.2	0.00	0.00
(+)	1.03	0.84	0.27	0.26	1.69	1.60	3.58	0.03	0.22	1.36	0.17	0.73

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1981 - 2004, BY WATER YEAR (WY)

MEAN	0.01	0.00	---	---	---	---	0.00	0.00	0.00	0.02	0.03	0.01
MAX	0.10	0.00	---	---	---	---	0.00	0.00	0.10	0.14	0.19	0.11
(WY)	(1982)	(1983)	---	---	---	---	(1983)	(1992)	(1988)	(1991)	(1999)	(1990)
MIN	0.00	0.00	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
(WY)	(1983)	(1983)	---	---	---	---	(1983)	(1982)	(1981)	(1981)	(1982)	(1982)

SUMMARY STATISTICS — WATER YEARS 1981 - 2004

HIGHEST DAILY MEAN	5.6	Aug 1, 1989
LOWEST DAILY MEAN	0.00	May 28, 1981
ANNUAL SEVEN-DAY MINIMUM	0.00	May 28, 1981
MAXIMUM PEAK FLOW	195	Aug 2, 1999
MAXIMUM PEAK STAGE	4.12	Aug 2, 1999

(+) Total precipitation accumulation, in inches.

08330200 SAN JOSE DRAIN AT WOODWARD ROAD AT ALBUQUERQUE, NEW MEXICO

STATION ANALYSIS

WATER YEAR 2004

Equipment.-- An electronic datalogger and pressure transducer, recording on 5-minute intervals, have been used to collect gage height and rainfall data since September 23, 1999. Prior to this date, gage heights were recorded only during water-quality sampling. An ISCO model 3700 automatic pump sampler is also located in the gage house. Electricity is provided to the shelter. The instruments are housed in a 4- by 4- by 8-foot brick walk-in building located approximately one-quarter mile west of the intersection of Woodward Road and South Broadway in Albuquerque. The shelter is immediately adjacent to the north shoulder of Woodward Road and directly over a 10-foot-diameter metal culvert. The channel is concrete-lined upstream from the culvert. Dowmstream, the natural channel is normally choked with weed growth. City maintenance crews clear the channel at least once each year. The reference gage is an outside staff painted on the concrete channel side-slope near the recorder orifice pipe. The staff is referenced to a tape-up point (RM1), which is a hex-head bolt anchored in the channel bottom approximately 1 foot streamward of the staff gage. Low- to medium-stage discharge measurements can be made by wading near the gage or downstream from the culvert.

Gage-Height Record.-- The recorder gave a complete and satisfactory record for the water year except for the period March 30-April 4 when the datalogger malfunctioned. The daily mean discharge was estimated as zero for March 30-April 1 because of the lack of precipitation in the watershed. Estimated daily mean discharges for April 2-4 were based on rainfall amounts and a reliable peak gage height on April 3 that was read from the recorder before it malfunctioned. Gage heights for this period were estimated by graphical methods and estimated daily means then computed.

Datum correction.-- Two recorder corrections were applied this water year. When the water level is not high enough to cover the orifice, an accurate gage height calibration is not possible, so opportunities to do so are limited. The site visit on April 3 provided an opportunity to correctly set the instrument and a +0.08-foot correction was required for the period October 7-April 3. A second correction was applied for the period September 18-October 28, 2004. The orifice tubing was discovered pushed up into its conduit line during the site visit on October 13 and repaired on October 28, 2004. Gage height readings did not agree well with observed high-water marks since the flow of September 19, so apparently, the problem occurred prior to that date. The data correction of +0.14 foot was based on the recorder calibration on October 28.

Rating.-- Rating 3.0 was developed for water year 2000 because rating 2.0 used theoretical discharge computations as input points for the rating curve, giving it an irregular shape. The new rating is basically the same as rating 2.0, with the exception of a smooth, "best-fit" line through these input points. Because of a very flat channel slope (approximately 0.0003 foot per foot), sediment and debris commonly accumulate in the culvert and

channel, resulting in large negative shifts to the stage versus discharge rating. Occasionally, large sediment deposits in the culvert throat cause ponding at the gage orifice, but no flows exist downstream. The control is the 10-foot diameter culvert pipe for most flows, but the mud layer in the culvert or vegetative cover in the natural lined part of the channel downstream may act as the control during extremely low flows and times of sediment accumulation in the culvert. The orifice is mounted 0.60 foot above the bottom of the channel to prevent sediment accumulations from covering the sensor and affecting the gage height record. Because of this, discharge computations show a constant negative 0.60-foot shift, or correction to the rating, below recorded gage heights of 0.61 foot. This technique eliminates computing a discharge when water levels are below the orifice. Prior to the June 23, 2003, repair, the orifice was mounted at an elevation of 0.50 foot, requiring a constant -0.50-foot shift to the rating.

Discharge.-- One measurement (8) was completed on February 24, 2004, and indicates a positive difference to rating 3.0 of only 4.2 percent. The rated discharge is considered more accurate than a single computed discharge if the measurement is within 5 percent of the rating curve, so no shift was applied. Measurement 9 was completed during the next flow event on March 3 and it indicates a shift of +0.38-foot. This value was prorated from zero at the beginning of the hydrograph to +0.38 by the peak stage as weed growth downstream from the concrete portion of the channel was partially washed out. During this time of dormancy, the biomass in the natural channel is easily removed, or at least matted down by significant flows, so flow efficiency increases, resulting in positive shifts to rating 3.0. During the growing season, vegetation can quickly re-establish itself, causing back-water effects, resulting in large negative shifts to the stage-discharge relationship.

Two measurements (10-11) were completed within an hour on April 3, 2004. This pair of measurements indicates that the +0.38-foot shift from March 3 had increased to +1.05 feet as the downstream weed growth was further washed out by the large flow on April 3. No other discharge measurements occurred until the paired measurements (12-13) on October 13, 2004, which both computed a negative 0.64-foot shift to rating 3.0. The negative shift was prorated from +1.05 feet on May 1, arbitrarily chosen to reflect the beginning of significant vegetation accumulation downstream of the culvert, to the -0.64 by October 13. No other measurements were completed in this water year to better define the stage-discharge relationship.

Occasionally, negative shift values can be determined by hydrographic interpretations. Peak flows generally display a slower recession pattern after reaching the water level of a channel obstruction. The shift values coincide with the approximate maximum gage height resulting from daily trickle flows ponding in the area behind the mud "dam" in the channel, then slowly seeping into the sediment layers, resulting in a diurnal-type hydrograph. In reality, these tiny trickle flows would not registered on the datalogger in a clean channel. Field inspections are also valuable in determining ponded water depths upstream from the sediment bars, even though no flows are detected downstream. During water year 2004, no sediment dams existed in the culvert pipe under Woodward Road, so no additional shift corrections to rating 3.0 were required.

The peak gage height and discharge for water year 2004 occurred on July 23 and were 6.26 feet and 96 cubic feet per second, respectively.

Remarks.-- Records are fair due to heavy weed accumulations in the channel at the gage and downstream. Estimated discharges are poor.

08330200 SAN JOSE DRAIN AT WOODWARD ROAD AT ALBUQUERQUE, NM

LOCATION.--Lat 35°02'56", long 106°38'55", in NE 1/4 of SW 1/4 sec.32, T.10 E., R.3 E., Bernalillo County, Hydrologic Unit 13020203, approximately 1/4 mi west of the intersection of Woodward Road and South Broadway on Albuquerqués south side. The gage is located on the right bank of San Jose Drain and the shoulder of Woodward Road where a corrugated metal culvert passes under Woodward.

DRAINAGE AREA.--1.95 mi^2.

PERIOD OF RECORD.--October 1993 to September 23, 1999, only data during water-quality sampling events were recorded and never published in the USGS Annual Data report. September 23, 1999 to present, full year's data is recorded, along with rainfall.

GAGE.--Water-stage recorder, and since July 1998, a tipping bucket raingage on the roof of the gage house is operational. The channel is concrete-lined above Woodward Road and natural below. Elevation of gage is 4,946 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records poor due to heavy mud and weed accumulation at gage and downstream. Mud accumulations and vegetative growth occurs in the channel and will affect the stage-discharge relationship. See tabulation below for monthly precipitation in inches.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.12	e13	0.00	0.00	0.00	0.07	0.00
3	0.17	0.00	0.00	0.00	0.00	0.00	e36	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	7.1	e6.0	0.00	0.00	0.00	0.00	0.57
5	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00	0.15	0.03
6	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	5.9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	6.7	0.00	0.00	0.00	0.00	0.00	6.2	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	1.5	0.00	0.00	0.00	0.00	0.00	3.8	0.00	0.00	0.00	1.3	0.00
11	0.92	0.00	0.00	0.00	0.00	0.00	0.82	0.00	0.00	0.00	0.78	0.00
12	0.00	1.9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.0	0.00	0.00
13	0.00	1.9	0.00	0.00	0.00	0.00	0.00	0.16	0.00	4.2	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.07	0.00	0.00	0.00	0.00	0.00	0.00	8.8	0.00	5.3	0.64	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.1	0.00	5.8	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.65	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.3	0.00	0.26	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.80	0.00	10
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	0.00	4.1
21	0.00	0.00	0.00	0.00	0.29	0.45	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.5	0.00	0.00
23	0.00	0.00	0.00	0.00	2.9	0.00	0.00	0.00	0.00	17	0.00	0.00
24	0.00	0.00	0.00	0.00	5.2	0.00	0.00	0.00	0.00	11	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.8	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.77	0.00	0.00
28	0.00	0.00	0.00	0.00	0.48	0.00	0.00	0.00	0.91	0.89	0.00	0.00
29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.9	0.00	0.00	0.73
30	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.02
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	0.00	0.00	---
MEAN	0.50	0.13	0.00	0.00	0.31	0.26	2.19	0.68	0.36	2.04	0.09	0.52
MAX	6.7	1.9	0.00	0.00	5.2	7.1	36	8.8	9.9	17	1.3	10
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	30	7.5	0.00	0.00	18	16	131	42	21	126	5.8	31

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1994 - 2004, BY WATER YEAR (WY)

MEAN	0.36	0.21	0.08	0.06	0.22	0.16	0.34	0.27	0.33	0.83	0.98	0.74
MAX	1.16	0.73	0.20	0.20	0.62	0.73	2.19	0.99	1.79	2.21	2.10	2.07
(WY)	(2001)	(1995)	(2003)	(1995)	(2003)	(2003)	(2004)	(1996)	(1996)	(2003)	(1996)	(1995)
MIN	0.01	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.01	0.07	0.09	0.01
(WY)	(2002)	(2000)	(2000)	(2000)	(2000)	(1996)	(2000)	(2000)	(1995)	(2002)	(2004)	(2000)

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1994 - 2004	
ANNUAL MEAN	0.51		0.59		0.43	
HIGHEST ANNUAL MEAN					0.66	1996
LOWEST ANNUAL MEAN					0.15	2002
HIGHEST DAILY MEAN	7.9	Mar 21	36	Apr 3	36	Apr 3, 2004
LOWEST DAILY MEAN	0.00	Jan 6	0.00	Oct 1	0.00	Oct 2, 1993
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 11	0.00	Oct 16	0.00	Oct 8, 1993
MAXIMUM PEAK FLOW			96	Jul 23	99	Aug 14, 1994
MAXIMUM PEAK STAGE			6.26	Jul 23	6.57	Aug 14, 1994
ANNUAL RUNOFF (AC-FT)	368		428		310	
10 PERCENT EXCEEDS	2.0		0.74		1.1	
50 PERCENT EXCEEDS	0.00		0.00		0.00	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

e Estimated

08330540 TRAMWAY FLOODWAY CHANNEL AT ALBUQUERQUE, NEW MEXICO

STATION ANALYSIS

WATER YEAR 2004

Equipment.-- An electronic datalogger and pressure transducer, recording on 5-minute intervals, are housed in a metal 5- by 5-foot walk-in shelter on the right bank of the concrete-lined channel. An outside staff gage is painted on the channel side slope and is the reference gage. A crest-stage gage, inclined 35 degrees from horizontal, was mounted to the right bank on October 22, 1998. Rainfall data from a tipping-bucket rain gage mounted to the gage house roof have been recorded by the datalogger since May 1, 2001. Prior to March 19, 1998, the pressure transducer orifice was mounted 0.12 foot above the channel bottom. On March 19, the orifice was lowered into a sump which is below the channel bottom so all gage heights above the point of zero flow (PZF) are recorded. The recorded gage height is 1.00 foot when the water level in the sump is equal to the channel bottom elevation, or PZF.

Gage-Height Record.-- The water-stage recorder, referenced to the outside staff gage, provided a complete and satisfactory record for the entire water year except for periods of ice-affected gage heights on January 22, 26-28, and February 1-6, 11, 14, and 17, 2004. Zero discharge was estimated for all ice-affected days. Estimations of mean daily discharges were determined by base-flow values available before and after the estimated period and precipitation records. No other gage is located on this channel that could provide a hydrographic comparison for estimating missing record at the Tramway Floodway station. Prior to water year 2002, the gage was not operational during the winter period from approximately November 15 to March 15.

Rating.-- The control for the gage is the concrete-lined channel. The depth of the channel at the gage is approximately 10 feet, and the bottom width is 10 feet. The side walls are inclined 35 degrees from horizontal. Rating 2.0 was effective from October 1, 1996, until March 19, 1998, when the orifice was lowered. Rating 2.0 is essentially identical to rating 1.0; the old rating, however, computed discharges for gage heights below the level of the orifice (0.12 foot). Because recording gage heights less than the orifice elevation is impossible, all discharges below the 0.12-foot gage height (less than 3.4 cubic feet per second) were computed as zero for rating 2.0.

Rating 3.0 was developed for the period after March 19, 1998, when all gage heights greater than the PZF are recorded. Rating 3.0 is identical to rating 1.0, except the PZF for rating 3.0 is 1.00 foot instead of 0.00 foot. All 3 ratings were developed by step-forward theoretical analysis because flow regimes here are super-critical.

Discharge.-- Estimations of missing record are based on only rainfall data and historic base flows. No upstream or downstream gage is available for hydrographic comparison. Small daily flows, probably from sprinkler system run-off, usually occur in the evening and early morning hours.

During water year 2004, 14 site inspections were made. Small trickle flows were occasionally observed and the recorder was tracking them to correct water levels. The instantaneous peak stage and discharge for water year 2004 were 2.58 feet and 233 cubic feet per second, respectively, recorded on August 4.

Discharges were computed using rating curve 3.0 directly with no shifts. Flows probably cause enough turbulence in the orifice sump to wash out any debris that might affect gage heights. The channel slope in this reach creates extremely high velocities that make stream-flow measurements nearly impossible. Because of the stability of the channel, the theoretical rating curve is considered better than individual measurements.

08330540 TRAMWAY FLOODWAY CHANNEL AT ALBUQUERQUE, NM

LOCATION.--Lat 35°04'42", long 106°29'49", Bernalillo County, Hydrologic Unit 13020203, on right bank 300 ft downstream from Copper Boulevard Bridge, near corner of Tramway and Copper Boulevards NE in Albuquerque.

DRAINAGE AREA.--1.60 mi^2.

PERIOD OF RECORD.--July 1987 to November 2000 (seasonal record), March 2001 to current year.

GAGE.--Water-stage recorder, crest-stage gage, and concrete-lined channel. Recording rain gage at this site since May 2001. Elevation of gage is 5,740 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except for those estimated, which are poor. Prior to water year 1998, some minor streamflow may have existed on days when daily mean discharges have been recorded as zero due to the sensitivity limits of the streamflow-monitoring equipment. Since 1998, all flows above zero are recorded. See tabulation below for monthly precipitation, in inches.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.04	0.01	0.00	0.00	e0.00	0.01	0.01	0.07	0.12	0.72	0.08	0.14
2	0.24	0.01	0.04	0.00	e0.00	0.48	1.5	0.14	0.11	0.63	0.93	0.17
3	0.19	0.01	0.00	0.00	e0.00	0.14	8.2	0.04	0.19	0.73	0.18	0.16
4	0.09	0.02	0.00	0.00	e0.00	4.6	2.8	0.09	0.24	0.76	9.4	0.90
5	0.00	0.02	0.01	0.00	e0.00	0.77	0.08	0.09	0.08	0.67	0.14	0.19
6	0.01	0.00	0.00	0.00	e0.00	0.01	0.02	0.09	0.05	0.70	0.06	0.14
7	4.3	0.01	0.00	0.00	0.00	0.00	0.04	0.02	0.09	0.84	0.06	0.16
8	1.1	0.01	0.04	0.00	0.00	0.01	1.8	0.01	0.09	0.77	0.09	0.14
9	0.03	0.00	0.20	0.00	0.00	0.00	0.56	0.29	0.09	1.1	0.09	0.16
10	1.3	0.01	0.02	0.00	0.00	0.00	1.3	0.16	0.10	0.97	0.24	0.14
11	0.26	0.04	0.04	0.00	e0.00	0.01	0.06	0.03	0.09	1.4	0.29	0.09
12	0.42	2.2	1.2	0.00	0.00	0.02	0.00	0.01	0.11	0.86	0.14	0.15
13	0.09	1.1	0.02	0.00	0.00	0.01	0.01	0.01	0.08	0.13	0.10	0.16
14	0.10	0.01	0.00	0.00	e0.00	0.01	0.00	0.00	0.08	0.97	0.16	0.16
15	0.14	0.01	0.00	0.26	0.00	0.00	0.01	0.01	0.08	0.18	0.14	0.10
16	0.06	0.00	0.00	0.04	0.00	0.03	0.01	0.02	0.07	0.12	0.10	0.16
17	0.09	0.13	0.00	0.00	e0.00	0.05	0.02	0.01	0.11	0.09	0.14	0.09
18	0.15	0.01	0.00	0.00	0.00	0.03	0.00	0.03	0.09	0.14	0.05	0.20
19	0.06	0.01	0.00	0.00	0.00	0.04	0.02	0.04	0.12	0.14	0.32	2.9
20	0.06	0.00	0.00	0.61	0.00	0.09	0.03	0.02	0.15	0.62	0.13	1.3
21	0.26	0.00	0.00	0.00	0.69	0.02	0.12	0.03	0.14	0.15	0.26	0.20
22	0.02	0.00	0.00	e0.00	0.01	0.06	0.16	0.04	0.53	1.0	0.45	0.12
23	0.02	0.00	0.00	0.00	6.0	0.28	0.27	0.17	0.43	2.8	0.14	0.18
24	0.07	0.00	0.00	0.00	1.5	0.12	0.47	0.50	0.48	0.51	0.16	0.10
25	0.01	0.00	0.00	0.39	0.05	0.07	0.65	0.03	0.51	1.3	0.11	0.08
26	0.00	0.00	0.00	e0.00	0.00	0.07	0.89	0.03	1.7	0.09	0.16	0.10
27	0.01	0.00	0.00	e0.00	0.00	0.06	1.2	0.03	0.63	2.5	0.12	0.09
28	0.01	0.00	0.00	e0.00	1.3	0.02	1.4	0.02	4.7	0.17	0.14	0.11
29	0.01	0.00	0.00	0.00	0.00	0.05	0.12	0.02	2.9	0.12	0.22	0.09
30	0.00	0.00	0.00	0.00	---	0.04	0.14	0.87	0.73	0.10	0.16	0.13
31	0.01	---	0.00	0.00	---	0.02	---	0.01	---	0.09	0.17	---
TOTAL	9.15	3.61	1.57	1.30	9.55	7.12	21.89	2.93	14.89	21.37	14.93	8.81
MEAN	0.30	0.12	0.05	0.04	0.33	0.23	0.73	0.09	0.50	0.69	0.48	0.29
MAX	4.3	2.2	1.2	0.61	6.0	4.6	8.2	0.87	4.7	2.8	9.4	2.9
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.09	0.05	0.08
AC-FT	18	7.2	3.1	2.6	19	14	43	5.8	30	42	30	17
(+)	1.39	1.06	0.22	0.32	1.80	0.97	2.84	0.00	1.56	2.03	1.88	0.94

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 2004, BY WATER YEAR (WY)

MEAN	0.25	0.09	0.08	0.11	0.25	0.30	0.15	0.12	0.15	0.38	0.49	0.24
MAX	1.03	0.38	0.17	0.29	0.33	1.17	0.73	0.38	0.50	0.95	1.44	0.93
(WY)	(1990)	(2002)	(2002)	(2002)	(2004)	(1990)	(2004)	(1998)	(2004)	(1998)	(2001)	(1991)
MIN	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(WY)	(1991)	(1990)	(1990)	(2003)	(2002)	(1991)	(1991)	(1995)	(1990)	(1994)	(1994)	(1990)

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1990 - 2004	
ANNUAL TOTAL	59.69		117.12			
ANNUAL MEAN	0.16		0.32		0.24	
HIGHEST ANNUAL MEAN					0.59	2001
LOWEST ANNUAL MEAN					0.00	1995
HIGHEST DAILY MEAN	4.3	Oct 7	9.4	Aug 4	32	Oct 4, 1989
LOWEST DAILY MEAN	0.00	Jan 1	0.00	Oct 5	0.00	Oct 1, 1989
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00	Nov 20	0.00	Oct 5, 1989
MAXIMUM PEAK FLOW			233	Aug 4	3,190	Jul 9, 1988
MAXIMUM PEAK STAGE			2.58	Aug 4	8.62	Jul 9, 1988
ANNUAL RUNOFF (AC-FT)	118		232		172	
10 PERCENT EXCEEDS	0.36		0.85		0.49	
50 PERCENT EXCEEDS	0.03		0.06		0.00	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

(+) Total precipitation accumulation, in inches.
e Estimated

08330600 TIJERAS ARROYO NEAR ALBUQUERQUE, NEW MEXICO

STATION ANALYSIS

WATER YEAR 2004

Equipment.-- An electronic datalogger, recording on 5-minute intervals, is housed in a metal 34- by 34-inch shelter over a 24-inch-diameter, 10-foot long, corrugated metal stilling well. The stilling well is recessed into the left streambank and is accessed by a 4- by 8-foot expanded metal walkway. The walkway also serves as a support for the well and is anchored into the bank with steel angle-iron braces. Outside and inside staff gages are available as references to the gage datum. An electric-tape gage was installed as an additional reference gage on July 9, 1998. A peak stage indicator clip was attached to the float tape on March 17, 1998.

Gage-Height Record.-- The water-stage recorder, which is referenced to the inside staff and electric-tape gages, gave a complete and satisfactory record for water year 2004, except October 8, 2003, and February 24, March 4, April 4, June 29, July 25, and August 5, 2004, when silt was deposited in the well. This sediment commonly accumulates during the recession of a hydrograph and may suspend the recorder float above the channel bottom elevation, as happened each of the days listed above. The final hours of each of these day's flow hydrographs were estimated by graphical methods with little loss in accurracy, and the estimated gage heights were re-entered into the database to compute a mean daily discharge. No flows occur at this site without substantial rainfall or snowmelt runoff in the upper drainage basin. This station recorded gage heights continuously during the entire water year. Prior to water year 1999, it was not operated during the winter months.

Rating.-- The channel is straight for at least 1,000 feet upstream and downstream from the gage. Steep cut banks on both sides of the channel are approximately 4 feet high and partially covered with vegetation. The channel bottom is approximatley 30 feet wide and is comprised of very loose sand that is prone to extreme shifting. The channel bottom elevation, or PZF, may change many times throughout the year and is critical in the determination of shift values because most flows cannot be measured. A hydrograph generally indicates the point of zero flow becuase ponded water remains in the stilling well long after flows cease. Field recordings of channel bottom elevations also confirm that the channel alternates between aggrading and scouring conditions.

Measuring conditions at this site are poor. Generally, low flows are shallow and characterized by high velocities and uneven measuring sections. Peak flows are flashy and change so quickly that mean gage heights for measurements are difficult to determine. High-water measurements are made by indirect methods. Even poorly rated measurements are often used to define a shift because measurements are so difficult to obtain at this site.

Rating 4.0 was developed in water year 1997 and began on October 1, 1996. The upper end of the rating is based on a theoretical step-backwater analysis and is verified by a slope-area indirect measurement (#22) on July 9, 1996. Rating 4.0 was used through

water year 2000. Measurements 56 and 57, completed in water year 2001, plot left (negative) of rating curve 4.0, as do all measurements from water year 2000, so a new rating, 5.0, was developed in water year 2001 and continued through water year 2004. Two measurements (#63-#64) were completed by the conventional current-meter method in water year 2004. A slope-area indirect measurement (#65) was also computed for the flow on August 4, 2004. The high-flow indirect measurement of 910 cubic feet per second verifies rating 5.0 within 2.1 percent. The poorly-rated measurement 63 indicates a shift of -0.20 feet to rating 5.0, but since measuring accuracy at this site is very poor for discharges under 0.5 cubic feet per second, such as this, the shift was not used. More reliable measurements of PZF's were used to determine the shift value. Measurement 64 indicated a shift of +0.28 feet to rating 5.0, and because it was rated good, the shift value was applied during that time period. Because of the extremely variable sand channel, most flows scour or aggrade the bed slightly, making developement of a standard rating curve difficult.

Discharge.-- During water year 2004, 33 no-flow site visits and 3 discharge measurements were completed. The instantaneous peak stage and discharge for the water year were 6.49 feet and 929 cubic feet per second, respectively, on August 4, 2004.

A negative shift was being applied to rating 5.0 at the end of water year 2003. This -0.05 foot shift correction was based on channel bottom elevations measured during field inspections that were approximately 0.05 foot higher than the rated PZF gage height of 2.75 feet. Beginning with the recession of the October 7-8 hydrograpgh, a negative 0.15-foot shift was applied because channel aggradation raised the point of zero flow to approximately 2.90 feet. Generally, aggradations occur as the discharge decreases and sediment drops out of suspension. Field inspections indicated that the channel bottom remained fairly undisturbed until the flow of April 2-3, 2004. Measurement 64, completed on April 3 indicated a positive 0.28-foot shift and PZF readings of approximately 2.45 feet confirm this shift value. The negative 0.15-foot shift was prorated to the positive 0.28-foot shift during the rise of the hydrograph, which is normally when scouring occurs. The PZF remained at a gage height of approximately 2.45 feet until the peak of year on August 4, 2004. The PZF was scoured to a gage height of approximately 1.75 feet, inidcating a positive 1.00-foot shift to rating 5.0. This shift change was prorated from a positive 0.28 foot to 1.00 foot during the rising limb of the hydrograph on August 4. This +1.00-foot shift was continued through the end of the water year.

Remarks.-- Records good except when the stilling well silted, resulting in estimated gage heights during the falling side of the hydrograph. The estimated daily mean discharges for these 7 days are considered "fair record".

08330600 TIJERAS ARROYO NEAR ALBUQUERQUE, NM

LOCATION.--Lat 35°00'10", long 106°38'53", in SW 1/4 SW 1/4 sec.17, T.9 N., R.3 E., Bernalillo County, Hydrologic Unit 13020203, on left bank 800 ft upstream from bridge on Broadway Boulevard SE, 0.2 mi downstream from bridge on Interstate Highway 25, and 3.0 mi south of Albuquerque.

DRAINAGE AREA.--128 mi^2.

PERIOD OF RECORD.--October 1951 to September 1968 (annual maximum only), August 1974 to September 1998 (seasonal records), October 1998 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 4,999 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Mar. 10, 1988, at site 1,700 ft downstream at different datum.

REMARKS.--Records good except for those estimated, which are fair.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	5.1	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	88	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	e15	e3.2	0.00	0.00	0.00	58	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e1.3	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	e5.9	0.00	0.00	0.00	0.00	0.00	7.3	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	6.7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	0.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	2.3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.7	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.2
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.9	0.00	0.00
23	0.00	0.00	0.00	0.00	16	0.00	0.00	0.00	0.00	40	0.00	0.00
24	0.00	0.00	0.00	0.00	e16	0.00	0.00	0.00	0.00	1.4	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e3.8	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	21	0.03	0.00	0.00
29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e4.1	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	50.00	2.75	0.00	0.00	32.00	15.00	103.60	0.00	25.10	52.13	61.00	1.20
MEAN	1.61	0.09	0.00	0.00	1.10	0.48	3.45	0.00	0.84	1.68	1.97	0.04
MAX	37	2.3	0.00	0.00	16	15	88	0.00	21	40	58	1.2
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	99	5.5	0.00	0.00	63	30	205	0.00	50	103	121	2.4

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1999 - 2004, BY WATER YEAR (WY)

MEAN	0.70	0.09	0.00	0.00	0.22	0.29	0.59	0.01	0.30	0.49	1.47	0.08
MAX	2.20	0.21	0.00	0.00	1.10	1.21	3.45	0.03	0.84	1.68	4.35	0.16
(WY)	(2001)	(2003)	(1999)	(1999)	(2004)	(2003)	(2004)	(2001)	(2004)	(2004)	(1999)	(2003)
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.28	0.03
(WY)	(2000)	(1999)	(1999)	(1999)	(1999)	(2001)	(2000)	(1999)	(2002)	(2003)	(2003)	(2000)

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1999 - 2004	
ANNUAL TOTAL	125.21		342.78			
ANNUAL MEAN	0.34		0.94		0.36	
HIGHEST ANNUAL MEAN					0.94	2004
LOWEST ANNUAL MEAN					0.06	2000
HIGHEST DAILY MEAN	37	Oct 7	88	Apr 3	88	Apr 3, 2004
LOWEST DAILY MEAN	0.00	Jan 1	0.00	Oct 1	0.00	Oct 1, 1998
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00	Oct 12	0.00	Oct 1, 1998
MAXIMUM PEAK FLOW			929	Aug 4	a2,930	Jul 9, 1988
MAXIMUM PEAK STAGE			6.49	Aug 4	b9.60	Jul 9, 1988
ANNUAL RUNOFF (AC-FT)	248		680		257	
10 PERCENT EXCEEDS	0.00		0.00		0.00	
50 PERCENT EXCEEDS	0.00		0.00		0.00	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

a From rating curve extended above 10 ft^3/s, on basis of step-backwater analysis, and slope-area measurement.
b From floodmarks.
e Estimated

08330775 SOUTH DIVERSION CHANNEL ABOVE TIJERAS ARROYO NEAR ALBUQUERQUE, NEW MEXICO

STATION ANALYSIS

WATER YEAR 2004

Equipment.-- An electronic datalogger and pressure transducer, recording on 5-minute intervals, are housed in a concrete block, walk-in shelter on the left bank where the earthen channel upstream becomes entirely concrete lined. The gage is located approximately 0.3 mile downstream from the Murray Road bridge, which is 0.2 miles west of South Broadway Boulevard. An outside staff gage is the reference gage. On April 30, 1999, the lower staff gage was moved to the right bank and a crest-stage gage (CSG) was mounted to the staff support. The lower CSG cap lip elevation is 1.69 feet. A satellite transmitter was installed on May 1, 2003, and updates the USGS web site every 4 hours.

Gage-Height Record.-- The recorder gave a complete and satisfactory record for water year 2004 except for the following periods. Ice formed over the pressure transducer orifice which caused erroneous gage height readings on December 21-29, and 31, 2003, and January 1-7, 2004. Daily mean discharges were estimated for these periods based on precipitation falling in the watershed and base flows prior to and after the affected dyas. During the flow on April 3, 2004, an oil spill occurred approximately 1 mile upstream of the gage. On April 5, AMAFCA maintenance crews constructed an earthen dam immediately downstream of the gage in an effort to contain the spill and assist in clean-up procedures. The earthen dam was washed out by the flow of April 8 , then re-built on approximately April 13. Daily mean discharges were estimated for April 5-6, and 8, however, the flow on April 11 was unaffected. No flows occurred between April 11 and June 29 when the dam was washed out for the final time. The gage-height plot for June 29clearly shows when the embankment was breached, so corrections could be applied with little loss in accuracy. Daily mean discharges were estimated for July 23-24 because the large flow tore the orifice pipe from its concrete anchors. It was repaired on July 27. The instantaneous peak-of year gage height and discharge for July 23 was accurately computed based on excellent high-water marks present near the gage. Prior to May 3, 1999, only gage heights above 0.11 feet were recorded because the orifice line was mounted on top of the concrete channel bottom. On May 3, 1999, the orifice was mounted on the upstream face of the concrete channel apron and below the Point of Zero Flow (PZF). A 1.00-foot datum was added to recorded gage heights to prevent negative readings during dry periods.

Rating.-- The control for this station is the upstream lip of the concrete-lined trapezoidal channel. The concrete-lined portion of the channel starts at the orifice mount. Upstream from the gage, the channel is an earthen bottom, trapezoidal shape. The bottom width of the channel is 16 feet. The slope of the sides is approximately 35 degrees. The depth of the channel is approximately 18 feet. New ratings 5.0 and 5.1 were developed in water year 2002. They are basically the same as rating 4.0 except the multiple input points used in rating 4.0, which caused an irregular-shaped line, were eliminated in ratings 5.0 and 5.1. The new ratings more closely approximated actual discharge measurements. Rating

5.1 is the same as 5.0 except that a 1.00-foot datum is added to all gage heights to prevent negative readings during dry periods. No shift corrections were applied to rating 5.1 this water year because of the stable nature of the channel at the gage and control.

Discharge.--Discharges were computed using rating 5.1 directly, with no shifts, for the entire water year. The channel bottom normally remains clear; therefore, shifts are rarely required at this site.

During water year 2004, 35 site inspections were completed. The maximum instantaneous stage and discharge during this water year occurred on July 23, 2004, and were 6.70 feet and 1,300 cubic feet per second, respectively.

08330775 SOUTH DIVERSION CHANNEL ABOVE TIJERAS ARROYO NEAR ALBUQUERQUE, NM

LOCATION.--Lat 35°00'10", long 106°39'26", Bernalillo County, Hydrologic Unit 13020203, on right bank 600 ft upstream from confluence with Tijeras Arroyo, and 2.5 mi south of Albuquerque.

DRAINAGE AREA.--11.0 mi^2.

PERIOD OF RECORD.--June 1988 to current year.

GAGE.--Water-stage recorder, crest-stage gage, and concrete control. Elevation of gage is 4,930 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except for those estimated, which are poor.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.07	0.56	e0.30	0.71	0.04	0.00	0.00	0.00	0.02	0.00	0.00
2	0.00	0.15	0.44	e0.30	0.64	0.00	2.6	0.00	0.00	0.00	0.00	0.00
3	0.00	0.01	0.22	e0.30	0.43	0.48	93	0.00	0.00	0.00	0.00	0.00
4	0.00	0.14	0.32	e0.30	0.47	19	3.4	0.00	0.00	0.00	0.00	0.00
5	0.22	0.26	0.19	e0.30	0.27	2.0	e0.50	0.00	0.00	0.00	0.00	0.00
6	0.44	0.17	0.46	e0.40	0.00	0.42	e0.00	0.00	0.00	0.00	0.00	0.00
7	24	0.00	0.80	e0.40	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00
8	10	0.05	0.78	0.52	0.00	0.00	e2.9	0.00	0.00	0.00	0.00	0.00
9	0.95	0.28	0.44	0.40	0.00	0.00	0.33	0.00	0.00	0.00	0.00	0.00
10	3.4	0.33	0.44	0.26	0.00	0.00	1.1	0.00	0.00	0.00	0.00	0.00
11	3.9	0.27	0.57	0.63	0.00	0.00	1.6	0.00	0.00	0.00	0.79	0.00
12	0.55	0.80	0.76	0.46	0.00	0.00	0.03	0.00	0.00	1.4	0.16	0.00
13	0.42	7.8	0.74	0.30	0.00	0.00	0.00	0.00	0.00	3.0	0.05	0.00
14	0.18	0.80	0.55	0.01	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00
15	0.00	0.44	0.50	0.28	0.00	0.00	0.00	0.00	0.00	2.8	0.00	0.00
16	0.00	0.45	0.38	0.42	0.00	0.00	0.00	0.00	0.00	4.2	0.00	0.00
17	0.00	0.65	0.34	0.27	0.00	0.00	0.00	0.00	0.00	0.11	0.00	0.00
18	0.00	0.49	0.44	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	0.15	0.51	0.51	0.49	0.00	0.00	0.00	0.00	0.00	0.04	0.00	19
20	0.27	0.36	0.30	0.44	0.00	0.00	0.00	0.00	0.00	0.17	0.00	10
21	0.18	0.06	e0.30	0.77	0.00	0.07	0.00	0.00	0.00	0.18	0.00	0.35
22	0.21	0.00	e0.30	0.53	0.20	0.13	0.00	0.00	0.00	5.5	0.00	0.00
23	0.23	0.37	e0.30	0.46	12	0.00	0.00	0.00	0.00	e230	0.00	0.00
24	0.17	0.62	e0.30	0.51	17	0.49	0.00	0.00	0.00	e70	0.00	0.00
25	0.00	0.56	e0.30	0.73	0.63	0.08	0.00	0.00	0.00	0.00	0.00	0.00
26	0.24	0.42	e0.30	0.69	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.37	0.47	e0.30	0.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	0.49	0.60	e0.30	0.47	0.50	0.00	0.00	0.00	0.00	2.1	0.00	0.00
29	0.94	0.71	e0.30	0.33	0.56	0.00	0.00	0.00	14	0.12	0.00	0.00
30	0.29	0.73	0.37	0.38	---	0.00	0.00	0.00	0.59	0.00	0.00	0.00
31	0.01	---	e0.30	0.54	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	47.61	18.57	13.11	13.04	33.49	22.74	105.46	0.00	14.59	319.69	1.00	29.35
MEAN	1.54	0.62	0.42	0.42	1.15	0.73	3.52	0.00	0.49	10.3	0.03	0.98
MAX	24	7.8	0.80	0.77	17	19	93	0.00	14	230	0.79	19
MIN	0.00	0.00	0.19	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	94	37	26	26	66	45	209	0.00	29	634	2.0	58

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1994 - 2004, BY WATER YEAR (WY)

MEAN	0.95	0.73	0.10	0.09	0.22	0.39	0.42	0.21	0.47	1.57	1.29	0.83
MAX	2.88	4.50	0.42	0.42	1.15	1.56	3.52	1.83	3.14	10.3	4.65	2.79
(WY)	(1995)	(1995)	(2004)	(2004)	(2004)	(2003)	(2004)	(1994)	(1996)	(2004)	(1994)	(1997)
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.03	0.00
(WY)	(2002)	(1996)	(1994)	(1994)	(1996)	(1996)	(1994)	(1995)	(1995)	(2002)	(2004)	(1998)

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1994 - 2004	
ANNUAL TOTAL	158.29		618.65			
ANNUAL MEAN	0.43		1.69		0.61	
HIGHEST ANNUAL MEAN					1.69	2004
LOWEST ANNUAL MEAN					0.15	2002
HIGHEST DAILY MEAN	24	Mar 21	230	Jul 23	230	Jul 23, 2004
LOWEST DAILY MEAN	0.00	Jan 1	0.00	Oct 1	0.00	Oct 1, 1993
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00	Feb 6	0.00	Oct 9, 1993
MAXIMUM PEAK FLOW			1,300	Jul 23	a1,960	Jul 14, 1990
MAXIMUM PEAK STAGE			6.70	Jul 23	6.70	Jul 23, 2004
ANNUAL RUNOFF (AC-FT)	314		1,230		441	
10 PERCENT EXCEEDS	0.61		0.73		0.33	
50 PERCENT EXCEEDS	0.00		0.00		0.00	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

a From rating curve extended above 30 ft^3/s, on basis of step-backwater analysis.
e Estimated

08331118 AMOLE DEL NORTE CHANNEL AT ALBUQUERQUE, NEW MEXICO

WATER YEAR 2004

Equipment.--. An electronic datalogger and pressure transducer, recording on 5-minute intervals, are housed in a metal, 2.5- by 2.5- by 6-foot shelter on the right bank of the concrete-lined channel, approximately 100 feet south of the Blake Road bridge. The site is approximately 0.5 mile west of Coors Boulevard on Albuquerque's southwest side. The 30-foot orifice line is housed in a 3/4-inch-diameter galvanized pipe anchored to the side wall of the channel. A concrete, broad-crested weir 980 feet downstream from the gage is the control. The top of the control wall is 1.0 foot higher than the elevation of the channel bottom at the gage because the channel slope is a very flat 0.0007 foot per foot. Because of this gentle slope, sediment accumulates in the channel bottom at the gage. An outside staff gage is painted on the channel side slope for reference. The point of zero flow (PZF) is referenced to a hex-head lag bolt anchored in the channel bottom outlined by a chiseled square. The PZF elevation is 1.00 foot. A crest-stage gage is mounted to the right channel sidewall and is inclined 26.5 degrees from horizontal. The elevation of the crest-stage gage cap is 2.14 feet referenced to the PZF. Low-water wading measurements are made in the vicinity of the gage.

Gage-Height Record.-- The water-stage recorder, referenced to the PZF bolt in the bottom of the channel or the outside staff gage, gave a complete and satisfactory record during water year 2004. Substantial rainfall is necessary to produce runoff at this site. No other gage exists on this particular channel, therefore, no hydrographic comparisons are possible.

The recorder senses only water levels greater than 0.30 foot deep (1.30-foot recorded gage height) because the orifice pipe is mounted 0.30 foot above the channel bottom to prevent siltation problems. At a gage height of 1.31 feet, the computed discharge is 0.17 cubic feet per second.

Rating.--The channel is concrete lined and trapezoidal shape at the gage, but the gage pool is controlled by a 40-foot-wide, broad-crested concrete weir 980 feet downstream. A one-foot-wide notch is cut into the weir wall and is the low-flow control. The channel is straight for at least 1,000 feet upstream and 980 feet downstream from the gage. A theoretical rating was developed using a step-backwater analysis and the U.S. Geological Survey Water Surface Profile (WSPRO) software. This site was measured for the first time in water year 2001, which better defined the low end of the rating. Measurements are difficult to obtain because of the flashy nature of this channel. All four measurements in water year 2001 plotted significantly left of theoretical rating 1.0, so a new rating, 2.0, was developed in water year 2001. The new rating breaks to the right at a gage height of approximately 2.12 feet, or the level at which broad-crested weir flow begins. The new rating curve gradually blends into the old theoretical rating by a stage of 9.38 feet.

One measurement, number 5, was completed in water year 2002. It plotted within 1.4 percent of rating 2.0. Because the channel is concrete lined and the control weir was clear

at the time of this measurement, no shift was needed. Three additional measurements (12-14) were completed in water year 2004 during identical, free-flowing control conditions and all plot within 7 percent of rating 2.0, further varifying the stage-discharge relationship. The small measurement variation from the rating curve is due to inherent errors in the measuring process.

The weir control is subject to debris accumulations, which affect the low flow rating if the 1-foot notch in the control wall is obstructed. Two shifts were applied in water year 2004 because the low-flow notch of the weir was obstructed with debris. Measurements (#6-8) completed on October 22, 2002, represent the condition when debris partially blocks the low-flow notch and affects stage readings at the gage. These 3 measurements defined a single average shift curve to rating 2.0 with a base shift value of negative 0.10 foot. An assumption is made that this effective shift value is approximately the same whenever the low-flow weir notch is partially obstucted. Field personnel identified this type of control condition for the period July 22-24, 2004, however no discharge measurements were completed, so the -0.10-foot shift was applied for this period based on the October 2002 measurements.

Measurements 9 and 10 were completed February 13, 2003, when the low-flow notch was completely blocked by debris. Both measurements defined an average shift of -0.30 foot to rating 2.0. In water year 2004, measurement 11 occurred during the same, fully-blocked control condition and a negative 0.29-foot shift was computed. These 3 measurements are the basis for the assumption that, if no discharge measurements are available, a -0.30-foot shift is applied when a fully-blocked control condition occurs.

Discharge.-- Rating 2.0 was applied directly without shifts at the end of water year 2003 and into water year 2004 (until February 23) because the control weir remained clear of debris. Field inspections noted full blockage of the low-flow weir notch immediately after the flow on February 23, 2004. This condition remained during measurement 11 on March 4, which defined a negative 0.29-foot shift. The channel and control were cleared on April 3, 2004, immediately before measurements 12-14 were completed. The debris causing the -0.29-foot shift washed in during the flow on February 23, so it was prorated from zero as gage heights rose. The shift remained -0.29 foot until April 3 when the control was cleared. The field inspection on July 24 described a partially obstructed low-flow control. As noted in the "Rating" paragraph above, since no measurements were possible, a -0.10-foot shift is applied under these conditions. This shift value was prorated on during the rise of the large flow on July 22 and removed when the debris was cleared on July 24. Field inspections between July 24 and October 12, 2004 confirmed that the weir remained clear, so no shifts were necessary.

During water year 2004, 22 site inspections and 4 measurement were completed. The instantaneous peak stage and discharge for water year 2004 were 4.29 feet and 259 cubic feet per second, respectively, on July 22, 2004.

Remarks.-- No flows will occur until significant precipitation falls in the watershed. No other gages exist in this watershed for comparison purposes, so precipitation records are the only source available to estimate discharges at this site. The record in water year 2004 is good.

08331118 AMOLE DEL NORTE CHANNEL AT ALBUQUERQUE, NM

LOCATION.--Lat 35°02'14", long 106°43'15", Bernalillo County, Hydrologic Unit 13020203, in Atrisco Grant, on right bank of concrete-lined channel 100 ft south of Blake Road and 2,500 ft west of intersection of Blake Road and Coors Blvd. in southwest Albuquerque.

DRAINAGE AREA.--6.302 mi^2.

PERIOD OF RECORD.--April 2000 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 4,997 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.01	3.6	0.00	0.00	0.00	0.28	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	27	0.00	0.08	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	5.2	2.1	0.00	0.00	0.00	0.00	0.22
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	3.4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	1.2	0.00	0.00	0.00	0.00	0.00	1.1	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	2.6	0.00	0.00	0.00	0.00	0.00	1.3	0.00	0.00	0.00	1.1	0.00
11	3.2	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00
12	0.61	1.7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.96	0.00	0.00
13	0.00	0.84	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.2	0.14	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.17
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	2.5
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.02	0.23
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.5	0.00	0.00
23	0.00	0.00	0.00	0.00	2.7	0.00	0.00	0.00	0.00	1.6	0.00	0.00
24	0.00	0.00	0.00	0.00	1.3	0.00	0.00	0.00	0.00	2.5	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.84	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00
29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.0	0.00	0.09	0.00
30	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.01	0.00	0.00
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	11.01	2.54	0.00	0.00	4.00	5.21	35.13	0.00	2.14	33.16	1.66	3.12
MEAN	0.36	0.08	0.00	0.00	0.14	0.17	1.17	0.00	0.07	1.07	0.05	0.10
MAX	3.4	1.7	0.00	0.00	2.7	5.2	27	0.00	2.0	16	1.1	2.5
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	22	5.0	0.00	0.00	7.9	10	70	0.00	4.2	66	3.3	6.2

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2000 - 2004, BY WATER YEAR (WY)

MEAN	0.31	0.19	0.02	0.06	0.05	0.13	0.32	0.11	0.09	0.57	0.24	0.15
MAX	0.76	0.50	0.03	0.23	0.14	0.23	1.17	0.38	0.35	1.07	0.75	0.53
(WY)	(2001)	(2001)	(2001)	(2001)	(2004)	(2003)	(2004)	(2000)	(2000)	(2004)	(2002)	(2002)
MIN	0.01	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05	0.00
(WY)	(2002)	(2004)	(2004)	(2003)	(2001)	(2002)	(2003)	(2003)	(2003)	(2002)	(2004)	(2000)

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 2000 - 2004	
ANNUAL TOTAL	46.79		97.97			
ANNUAL MEAN	0.13		0.27		0.18	
HIGHEST ANNUAL MEAN					0.27	2004
LOWEST ANNUAL MEAN					0.11	2003
HIGHEST DAILY MEAN	18	Jul 20	27	Apr 3	27	Apr 3, 2004
LOWEST DAILY MEAN	0.00	Jan 1	0.00	Oct 1	0.00	Apr 20, 2000
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00	Oct 13	0.00	Apr 20, 2000
MAXIMUM PEAK FLOW			259	Jul 22	366	Jul 20, 2003
MAXIMUM PEAK STAGE			4.29	Jul 22	4.81	Jul 20, 2003
ANNUAL RUNOFF (AC-FT)	93		194		127	
10 PERCENT EXCEEDS	0.00		0.05		0.01	
50 PERCENT EXCEEDS	0.00		0.00		0.00	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

RAINFALL DATA SUMMARY,

WATER YEAR 2004

(arranged alphabetically)

Precipitation for Water Year 2004

The following section presents daily precipitation totals for the 40 rain gages in the Urban Runoff Program. A station analysis, which lists detailed location descriptions, equipment, and period of data record, is also included for each rain-gage location**.** In addition, the station analysis describes data problems and how data estimates were made.

Precipitation Totals For Water Year 2004

During water year 2004, 39 rain gages were operated continuously over the entire year; the Rio Rancho Well #13 (site ID 50 in table 1) rain gage was not established until August 2004. Averaged over the 39 rain gages that were operated continuously in the metropolitan area, approximately 13.1 inches of rain fell over Albuquerque during water year 2004. However, the variation in both spatial and temporal distribution of rainfall in the Albuquerque area is large. For example, the rain gage at Bear Canyon (site ID 1) in the Sandia foothills measured more than 19 inches of rain for water year 2004, while the rain gage at Tijeras Arroyo (site ID 25), located approximately 12 miles southwest of the rain gage at Bear Canyon, measured less than 10 inches of rain for water year 2004.

The variation in spatial distribution of annual precipitation over the USGS rain-gage network is illustrated in figure 4, which shows water year 2004 precipitation totals for 39 of the USGS rain gages. The rain gage at Well #13 near Rio Rancho (site ID 50 in table 1) is not included in the figure because it did not have a complete data record for water year 2004. Additionally, annual precipitation totals from the Walker Pump Station (site ID 10), Kirtland Air Force Base (site ID 14), North Camino Arroyo (site ID 18), North Floodway near Alameda (site ID 26), San Jose Drain (site ID 33), Albuquerque City Hall (site ID 34), Taylor Ranch Drain (site ID 37), and Swinburn Dam (side ID 38) rain gages include days with estimated daily totals; details about data estimates are given in the station analysis.

The combined precipitation for July through September for water year 2004 is also shown in figure 4. In general, a disproportionate amount of total annual precipitation in Albuquerque falls in July through September due to the onset of the southwestern monsoon, during which moisture-laden air is drawn into Mexico and the southwestern United States from the Gulf of California and the Gulf of Mexico (Adams and Comrie, 1997). During water year 2004, the average monthly precipitation for July through September was 1.45 inches, while the average monthly precipitation for October through June was 0.97 inches.

The station locations shown in figure 4 are listed, from left to right, in order of increasing longitude. Although not readily apparent in figure 4, there is a slight increasing total precipitation trend in an eastward direction, or towards the Sandia Mountains. This precipitation trend, although modest, is not surprising because the increasing elevation forces an increase in convection and consequently creates more uplift of water vapor to the condensation level.

Comparison to Historical Data

Due to the large variation in precipitation distribution across the metropolitan area, using an annual average of the entire rain-gage network to determine if water year 2004 was a “wet” or

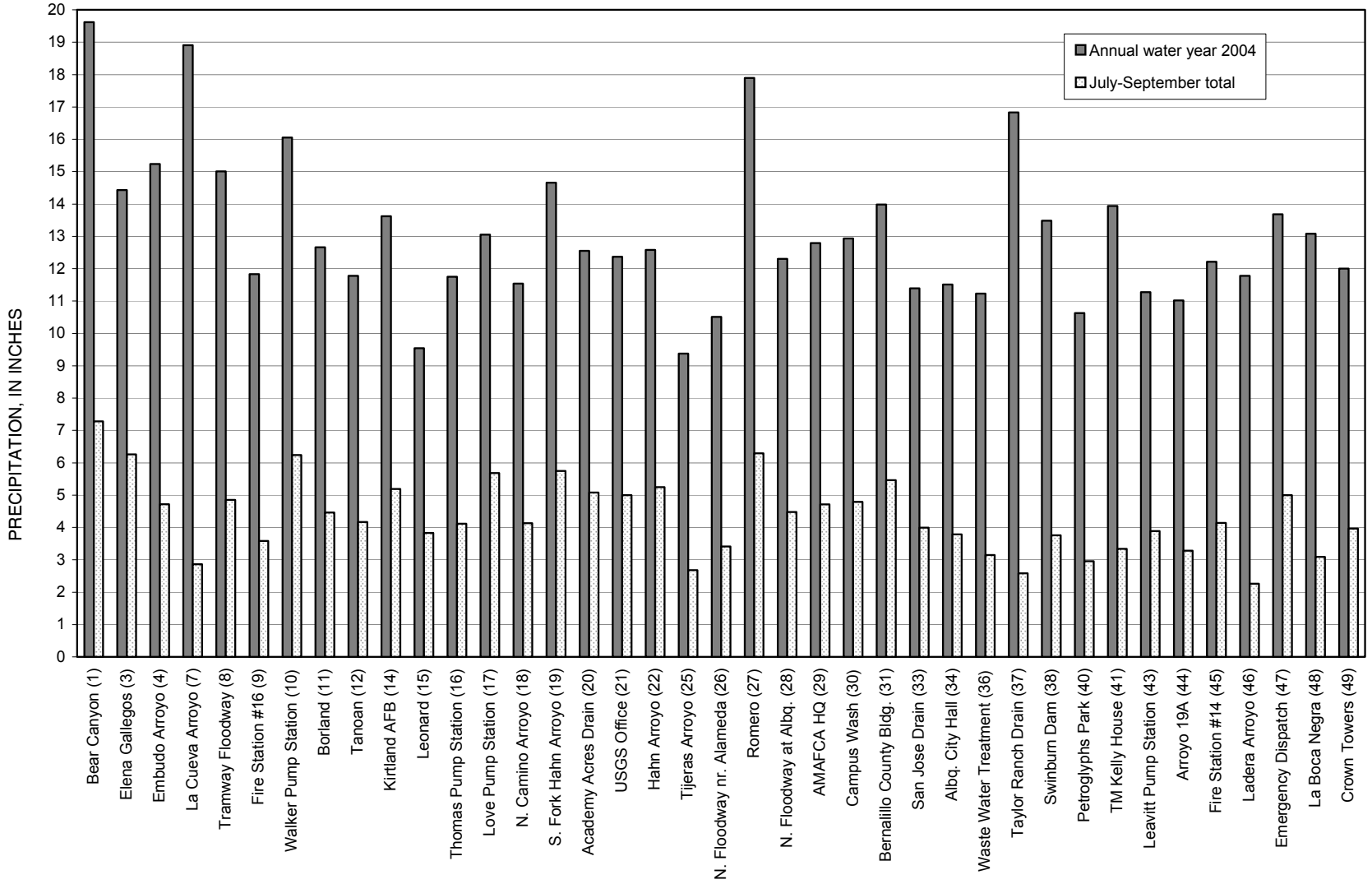

Figure 4. Precipitation totals for water year 2004 in comparison to totals for July through September 2004 at 39 U.S. Geological Survey rain gages. The gages are listed by name and site ID number from table 1.

dry"year is less than ideal. Instead, it is more meaningful to compare water year 2004 precipitation data with historical precipitation data sampled over the same spatial and temporal scales. For this reason, seven rain gages in the USGS network were selected to give a good geographic representation of the 40 rain gages in the Albuquerque metropolitan area: Bear Canyon Arroyo (site ID 1) in the Sandia Mountains foothills, Leonard (site ID 15) in northeast Albuquerque, North Camino Arroyo Tributary(site ID 18) in the far northeast heights, Tijeras Arroyo (site ID 25) in southern Albuquerque, City Hall (site ID 34) in central Albuquerque, Taylor Ranch Drain (site ID 37) in the northwest, and Fire Station 14 (site ID 45) in southwestern Albuquerque.

Figure 5 compares total annual precipitation for water year 2004 to average historical total annual precipitation at each of the selected seven rain gages. With the exception of the North Camino Arroyo rain gage, the remaining six selected rain gages averaged about 30 percent above average precipitation for water year 2004; the North Camino rain gage recorded about 30 percent below average precipitation for the water year.

Precipitation during water year 2004 for the seven selected rain gages is also compared to historical precipitation on a monthly basis. Figures 6-9 show total monthly precipitation, for both water year 2004 and for each water year in the historical USGS precipitation record, and the average historical monthly precipitation at each of the seven selected rain gages. Data point symbols in these figures are centered over their corresponding values. Also, because the data record from these selected stations varies from less than 10 years to over 20 years of historical data, the number of historical data points for each gage varies accordingly.

Generally, monthly totals for water year 2004 at these seven selected rain gages were above corresponding historical averages. Specifically, February 2004 and April 2004 were exceptionally wet months in the Albuquerque metropolitan area, during which all seven selected rain gages recorded above-average precipitation totals. In fact, both February and April were period-of-record monthly maximums for the Bear Canyon, Tijeras, Albuquerque City Hall and Taylor Ranch rain gages; February was also a period-of-record monthly maximum at the Fire Station #14 rain gage. In contrast, although May is typically a very dry month in Albuquerque, May 2004 was an exceptionally dry month; none of the seven selected rain gages recorded precipitation during this month and only 0.06 inch of precipitation was recorded across the *entire* network of USGS rain gages that were operational during May.

Finally, precipitation during the monsoonal months of July, August, and September was about normal; the mean total precipitation measured at the seven selected rain gages during these three months was 98% of the corresponding historical 3-month average. Although precipitation during the month of July was well above the historical monthly average at each of the selected rain gages, precipitation during the month of August was conversely well below the historical monthly average at every selected rain gage except Bear Canyon Arroyo. Combined with nearly average September precipitation at each of the selected rain gages, the wet July countered by a dry August resulted in very near normal monsoonal precipitation during water year 2004.

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Adams, D.K., and A.C. Comrie, 1997: The North American monsoon. *Bull. Amer. Meteor. Soc.*, **78**, 2197-2213.

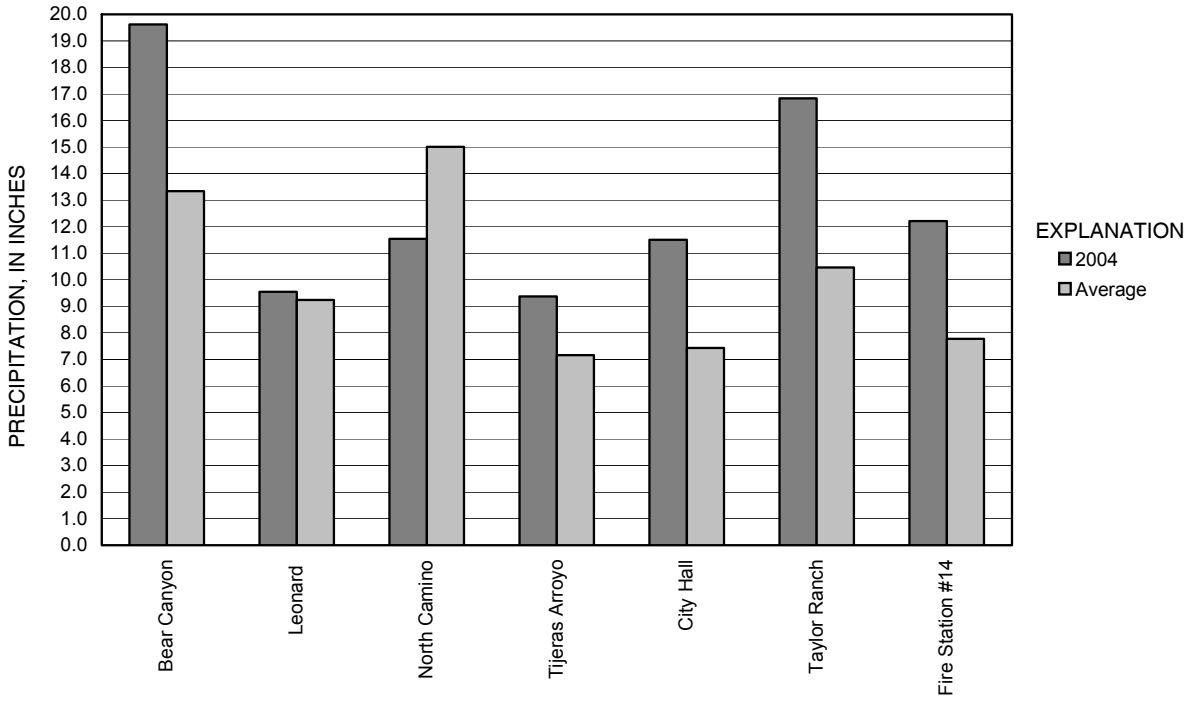

Figure 5. Comparison of total annual precipitation for water year 2004 to average historical total annual precipitation at selected U.S. Geological Survey rain-gage sites. Location of gages in figure 1.

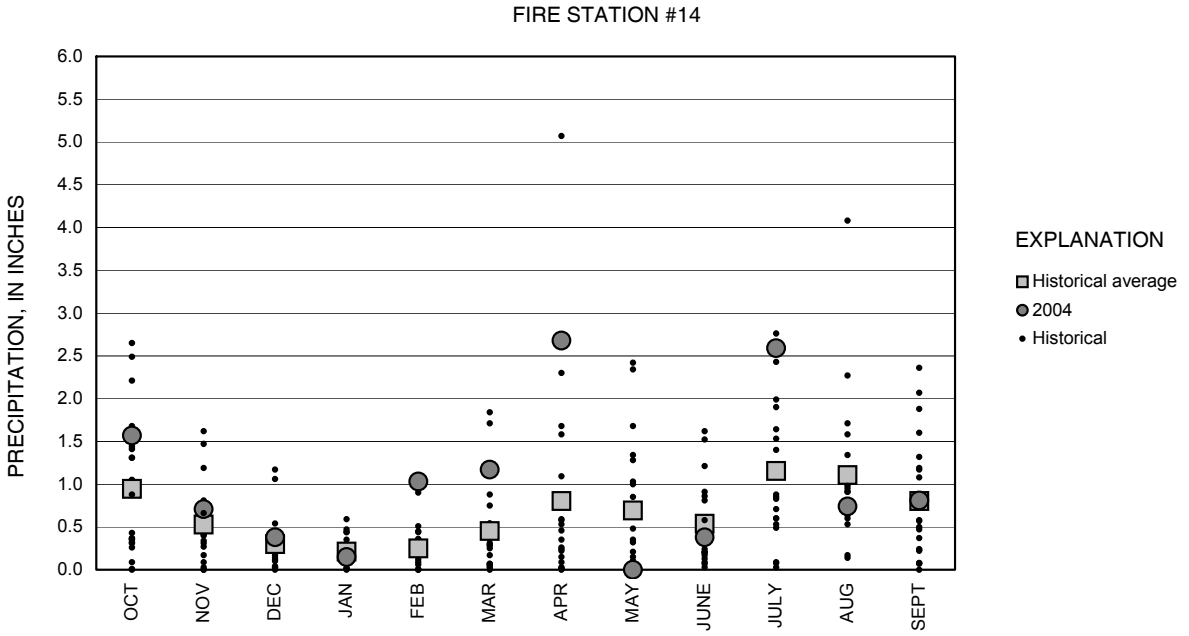

Figure 6. Monthly precipitation at the Fire Station #14 rain-gage site. Location of gage in figure 1.

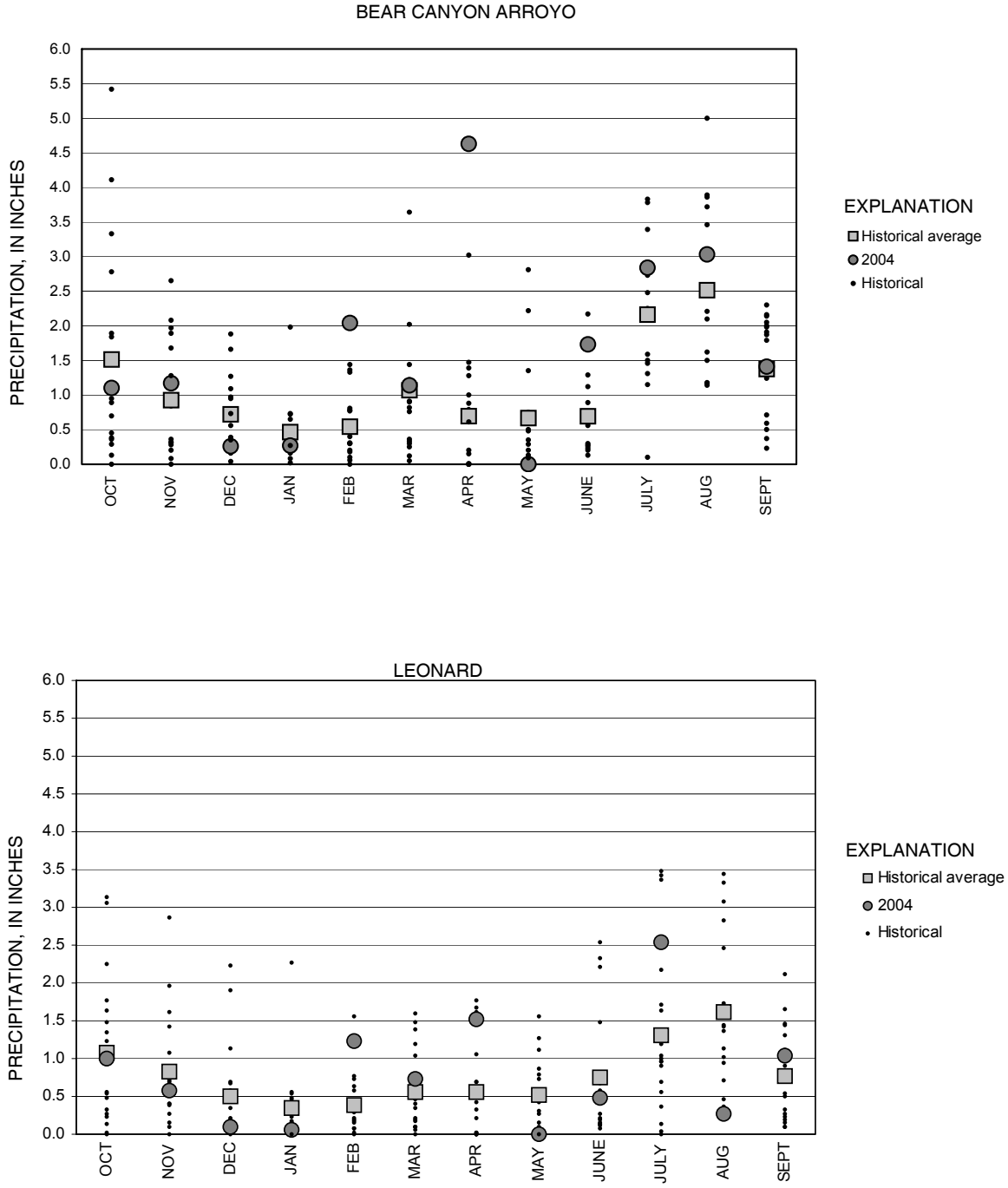

Figure 7. Monthly precipitation at selected U.S. Geological Survey rain-gage sites. Location of gages in figure 1.

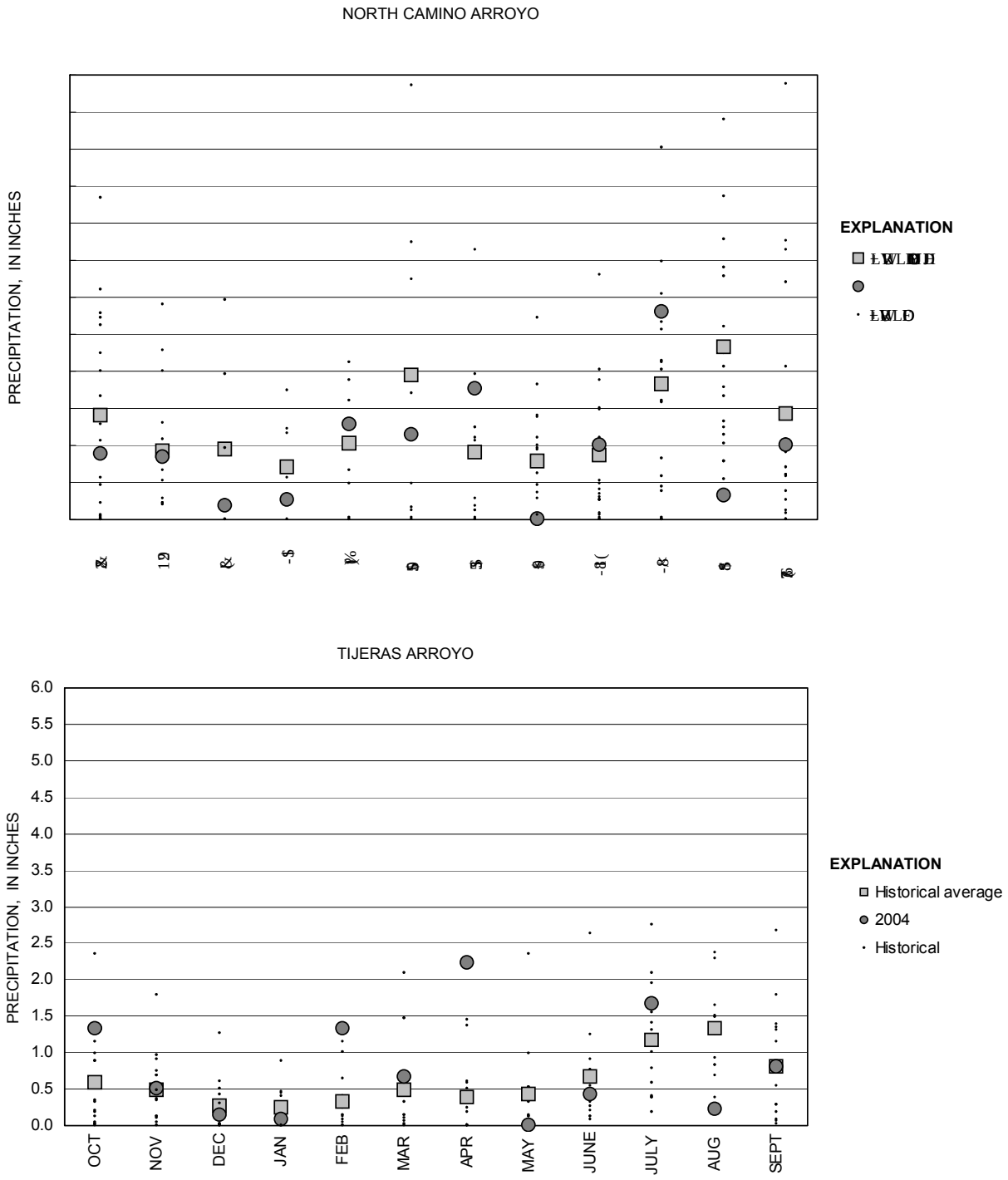

Figure 8. Monthly precipitation at selected U.S. Geological Survey rain-gage sites. Location of gages in figure 1.

08329880 ACADEMY ACRES DRAIN RAIN GAGE AT ALBUQUERQUE, NEW MEXICO
STATION ANALYSIS
WATER YEAR 2004

Location.--35°09'04"N, 106°34'23"W. Rain gage is located in northeast Albuquerque on Burlison Drive, approximately 0.5 mile north of intersection with Academy Road, approximately 1 mile east of San Mateo Boulevard.

Equipment.--Onset Corporation HOBO Event data recorder and 8.2-inch-diameter tipping bucket. The bucket tips one time per 0.01 inch of rain, and the recorder stores data at 5-minute intervals. The rain gage is calibrated approximately every 2 years and was last calibrated in March 2003.

Record.--The rain gage gave a complete and satisfactory record for the entire water year.

Period of Record.--October 1985 to present.

Remarks.--Record is good for the entire water year.

PRECIPITATION, TOTAL, INCHES WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.16	0.22	0.00	0.00	0.00	0.08	0.00
3	0.12	0.00	0.00	0.00	0.00	0.01	0.86	0.00	0.00	0.00	0.00	0.00
4	0.05	0.00	0.00	0.00	0.04	0.78	0.13	0.00	0.00	0.00	0.19	0.03
5	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.97	0.00	0.02	0.00	0.00	0.00	0.22	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.24	0.00	0.00	0.00	0.02	0.00
11	0.06	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.12	0.00	0.00
12	0.01	0.71	0.15	0.00	0.00	0.00	0.00	0.00	0.00	1.19	0.00	0.00
13	0.00	0.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	1.00
20	0.00	0.00	0.00	0.14	0.00	0.00	0.00	0.00	0.00	0.13	0.00	0.04
21	0.00	0.00	0.00	0.01	0.08	0.00	0.00	0.00	0.00	0.01	0.00	0.00
22	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.10	0.00	0.00
23	0.00	0.00	0.00	0.00	0.71	0.03	0.00	0.00	0.00	0.98	0.00	0.00
24	0.00	0.00	0.00	0.00	0.23	0.00	0.00	0.00	0.00	0.17	0.00	0.00
25	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.28	0.00	0.00
26	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.12	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.45	0.00	0.00
28	0.00	0.00	0.00	0.00	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.47	0.00	0.00	0.24
30	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	1.30	1.09	0.17	0.27	1.23	1.03	1.79	0.00	0.59	3.43	0.31	1.34
MAX	0.97	0.71	0.15	0.14	0.71	0.78	0.86	0.00	0.47	1.19	0.19	1.00
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

CAL YR 2003 TOTAL 8.19 MAX 1.24 MIN 0.00
WTR YR 2004 TOTAL 12.55 MAX 1.19 MIN 0.00

350448106390230, ALBUQUERQUE CITY HALL RAIN GAGE AT ALBUQUERQUE, NEW MEXICO
STATION ANALYSIS
WATER YEAR 2004

Location.--35°05'15"N, 106°39'05"W. The rain gage is located in northwest Albuquerque on the roof of Albuquerque City Hall, just west of City Plaza.

Equipment.--Onset Corporation HOBO Event data recorder and 8.0-inch-diameter tipping bucket. The bucket tips one time per 0.01 inch of rain, and the recorder stores data at 5-minute intervals. Rain gage is calibrated approximately every 2 years and was last calibrated in March 2003.

Record.--The rain gage gave a complete and satisfactory record for the entire water year except for August 12 to September 1. During this period the rain gage was moved by unknown building maintenance personnel. Estimated daily totals for these days are the averages of daily totals from the Bernalillo County Building and Campus Wash rain gages.

Period of Record.--October 1994 to present.

Remarks.--Record is good for the entire water year, including days estimated as zero; other estimates are poor.

PRECIPITATION, TOTAL, INCHES, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00
2	0.00	0.00	0.00	0.00	0.00	0.10	0.41	0.00	0.00	0.00	0.06	0.00
3	0.09	0.00	0.00	0.00	0.01	0.00	1.67	0.00	0.00	0.00	0.00	0.00
4	0.03	0.00	0.00	0.00	0.00	0.65	0.09	0.00	0.00	0.00	0.00	0.07
5	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.21	0.00	0.01	0.00	0.00	0.00	0.26	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00
10	0.16	0.00	0.00	0.00	0.00	0.00	0.31	0.00	0.00	0.00	0.02	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00
12	0.00	0.48	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.21	e0.00	0.00
13	0.00	0.19	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	0.00
15	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.36	e0.09	0.00
16	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	e0.02	0.11
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	e0.02	0.52
20	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.07	e0.00	0.03
21	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.01	e0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	e0.00	0.00
23	0.00	0.00	0.00	0.00	0.78	0.02	0.00	0.00	0.00	1.06	e0.00	0.00
24	0.00	0.00	0.00	0.00	0.33	0.00	0.00	0.00	0.00	0.23	e0.00	0.00
25	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.32	e0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	e0.00	0.00
28	0.00	0.00	0.00	0.00	0.14	0.00	0.00	0.00	0.00	0.00	e0.00	0.00
29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.71	0.00	e0.03	0.02
30	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	e0.03	0.01
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	0.00	e0.00	---
TOTAL	1.26	0.67	0.13	0.13	1.28	0.79	2.75	0.00	0.71	2.75	0.28	0.76
MAX	0.77	0.48	0.11	0.06	0.78	0.65	1.67	0.00	0.71	1.06	0.09	0.52
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

CAL YR 2003 TOTAL 5.76 MAX 0.83 MIN 0.00
WTR YR 2004 TOTAL 11.51 MAX 1.67 MIN 0.00

e Estimated

350627106364630, AMAFCA HEADQUARTERS RAIN GAGE NR. ALBUQUERQUE, NEW MEXICO
STATION ANALYSIS
WATER YEAR 2004

Location.--35°06'27"N, 106°36'47"W. The AMAFCA headquarters are located in northeast Albuquerque, west of Carlisle Boulevard on Manual Boulevard behind the Summer Suites Hotel. The rain gage is in the maintenance yard.

Equipment.--Onset Corporation HOBO Event data recorder and 6.3-inch-diameter tipping bucket. The bucket tips one time per 0.01 inch of rain, and the recorder stores data at 5-minute intervals. Rain gage is calibrated approximately every 2 years and was last calibrated in March 2003.

Record.--The rain gage gave a complete and satisfactory record for the water year.

Period of Record.--September 1997 to present.

Remarks.--Record is good for the entire water year.

PRECIPITATION, TOTAL, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.10	0.37	0.00	0.00	0.00	0.09	0.00
3	0.11	0.00	0.00	0.00	0.02	0.01	1.44	0.00	0.00	0.00	0.00	0.00
4	0.02	0.00	0.00	0.00	0.00	0.71	0.07	0.00	0.00	0.00	0.06	0.05
5	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	1.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.21	0.00	0.01	0.00	0.00	0.00	0.25	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00
10	0.11	0.00	0.00	0.00	0.00	0.00	0.23	0.00	0.00	0.00	0.10	0.00
11	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.03	0.00
12	0.00	0.55	0.13	0.00	0.00	0.01	0.00	0.00	0.00	0.82	0.00	0.00
13	0.00	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00
15	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.45	0.00	0.00
16	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.09
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.83
20	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.03
21	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.88	0.08	0.00	0.00	0.00	1.03	0.00	0.00
24	0.00	0.00	0.00	0.00	0.26	0.00	0.00	0.00	0.00	0.10	0.00	0.00
25	0.00	0.00	0.00	0.10	0.02	0.00	0.00	0.00	0.00	0.36	0.00	0.00
26	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.00	0.00
28	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.00	0.01	0.05	0.00	0.00
29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.63	0.00	0.00	0.08
30	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.01	0.00
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	1.48	0.75	0.14	0.23	1.41	0.94	2.40	0.00	0.73	3.20	0.43	1.08
MAX	1.02	0.55	0.13	0.10	0.88	0.71	1.44	0.00	0.63	1.03	0.14	0.83
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

CAL YR 2003 TOTAL 6.30 MAX 1.02 MIN 0.00
WTR YR 2004 TOTAL 12.79 MAX 1.44 MIN 0.00

08329935, ARROYO 19A RAIN GAGE AT ALBUQUERQUE, NEW MEXICO
STATION ANALYSIS
WATER YEAR 2004

Location.--35°09'24"N, 106°43'50"W. The rain gage is located west of Albuquerque on Volcano Hill, west of Unser Boulevard and west of Petroglyphs National Park.

Equipment.--Onset Corporation HOBO Event data recorder and 8.2-inch-diameter tipping bucket. The bucket tips one time per 0.01 inch of rain, and the recorder stores data at 5-minute intervals. Rain gage is calibrated approximately every 2 years and was last calibrated in March 2003.

Record.--The rain gage gave a complete and satisfactory record for the entire water year.

Period of Record.--October 1986 to present.

Remarks.--Record is good for the entire water year.

PRECIPITATION, TOTAL, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.21	0.58	0.00	0.00	0.00	0.06	0.00
3	0.09	0.00	0.00	0.00	0.01	0.01	1.45	0.00	0.00	0.00	0.00	0.21
4	0.03	0.00	0.00	0.00	0.00	0.68	0.16	0.00	0.00	0.00	0.01	0.06
5	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.09	0.01
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.25	0.00	0.04	0.00	0.00	0.00	0.23	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.35	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00
12	0.00	0.58	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00
13	0.00	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00
16	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.43
20	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00
21	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.66	0.00	0.00
23	0.00	0.00	0.00	0.00	0.63	0.00	0.02	0.00	0.00	0.02	0.00	0.00
24	0.00	0.00	0.00	0.00	0.40	0.00	0.00	0.00	0.00	0.53	0.00	0.00
25	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.22	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00
28	0.00	0.00	0.00	0.00	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57	0.00	0.00	0.57
30	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	1.16	0.75	0.14	0.16	1.22	0.92	2.81	0.00	0.58	1.66	0.23	1.39
MAX	0.79	0.58	0.10	0.07	0.63	0.68	1.45	0.00	0.57	0.66	0.09	0.57
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

CAL YR 2003 TOTAL 5.14 MAX 0.79 MIN 0.00
WTR YR 2004 TOTAL 11.02 MAX 1.45 MIN 0.00

350859106274330, BEAR CANYON RAIN GAGE IN ALBUQUERQUE, NEW MEXICO
STATION ANALYSIS
WATER YEAR 2004

Location.--35°08'00"N, 106°27'45"W. The rain gage is located on Albuquerque Academy property in the Sandia Mountains foothills, east of the intersection of Tramway Boulevard and Academy Road.

Equipment.--Onset Corporation HOBO Event data recorder and 7.9-inch-diameter tipping bucket. The bucket tips one time per 0.01 inch of rain, and the recorder stores data at 5-minute intervals. Rain gage is calibrated approximately every 2 years and was last calibrated in March 2003.

Record.--The rain gage gave a complete and satisfactory record for the entire water year

Period of Record.--October 1994 to present.

Remarks.--Record is good for the entire water year.

PRECIPITATION, TOTAL, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.02	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.01	0.09	0.71	0.00	0.00	0.00	0.16	0.00
3	0.09	0.00	0.00	0.00	0.00	0.00	2.39	0.00	0.00	0.00	0.00	0.00
4	0.03	0.00	0.00	0.00	0.02	0.67	0.81	0.00	0.00	0.00	2.08	0.17
5	0.00	0.00	0.00	0.00	0.00	0.29	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.45	0.00
7	0.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.21	0.00	0.00	0.00	0.00	0.00	0.42	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.03	0.00	0.00	0.00	0.15	0.00	0.00	0.00	0.00	0.00
10	0.17	0.01	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.01	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.00	0.00	0.11	0.00	0.00
12	0.00	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.31	0.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00
14	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.23	0.00
15	0.00	0.00	0.00	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.06
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.04	1.05
20	0.00	0.00	0.00	0.11	0.00	0.00	0.00	0.00	0.00	0.15	0.00	0.12
21	0.00	0.00	0.00	0.00	0.19	0.00	0.00	0.00	0.00	0.00	0.02	0.00
22	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.56	0.00	0.00
23	0.00	0.00	0.00	0.00	0.31	0.06	0.01	0.00	0.00	0.26	0.00	0.00
24	0.00	0.00	0.00	0.00	0.17	0.01	0.00	0.00	0.00	0.91	0.00	0.00
25	0.00	0.00	0.00	0.00	0.98	0.00	0.00	0.00	0.01	0.28	0.00	0.00
26	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.18	0.00	0.00	0.01
27	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.22	0.00	0.00
28	0.00	0.00	0.00	0.00	0.24	0.00	0.00	0.00	0.17	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.37	0.00	0.01	0.00
30	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	1.10	1.17	0.26	0.27	2.04	1.14	4.63	0.00	1.73	2.84	3.03	1.41
MAX	0.58	0.83	0.19	0.14	0.98	0.67	2.39	0.00	1.37	0.91	2.08	1.05
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

CAL YR 2003 TOTAL 8.30 MAX 0.83 MIN 0.00
WTR YR 2004 TOTAL 19.62 MAX 2.39 MIN 0.00

350340106385230, BERNALILLO COUNTY BUILDING RAIN GAGE NEAR ALBUQUERQUE, NEW MEXICO

STATION ANALYSIS

WATER YEAR 2004

Location.--35°03'29"N, 106°38'40"W. The rain gage is located in southeast Albuquerque on the roof of a Bernalillo County office building, south of the intersection of Gibson and Broadway Boulevards.

Equipment.--Onset Corporation HOBO Event data recorder and 6.3-inch-diameter tipping bucket. The bucket tips one time per 0.01 inch of rain, and the recorder stores data at 5-minute intervals. Rain gage is calibrated approximately every 2 years and was last calibrated in March 2003.

Record.--The rain gage gave a complete and satisfactory record for the water year.

Period of Record.--October 1994 to present.

Remarks.-- Record is good for the entire water year.

PRECIPITATION, TOTAL, INCHES, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	0.51	0.00	0.00	0.00	0.05	0.00
3	0.12	0.00	0.00	0.00	0.00	0.00	1.87	0.00	0.00	0.00	0.00	0.00
4	0.01	0.00	0.00	0.00	0.01	0.56	0.14	0.00	0.00	0.00	0.00	0.09
5	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	1.24	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00
8	0.23	0.00	0.00	0.00	0.00	0.00	0.36	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.30	0.00	0.00	0.00	0.00	0.00	0.27	0.00	0.00	0.00	0.10	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00
12	0.00	0.52	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.49	0.00	0.00
13	0.00	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.01	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.77	0.18	0.00
16	0.00	0.03	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.01	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.03	0.12
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.75
20	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.02
21	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.01	0.00	0.00
22	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.01	0.50	0.00	0.00
23	0.00	0.00	0.00	0.00	0.80	0.05	0.00	0.00	0.00	1.34	0.00	0.00
24	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.00	0.00	0.25	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.36	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56	0.00	0.00	0.08
30	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.04	0.01
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	1.90	0.77	0.17	0.14	1.06	0.64	3.19	0.00	0.65	3.95	0.44	1.07
MAX	1.24	0.52	0.17	0.07	0.80	0.56	1.87	0.00	0.56	1.34	0.18	0.75
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

CAL YR 2003 TOTAL 6.68 MAX 1.24 MIN 0.00
WTR YR 2004 TOTAL 13.98 MAX 1.87 MIN 0.00

350713106314230, BORLAND RAIN GAGE IN ALBUQUERQUE, NEW MEXICO
STATION ANALYSIS
WATER YEAR 2004

Location.--35°07'14"N, 106°31'45"W. The rain gage is located on private property in northeast Albuquerque near the intersection of Candelaria Road and Eubank Boulevard.

Equipment.--Onset Corporation HOBO Event data recorder and 7.9-inch-diameter tipping bucket. The bucket tips one time per 0.01 inch of rain, and the recorder stores data at 5-minute intervals. Rain gage is calibrated approximately every 2 years and was last calibrated in March 2003.

Record.--The rain gage gave a complete and satisfactory record for the entire water year.

Period of Record.--October 1994 to present.

Remarks.--Record is good for the entire water year.

PRECIPITATION, TOTAL, INCHES, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.10	0.30	0.00	0.00	0.00	0.13	0.00
3	0.07	0.00	0.00	0.00	0.00	0.00	0.78	0.00	0.00	0.00	0.00	0.00
4	0.02	0.00	0.00	0.00	0.11	0.86	0.23	0.00	0.00	0.00	0.38	0.12
5	0.00	0.00	0.00	0.00	0.00	0.12	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.22	0.00	0.00	0.00	0.00	0.00	0.35	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00
10	0.23	0.00	0.00	0.00	0.00	0.00	0.24	0.00	0.00	0.00	0.02	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.76	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.02	0.00
13	0.00	0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.00	0.00
15	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00
16	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.01	0.07
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.76
20	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.14	0.00	0.07
21	0.00	0.00	0.00	0.00	0.14	0.00	0.00	0.00	0.00	0.03	0.08	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.87	0.04	0.00	0.00	0.00	0.55	0.00	0.00
24	0.00	0.00	0.00	0.00	0.32	0.00	0.00	0.00	0.00	0.08	0.00	0.00
25	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.23	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.00	0.00	0.04
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.69	0.00	0.01
28	0.00	0.00	0.00	0.00	0.22	0.00	0.00	0.00	0.03	0.02	0.00	0.00
29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.35	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	1.42	1.11	0.14	0.13	1.75	1.12	1.94	0.00	0.59	2.75	0.64	1.07
MAX	0.88	0.76	0.14	0.08	0.87	0.86	0.78	0.00	0.35	0.81	0.38	0.76
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

CAL YR 2003 TOTAL 6.84 MAX 0.88 MIN 0.00
WTR YR 2004 TOTAL 12.66 MAX 0.88 MIN 0.00

08329700, CAMPUS WASH RAIN GAGE AT ALBUQUERQUE, NEW MEXICO
STATION ANALYSIS
WATER YEAR 2004

Location.--35°05'38"N, 106°37'25"W. The rain gage is located in northeast Albuquerque at the surface-water gage, just west of the UNM South Golf Course.

Equipment.--7.9-inch-diameter tipping bucket connected to a surface-water data recorder. The bucket tips one time per 0.01 inch of rain, and the recorder stores data at 5-minute intervals. Rain gage is calibrated approximately every 2 years and was last calibrated in March 2003.

Record.--The rain gage gave a complete and satisfactory record for the entire water year.

Period of Record.--October 1988 to present.

Remarks.--Record is good for the entire water year.

PRECIPITATION, TOTAL, INCHES, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.07	0.49	0.00	0.00	0.00	0.04	0.00
3	0.10	0.00	0.00	0.00	0.01	0.00	1.54	0.00	0.00	0.00	0.00	0.00
4	0.02	0.00	0.00	0.00	0.00	0.63	0.04	0.00	0.00	0.00	0.00	0.07
5	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.14	0.00	0.02	0.00	0.00	0.00	0.26	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00
10	0.16	0.00	0.00	0.00	0.00	0.00	0.23	0.00	0.00	0.00	0.20	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.04	0.00
12	0.00	0.49	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.57	0.00	0.00
13	0.00	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.04	0.02	0.00	0.00	0.00	0.00	0.52	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.19	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.01	0.09
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.02	0.65
20	0.00	0.00	0.00	0.04	0.00	0.06	0.00	0.00	0.00	0.02	0.00	0.00
21	0.00	0.00	0.00	0.00	0.05	0.06	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.09	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.16	0.00	0.00
23	0.00	0.00	0.00	0.00	0.95	0.11	0.00	0.00	0.00	1.29	0.00	0.00
24	0.00	0.00	0.00	0.00	0.14	0.00	0.00	0.00	0.00	0.20	0.00	0.00
25	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.25	0.00	0.00
26	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.00	0.00
28	0.00	0.00	0.00	0.00	0.13	0.00	0.00	0.00	0.04	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.61	0.00	0.05	0.02
30	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.01	0.00
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	1.33	0.76	0.24	0.13	1.30	0.96	2.77	0.00	0.65	3.57	0.38	0.84
MAX	0.91	0.49	0.12	0.05	0.95	0.63	1.54	0.00	0.61	1.29	0.20	0.65
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

CAL YR 2003 TOTAL 5.62 MAX 0.91 MIN 0.00
WTR YR 2004 TOTAL 12.93 MAX 1.54 MIN 0.00

350400106465630, CROWN TOWERS AT NINE MILE HILL RAIN GAGE AT ALBUQUERQUE, NEW MEXICO

STATION ANALYSIS

WATER YEAR 2004

Location.--35°04'00"N, 106°46'56"W. The rain gage is located in far southwest Albuquerque, and is in the maintenance yard of a group of communications towers. The yard is just southeast of the intersection of Interstate 40 and Paseo del Vulcan Road.

Equipment.--Onset Corporation HOBO Event data recorder and 6.5-inch-diameter tipping bucket. The bucket tips one time per 0.01 inch of rain, and the recorder stores data at 5-minute intervals. Rain gage is calibrated approximately every 2 years and was last calibrated in March 2003.

Record.--The rain gage gave a complete and satisfactory record for the water year.

Period of Record.--August 2000 to present.

Remarks.--Record is good for the water year.

PRECIPITATION, TOTAL, INCHES, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.13	0.59	0.00	0.00	0.00	0.09	0.00
3	0.13	0.00	0.00	0.00	0.00	0.11	1.58	0.00	0.00	0.00	0.01	0.01
4	0.01	0.00	0.00	0.00	0.00	0.50	0.20	0.00	0.00	0.00	0.05	0.20
5	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.09	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.48	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00
8	0.18	0.00	0.02	0.00	0.00	0.00	0.26	0.00	0.00	0.03	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.22	0.02	0.00	0.00	0.00	0.00	0.43	0.00	0.00	0.00	0.11	0.00
11	0.01	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00
12	0.00	0.58	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00
13	0.00	0.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.01	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.04	0.10	0.00
16	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.01	0.19
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.04	0.39
20	0.00	0.00	0.00	0.11	0.00	0.00	0.00	0.00	0.00	0.09	0.01	0.03
21	0.00	0.00	0.00	0.01	0.14	0.00	0.00	0.00	0.00	0.04	0.00	0.00
22	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.03	0.12	0.00	0.00
23	0.00	0.00	0.00	0.00	0.39	0.03	0.03	0.00	0.00	0.11	0.00	0.00
24	0.00	0.00	0.00	0.00	0.53	0.00	0.00	0.00	0.00	1.31	0.00	0.00
25	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.26	0.00	0.00
26	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00
28	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.65	0.00	0.21	0.14
30	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.04
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	1.03	0.87	0.15	0.24	1.14	0.78	3.15	0.00	0.68	2.24	0.72	1.00
MAX	0.48	0.58	0.12	0.11	0.53	0.50	1.58	0.00	0.65	1.31	0.21	0.39
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

CAL YR 2003 TOTAL 6.50 MAX 0.58 MIN 0.00
WTR YR 2004 TOTAL 12.00 MAX 1.58 MIN 0.00

350954106282330, ELENA GALLEGOS PICNIC AREA RAIN GAGE AT ALBUQUERQUE, NEW MEXICO

STATION ANALYSIS

WATER YEAR 2004

Location.--35°09'42"N, 106°28'25"W. The rain gage is located in the Sandia Mountains foothills on the roof of the Elena Gallegos visitor center, approximately one mile northeast of the intersection of Tramway Boulevard and Academy Road.

Equipment.--Onset Corporation HOBO Event data recorder and 8.0-inch-diameter tipping bucket. The bucket tips one time per 0.01 inch of rain, and the recorder stores data at 5-minute intervals. Rain gage is calibrated approximately every 2 years and was last calibrated in March 2003.

Record.--The rain gage gave a complete and satisfactory record for the entire water year.

Period of Record.--October 1994 to present.

Remarks.--Record is good for the entire water year.

PRECIPITATION, TOTAL, INCHES, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.01	0.00	0.00	0.00	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.0	0.00	0.00	0.00	0.00	0.05	0.41	0.00	0.00	0.00	0.16	0.00
3	0.12	0.00	0.00	0.00	0.00	0.00	0.99	0.00	0.00	0.00	0.00	0.00
4	0.05	0.00	0.00	0.00	0.05	0.68	0.10	0.00	0.00	0.00	1.47	0.12
5	0.0	0.00	0.00	0.00	0.00	0.41	0.00	0.00	0.00	0.00	0.01	0.00
6	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.34	0.00
7	0.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.17	0.00	0.02	0.00	0.00	0.00	0.36	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.03	0.00	0.00	0.00	0.11	0.00	0.00	0.00	0.00	0.00
10	0.30	0.01	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.02	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.01	0.00
12	0.00	0.42	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00
14	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.21	0.00
15	0.00	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.03	0.00	0.01	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.01	0.04
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.09	0.77
20	0.00	0.00	0.00	0.11	0.00	0.00	0.00	0.00	0.00	0.20	0.01	0.09
21	0.00	0.00	0.00	0.01	0.16	0.00	0.00	0.00	0.00	0.00	0.02	0.00
22	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.76	0.00	0.00
23	0.00	0.00	0.00	0.00	0.34	0.06	0.00	0.00	0.00	0.31	0.00	0.00
24	0.00	0.00	0.00	0.00	0.41	0.01	0.00	0.00	0.00	0.78	0.00	0.00
25	0.00	0.00	0.00	0.11	0.44	0.00	0.00	0.00	0.02	0.12	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.00	0.03
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42	0.00	0.00
28	0.00	0.00	0.00	0.00	0.25	0.00	0.00	0.00	0.09	0.02	0.00	0.00
29	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.47	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	1.14	0.66	0.30	0.34	1.82	1.21	2.02	0.00	0.68	2.84	2.37	1.05
MAX	0.49	0.42	0.23	0.11	0.44	0.68	0.99	0.00	0.47	0.78	1.47	0.77
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

CAL YR 2003 TOTAL 7.57 MAX 0.57 MIN 0.00
WTR YR 2004 TOTAL 14.43 MAX 1.47 MIN 0.00

350554106283230, EMBUDO CANYON RAIN GAGE AT ALBUQUERQUE, NEW MEXICO
STATION ANALYSIS
WATER YEAR 2004

Location.--35°05'55"N, 106°28'32"W. The rain gage is located in the Sandia Mountains foothills in Embudo Canyon. The city maintains a water storage tank approximately 0.5 mile east of the eastern terminus of Indian School Road, and the rain gage is located in the storage tank yard.
Equipment.--Onset Corporation HOBO Event data recorder and 6.3-inch-diameter tipping bucket. The bucket tips one time per 0.01 inch of rain, and the recorder stores data at 5-minute intervals. Rain gage is calibrated approximately every 2 years and was last calibrated in March 2003.

Record.--The rain gage gave a complete and satisfactory record for the entire water year.

Period of Record.--June 1999 to present.

Remarks.--Record is good for the entire water year.

PRECIPITATION, TOTAL, INCHES, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.02	0.00	0.00	0.00	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.02	0.11	0.42	0.00	0.00	0.00	0.18	0.00
3	0.08	0.00	0.00	0.00	0.00	0.00	1.63	0.00	0.00	0.00	0.00	0.00
4	0.01	0.00	0.00	0.00	0.04	0.82	0.55	0.00	0.00	0.00	1.40	0.16
5	0.00	0.00	0.00	0.00	0.00	0.17	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.04	0.00
7	0.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.18	0.00	0.01	0.00	0.00	0.00	0.39	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.03	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.00
10	0.21	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.00	0.00	0.01	0.00
11	0.00	0.01	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.08	0.00	0.00
12	0.00	0.61	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.25	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.45	0.01	0.00
15	0.00	0.00	0.00	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.01	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.68
20	0.00	0.00	0.00	0.15	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.19
21	0.00	0.00	0.00	0.00	0.14	0.00	0.00	0.00	0.00	0.00	0.03	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.08	0.04	0.00
23	0.00	0.00	0.00	0.00	1.02	0.06	0.01	0.00	0.00	0.30	0.00	0.00
24	0.00	0.00	0.00	0.00	0.36	0.00	0.00	0.00	0.00	0.31	0.00	0.00
25	0.00	0.00	0.00	0.04	0.07	0.00	0.00	0.00	0.00	0.27	0.00	0.00
26	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.14	0.00	0.00	0.00
27	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.19	0.00	0.00
28	0.00	0.00	0.00	0.00	0.23	0.00	0.00	0.00	0.97	0.01	0.00	0.00
29	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.41	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.01
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	1.12	0.88	0.20	0.36	2.03	1.16	3.24	0.00	1.53	1.85	1.75	1.12
MAX	0.62	0.61	0.13	0.15	1.02	0.82	1.63	0.00	0.97	0.45	1.40	0.68
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

CAL YR 2003 TOTAL 8.14 MAX 0.86 MIN 0.00
WTR YR 2004 TOTAL 15.24 MAX 1.63 MIN 0.00

350348106453230, EMERGENCY DISPATCH BUILDING RAIN GAGE AT ALBUQUERQUE, NEW MEXICO

STATION ANALYSIS

WATER YEAR 2004

Location.--35°03'48"N, 106°45'32"W. The rain gage is located in southwest Albuquerque in the Emergency Response Dispatch Building. The building is located near the intersection of Central Avenue and 98th Street.

Equipment.-- Onset Corporation HOBO Event data recorder and 6.5-inch-diameter tipping bucket. The bucket tips one time per 0.01 inch of rain, and the recorder stores data at 5-minute intervals. Rain gage is calibrated approximately every 2 years and was last calibrated in March 2003.

Record.--The rain gage gave a complete and satisfactory record for the entire water year.

Period of Record.--October 2000 to present.

Remarks.--Record is good for the entire water year.

PRECIPITATION, TOTAL, INCHES, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.19	0.48	0.00	0.00	0.00	0.06	0.00
3	0.12	0.00	0.00	0.00	0.05	0.02	1.68	0.00	0.00	0.00	0.01	0.01
4	0.01	0.00	0.00	0.00	0.00	0.66	0.17	0.00	0.01	0.00	0.01	0.17
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.53	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00
8	0.22	0.00	0.03	0.00	0.00	0.00	0.25	0.00	0.00	0.02	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00
10	0.38	0.02	0.00	0.00	0.00	0.00	0.42	0.00	0.00	0.00	0.11	0.00
11	0.01	0.00	0.00	0.00	0.00	0.00	0.02	0.01	0.00	0.00	0.00	0.00
12	0.00	0.66	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.00	0.00
13	0.00	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.02	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.39	0.13	0.00
16	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.19
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.04	0.42
20	0.00	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.15	0.02	0.07
21	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.06	0.00	0.00
22	0.00	0.48	0.00	0.01	0.01	0.00	0.00	0.00	0.01	0.19	0.00	0.00
23	0.00	0.00	0.00	0.00	0.40	0.02	0.02	0.00	0.00	0.14	0.00	0.00
24	0.00	0.00	0.00	0.00	0.41	0.00	0.00	0.00	0.00	1.57	0.00	0.00
25	0.00	0.00	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.30	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00
28	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.01	0.00	0.00
29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.60	0.00	0.49	0.02
30	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.04
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	1.27	1.39	0.17	0.24	1.03	0.89	3.06	0.01	0.62	3.08	1.00	0.92
MAX	0.53	0.66	0.14	0.10	0.41	0.66	1.68	0.01	0.60	1.57	0.49	0.42
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

CAL YR 2003 TOTAL 8.79 MAX 1.14 MIN 0.00
WTR YR 2004 TOTAL 13.68 MAX 1.68 MIN 0.00

350357106443030, FIRE STATION #14 RAIN GAGE IN ALBUQUERQUE, NEW MEXICO
STATION ANALYSIS
WATER YEAR 2004

Location.--35°03'57"N, 106°44'31"W. The rain gage is located in southwest Albuquerque, approximately 0.25 mile southwest from the intersection of Central Avenue and 98th Street.

Equipment.--Onset Corporation HOBO Event data recorder and 7.9-inch-diameter tipping bucket. The bucket tips one time per 0.01 inch of rain, and the recorder stores data at 5-minute intervals. Rain gage is calibrated approximately every 2 years and was last calibrated in March 2003.

Record.--The rain gage gave a complete and satisfactory record for the water year except for October 25, October 29 and 30, December 26 to 28, March 11, and March 20 to 21. Although the Firestation #14 rain gage recorded substantial rain on these days, no precipitation or streamflow was recorded at other gages in the metropolitan area. For this reason, the record for these days should be considered suspect.

Period of Record.--October 1994 to present.

Remarks.--Record is good for the entire water year except for some suspect days in the period of October 25 to March 11.

PRECIPITATION, TOTAL, INCHES, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.15	0.52	0.00	0.00	0.00	0.11	0.00
3	0.09	0.00	0.00	0.00	0.06	0.00	1.36	0.00	0.00	0.00	0.00	0.00
4	0.01	0.00	0.00	0.00	0.00	0.70	0.15	0.00	0.00	0.00	0.00	0.10
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.21	0.00	0.03	0.00	0.00	0.00	0.27	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.45	0.00	0.00	0.00	0.00	0.00	0.37	0.00	0.00	0.00	0.18	0.00
11	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.54	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00
13	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.03	0.07	0.00	0.00	0.00	0.00	0.00	0.48	0.07	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.01	0.18
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.01	0.44
20	0.00	0.00	0.00	0.07	0.00	0.17	0.00	0.00	0.00	0.16	0.03	0.05
21	0.00	0.00	0.00	0.00	0.05	0.07	0.00	0.00	0.00	0.04	0.00	0.00
22	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.32	0.00	0.00
23	0.00	0.00	0.00	0.00	0.49	0.01	0.01	0.00	0.00	0.12	0.00	0.00
24	0.00	0.00	0.00	0.00	0.37	0.00	0.00	0.00	0.00	0.96	0.00	0.00
25	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.31	0.00	0.00
26	0.00	0.02	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00
28	0.00	0.00	0.01	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.38	0.00	0.25	0.01
30	0.01	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.03
31	0.00	---	0.00	0.01	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	1.57	0.71	0.38	0.15	1.03	1.17	2.68	0.00	0.38	2.59	0.74	0.81
MAX	0.55	0.54	0.14	0.07	0.49	0.70	1.36	0.00	0.38	0.96	0.25	0.44
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

CAL YR 2003 TOTAL 12.67 MAX 1.44 MIN 0.00
WTR YR 2004 TOTAL 12.21 MAX 1.36 MIN 0.00

350756106305430, FIRE STATION #16 RAIN GAGE IN ALBUQUERQUE, NEW MEXICO
STATION ANALYSIS
WATER YEAR 2004

Location.--35°08'09"N, 106°30'58"W. The rain gage is located in northeast Albuquerque, approximately 0.5 mile north of the intersection of Montgomery and Juan Tabo Boulevards.

Equipment.--Onset Corporation HOBO Event data recorder and 7.9-inch-diameter tipping bucket. The bucket tips one time per 0.01 inch of rain, and the recorder stores data at 5-minute intervals. Rain gage is calibrated approximately every 2 years and was last calibrated in March 2003.

Record.--The rain gage gave a complete and satisfactory record for the entire water year.

Period of Record.--June 1983 to present.

Remarks.--Record is good for the entire water year.

PRECIPITATION, TOTAL, INCHES, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.02	0.13	0.35	0.00	0.00	0.00	0.13	0.00
3	0.07	0.00	0.00	0.00	0.00	0.00	0.98	0.00	0.00	0.00	0.01	0.00
4	0.03	0.00	0.00	0.00	0.11	0.84	0.31	0.00	0.00	0.00	0.55	0.12
5	0.00	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.19	0.00	0.00	0.00	0.00	0.00	0.34	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.00	0.00	0.00	0.00	0.00
10	0.18	0.00	0.00	0.00	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00
12	0.00	0.77	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.02	0.00
13	0.00	0.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00
15	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.89
20	0.00	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.14	0.00	0.10
21	0.00	0.00	0.00	0.00	0.13	0.00	0.00	0.00	0.00	0.00	0.02	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.00	0.00
23	0.00	0.00	0.00	0.00	0.57	0.03	0.00	0.00	0.00	0.36	0.00	0.00
24	0.00	0.00	0.00	0.00	0.25	0.00	0.00	0.00	0.00	0.15	0.00	0.00
25	0.00	0.00	0.00	0.11	0.00	0.00	0.00	0.00	0.02	0.19	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.44	0.00	0.01
28	0.00	0.00	0.00	0.00	0.22	0.00	0.00	0.00	0.03	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	1.20	1.17	0.15	0.23	1.34	1.08	2.37	0.00	0.71	1.65	0.75	1.18
MAX	0.73	0.77	0.15	0.11	0.57	0.84	0.98	0.00	0.41	0.44	0.55	0.89
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

CAL YR 2003 TOTAL 6.50 MAX 0.77 MIN 0.00
WTR YR 2004 TOTAL 11.83 MAX 0.98 MIN 0.00

08329840, HAHN ARROYO RAIN GAGE IN ALBUQUERQUE, NEW MEXICO
STATION ANALYSIS
WATER YEAR 2004

Location.--35°07'33"N, 106°35'23"W. The rain gage is located in northeast Albuquerque at the surface-water gage, east of Monroe Street between Comanche Road and Montgomery Boulevard.

Equipment.--8.2-inch-diameter tipping bucket connected to a surface-water data recorder. The bucket tips one time per 0.01 inch of rain, and the recorder stores data at 5-minute intervals. Rain gage is calibrated approximately every 2 years and was last calibrated in March 2003.

Record.-- The rain gage gave a complete and satisfactory record for the entire water year.

Period of Record.--March 1984 to present.

Remarks.--Record is good for the entire water year.

PRECIPITATION, TOTAL, INCHES, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.09	0.25	0.00	0.00	0.00	0.14	0.00
3	0.09	0.00	0.00	0.00	0.04	0.01	0.98	0.00	0.00	0.00	0.00	0.00
4	0.03	0.00	0.00	0.00	0.01	0.68	0.09	0.00	0.00	0.00	0.28	0.05
5	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.24	0.00	0.02	0.00	0.00	0.00	0.25	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00
10	0.21	0.00	0.00	0.00	0.00	0.00	0.24	0.00	0.00	0.00	0.41	0.00
11	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.00	0.00
12	0.00	0.62	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.70	0.00	0.00
13	0.00	0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.00
16	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.85
20	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.03
21	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.86	0.03	0.00	0.00	0.00	0.87	0.00	0.00
24	0.00	0.00	0.00	0.00	0.35	0.00	0.00	0.00	0.00	0.12	0.00	0.00
25	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.30	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.77	0.00	0.00
28	0.00	0.00	0.00	0.00	0.14	0.00	0.00	0.00	0.00	0.05	0.00	0.00
29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41	0.00	0.00	0.19
30	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	1.32	0.87	0.14	0.14	1.47	0.87	1.86	0.00	0.66	3.13	0.94	1.18
MAX	0.74	0.62	0.12	0.07	0.86	0.68	0.98	0.00	0.41	0.87	0.41	0.85
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

CAL YR 2003 TOTAL 6.78 MAX 0.74 MIN 0.00
WTR YR 2004 TOTAL 12.58 MAX 0.98 MIN 0.00

350310106320930, KIRTLAND AIR FORCE BASE RAIN GAGE AT EUBANK GATE, ALBUQUERQUE, NEW MEXICO

STATION ANALYSIS

WATER YEAR 2004

Location.--35°03'10"N, 106°32'09"W. The rain gage is located in southeast Albuquerque on Kirtland Air Force Base, near the southern terminus of Eubank Boulevard.

Equipment.-- Onset Corporation HOBO Event data recorder and 6.5-inch-diameter tipping bucket. The bucket tips one time per 0.01 inch of rain, and the recorder stores data at 5-minute intervals. Rain gage is calibrated approximately every 2 years and was last calibrated in March 2003.

Record.--The rain gage gave a complete and satisfactory record for the water year except for November 13 to December 3. During this period the data recorder malfunctioned. Estimated daily totals for these days are averages of daily totals from the Orlando Romero, Love Pump, and Tramway rain gages.

Period of Record.--June 2001 to present.

Remarks.--Record is good for the entire water year including days estimated as zero; other estimates are poor.

PRECIPITATION, TOTAL, INCHES, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	e0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	e0.00	0.00	0.00	0.09	0.17	0.00	0.00	0.00	0.28	0.00
3	0.09	0.00	e0.00	0.00	0.01	0.00	0.98	0.00	0.00	0.00	0.00	0.00
4	0.02	0.00	0.00	0.00	0.03	0.71	0.41	0.00	0.06	0.00	1.44	0.13
5	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.01
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.16	0.00	0.03	0.00	0.00	0.00	0.33	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.04	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.02	0.18	0.00
11	0.00	0.02	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00
12	0.00	0.44	0.18	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	e0.28	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	e0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.11	0.00	0.00
16	0.00	e0.03	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	e0.01	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.07
19	0.00	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.48
20	0.00	e0.00	0.00	0.12	0.00	0.00	0.00	0.00	0.00	0.15	0.00	0.10
21	0.00	e0.00	0.00	0.01	0.06	0.00	0.00	0.00	0.00	0.04	0.00	0.00
22	0.00	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39	0.00	0.00
23	0.00	e0.00	0.00	0.00	0.82	0.04	0.00	0.00	0.00	1.04	0.00	0.00
24	0.00	e0.00	0.00	0.00	0.35	0.00	0.00	0.00	0.00	0.11	0.00	0.00
25	0.00	e0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.25	0.00	0.00
26	0.00	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.00	0.01
28	0.00	e0.00	0.00	0.00	0.13	0.00	0.00	0.00	0.98	0.04	0.00	0.00
29	0.00	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.53	0.00	0.00	0.00
30	0.00	e0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	1.21	0.78	0.22	0.22	1.42	0.95	2.06	0.00	1.57	2.46	1.93	0.80
MAX	0.90	0.44	0.18	0.12	0.82	0.71	0.98	0.00	0.98	1.04	1.44	0.48
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

CAL YR 2003 TOTAL 7.06 MAX 0.90 MIN 0.00
WTR YR 2004 TOTAL 13.62 MAX 1.44 MIN 0.00

e Estimated

350912106455630, LA BOCA NEGRA RAIN GAGE NEAR ALBUQUERQUE, NEW MEXICO
STATION ANALYSIS
WATER YEAR 2004

Location.--35°09'18"N, 106°45'58"W. The rain gage is located in far northwest Albuquerque, approximately 0.25 mile north of the West Mesa volcanoes.

Equipment.--Onset Corporation HOBO Event data recorder and 8.2-inch-diameter tipping bucket. The bucket tips one time per 0.01 inch of rain, and the recorder stores data at 5-minute intervals. Rain gage is calibrated approximately every 2 years and was last calibrated in March 2003.

Record.--The rain gage gave a complete and satisfactory record for the entire water year.

Period of Record.--October 1990 to present.

Remarks.--Record is good for the entire water year.

PRECIPITATION, TOTAL, INCHES, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.39	0.74	0.00	0.00	0.00	0.04	0.00
3	0.12	0.00	0.00	0.00	0.00	0.05	2.14	0.00	0.00	0.00	0.01	0.08
4	0.04	0.00	0.00	0.00	0.00	0.69	0.27	0.00	0.00	0.00	0.00	0.07
5	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.15	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.87	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00
8	0.27	0.00	0.03	0.00	0.00	0.00	0.30	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00
10	0.00	0.01	0.00	0.00	0.00	0.00	0.87	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.76	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00
13	0.00	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00
15	0.00	0.01	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.10
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.34
20	0.00	0.00	0.00	0.12	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00
21	0.00	0.00	0.00	0.01	0.07	0.00	0.00	0.00	0.00	0.01	0.00	0.00
22	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.46	0.00	0.00
23	0.00	0.00	0.00	0.00	0.43	0.00	0.01	0.00	0.00	0.04	0.00	0.00
24	0.00	0.00	0.00	0.00	0.63	0.00	0.00	0.00	0.00	0.80	0.00	0.00
25	0.00	0.00	0.00	0.05	0.05	0.00	0.00	0.00	0.00	0.17	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.00	0.00
28	0.00	0.00	0.00	0.00	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.49	0.00	0.00	0.56
30	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	1.30	0.96	0.11	0.26	1.34	1.15	4.36	0.00	0.51	1.72	0.22	1.15
MAX	0.87	0.76	0.08	0.12	0.63	0.69	2.14	0.00	0.49	0.80	0.15	0.56
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

CAL YR 2003 TOTAL 6.89 MAX 0.87 MIN 0.00
WTR YR 2004 TOTAL 13.08 MAX 2.14 MIN 0.00

08329890, LA CUEVA ARROYO TRIBUTARY RAIN GAGE NEAR ALBUQUERQUE, NEW MEXICO
STATION ANALYSIS
WATER YEAR 2004

Location.--35°11'31"N, 106°29'46"W. The rain gage is located in northeast Albuquerque, approximately 0.25 mile north of the surface-water gage and just north of the intersection of Tramway Road and Tramway Boulevard.

Equipment.--Onset Corporation HOBO Event data recorder and 8.2-inch-diameter tipping bucket. The bucket tips one time per 0.01 inch of rain, and the recorder stores data at 5-minute intervals. Rain gage is calibrated approximately every 2 years and was last calibrated in March 2003.

Record.--The rain gage gave a complete and satisfactory record for the water year.

Period of Record.--July 1981 to present.

Remarks.--Record is good for the entire water year.

PRECIPITATION, TOTAL, INCHES, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.24	0.86	0.00	0.00	0.00	0.06	0.00
3	0.18	0.00	0.00	0.00	0.00	0.00	2.56	0.00	0.00	0.00	0.01	0.00
4	0.14	0.00	0.00	0.00	0.04	1.72	1.04	0.00	0.00	0.00	0.13	0.03
5	0.00	0.00	0.00	0.00	0.00	0.14	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.00
7	1.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.50	0.00	0.07	0.00	0.00	0.00	0.71	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.00	0.00	0.00	0.00	0.00
10	0.27	0.01	0.00	0.00	0.00	0.00	0.46	0.00	0.00	0.00	0.00	0.00
11	0.01	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00
12	0.00	1.45	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00
13	0.00	0.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46	0.00
15	0.00	0.04	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.01	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.72
20	0.00	0.00	0.00	0.33	0.00	0.00	0.00	0.00	0.00	0.13	0.00	0.15
21	0.00	0.00	0.00	0.00	0.23	0.00	0.00	0.00	0.00	0.00	0.01	0.00
22	0.00	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00
23	0.00	0.00	0.00	0.00	0.61	0.02	0.01	0.00	0.00	0.20	0.00	0.00
24	0.00	0.00	0.00	0.00	0.45	0.00	0.00	0.00	0.00	0.34	0.00	0.00
25	0.00	0.00	0.00	0.04	0.41	0.00	0.00	0.00	0.00	0.05	0.00	0.00
26	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.03
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.00	0.01
28	0.00	0.00	0.00	0.00	0.21	0.00	0.00	0.00	0.00	0.04	0.00	0.00
29	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.40	0.00	0.00	0.01
30	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.01	0.00	0.00	0.00
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	2.39	2.24	0.53	0.48	2.03	2.12	5.80	0.00	0.46	1.04	0.85	0.97
MAX	1.29	1.45	0.44	0.33	0.61	1.72	2.56	0.00	0.40	0.34	0.46	0.72
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

CAL YR 2003 TOTAL 12.96 MAX 1.56 MIN 0.00
WTR YR 2004 TOTAL 18.91 MAX 2.56 MIN 0.00

08329938, LADERA ARROYO RAIN GAGE AT ALBUQUERQUE, NEW MEXICO
STATION ANALYSIS
WATER YEAR 2004

Location.--35°06'56"N, 106°44'48"W. The rain gage is located in far northwest Albuquerque in Petroglyphs National Park.

Equipment.--Onset Corporation HOBO Event data recorder and 8.2-inch-diameter tipping bucket. The bucket tips one time per 0.01 inch of rain, and the recorder stores data at 5-minute intervals. Rain gage is calibrated approximately every 2 years and was last calibrated in March 2003.

Record.--The rain gage gave a complete and satisfactory record for the entire water year.

Period of Record.--May 1987 to present.

Remarks.--Record is good for the entire water year.

PRECIPITATION, TOTAL, INCHES, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.38	0.80	0.00	0.00	0.00	0.04	0.00
3	0.00	0.00	0.00	0.00	0.03	0.01	1.86	0.00	0.00	0.00	0.01	0.00
4	0.00	0.00	0.00	0.00	0.00	1.21	0.16	0.00	0.00	0.00	0.01	0.09
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.24	0.00	0.05	0.00	0.00	0.00	0.28	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.01	0.00	0.00	0.00	0.00	0.00	0.47	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.63	0.22	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00
13	0.00	0.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.01	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.35
20	0.00	0.00	0.00	0.12	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.01
21	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.50	0.00	0.00
23	0.00	0.00	0.00	0.00	0.62	0.00	0.01	0.00	0.00	0.09	0.00	0.00
24	0.00	0.00	0.00	0.00	0.86	0.00	0.00	0.00	0.00	0.43	0.00	0.00
25	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.22	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.07	0.00	0.00
28	0.00	0.00	0.00	0.00	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.00	0.00	0.16
30	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	1.03	0.84	0.27	0.26	1.69	1.60	3.58	0.03	0.22	1.36	0.17	0.73
MAX	0.78	0.63	0.22	0.12	0.86	1.21	1.86	0.03	0.21	0.50	0.07	0.35
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

CAL YR 2003 TOTAL 9.50 MAX 0.82 MIN 0.00
WTR YR 2004 TOTAL 11.78 MAX 1.86 MIN 0.00

350310106434930, LEAVITT PUMP STATION RAIN GAGE AT ALBUQUERQUE, NEW MEXICO
STATION ANALYSIS
WATER YEAR 2004

Location.--35°03'10"N, 106°43'49"W. The rain gage is located in southwest Albuquerque, in the maintenance yard of the Leavitt Pump Station. The pump station is located near the southern end of 86th Street.

Equipment.--Onset Corporation HOBO Event data recorder and 6.5-inch-diameter tipping bucket. The bucket tips one time per 0.01 inch of rain, and the recorder stores data at 5-minute intervals. Rain gage is calibrated approximately every 2 years and was last calibrated in March 2003.

Record.--The rain gage gave a complete and satisfactory record for the water year.

Period of Record.--August 2000 to present.

Remarks.--Record is good for the entire water year.

PRECIPITATION, TOTAL, INCHES, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.16	0.55	0.00	0.00	0.00	0.14	0.00
3	0.10	0.00	0.00	0.00	0.07	0.02	1.17	0.00	0.00	0.00	0.01	0.00
4	0.02	0.00	0.00	0.00	0.00	0.60	0.20	0.00	0.01	0.00	0.00	0.13
5	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.03	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00
7	0.55	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00
8	0.22	0.00	0.03	0.00	0.00	0.00	0.30	0.00	0.00	0.02	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00
10	0.37	0.01	0.00	0.00	0.00	0.00	0.39	0.00	0.00	0.00	0.26	0.00
11	0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00
12	0.00	0.57	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.22	0.00	0.00
13	0.00	0.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.01	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.10	0.07	0.00
16	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.04	0.24
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.03	0.41
20	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.12	0.03	0.04
21	0.00	0.00	0.00	0.01	0.04	0.00	0.00	0.00	0.00	0.09	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.58	0.00	0.00
23	0.00	0.00	0.00	0.00	0.53	0.04	0.03	0.00	0.00	0.17	0.00	0.00
24	0.00	0.00	0.00	0.00	0.34	0.00	0.01	0.00	0.00	0.61	0.00	0.00
25	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.30	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00
28	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39	0.00	0.08	0.01
30	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	1.27	0.80	0.18	0.17	1.05	0.83	2.67	0.00	0.41	2.34	0.72	0.83
MAX	0.55	0.57	0.14	0.08	0.53	0.60	1.17	0.00	0.39	0.61	0.26	0.41
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

CAL YR 2003 TOTAL 6.96 MAX 1.20 MIN 0.00
WTR YR 2004 TOTAL 11.27 MAX 1.17 MIN 0.00

350722106325030, LEONARD RAIN GAGE IN ALBUQUERQUE, NEW MEXICO
STATION ANALYSIS
WATER YEAR 2004

Location.--35°07'21"N, 106°33'55"W. The rain gage is located in northeast Albuquerque at a private residence, approximately 0.25 mile northeast of the intersection of Louisiana and Montgomery Boulevards.

Equipment.--Onset Corporation HOBO Event data recorder and 7.9-inch-diameter tipping bucket. The bucket tips one time per 0.01 inch of rain, and the recorder stores data at 5-minute intervals. Rain gage is calibrated approximately every 2 years and was last calibrated in March 2003.

Record.--The rain gage gave a complete and satisfactory record for the water year.

Period of Record.--April 1984 to present.

Remarks.--Record is good for the entire water year.

PRECIPITATION, TOTAL, INCHES, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.06	0.20	0.00	0.00	0.00	0.04	0.00
3	0.03	0.00	0.00	0.00	0.00	0.00	0.71	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.07	0.58	0.10	0.00	0.00	0.00	0.07	0.06
5	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.13	0.00	0.00	0.00	0.00	0.00	0.26	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00
10	0.13	0.00	0.00	0.00	0.00	0.00	0.21	0.00	0.00	0.00	0.06	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.39	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.61	0.00	0.00
13	0.00	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.00
16	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.86
20	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.03
21	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.01	0.10	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.68	0.02	0.00	0.00	0.00	0.66	0.00	0.00
24	0.00	0.00	0.00	0.00	0.30	0.00	0.00	0.00	0.00	0.11	0.00	0.00
25	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.18	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.72	0.00	0.00
28	0.00	0.00	0.00	0.00	0.10	0.00	0.00	0.00	0.01	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	1.00	0.58	0.10	0.06	1.24	0.73	1.52	0.00	0.48	2.53	0.27	1.03
MAX	0.71	0.39	0.10	0.04	0.68	0.58	0.71	0.00	0.30	0.72	0.10	0.86
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

CAL YR 2003 TOTAL 4.68 MAX 0.71 MIN 0.00
WTR YR 2004 TOTAL 9.54 MAX 0.86 MIN 0.00

350540106333230, LOVE PUMP STATION RAIN GAGE AT ALBUQUERQUE, NEW MEXICO
STATION ANALYSIS
WATER YEAR 2004

Location.--35°05'40"N, 106°33'32"W. The rain gage is located in northeast Albuquerque near the intersection of Pennsylvania Street and Constitution Avenue.

Equipment.--Onset Corporation HOBO Event data recorder and 6.5-inch-diameter tipping bucket. The bucket tips one time per 0.01 inch of rain, and the recorder stores data at 5-minute intervals. Rain gage is calibrated approximately every 2 years and was last calibrated in March 2003.

Record.--The rain gage gave a complete and satisfactory record for the period of record.

Period of Record.--September 2002 to present.

Remarks.--Record is good for the period of record.

PRECIPITATION, TOTAL, INCHES, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.05	0.21	0.00	0.00	0.00	0.08	0.00
3	0.07	0.00	0.00	0.00	0.02	0.00	0.86	0.00	0.00	0.00	0.00	0.00
4	0.01	0.00	0.00	0.00	0.03	0.86	0.16	0.00	0.00	0.00	0.16	0.10
5	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	1.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.19	0.00	0.03	0.00	0.00	0.00	0.30	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00
10	0.16	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.00	0.00	0.38	0.00
11	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.01	0.00
12	0.00	0.50	0.14	0.00	0.00	0.01	0.00	0.00	0.00	0.26	0.00	0.00
13	0.00	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00
15	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	1.06	0.00	0.00
16	0.00	0.03	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.04
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.85
20	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.08	0.00	0.06
21	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42	0.00	0.00
23	0.00	0.00	0.00	0.00	0.87	0.06	0.00	0.00	0.00	0.99	0.00	0.00
24	0.00	0.00	0.00	0.00	0.44	0.00	0.00	0.00	0.00	0.12	0.00	0.00
25	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.02
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40	0.00	0.00
28	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.00	0.04	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.53	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.01
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	1.46	0.72	0.17	0.17	1.59	1.01	1.64	0.00	0.61	3.94	0.66	1.08
MAX	1.03	0.50	0.14	0.08	0.87	0.86	0.86	0.00	0.53	1.06	0.38	0.85
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

CAL YR 2003 TOTAL 6.81 MAX 1.03 MIN 0.00
WTR YR 2004 TOTAL 13.05 MAX 1.06 MIN 0.00

08329914, NORTH CAMINO ARROYO TRIBUTARY AT WYOMING BOULEVARD RAIN GAGE AT ALBUQUERQUE, NEW MEXICO

STATION ANALYSIS

WATER YEAR 2004

Location.--35°11'44"N, 106°33'36"W. The rain gage is located in northeast Albuquerque on Wyoming Boulevard, approximately 2 miles north of Paseo del Norte.

Equipment.--Onset Corporation HOBO Event data recorder and 8.1-inch-diameter tipping bucket. The bucket tips one time per 0.01 inch of rain, and the recorder stores data at 5-minute intervals. Rain gage is calibrated approximately every 2 years and was last calibrated in March 2003.

Record.--The rain gage gave a complete and satisfactory record for the entire water year except for May 25 to June 22. During this period the rain gage installation was vandalized. Estimated daily totals for these days are the averages of daily totals from the North Floodway nr. Alameda and Walker Pump rain gages.

Period of Record.--October 1988 to present.

Remarks.--Record is good for the entire water year including estimates.

PRECIPITATION, TOTAL, INCHES, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.19	0.30	0.00	e0.00	0.00	0.06	0.00
3	0.07	0.00	0.00	0.00	0.00	0.01	0.62	0.00	e0.00	0.00	0.00	0.00
4	0.03	0.00	0.00	0.00	0.12	0.84	0.13	0.00	e0.00	0.00	0.16	0.02
5	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	e0.00	0.00	0.02	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	0.00	0.00	0.00
7	0.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	0.00	0.00	0.00
8	0.20	0.00	0.06	0.00	0.00	0.00	0.23	0.00	e0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.00	e0.00	0.00	0.00	0.00
10	0.07	0.00	0.00	0.00	0.00	0.00	0.42	0.00	e0.00	0.00	0.01	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	0.00	0.00	0.00
12	0.00	0.54	0.13	0.00	0.00	0.00	0.00	0.00	e0.00	0.64	0.03	0.00
13	0.00	0.28	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.01	e0.00	0.00	0.00	0.00
16	0.00	0.02	0.00	0.02	0.00	0.00	0.00	0.00	e0.00	0.00	0.00	0.00
17	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	0.01	0.04	0.05
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	0.00	0.00	0.71
20	0.00	0.00	0.00	0.10	0.00	0.00	0.00	0.00	e0.00	0.09	0.00	0.03
21	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	e0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.55	0.08	0.01	0.00	0.00	0.87	0.00	0.00
24	0.00	0.00	0.00	0.00	0.35	0.00	0.00	0.00	0.00	0.55	0.00	0.00
25	0.00	0.00	0.00	0.06	0.00	0.00	0.00	e0.00	0.00	0.21	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	0.25	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	0.00	0.43	0.00	0.00
28	0.00	0.00	0.00	0.02	0.18	0.00	0.00	e0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	0.75	0.00	0.00	0.19
30	0.00	0.00	0.00	0.00	---	0.00	0.00	e0.00	0.00	0.00	0.00	0.01
31	0.00	---	0.00	0.00	---	0.00	---	e0.00	---	0.00	0.00	---
TOTAL	0.88	0.85	0.19	0.27	1.29	1.15	1.77	0.01	1.00	2.80	0.32	1.01
MAX	0.51	0.54	0.13	0.10	0.55	0.84	0.62	0.01	0.75	0.87	0.16	0.71
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

CAL YR 2003 TOTAL 11.78 MAX 2.22 MIN 0.00
WTR YR 2004 TOTAL 11.54 MAX 0.87 MIN 0.00

e Estimated

08329835, NORTH FLOODWAY CHANNEL RAIN GAGE AT ALBUQUERQUE, NEW MEXICO
STATION ANALYSIS
WATER YEAR 2004

Location.--35°07'05"N, 106°36'42"W. The rain gage is located in northeast Albuquerque at the surface-water gage, just north of the intersection of the North Floodway Channel and Candelaria Road.

Equipment.--8.0-inch-diameter tipping bucket connected to a surface-water data recorder. The bucket tips one time per 0.01 inch of rain, and the recorder stores data at 5-minute intervals. Rain gage is calibrated approximately every 2 years and was last calibrated in March 2003.

Record.--The rain gage gave a complete and satisfactory record for the water year.

Period of Record.--July 1999 to present.

Remarks.--Record is good for the entire water year.

PRECIPITATION, TOTAL, INCHES, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.10	0.33	0.00	0.00	0.00	0.06	0.00
3	0.09	0.00	0.00	0.00	0.03	0.00	1.52	0.00	0.00	0.00	0.00	0.00
4	0.01	0.00	0.00	0.00	0.00	0.53	0.06	0.00	0.00	0.00	0.12	0.04
5	0.00	0.00	0.00	0.00	0.00	0.06	0.01	0.00	0.00	0.00	0.01	0.01
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.21	0.00	0.00	0.00	0.00	0.00	0.27	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00
10	0.21	0.00	0.01	0.00	0.00	0.00	0.22	0.00	0.00	0.00	0.32	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00
12	0.00	0.59	0.05	0.00	0.00	0.02	0.00	0.00	0.00	0.82	0.00	0.00
13	0.00	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.02	0.02	0.00	0.00	0.00	0.00	0.00	0.11	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.01	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.08
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.77
20	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.02
21	0.00	0.00	0.00	0.01	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.97	0.01	0.00	0.00	0.00	1.06	0.00	0.00
24	0.00	0.00	0.00	0.00	0.24	0.01	0.00	0.00	0.00	0.04	0.00	0.00
25	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.36	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.00	0.00
28	0.00	0.00	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.07	0.00	0.00
29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56	0.00	0.00	0.18
30	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	1.52	0.83	0.08	0.08	1.39	0.73	2.43	0.00	0.76	2.73	0.65	1.10
MAX	1.00	0.59	0.05	0.02	0.97	0.53	1.52	0.00	0.56	1.06	0.32	0.77
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

CAL YR 2003 TOTAL 6.54 MAX 1.00 MIN 0.00
WTR YR 2004 TOTAL 12.30 MAX 1.52 MIN 0.00

08329900, NORTH FLOODWAY CHANNEL RAIN GAGE NEAR ALAMEDA, ALBUQUERQUE, NEW MEXICO

STATION ANALYSIS

WATER YEAR 2004

Location.--35°11'53"N, 106°35'59"W. The rain gage is located in northeast Albuquerque at the surface-water gage, just east of the northern terminus of Edith Boulevard.

Equipment.--8.0-inch-diameter tipping bucket connected to a surface-water data recorder. The bucket tips one time per 0.01 inch of rain, and the recorder stores data at 5-minute intervals. Rain gage is calibrated approximately every 2 years and was last calibrated in March 2003.

Record.--The rain gage gave a complete and satisfactory record for the period of record except for November 12 to 18; during this period the data recorder malfunctioned. Estimated daily totals for these days are actual totals observed during gage inspections.

Period of Record.--December 2001 to present.

Remarks.--Record is good for the entire water year including estimated days.

PRECIPITATION, TOTAL, INCHES, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.19	0.19	0.00	0.00	0.00	0.09	0.00
3	0.08	0.00	0.00	0.00	0.09	0.01	1.10	0.00	0.00	0.00	0.00	0.00
4	0.03	0.00	0.00	0.00	0.00	0.65	0.10	0.00	0.00	0.00	0.09	0.17
5	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.04	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.23	0.00	0.03	0.00	0.00	0.00	0.28	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.00
10	0.02	0.00	0.00	0.00	0.00	0.00	0.24	0.00	0.00	0.00	0.01	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	e0.57	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.00	0.00
13	0.00	e0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00
14	0.00	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00
15	0.00	e0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	e0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	e0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.13
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.04	0.60
20	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.16	0.01	0.03
21	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.04	0.01	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00
23	0.00	0.00	0.00	0.00	0.68	0.00	0.01	0.00	0.00	0.24	0.00	0.00
24	0.00	0.00	0.00	0.00	0.25	0.00	0.00	0.00	0.00	0.24	0.00	0.00
25	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.66	0.00	0.00
28	0.00	0.00	0.00	0.00	0.17	0.00	0.00	0.00	0.00	0.05	0.00	0.00
29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.45	0.00	0.00	0.22
30	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.01
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	1.11	0.83	0.16	0.19	1.27	0.87	1.98	0.00	0.69	1.76	0.49	1.16
MAX	0.75	0.57	0.13	0.09	0.68	0.65	1.10	0.00	0.45	0.66	0.16	0.60
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

CAL YR 2003 TOTAL 5.83 MAX 0.75 MIN 0.00
WTR YR 2004 TOTAL 10.51 MAX 1.10 MIN 0.00

e Estimated

350417106363330, ORLANDO ROMERO RAIN GAGE IN ALBUQUERQUE, NEW MEXICO
STATION ANALYSIS
WATER YEAR 2004

Location.--35°04'17"N, 106°36'33"W. The rain gage is located in southeast Albuquerque at a private residence, approximately 0.25 mile from the intersection of Carlisle Boulevard and Burton Street.

Equipment.--Onset Corporation HOBO Event data recorder and 7.9-inch-diameter tipping bucket. The bucket tips one time per 0.01 inch of rain, and the recorder stores data at 5-minute intervals. Rain gage is calibrated approximately every 2 years and was last calibrated in March 2003.

Record.--The rain gage gave a complete and satisfactory record for the entire water.

Period of Record.--March 2001 to present.

Remarks.--Record is good for the entire water year.

PRECIPITATION, TOTAL, INCHES, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.13	0.57	0.00	0.00	0.00	0.12	0.00
3	0.11	0.00	0.00	0.00	0.02	0.04	1.74	0.00	0.00	0.00	0.01	0.00
4	0.01	0.00	0.00	0.00	0.02	0.71	0.10	0.00	0.02	0.00	0.00	0.12
5	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.00
7	1.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.24	0.00	0.00	0.00	0.00	0.00	0.38	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.00
10	0.22	0.00	0.00	0.00	0.00	0.00	0.20	0.00	0.00	0.00	0.11	0.00
11	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.04	0.00
12	0.00	0.51	0.16	0.00	0.00	0.00	0.00	0.00	0.00	0.31	0.00	0.00
13	0.00	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00
16	0.00	0.05	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.08
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.01	1.14
20	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.04
21	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.27	0.00	0.00	0.00	0.01	0.50	0.00	0.00
23	0.00	0.00	0.00	0.00	1.09	0.11	0.00	0.00	0.00	2.60	0.00	0.00
24	0.00	0.00	0.00	0.00	1.84	0.00	0.00	0.00	0.00	0.21	0.00	0.00
25	0.00	0.00	0.00	0.02	0.04	0.00	0.00	0.00	0.00	0.38	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.00	0.00
28	0.00	0.00	0.00	0.00	0.15	0.00	0.00	0.00	0.18	0.04	0.00	0.00
29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.89	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.08
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	1.66	0.77	0.16	0.19	3.54	1.06	3.05	0.00	1.17	4.54	0.29	1.46
MAX	1.07	0.51	0.16	0.08	1.84	0.71	1.74	0.00	0.89	2.60	0.12	1.14
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

CAL YR 2003 TOTAL 7.18 MAX 1.07 MIN 0.00
WTR YR 2004 TOTAL 17.89 MAX 2.60 MIN 0.00

350939106430930, PETROGLYPHS PARK RAIN GAGE AT ALBUQUERQUE, NEW MEXICO
STATION ANALYSIS
WATER YEAR 2004

Location.--35°09'39"N, 106°43'10"W. The rain gage is located in far northwest Albuquerque at the Petroglyphs National Park Visitor Center.

Equipment.--Onset Corporation HOBO Event data recorder and 7.9-inch-diameter tipping bucket. The bucket tips one time per 0.01 inch of rain, and the recorder stores data at 5-minute intervals. Rain gage is calibrated approximately every 2 years and was last calibrated in March 2003.

Record.--The rain gage gave a complete and satisfactory record for the entire water year.

Period of Record.--January 1995 to present.

Remarks.--Record is good for the entire water year.

PRECIPITATION, TOTAL, INCHES, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.20	0.61	0.00	0.00	0.00	0.07	0.00
3	0.08	0.00	0.00	0.00	0.01	0.02	1.42	0.00	0.00	0.00	0.00	0.05
4	0.02	0.00	0.00	0.00	0.00	0.74	0.19	0.00	0.00	0.00	0.04	0.08
5	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.05	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.23	0.00	0.03	0.00	0.00	0.00	0.21	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.33	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.00
12	0.00	0.56	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00
13	0.00	0.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.15
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.01	0.40
20	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.09	0.01	0.00
21	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.01	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.38	0.00	0.00
23	0.00	0.00	0.00	0.00	0.72	0.01	0.01	0.00	0.00	0.03	0.00	0.00
24	0.00	0.00	0.00	0.00	0.36	0.00	0.01	0.00	0.00	0.47	0.00	0.00
25	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.17	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.00
28	0.00	0.00	0.00	0.00	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.57	0.00	0.00	0.54
30	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.01
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	1.03	0.72	0.13	0.12	1.29	0.98	2.83	0.00	0.57	1.38	0.35	1.23
MAX	0.70	0.56	0.10	0.06	0.72	0.74	1.42	0.00	0.57	0.47	0.08	0.54
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

CAL YR 2003 TOTAL 4.59 MAX 0.70 MIN 0.00
WTR YR 2004 TOTAL 10.63 MAX 1.42 MIN 0.00

351631106481230, RIO RANCHO WELL #13 RAIN GAGE, RIO RANCHO, NEW MEXICO
STATION ANALYSIS
WATER YEAR 2004

Location.--35°16'31"N, 106°48'12"W. The rain gage is located at a public supply well in Rio Rancho, approximately 6 miles northwest of the Albuquerque City Limit. This property is located at the intersection of Northern Boulevard and Encino Street.

Equipment.--Onset Corporation HOBO Event data recorder and 6.3-inch-diameter tipping bucket. The bucket tips one time per 0.01 inch of rain, and the recorder stores data at 5-minute intervals. Rain gage is calibrated approximately every 2 years and was last calibrated in July 2004.

Record.--The rain gage gave a complete and satisfactory record for the period of record.

Period of Record.—July 22, 2004 to present.

Remarks.--Record is good for the entire period of record. This is the first year of record for the rain gage.

PRECIPITATION, TOTAL, INCHES, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	0.03	0.00
2	---	---	---	---	---	---	---	---	---	---	0.06	0.00
3	---	---	---	---	---	---	---	---	---	---	0.01	0.00
4	---	---	---	---	---	---	---	---	---	---	0.25	0.28
5	---	---	---	---	---	---	---	---	---	---	0.03	0.00
6	---	---	---	---	---	---	---	---	---	---	0.00	0.00
7	---	---	---	---	---	---	---	---	---	---	0.00	0.00
8	---	---	---	---	---	---	---	---	---	---	0.50	0.00
9	---	---	---	---	---	---	---	---	---	---	0.00	0.00
10	---	---	---	---	---	---	---	---	---	---	0.31	0.00
11	---	---	---	---	---	---	---	---	---	---	0.00	0.00
12	---	---	---	---	---	---	---	---	---	---	0.03	0.00
13	---	---	---	---	---	---	---	---	---	---	0.00	0.00
14	---	---	---	---	---	---	---	---	---	---	0.00	0.00
15	---	---	---	---	---	---	---	---	---	---	0.00	0.00
16	---	---	---	---	---	---	---	---	---	---	0.00	0.00
17	---	---	---	---	---	---	---	---	---	---	0.00	0.00
18	---	---	---	---	---	---	---	---	---	---	0.00	0.22
19	---	---	---	---	---	---	---	---	---	---	0.02	0.41
20	---	---	---	---	---	---	---	---	---	---	0.08	0.00
21	---	---	---	---	---	---	---	---	---	---	0.00	0.00
22	---	---	---	---	---	---	---	---	---	---	0.00	0.00
23	---	---	---	---	---	---	---	---	---	0.14	0.00	0.00
24	---	---	---	---	---	---	---	---	---	0.33	0.00	0.00
25	---	---	---	---	---	---	---	---	---	0.13	0.02	0.00
26	---	---	---	---	---	---	---	---	---	0.00	0.00	0.00
27	---	---	---	---	---	---	---	---	---	0.20	0.00	0.00
28	---	---	---	---	---	---	---	---	---	0.01	0.00	0.00
29	---	---	---	---	---	---	---	---	---	0.19	0.00	0.24
30	---	---	---	---	---	---	---	---	---	0.11	0.00	0.00
31	---	---	---	---	---	---	---	---	---	0.04	0.00	---
TOTAL	---	---	---	---	---	---	---	---	---	1.15	1.34	1.15

WTR YR 2004 TOTAL 3.64

08329838, SOUTH FORK HAHN ARROYO RAIN GAGE IN ALBUQUERQUE, NEW MEXICO
STATION ANALYSIS
WATER YEAR 2004

Location.--35°07'16"N, 106°34'04"W. The rain gage is located in northeast Albuquerque at the surface-water gage, between Comanche and Candelaria Roads on Louisiana Boulevard.

Equipment.--7.9-inch-diameter tipping bucket connected to a surface-water data recorder or Onset Corporation HOBO Event data recorder. The bucket tips one time per 0.01 inch of rain, and the recorder stores data at 5-minute intervals. Rain gage is calibrated approximately every 2 years and was last calibrated in March 2003.

Record.--The rain gage gave a complete and satisfactory record for the water year except for November 22 and February 12. Although this rain gage recorded substantial rain on these days, no precipitation or streamflow was recorded at other gages in the metropolitan area. For this reason, the record for these days should be considered suspect.

Period of Record.--October 1984 to present.

Remarks.--Record is good for the entire water year except for November 22 and February 12; record for these days is poor.

PRECIPITATION, TOTAL, INCHES, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.10	0.28	0.00	0.00	0.00	0.21	0.00
3	0.07	0.00	0.00	0.00	0.00	0.00	0.95	0.00	0.43	0.00	0.00	0.00
4	0.03	0.00	0.00	0.00	0.05	0.74	0.10	0.00	0.00	0.00	0.25	0.09
5	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.01
6	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.06	0.00
7	0.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.21	0.00	0.00	0.00	0.00	0.00	0.28	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.00
10	0.10	0.00	0.00	0.00	0.00	0.00	0.25	0.00	0.00	0.00	0.26	0.00
11	0.01	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.23	0.00	0.00
12	0.00	0.60	0.12	0.00	0.20	0.00	0.00	0.00	0.00	0.95	0.00	0.00
13	0.00	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00
15	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.21	0.00	0.00
16	0.00	0.04	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.01	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.06
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.99
20	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.12	0.00	0.04
21	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.01	0.01	0.00
22	0.00	0.52	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00
23	0.00	0.01	0.00	0.00	0.84	0.02	0.00	0.00	0.00	0.95	0.00	0.00
24	0.00	0.00	0.00	0.00	0.45	0.00	0.00	0.00	0.00	0.16	0.00	0.00
25	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.28	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.27	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.75	0.00	0.00
28	0.00	0.00	0.00	0.00	0.12	0.00	0.00	0.00	0.01	0.03	0.00	0.00
29	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.47	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	1.18	1.41	0.12	0.14	1.90	0.95	2.03	0.00	1.18	3.76	0.80	1.19
MAX	0.76	0.60	0.12	0.08	0.84	0.74	0.95	0.00	0.47	0.95	0.26	0.99
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

CAL YR 2003 TOTAL 7.32 MAX 0.76 MIN 0.00
WTR YR 2004 TOTAL 14.66 MAX 0.99 MIN 0.00

08330200, SAN JOSE DRAIN RAIN GAGE AT ALBUQUERQUE, NEW MEXICO
STATION ANALYSIS
WATER YEAR 2004

Location.--35°02'56"N, 106° 38'55"W. The rain gage is located in southwest Albuquerque at the surface-water gage, just west of the intersection of Broadway Boulevard and Woodward Street.

Equipment.--8.0-inch-diameter tipping bucket connected to a surface-water data recorder. The bucket tips one time per 0.01 inch of rain, and the recorder stores data at 5-minute intervals. Rain gage is calibrated approximately every 2 years and was last calibrated in March 2003.

Record.--The rain gage gave a complete and satisfactory record for the water year except for March 30 to April 4; during this period the data recorder malfunctioned. The estimated daily totals for these days are based on both totals observed during gage inspections and the daily totals from the Bernalillo County Building and Wastewater Treatment Plant rain gages.

Period of Record.--June 1998 to present.

Remarks.--Record is good for the entire water year including estimated days.

PRECIPITATION, TOTAL, INCHES, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.01	0.00	e0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.10	e0.61	0.00	0.00	0.00	0.05	0.00
3	0.05	0.00	0.00	0.00	0.01	0.00	e2.00	0.00	0.00	0.00	0.01	0.00
4	0.01	0.00	0.00	0.00	0.00	0.70	e0.14	0.00	0.00	0.00	0.00	0.08
5	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.45	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00
8	0.10	0.00	0.00	0.00	0.00	0.00	0.40	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.13	0.00	0.00	0.00	0.00	0.00	0.22	0.00	0.00	0.00	0.09	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00
12	0.00	0.15	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.39	0.00	0.00
13	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.18	0.20	0.00
16	0.00	0.02	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00
18	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.03	0.12
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.85
20	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.03
21	0.00	0.00	0.00	0.01	0.10	0.00	0.00	0.00	0.00	0.01	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.34	0.00	0.00
23	0.00	0.00	0.00	0.00	0.75	0.12	0.00	0.00	0.00	0.68	0.00	0.00
24	0.00	0.00	0.00	0.00	0.27	0.00	0.00	0.00	0.00	0.14	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00
28	0.00	0.00	0.00	0.00	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.49	0.00	0.00	0.10
30	0.00	0.00	0.00	0.00	---	e0.00	0.00	0.00	0.00	0.00	0.01	0.01
31	0.00	---	0.00	0.00	---	e0.00	---	0.00	---	0.00	0.00	---
TOTAL	0.74	0.21	0.18	0.16	1.26	0.94	3.42	0.00	0.49	2.38	0.42	1.19
MAX	0.45	0.15	0.18	0.08	0.75	0.70	2.00	0.00	0.49	0.68	0.20	0.85
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

CAL YR 2003 TOTAL 5.18 MAX 0.48 MIN 0.00
WTR YR 2004 TOTAL 11.39 MAX 2.00 MIN 0.00

e Estimated

351216106421330, SWINBURN DAM RAIN GAGE AT PARADISE HILLS, NEW MEXICO
STATION ANALYSIS
WATER YEAR 2004

Location.--35°12'16"N, 106°42'13"W. The rain gage is located in far northwest Albuquerque just south of the Swinburn detention dam.

Equipment.--Onset Corporation HOBO Event data recorder and 6.5-inch-diameter tipping bucket. The bucket tips one time per 0.01 inch of rain, and the recorder stores data at 5-minute intervals. Rain gage is calibrated approximately every 2 years and was last calibrated in March 2003.

Record.--The rain gage gave a complete and satisfactory record for the water year except from October 11 to 17. During this period the data recorder lost power. Estimated daily totals for this period are the daily totals from the TM Kelly rain gage.

Period of Record.--August 2000 to present.

Remarks.--Record is good for the water year, including days estimated at zero; other estimates are poor.

PRECIPITATION, TOTAL, INCHES, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.28	0.87	0.00	0.00	0.00	0.31	0.00
3	0.11	0.00	0.00	0.00	0.02	0.03	1.86	0.00	0.00	0.00	0.01	0.04
4	0.03	0.00	0.00	0.00	0.00	0.81	0.26	0.00	0.00	0.00	0.03	0.09
5	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.04	0.01
6	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00
7	0.74	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00
8	0.23	0.00	0.04	0.00	0.00	0.00	0.30	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.00
10	0.01	0.01	0.00	0.00	0.00	0.00	0.47	0.00	0.00	0.00	0.00	0.00
11	e0.01	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00
12	e0.00	0.61	0.12	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.00
13	e0.00	0.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00
14	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	e0.00	0.01	0.01	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	e0.00	0.02	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	e0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.17
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.05	0.41
20	0.00	0.00	0.00	0.11	0.00	0.00	0.00	0.00	0.00	0.16	0.38	0.01
21	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.01	0.01	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46	0.00	0.00
23	0.00	0.00	0.00	0.00	0.77	0.02	0.03	0.00	0.00	0.08	0.00	0.00
24	0.00	0.00	0.00	0.00	0.49	0.00	0.01	0.00	0.00	0.47	0.00	0.00
25	0.00	0.00	0.00	0.02	0.02	0.00	0.00	0.00	0.00	0.14	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.01
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33	0.00	0.00
28	0.00	0.00	0.00	0.00	0.22	0.00	0.00	0.00	0.00	0.03	0.00	0.00
29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.61	0.00	0.00	0.17
30	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.03
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	1.13	0.88	0.17	0.21	1.59	1.16	3.92	0.00	0.66	1.86	0.96	0.94
MAX	0.74	0.61	0.12	0.11	0.77	0.81	1.86	0.00	0.61	0.47	0.38	0.41
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

CAL YR 2003 TOTAL 7.13 MAX 0.74 MIN 0.00
WTR YR 2004 TOTAL 13.48 MAX 1.86 MIN 0.00

e Estimated

350924106315630, TANOAN RAIN GAGE AT ALBUQUERQUE, NEW MEXICO
STATION ANALYSIS
WATER YEAR 2004

Location.--35°09'20"N, 106°31'53"W. The rain gage is located in northeast Albuquerque at a private office, north of Academy Road between Eubank Boulevard and Ventura Street.

Equipment.--Onset Corporation HOBO Event data recorder and 7.9-inch-diameter tipping bucket. The bucket tips one time per 0.01 inch of rain, and the recorder stores data at 5-minute intervals. Rain gage is calibrated approximately every 2 years and was last calibrated in March 2003.

Record.--The rain gage gave a complete and satisfactory record for the entire water year.

Period of Record.--April 1991 to present.

Remarks.--Record is good for the entire water year.

PRECIPITATION, TOTAL, INCHES, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.03	0.12	0.24	0.00	0.00	0.00	0.10	0.00
3	0.10	0.00	0.00	0.00	0.01	0.01	0.76	0.00	0.00	0.00	0.00	0.00
4	0.05	0.00	0.00	0.00	0.12	0.75	0.21	0.00	0.00	0.00	0.11	0.08
5	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.21	0.00	0.00	0.00	0.00	0.00	0.35	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.00	0.00	0.00	0.00	0.00
10	0.13	0.00	0.00	0.00	0.00	0.00	0.29	0.00	0.00	0.00	0.01	0.00
11	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.00	0.00
12	0.00	0.65	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.78	0.02	0.00
13	0.00	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00
16	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.03	0.07
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.96
20	0.00	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.11	0.00	0.05
21	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.02	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.32	0.00	0.00
23	0.00	0.00	0.00	0.00	0.58	0.01	0.01	0.00	0.00	0.45	0.00	0.00
24	0.00	0.00	0.00	0.00	0.22	0.00	0.00	0.00	0.00	0.11	0.00	0.00
25	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.02	0.17	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39	0.00	0.00	0.02
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.49	0.00	0.00
28	0.00	0.00	0.00	0.00	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.53	0.00	0.00	0.01
30	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	1.24	0.99	0.15	0.19	1.18	0.94	1.98	0.00	0.94	2.58	0.40	1.19
MAX	0.74	0.65	0.15	0.10	0.58	0.75	0.76	0.00	0.53	0.78	0.11	0.96
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

CAL YR 2003 TOTAL 6.65 MAX 0.78 MIN 0.00
WTR YR 2004 TOTAL 11.78 MAX 0.96 MIN 0.00

08329936, TAYLOR RANCH DRAIN RAIN GAGE AT ALBUQUERQUE, NEW MEXICO
STATION ANALYSIS
WATER YEAR 2004

Location.--35°08'58"N, 106°42'05"W. The rain gage is located in northwest Albuquerque on Calle Nuestra Street, near the intersection of Golf Course Road and Montano Road.

Equipment.--Onset Corporation HOBO Event data recorder and 8.2-inch-diameter tipping bucket. The bucket tips one time per 0.01 inch of rain, and the recorder stores data at 5-minute intervals. Rain gage is calibrated approximately every 2 years and was last calibrated in March 2003.

Record.--The rain gage gave a complete and satisfactory record for the entire water year except for October 8 to 16; during this period the rain gage was plugged. Estimates for these days are based on daily totals recorded at this gage as well as the Petroglyph rain gage.

Period of Record.--June 1984 to present.

Remarks.--Record is good for the entire water year including days estimated as zero; other estimates are poor.

PRECIPITATION, TOTAL, INCHES, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.28	1.15	0.00	0.00	0.00	0.07	0.00
3	0.15	0.00	0.00	0.00	0.07	0.00	2.76	0.00	0.00	0.00	0.00	0.00
4	0.04	0.00	0.00	0.00	0.00	1.08	0.21	0.00	0.00	0.00	0.00	0.08
5	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.01	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	1.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	e0.37	0.00	0.23	0.00	0.00	0.00	0.41	0.00	0.00	0.00	0.00	0.00
9	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	e0.00	0.00	0.00	0.00	0.00	0.00	0.41	0.00	0.00	0.00	0.00	0.00
11	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00
12	e0.00	0.90	0.37	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00
13	e0.00	0.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.00
14	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	e0.00	0.01	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	e0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.00	0.41
20	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.02
21	0.00	0.00	0.00	0.01	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.37	0.00	0.00
23	0.00	0.00	0.00	0.00	1.24	0.01	0.01	0.00	0.00	0.14	0.00	0.00
24	0.00	0.00	0.00	0.00	1.13	0.00	0.00	0.00	0.00	0.17	0.00	0.00
25	0.00	0.00	0.00	0.04	0.01	0.00	0.00	0.00	0.00	0.22	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00
28	0.00	0.00	0.00	0.00	0.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.13	0.00	0.00	0.36
30	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.01
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	1.71	1.24	0.60	0.20	3.03	1.39	4.95	0.00	1.13	1.31	0.24	1.03
MAX	1.15	0.90	0.37	0.08	1.24	1.08	2.76	0.00	1.13	0.37	0.09	0.41
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

CAL YR 2003 TOTAL 9.61 MAX 1.15 MIN 0.00
WTR YR 2004 TOTAL 16.83 MAX 2.76 MIN 0.00

e Estimated

350755106325830, THOMAS PUMP STATION RAIN GAGE AT ALBUQUERQUE, NEW MEXICO
STATION ANALYSIS
WATER YEAR 2004

Location.--35°07'56"N, 106°33'01"W. The rain gage is located in northeast Albuquerque, approximately 0.25 mile northeast of the intersection of Montgomery and Wyoming Boulevards.

Equipment.--Onset Corporation HOBO Event data recorder and 7.9-inch-diameter tipping bucket. The bucket tips one time per 0.01 inch of rain, and the recorder stores data at 5-minute intervals. Rain gage is calibrated approximately every 2 years and was last calibrated in March 2003.

Record.--The rain gage gave a complete and satisfactory record for the entire water year.

Period of Record.--October 1994 to present.

Remarks.--Record is good for the entire water year.

PRECIPITATION, TOTAL, INCHES, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.12	0.26	0.00	0.00	0.00	0.10	0.00
3	0.07	0.00	0.00	0.00	0.00	0.01	0.77	0.00	0.00	0.00	0.00	0.00
4	0.03	0.00	0.00	0.00	0.09	0.79	0.12	0.00	0.00	0.00	0.18	0.08
5	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.01	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.22	0.00	0.00	0.00	0.00	0.00	0.37	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.00
10	0.14	0.00	0.00	0.00	0.00	0.00	0.28	0.00	0.00	0.00	0.02	0.00
11	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00
12	0.00	0.68	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.55	0.02	0.00
13	0.00	0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.03	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.10
19	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.01	1.00
20	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.10	0.01	0.06
21	0.00	0.00	0.00	0.01	0.07	0.00	0.00	0.00	0.00	0.03	0.02	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.82	0.03	0.00	0.00	0.00	0.70	0.00	0.00
24	0.00	0.00	0.00	0.00	0.31	0.01	0.00	0.00	0.00	0.16	0.00	0.00
25	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.21	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.65	0.00	0.00
28	0.00	0.00	0.00	0.00	0.15	0.00	0.00	0.00	0.00	0.03	0.00	0.00
29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	1.41	1.02	0.12	0.15	1.51	1.02	1.87	0.00	0.53	2.51	0.37	1.24
MAX	0.94	0.68	0.12	0.09	0.82	0.79	0.77	0.00	0.39	0.70	0.18	1.00
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

CAL YR 2003 TOTAL 6.47 MAX 0.94 MIN 0.00
WTR YR 2004 TOTAL 11.75 MAX 1.00 MIN 0.00

08330580, TIJERAS ARROYO AT MONTESSA PARK RAIN GAGE NEAR ALBUQUERQUE, NEW MEXICO

STATION ANALYSIS

WATER YEAR 2004

Location.--35°01'11"N, 106°35'58"W. The rain gage is located in far southeast Albuquerque at a discontinued surface-water gage, approximately 2 miles east of Bobby Foster Road and the I-25 overpass.

Equipment.--Onset Corporation HOBO Event data recorder and 7.9-inch-diameter tipping bucket. The bucket tips one time per 0.01 inch of rain, and the recorder stores data at 5-minute intervals. Rain gage is calibrated approximately every 2 years and was last calibrated in March 2003.

Record.--The rain gage gave a complete and satisfactory record for the entire water year.

Period of Record.--October 1994 to present.

Remarks.--Record is good for the entire water year.

PRECIPITATION, TOTAL, INCHES, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.06	0.39	0.00	0.00	0.00	0.11	0.00
3	0.07	0.00	0.01	0.00	0.03	0.00	1.38	0.00	0.00	0.00	0.00	0.00
4	0.03	0.00	0.00	0.00	0.00	0.53	0.05	0.00	0.00	0.00	0.00	0.08
5	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	1.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.17	0.00	0.00	0.00	0.00	0.00	0.27	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.04	0.00	0.00	0.00	0.00	0.00	0.13	0.00	0.00	0.00	0.07	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.39	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00
15	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.01	0.03
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.62
20	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.07
21	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.02	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.17	0.00	0.00
23	0.00	0.00	0.00	0.00	0.92	0.03	0.00	0.00	0.00	0.56	0.00	0.00
24	0.00	0.00	0.00	0.00	0.23	0.00	0.00	0.00	0.00	0.23	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.53	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.07	0.00	0.00
28	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.02	0.00
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	1.33	0.50	0.15	0.08	1.32	0.66	2.22	0.00	0.43	1.66	0.22	0.80
MAX	1.02	0.39	0.14	0.06	0.92	0.53	1.38	0.00	0.42	0.56	0.11	0.62
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

CAL YR 2003 TOTAL 6.19 MAX 1.02 MIN 0.00
WTR YR 2004 TOTAL 9.37 MAX 1.38 MIN 0.00

351516106431430, TM KELLY RAIN GAGE AT RIO RANCHO, NEW MEXICO
STATION ANALYSIS
WATER YEAR 2004

Location.--35°15'16"N, 106°43'14"W. The rain gage is located on private property in Rio Rancho, approximately 2 miles north of the Albuquerque City Limit. This property is located northeast of the intersection of Southern and Rainbow Boulevards.

Equipment.--Onset Corporation HOBO Event data recorder and 6.5-inch-diameter tipping bucket. The bucket tips one time per 0.01 inch of rain, and the recorder stores data at 5-minute intervals. Rain gage is calibrated approximately every 2 years and was last calibrated in April 2003.

Record.--The rain gage gave a complete and satisfactory record for the entire period of record.

Period of Record.--October 2000 to present. This is the first year of record for this gage.

Remarks.--Record is good for the entire period of record.

PRECIPITATION, TOTAL, INCHES, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.18	0.74	0.00	0.00	0.00	0.25	0.00
3	0.14	0.00	0.00	0.00	0.00	0.10	1.93	0.00	0.00	0.00	0.01	0.00
4	0.06	0.00	0.00	0.00	0.00	0.71	0.33	0.00	0.00	0.00	0.17	0.13
5	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.03	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.16	0.00	0.01	0.00	0.00	0.00	0.36	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00
10	0.16	0.01	0.00	0.00	0.00	0.00	0.61	0.00	0.00	0.09	0.02	0.00
11	0.01	0.00	0.00	0.00	0.00	0.00	0.03	0.01	0.00	0.00	0.00	0.00
12	0.00	0.73	0.13	0.00	0.06	0.00	0.01	0.00	0.00	0.05	0.00	0.00
13	0.00	0.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33	0.00
14	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00
15	0.00	0.01	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.14
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.03	0.36
20	0.00	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01
21	0.00	0.00	0.00	0.01	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.09	0.00	0.00
23	0.00	0.00	0.00	0.00	0.49	0.00	0.04	0.00	0.00	0.11	0.00	0.00
24	0.00	0.00	0.00	0.00	0.70	0.00	0.00	0.00	0.00	0.54	0.00	0.00
25	0.00	0.00	0.00	0.01	0.05	0.00	0.00	0.00	0.00	0.13	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.47	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.00	0.06
28	0.00	0.00	0.00	0.00	0.25	0.00	0.00	0.00	0.00	0.03	0.00	0.00
29	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.92	0.00	0.00	0.40
30	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.03
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	1.07	1.02	0.14	0.20	1.62	1.02	4.13	0.01	1.39	1.33	0.88	1.13
MAX	0.54	0.73	0.13	0.10	0.70	0.71	1.93	0.01	0.92	0.54	0.33	0.40
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

CAL YR 2003 TOTAL 7.05 MAX 0.73 MIN 0.00
WTR YR 2004 TOTAL 13.94 MAX 1.93 MIN 0.00

08330540, TRAMWAY FLOODWAY CHANNEL RAIN GAGE AT ALBUQUERQUE, NEW MEXICO
STATION ANALYSIS
WATER YEAR 2004

Location.--35°04'42"N, 106°29'49"W. The rain gage is located in northeast Albuquerque at a surface-water gage, approximately 200 feet south of the intersection of Tramway Boulevard and Copper Street.

Equipment.--8.0-inch-diameter tipping bucket connected to a surface-water data recorder. The bucket tips one time per 0.01 inch of rain, and the recorder stores data at 5-minute intervals. Rain gage is calibrated approximately every 2 years and was last calibrated in March 2003.

Record.--The rain gage gave a complete and satisfactory record for the entire water year.

Period of Record.--May 2001 to present.

Remarks.--Record is good for the entire water year.

PRECIPITATION, TOTAL, INCHES, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.01	0.09	0.23	0.00	0.00	0.00	0.23	0.00
3	0.07	0.00	0.00	0.00	0.00	0.00	1.50	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.01	0.72	0.45	0.00	0.00	0.00	1.48	0.14
5	0.00	0.00	0.00	0.00	0.00	0.11	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.17	0.00	0.01	0.00	0.00	0.00	0.33	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.00
10	0.22	0.00	0.00	0.00	0.00	0.00	0.26	0.00	0.00	0.01	0.05	0.00
11	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.56	0.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00
13	0.00	0.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00
15	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.02	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.08
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.53
20	0.00	0.00	0.00	0.15	0.00	0.00	0.00	0.00	0.00	0.15	0.00	0.17
21	0.00	0.00	0.00	0.00	0.13	0.00	0.00	0.00	0.00	0.02	0.04	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.34	0.03	0.00
23	0.00	0.00	0.00	0.00	0.91	0.04	0.00	0.00	0.00	0.47	0.00	0.00
24	0.00	0.00	0.00	0.00	0.37	0.01	0.00	0.00	0.00	0.10	0.00	0.00
25	0.00	0.00	0.00	0.06	0.01	0.00	0.00	0.00	0.00	0.18	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.69	0.00	0.00
28	0.00	0.00	0.00	0.00	0.23	0.00	0.00	0.00	0.88	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.45	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.02
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	1.39	1.06	0.22	0.32	1.80	0.97	2.84	0.00	1.56	2.03	1.88	0.94
MAX	0.93	0.56	0.21	0.15	0.91	0.72	1.50	0.00	0.88	0.69	1.48	0.53
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

CAL YR 2003 TOTAL 7.72 MAX 0.93 MIN 0.00
WTR YR 2004 TOTAL 15.01 MAX 1.50 MIN 0.00

350748106345830, USGS OFFICE RAIN GAGE AT ALBUQUERQUE, NEW MEXICO
STATION ANALYSIS
WATER YEAR 2004

Location.--35°07'48"N, 106°34'58"W. The rain gage is located in northeast Albuquerque on the roof of the IRS Building. This building houses the USGS and is just southeast of the intersection of San Mateo and Montgomery Boulevards.

Equipment.--Onset Corporation HOBO Event data recorder and 6.5-inch-diameter tipping bucket. The bucket tips one time per 0.01 inch of rain, and the recorder stores data at 5-minute intervals. Rain gage is calibrated approximately every 2 years and was last calibrated in April 2003.

Record.--The rain gage gave a complete and satisfactory record for the entire water year.

Period of Record.--August 2000 to present.

Remarks.--Record is good for the entire water year.

PRECIPITATION, TOTAL, INCHES, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.14	0.29	0.00	0.00	0.00	0.16	0.00
3	0.11	0.00	0.00	0.00	0.02	0.01	0.92	0.00	0.01	0.00	0.00	0.00
4	0.02	0.00	0.00	0.00	0.02	0.67	0.15	0.00	0.00	0.00	0.28	0.05
5	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.01
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.18	0.00	0.03	0.00	0.00	0.00	0.23	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00
10	0.22	0.00	0.00	0.00	0.00	0.00	0.30	0.00	0.00	0.00	0.27	0.00
11	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.00	0.00
12	0.00	0.62	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.76	0.00	0.00
13	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.00
16	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.03	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00
18	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.01	0.06
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.74
20	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.02
21	0.00	0.00	0.00	0.01	0.05	0.00	0.00	0.00	0.00	0.01	0.02	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.74	0.04	0.00	0.00	0.00	0.74	0.00	0.00
24	0.00	0.00	0.00	0.00	0.29	0.00	0.00	0.00	0.00	0.15	0.00	0.00
25	0.00	0.00	0.00	0.04	0.01	0.00	0.00	0.00	0.00	0.29	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.70	0.00	0.00
28	0.00	0.00	0.00	0.00	0.14	0.00	0.00	0.00	0.00	0.03	0.00	0.00
29	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.52	0.00	0.00	0.11
30	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.01	0.00	0.00	0.01
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	1.20	0.90	0.16	0.18	1.28	0.95	1.95	0.00	0.75	3.13	0.87	1.00
MAX	0.66	0.62	0.13	0.08	0.74	0.67	0.92	0.00	0.52	0.76	0.28	0.74
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

CAL YR 2003 TOTAL 6.64 MAX 0.66 MIN 0.00
WTR YR 2004 TOTAL 12.37 MAX 0.92 MIN 0.00

351023106313930, WALKER PUMP STATION RAIN GAGE AT ALBUQUERQUE, NEW MEXICO
STATION ANALYSIS
WATER YEAR 2004

Location.--35°10’23”N, 106°31’39”W. The rain gage is located in far northeast Albuquerque near the intersection of Paseo del Norte and Eubank Boulevard.

Equipment.--Onset Corporation HOBO Event data recorder and 6.5-inch-diameter tipping bucket. The bucket tips one time per 0.01 inch of rain, and the recorder stores data at 5-minute intervals. Rain gage is calibrated approximately every 2 years and was last calibrated in March 2003.

Record.--The rain gage gave a complete and satisfactory record for the entire water year except for January 18 to 27; during this period the data recorder lost power. Estimated daily totals for these days are averages of daily totals from the Elena Gallegos, La Cueva, North Camino Arroyo, and Tanoan rain gages.

Period of Record.--May 2002 to present.

Remarks.--Record is good for the entire water year including days estimated as zero; other estimates are poor.

PRECIPITATION, TOTAL, INCHES, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.02	0.01	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.02	0.15	0.42	0.00	0.00	0.00	0.13	0.00
3	0.12	0.00	0.00	0.00	0.10	0.01	1.03	0.00	0.00	0.00	0.02	0.00
4	0.06	0.00	0.00	0.00	0.03	0.98	0.30	0.00	0.00	0.00	0.34	0.10
5	0.00	0.00	0.00	0.00	0.01	0.09	0.01	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.77	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.24	0.00	0.01	0.00	0.00	0.00	0.51	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.02	0.00	0.00	0.00	0.21	0.00	0.00	0.00	0.00	0.00
10	0.09	0.01	0.00	0.00	0.00	0.00	0.30	0.00	0.00	0.00	0.01	0.00
11	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.02	0.00
12	0.00	0.64	0.14	0.00	0.00	0.00	0.02	0.00	0.00	1.05	0.02	0.00
13	0.00	0.27	0.01	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00
15	0.00	0.02	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00
16	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.03	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	e0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.14	0.11
19	0.00	0.00	0.00	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	1.16
20	0.00	0.00	0.00	e0.16	0.00	0.00	0.00	0.00	0.00	0.19	0.00	0.04
21	0.00	0.00	0.00	e0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.02	0.00
22	0.00	0.00	0.00	e0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.00	0.00
23	0.00	0.00	0.01	e0.00	0.80	0.09	0.04	0.00	0.00	0.92	0.00	0.00
24	0.00	0.00	0.00	e0.00	0.21	0.00	0.01	0.00	0.00	0.22	0.00	0.00
25	0.00	0.00	0.00	e0.07	0.01	0.00	0.00	0.00	0.05	0.12	0.00	0.00
26	0.00	0.00	0.01	e0.00	0.00	0.00	0.00	0.00	0.36	0.00	0.00	0.06
27	0.00	0.00	0.01	e0.00	0.00	0.00	0.00	0.00	0.00	0.76	0.00	0.01
28	0.00	0.00	0.00	0.00	0.22	0.00	0.00	0.00	0.00	0.01	0.00	0.00
29	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.79	0.00	0.00	0.10
30	0.00	0.00	0.02	0.00	---	0.00	0.00	0.00	0.01	0.00	0.00	0.02
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	1.31	1.00	0.23	0.33	1.56	1.32	2.85	0.00	1.21	3.83	0.81	1.60
MAX	0.77	0.64	0.14	0.16	0.80	0.98	1.03	0.00	0.79	1.05	0.34	1.16
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

CAL YR 2003 TOTAL 7.37 MAX 0.77 MIN 0.00
WTR YR 2004 TOTAL 16.05 MAX 1.16 MIN 0.00

e Estimated

350119106394630, WASTEWATER TREATMENT PLANT RAIN GAGE AT ALBUQUERQUE, NEW MEXICO

STATION ANALYSIS

WATER YEAR 2004

Location.--35°01'19"N, 106°39'46"W. The rain gage is located in southwest Albuquerque on the roof of the Water Quality Lab at the wastewater treatment facility. The facility is located south of the intersection of Rio Bravo Boulevard and 2nd Street.

Equipment.--Onset Corporation HOBO Event data recorder and 6.5-inch-diameter tipping bucket. The bucket tips one time per 0.01 inch of rain, and the recorder stores data at 5-minute intervals. Rain gage is calibrated approximately every 2 years and was last calibrated in March 2003.

Record.--The rain gage gave a complete and satisfactory record for the entire water year.

Period of Record.--August 2000 to present.

Remarks.--Record is good for the entire water year**.**

PRECIPITATION, TOTAL, INCHES, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.02	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.13	0.83	0.00	0.00	0.00	0.05	0.00
3	0.12	0.00	0.00	0.01	0.01	0.00	1.42	0.00	0.00	0.00	0.00	0.00
4	0.02	0.00	0.00	0.00	0.00	0.65	0.14	0.00	0.02	0.00	0.00	0.13
5	0.01	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.01
6	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00
7	0.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.18	0.00	0.00	0.00	0.00	0.00	0.35	0.00	0.00	0.03	0.00	0.00
9	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.44	0.00	0.00	0.00	0.00	0.00	0.28	0.00	0.00	0.00	0.10	0.00
11	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.51	0.13	0.00	0.00	0.01	0.01	0.00	0.00	0.02	0.00	0.00
13	0.00	0.18	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.01	0.01	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.00
16	0.00	0.03	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.02	0.00	0.01	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.03	0.10
19	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.01	0.03	0.82
20	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.11	0.00	0.04
21	0.00	0.01	0.00	0.01	0.05	0.00	0.00	0.00	0.00	0.02	0.00	0.00
22	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.01	0.39	0.00	0.00
23	0.00	0.00	0.00	0.00	0.59	0.17	0.01	0.00	0.00	0.42	0.00	0.00
24	0.00	0.00	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.05	0.00	0.00
25	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.35	0.01	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.00	0.00
28	0.00	0.00	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.01	0.00	0.00
29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.34	0.00	0.01	0.04
30	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.04	0.01
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	1.55	0.76	0.15	0.19	1.02	0.99	3.05	0.00	0.37	1.63	0.37	1.15
MAX	0.74	0.51	0.13	0.07	0.59	0.65	1.42	0.00	0.34	0.42	0.10	0.82
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

CAL YR 2003 TOTAL 6.71 MAX 0.74 MIN 0.00
WTR YR 2004 TOTAL 11.23 MAX 1.42 MIN 0.00