

Typical ALERT Rain/Stream Gage Schematic

**ANNUAL HYDROLOGIC
DATA REPORT
VOLUME I: PRECIPITATION
WATER YEAR 1999**

PREFACE

This publication presents precipitation data collected by the Flood Control District of Maricopa County's automated ALERT system. This telemetered flood-detection network is located primarily throughout Maricopa County, Arizona with additional gages in Yavapai, Pinal, Gila, and La Paz Counties.

The data contained in this report was collected, compiled, and edited by the Flood Warning/Data Collection Branch of the Engineering Division. Precipitation data includes daily, monthly, and annual totals for 227 stations maintained by FCDMC.

Information contained herein is as accurate and complete as possible within the limitations of real-time ALERT data collection technology currently available. Wherever possible, footnotes have been included to identify questionable, estimated, or missing data. Reliance upon the accuracy, reliability, or authority of this information is solely the responsibility of the user.

This report is Volume 1 of a 5 Volume set entitled "ALERT Annual Hydrologic Data Report - Water Year 1999". Volumes 2-5 in order are [2] Surface Water Report; [3] Observer Network; [4] Stormwater Monitoring Program; and [5] Weather Data and Alluvial Fan Watershed Summaries. Additional copies of this report, or copies of the companion volumes, may be purchased from:

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<http://www.fcd.maricopa.gov/alert/alert.htm>

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INTRODUCTION

The following paragraphs describe the arrangement, collection, and compilation of data in this report.

1. Data is tabulated for each precipitation gage based on the "1999 Water Year" which begins Oct. 1st, 1998 and ends on Sep. 30th, 1999. Each data page represents one gage, and lists the daily precipitation totals, the monthly totals, the cumulative rainfall by month, the maximum daily value each month, and the number of days with rain. The data pages are arranged in ascending order by sensor ID number.
2. The unit of measurement for daily precipitation totals provided in this report is inches. Annual totals are also provided in millimeters.
3. An index of gage names, numbers, locations, and other descriptors is included as Table I.
4. All of the data in this report has been reviewed and/or edited in an attempt to provide the most accurate data possible. Where possible, inaccurate data is flagged with a footnote describing the time the gage was down, the cumulative rainfall count in millimeters at the beginning and end of the down period, whether or not rain fell during that time, and whether or not monthly and annual totals were affected. For example, a footnote might read " Gage down from 2/12 03:40 (92) through 2/14 13:30 (94) due to lightning strike; rainfall assigned to 2/13", where the values in parentheses are the beginning and end rainfall counts in millimeters.
5. Snow gages were in service during Water-Year 1999. They consist of a 4' tube mounted vertically to the tipping-bucket funnel. Consequently, gages above approximately 5,000 feet will show meltwater following the colder winter events.
6. Table II lists the sensors installed in the FCDMC ALERT System during Water Year 1999 and their installation dates. Table III lists the annual rainfall total for each gage, sorted by decreasing amount, along with Water-Year totals for 1998, 1997, and 1996. Table III can also be used as a quick reference to determine which gages were installed during the Water Year, which had incomplete records, and which had estimated totals. In the case of estimated totals, one or more daily totals were calculated using either the Isohyetal or Thiessen polygon methods applied to nearby rain stations.
7. Additional and/or more detailed sensor data in hard copy or computer disk format is available for the gages listed in this report. Contact the Flood Control District, Engineering Division, Flood Warning/Water Quality Branch at (602) 506-8701.
8. Note on data compilation: Nearly all automatic rain gages in this network measure rainfall depth in 1mm increments. The base station computer which collects the data uses the equation $1\text{mm} = 1/25.4$ or 0.03937 inches to convert millimeters to inches. As a result, daily totals may sum to a slightly different total than the reported monthly total (which is more accurate than the sum of the daily totals) because of rounding errors. In the same way, the annual totals reported in Table III may not match exactly the sum of the monthly totals, but can be considered more accurate.
9. Note on the accuracy of monthly and annual totals: Because automatic ALERT gages are designed for flood warning applications, there is some inherent error associated with their use in maintaining accurate long-term records. The majority of tipping buckets collect rainfall in 1mm increments before sending a signal and dumping the accumulated rainfall. Because evaporation often dries the bucket between storms, the measurement error averages out to be 0.05 mm (0.02 in) times the number of rainfall events during the period of interest (month or year). It is also conceivable that during times of low evaporation and/or short times between storms that the bucket could be partially or nearly full at the start of a rainstorm. Other errors can be introduced by the effects of gage height, calibration errors, and the physical environment (trees, buildings, wind patterns) near the gage.

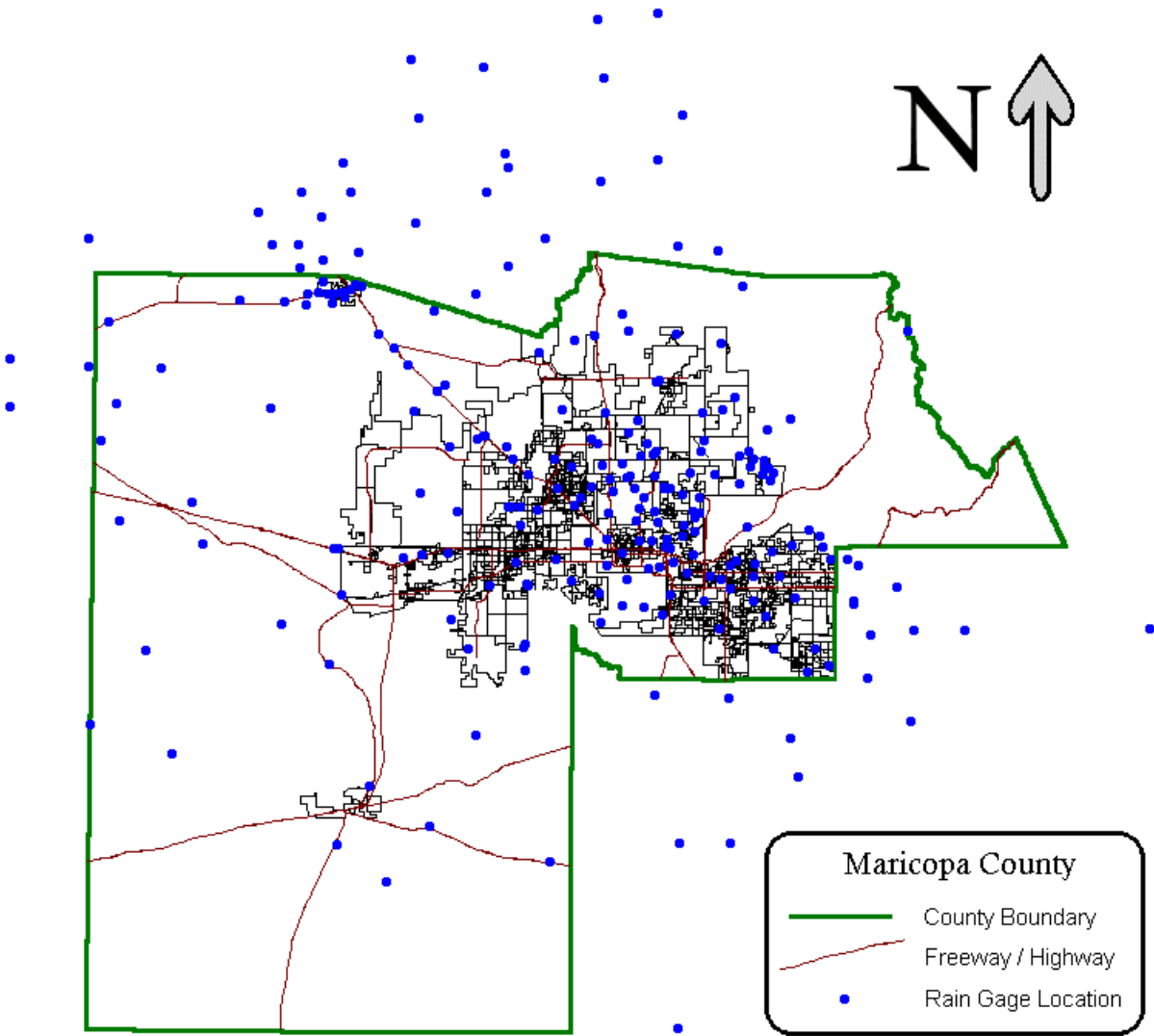


Figure 1

General Map of Rain Gage Locations

MARICOPA COUNTY ANNUAL RAINFALL DISTRIBUTION FOR WATER YEAR 1999

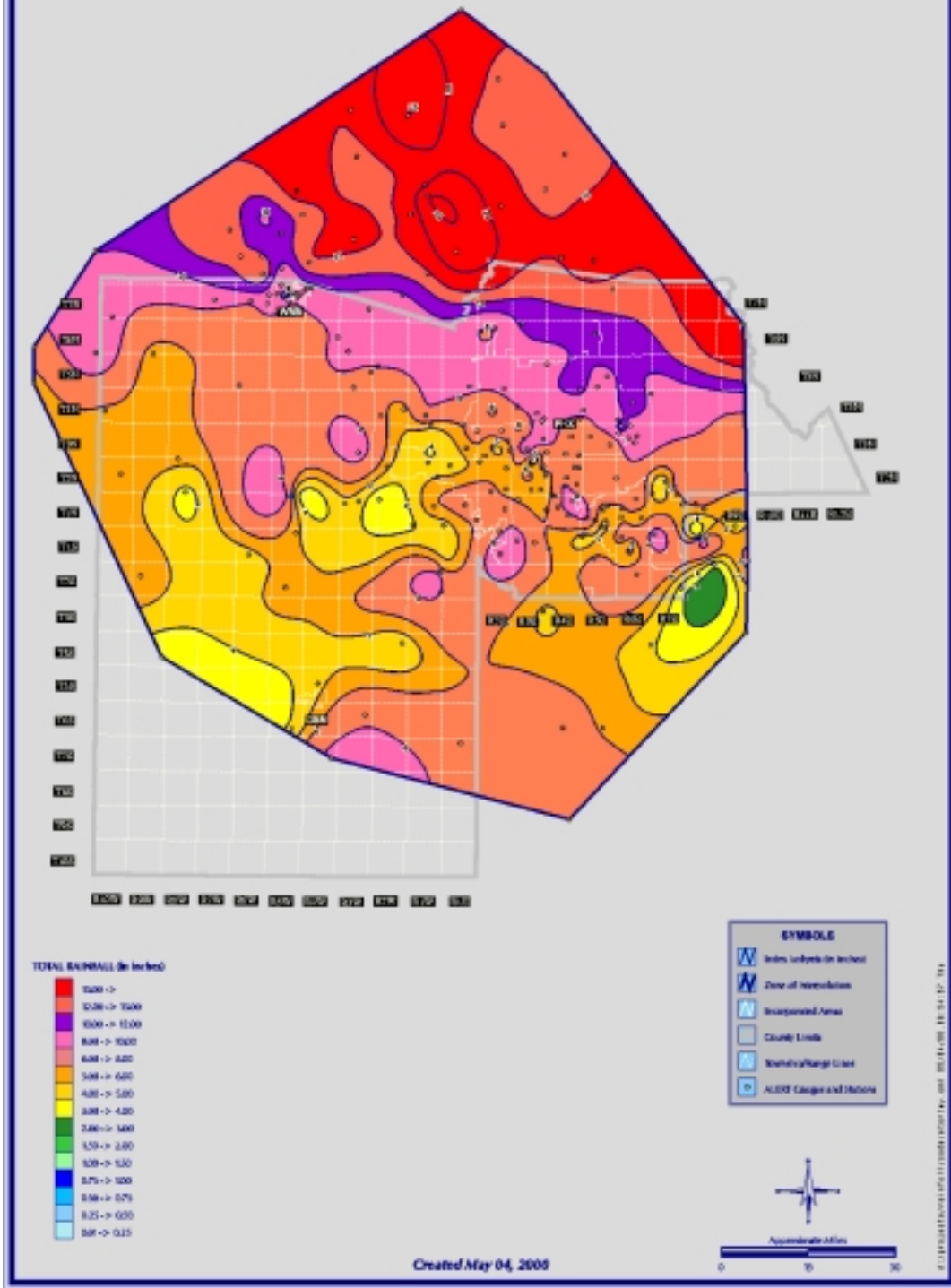


FIGURE 2

Flood Control District of Maricopa County

ALERT System Sensor Database - Precipitation Sensors

Sensor Name	Sensor ID	Installed	T-R-S	Latitude	Longitude	Elevation	Location
Sacaton Peak	750	06/11/96	5S-7E-07	33 00 20	111 40 30	2680	4.5 miles E. of the SR387 / I-10 junction
Tat Momolikot Dam	770	01/29/98	9S-4E-30	32 39 02	111 55 36	1560	19 miles SW of Casa Grande
Gila @ Maricopa Rd	775	04/09/95	3S-3E-13	33 10 16	112 00 21	1120	Gila River at Maricopa Road bridge
Gila @ Olberg	780	04/12/95	4S-6E-12	33 06 50	111 41 15	1290	Gila River at Olberg Bridge, 3 mi. ENE of Sacaton
Santa Cruz @ SR 84	785	03/16/94	7S-5E-21	32 52 55	111 49 45	1311	3 mi. West of SR 93 (Casa Grande) on SR 84
Santa Rosa @ SR 84	795	03/16/94	7S-4E-20	32 52 39	111 56 51	1305	11 mi. West of SR 93 (Casa Grande) on SR 84
Cesar Chavez Park	4500	08/08/90	1S-2E-3	33 22 22	112 08 08	1070	South end of park, 35th Ave. and Baseline Rd.
Salt R. @ I-10	4505	12/21/95	1N-3E-23	33 25 06	112 02 49	1115	I-10 Bridge at Salt River
Roeser @ 2nd St.	4510	01/29/91	1N-3E-29	33 23 58	112 04 11	1079	1/2 mi. SSE of Broadway Rd. and Central Ave.
Salt R. @ 40th St.	4515	03/22/96	1N-3E-13	33 25 22	111 59 54	1101	South side of Salt River near 40th St.
Salt R. @ Priest Dr.	4520	09/21/95	1N-4E-17	33 26 00	111 57 43	1133	West side of Salt River bridge at Priest Drive
ASU South	4525	07/14/95	1N-4E-22	33 24 45	111 55 51	1160	1/4 mi. NNE of Broadway Rd. and Mill Ave.
Kleinman Park	4530	03/26/91	1N-5E-28	33 24 03	111 51 02	1220	1/2 mi. SE of Broadway Rd. and Alma School Rd.
Broadway @ Dobson	4535	10/01/95	1N-5E-30	33 24 17	111 52 31	1210	1/8 mi. SW of Broadway Rd. & Dobson Rd.
Fitch Park	4540	03/27/91	1N-5E-15	33 25 42	111 49 35	1245	1/2 mi. N of University Dr. and Center St.
Brown Rd. @ Horne	4545	11/06/95	1N-5E-11	33 26 15	111 48 47	1265	100 yards N. of Brown Rd. @ Horne, Mesa
Mountain View Park	4550	03/21/91	1N-6E-17	33 25 52	111 46 14	1280	1/2 mi. N of University Dr. and Lindsay Rd.
Falcon Field	4555	10/01/95	1N-6E-03	33 27 17	111 43 45	1380	1/4 mi. NE of McKellips Rd. & Greenfield Rd.
Spookhill FRS	4560	03/13/84	2N-7E-31	33 28 01	111 40 48	1595	1/2 mi. N of McDowell Rd. and Bush Highway
Salt River Landfill	4580	01/30/98	2N-5E-24	33 30 16	111 47 13	1200	1/4 mi. N of Gilbert
Pima @ Union Hills	4590	10/22/97	4N-4E-36	33 39 19	111 53 48	1640	1/4 mi. west of Pima Rd. @ Union Hills
Pinnacle Peak Vista	4595	04/21/98	4N-5E-19	33 40 28	111 53 06	1950	1/2 mi. SSE of Deer Valley Rd. and Pima Rd.
IBW @ McKellips Rd.	4600	05/21/85	1N-4E-11	33 26 58	111 54 58	1187	On Indian Bend Wash 1/4 mi. South of McKellips
Osborn @ 64 th St.	4605	10/22/97	2N-4E-27	33 29 05	111 56 33	1290	200 yards east of Osborn Rd. @ 64 th St.
IBW @ Indian Bend Rd.	4610	09/28/83	2N-4E-11	33 32 00	111 54 53	1071	On Indian Bend Wash just S. of Indian Bend Rd.
IBW @ Indian School Rd.	4615	11/26/97	2N-4E-23	33 29 28	111 54 20	1235	Indian School Rd. @ Hayden Rd.
IBW @ Interceptor	4620	01/01/89	2N-4E-12	33 31 57	111 53 55	1071	1/4 mi. SW of Pima Rd. & Indian Bend Rd.
Highland @ 68 th St.	4625	11/13/97	2N-4E-22	33 30 28	111 56 10	1290	1/4 mi. north of Highland @ 68 th St.
Thunderbird Academy	4630	08/04/81	3N-4E-14	33 36 38	111 55 22	1448	1/4 mi. ESE of Thunderbird Rd. and Scottsdale Rd.
Tatum Wash @ 40th St.	4635	06/03/94	3N-4E-30	33 34 16	111 59 44	1300	Just S. of 40th St. and Mountain View Rd.
IBW @ Sweetwater	4640	12/27/90	3N-3E-13	33 36 15	112 00 18	1400	1/2 mi. E of 32nd St. and Sweetwater Ave.
East Fork CC #1	4645	03/02/94	4N-3E-23	33 40 05	112 01 15	1515	1/4 mi. E of Beardsley Rd. and Cave Creek Rd.
Paradise Valley Park	4650	02/27/89	4N-3E-36	33 39 17	112 00 13	1494	1/2 mi. E of Union Hills Dr. and 32nd St.
East Fork CC #4	4655	01/18/94	4N-3E-25	33 38 31	112 01 01	1456	1/4 mi. S of Union Hills Dr. and 32nd St.
Lost Dog Wash	4660	07/13/90	3N-5E-23	33 36 02	111 48 02	1700	1/2 mi. NNW of Shea Blvd. and 128th St.
EFCC near 7 th Ave.	4665	05/08/97	3N-6E-05	33 37 43	112 04 50	1325	Near 7 th Ave., 1/2 mi. South of Greenway Rd.

Sensor Name	Sensor ID	Installed	T-R-S	Latitude	Longitude	Elevation	Location
Pima @ Jomax	4670	05/06/93	5N-4E-36	33 43 44	111 53 42	2180	1/8 mi. NW of Pima Rd. and Jomax Rd.
Lake Marguarite	4675	11/25/97	3N-4E-36	33 33 49	111 53 56	1325	1/4 mi. west of Doubletree and Hayden
East Fork CC #3	4680	09/13/94	4N-3E-34	33 38 44	112 02 24	1456	1/2 mi. SW of Union Hills Dr. and Cave Creek Rd.
Berneil Wash	4685	07/30/98	3N-4E-34	33 33 59	111 56 16	1340	Doubletree @ Invergordon
IBW @ Shea Blvd.	4690	06/09/98	3N-4E-29	33 34 56	111 58 08	1350	Shea Blvd. @ 52 nd St.
Aztec Park	4695	02/03/98	3N-5E-17	33 36 36	111 51 53	1530	Thunderbird Rd. @ Frank Lloyd Wright Blvd.
Durango Complex .01	4699	02/24/94	1N-2E-14	33 25 41	112 07 09	1050	27th Ave. and Durango St.
Durango Complex	4700	06/04/80	1N-2E-14	33 25 41	112 07 09	1050	27th Ave. and Durango St.
Jefferson @ 4th Ave.	4710	01/29/91	1N-3E-8	33 27 08	112 04 48	1080	County Building, 4th Ave. and Jefferson St.
Grand @ 27 th Ave.	4715	10/11/96	2N-3E-35	33 29 00	112 08 28	1100	Near 28 th Ave. and Grand Ave.
Thomas @ 16th St.	4720	01/17/91	1N-3E-24	33 28 37	112 02 27	1120	16 th St. at Thomas Rd.
Perry Park	4730	08/22/90	2N-3E-35	33 28 39	112 00 50	1160	1/8 mi. S. of Thomas Rd. and 32nd St.
Papago Park	4740	08/15/90	1N-4E-5	33 27 37	111 58 07	1200	1/4 mi. N. of McDowell Rd. and 52nd St.
Old X-cut @ McDowell	4745	07/27/94	1N-4E-06	33 27 55	111 58 49	1250	McDowell Rd. at Hohokam Expressway
Thomas @ 48th St.	4750	01/30/91	1N-4E-31	33 28 49	111 58 46	1200	Thomas Rd. and 48th St.
Salt River @ 67 th Ave.	4755	04/23/98	1N-1E-25	33 24 00	112 12 10	1000	67 th Ave. @ Roeser St.
Maryvale Muni Golf	4760	08/17/89	2N-2E-19	33 28 21	112 09 40	1200	1/4 mi. N of Indian School Rd. and 59th Ave.
Buckeye @ 75th Ave.	4765	08/01/96	1N-1E-11	33 26 43	112 13 30	1004	1/4 mi. N. of Buckeye Rd. and 75th Ave.
City of Glendale	4770	07/13/89	2N-2E-6	33 32 45	112 11 43	1148	Grand Avenue at 63rd Avenue
Maryland @ 27th Av	4775	12/22/94	2N-2E-11	33 33 53	112 06 50	1200	Near I-17, 1/2 mi. North of Bethany Home Rd.
Missouri @ 16th St.	4780	01/17/91	2N-3E-16	33 31 01	112 02 53	1155	1/2 mi. North of Camelback Rd. and 16th St.
Butler Park	4785	09/09/98	3N-2E-32	33 33 41	112 10 48	1200	1/4 mi. SE of 59 th Ave. and Olive Ave.
Paradise Valley CC	4790	07/13/89	2N-4E-9	33 32 07	112 00 13	1494	1/2 mi. North of Lincoln Dr. and Tatum Blvd.
Dreamy Draw Dam	4800	01/24/84	3N-3E-34	33 33 45	112 01 54	1407	1/4 mi. SSW of the 24th St. and Dulap Ave. alignments
ACDC @ 36th St.	4805	02/24/94	2N-3E-13	33 30 09	112 00 00	1260	1/2 mi. North of 36th St. and Camelback Rd.
ACDC @ 14th St.	4810	02/09/94	2N-3E-4	33 32 31	112 02 35	1230	1/2 mi. North of Glendale Ave. and 14th St.
10 th St. Wash Basin #1	4815	10/23/96	3N-3E-28	33 34 47	112 03 16	1150	1/4 mi. SW of Peoria Ave. and Cave Creek Rd.
ACDC @ 43rd Ave.	4820	11/14/90	3N-2E-22	33 35 03	112 09 16	1225	1/4 mi. NW of Peoria Ave. and 43rd Ave.
Cave Creek @ Cactus	4830	06/27/91	3N-2E-13	33 35 56	112 07 01	1280	1/4 mi. ENE of I-17 and Cactus Rd.
ACDC @ Cave Creek	4835	03/11/97	3N-2E-25	33 22 12	112 07 12	1243	Mountain View Rd. near 23 rd Ave.
Greenway @ 32nd Ave.	4840	01/31/91	3N-2E-2	33 37 31	112 07 45	1300	1/4 mi. East of Greenway Rd. and 32nd Ave.
T-bird @ 7 th Street	4850	10/17/96	3N-3E-16	33 36 16	112 04 09	1092	1/4 mi. SW of Thunderbird Rd. and 7 th Street
Rawhide Wash	4860	07/22/99	5N-4E-36	33 44 27	111 53 55	2205	1/3 mile west of Pima Rd. on Dynamite Blvd.
Cave Buttes Dam	4900	01/25/84	4N-3E-15	33 42 58	112 02 43	1649	1/4 mi. North of the Happy Valley Rd. & 16th St. alignments
Cave Creek Landfill	4915	04/22/93	5N-4E-07	33 47 33	111 59 47	1627	1/2 mi. E of Carefree Hwy. and the 40th St. alignment
Cave Cr. @ Spur Cross	4920	06/16/93	6N-4E-04	33 53 05	111 57 17	2280	3.5 mi. North of the Town of Cave Creek
Carefree Ranch	4930	07/15/85	6N-5E-16	33 52 03	111 51 00	3200	3.5 mi. NE of Sky ranch Airport
Reata Pass Dam	4935	02/25/93	5N-5E-33	33 44 06	111 50 36	2600	1/2 mi. South of Dynamite Blvd. and 112th St.
Humboldt Mtn.	4940	07/14/81	7N-5E-6	33 58 48	111 47 56	5198	13 mi. NE of the Town of Cave Creek
Seven Springs	4950	11/12/81	8N-5E-8	34 03 06	111 51 17	4595	15 mi. NNE of the Town of Cave Creek
Mt. Oatman	5000	04/30/80	4S-9W-25	33 03 05	113 08 15	1720	8 mi. WSW of Painted Rock Dam

Sensor Name	Sensor ID	Installed	T-R-S	Latitude	Longitude	Elevation	Location
Columbus Wash	5010	9/21/99	4S-10W-6	33 06 27	113 19 57	690	8 miles north of Agua Caliente
Gila Bend Mountains	5050	06/01/88	2S-9W-17	33 14 28	113 12 14	1620	16 mi. NW of Painted Rock Dam off Agua Caliente Rd.
Centennial @ Wenden	5090	09/02/98	6N-12W-32	33 49 27	113 32 00	1850	5.5 mi. NE of Salome on US60 bridge
Centennial Railroad	5100	02/09/90	1S-6W-28	33 18 35	112 52 56	850	8 mi. NW of Old US 80 at the Gila River
Saddleback FRS	5110	12/16/88	2N-10W-34	33 27 55	113 04 21	1177	7 mi. WSW of Tonopah in Harquahala Valley
Centennial Levee	5120	03/07/84	2N-10W-17	33 30 48	113 16 32	1298	2 mi S. of I-10 and 1 mi. E. of West County border
Harquahala FRS	5125	09/15/93	2N-8W-05	33 32 54	113 05 52	1420	10 mi. WNW of Tonopah in Harquahala Valley
Upper Tiger Wash	5130	09/12/80	5N-9W-2	33 48 40	113 10 25	2198	11 mi. S. of Aguila off Eagle Eye Road
Tiger Wash Fan	5140	09/21/94	4N-10W-20	33 40 06	113 18 54	1605	1 mi. W of Eagle Eye Rd. and 4 mi. N of Salome Highway
Narrows Dam	5150	09/01/94	4N-12W-04	33 43 29	113 30 45	1960	5 mi. SE of Salome off Salome Highway
Tiger Wash	5160	9/15/99	5N-10W-2	33 44 30	113 16 43	1960	10 mi. N of the Eagle Eye Rd. / Salome Highway intersection
Gladden	5170	02/02/82	7N-10W-33	33 54 09	113 17 54	2198	US 60 at Gladden, 34 miles W of Wickenburg
Centennial Wash	5180	11/19/81	7N-7W-16	33 57 03	113 00 02	2417	1 mi. N of US 60, 19 mi. W of Wickenburg
Harquahala Mtn.	5185	02/10/94	5N-10W-06	33 48 43	113 20 48	5681	Top of Harquahala Mtn., 36 mi. WSW of Wickenburg
Smith Peak	5190	05/05/80	8N-11W-1	34 04 00	113 21 03	5131	Harcuvar Mtns., 13 mi. NW of Aguila
Buckeye FRS #1	5200	07/26/83	1N-5W-3	33 29 24	112 44 02	1097	West end of Buckeye FRS #1, I-10 @ Hassayampa River
Buckeye FRS #2	5205	11/11/92	1N-3W-07	33 26 26	112 35 47	1150	West end of Buckeye FRS #2, 5 mi N of Buckeye
Hassayampa Landfill	5210	04/15/93	1S-5W-02	33 21 59	112 44 33	900	2 mi. NW of Hassayampa
Jackrabbit Wash	5215	09/14/82	5N-6W-31	33 44 08	112 54 54	1798	16 mi. NNE of Tonopah, 20 mi. SSW of Wickenburg
Morristown	5220	05/13/92	6N-4W-13	33 51 21	112 37 29	1978	US 60/93 at Morristown, 10 mi. SE of Wickenburg
Hassy R. @ US 60	5225	03/14/94	7N-5W-12	33 58 42	112 43 40	2035	Hassayampa River at US 60/93 in Wickenburg
Sunset FRS	5230	02/12/89	7N-5W-11	33 57 50	112 44 33	2100	3/4 mi. WSW of the US 60 / US 93 intersection in Wickenburg
Sunnycove FRS	5245	07/31/86	7N-5W-11	33 57 25	112 44 24	2200	1 mi. SW of the US 60 / US 93 intersection in Wickenburg
Vulture Mine	5260	10/14/81	7N-5W-15	33 56 42	112 46 07	2311	3 mi. SW of Wickenburg
Sols Wash	5275	09/24/81	8N-7W-13	34 07 25	112 56 55	2771	Intersection of SR 71 and US 93, 16 mi. NW of Wickenburg
Hassayampa R. @ I-10	5280	11/09/94	1N-5W-03	33 27 33	112 45 46	1035	I-10 bridge over Hassayampa River, 12 mi WNW of Buckeye
Yarnell Hill	5290	07/13/81	10N-5W-11	34 13 21	112 44 53	5128	1 mi. ENE of Yarnell, Yavapai County
Hassy R. @ Box Canyon	5305	11/17/83	8N-4W-7	33 58 11	112 43 38	2245	6 mi. N of Wickenburg on Hassayampa River, Yavapai County
O'Brien	5320	11/03/82	9N-3W-21	34 03 48	112 34 20	2798	11 mi. NE of Wickenburg, Yavapai County
Minnehaha	5335	06/16/81	10N-1W-31	34 10 00	112 22 30	5602	8 mi. E of Wagoner, Yavapai County
Towers Mtn.	5340	05/01/92	10N-1W-15	34 14 24	112 21 47	7528	3 mi. NW of Crown King, Yavapai County
Hassy R. @ Wagoner Rd.	5350	12/19/83	11N-3W-9	34 18 38	112 34 05	3785	6 mi. ESE of Kirkland Junction
Wilhoit	5365	09/24/81	13N-3W-32	34 26 36	112 36 47	5043	At Wilhoit, 10 mi. SSW of Prescott, Yavapai County
Mt. Union	5380	08/16/82	12N-2W-1	34 24 47	112 24 54	7495	Top of Mt. Union, 10 mi. SSE of Prescott
Agua Fria @ Buckeye	5400	10/11/88	1N-1W-14	33 26 05	112 19 54	940	Buckeye Rd. Bridge over Agua Fria River, nr Avondale
Colter @ El Mirage	5405	06/29/94	2N-1W-13	33 30 38	112 19 32	1025	1/4 mi. N of Camelback and El Mirage Rd.
Dysart Drain @ LAFB	5410	08/22/96	2N-1W-03	33 32 38	112 20 57	1090	1/4 mi. West of Northern Ave. & Litchfield Rd.
White Tanks 3	5415	03/12/86	2N-2W-9	33 32 01	112 28 14	1190	4 mi. N of I-10 on Jackrabbit Trail alignment
White Tanks E. Peak	5430	05/15/80	3N-3W-27	33 34 08	112 33 29	4031	Top of White Tank Mtns., 13 mi. N of Buckeye
McMicken Floodway	5435	09/03/92	4N-1W-18	33 41 04	112 24 33	1337	1/2 mi. N of Grand Ave. and Deer Valley Rd.
McMicken Dam	5445	03/24/83	4N-2W-24	33 40 38	112 25 23	1361	N. end of the dam, 1/4 mi SE of Deer Valley Rd and Cotton Ln

Sensor Name	Sensor ID	Installed	T-R-S	Latitude	Longitude	Elevation	Location
Patton Rd.	5450	05/13/92	5N-3W-33	33 43 53	112 34 23	2683	7 mi. E of Grand Ave. on Patton Rd.
Wittmann	5455	05/13/92	5N-3W-13	33 46 15	112 31 14	1653	US 60/93 at Wittmann, 4 mi. SE of Circle City
Chrysler P. Grounds	5460	10/31/90	5N-2W-7	33 47 04	112 30 03	1720	3 mi. ESE of Circle City, 1.5 mi. N of Wittmann
NW Regional Landfill	5465	04/27/93	4N-2W-17	33 39 40	112 29 30	1890	Near 195th Ave. and Deer Valley Rd.
Circle City	5475	09/17/82	6N-3W-32	33 49 22	112 35 25	1890	Along US 60/93, 14 mi. SE of Wickenburg
Castle Hot Springs	5490	10/20/81	7N-3W-24	33 55 42	112 31 42	2683	6 mi. NE from US 60/93 on Castle Hot Springs Rd.
Agua Fria @ Grand Ave.	5500	04/27/94	3N-1E-18	33 36 25	112 18 16	1125	Grand Ave. bridge at Agua Fria River
New River @ Glendale	5505	03/21/90	3N-1E-8	33 32 14	112 17 00	1050	1/2 mi. E of 99th Ave. on Glendale Ave. bridge
Dysart @ Bell Rd.	5510	10/19/92	3N 1W 02	33 38 11	112 20 27	1190	Dysart Rd. at Bell Rd., Surprise
Sun City West	5515	03/30/95	4N-1W-27	33 39 54	112 21 25	1335	1/4 mi. SE of the Beardsley Rd. & Litchfield Rd. alignments
ACDC @ 67th Ave.	5520	06/07/90	3N-1E-12	33 37 26	112 12 10	1220	67th Ave. Bridge at Arizona Canal, Glendale
Grand @ Peoria Ave.	5525	07/11/96	3N-1E-22	33 35 00	112 15 30	1114	Intersection of Grand Ave. and Peoria Ave.
Adobe Dam	5535	10/28/82	4N-2E-21	33 40 37	112 09 12	1413	1/4 mi. South of Deer Valley Rd. & 43rd Ave.
Deer Valley Airport	5550	01/23/91	4N-3E-18	33 41 06	112 04 59	1445	Deer Valley Rd. and 7th Ave.
Skunk Creek @ I-17	5565	10/26/89	5N-2E-35	33 43 47	112 07 21	1475	I-17 at Jomax Rd. alignment
Upper Skunk Creek	5580	09/19/80	6N-3E-5	33 53 35	112 04 05	2109	4 mi. E of New River
New River @ Bell Rd.	5595	04/04/90	3N-1E-3	33 38 18	112 14 27	1200	Bell Rd. at 83rd Ave.
New River Dam	5610	04/15/86	5N-1E-35	33 44 09	112 13 31	1498	1/2 mi. NE of Jomax Rd. and 83rd Ave.
Sunup Ranch	5625	03/21/84	6N-2E-03	33 53 36	112 08 20	2141	1 mi. SSW of New River
New River Landfill	5630	04/29/93	8N-2E-08	33 52 20	112 11 40	1508	4 mi. ENE of New Waddell Dam
Cooks Mesa	5640	03/21/84	8N-4E-4	34 03 34	111 57 06	4565	10 mi. E of Black Canyon City in the New River Mtns.
Garfias Mtn.	5670	04/14/81	7N-2W-1	33 57 55	112 25 43	2645	6 mi. WSW of Castle Hot Springs, off Castle Hot Springs Rd.
Columbia Hill	5685	05/28/81	8N-1W-22	34 01 04	112 21 09	2393	5 mi. NNW of Castle Hot Springs
Horsethief Basin	5700	11/24/86	9N-1E-33	34 06 19	112 20 49	6702	At HB Recreation Area, 6 mi. SE of Crown King
Crown King	5715	05/10/83	10N-1W-15	34 12 50	112 21 14	6783	Crown King, Bradshaw Mtns, 24 mi. SSE of Prescott
Sunset Point	5730	06/09/81	9N-2E-23	34 11 13	112 08 04	3378	Sunset Point Rest Area on I-17, 10 mi. N of Black Canyon City
Horseshoe Ranch	5745	03/09/85	10N-3E-24	34 13 50	112 00 00	3805	10 mi. SE of Cordes Junction
Horner Mtn. Ranch	5760	02/13/81	11N-4E-4	34 31 53	111 56 44	4407	11 mi. ENE of Cordes Junction
Arizona Hunt Club	5775	02/18/81	12N-2E-27	34 23 26	112 07 42	3805	5 mi. NNW of Cordes Junction
I-17 @ 169	5790	10/06/87	13N-3E-3	34 31 10	112 00 02	4750	I-17 at SR 169 (Cherry Rd.)
Dewey	5805	06/18/81	13N-2E-8	34 30 21	112 08 32	4775	5 mi. E of Dewey off Orme Ranch Rd.
Prescott Valley	5820	12/07/82	15N-1E-16	34 40 43	112 15 16	5228	5 mi. N of the intersection of SR 69 and Roberts Rd.
Asher Hills	5900	08/02/90	4N-6E-1	33 43 03	111 41 01	1680	Off Asher Dr. in McDowell Mtn. Park, 1 mi. W of Rio Verde
McDowell Mtn. Park	5915	08/06/90	4N-6E-16	33 57 03	111 44 42	2040	Palisades Dr. in McDowell Mtn. Park, 4 mi. WSW of Rio Verde
Fraesfield Mtn.	5930	07/28/89	5N-5E-23	33 45 41	111 48 51	2661	Near the alignments of Dixaleta Dr. and 128th St.
Thompson Peak	5945	06/11/80	4N-5E-35	33 38 40	111 49 11	3993	On Thompson Peak, 120th St. and Bell Rd. alignments
Fountain Hills	5950	12/09/93	3N-6E-15	33 36 40	111 43 29	2284	At Palisades Blvd. Fire Station, nr xseccn with Fntn. Hills Blvd.
Mt. Ord	5960	07/01/83	7N-9E-34	33 53 25	111 24 20	7139	Top of Mt. Ord, 4 mi. E of Sunflower in the Mazatzal Mountains
Stone Ridge Dam	5965	12/11/96	3N-6E-22	33 35 41	111 44 01	1710	1/4 mi. W. of Cholla Dr. and Fountain Hills Blvd.
SunRidge Canyon Dam	5970	2/4/97	3N-6E-16	33 16 18	111 45 06	1932	200 yards W. of Lago Blvd and Palisades Blvd.
Cloudburst Wash	5975	03/13/97	3N-6E-07	33 37 13	111 46 37	2440	2 mi. NW of SunRidge Golf Course, Fountain Hills

Sensor Name	Sensor ID	Installed	T-R-S	Latitude	Longitude	Elevation	Location
North Heights Dam	5980	10/11/96	3N-6E-09	33 37 21	111 44 54	1819	400 yards SW of Sierra Madre Dr. and Golden Eagle Blvd.
Golden Eagle Blvd.	5985	2/12/97	3N-6E-05	33 38 40	111 45 59	1903	NW1/4 of Section at Chaparral Water Tank
Hesperus Dam	5990	12/18/96	3N-6E-04	33 38 14	111 44 47	1894	1/4 mi. N. of Richwood Ave. and Golden Eagle Blvd.
Hesperus Wash	5995	03/10/97	4N-6E-31	33 32 59	111 46 53	2280	NW1/4 of T4N-R6E-Section 31 near Dixie Mine
Guadalupe FRS	6500	06/29/89	1S-4E-5	33 22 16	111 58 10	1250	1/4 mi. SSW of Baseline Rd. and I-10
South Mountain Park	6510	09/28/82	1S-3E-11	33 20 46	112 02 59	2135	Alignments of Elliot Rd. and 24th St.
Carriage Lane Park	6520	03/26/91	1S-5E-7	33 21 34	111 53 22	1200	1/2 mi. South of Price Rd. and Guadalupe Rd.
South Mtn. Park HQ	6525	05/01/97	1S-2E-26	33 18 55	112 08 03	1251	Alignments of Elliot Rd. and 7 th Ave.
Chandler @ Alma Schl	6530	07/25/96	1S-5E-33	33 18 15	11 50 43	1527	1/4 mi. SE of Chandler Blvd. and Alma School Rd.
Mesa Tower	6540	07/19/89	1N-5E-35	33 23 01	111 49 34	1215	1/4 mi. NW of McQueen Rd. and Baseline Rd.
Broadway @ Lindsay	6545	09/29/95	1N-6E-14	33 24 23	111 46 25	1250	1/4 mi. E of Broadway Rd. & Lindsay Rd.
Ahwatukee	6550	03/04/96	1S-4E-19	33 19 44	111 59 18	1280	1/2 mi. South of the 43rd Ave. and Warner Rd. alignments
South Mountain Fan	6560	06/09/93	1S-2E-26	33 18 57	112 08 25	1420	Alignments of Ray Rd. and 35th Ave. in S. Mtn. Park
EMF @ Broadway	6570	08/10/89	1N-6E-26	33 24 21	111 42 42	1349	1/2 mi. SSE of Broadway Rd. and Higley Rd.
EMF @ Queencreek Rd.	6580	01/18/89	2S-6E-15	33 15 50	111 43 35	1317	1/3 mi. West of Queen Creek Rd. and Higley Rd.
EMF @ Arizona Ave.	6595	02/10/89	3S-5E-15	33 10 53	111 51 50	1214	On the SR 587 bridge 3 mi. South of Riggs Rd.
Guadalupe Channel	6600	08/07/98	1S-7E-06	33 21 48	111 40 33	1360	1/4 mi. E of Power Rd. @ Guadalupe Rd.
Freestone Basin	6605	12/19/95	1S-6E-08	33 21 29	111 46 21	1450	1/2 mi. SSE of Guadalupe Rd. and Lindsay Rd.
Queen Creek Rd.	6610	05/13/84	2S-7E-10	33 15 49	111 37 35	1409	1/4 mi. NE of Queen Creek Rd. and Ellsworth Rd.
Queen Creek Landfill	6615	04/23/93	2S-7E-21	33 13 13	111 38 48	1409	1/2 mi. SW of Ocotillo Rd. and Ellsworth Rd.
Crossroads Park	6620	12/18/95	1S-6E-21	33 19 40	111 44 49	1270	1/2 mi. NW of Ray Rd. and Greenfield Rd.
Signal Buttes FRS	6625	11/10/87	1N-7E-12	33 26 25	111 35 25	1650	1/4 mi. NE of Signal Butte Rd. and Brown Rd.
Usery Mtn. Park	6640	06/20/85	2N-7E-35	33 27 56	111 36 26	1799	1/3 mi. East of the McDowell Rd. and Crismon Rd. alignments
Usery Park WS	6650	02/24/94	2N-7E-27	33 29 07	111 36 58	2115	1/4 mi. WNW of the Crismon Rd. and Thomas Rd. alignments
Thunder Mtn.	6655	03/31/82	2N-7E-28	33 29 48	111 38 25	2552	1/2 mi. W. of the Ellsworth Rd. and Indian School Rd. alignments
Apache Junction FRS	6670	12/16/81	1N-8E-8	33 26 28	111 33 07	1989	1/3 mi. NW of Lost Dutchman Blvd. and Idaho Rd.
Apache Trail	6675	04/14/93	1N-8E-21	33 25 42	111 31 31	1820	1/3 mi. NE of Broadway Rd. and Idaho Rd.
Powerline FRS	6680	12/03/92	1S 8E 09	33 21 06	111 32 34	1580	Alignments of Idaho Rd. and Warner Rd.
Vineyard FRS	6685	11/02/83	1S-8E-9	33 21 06	111 32 34	1582	Alignments of Tomahawk Rd. and Williams Field Rd.
Rittenhouse FRS	6700	09/27/88	2S-8E-2	33 17 22	111 30 26	1580	Alignments of Goldfield Rd. and Germann Rd.
Queen Ck @ Rittenhouse	6710	09/14/93	2S-7E-25	33 13 50	111 35 41	1400	1/3 mi. SE of the Signal Butte and Chandler Heights alignments
Magma FRS	6715	10/27/88	4S-9E-35	33 07 04	111 24 09	1610	7 mi. NNW of Florence
Queen Cr. @ CAP	6720	01/14/99	2S-8E-26	33 12 22	111 30 15	1565	Queen Creek at Central AZ Project
Florence Junction	6730	04/18/86	1S-9E-35	33 17 51	111 23 43	1840	1.5 mi. NW of Florence Junction
Whitlow Ranch Dam	6740	01/08/99	1S-10E-3	33 17 57	111 16 13	2200	5 mi. NE of Florence Junction
Kings Ranch	6745	09/13/81	1N-9E-33	33 23 06	111 25 58	2145	7 mi. ESE of Apache Junction
Signal Peak	6760	09/15/93	1S-15E-33	33 17 52	110 50 28	7812	8 mi. SSW of Globe
Buckeye FRS #3	6810	11/23/92	1N-3W-10	33 26 49	112 33 20	1200	1/4 mi. NE of I-10 and Watson Rd.
White Tanks 4	6820	01/09/86	1N-2W-5	33 27 04	112 29 40	1044	1/4 mi. NE of Tuthill Rd. and Van Buren St.
Waterman @ Rainbow	6830	03/18/99	2S-2W-14	33 15 40	112 36 38	1085	Rainbow Valley Rd. at Queen Creek Rd.
Tuthill @ Ray Rd.	6840	12/22/94	1S-2W-20	33 19 25	111 29 56	1000	1/2 mi. East of Tuthill Rd. and Ray Rd.

Sensor Name	Sensor ID	Installed	T-R-S	Latitude	Longitude	Elevation	Location
Gila @ Estrella Pkwy.	6850	02/28/89	1N-1W-31	33 23 19	112 23 33	900	Gila River at Estrella Parkway
Holly Acres	6860	01/26/89	1N-1E-31	33 23 12	112 18 08	945	1/2 mi. SW of Southern Ave. and 107th Ave.
Waterman Wash	6880	05/12/83	2S-1W-25	33 13 15	112 18 31	1263	El Mirage Rd. and Riggs Rd. alignments
Estrella Fan	6890	11/15/92	2S-1W-12	33 16 08	112 19 15	1425	Alignments of El Mirage Rd. and Germann Rd.
Upper Waterman Wash	6900	06/23/88	4S-2W-11	33 05 25	112 25 25	1600	10 mi. WNW of Mobile
Gillespie Dam	6905	04/12/94	2S-5W-28	33 13 45	112 46 18	760	Gila River at Old US 80
Gila Bend Landfill	6910	04/07/93	5S-4W-20	32 59 20	112 40 29	750	3 mi. North of the intersection of US 80 and I-8
Sauceda Wash	6920	02/28/90	6S-5W-04	32 52 27	112 44 57	726	6 mi. SSW of Gila Bend
Sand Tanks Wash	6940	07/21/83	7S-4W-14	32 48 06	112 37 55	1108	9 mi. SSE of Gila Bend
Gila R. @ 116 th Ave.	6845	12/16/98	1N-1W-36	33 23 24	112 18 28	940	¼ mile NNW of 115 th Ave. and Baseline Rd.
Bender Wash	6960	01/12/82	6S-3W-14	32 54 39	112 31 56	1243	Just North of I-8, 10 mi. East of Gila Bend
Vekol Wash	6980	03/07/90	7S-1E-3	32 50 30	112 14 58	1720	On I-8 bridge, halfway between Gila Bend and Casa Grande
Stanton	7000	06/16/94	10N-5W-36	34 12 20	112 40 48	3250	6.5 mi. East of Congress, Yavapai County
Mid-Martinez Creek	7005	04/27/95	9N-5W-20	34 07 35	112 48 04	2725	4.4 mi SSE of the US 89 / SR 71 junction
Martinez Creek	7010	11/23/94	8N-5W-17	34 01 44	112 47 30	2300	1 mi. East of the US 93 / US 89 junction
Congress	7020	06/16/94	10N-6W-35	34 10 11	112 51 15	3000	Junction of US 89 and SR 71
Flores West	7025	05/02/95	8N-6W-3	34 03 32	112 51 12	2625	Along US 93, 3.2 mi. NW of the US 93 / US 89 junction
Sols Tank	7030	07/25/95	9N-6W-31	34 03 40	112 55 00	2690	6.3 mi. WNW of the US 93 / US 89 junction
Black Hill	7035	06/15/95	8N-6W-26	34 00 48	112 50 58	2560	2.3 miles WSW of the US 93 / US 89 junction
Sols Wash nr Matthie	7040	08/04/95	8N-5W-32	33 59 14	112 47 36	2220	Sols Wash at SPRR bridge, 2 mi. N. of Wickenburg Airport
Black Mountain	7050	07/06/94	7N-6W-15	33 56 49	112 53 02	2617	Along US 60, 9 mi. West of US 60 / US 93
Hartman Wash	7060	07/06/94	7N-5W-6	33 57 47	112 49 40	2488	On US 60 bridge, 6.3 mi. West of US 60 / US 93
Flying E Tank	7070	05/09/95	7N-5W-17	33 56 11	112 49 10	2480	6.3 mi. WSW of the US 93 / US 89 junction at Wickenburg
Flying E Wash	7080	07/12/94	7N-5W-09	33 57 44	112 46 49	2302	On US 60 bridge, 3 mi. West of US 60 / US 93
Casandro Wash	7090	07/12/94	7N-5W-10	33 57 44	112 45 53	2240	On US 60 bridge, 2 mi. West of US 60 / US 93
Constellation Road	7100	08/03/94	8N-4W-31	33 58 38	112 42 15	2220	1.4 mi. NE of the US 60 / US 93 junction
Powder House Wash	7110	05/18/95	7N-4W-06	33 59 00	112 42 45	2120	1/2 mi. NE of US 60 and Constellation Rd., Wickenburg
Wickenburg Airport	7120	08/03/94	7N-5W-08	33 58 34	112 48 15	2383	4.5 mi. West of the US 60 / US 93 junction
Casandro Dam	7130	08/15/96	7N-5W-11	33 58 04	112 44 49	2180	1.1 miles W of the US60 / US93 intersection

Flood Control District of Maricopa County ALERT System

Table II - Precipitation Sensors Installed in Water-Year 1999

Sensor Name	Sensor ID	Date Installed	Location
Gila R. @ 116 th Ave.	6845	12/16/98	¼ mile NNW of 115 th Ave. and Baseline Road
Queen Creek @ CAP	6720	01/14/99	Queen Creek at Central AZ Project Canal
Waterman @ Rainbow	6830	03/18/99	Rainbow Valley Rd. at Queen Creek Rd.
Rawhide Wash	4860	07/22/99	1/3 mile west of Pima Rd. on Dynamite Blvd.
Tiger Wash	5160	09/15/99	10 miles N of Eagle Eye Rd. / Salome Highway
Columbus Wash	5010	09/21/99	8 miles north of Agua Caliente

Table III - Rain Gage Failure Statistics for Water-Year 1999

(A "Failure" is a continuous 48-hour period when no data is received)

FAILURE TYPE	Failures - 1999	Failures - 1998
Unknown	45	57
Transmitter	37	25
Battery	30	24
Antenna	11	7
Vandalism	4	10
Tipping Bucket	4	4
Programming Error	3	7
Solar Panal	3	1
Repeater	3	0
Radio Path	2	6
Radio	2	1
Electrical Interference	1	0
Winds / Lightning	0	3

Flood Control District of Maricopa County

Table IV

ALERT Rain Gages: Water-Year Totals for 1999, 1998, 1997 & 1996

Gage Name	ID #	Inches - 1999	Inches- 1998*	Inches- 1997*	Inches- 1996*	Notes
Sacaton Peak	750	2.48	7.09	2.17	NA	4
Tat Momolikot Dam	770	7.80	5.92	NA	NA	
Gila @ Maricopa Rd	775	4.88	6.97	5.83	3.74	
Gila @ Olberg	780	4.17	7.80	3.39	3.43	
Santa Cruz @ SR 84	785	5.87	10.47	2.60	3.19	
Santa Rosa @ SR 84	795	6.77	7.95	3.31	5.39	
Cesar Chavez Park	4500	7.64	7.28	3.58	4.17	
Roeser @ 2nd St.	4510	NA	2.80	2.83	4.80	2
Salt R. @ 40th St.	4515	5.94	9.65	3.11	NA	
Salt R. @ Priest Dr.	4520	7.40	6.93	4.80	4.97	
ASU South	4525	7.68	10.35	5.39	6.10	
Kleinman Park	4530	6.06	8.11	3.35	4.88	
Broadway @ Dobson	4535	7.98	10.87	4.58	NA	
Fitch Park	4540	5.43	8.31	3.11	4.80	
Brown Rd. @ Horne	4545	5.89	11.10	3.95	NA	
Mountain View Park	4550	5.79	9.49	3.66	4.72	
Falcon Field	4555	7.56	8.46	4.86	NA	
Spookhill FRS	4560	4.92	11.02	2.32	5.51	
Salt River Landfill	4580	7.40	8.39	NA	NA	
Pima @ Union Hills	4590	7.87	9.65	NA	NA	
Pinnacle Peak Vista	4595	8.35	1.26	NA	NA	
IBW @ McKellips Rd.	4600	8.90	11.46	7.44	6.65	
Osborn @ 64 th St.	4605	8.15	9.80	NA	NA	
IBW @ Indian Bend Rd.	4610	7.83	10.91	5.35	7.13	
IBW @ Indian School	4615	6.69	9.72	NA	NA	
IBW @ Interceptor	4620	7.76	10.04	5.83	7.72	
Highland @ 68 th St.	4625	7.52	11.61	NA	NA	
Thunderbird Academy	4630	6.81	8.66	4.72	5.83	
Tatum Basin Rain	4635	7.05	10.12	3.54	4.53	
IBW @ Sweetwater	4640	8.78	1.69	2.13	4.96	
East Fork CC #1	4645	9.21	11.73	3.82	7.72	
Paradise Valley Park	4650	9.29	10.04	3.23	4.80	
East Fork CC #4	4655	9.72	11.06	3.27	4.65	
Lost Dog Wash	4660	6.54	10.91	5.12	7.99	
EFCC nr 7 th Ave.	4665	6.02	10.59	1.77	NA	
Pima @ Jomax	4670	10.35	13.23	4.84	7.40	
Lake Marguarite	4675	7.87	11.42	NA	NA	
East Fork CC #3	4680	7.99	11.81	3.39	6.06	
Berneil Wash	4685	7.68	1.14	NA	NA	
IBW @ Shea Blvd	4690	4.17	2.99	NA	NA	3,4
Aztec Park	4695	7.60	7.99	NA	NA	
Durango Complex	4700	7.60	9.17	3.54	5.47	
Jefferson @ 4th Ave.	4710	5.79	8.27	4.13	5.28	
Grand @ 27 th Ave.	4715	5.20	8.58	3.94	NA	
Thomas @ 16th St.	4720	5.63	9.13	4.21	4.88	
Perry Park	4730	5.71	9.49	5.04	4.88	
Papago Park	4740	6.73	7.87	4.41	4.88	3
Old X-cut @ McDowell	4745	5.98	9.57	4.25	5.24	
Thomas @ 48th St.	4750	NA	5.55	4.02	5.98	2
Salt River @ 67 th Ave	4755	6.34	1.50	NA	NA	
Maryvale Muni Golf	4760	6.61	8.86	4.06	6.06	
Buckeye @ 75th Ave.	4765	6.81	8.78	4.45	NA	
City of Glendale	4770	5.24	8.78	3.35	7.60	

Gage Name	ID #	Inches - 1999	Inches- 1998*	Inches- 1997*	Inches- 1996*	Notes
Maryland @ 27th Ave.	4775	5.71	11.42	3.54	6.54	
Missouri @ 16th St.	4780	6.14	9.17	3.54	6.57	3
Butler Park	4785	5.79	0.59	NA	NA	
Paradise Valley CC	4790	6.65	6.93	3.86	4.61	
Dreamy Draw Dam	4800	5.00	10.47	3.11	5.20	
ACDC @ 36th St.	4805	5.28	8.74	4.45	4.29	
ACDC @ 14th St.	4810	4.88	11.38	3.11	6.10	
10 th St. Wash Basin #1	4815	9.41	9.88	1.65	NA	
ACDC @ 43rd Ave.	4820	4.84	8.74	3.19	7.95	
Cave Creek @ Cactus	4830	6.10	10.12	2.83	5.75	
ACDC @ Cave Creek	4835	5.75	10.87	2.01	NA	
Greenway @ 32nd Ave.	4840	6.81	11.38	2.99	7.80	
Thunderbird @ 7 th St.	4850	7.76	10.59	3.35	NA	
Rawhide Wash	4860	NA	NA	NA	NA	1
Cave Buttes Dam	4900	4.33	8.54	3.54	4.92	4
Cave Creek Landfill	4915	9.41	11.61	4.45	8.35	
Cave Cr. @ Spur Cross	4920	7.44	14.53	5.63	NA	
Carefree Ranch	4930	10.59	16.89	6.73	9.88	
Reata Pass Dam	4935	9.21	14.25	5.71	9.96	
Humboldt Mtn.	4940	13.74	14.53	8.39	9.49	
Seven Springs	4950	17.40	21.85	11.26	8.03	
Mt. Oatman	5000	3.31	8.23	5.04	2.56	
Columbus Wash	5010	NA	NA	NA	NA	1
Gila Bend Mountains	5050	5.75	9.45	5.63	2.60	
Centennial @ Wenden	5090	6.77	0.71	NA	NA	
Centennial Railroad	5100	4.69	7.87	4.02	2.80	
Saddleback FRS	5110	3.82	9.49	4.96	2.40	
Centennial Levee	5120	5.71	8.54	6.26	2.40	
Harquahala FRS	5125	5.31	9.29	3.43	2.01	
Upper Tiger Wash	5130	5.59	10.20	9.13	3.23	
Tiger Wash Fan	5140	5.83	8.90	8.19	3.46	
Narrows Dam	5150	5.55	8.11	4.57	2.44	
Tiger Wash	5160	NA	NA	NA	NA	1
Gladden	5170	8.70	10.39	10.08	2.32	
Centennial Wash	5180	8.74	12.20	10.98	4.06	
Harquahala Mtn.	5185	9.33	15.31	18.46	4.80	
Smith Peak	5190	10.00	9.80	8.46	4.06	
Buckeye FRS #1	5200	5.20	6.97	7.05	4.69	
Buckeye FRS #2	5205	4.76	8.54	6.34	5.28	
Hassayampa Landfill	5210	5.24	6.50	4.49	NA	
Jackrabbit Wash	5215	6.93	9.17	6.85	4.25	
Morristown	5220	8.23	12.68	6.97	5.87	
Hassy R. @ US 60	5225	9.49	13.15	9.61	6.73	
Sunset FRS	5230	8.27	11.61	8.31	5.63	
Sunnycove FRS	5245	8.50	10.98	7.72	5.39	
Vulture Mine	5260	8.39	11.61	7.83	5.63	
Sols Wash	5275	13.39	15.87	8.15	5.04	
Hassy R. @ I-10	5280	7.05	8.15	8.58	4.92	
Yarnell Hill	5290	16.54	21.89	19.92	9.57	
Hassy R. @ Box Canyon	5305	14.17	15.47	10.39	5.28	
O'Brien Gulch	5320	15.94	15.24	12.87	6.89	
Minnehaha	5335	17.13	19.92	12.80	14.25	
Towers Mtn.	5340	19.45	24.72	15.94	13.43	
Hassy R. @ Wagoner Rd.	5350	13.90	19.80	13.50	6.93	
Wilhoit	5365	15.91	21.50	13.15	10.00	
Mt. Union	5380	24.88	28.03	19.68	18.07	
Agua Fria @ Buckeye	5400	5.75	8.86	3.50	6.34	
Colter @ El Mirage	5405	5.04	8.90	2.99	4.17	
Dysart Drain @ LAFB	5410	4.13	9.33	3.46	NA	

Gage Name	ID #	Inches - 1999	Inches- 1998*	Inches- 1997*	Inches- 1996*	Notes
White Tanks 3	5415	5.16	11.34	3.74	4.17	
White Tanks E. Peak	5430	8.70	15.51	7.83	NA	
McMicken Floodway	5435	NA	8.07	4.02	5.79	2
McMicken Dam	5445	5.63	9.02	3.78	6.02	
Patton Rd.	5450	7.24	12.24	5.08	4.76	
Wittmann	5455	7.60	11.42	5.91	4.06	
Chrysler P. Grounds	5460	8.03	11.61	6.10	3.90	
NW Regional Landfill	5465	6.42	10.55	5.39	7.48	
Circle City	5475	8.82	12.20	5.79	4.61	
Castle Hot Springs	5490	8.46	13.50	6.81	6.81	
Agua Fria @ Grand Ave.	5500	1.89	8.27	3.27	5.20	4
New River @ Glendale	5505	4.37	8.23	2.13	5.79	
Dysart @ Bell Rd.	5510	5.28	6.97	4.21	4.72	
Sun City West	5515	7.32	8.03	4.69	5.59	
ACDC @ 67th Ave.	5520	6.54	9.25	3.07	8.54	
Grand @ Peoria Ave.	5525	5.51	10.20	2.60	NA	
Adobe Dam	5535	5.91	10.71	3.19	7.52	
Deer Valley Airport	5550	7.95	12.91	5.08	9.06	
Skunk Creek @ I-17	5565	8.78	10.67	3.23	6.73	
Upper Skunk Creek	5580	10.28	14.88	7.64	6.06	
New River @ Bell Rd.	5595	6.14	9.09	3.58	9.13	
New River Dam	5610	8.62	10.47	2.95	6.61	
Sunup Ranch	5625	8.19	11.34	5.35	5.71	
New River Landfill	5630	7.99	11.73	4.65	5.55	
Cooks Mesa	5640	15.31	21.69	15.83	12.68	
Garfias Mtn.	5670	9.88	16.06	8.94	5.75	
Columbia Hill	5685	14.45	16.46	12.40	7.83	
Horsethief Basin	5700	24.13	25.35	15.67	13.82	
Crown King	5715	24.17	25.59	14.65	14.06	
Sunset Point	5730	17.40	17.60	13.46	7.95	
Horseshoe Ranch	5745	14.02	14.45	10.67	9.06	
Horner Mtn. Ranch	5760	14.02	14.53	9.06	4.72	
Arizona Hunt Club	5775	13.07	16.57	12.72	7.56	
I-17 @ 169	5790	13.82	16.81	10.28	NA	
Dewey	5805	14.02	14.53	9.61	4.25	
Prescott Valley	5820	17.95	15.12	12.56	6.14	
Asher Hills	5900	9.57	10.94	6.73	5.20	
McDowell Mtn. Park	5915	10.87	13.62	7.28	6.34	
Fraesfield Mtn.	5930	9.76	16.26	7.05	7.87	
Thompson Peak	5945	5.91	10.47	5.28	6.69	4
Fountain Hills Fire	5950	9.49	12.80	5.51	7.24	
Mt. Ord	5960	19.37	16.02	10.43	10.63	
Stone Ridge Dam	5965	9.65	12.20	4.88	NA	
SunRidge Canyon Dam	5970	9.41	12.99	3.27	NA	
Cloudburst Wash	5975	9.45	14.69	2.95	NA	
North Heights Dam	5980	NA	12.48	4.80	NA	2
Golden Eagle Blvd.	5985	10.51	14.25	3.82	NA	
Hesperus Dam	5990	9.57	12.87	4.88	NA	
Hesperus Wash	5995	9.61	16.18	3.03	NA	
Guadalupe FRS	6500	3.19	5.39	1.81	4.37	4
South Mountain Park	6510	6.69	9.41	4.49	4.41	
Carriage Lane Park	6520	4.76	6.38	2.52	4.33	
South Mtn. Park HQ	6525	8.87	10.00	1.92	NA	
Chandler @ Alma School	6530	6.14	8.90	2.72	NA	
Mesa Tower	6540	4.84	9.17	3.03	4.72	
Broadway @ Lindsay	6545	5.83	10.59	3.98	NA	
Ahwatukee	6550	6.02	9.09	3.98	NA	
South Mountain Fan	6560	9.41	8.27	3.74	3.86	
EMF @ Broadway	6570	5.43	8.03	2.52	4.53	

Gage Name	ID #	Inches - 1999	<i>Inches-</i> <i>1998*</i>	<i>Inches-</i> <i>1997*</i>	<i>Inches-</i> <i>1996*</i>	Notes
EMF @ Queen Creek Rd.	6580	6.81	4.76	2.13	5.35	
EMF @ Arizona Ave.	6595	6.02	9.17	4.09	4.76	
Guadalupe Channel	6600	8.62	2.13	NA	NA	
Freestone Basin	6605	6.46	9.17	2.76	NA	
Queen Creek Rd.	6610	6.02	7.76	3.58	6.81	
Queen Creek Landfill	6615	NA	7.68	2.44	6.65	2
Crossroads Park	6620	4.92	10.28	2.76	NA	
Signal Butte FRS	6625	5.79	9.49	4.09	3.82	
Usery Mtn. Park	6640	5.75	11.73	3.54	4.25	
Usery Park WS	6650	6.22	11.81	3.94	5.20	
Thunder Mtn.	6655	4.61	10.12	2.52	4.29	
Apache Junction FRS	6670	6.14	10.08	4.02	4.96	
Apache Trail	6675	5.67	11.61	4.13	5.55	
Powerline FRS	6680	5.39	8.15	2.64	7.36	
Vineyard FRS	6685	6.89	9.84	3.58	8.46	
Rittenhouse FRS	6700	3.46	8.11	2.95	7.01	
Queen Cr. @ Rittenhouse	6710	3.66	7.95	3.50	7.87	
Magma FRS	6715	4.96	10.83	3.11	5.16	
Queen Creek @ CAP	6720	NA	NA	NA	NA	1
Florence Junction	6730	6.46	10.94	3.78	9.06	
Whitlow Ranch Dam	6740	NA	11.10	NA	NA	2
Kings Ranch	6745	4.69	13.94	4.61	5.75	
Buckeye FRS #3	6810	4.49	8.74	4.49	6.02	
White Tanks 4	6820	3.23	7.13	3.62	4.41	
Waterman @ Rainbow	6830	NA	NA	NA	NA	1
Tuthill @ Ray Rd.	6840	NA	7.52	5.04	5.28	2
Gila @ 116 th Ave.	6845	NA	NA	NA	NA	1
Gila @ Estrella Pkwy.	6850	3.94	7.09	2.83	5.91	
Holly Acres	6860	4.57	11.65	3.31	4.09	
Upper Estrella Fan	6870	6.73	8.35	2.71	NA	
Waterman Wash	6880	7.95	9.13	3.39	4.02	
Estrella Fan	6890	7.68	10.00	4.25	6.42	
Upper Waterman Wash	6900	4.49	8.98	2.40	4.06	
Gillespie Dam	6905	5.35	8.74	5.24	2.64	
Gila Bend Landfill	6910	4.72	8.90	3.50	4.25	
Sauceda Wash	6920	4.29	9.37	2.80	4.02	
Sand Tank Wash	6940	8.62	11.14	5.71	6.02	
Bender Wash	6960	7.48	11.30	5.35	4.41	
Vekol Wash	6980	7.20	13.31	4.37	5.24	
Stanton	7000	13.11	16.22	12.48	7.52	
Mid-Martinez Creek	7005	10.75	13.19	9.84	6.14	
Martinez Creek	7010	9.37	11.54	7.72	3.35	
Congress	7020	9.84	14.96	10.39	7.72	
Flores West	7025	12.24	14.21	8.11	6.06	
Sols Tank	7030	12.32	17.48	12.09	5.20	
Black Hill	7035	13.82	15.59	7.60	4.84	
Sols Wash nr Matthie	7040	8.15	12.64	7.91	6.10	
Black Mountain	7050	8.39	13.03	7.40	3.35	
Hartman Wash	7060	9.17	14.41	9.61	4.84	
Flying E Tank	7070	8.94	15.08	10.16	6.97	
Flying E Wash	7080	10.67	13.35	8.70	6.89	
Casandro Wash	7090	9.57	13.78	9.88	6.14	
Constellation Road	7100	9.33	12.76	7.24	5.16	
Powder House Wash	7110	9.49	13.27	6.77	4.88	
Wickenburg Airport	7120	9.06	14.25	8.58	5.87	
Casandro Dam	7130	8.31	11.61	8.98	NA	

Note 1: Gage installed during water-year 1998, total given is for period of record.

Note 2: Total is inaccurate due to gage failure one or more times during the water-year.

Gage Name	ID #	Inches - 1999	<i>Inches-</i> <i>1998*</i>	<i>Inches-</i> <i>1997*</i>	<i>Inches-</i> <i>1996*</i>	Notes
-----------	------	------------------	--------------------------------	--------------------------------	--------------------------------	-------

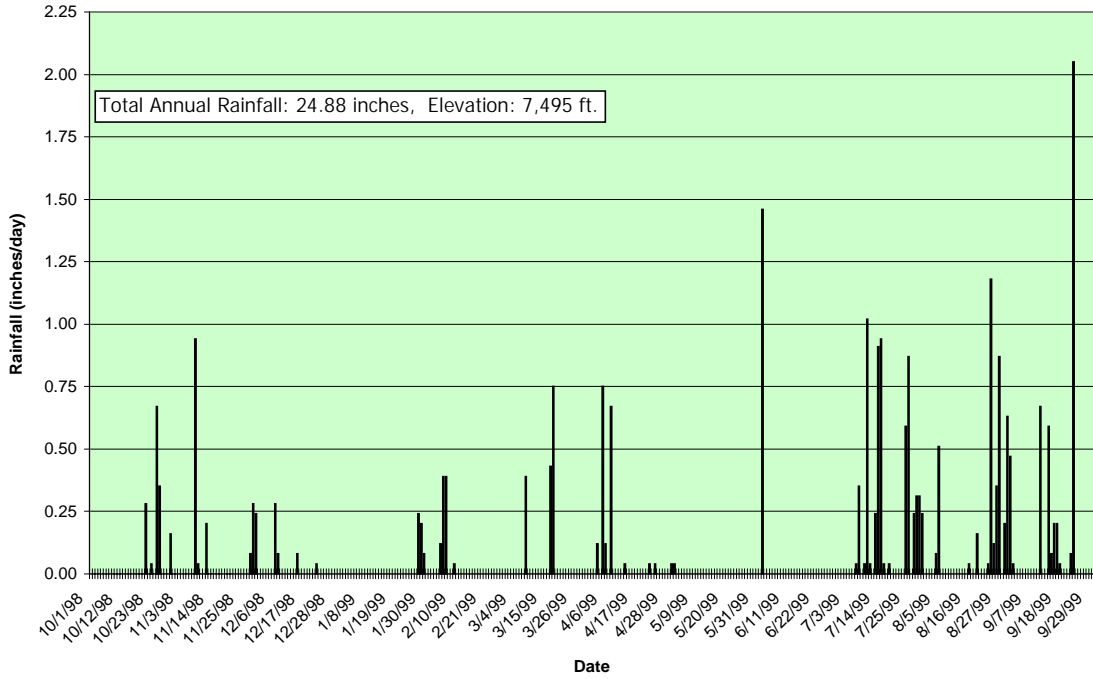
Note 3: Water-year total contains one or more estimated daily values.

Note 4: Total not included in annual rainfall plot by reason of high-wind profile or detrimental physical modification.

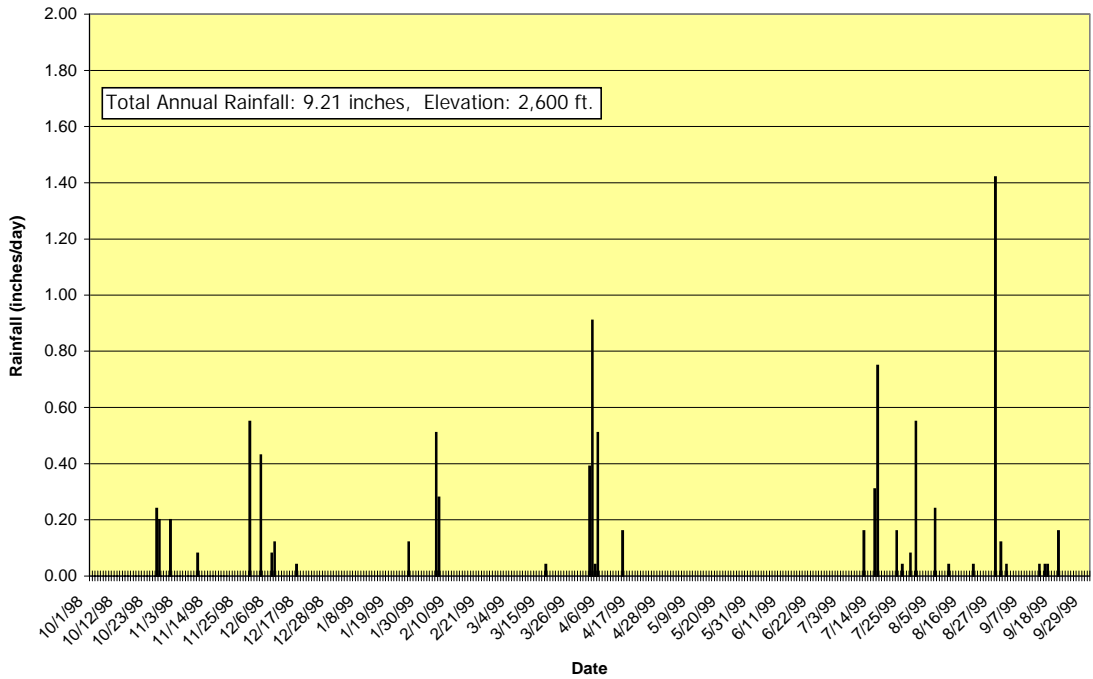
* Estimated totals are included, partial totals are shown as "NA".

Mt. Union Precipitation Gage No. 5380
Water-Year 1999

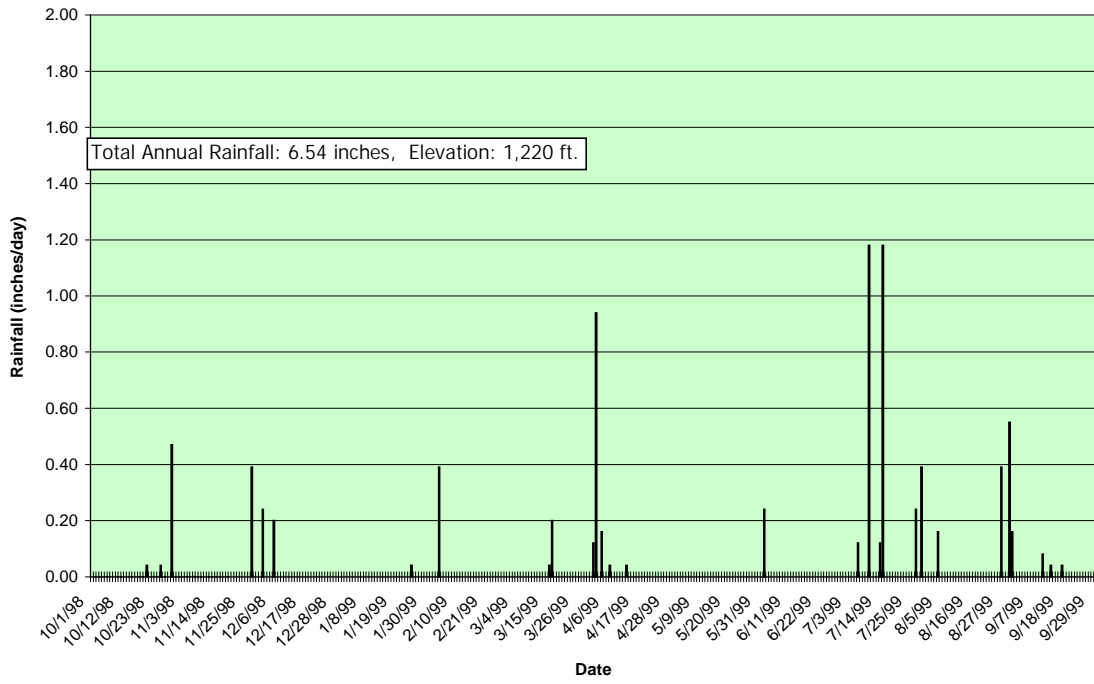
Water-Year
Hyetographs for
Six Selected Gages



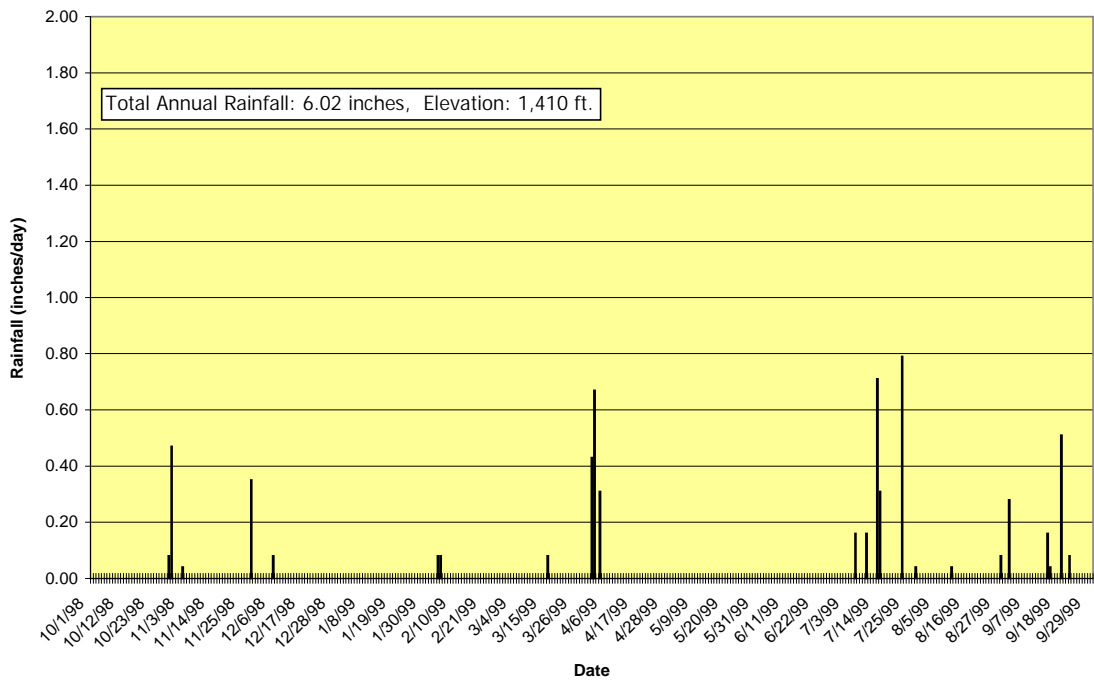
Reata Pass Dam Precipitation Gage No. 4935
Water-Year 1999



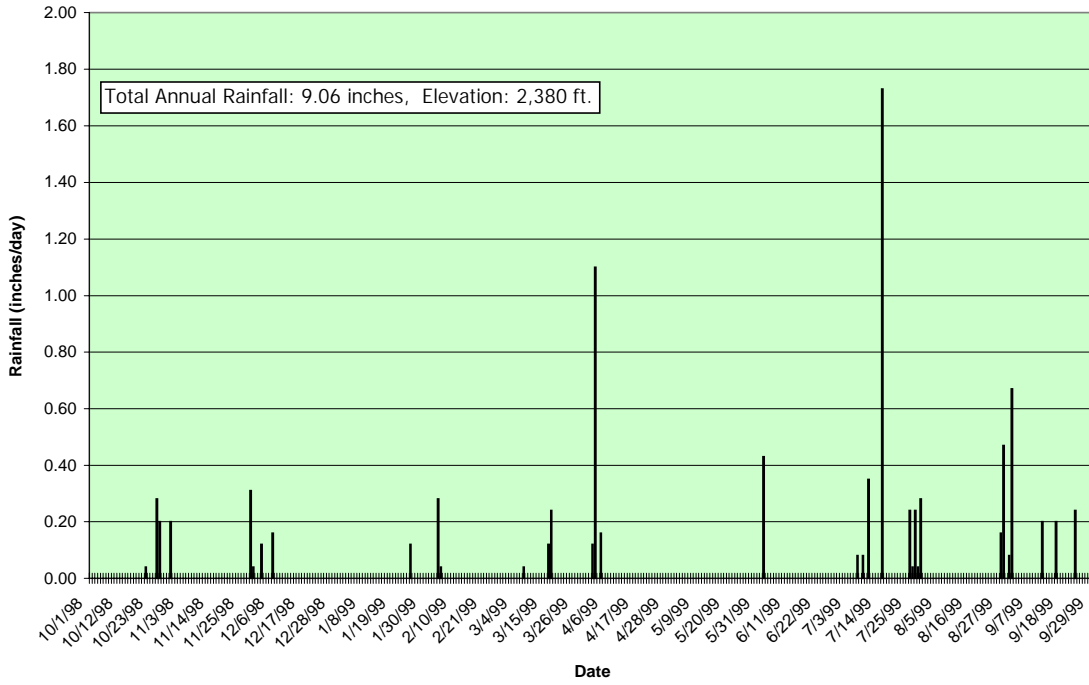
**AZ Canal Diversion Channel at 67th Ave. Precipitation Gage No. 5520
Water-Year 1999**



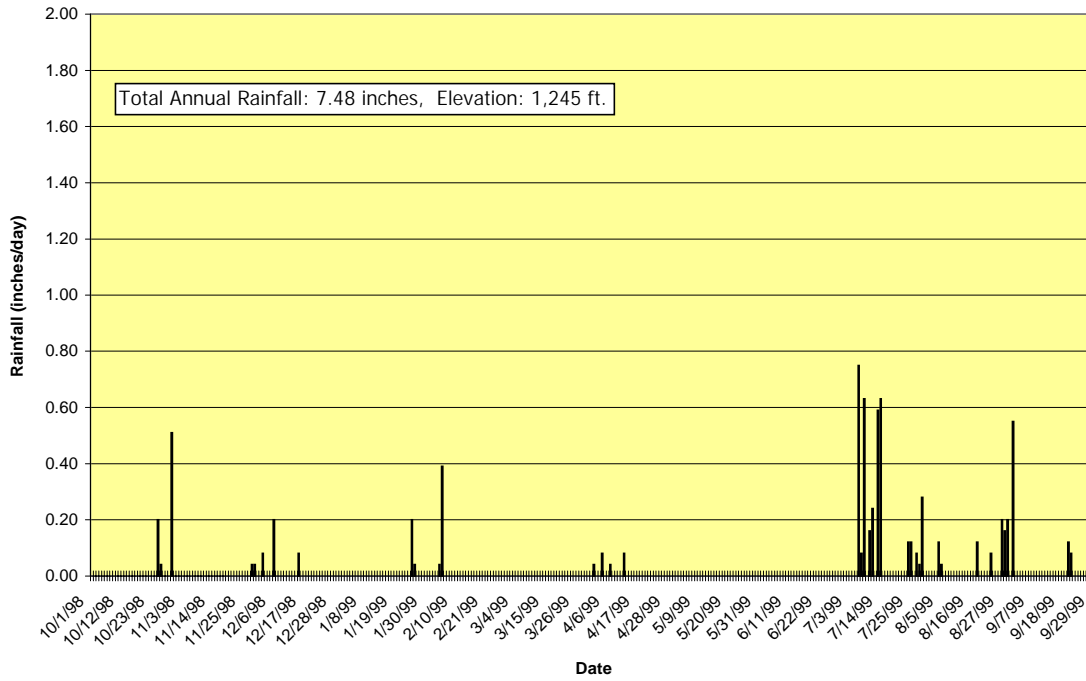
**Queen Creek Rd. Precipitation Gage No. 6610
Water-Year 1999**



**Wickenburg Airport Precipitation Gage No. 7120
Water-Year 1999**



**Bender Wash Precipitation Gage No. 6960
Water-Year 1999**



Flood Control District of Maricopa County ALERT System
Daily Rainfall at Thomas @ 48th St. (gage # 4750) for Water Year 1999

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	----	----	----	----	----	----	. 20							
2	----	----	----	----	----		. 51							
3	----	----	----	----	----									
4	----	----	----	----	----		. 20			. 16				
5	----	----	----	----	----						. 43			
6	----	----	----	----	----					. 04				
7	----	----	----	----	----					. 20				
8	----	----	----	----	----									
9	----	----	----	----	----									
10	----	----	----	----	----									
11	----	----	----	----	----									
12	----	----	----	----	----						. 08	. 04		
13	----	----	----	----	----		. 08							
14	----	----	----	----	----					1. 30		. 04		
15	----	----	----	----	----					. 47				
16	----	----	----	----	----	. 08								
17	----	----	----	----	----									
18	----	----	----	----	----					. 31				
19	----	----	----	----	----							. 79		
20	----	----	----	----	----									
21	----	----	----	----	----									
22	----	----	----	----	----							. 04		
23	----	----	----	----	----					. 08				
24	----	----	----	----	----									
25	----	----	----	----	----									
26	----	----	----	----	----									
27	----	----	----	----	----						. 35			
28	----	----	----	----	----									
29	----	----	----	----	----					. 24				
30	----	----	----	----	----									
31	----	----	----	----	----		----		----			----		
SUM	0. 00	----	----	----	----	0. 08	0. 98	0. 00	0. 00	2. 80	0. 87	0. 91		
ACC	0. 00	0. 00	0. 00	0. 00	0. 00	0. 08	1. 06	1. 06	1. 06	3. 86	4. 72	5. 63		
MAX	0. 00	----	----	----	----	0. 08	0. 51	0. 00	0. 00	1. 30	0. 43	0. 79		
NO.	0	----	----	----	----	1	4	0	0	8	3	4		
												Maximum Dai l y Rai nfa l l	1. 30	
													Maximum Monthl y Rai nfa l l	2. 80
													Parti al Annual Rai nfa l l	5. 63
													Number of Days wi th Rai n	20

Notes:

Partial annual rainfall in millimeters: 143

Total down-time: 152 days

Gage out of service from 10/1/98 through 3/1/99 because of building construction.

Flood Control District of Maricopa County ALERT System
Daily Rainfall at Rawhide Wash (gage # 4860) for Water Year 1999

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	----	----	----	----	----	----	----	----	----	----		
2	----	----	----	----	----	----	----	----	----	----		
3	----	----	----	----	----	----	----	----	----	----		
4	----	----	----	----	----	----	----	----	----	----		
5	----	----	----	----	----	----	----	----	----	----		
6	----	----	----	----	----	----	----	----	----	----		
7	----	----	----	----	----	----	----	----	----	----		
8	----	----	----	----	----	----	----	----	----	----		
9	----	----	----	----	----	----	----	----	----	----		
10	----	----	----	----	----	----	----	----	----	----		
11	----	----	----	----	----	----	----	----	----	----		. 04
12	----	----	----	----	----	----	----	----	----	----		
13	----	----	----	----	----	----	----	----	----	----		
14	----	----	----	----	----	----	----	----	----	----		. 08
15	----	----	----	----	----	----	----	----	----	----		. 08
16	----	----	----	----	----	----	----	----	----	----		
17	----	----	----	----	----	----	----	----	----	----		
18	----	----	----	----	----	----	----	----	----	----		
19	----	----	----	----	----	----	----	----	----	----		. 16
20	----	----	----	----	----	----	----	----	----	----		
21	----	----	----	----	----	----	----	----	----	----		
22	----	----	----	----	----	----	----	----	----	1. 34		
23	----	----	----	----	----	----	----	----	----	. 20		
24	----	----	----	----	----	----	----	----	----	----		
25	----	----	----	----	----	----	----	----	----	----		
26	----	----	----	----	----	----	----	----	----	----	. 28	
27	----	----	----	----	----	----	----	----	----	----	. 39	
28	----	----	----	----	----	----	----	----	----	----		
29	----	----	----	----	----	----	----	----	----	. 08		
30	----	----	----	----	----	----	----	----	----	----		
31	----	----	----	----	----	----	----	----	----	----	. 04	----
SUM	----	----	----	----	----	----	----	----	----	1. 61	0. 71	0. 35
ACC	----	----	----	----	----	----	----	----	----	1. 61	2. 32	2. 68
MAX	----	----	----	----	----	----	----	----	----	1. 34	0. 39	0. 16
NO.	----	----	----	----	----	----	----	----	----	3	3	4
										Maximum Dai l y Rai nfa l l		1. 34
										Maximum Monthl y Rai nfa l l		1. 61
										Parti al Annual Rai nfa l l		2. 68
										Number of Days wi th Rai n		10

Notes:

Partial annual rainfall in millimeters: 68

Total down-time: 0 days

Gage installed on the morning of 7/22/99. Later that day 1.34 inches fell in 65 minutes - an FCD record for highest rainfall recorded at a gage on the day it was installed.

Flood Control District of Maricopa County ALERT System
Daily Rainfall at Tiger Wash (gage # 5160) for Water Year 1999

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1	----	----	----	----	----	----	----	----	----	----	----	----	
2	----	----	----	----	----	----	----	----	----	----	----	----	
3	----	----	----	----	----	----	----	----	----	----	----	----	
4	----	----	----	----	----	----	----	----	----	----	----	----	
5	----	----	----	----	----	----	----	----	----	----	----	----	
6	----	----	----	----	----	----	----	----	----	----	----	----	
7	----	----	----	----	----	----	----	----	----	----	----	----	
8	----	----	----	----	----	----	----	----	----	----	----	----	
9	----	----	----	----	----	----	----	----	----	----	----	----	
10	----	----	----	----	----	----	----	----	----	----	----	----	
11	----	----	----	----	----	----	----	----	----	----	----	----	
12	----	----	----	----	----	----	----	----	----	----	----	----	
13	----	----	----	----	----	----	----	----	----	----	----	----	
14	----	----	----	----	----	----	----	----	----	----	----	----	
15	----	----	----	----	----	----	----	----	----	----	----	----	
16	----	----	----	----	----	----	----	----	----	----	----	. 47	
17	----	----	----	----	----	----	----	----	----	----	----	----	
18	----	----	----	----	----	----	----	----	----	----	----	----	
19	----	----	----	----	----	----	----	----	----	----	----	----	
20	----	----	----	----	----	----	----	----	----	----	----	----	
21	----	----	----	----	----	----	----	----	----	----	----	----	
22	----	----	----	----	----	----	----	----	----	----	----	. 04	
23	----	----	----	----	----	----	----	----	----	----	----	. 12	
24	----	----	----	----	----	----	----	----	----	----	----	----	
25	----	----	----	----	----	----	----	----	----	----	----	----	
26	----	----	----	----	----	----	----	----	----	----	----	----	
27	----	----	----	----	----	----	----	----	----	----	----	----	
28	----	----	----	----	----	----	----	----	----	----	----	----	
29	----	----	----	----	----	----	----	----	----	----	----	----	
30	----	----	----	----	----	----	----	----	----	----	----	----	
31	----	----	----	----	----	----	----	----	----	----	----	----	
SUM	----	----	----	----	----	----	----	----	----	----	----	0. 63	
ACC	----	----	----	----	----	----	----	----	----	----	----	0. 63	
MAX	----	----	----	----	----	----	----	----	----	----	----	0. 47	
NO.	----	----	----	----	----	----	----	----	----	----	----	3	
												Maximum Dai l y Rai nfa l l	0. 47
												Maximum Monthl y Rai nfa l l	0. 63
												Total Annual Rai nfa l l	0. 63
												Number of Days wi th Rai n	3

Notes:

Annual rainfall in millimeters: 16

Total down-time: 0 days

Gage installed 09/15/1999.

