

# Precipitation-Chemistry Data at Selected Sites in Northwestern Colorado, 1980–94

By Anthony J. Ranalli

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For additional information write to:

District Chief  
U.S. Geological Survey  
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# Precipitation-Chemistry Data at Selected Sites in Northwestern Colorado, 1980–94

By Anthony J. Ranalli

## Abstract

The chemical content of precipitation was monitored during the period 1980–94 at three sites at altitudes above 2,400 meters near the Piceance Basin in northwestern Colorado. Daily precipitation volumes, specific conductance, pH (in this report pH is expressed as hydrogen-ion concentration), concentrations of major cations and anions, calculated charge balance between cations and anions, and summary statistics of chemical concentrations are tabulated. Sampling sites are plotted on a map of the area. Seasonal variabilities of major cation and anion concentrations are presented graphically.

## INTRODUCTION

Knowledge of the chemistry of precipitation is needed in the preparation of permit requests for new sources of emissions to the atmosphere and for review of these requests. One area in which data may be needed is northwestern Colorado. Energy resources, such as oil shale and coal, are upwind from the federally protected Flat Tops Wilderness Area, which is sensitive to acid rain (Turk and Adams, 1983). The lack of precipitation-chemistry data in northwestern Colorado partially was addressed by establishment of a network of monitoring sites as part of a study done by the U.S. Geological Survey, in cooperation with Delta, Mesa, and Rio Blanco Counties, and assisted by the Rocky Mountain Oil and Gas Association. The network is located near the oil shale reserves of the Piceance Basin. Data collected from these sites provide a baseline for ambient atmospheric deposition that could be compared to any future measurements. The data also are suitable for making estimates of

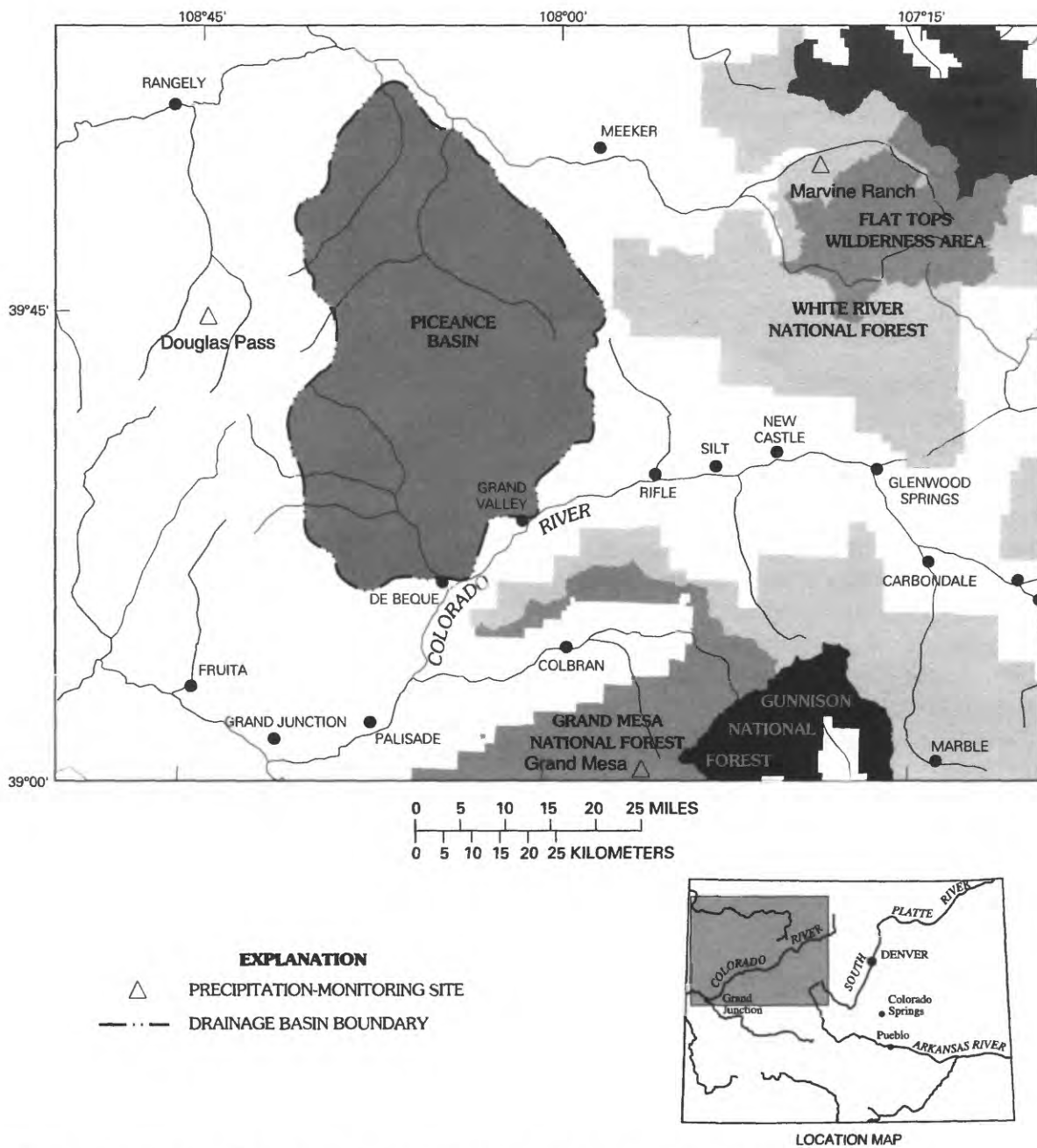
natural variability in precipitation chemistry. This report presents data collected at the monitoring sites from 1980 to 1994 and includes site location, sampling and laboratory analytical methods, precipitation volume and summary statistics, and seasonal variability of major chemical constituents.

## Site Description

The three precipitation-monitoring sites (fig. 1) are located at Douglas Pass at an altitude of 2,710 meters in a treeless area of sage; at Grand Mesa, at an altitude of 3,121 meters in a clearing; and at Marvine Ranch, at an altitude of 2,414 meters in a clearing.

## Methods

Precipitation volume and chemistry have been monitored at Douglas Pass since November 1980, at Grand Mesa since August 1981, and at Marvine Ranch since April 1981. Data collection was discontinued at Douglas Pass and Grand Mesa in October 1991 but is ongoing at Marvine Ranch. The sampling equipment and analytical methods are the same at each site. The sampling intervals, however, varied at each site. The sampling equipment consisted of a Belfort weighing-bucket rain gage for the measurement of precipitation volume and an Aerochem Metrics Model 301 wet/dry collector for the monitoring of wet deposition. The samples collected at each site are a combination of single storms and two or more storms collected into a single sample. Unfiltered precipitation samples were analyzed for specific conductance, pH, dissolved calcium, magnesium, sodium, potassium, ammonium, chloride, nitrate, and sulfate by the U.S. Geological Survey National Water-Quality Laboratory in Arvada,



**Figure 1.** Location of selected precipitation-monitoring sites in northwestern Colorado.

Colorado, using methods described in Fishman and Friedman (1989). After May 1991, samples were filtered through 0.45-micrometer filters. Aliquots for cations were preserved with concentrated nitric acid, whereas aliquots for ammonium were preserved with mercuric chloride. The chemical data were checked using cation:anion balances and comparisons of measured and calculated specific conductance. Alkalinity was not measured because pH typically was low enough to make alkalinity minimal. The buckets used to collect precipitation were cleaned by scrubbing with a nylon brush and rinsing with deionized water. Bias and precision data for the chemical analysis done at the U.S. Geological Survey National Water-Quality Laboratory are published yearly in U.S. Geological Survey Water-Resources Investigations reports (Peart and Sutphin, 1987; Lucey

and Peart, 1988; Lucey and Peart, 1989a, 1989b, 1989c; Maloney and others 1992, 1993, 1994).

## RESULTS OF PRECIPITATION VOLUMES AND CHEMICAL CONCENTRATIONS

Specific conductance, precipitation chemical concentrations, and calculated charge balance are presented in tables 1, 3, and 5. Daily precipitation volumes are reported in tables 7–9. Summary statistics (tables 2, 4, and 6) of specific conductance and chemical concentrations (means, medians, standard deviations, and minimum and maximum values) follow each data table. Seasonal variations of precipitation chemistry at each site are shown in the box plots in figures 2–10.

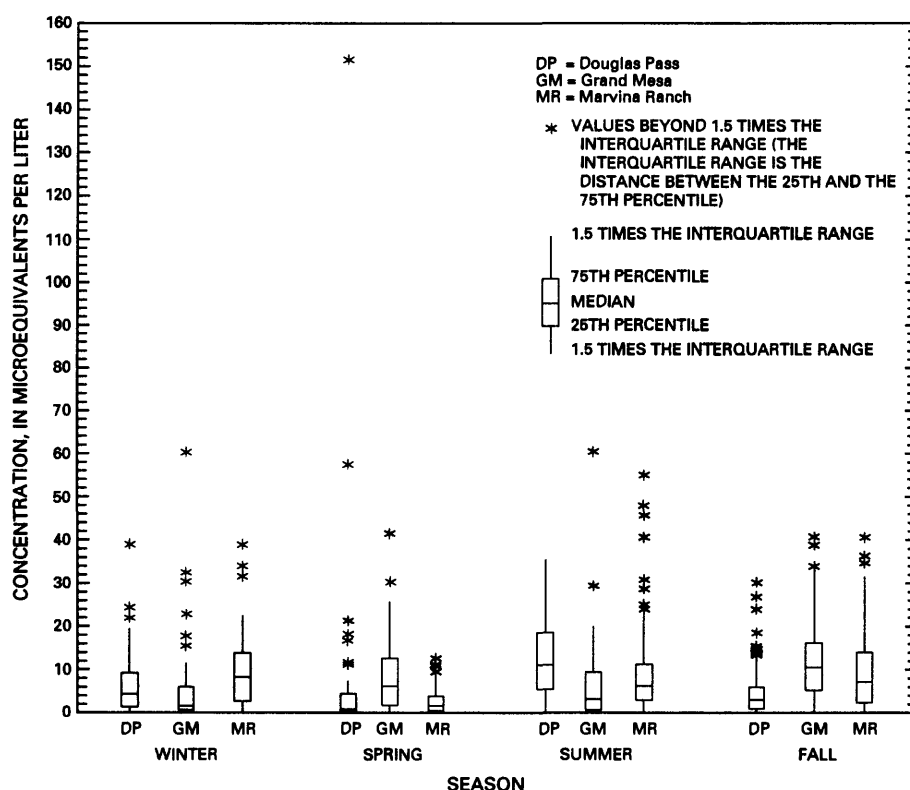


Figure 2. Seasonal variability of hydrogen-ion concentration.

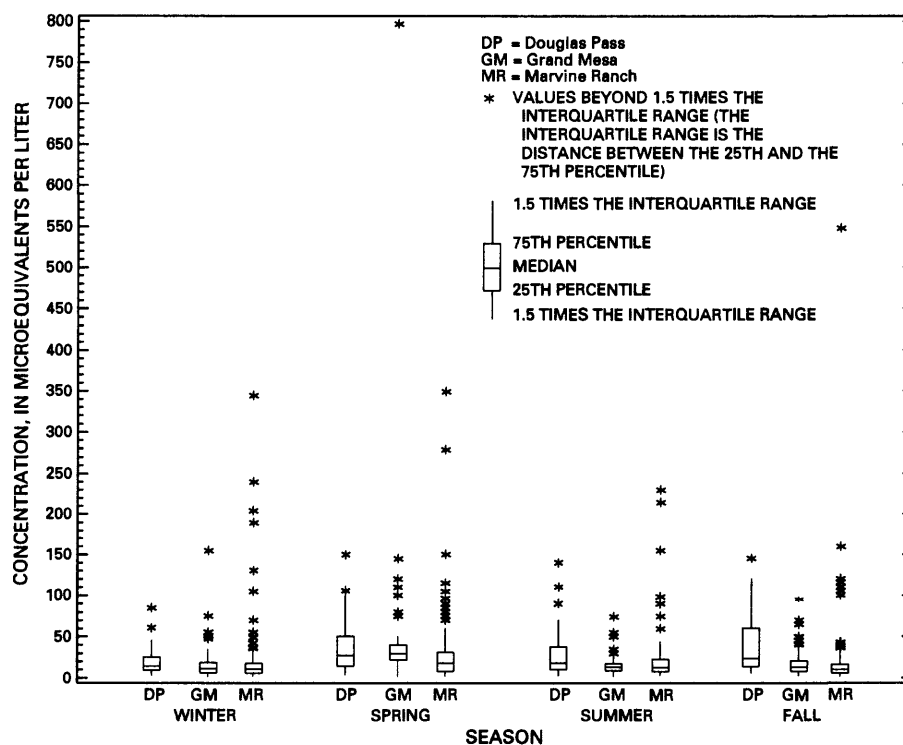


Figure 3. Seasonal variability of calcium.

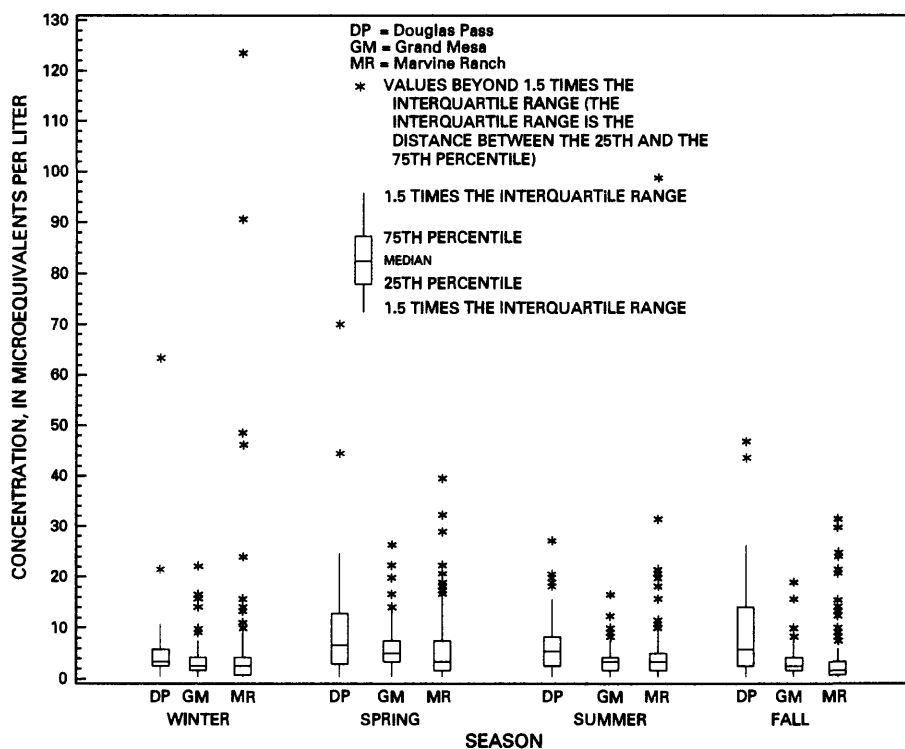


Figure 4. Seasonal variability of magnesium.

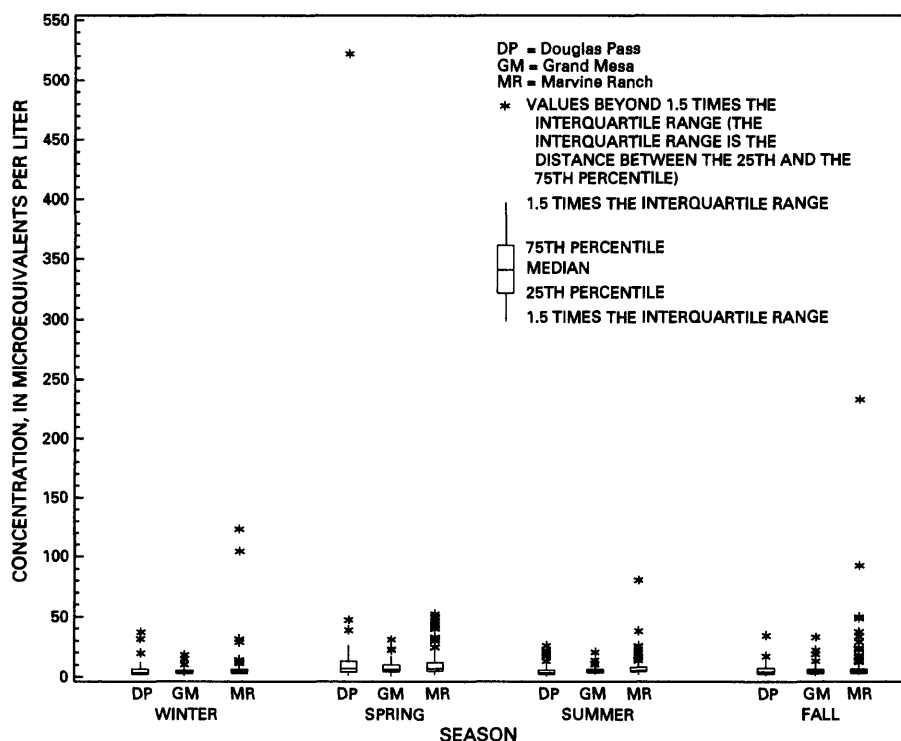


Figure 5. Seasonal variability of sodium.

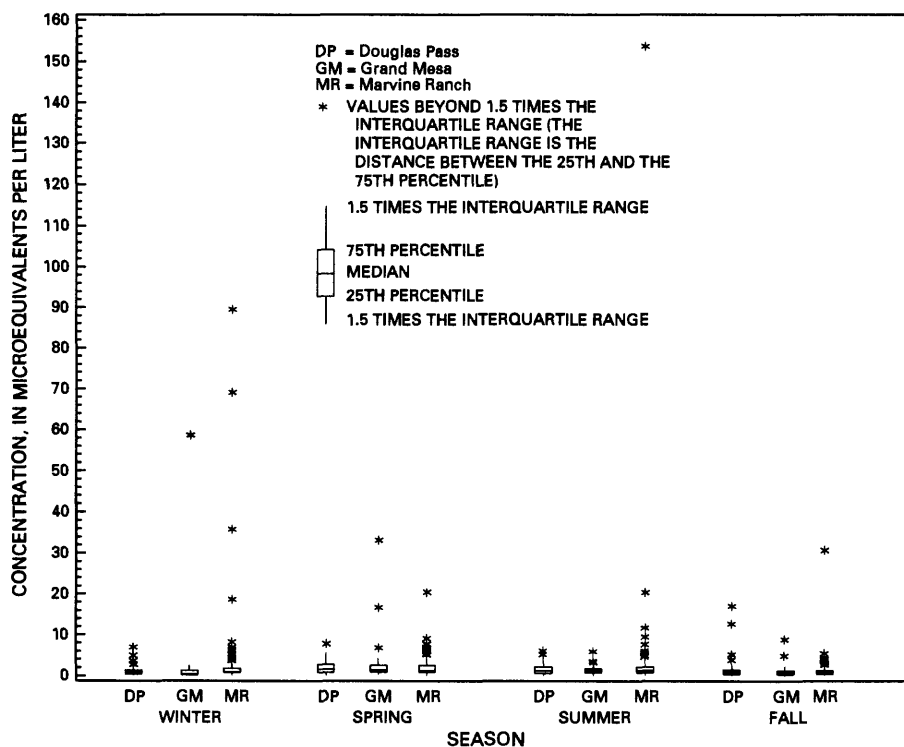


Figure 6. Seasonal variability of potassium.

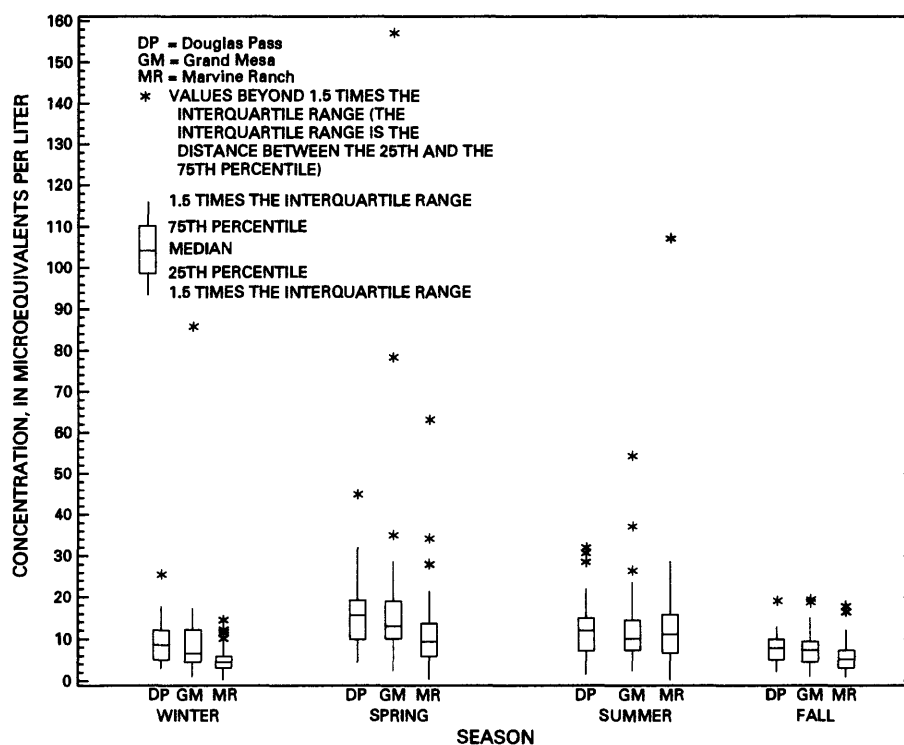


Figure 7. Seasonal variability of ammonium.

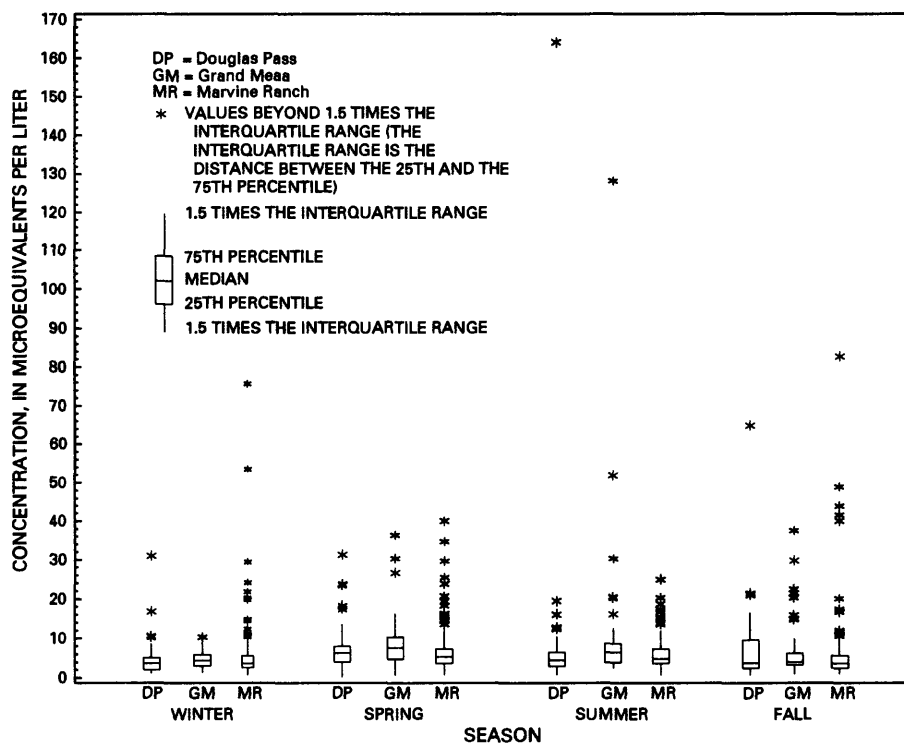


Figure 8. Seasonal variability of chloride.

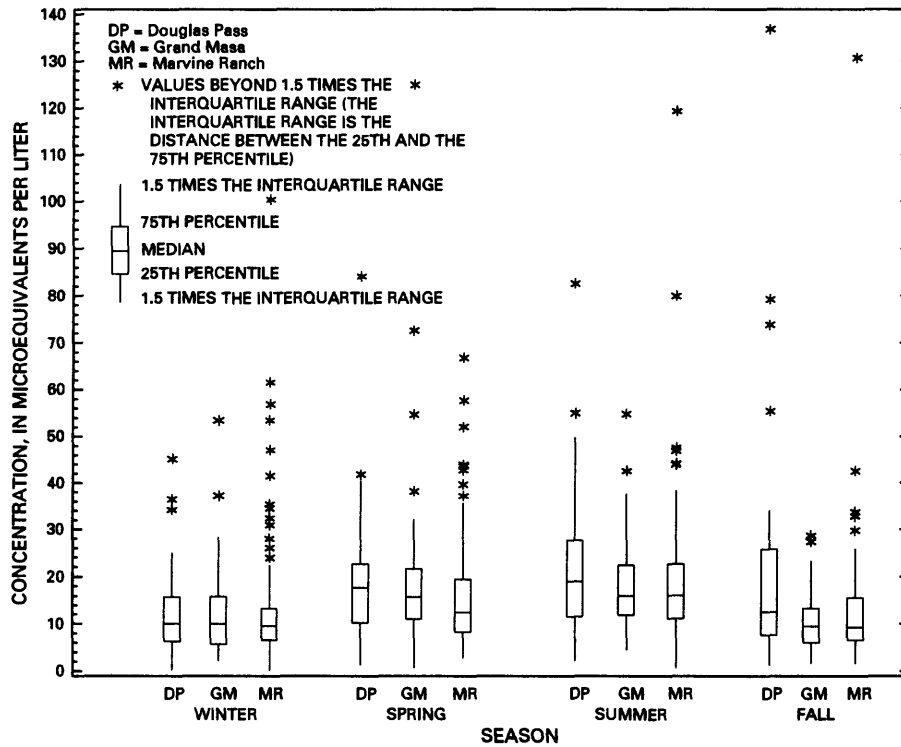


Figure 9. Seasonal variability of nitrate.

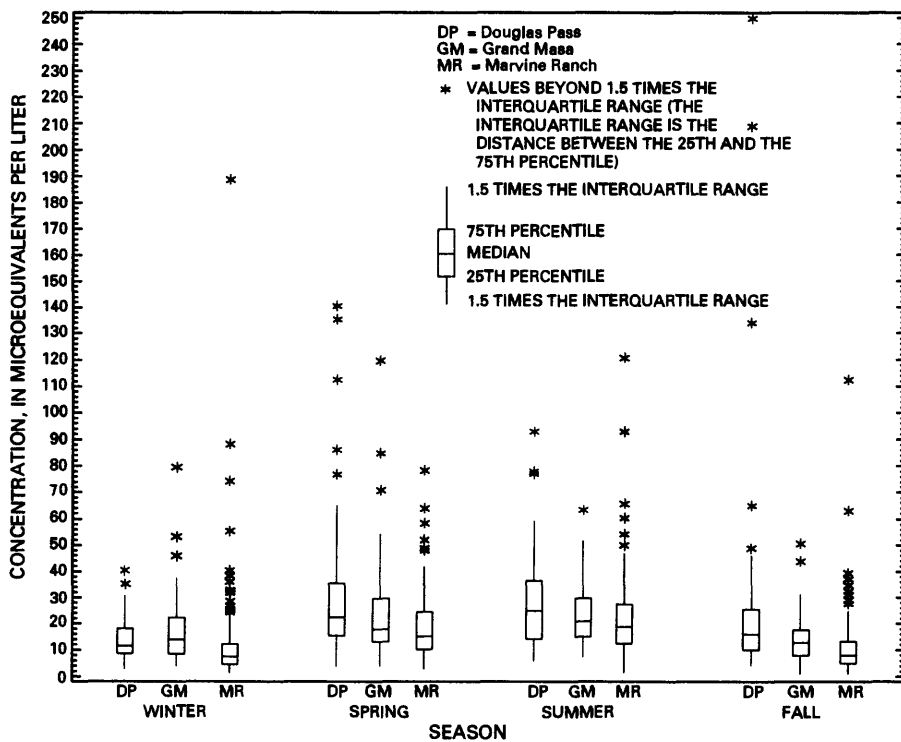


Figure 10. Seasonal variability of sulfate.

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# PRECIPITATION DATA

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**Table 1.** Precipitation volume, specific conductance, concentrations of dissolved ions, and percent charge balance for each sampling interval at Douglas Pass, 1980–91

[Precipitation volume in inches; specific conductance in microsiemens per centimeter at 25 degrees Celsius; dissolved ions in microequivalents per liter; --, no data]

Beginning date	Ending date	Precipitation	Specific conductance	Hydrogen (H <sup>+</sup> ) <sup>1</sup>	Calcium (Ca <sup>2+</sup> )	Magnesium (Mg <sup>2+</sup> )	Sodium (Na <sup>+</sup> )	Potassium (K <sup>+</sup> )	Ammonium (NH <sub>4</sub> <sup>+</sup> )	Chloride (Cl <sup>-</sup> )	Nitrate (NO <sub>3</sub> <sup>-</sup> )	Sulfate (SO <sub>4</sub> <sup>2-</sup> )	Sum cations	Sum anions	Percent charge balance
11/14/80	12/11/80	1.02	4.0	2.5	15.0	8.2	4.4	2.6	--	3.9	36.5	10.8	--	51.2	--
12/11/80	02/06/81	1.36	11.0	0.1	59.9	8.2	17.4	5.1	--	21.4	13.5	16.9	--	51.8	--
02/25/81	03/13/81	2.11	8.0	3.2	15.0	8.2	17.4	2.6	8.6	3.7	10.0	19.2	55.0	32.9	25.1
03/13/81	04/02/81	2.41	11.0	0.8	39.9	16.5	34.8	5.1	--	9.3	30.6	16.4	--	56.3	--
04/02/81	04/16/81	1.22	4.6	5.6	5.0	16.5	13.0	2.6	--	9.6	17.1	29.8	--	56.5	--
04/16/81	05/05/81	1.20	7.3	6.6	20.0	16.5	21.7	2.6	--	7.3	16.5	22.3	--	46.1	--
05/05/81	05/21/81	4.32	17.6	0.9	99.8	24.7	47.8	7.7	26.4	17.5	32.1	86.0	207.3	135.6	20.9
05/21/81	06/01/81	1.69	5.5	6.6	10.0	0.4	17.4	2.6	10.0	6.5	7.9	14.8	47.0	29.2	23.4
06/01/81	06/09/81	0.56	6.9	5.9	15.0	0.4	21.7	2.6	15.7	4.8	13.5	22.9	61.3	41.2	19.6
06/09/81	06/30/81	1.12	10.0	17.8	10.0	0.4	26.1	2.6	14.3	7.1	12.1	22.5	71.2	41.7	26.1
06/30/81	07/16/81	0.84	10.2	15.5	10.0	8.2	26.1	2.6	13.6	3.7	12.9	15.2	76.0	31.8	41.0
07/16/81	08/03/81	0.63	14.7	7.1	59.9	8.2	17.4	5.1	28.6	12.4	8.4	51.0	126.3	71.8	27.5
08/03/81	09/04/81	1.78	18.1	31.6	39.9	5.8	5.2	0.8	--	5.1	25.8	47.9	--	78.8	--
09/04/81	11/12/81	9.04	13.3	38.9	39.9	4.1	3.5	0.3	--	2.5	14.7	27.1	--	44.3	--
11/12/81	12/29/81	3.04	1.8	4.0	14.5	2.5	3.0	0.1	--	2.0	0.2	5.2	--	7.4	--
12/29/81	02/25/82	4.34	8.0	0.5	64.9	26.3	4.3	--	--	2.8	15.2	13.7	--	31.7	--
02/25/82	04/15/82	3.79	4.9	4.4	36.9	4.9	2.2	--	10.7	1.7	7.9	17.9	--	27.5	--
04/15/82	05/06/82	0.08	8.8	0.3	59.9	6.6	4.8	1.3	20.0	4.2	19.4	25.0	92.9	48.6	31.3
05/06/82	05/26/82	0.05	12.3	15.5	59.9	15.6	16.5	3.6	--	8.5	21.0	45.8	--	75.3	--
05/26/82	06/22/82	0.30	16.7	9.3	39.9	11.5	11.3	2.8	--	7.9	32.3	39.6	--	79.8	--
06/22/82	07/26/82	0.09	17.9	20.0	69.9	18.9	9.6	3.6	--	10.4	33.9	52.0	--	96.3	--
07/26/82	09/08/82	2.67	18.1	4.3	15.0	2.5	3.0	1.0	15.7	2.8	25.8	27.1	41.5	55.7	-14.6
09/08/82	10/06/82	4.57	4.9	3.6	11.0	4.1	2.6	0.5	10.0	1.1	8.7	13.7	31.8	23.5	15.0
10/06/82	10/12/82	0.74	6.1	5.5	13.0	2.5	10.4	0.8	--	2.0	13.2	11.5	--	26.7	--
10/21/82	10/29/82	1.05	5.5	7.1	10.0	2.5	3.9	0.5	8.6	2.0	11.1	13.9	32.6	27.0	9.4
10/29/82	11/05/82	1.00	6.1	0.4	11.5	0.4	5.2	0.8	--	1.7	7.1	17.7	--	26.5	--
11/05/82	11/12/82	1.51	9.1	3.9	13.0	2.5	37.4	6.9	--	31.0	5.3	12.7	--	49.0	--
11/12/82	11/29/82	1.06	4.8	0.9	--	--	--	--	--	4.5	10.2	14.6	--	29.3	--
11/29/82	12/03/82	3.06	5.0	1.5	15.0	4.1	20.0	4.9	--	16.9	4.4	8.7	--	30.0	--
12/03/82	12/09/82	0.17	1.9	1.3	2.0	0.8	5.2	0.8	--	2.8	1.5	2.7	--	7.0	--
12/09/82	01/06/83	1.45	3.6	1.3	15.0	5.8	5.2	1.0	--	3.1	6.1	10.8	--	20.0	--
01/18/83	02/14/83	1.99	6.4	6.8	10.0	4.1	5.2	0.5	--	1.7	9.7	18.7	--	30.1	--

**Table 1.** Precipitation volume, specific conductance, concentrations of dissolved ions, and percent charge balance for each sampling interval at Douglas Pass, 1980-91—Continued

[Precipitation volume in inches; specific conductance in microsiemens per centimeter at 25 degrees Celsius; dissolved ions in microequivalents per liter; --, no data]

Beginning date	Ending date	Precipitation	Specific conductance	Hydrogen (H <sup>+</sup> ) <sup>1</sup>	Calcium (Ca <sup>2+</sup> )	Magnesium (Mg <sup>2+</sup> )	Sodium (Na <sup>+</sup> )	Potassium (K <sup>+</sup> )	Ammonium (NH <sub>4</sub> <sup>+</sup> )	Chloride (Cl <sup>-</sup> )	Nitrate (NO <sub>3</sub> <sup>-</sup> )	Sulfate (SO <sub>4</sub> <sup>2-</sup> )	Sum cations	Sum anions	Percent charge balance
02/14/83	02/22/83	0.84	6.0	0.5	--	--	--	--	--	--	--	--	--	--	--
02/22/83	03/03/83	1.11	6.9	11.2	8.0	2.5	7.4	0.5	--	3.4	7.7	18.1	--	29.2	--
03/03/83	03/10/83	1.38	10.0	18.2	4.5	0.4	2.6	0.3	7.9	0.6	5.5	20.8	33.9	26.9	11.5
03/10/83	03/29/83	4.03	4.8	4.4	9.0	2.5	4.8	0.3	10.0	1.4	7.4	13.9	31.0	22.7	15.5
03/29/83	04/06/83	0.41	3.7	1.0	8.0	1.6	4.3	0.3	10.0	1.7	4.8	9.4	25.2	15.9	22.6
04/06/83	04/13/83	0.98	5.7	3.3	12.0	2.5	5.2	0.5	--	2.5	13.2	15.4	--	31.1	--
04/26/83	05/03/83	2.06	4.8	0.9	15.0	3.3	3.9	0.5	15.0	2.3	10.6	12.9	38.6	25.8	19.9
05/03/83	05/24/83	3.66	5.1	1.6	20.5	4.1	8.3	0.8	12.1	4.5	8.4	16.4	47.4	29.3	23.6
05/24/83	06/14/83	0.88	9.9	7.4	24.0	4.9	7.0	1.5	16.4	6.2	19.4	25.0	61.2	50.5	9.5
06/14/83	06/24/83	--	15.9	0.5	33.9	23.9	15.7	4.1	--	6.8	22.6	77.0	--	106.4	--
06/24/83	07/08/83	--	13.9	22.4	13.0	3.3	4.8	1.5	14.3	5.4	5.0	27.1	59.3	37.5	22.5
07/08/83	07/28/83	2.62	6.0	8.5	5.0	0.8	2.2	0.5	9.3	4.2	2.1	13.3	26.3	19.6	14.6
07/28/83	08/08/83	1.78	7.1	12.6	3.0	0.8	1.7	2.3	5.0	2.3	10.8	11.2	25.4	24.3	2.2
08/08/83	08/17/83	1.01	6.4	9.8	6.0	2.5	1.3	1.0	8.6	2.3	11.0	10.8	29.2	24.1	9.6
08/17/83	08/30/83	0.70	8.0	33.9	139.7	8.2	1.7	1.8	9.3	3.4	28.5	36.5	194.6	68.1	48.0
08/30/83	09/08/83	0.47	5.9	38.9	34.4	9.0	3.5	1.3	12.1	4.5	40.2	57.7	99.2	102.4	-1.6
09/21/83	09/27/83	0.44	8.7	12.6	23.0	3.3	3.0	1.3	1.4	4.5	15.3	19.6	44.6	39.4	6.2
09/27/83	10/05/83	4.24	5.2	10.0	59.9	3.3	1.3	1.0	3.6	1.4	4.5	9.2	79.1	15.1	67.9
10/12/83	10/21/83	0.53	6.1	7.8	7.0	2.5	2.6	0.5	4.3	1.7	9.8	14.2	24.7	25.7	-2.0
11/02/83	11/08/83	1.15	3.4	4.7	4.0	1.6	1.3	0.8	2.9	1.4	3.9	6.7	15.3	12.0	12.1
11/08/83	11/16/83	0.10	5.4	0.8	--	--	--	--	--	--	--	--	--	--	--
11/16/83	11/22/83	2.15	5.7	9.8	3.5	1.6	2.2	0.5	--	4.5	1.5	7.3	--	13.3	--
11/22/83	11/30/83	1.93	5.4	9.1	2.5	8.2	2.2	1.3	--	4.2	0.2	10.0	--	14.4	--
11/30/83	12/07/83	1.72	6.6	8.7	7.0	2.5	3.0	0.5	--	5.6	1.1	16.7	--	23.4	--
12/14/83	12/21/83	0.65	4.1	3.4	7.0	1.6	6.5	2.6	--	7.9	9.0	5.2	--	22.1	--
12/21/83	12/28/83	1.50	4.8	4.8	5.0	0.8	3.5	1.0	--	3.4	6.3	5.6	--	15.3	--
01/05/84	01/12/84	0.16	4.0	3.5	13.0	2.5	2.2	1.0	--	4.5	11.9	5.4	--	21.8	--
01/12/84	01/19/84	0.70	8.4	16.6	13.0	2.5	2.2	1.0	--	3.6	9.5	14.0	--	27.1	--
02/09/84	02/16/84	0.93	6.8	11.5	--	--	--	--	--	11.9	79.2	49.1	--	140.2	--
02/16/84	02/24/84	0.19	49.5	0.2	--	--	--	--	--	--	--	--	--	--	--
02/24/84	03/01/84	0.16	--	--	--	--	--	--	--	15.7	6.6	10.1	--	32.4	--
03/01/84	03/07/84	0.29	9.3	0.8	--	--	--	--	--	9.6	30.8	22.9	--	63.3	--

**Table 1.** Precipitation volume, specific conductance, concentrations of dissolved ions, and percent charge balance for each sampling interval at Douglas Pass, 1980–91—Continued

[Precipitation volume in inches; specific conductance in microsiemens per centimeter at 25 degrees Celsius; dissolved ions in microequivalents per liter; --, no data]

Beginning date	Ending date	Precipitation	Specific conductance	Hydrogen (H <sup>+</sup> ) <sup>1</sup>	Calcium (Ca <sup>2+</sup> )	Magnesium (Mg <sup>2+</sup> )	Sodium (Na <sup>+</sup> )	Potassium (K <sup>+</sup> )	Ammonium (NH <sub>4</sub> <sup>+</sup> )	Chloride (Cl <sup>-</sup> )	Nitrate (NO <sub>3</sub> <sup>-</sup> )	Sulfate (SO <sub>4</sub> <sup>2-</sup> )	Sum cations	Sum anions	Percent charge balance
03/07/84	03/14/84	0.05	7.1	1.4	--	--	--	--	--	--	--	--	--	--	--
03/14/84	03/20/84	1.72	4.6	0.8	20.5	6.6	3.5	1.0	7.9	2.3	10.2	15.1	40.3	27.6	18.7
03/20/84	04/02/84	1.88	11.1	21.4	10.5	2.5	0.9	0.5	19.3	2.7	16.3	25.6	55.1	44.6	10.5
04/02/84	04/11/84	0.72	12.7	0.4	69.9	23.9	13.9	4.1	--	5.8	17.7	25.0	--	48.5	--
04/11/84	04/24/84	0.43	7.3	1.0	27.9	9.0	6.5	2.3	--	7.8	19.8	20.6	--	48.2	--
04/24/84	05/07/84	2.15	38.6	0.1	149.7	44.4	38.7	5.6	--	23.4	22.6	112.4	--	158.4	--
05/07/84	05/14/84	0.36	5.6	0.6	17.5	4.9	5.7	1.8	15.0	6.2	1.3	7.7	45.5	15.2	49.9
05/30/84	06/01/84	0.56	11.5	0.5	37.9	12.3	6.5	4.9	29.3	8.5	5.3	39.6	91.4	53.3	26.2
06/01/84	06/15/84	3.83	5.3	4.2	10.5	2.5	2.6	1.3	7.9	5.1	2.3	12.7	29.0	20.1	18.1
06/15/84	06/19/84	0.04	19.7	6.3	--	--	--	--	--	--	--	--	--	--	--
06/19/84	06/25/84	0.00	41.0	32.4	--	--	--	--	--	--	--	--	--	--	--
06/25/84	07/02/84	0.05	53.0	60.3	--	--	--	--	--	--	--	--	--	--	--
07/02/84	07/09/84	0.15	12.8	10.5	--	--	--	--	--	7.4	24.5	33.7	--	65.6	--
07/09/84	07/17/84	0.92	8.6	13.2	8.0	2.5	2.6	1.8	7.1	4.8	2.9	14.8	35.2	22.5	22.0
07/17/84	07/25/84	0.01	25.8	0.3	--	--	--	--	--	12.8	55.0	78.1	--	145.9	--
07/25/84	07/31/84	0.04	19.9	0.3	5.0	1.6	0.2	1.3	--	2.9	11.8	9.3	--	24.0	--
07/31/84	08/07/84	0.34	12.6	10.0	25.4	6.6	3.9	2.3	--	6.2	6.5	29.1	--	421.8	--
08/07/84	08/20/84	1.46	8.6	12.6	9.0	0.8	0.4	1.5	5.0	3.4	2.9	13.3	29.3	19.6	19.8
08/20/84	08/27/84	0.52	3.6	5.6	1.5	0.4	2.6	0.5	1.4	2.4	2.9	5.7	12.0	11.0	4.3
08/27/84	09/06/84	0.07	18.6	0.2	4.5	5.8	4.3	0.8	6.4	9.0	44.5	59.3	22.0	112.8	-67.4
09/06/84	09/18/84	0.70	7.6	11.0	4.5	5.8	4.3	0.8	6.4	2.9	12.7	14.3	32.8	29.9	4.6
09/18/84	09/25/84	0.97	12.2	2.0	36.4	15.6	11.3	2.0	21.4	10.5	27.4	52.0	88.7	89.9	-0.7
09/25/84	10/09/84	1.01	11.3	15.1	13.0	5.8	4.3	1.3	17.8	4.1	16.8	30.8	57.3	51.7	5.1
10/09/84	10/16/84	1.34	--	--	4.0	0.8	3.0	0.3	5.7	3.0	5.1	10.4	--	18.5	--
11/14/84	12/19/84	--	6.3	8.1	10.0	3.3	2.2	0.5	4.3	1.8	11.8	12.3	28.4	25.9	4.6
12/19/84	01/02/85	2.69	13.2	19.5	14.5	5.8	7.0	0.8	--	3.9	21.1	30.0	--	55.0	--
01/14/85	01/31/85	0.81	9.2	0.3	36.4	2.5	3.0	0.8	--	3.7	16.1	15.7	--	35.5	--
01/31/85	03/05/85	2.31	8.0	0.4	42.4	12.3	7.0	1.3	12.9	3.7	15.8	20.2	76.3	39.7	31.6
03/05/85	03/11/85	0.39	--	--	--	--	--	--	--	--	--	--	--	--	--
03/11/85	03/19/85	0.44	19.2	0.2	--	--	--	--	--	--	--	--	--	--	--
03/19/85	03/26/85	0.21	--	--	--	--	--	--	--	21.2	55.5	65.2	--	141.9	--
03/26/85	04/08/85	1.70	--	--	--	--	--	--	--	--	--	--	--	--	--
05/09/85	05/22/85	1.61	7.0	1.4	15.0	3.3	4.8	2.3	21.4	5.6	17.9	18.0	48.2	41.5	7.5
05/30/85	06/10/85	0.66	14.0	3.5	27.9	6.6	8.3	2.8	--	9.0	27.1	38.3	--	74.4	--

**Table 1.** Precipitation volume, specific conductance, concentrations of dissolved ions, and percent charge balance for each sampling interval at Douglas Pass, 1980-91—Continued

[Precipitation volume in inches; specific conductance in microsiemens per centimeter at 25 degrees Celsius; dissolved ions in microequivalents per liter; --, no data]

Beginning date	Ending date	Precipitation	Specific conductance	Hydrogen (H <sup>+</sup> ) <sup>1</sup>	Calcium (Ca <sup>2+</sup> )	Magnesium (Mg <sup>2+</sup> )	Sodium (Na <sup>+</sup> )	Potassium (K <sup>+</sup> )	Ammonium (NH <sub>4</sub> <sup>+</sup> )	Chloride (Cl <sup>-</sup> )	Nitrate (NO <sub>3</sub> <sup>-</sup> )	Sulfate (SO <sub>4</sub> <sup>2-</sup> )	Sum cations	Sum anions	Percent charge balance
06/24/85	07/08/85	0.88	17.7	1.0	43.4	15.6	10.9	4.9	45.0	23.8	33.7	65.0	120.8	122.5	-0.7
07/08/85	07/19/85	1.60	7.6	3.6	6.0	6.6	3.9	1.8	12.9	2.8	19.0	14.9	34.8	36.7	-2.7
07/19/85	07/26/85	--	5.7	5.9	4.0	2.5	2.2	1.3	10.7	3.1	14.5	7.4	26.6	25.0	3.1
07/26/85	07/30/85	0.52	7.7	5.2	7.5	7.4	3.5	2.8	15.0	3.6	18.1	15.5	41.4	37.2	5.3
08/15/85	08/22/85	0.18	14.3	0.2	37.4	19.7	17.4	2.3	--	9.9	31.4	49.8	--	91.1	--
10/16/85	10/28/85	0.10	--	--	39.4	63.3	7.0	1.0	16.4	--	--	--	--	--	--
10/28/85	11/20/85	3.55	10.3	2.4	25.9	7.4	12.6	--	12.1	4.7	18.9	35.4	--	59.0	--
11/20/85	12/27/85	--	10.8	2.0	--	--	--	--	--	--	--	--	--	--	--
12/27/85	01/03/86	--	--	--	--	--	--	--	--	--	--	--	--	--	--
01/03/86	02/20/86	3.78	17.3	0.8	119.8	43.6	7.4	1.3	7.9	14.3	16.9	25.2	180.8	56.4	52.4
02/20/86	03/19/86	2.55	74.3	151.4	54.9	21.4	7.0	1.5	5.0	11.5	16.3	249.8	241.2	277.6	-7.0
03/25/86	04/17/86	2.70	31.9	30.2	79.8	69.9	7.0	2.0	21.4	31.3	21.6	140.3	210.3	193.2	4.2
04/17/86	04/23/86	0.62	11.8	0.9	--	--	--	--	--	--	--	--	--	--	--
04/23/86	05/01/86	0.17	--	--	--	--	--	--	--	--	--	--	--	--	--
05/01/86	05/13/86	2.03	5.3	1.0	3.0	4.9	522.0	0.8	15.0	3.2	10.2	14.6	546.0	28.0	90.3
05/13/86	05/20/86	0.60	6.1	6.5	14.0	1.6	2.6	0.5	18.6	3.8	10.0	17.1	43.8	30.9	17.3
05/20/86	06/10/86	1.15	3.2	2.2	18.5	2.5	6.5	0.8	7.9	1.9	6.8	8.0	38.4	16.7	39.4
06/10/86	06/24/86	0.00	37.3	22.9	--	--	--	--	--	18.3	84.0	135.5	--	237.8	--
06/24/86	07/07/86	0.10	13.6	0.6	69.9	14.0	21.7	3.1	30.7	12.5	24.0	35.4	140.0	71.9	32.1
07/07/86	07/21/86	1.35	8.2	13.8	11.0	3.3	3.5	0.5	12.9	3.7	14.7	19.5	45.0	37.9	8.6
07/21/86	07/29/86	0.10	8.6	11.2	13.5	4.1	4.8	0.5	16.4	2.8	18.1	21.7	50.5	42.6	8.5
08/20/86	09/05/86	0.38	11.6	15.5	22.0	5.8	6.5	1.5	17.1	5.3	27.2	24.9	68.4	57.4	8.7
09/05/86	09/12/86	0.69	10.7	17.8	64.9	14.8	7.0	2.6	12.9	0.7	17.3	29.8	120.0	47.8	43.0
09/12/86	10/02/86	3.30	4.1	4.9	15.0	3.3	5.7	2.6	1.4	2.2	6.9	7.6	32.9	16.7	32.7
10/02/86	10/09/86	1.29	4.9	5.0	8.5	4.1	6.5	0.8	--	5.6	8.2	9.8	--	23.6	--
10/09/86	10/20/86	0.74	11.8	24.5	21.0	4.9	6.5	2.8	--	2.0	17.3	30.8	--	50.1	--
10/20/86	10/27/86	0.34	9.0	6.5	32.9	5.8	4.3	2.0	--	3.9	18.2	28.1	--	50.2	--
10/27/86	11/10/86	1.58	6.6	9.1	39.9	4.1	9.6	3.6	--	4.2	11.6	14.2	--	30.0	--
11/10/86	12/03/86	1.40	6.0	6.2	18.0	4.1	2.2	0.8	--	2.2	15.2	14.8	--	32.2	--
12/03/86	12/16/86	--	6.3	12.0	13.0	3.3	3.0	1.0	--	1.3	8.9	11.5	--	21.7	--
12/16/86	01/07/87	1.65	26.4	0.3	--	--	--	--	--	9.3	30.3	40.4	--	80.0	--
01/07/87	02/06/87	1.59	13.3	0.5	74.9	18.1	7.4	3.8	--	7.6	32.6	27.5	--	67.7	--

**Table 1. Precipitation volume, specific conductance, concentrations of dissolved ions, and percent charge balance for each sampling interval at Douglas Pass, 1980–91—Continued**

[Precipitation volume in inches; specific conductance in microsiemens per centimeter at 25 degrees Celsius; dissolved ions in microequivalents per liter; --, no data]

Beginning date	Ending date	Precipitation	Specific conductance	Hydrogen (H <sup>+</sup> ) <sup>1</sup>	Calcium (Ca <sup>2+</sup> )	Magnesium (Mg <sup>2+</sup> )	Sodium (Na <sup>+</sup> )	Potassium (K <sup>+</sup> )	Ammonium (NH <sub>4</sub> <sup>+</sup> )	Chloride (Cl <sup>-</sup> )	Nitrate (NO <sub>3</sub> <sup>-</sup> )	Sulfate (SO <sub>4</sub> <sup>2-</sup> )	Sum cations	Sum anions	Percent charge balance
02/06/87	02/17/87	0.96	10.1	1.4	--	--	--	--	--	--	--	--	--	--	--
02/17/87	03/12/87	1.80	14.0	0.5	59.9	14.0	14.4	17.1	--	14.4	12.9	46.0	--	73.3	--
03/12/87	03/18/87	1.23	7.5	0.4	44.9	9.9	9.1	0.3	3.6	4.8	8.9	14.8	68.2	28.5	41.1
03/18/87	03/24/87	1.65	3.5	0.8	18.5	3.3	2.2	0.8	5.0	2.3	6.1	5.4	30.6	13.8	37.8
03/24/87	04/09/87	0.60	--	--	--	--	--	--	--	--	--	--	--	--	--
04/09/87	04/24/87	1.38	14.8	0.3	104.8	18.9	21.3	3.3	--	13.5	16.9	24.6	--	55.0	--
04/24/87	05/01/87	0.20	16.5	5.5	54.9	9.0	7.8	2.8	--	5.1	40.5	62.9	--	108.5	--
05/01/87	05/08/87	0.59	8.6	1.1	32.9	5.8	7.0	1.8	17.8	6.2	19.4	29.6	66.4	55.2	9.2
05/08/87	05/28/87	2.54	7.5	6.0	14.0	3.3	3.9	1.0	15.7	--	--	--	43.9	--	--
05/28/87	06/17/87	0.64	14.7	1.9	49.4	14.0	5.2	4.1	32.1	6.8	41.9	50.0	106.7	98.7	3.9
07/06/87	07/16/87	0.35	26.4	0.5	109.8	27.1	18.7	6.1	--	19.5	82.6	77.0	--	179.1	--
07/16/87	07/23/87	0.80	9.1	3.2	39.9	6.6	3.0	1.3	12.1	5.6	21.1	31.4	66.1	58.1	6.4
07/23/87	08/07/87	1.29	5.9	12.0	10.0	1.6	2.6	0.5	7.9	2.2	12.3	10.8	34.6	25.3	15.5
08/07/87	08/17/87	0.96	9.3	0.8	40.9	18.1	8.7	1.0	13.6	7.3	23.1	28.7	83.1	59.1	16.0
08/17/87	09/03/87	1.31	11.5	19.5	17.0	3.3	4.3	1.3	9.3	2.8	18.7	15.2	54.7	36.7	19.7
09/03/87	09/15/87	0.23	39.4	0.2	89.8	18.1	13.0	2.6	--	163.9	34.4	92.9	--	291.2	--
09/15/87	10/19/87	1.16	7.7	9.8	24.0	3.3	4.3	1.3	14.3	2.4	14.7	26.9	57.0	44.0	12.9
10/19/87	10/29/87	0.45	5.6	1.1	11.0	2.5	2.2	0.8	--	5.1	1.9	6.5	--	13.5	--
10/29/87	11/20/87	2.71	3.7	3.0	16.5	1.6	3.5	0.5	5.0	4.5	8.1	8.7	30.1	21.3	17.1
11/20/87	12/07/87	1.23	13.3	0.1	84.8	21.4	7.8	2.0	--	10.4	25.0	27.7	--	63.1	--
12/07/87	12/21/87	--	16.8	21.9	--	--	--	--	--	7.6	45.2	34.8	--	87.6	--
12/21/87	12/30/87	2.55	--	--	--	--	--	--	--	--	--	--	--	--	--
12/30/87	01/14/88	0.76	--	--	--	--	--	--	--	--	--	--	--	--	--
01/14/88	01/28/88	1.27	--	--	--	--	--	--	--	--	--	--	--	--	--
01/28/88	03/04/88	1.30	18.2	0.1	144.7	46.9	6.5	1.5	--	10.2	34.0	37.9	--	82.1	--
03/04/88	03/18/88	1.74	7.5	0.1	44.4	7.4	11.3	1.5	12.9	9.6	21.1	15.0	77.6	45.7	25.9
03/18/88	04/21/88	2.07	0.9	0.8	49.9	8.2	11.7	1.5	20.0	7.9	20.5	29.4	92.1	57.8	22.9
04/21/88	04/25/88	1.30	3.2	1.7	9.5	3.3	1.7	0.5	9.3	0.1	25.5	9.8	26.0	35.4	-15.3
04/25/88	06/01/88	2.02	11.2	0.6	59.9	9.9	7.8	3.6	19.3	7.3	17.9	30.4	101.1	55.6	29.0
06/01/88	08/16/88	3.13	14.0	16.2	23.5	5.8	3.0	0.8	2.1	5.6	32.4	26.9	51.4	64.9	-11.6
08/16/88	08/30/88	1.92	7.4	14.8	54.9	3.3	3.5	1.0	17.1	3.9	23.5	22.3	94.6	49.7	31.1
08/30/88	09/13/88	0.48	11.0	3.7	37.4	13.2	5.7	2.0	18.6	6.5	27.6	26.4	80.6	60.5	14.2
09/13/88	09/26/88	0.50	6.6	1.9	30.4	4.9	6.1	0.5	10.7	6.2	11.1	17.3	54.5	34.6	22.3
09/26/88	10/12/88	0.41	30.2	17.4	43.4	9.9	3.0	1.0	25.7	5.4	34.2	40.2	100.4	79.8	11.4

**Table 1.** Precipitation volume, specific conductance, concentrations of dissolved ions, and percent charge balance for each sampling interval at Douglas Pass, 1980–91—Continued

[Precipitation volume in inches; specific conductance in microsiemens per centimeter at 25 degrees Celsius; dissolved ions in microequivalents per liter; --, no data]

Beginning date	Ending date	Precipitation	Specific conductance	Hydrogen (H <sup>+</sup> ) <sup>1</sup>	Calcium (Ca <sup>2+</sup> )	Magnesium (Mg <sup>2+</sup> )	Sodium (Na <sup>+</sup> )	Potassium (K <sup>+</sup> )	Ammonium (NH <sub>4</sub> <sup>+</sup> )	Chloride (Cl <sup>-</sup> )	Nitrate (NO <sub>3</sub> <sup>-</sup> )	Sulfate (SO <sub>4</sub> <sup>2-</sup> )	Sum cations	Sum anions	Percent charge balance
10/12/88	11/22/88	1.71	4.7	1.4	15.5	4.1	4.3	0.8	9.3	3.7	14.7	11.0	35.4	29.4	9.3
11/22/88	12/06/88	0.40	4.3	0.7	30.4	8.2	31.3	0.8	--	10.7	10.0	5.2	--	25.9	--
12/06/88	12/21/88	0.81	8.5	15.5	9.0	1.6	1.7	0.5	--	8.5	22.4	7.1	--	38.0	--
12/21/88	12/27/88	2.39	4.2	5.6	--	--	--	--	--	12.1	9.5	5.6	--	27.2	--
12/27/88	01/19/89	1.40	3.6	1.1	23.0	5.8	3.5	1.0	--	2.5	1.3	6.0	--	9.8	--
01/19/89	02/01/89	0.38	3.7	3.0	19.0	4.9	0.9	0.8	--	8.2	5.3	11.9	--	25.4	--
02/01/89	02/14/89	2.37	2.5	1.5	18.0	3.3	2.6	0.1	2.1	2.5	3.7	4.8	27.6	11.0	43.0
02/14/89	02/28/89	0.66	4.9	57.5	--	--	--	--	--	16.6	73.9	133.9	--	224.4	--
02/28/89	03/30/89	1.73	74.6	0.0	--	--	--	--	--	64.9	136.8	209.0	--	410.7	--
03/30/89	04/11/89	0.51	2.5	1.7	9.5	1.6	2.2	0.1	4.3	7.3	7.7	3.7	19.4	18.7	1.8
04/11/89	05/03/89	0.16	11.3	0.3	59.9	11.5	13.0	1.5	--	7.1	24.7	25.8	--	57.6	--
05/03/89	05/18/89	0.25	12.1	0.4	47.4	11.5	9.6	1.5	--	8.7	26.0	32.5	--	67.2	--
06/01/89	06/17/89	1.11	9.1	0.6	33.4	9.0	5.7	1.0	17.8	6.5	21.3	21.9	67.5	49.7	15.2
06/17/89	07/20/89	0.31	18.3	0.2	89.8	20.6	19.6	4.1	--	16.1	49.7	41.4	--	107.2	--
07/20/89	08/29/89	1.66	9.7	9.3	13.0	2.5	3.5	2.8	15.0	3.4	22.3	17.5	46.1	43.2	3.2
08/29/89	09/21/89	1.53	6.9	5.9	18.0	3.3	2.2	0.1	6.4	4.8	19.5	12.9	35.9	37.2	-1.8
09/21/89	10/10/89	0.10	38.1	0.0	--	--	--	--	--	8.7	14.4	21.9	--	45.0	--
10/10/89	11/01/89	1.28	4.6	4.3	7.5	1.6	2.2	0.3	7.1	1.1	7.4	10.0	23.0	18.5	10.8
11/21/89	12/06/89	1.37	8.5	0.3	44.9	10.7	3.0	0.8	--	2.0	21.9	14.6	--	38.5	--
12/06/89	12/21/89	0.52	3.8	1.8	14.0	2.5	1.7	0.3	--	1.4	7.1	6.9	--	15.4	--
12/21/89	01/03/90	0.17	5.8	6.5	--	--	--	--	--	3.4	13.5	8.3	--	25.2	--
01/03/90	01/18/90	0.93	5.6	7.4	8.5	0.8	3.0	0.3	8.6	1.1	8.1	10.0	28.6	19.2	19.7
01/18/90	01/29/90	0.26	24.9	0.0	--	--	--	--	--	--	--	--	--	--	--
01/29/90	03/01/90	2.55	13.8	0.1	99.8	20.6	4.3	1.5	2.1	2.8	--	9.0	128.4	--	--
03/01/90	03/15/90	2.60	9.0	0.2	74.9	14.0	3.5	12.8	9.3	3.9	--	14.6	114.7	--	--
03/15/90	03/29/90	0.38	16.3	1.9	--	--	--	--	--	9.3	32.4	33.3	--	75.0	--
03/29/90	04/09/90	0.76	10.0	11.5	10.5	1.6	2.2	0.3	17.1	2.1	--	19.4	43.2	--	--
04/09/90	04/25/90	0.65	7.0	1.4	25.0	4.9	3.0	2.6	16.4	2.0	--	21.4	53.3	--	--
04/25/90	05/09/90	0.15	--	--	--	--	--	--	--	--	--	--	--	--	--
05/09/90	05/30/90	0.81	7.1	0.5	34.9	6.6	5.2	1.5	7.9	7.1	--	15.4	56.6	--	--
05/30/90	06/19/90	1.38	6.2	1.5	16.5	3.3	2.6	1.0	16.4	4.5	16.5	15.6	41.3	36.6	6.0
06/19/90	07/10/90	2.16	6.2	0.7	25.0	5.8	2.2	1.0	14.3	--	--	--	49.0	--	--

**Table 1. Precipitation volume, specific conductance, concentrations of dissolved ions, and percent charge balance for each sampling interval at Douglas Pass, 1980-91—Continued**

[Precipitation volume in inches; specific conductance in microsiemens per centimeter at 25 degrees Celsius; dissolved ions in microequivalents per liter; --, no data]

Beginning date	Ending date	Precipitation	Specific conductance	Hydrogen (H <sup>+</sup> ) <sup>1</sup>	Calcium (Ca <sup>2+</sup> )	Magnesium (Mg <sup>2+</sup> )	Sodium (Na <sup>+</sup> )	Potassium (K <sup>+</sup> )	Ammonium (NH <sub>4</sub> <sup>+</sup> )	Chloride (Cl <sup>-</sup> )	Nitrate (NO <sub>3</sub> <sup>-</sup> )	Sulfate (SO <sub>4</sub> <sup>2-</sup> )	Sum cations	Sum anions	Percent charge balance
07/10/90	08/02/90	0.49	9.6	2.6	32.4	9.9	5.7	1.0	15.0	6.5	29.7	26.9	66.6	63.1	2.7
08/02/90	08/21/90	0.26	13.6	8.3	36.9	7.4	3.9	2.0	32.1	6.2	35.5	39.6	90.6	81.3	5.4
08/21/90	09/20/90	1.96	6.3	9.3	8.0	1.6	0.9	0.1	5.0	2.8	11.5	11.2	24.9	25.5	-1.2
09/20/90	10/10/90	1.07	8.5	12.3	13.0	2.5	1.7	0.5	9.3	2.5	15.8	18.1	39.3	36.4	3.8
10/10/90	10/26/90	0.98	3.9	2.3	11.5	2.5	2.6	0.8	6.4	3.4	6.8	10.6	26.1	20.8	11.3
10/26/90	11/12/90	1.04	6.8	0.8	35.9	6.6	3.5	0.8	11.4	4.5	17.7	18.9	59.0	41.1	17.9
11/12/90	11/23/90	0.85	10.8	0.1	--	--	--	--	--	3.4	13.9	16.0	--	33.3	--
11/23/90	12/10/90	0.16	9.5	2.3	--	--	--	--	--	--	--	--	--	--	--
12/10/90	12/27/90	1.65	5.7	0.2	--	--	--	--	--	3.4	7.6	5.2	--	16.2	--
12/27/90	01/09/91	0.96	9.3	0.1	--	--	--	--	--	2.3	12.1	4.2	--	18.6	--
01/09/91	02/11/91	0.54	7.3	1.3	--	--	--	--	--	--	--	--	--	--	--
02/11/91	02/26/91	0.70	5.3	4.2	--	--	--	--	--	3.1	7.6	9.0	--	19.7	--
02/26/91	03/13/91	1.83	2.9	0.5	20.0	4.1	7.0	1.5	--	5.9	5.8	6.2	--	17.9	--
03/13/91	04/03/91	2.93	2.9	2.2	13.0	2.5	1.7	0.5	3.6	2.5	6.3	6.5	23.5	15.3	21.1
04/03/91	04/18/91	0.87	4.8	4.7	10.0	1.6	2.2	0.3	5.0	3.4	8.1	10.4	23.8	21.9	4.2
04/18/91	05/06/91	1.18	10.5	0.1	59.9	13.2	10.9	1.3	13.6	3.4	16.3	19.2	99.0	38.9	43.6
05/06/91	05/21/91	0.65	2.8	1.5	13.0	1.6	0.9	0.1	4.3	2.0	5.5	6.5	21.4	14.0	20.9
05/21/91	06/04/91	0.90	8.0	0.3	43.9	6.6	3.9	1.0	13.6	4.5	15.5	16.2	69.3	36.2	31.4
06/04/91	06/17/91	0.05	--	--	--	--	--	--	--	--	--	--	--	--	--
06/17/91	07/09/91	0.28	5.7	1.2	21.0	2.5	0.4	0.1	22.1	--	--	--	47.3	--	--
07/09/91	07/31/91	1.43	6.1	4.9	15.0	2.5	1.3	0.3	7.1	--	--	--	31.1	--	--
07/31/91	08/22/91	1.64	11.1	14.1	14.0	3.3	0.9	0.1	12.1	--	--	--	44.5	--	--
08/22/91	09/16/91	1.53	6.6	6.3	11.0	2.5	1.3	0.1	7.1	--	--	--	28.3	--	--
09/16/91	10/01/91	0.02	14.4	16.2	--	--	--	--	--	--	--	--	--	--	--

<sup>1</sup>Values of pH can be calculated from hydrogen concentration by multiplying the log of the product of hydrogen concentration times  $1 \times 10^{-6}$  by -1.

**Table 2.** Summary statistics of specific conductance and concentrations of dissolved ions at Douglas Pass, 1980–91

[Specific conductance in microsiemens per centimeter at 25 degrees Celsius; dissolved ions in microequivalents per liter]

	Specific conductance	Hydrogen (H <sup>+</sup> )	Calcium (Ca <sup>2+</sup> )	Magnesium (Mg <sup>2+</sup> )	Sodium (Na <sup>+</sup> )	Potassium (K <sup>+</sup> )	Ammonium (NH <sub>4</sub> <sup>+</sup> )	Chloride (Cl <sup>-</sup> )	Nitrate (NO <sub>3</sub> <sup>-</sup> )	Sulfate (SO <sub>4</sub> <sup>2-</sup> )
Number of samples	206	204	175	175	175	172	112	188	183	188
Mean	11.1	7.4	30.1	8.0	10.0	1.8	12.4	7.3	18.4	26.8
Median	8.0	3.3	18.0	4.9	4.3	1.0	11.8	4.5	14.7	17.4
Standard deviation	10.5	13.7	28.7	10.0	39.6	2.0	7.5	13.3	16.8	31.1
Minimum	0.9	0.1	1.5	0.4	0.2	0.1	1.4	0.1	0.2	2.7
Maximum	74.6	151.4	149.7	69.9	522.0	17.1	45.0	163.9	136.8	249.8

**Table 3.** Precipitation volume, specific conductance, concentrations of dissolved ions, and percent charge balance for each sampling interval at Grand Mesa, 1981–91

[Precipitation volume in inches; specific conductance in microsiemens per centimeter at 25 degrees Celsius; dissolved ions in microequivalents per liter; --, no data]

Beginning date	Ending date	Precipitation	Specific conductance	Hydrogen (H <sup>+</sup> ) <sup>1</sup>	Calcium (Ca <sup>2+</sup> )	Magnesium (Mg <sup>2+</sup> )	Sodium (Na <sup>+</sup> )	Potassium (K <sup>+</sup> )	Ammonium (NH <sub>4</sub> <sup>+</sup> )	Chloride (Cl <sup>-</sup> )	Nitrate (NO <sub>3</sub> <sup>-</sup> )	Sulfate (SO <sub>4</sub> <sup>2-</sup> )	Sum cations	Sum anions	Percent charge balance
08/27/81	11/02/81	11.57	9.0	5.5	17.5	3.3	3.0	0.1	--	2.3	8.1	18.3	--	28.7	--
11/02/81	12/02/81	2.62	5.5	1.5	10.5	2.5	3.0	0.1	--	2.3	5.6	10.4	--	18.3	--
12/02/81	12/26/81	2.52	5.8	13.2	17.5	2.5	5.2	0.1	--	3.7	9.8	20.4	--	33.9	--
12/26/81	01/06/82	1.61	6.9	30.2	10.5	0.8	3.5	0.1	--	2.5	8.5	17.1	--	28.1	--
01/06/82	01/13/82	0.27	6.7	9.8	--	--	--	--	--	2.8	15.3	10.0	--	28.1	--
01/13/82	01/22/82	1.50	6.2	0.3	49.9	--	5.7	0.3	--	4.5	6.3	10.4	--	21.2	--
01/22/82	01/31/82	0.60	6.6	9.8	12.5	2.5	3.5	0.1	--	2.3	11.0	17.5	--	30.8	--
01/31/82	02/11/82	1.50	5.5	6.5	5.0	1.6	3.0	--	--	1.1	13.2	6.0	--	20.3	--
02/11/82	02/15/82	0.02	5.1	0.2	28.4	4.9	18.3	--	--	4.2	2.3	9.0	--	15.5	--
02/15/82	03/02/82	1.69	8.1	10.0	12.5	4.1	5.2	--	10.0	1.4	6.0	29.1	--	36.5	--
03/02/82	03/04/82	0.85	3.4	2.1	7.0	0.8	6.5	--	7.9	1.7	5.6	11.9	--	19.2	--
03/05/82	03/11/82	0.25	8.2	3.1	17.0	1.6	12.6	--	10.7	5.4	10.5	31.2	--	47.1	--
03/11/82	03/12/82	2.11	2.4	1.0	8.0	0.8	2.2	--	5.7	1.1	1.8	7.7	--	10.6	--
03/12/82	03/17/82	--	5.9	0.6	10.5	1.6	3.5	--	10.7	2.0	7.6	22.9	--	32.5	--
03/17/82	03/21/82	--	9.6	0.4	40.9	6.6	8.3	--	--	3.9	11.1	43.7	--	58.7	--
03/21/82	03/27/82	--	6.5	5.4	13.5	4.1	4.3	--	7.9	2.5	10.3	18.5	--	31.3	--
03/27/82	03/30/82	--	5.7	0.7	18.0	4.1	3.9	--	19.3	2.3	6.8	18.9	--	28.0	--

**Table 3.** Precipitation volume, specific conductance, concentrations of dissolved ions, and percent charge balance for each sampling interval at Grand Mesa, 1981–91—Continued

[Precipitation volume in inches; specific conductance in microsiemens per centimeter at 25 degrees Celsius; dissolved ions in microequivalents per liter; --, no data]

Beginning date	Ending date	Precipitation	Specific conductance	Hydrogen (H <sup>+</sup> ) <sup>1</sup>	Calcium (Ca <sup>2+</sup> )	Magnesium (Mg <sup>2+</sup> )	Sodium (Na <sup>+</sup> )	Potassium (K <sup>+</sup> )	Ammonium (NH <sub>4</sub> <sup>+</sup> )	Chloride (Cl <sup>-</sup> )	Nitrate (NO <sub>3</sub> <sup>-</sup> )	Sulfate (SO <sub>4</sub> <sup>2-</sup> )	Sum cations	Sum anions	Percent charge balance
04/07/82	04/26/82	1.44	12.7	4.7	43.4	9.9	9.1	1.8	20.7	10.2	14.8	54.1	89.6	79.1	6.2
04/26/82	05/12/82	1.34	7.0	0.8	39.9	5.8	7.0	1.3	17.8	5.9	13.5	20.8	72.6	40.2	28.7
05/12/82	05/16/82	2.46	2.2	2.5	79.8	3.3	2.6	1.0	4.3	1.4	2.4	4.0	93.5	7.8	84.6
05/16/82	05/27/82	0.16	10.4	2.6	798.4	26.3	11.7	6.9	--	3.9	19.4	33.3	--	56.6	--
05/27/82	08/06/82	3.65	7.3	1.6	34.4	5.8	3.9	1.8	5.7	1.4	15.3	25.0	53.2	41.7	12.1
08/06/82	08/11/82	0.65	13.4	18.6	16.5	4.1	4.8	1.0	17.8	2.5	22.6	27.1	62.8	52.2	9.2
08/11/82	09/09/82	3.90	12.2	19.5	5.0	0.8	2.6	0.5	13.6	36.7	15.5	20.8	42.0	73.0	-27.0
09/09/82	09/10/82	0.93	19.0	32.4	9.5	2.5	3.0	0.5	26.4	2.0	16.1	41.6	74.3	59.7	10.9
09/10/82	09/18/82	2.66	11.7	18.6	13.5	1.6	3.0	0.5	8.6	1.7	9.4	22.9	45.8	34.0	14.8
09/18/82	09/20/82	0.68	10.4	20.4	6.0	0.8	2.6	0.5	5.7	2.3	8.5	20.8	36.0	31.6	6.5
09/20/82	09/28/82	0.86	4.8	4.8	15.0	2.5	3.5	0.5	5.0	2.5	5.0	15.0	31.3	22.5	16.4
09/28/82	09/30/82	0.95	11.7	17.8	8.5	0.8	5.7	0.5	12.9	3.9	7.4	33.3	46.2	44.6	1.8
09/30/82	10/09/82	1.90	13.7	0.3	74.9	9.0	10.0	1.3	10.7	7.1	17.7	37.5	106.2	62.3	26.1
10/09/82	10/26/82	1.86	19.9	41.7	27.4	3.3	3.9	1.3	--	3.1	37.1	45.8	--	86.0	--
10/26/82	10/30/82	2.82	4.9	7.8	6.5	2.5	2.2	0.5	--	0.8	4.2	10.2	--	15.2	--
10/30/82	11/03/82	0.71	7.9	15.5	5.5	1.6	1.7	0.5	--	0.8	6.0	15.6	--	22.4	--
11/03/82	11/14/82	4.34	10.5	20.0	6.5	1.6	2.2	0.5	6.4	1.4	4.4	25.0	37.2	30.8	9.4
11/14/82	11/20/82	1.48	7.5	13.2	4.0	0.8	2.2	0.3	9.3	0.6	9.0	14.2	29.8	23.8	11.2
11/20/82	11/23/82	0.28	8.8	13.8	5.5	0.8	5.2	0.3	--	2.3	16.1	13.9	--	32.3	--
11/26/82	12/17/82	4.83	5.7	11.0	2.0	0.4	3.5	0.3	5.7	1.7	7.9	9.8	22.9	19.4	8.3
01/22/83	01/28/83	1.09	2.6	4.5	2.0	0.4	2.2	0.3	4.3	0.8	3.9	2.5	13.7	7.2	31.1
01/28/83	01/31/83	0.40	6.8	12.0	3.0	0.4	2.6	0.3	9.3	2.5	5.8	14.8	27.6	23.1	8.9
01/31/83	02/04/83	0.24	3.4	5.4	6.0	1.6	3.5	0.3	--	2.0	4.2	6.2	--	12.4	--
02/04/83	02/09/83	1.91	5.0	9.1	2.0	0.4	4.8	0.3	4.3	1.1	7.1	9.0	20.9	17.2	9.7
02/09/83	02/11/83	0.19	7.6	10.7	64.9	3.3	9.6	1.3	--	5.9	11.9	12.9	--	30.7	--
02/11/83	02/23/83	--	6.5	0.2	44.9	7.4	5.7	1.0	--	2.5	12.7	17.1	--	32.3	--
02/23/83	03/08/83	--	8.6	11.5	6.5	0.8	7.0	0.8	--	2.5	13.1	17.5	--	33.1	--
03/08/83	03/27/83	--	3.9	6.0	5.0	0.8	3.0	0.5	7.9	1.1	4.7	7.9	23.2	13.7	25.7
03/27/83	04/02/83	--	10.7	0.1	69.9	15.6	10.0	1.0	8.6	2.5	11.3	20.0	105.2	33.8	51.4
04/02/83	04/11/83	--	7.5	3.6	26.9	3.3	5.2	1.0	17.1	3.1	21.0	20.8	57.1	44.9	12.0
04/11/83	04/18/83	1.48	6.1	4.9	13.0	0.8	4.3	2.3	12.9	2.5	11.0	17.7	38.2	31.2	10.1
04/18/83	04/19/83	--	4.6	0.6	25.4	4.1	9.6	1.0	--	2.8	7.6	11.5	--	21.9	--
04/19/83	04/22/83	0.81	5.9	6.9	8.0	2.5	7.0	--	12.9	2.8	9.4	17.3	--	29.5	--
04/22/83	05/10/83	3.83	6.4	3.2	27.9	4.9	5.2	1.0	14.3	2.3	16.1	17.3	56.5	35.7	22.6

**Table 3.** Precipitation volume, specific conductance, concentrations of dissolved ions, and percent charge balance for each sampling interval at Grand Mesa, 1981–91—Continued

[Precipitation volume in inches; specific conductance in microsiemens per centimeter at 25 degrees Celsius; dissolved ions in microequivalents per liter; --, no data]

Beginning date	Ending date	Precipitation	Specific conductance	Hydrogen (H <sup>+</sup> ) <sup>1</sup>	Calcium (Ca <sup>2+</sup> )	Magnesium (Mg <sup>2+</sup> )	Sodium (Na <sup>+</sup> )	Potassium (K <sup>+</sup> )	Ammonium (NH <sub>4</sub> <sup>+</sup> )	Chloride (Cl <sup>-</sup> )	Nitrate (NO <sub>3</sub> <sup>-</sup> )	Sulfate (SO <sub>4</sub> <sup>2-</sup> )	Sum cations	Sum anions	Percent charge balance
05/10/83	05/19/83	2.62	6.5	0.4	36.9	7.4	6.5	1.0	10.0	3.7	15.3	16.9	62.2	35.9	26.8
05/19/83	05/23/83	0.29	3.4	3.4	21.5	1.6	10.0	--	6.4	1.7	6.1	6.7	--	14.5	--
05/23/83	06/13/83	1.43	5.2	1.8	18.5	3.3	5.7	1.5	12.1	5.4	10.3	13.3	42.9	29.0	19.3
06/13/83	07/20/83	2.57	8.7	3.0	22.0	0.4	5.2	2.6	--	5.6	22.1	33.3	--	61.0	--
07/20/83	07/21/83	0.31	16.5	25.1	16.0	3.3	5.7	0.5	--	5.9	25.6	35.4	--	66.9	--
07/21/83	07/29/83	2.52	6.0	9.5	2.0	0.4	1.3	0.5	8.6	3.1	7.9	10.0	22.3	21.0	3.0
07/29/83	08/02/83	0.60	6.1	7.9	9.5	2.5	4.3	1.3	9.3	4.5	10.0	15.2	34.8	29.7	7.9
08/02/83	08/05/83	0.52	8.4	14.1	4.0	0.4	2.2	0.8	10.0	2.5	11.0	15.6	31.5	29.1	4.0
08/05/83	08/12/83	0.16	5.8	20.4	11.0	3.3	1.3	3.3	--	14.4	22.1	32.7	--	69.2	--
08/12/83	08/16/83	0.31	--	--	--	--	--	--	--	--	--	--	--	--	--
08/16/83	08/19/83	0.32	10.0	9.3	7.0	0.8	9.1	1.5	14.3	2.8	19.8	24.8	42.0	47.4	-6.0
08/19/83	08/26/83	0.17	9.8	11.5	8.5	0.4	4.8	2.3	--	5.1	11.8	24.4	--	41.3	--
08/26/83	09/02/83	0.24	8.2	32.4	14.0	1.6	3.5	1.5	--	5.4	28.7	37.1	--	71.2	--
09/02/83	09/09/83	--	7.2	28.2	10.0	1.6	4.3	2.8	15.0	3.4	19.8	42.3	61.9	65.5	-2.8
09/09/83	09/16/83	--	5.8	5.2	--	--	--	--	--	11.3	42.6	50.4	--	104.3	--
09/16/83	09/23/83	--	--	2.2	26.4	9.9	5.7	1.8	--	4.5	27.6	29.8	--	61.9	--
09/23/83	09/29/83	--	7.7	12.9	18.0	3.3	2.2	1.8	7.1	2.3	8.5	15.0	45.3	25.8	27.4
09/29/83	10/04/83	--	4.4	7.8	3.0	3.3	1.7	1.3	2.9	1.4	4.4	7.1	20.0	12.9	21.6
10/04/83	10/13/83	0.10	1.3	11.5	--	--	--	--	--	5.1	18.2	31.3	--	54.6	--
10/13/83	10/19/83	1.18	7.3	5.9	12.0	5.8	3.5	1.3	12.1	2.8	15.0	22.1	40.6	39.9	0.9
11/03/83	11/09/83	1.39	3.0	2.5	4.0	1.6	5.2	2.0	2.9	5.4	2.9	5.8	18.2	14.1	12.7
11/09/83	11/15/83	0.79	3.9	0.8	15.0	4.1	3.5	1.8	--	3.4	6.0	9.6	--	19.0	--
11/15/83	11/23/83	0.76	3.4	4.4	3.0	1.6	1.7	0.8	--	3.7	2.1	6.2	--	12.0	--
11/23/83	12/01/83	--	2.8	4.9	0.2	0.8	1.7	2.6	--	3.1	--	4.8	--	--	--
01/06/84	01/13/84	--	7.3	9.1	--	--	--	--	--	11.0	7.7	13.3	--	32.0	--
01/13/84	01/20/84	1.96	4.7	8.7	1.5	0.4	1.3	1.0	2.1	1.4	6.3	5.1	15.0	12.8	7.9
01/20/84	01/27/84	0.12	29.7	60.3	--	--	--	--	--	--	--	--	--	--	--
02/06/84	02/15/84	2.04	6.1	3.6	16.0	2.5	2.2	0.8	5.0	2.2	13.9	15.2	30.1	31.3	-2.0
02/15/84	02/23/84	0.73	4.3	1.1	14.0	2.5	3.9	1.0	--	3.0	10.9	9.1	--	23.0	--
02/23/84	02/29/84	0.25	7.4	0.8	--	--	--	--	--	15.7	15.5	12.1	--	43.3	--
02/29/84	03/08/84	0.34	4.8	0.9	16.0	8.2	10.9	1.5	--	5.7	10.7	8.8	--	25.2	--
03/08/84	03/15/84	0.84	3.0	1.1	36.4	4.1	3.9	0.8	--	2.6	5.3	6.3	--	14.2	--

**Table 3.** Precipitation volume, specific conductance, concentrations of dissolved ions, and percent charge balance for each sampling interval at Grand Mesa, 1981–91—Continued

[Precipitation volume in inches; specific conductance in microsiemens per centimeter at 25 degrees Celsius; dissolved ions in microequivalents per liter; --, no data]

Beginning date	Ending date	Precipitation	Specific conductance	Hydrogen (H <sup>+</sup> ) <sup>1</sup>	Calcium (Ca <sup>2+</sup> )	Magnesium (Mg <sup>2+</sup> )	Sodium (Na <sup>+</sup> )	Potassium (K <sup>+</sup> )	Ammonium (NH <sub>4</sub> <sup>+</sup> )	Chloride (Cl <sup>-</sup> )	Nitrate (NO <sub>3</sub> <sup>-</sup> )	Sulfate (SO <sub>4</sub> <sup>2-</sup> )	Sum cations	Sum anions	Percent charge balance
03/15/84	03/21/84	0.89	7.9	0.4	16.0	3.3	5.7	1.3	18.6	2.8	13.6	27.9	45.3	44.3	1.1
03/21/84	03/29/84	1.61	3.3	2.0	9.5	0.4	3.0	0.5	5.0	1.8	5.8	6.3	20.4	13.9	19.0
03/29/84	04/09/84	1.76	3.1	1.4	16.0	3.3	9.6	0.8	6.4	3.6	5.3	5.4	37.5	14.3	44.8
04/09/84	04/19/84	0.29	13.5	0.5	--	--	--	--	--	--	--	--	--	--	--
04/19/84	04/26/84	1.53	29.5	0.1	109.8	16.5	22.2	3.1	--	11.3	54.8	33.1	--	99.2	--
04/26/84	05/02/84	1.70	1.9	1.6	3.5	0.4	2.6	3.1	2.1	1.9	0.6	5.0	13.3	7.5	27.9
05/02/84	05/10/84	1.12	3.8	0.8	--	--	--	--	--	11.0	--	9.6	--	--	--
05/10/84	05/18/84	0.41	12.1	0.6	34.4	9.0	12.6	2.3	35.0	9.6	20.6	52.0	93.9	82.2	6.6
05/24/84	06/04/84	0.60	9.5	0.4	38.9	7.4	7.0	2.6	17.8	6.8	18.5	29.1	74.1	54.4	15.3
06/04/84	06/12/84	4.12	6.9	6.2	7.5	0.4	5.7	1.0	9.3	6.2	10.6	18.3	30.1	35.1	-7.7
06/12/84	06/20/84	0.06	52.5	0.1	--	--	--	--	--	21.3	124.8	119.7	--	265.8	--
06/20/84	06/26/84	0.45	60.6	--	28.4	7.4	30.4	16.9	157.1	7.1	28.7	70.6	240.2	106.4	38.6
07/06/84	07/13/84	0.96	15.8	0.2	18.0	9.0	5.7	5.9	54.3	5.2	25.6	49.3	93.1	80.1	7.5
07/13/84	07/20/84	1.49	7.4	9.5	3.0	0.8	3.5	1.3	7.9	4.5	12.1	14.4	26.0	31.0	-8.8
07/20/84	07/24/84	0.17	12.6	5.5	--	--	--	--	--	7.9	27.1	41.6	--	76.6	--
07/24/84	08/02/84	1.52	7.1	7.8	7.5	0.4	6.1	1.3	15.7	3.9	12.1	15.6	38.8	31.6	10.2
08/02/84	08/10/84	0.34	9.3	6.2	9.5	0.4	9.1	2.3	--	7.5	18.4	20.8	--	46.7	--
08/10/84	08/17/84	0.73	8.2	10.5	9.5	0.4	3.0	1.3	10.0	2.4	15.5	18.1	34.7	36.0	-1.8
08/17/84	08/24/84	2.30	10.9	19.5	3.5	0.4	13.5	1.0	8.6	1.9	14.9	19.6	46.5	36.4	12.2
08/24/84	08/31/84	0.74	6.6	10.7	1.5	0.4	2.6	0.5	7.1	2.3	8.6	12.5	22.8	23.4	-1.3
08/31/84	09/04/84	0.15	14.1	0.3	54.9	16.5	7.0	1.8	--	7.2	37.1	44.1	--	88.4	--
09/04/84	09/14/84	0.42	15.3	23.4	10.0	4.1	4.8	1.5	12.9	4.3	20.0	33.1	56.7	57.4	-0.6
09/14/84	09/21/84	1.45	16.1	29.5	6.5	1.6	7.4	2.3	14.3	2.3	21.8	32.7	61.6	56.8	4.1
09/21/84	09/26/84	0.52	17.3	19.5	19.5	12.3	5.7	2.0	--	3.9	32.9	51.6	--	88.4	--
09/26/84	10/11/84	2.19	8.6	6.8	8.5	4.1	7.4	1.8	15.0	4.8	11.2	29.4	43.6	45.4	-2.0
10/11/84	10/25/84	3.20	5.3	9.3	8.5	0.4	1.7	0.5	4.3	1.9	4.8	11.0	24.7	17.7	16.5
11/15/84	12/18/84	4.84	9.4	16.2	4.0	0.8	2.6	0.5	3.6	2.1	10.2	18.4	27.7	30.7	-5.1
01/10/85	02/11/85	--	16.2	29.5	17.5	6.6	7.0	1.5	14.3	4.1	28.5	25.6	76.4	58.2	13.5
02/20/85	03/04/85	1.27	10.9	13.8	11.0	3.3	5.2	0.8	15.0	3.7	19.7	25.2	49.1	48.6	0.5
03/04/85	03/12/85	1.73	2.7	2.1	7.5	2.5	2.6	0.5	5.0	1.7	4.8	6.2	20.2	12.7	22.8
03/12/85	03/20/85	0.29	7.2	0.5	23.5	9.9	9.1	2.3	--	6.8	20.3	16.8	--	43.9	--
03/20/85	03/27/85	0.92	17.6	0.1	--	--	--	--	--	15.0	27.3	50.6	--	92.9	--
04/25/85	04/26/85	1.02	13.0	0.5	74.9	9.9	13.0	1.3	26.4	4.2	21.6	20.4	126.0	46.2	46.3
05/03/85	05/10/85	0.30	14.4	11.2	25.0	9.0	13.5	2.8	28.6	11.2	32.1	40.4	90.1	83.7	3.7

**Table 3.** Precipitation volume, specific conductance, concentrations of dissolved ions, and percent charge balance for each sampling interval at Grand Mesa, 1981–91—Continued

[Precipitation volume in inches; specific conductance in microsiemens per centimeter at 25 degrees Celsius; dissolved ions in microequivalents per liter; --, no data]

Beginning date	Ending date	Precipitation	Specific conductance	Hydrogen <sup>+</sup> (H <sup>+</sup> ) <sup>1</sup>	Calcium (Ca <sup>2+</sup> )	Magnesium (Mg <sup>2+</sup> )	Sodium (Na <sup>+</sup> )	Potassium (K <sup>+</sup> )	Ammonium (NH <sub>4</sub> <sup>+</sup> )	Chloride (Cl <sup>-</sup> )	Nitrate (NO <sub>3</sub> <sup>-</sup> )	Sulfate (SO <sub>4</sub> <sup>2-</sup> )	Sum cations	Sum anions	Percent charge balance
05/10/85	05/29/85	2.53	9.0	1.2	39.9	7.4	4.3	1.5	18.6	5.5	21.0	23.3	72.9	49.8	18.8
05/29/85	06/12/85	0.80	10.3	2.8	34.9	6.6	4.8	2.8	20.7	7.1	25.0	30.6	72.6	62.7	7.3
06/12/85	06/28/85	0.50	42.4	0.3	37.4	19.7	21.7	33.2	78.5	25.7	38.2	70.6	190.8	134.5	17.3
07/05/85	07/12/85	--	35.6	1.2	--	--	--	--	--	91.1	54.8	63.3	--	209.2	--
07/12/85	07/19/85	0.62	10.0	11.2	12.0	6.6	8.7	2.0	16.4	14.2	21.9	19.3	56.9	55.4	1.3
07/19/85	07/25/85	1.50	6.9	8.7	5.0	4.9	3.5	1.0	15.0	2.8	15.5	12.2	38.1	30.5	11.1
07/25/85	08/19/85	1.40	--	--	8.0	6.6	5.2	3.3	23.6	5.3	22.3	24.4	--	52.0	--
08/30/85	09/09/85	1.08	7.6	4.9	13.0	7.4	6.1	0.3	14.3	5.7	17.6	21.7	46.0	45.0	1.1
09/09/85	09/13/85	0.83	5.0	6.3	1.5	3.3	3.5	2.0	5.0	3.4	6.9	11.3	21.6	21.6	0.0
09/13/85	09/19/85	2.32	7.9	14.8	0.5	0.8	3.5	1.3	5.7	2.5	8.6	13.4	26.6	24.5	4.1
09/19/85	09/27/85	0.65	6.2	11.7	9.5	2.5	4.3	1.3	5.0	3.7	8.6	8.9	34.3	21.2	23.6
10/09/85	10/24/85	--	--	--	19.5	22.2	17.8	58.8	85.7	--	--	--	--	--	--
10/24/85	11/21/85	--	6.8	10.5	13.5	3.3	2.2	1.3	1.4	1.9	12.2	8.4	32.2	22.5	17.7
11/21/85	11/27/85	--	6.8	2.6	27.4	4.1	3.5	0.1	--	3.3	13.5	23.1	--	39.9	--
11/27/85	12/19/85	--	--	--	17.5	15.6	1.7	0.1	--	5.9	3.8	4.1	--	13.8	--
12/19/85	01/02/86	--	--	--	6.5	1.6	4.3	0.8	--	3.7	2.8	4.5	--	11.0	--
01/02/86	01/24/86	1.07	10.0	20.0	8.5	3.3	3.0	0.8	3.6	2.9	7.7	19.7	39.2	30.3	12.8
01/24/86	02/19/86	4.36	6.2	5.1	14.5	3.3	4.3	1.3	--	4.1	8.5	18.4	--	31.0	--
05/01/86	05/08/86	--	5.9	0.6	40.9	5.8	3.9	0.8	10.7	3.4	7.7	9.2	62.7	20.3	51.1
05/08/86	05/13/86	--	3.8	7.1	0.5	1.6	0.4	0.3	2.9	1.7	4.6	3.8	12.8	10.1	11.8
05/13/86	05/20/86	1.21	8.8	12.6	9.0	3.3	3.9	0.3	12.9	3.3	18.7	14.7	42.0	36.7	6.7
05/20/86	06/10/86	0.84	8.4	8.5	30.9	4.9	17.0	1.8	15.7	4.7	20.3	20.7	78.8	45.7	26.6
06/17/86	06/24/86	--	26.2	2.8	--	--	--	--	--	18.7	72.4	84.7	--	175.8	--
06/24/86	07/17/86	3.38	7.7	1.6	24.5	8.2	20.0	2.8	11.4	6.1	14.2	26.0	68.5	46.3	19.3
07/17/86	07/21/86	0.16	12.5	21.9	16.5	4.9	7.8	1.8	--	4.6	19.8	26.8	--	51.2	--
07/21/86	08/07/86	0.77	8.4	14.5	12.5	4.1	4.8	2.6	9.3	4.7	15.9	16.0	47.8	36.6	13.3
08/07/86	08/21/86	0.49	17.0	35.5	12.5	4.1	11.3	1.3	10.0	5.8	30.4	26.5	74.7	62.7	8.7
08/21/86	09/04/86	1.43	8.4	16.2	12.5	3.3	6.1	1.0	10.0	7.3	22.0	18.3	49.1	47.6	1.6
09/04/86	09/30/86	5.09	5.9	12.0	12.5	3.3	4.3	0.8	5.7	2.4	7.8	13.3	38.6	23.5	24.3
09/30/86	10/08/86	0.79	9.0	4.8	34.4	7.4	14.4	2.0	12.1	1.8	8.9	21.9	75.1	32.6	39.5
10/08/86	10/21/86	2.16	7.8	12.0	29.9	4.9	4.3	2.0	--	6.2	16.1	36.2	--	58.5	--
10/21/86	10/30/86	0.05	10.8	4.5	--	--	--	--	--	--	--	--	--	--	--

**Table 3.** Precipitation volume, specific conductance, concentrations of dissolved ions, and percent charge balance for each sampling interval at Grand Mesa, 1981–91—Continued

[Precipitation volume in inches; specific conductance in microsiemens per centimeter at 25 degrees Celsius; dissolved ions in microequivalents per liter; --, no data]

Beginning date	Ending date	Precipitation	Specific conductance	Hydrogen (H <sup>+</sup> ) <sup>1</sup>	Calcium (Ca <sup>2+</sup> )	Magnesium (Mg <sup>2+</sup> )	Sodium (Na <sup>+</sup> )	Potassium (K <sup>+</sup> )	Ammonium (NH <sub>4</sub> <sup>+</sup> )	Chloride (Cl <sup>-</sup> )	Nitrate (NO <sub>3</sub> <sup>-</sup> )	Sulfate (SO <sub>4</sub> <sup>2-</sup> )	Sum cations	Sum anions	Percent charge balance
10/30/86	11/12/86	3.01	9.0	15.1	9.0	2.5	4.8	1.3	--	1.9	11.3	22.3	--	35.5	--
11/12/86	12/02/86	2.44	4.3	8.3	5.0	1.6	2.2	0.5	--	1.1	5.5	5.6	--	12.2	--
12/03/86	12/19/86	1.10	3.4	6.6	3.5	1.6	1.7	1.3	--	1.6	2.3	6.5	--	10.4	--
12/19/86	01/20/87	2.73	9.3	0.6	19.0	3.3	33.1	9.0	--	26.5	7.9	18.7	--	53.1	--
01/20/87	02/05/87	--	6.9	15.1	11.0	1.6	3.5	1.8	--	1.7	9.7	10.0	--	21.4	--
02/05/87	02/18/87	2.32	4.9	8.3	2.0	1.6	1.7	0.5	--	1.9	4.0	7.5	--	13.4	--
02/18/87	03/06/87	2.28	7.5	8.3	--	--	--	--	--	3.7	19.4	12.5	--	35.6	--
03/06/87	03/19/87	1.72	3.5	2.7	7.0	1.6	4.3	0.8	3.6	3.4	5.0	8.7	20.0	17.1	7.7
03/19/87	04/08/87	2.94	5.7	0.7	34.4	4.9	4.3	1.0	2.1	2.0	7.3	10.4	47.4	19.7	41.3
04/08/87	04/24/87	0.70	6.3	5.2	31.4	3.3	9.6	0.8	10.7	5.6	21.1	7.3	61.0	34.0	28.4
04/24/87	05/11/87	1.10	6.3	1.1	25.0	3.3	5.7	1.0	12.1	5.4	11.8	15.2	48.2	32.4	19.6
05/11/87	05/22/87	2.60	6.3	2.8	10.5	3.3	3.9	1.5	19.3	5.4	14.4	16.7	41.3	36.5	6.2
05/22/87	05/29/87	1.47	9.8	10.7	18.0	4.9	6.5	1.5	12.9	5.1	15.0	28.1	54.5	48.2	6.2
06/17/87	07/07/87	0.41	9.2	9.5	21.0	4.1	6.1	1.5	12.1	7.6	17.9	16.4	54.3	41.9	12.9
07/07/87	07/17/87	0.63	7.8	9.1	15.5	4.1	5.7	1.3	8.6	5.9	12.4	17.5	44.3	35.8	10.6
07/17/87	07/24/87	0.43	8.7	7.2	10.0	4.9	4.3	0.8	--	7.1	12.6	13.9	--	33.6	--
07/24/87	08/18/87	1.58	6.6	10.0	14.5	2.5	3.0	1.8	8.6	2.5	14.5	13.5	40.4	30.5	14.0
08/18/87	09/04/87	2.54	7.8	12.6	6.5	1.6	2.6	0.8	7.1	2.3	12.4	13.5	31.2	28.2	5.0
09/04/87	09/25/87	0.36	9.8	11.2	22.0	4.1	5.7	1.8	14.3	6.2	23.1	20.8	59.1	50.1	8.2
09/25/87	10/20/87	1.37	9.9	11.7	5.5	0.8	1.3	0.3	7.1	3.7	10.0	22.3	26.7	36.0	-14.9
10/20/87	12/04/87	5.64	6.6	12.0	2.0	0.4	3.9	0.3	4.3	1.9	9.5	11.5	22.9	22.9	-0.1
12/04/87	12/23/87	2.32	2.6	2.8	4.5	0.8	3.9	0.3	1.4	2.1	4.0	5.6	13.7	11.7	7.7
12/23/87	01/14/88	2.62	6.1	10.0	8.0	1.6	0.9	0.1	2.1	3.4	13.2	7.3	22.7	23.9	-2.6
01/14/88	01/27/88	2.52	--	--	--	--	--	--	--	--	--	--	--	--	--
01/27/88	02/05/88	1.05	--	--	--	--	--	--	--	--	--	--	--	--	--
02/05/88	02/25/88	0.59	8.6	11.0	15.5	4.1	4.8	1.0	--	3.4	23.2	15.2	--	41.8	--
02/25/88	03/10/88	1.38	15.0	0.1	94.8	18.9	6.5	4.9	7.1	20.9	14.4	31.2	132.3	66.5	33.1
03/10/88	03/29/88	1.24	5.5	0.3	--	--	--	--	--	10.4	13.4	14.8	--	38.6	--
03/29/88	04/08/88	0.84	5.4	0.5	25.4	5.8	10.0	1.3	5.0	10.2	21.9	13.3	48.0	45.4	2.8
04/08/88	04/22/88	2.43	6.4	2.0	29.9	4.1	7.0	1.8	7.1	5.1	10.0	21.4	51.9	36.5	17.4
04/22/88	04/26/88	1.06	3.9	4.1	7.0	1.6	1.3	0.5	10.0	0.1	9.5	11.0	24.5	20.6	8.6
04/26/88	05/19/88	1.70	9.2	7.1	43.4	2.5	5.2	1.3	10.0	5.1	11.9	21.2	69.5	38.2	29.1
06/06/88	07/07/88	1.75	9.1	6.6	25.9	3.3	3.9	2.8	17.1	3.4	18.5	22.5	59.6	44.4	14.6
07/07/88	08/16/88	2.17	7.3	11.0	13.0	2.5	3.9	1.0	2.1	2.0	13.2	13.3	33.5	28.5	8.1

**Table 3. Precipitation volume, specific conductance, concentrations of dissolved ions, and percent charge balance for each sampling interval at Grand Mesa, 1981–91—Continued**

[Precipitation volume in inches; specific conductance in microsiemens per centimeter at 25 degrees Celsius; dissolved ions in microequivalents per liter; --, no data]

Beginning date	Ending date	Precipitation	Specific conductance	Hydrogen (H <sup>+</sup> ) <sup>1</sup>	Calcium (Ca <sup>2+</sup> )	Magnesium (Mg <sup>2+</sup> )	Sodium (Na <sup>+</sup> )	Potassium (K <sup>+</sup> )	Ammonium (NH <sub>4</sub> <sup>+</sup> )	Chloride (Cl <sup>-</sup> )	Nitrate (NO <sub>3</sub> <sup>-</sup> )	Sulfate (SO <sub>4</sub> <sup>2-</sup> )	Sum cations	Sum anions	Percent charge balance
08/16/88	08/31/88	0.67	12.6	20.9	28.9	2.5	1.7	0.8	10.7	3.4	19.8	22.5	65.5	45.7	17.8
08/31/88	09/13/88	3.87	9.7	13.5	11.0	3.3	2.2	2.3	12.1	2.8	13.1	20.0	44.4	35.9	10.6
09/13/88	09/27/88	0.49	16.6	1.1	49.9	7.4	6.5	1.3	15.0	5.1	10.8	24.4	81.2	40.3	33.7
09/27/88	10/13/88	0.26	34.2	25.7	46.9	14.0	4.8	1.8	--	6.5	53.4	53.1	--	113.0	--
10/13/88	11/21/88	3.49	5.0	1.1	13.5	2.5	2.6	0.5	5.7	2.8	8.1	10.8	25.9	21.7	8.8
11/21/88	12/07/88	1.71	2.7	1.9	8.5	1.6	2.6	0.3	0.7	3.4	5.6	5.8	15.6	14.8	2.6
12/07/88	12/21/88	1.62	11.1	20.4	6.5	0.8	1.7	0.5	5.0	2.0	23.2	9.8	34.9	35.0	-0.1
12/21/88	12/28/88	3.35	8.3	1.3	--	--	--	--	--	3.4	25.2	10.0	--	38.6	--
12/28/88	01/19/89	1.62	4.7	8.7	5.5	0.4	2.2	1.0	5.7	1.4	8.1	7.5	23.5	17.0	16.0
01/19/89	02/01/89	0.96	9.7	18.6	7.5	0.8	0.9	0.5	6.4	2.0	12.3	13.1	34.7	27.4	11.8
02/01/89	02/14/89	5.19	5.7	7.1	11.0	2.5	2.2	0.1	7.1	3.4	7.9	15.2	30.0	26.5	6.2
02/14/89	02/28/89	1.27	9.4	13.2	12.0	2.5	3.0	0.3	7.1	3.7	17.6	15.4	38.1	36.7	1.9
02/28/89	03/15/89	2.59	4.6	3.5	12.5	1.6	2.2	0.5	9.3	3.1	9.2	10.6	29.6	22.9	12.8
03/15/89	03/30/89	1.15	5.3	0.9	15.0	4.1	6.1	0.8	9.3	3.1	12.6	13.1	36.2	28.8	11.4
03/30/89	04/12/89	0.63	5.7	0.5	26.4	6.6	5.2	1.0	11.4	3.4	12.9	13.1	51.1	29.4	27.0
04/12/89	05/03/89	0.77	7.0	1.0	27.4	5.8	4.3	0.8	18.6	3.9	19.2	15.6	57.9	38.7	19.9
05/03/89	05/18/89	0.68	12.8	0.4	49.9	13.2	9.6	2.8	27.1	9.6	29.4	33.9	103.0	72.9	17.1
06/02/89	06/18/89	0.49	14.8	0.9	38.9	9.0	7.0	1.5	19.3	8.5	28.7	27.3	76.6	64.5	8.6
06/18/89	07/21/89	0.34	17.2	0.2	74.9	12.3	9.1	3.6	37.1	8.7	37.6	44.3	137.2	90.6	20.5
07/21/89	08/28/89	3.80	7.3	6.2	10.0	4.1	2.6	1.5	15.0	2.2	16.8	13.1	39.4	32.1	10.2
08/28/89	09/21/89	1.09	6.8	1.5	26.9	4.9	3.5	1.0	8.6	5.4	20.3	16.7	46.4	42.4	4.5
09/21/89	10/10/89	0.39	18.7	0.1	154.7	16.5	7.4	2.6	11.4	4.5	28.2	34.1	192.7	66.8	48.5
10/10/89	11/01/89	2.00	3.8	1.4	13.5	2.5	2.2	0.5	7.9	2.5	7.9	10.6	28.0	21.0	14.3
11/20/89	12/05/89	1.67	9.4	0.3	54.9	9.9	5.7	1.8	17.1	5.6	23.1	20.4	89.7	49.1	29.3
12/05/89	12/21/89	0.90	4.3	2.1	11.0	2.5	1.7	0.5	6.4	1.7	10.2	4.6	24.2	16.5	18.9
12/21/89	01/02/90	0.32	7.3	5.8	--	--	--	--	--	4.2	24.5	6.0	--	34.7	--
01/02/90	01/17/90	1.82	9.5	13.8	11.5	1.6	3.9	0.5	10.0	1.7	12.9	12.3	41.3	26.9	21.1
01/17/90	01/30/90	0.63	8.9	0.2	40.4	8.2	21.7	1.0	5.0	14.1	--	14.6	76.5	--	--
01/30/90	02/13/90	2.29	5.7	2.4	21.0	4.1	3.0	1.8	8.6	2.0	--	15.2	40.9	--	--
02/13/90	03/02/90	1.83	8.2	0.2	48.9	7.4	5.7	1.3	--	5.6	16.3	11.0	--	32.9	--
03/02/90	03/15/90	3.90	11.2	12.6	11.0	1.6	0.9	0.5	8.6	1.6	--	17.3	35.2	--	--
03/15/90	03/30/90	1.07	2.9	1.6	9.0	1.6	1.3	0.3	2.1	2.2	--	3.7	15.9	--	--

**Table 3.** Precipitation volume, specific conductance, concentrations of dissolved ions, and percent charge balance for each sampling interval at Grand Mesa, 1981–91—Continued

[Precipitation volume in inches; specific conductance in microsiemens per centimeter at 25 degrees Celsius; dissolved ions in microequivalents per liter; --, no data]

Beginning date	Ending date	Precipitation	Specific conductance	Hydrogen (H <sup>+</sup> ) <sup>1</sup>	Calcium (Ca <sup>2+</sup> )	Magnesium (Mg <sup>2+</sup> )	Sodium (Na <sup>+</sup> )	Potassium (K <sup>+</sup> )	Ammonium (NH <sub>4</sub> <sup>+</sup> )	Chloride (Cl <sup>-</sup> )	Nitrate (NO <sub>3</sub> <sup>-</sup> )	Sulfate (SO <sub>4</sub> <sup>2-</sup> )	Sum cations	Sum anions	Percent charge balance
03/30/90	04/10/90	2.52	5.4	3.6	10.0	1.6	2.2	0.5	15.7	2.8	--	12.1	33.6	--	--
04/10/90	04/24/90	1.83	7.2	0.5	35.9	4.9	3.9	0.5	12.9	2.8	--	16.4	58.6	--	--
04/24/90	05/09/90	1.30	5.9	0.1	35.4	7.4	3.0	0.8	4.3	1.5	--	8.5	51.0	--	--
05/09/90	05/30/90	0.96	18.9	0.1	144.7	22.2	14.4	3.6	12.9	2.8	--	27.3	197.9	--	--
05/30/90	06/18/90	0.83	9.8	2.0	30.4	4.9	3.5	2.3	22.1	5.4	22.4	29.6	65.2	57.4	6.4
06/18/90	07/11/90	2.27	5.8	1.3	15.5	2.5	6.1	1.8	23.6	--	--	--	50.8	--	--
07/11/90	08/02/90	1.51	7.7	3.4	21.0	4.9	3.5	1.3	13.6	4.8	22.4	18.5	47.7	45.7	2.1
08/02/90	08/21/90	1.00	9.8	17.8	12.5	1.6	2.6	1.0	14.3	21.4	16.9	22.3	49.8	60.6	-9.8
08/21/90	09/20/90	2.61	9.5	12.9	11.5	1.6	1.3	0.3	10.0	3.1	15.8	20.4	37.6	39.3	-2.2
09/20/90	10/10/90	1.21	5.8	7.2	12.0	2.5	1.7	0.8	6.4	2.3	10.5	11.9	30.6	24.7	10.7
10/10/90	10/25/90	1.42	6.9	0.9	26.4	6.6	5.2	1.0	12.1	3.9	15.2	23.1	52.2	42.2	10.6
10/25/90	11/12/90	2.11	7.9	0.3	49.9	7.4	3.9	1.5	16.4	4.5	15.5	15.8	79.4	35.8	37.8
11/12/90	11/24/90	0.42	24.7	0.1	--	--	--	--	--	4.8	27.7	79.7	--	112.2	--
11/24/90	12/11/90	1.98	2.8	1.7	18.0	2.5	3.0	0.5	3.6	3.7	5.2	3.7	29.3	12.6	39.9
12/11/90	12/26/90	3.54	7.1	13.8	7.0	1.6	0.2	0.8	7.9	2.5	10.8	14.6	31.3	27.9	5.7
12/26/90	01/08/91	1.39	1.5	2.3	5.0	0.4	0.2	2.3	1.4	0.3	1.5	0.8	11.6	2.6	63.4
01/08/91	01/25/91	1.19	2.4	3.3	8.0	0.8	0.4	0.1	0.7	2.3	5.2	3.3	13.3	10.8	10.4
01/25/91	02/11/91	0.07	14.3	0.1	--	--	--	--	--	--	--	--	--	--	--
02/11/91	02/26/91	1.78	5.5	8.7	4.0	0.4	0.2	0.1	4.3	2.8	6.3	6.0	17.7	15.1	7.9
02/26/91	03/12/91	5.42	3.9	0.6	23.5	3.3	3.0	1.0	11.4	2.5	5.3	9.8	42.8	17.6	41.7
03/12/91	03/29/91	4.26	2.8	1.2	18.0	2.5	1.3	0.5	2.1	2.0	9.2	5.6	25.6	16.8	20.8
03/29/91	04/18/91	2.01	4.5	0.6	25.0	4.1	4.8	0.5	5.0	4.8	12.3	10.4	40.0	27.5	18.5
04/18/91	05/07/91	1.99	13.8	0.1	99.8	14.0	13.0	2.0	6.4	3.9	14.8	15.8	135.3	34.5	59.4
05/07/91	05/21/91	0.60	15.8	0.1	119.8	11.5	5.2	2.6	4.3	5.1	14.4	15.2	143.5	34.7	61.1
05/21/91	06/04/91	0.61	6.3	1.7	23.0	4.1	2.6	0.5	14.3	3.7	14.5	16.0	46.2	34.2	14.9
06/04/91	06/17/91	0.63	10.6	0.7	36.9	7.4	8.3	4.3	27.1	8.5	27.6	31.6	84.7	67.7	11.2
06/17/91	07/09/91	0.57	7.7	5.5	13.0	3.3	10.0	1.5	6.4	--	--	--	39.7	--	--
07/09/91	07/31/91	0.95	11.8	12.0	21.0	4.1	2.2	1.0	12.9	4.5	23.5	23.7	53.2	51.7	1.4
07/31/91	08/22/91	--	11.8	14.5	14.5	3.3	5.7	0.5	14.3	--	--	--	52.8	--	--
08/22/91	09/16/91	--	6.7	3.2	11.5	4.1	3.9	0.3	11.4	--	--	--	34.4	--	--
09/16/91	10/01/91	0.36	18.5	20.0	22.0	3.3	2.2	0.1	7.1	--	--	--	54.7	--	--

<sup>1</sup>Values of pH can be calculated from hydrogen concentration by multiplying the log of the product of hydrogen concentration times  $1 \times 10^{-6}$  by -1.

**Table 4.** Summary statistics of specific conductance and concentrations of dissolved ions at Grand Mesa, 1981–91

[Specific conductance in microsiemens per centimeter at 25 degrees Celsius; dissolved ions in microequivalents per liter]

	Specific conductance	Hydrogen (H <sup>+</sup> )	Calcium (Ca <sup>2+</sup> )	Magnesium (Mg <sup>2+</sup> )	Sodium (Na <sup>+</sup> )	Potassium (K <sup>+</sup> )	Ammonium (NH <sub>4</sub> <sup>+</sup> )	Chloride (Cl <sup>-</sup> )	Nitrate (NO <sub>3</sub> <sup>-</sup> )	Sulfate (SO <sub>4</sub> <sup>2-</sup> )
Number of samples	238	238	223	222	223	211	171	233	223	233
Mean	9.1	7.6	24.7	4.3	5.4	1.8	12.5	5.1	15.3	20.1
Median	7.4	5.2	13.5	3.3	0.43	1.0	10.0	3.4	12.7	16.4
Standard deviation	7.1	8.4	56.8	4.3	4.7	4.8	15.3	7.2	12.4	15.1
Minimum	1.3	0.1	0.2	0.4	0.2	0.1	0.7	0.1	0.6	0.8
Maximum	60.6	60.3	798.4	26.3	33.1	58.8	157.1	91.1	124.8	119.7

**Table 5.** Precipitation volume, specific conductance, concentrations of dissolved ions, and percent charge balance for each sampling interval at Marvine Ranch, 1981–94

[Precipitation volume in inches; specific conductance in microsiemens per centimeter at 25 degrees Celsius; dissolved ions in microequivalents per liter; --, no data]

Beginning date	Ending date	Precipitation	Specific conductance	Hydrogen (H <sup>+</sup> )	Calcium (Ca <sup>2+</sup> )	Magnesium (Mg <sup>2+</sup> )	Sodium (Na <sup>+</sup> )	Potassium (K <sup>+</sup> )	Ammonium (NH <sub>4</sub> <sup>+</sup> )	Chloride (Cl <sup>-</sup> )	Nitrate (NO <sub>3</sub> <sup>-</sup> )	Sulfate (SO <sub>4</sub> <sup>2-</sup> )	Sum cations	Sum anions	Percent charge balance
04/24/81	05/20/81	2.98	7.8	3.4	20.0	0.4	30.5	2.6	10.7	13.5	15.0	28.5	67.6	57.0	8.5
05/20/81	05/27/81	0.93	8.8	13.8	20.0	0.4	34.8	2.6	17.1	2.5	15.0	35.0	88.7	52.5	25.6
07/01/81	07/10/81	1.15	7.9	11.5	10.0	0.4	26.1	2.6	15.7	6.8	12.9	17.9	66.3	37.6	27.6
07/10/81	07/27/81	1.26	11.1	18.2	18.5	7.4	3.5	1.3	--	3.7	24.2	25.0	--	52.9	--
08/10/81	08/12/81	0.24	8.7	16.6	15.0	4.9	4.4	2.6	--	7.9	16.5	17.9	--	42.3	--
08/12/81	08/14/81	--	8.6	14.5	--	--	--	--	--	7.6	15.6	17.9	--	41.1	--
08/14/81	09/01/81	1.08	17.4	32.4	11.5	3.3	0.9	0.5	--	3.1	22.6	43.7	--	69.4	--
09/01/81	09/03/81	0.15	11.8	12.6	21.0	11.5	17.4	2.0	--	13.0	22.6	31.2	--	66.8	--
09/03/81	10/07/81	2.03	12.5	2.8	15.5	4.1	2.2	1.0	--	2.0	16.1	25.0	--	43.1	--
10/07/81	10/29/81	2.81	7.0	7.8	23.0	4.1	3.0	1.0	--	2.3	10.5	25.0	--	37.8	--
10/29/81	12/01/81	2.47	13.5	1.3	17.0	4.1	2.2	1.0	--	1.4	11.5	12.3	--	25.2	--
12/01/81	12/15/81	0.51	13.7	40.7	11.0	4.1	2.2	1.0	--	2.5	21.0	22.9	--	46.4	--
12/15/81	12/19/81	0.49	4.0	4.7	24.0	4.1	5.2	1.0	--	3.4	5.5	8.5	--	17.4	--
12/19/81	12/22/81	0.99	6.2	14.1	9.0	1.6	3.0	0.3	--	3.1	8.5	4.8	--	16.4	--
12/22/81	12/26/81	1.04	3.4	10.0	12.5	2.5	1.3	0.5	--	2.5	8.2	4.4	--	15.1	--

**Table 5. Precipitation volume, specific conductance, concentrations of dissolved ions, and percent charge balance for each sampling interval at Marvine Ranch, 1981–94—Continued**

[Precipitation volume in inches; specific conductance in microsiemens per centimeter at 25 degrees Celsius; dissolved ions in microequivalents per liter; --, no data]

Beginning date	Ending date	Precipitation	Specific conductance	Hydrogen (H <sup>+</sup> ) <sup>1</sup>	Calcium (Ca <sup>2+</sup> )	Magnesium (Mg <sup>2+</sup> )	Sodium (Na <sup>+</sup> )	Potassium (K <sup>+</sup> )	Ammonium (NH <sub>4</sub> <sup>+</sup> )	Chloride (Cl <sup>-</sup> )	Nitrate (NO <sub>3</sub> <sup>-</sup> )	Sulfate (SO <sub>4</sub> <sup>2-</sup> )	Sum cations	Sum anions	Percent charge balance
12/26/81	12/27/81	--	2.2	7.1	12.5	2.5	3.0	0.5	--	1.4	1.8	2.5	--	5.7	--
12/27/81	12/30/81	1.60	4.2	7.4	15.0	3.3	4.4	0.5	--	3.9	5.8	6.9	--	16.6	--
01/02/82	01/06/82	0.88	2.7	3.2	12.5	2.5	2.2	0.3	--	1.1	3.9	3.7	--	8.7	--
01/06/82	01/12/82	--	7.0	25.1	12.5	4.1	23.1	0.8	--	3.4	22.6	5.4	--	31.4	--
01/12/82	01/14/82	0.26	3.6	1.3	--	--	--	--	--	3.1	6.3	3.5	--	12.9	--
01/14/82	01/22/82	1.02	3.8	1.7	12.5	3.3	--	0.3	0.7	2.3	8.2	5.4	--	15.9	--
01/22/82	01/28/82	0.43	3.8	2.2	8.5	0.4	3.5	0.1	--	3.4	8.5	6.2	--	18.1	--
01/28/82	02/01/82	0.35	3.3	3.4	--	--	--	--	--	1.1	7.7	5.0	--	13.8	--
02/01/82	02/17/82	0.74	5.0	3.4	12.5	1.6	6.1	--	--	1.4	13.2	10.6	--	25.2	--
02/17/82	03/02/82	0.22	13.6	19.1	12.5	4.1	4.8	--	--	1.4	17.7	31.2	--	50.3	--
03/02/82	03/04/82	0.35	5.1	0.9	21.5	3.3	2.6	--	--	1.7	10.6	14.4	--	26.7	--
03/07/82	03/09/82	--	3.4	0.9	21.5	29.6	3.9	--	--	1.7	2.6	5.8	--	10.1	--
03/09/82	03/11/82	--	14.0	0.1	104.8	20.6	15.2	--	--	4.2	9.2	19.4	--	32.8	--
03/11/82	03/18/82	0.92	4.5	1.0	21.5	3.3	2.6	--	9.3	4.2	9.4	19.4	--	33.0	--
03/18/82	03/27/82	0.58	5.7	4.0	21.5	9.0	4.8	--	12.1	2.0	9.0	13.5	--	24.5	--
03/31/82	04/03/82	0.30	10.2	0.1	69.9	28.8	5.7	--	8.6	4.5	7.3	20.8	--	32.6	--
04/03/82	04/05/82	0.24	15.7	0.1	79.8	17.3	20.9	--	10.7	3.1	8.9	35.4	--	47.4	--
04/05/82	04/09/82	0.24	14.8	0.1	69.9	20.6	13.0	--	17.8	5.6	29.0	19.6	--	54.2	--
04/09/82	04/12/82	0.40	15.4	0.1	7.0	1.6	8.7	--	--	5.9	6.0	47.9	--	59.8	--
04/12/82	04/13/82	0.03	5.7	0.4	27.4	6.6	3.9	--	15.7	2.3	7.9	13.5	--	23.7	--
04/13/82	04/20/82	0.01	36.0	0.1	--	--	--	--	--	--	--	--	--	--	--
04/20/82	04/27/82	0.33	8.7	3.0	59.9	9.9	7.0	3.8	--	4.5	19.4	27.1	--	51.0	--
04/27/82	04/28/82	--	8.5	3.1	114.8	8.2	6.1	2.8	--	4.8	19.4	25.0	--	49.2	--
04/28/82	05/04/82	0.39	8.9	4.6	22.5	8.2	5.2	2.3	27.8	4.5	19.4	25.0	70.6	48.9	18.2
05/08/82	05/10/82	0.12	43.8	0.1	349.3	32.1	21.3	6.9	--	13.5	22.6	41.7	--	77.8	--
05/10/82	05/13/82	1.93	3.3	3.7	4.5	3.3	3.0	1.3	5.7	1.2	4.2	7.7	21.5	13.1	24.3
05/13/82	05/14/82	0.14	3.2	4.4	4.0	1.6	4.8	0.8	7.1	1.4	3.5	5.2	22.7	10.1	38.4
05/14/82	05/17/82	--	13.6	0.6	--	--	--	--	--	--	--	--	--	--	--
05/18/82	05/21/82	0.18	14.1	6.3	41.9	9.9	15.2	4.6	--	10.2	24.2	39.6	--	74.0	--
05/21/82	05/30/82	0.21	14.4	2.4	74.9	11.5	14.4	3.6	--	9.3	37.1	52.1	--	98.5	--
06/10/82	07/01/82	0.27	11.7	3.8	43.4	10.7	11.3	7.7	17.8	11.3	22.6	33.3	94.7	67.2	17.0
07/01/82	07/06/82	0.31	11.0	1.1	41.9	10.7	13.5	6.1	15.0	11.6	24.2	29.2	88.3	65.0	15.2
07/06/82	07/09/82	0.03	6.5	3.8	--	--	--	--	--	--	--	--	--	--	--
07/09/82	07/10/82	0--24	7--0	6.2	9.5	3.3	2.2	1.3	--	1.4	15.2	15.6	--	32.2	--

**Table 5.** Precipitation volume, specific conductance, concentrations of dissolved ions, and percent charge balance for each sampling interval at Marvine Ranch, 1981–94—Continued

[Precipitation volume in inches; specific conductance in microsiemens per centimeter at 25 degrees Celsius; dissolved ions in microequivalents per liter; --, no data]

Beginning date	Ending date	Precipitation	Specific conductance	Hydrogen (H <sup>+</sup> ) <sup>1</sup>	Calcium (Ca <sup>2+</sup> )	Magnesium (Mg <sup>2+</sup> )	Sodium (Na <sup>+</sup> )	Potassium (K <sup>+</sup> )	Ammonium (NH <sub>4</sub> <sup>+</sup> )	Chloride (Cl <sup>-</sup> )	Nitrate (NO <sub>3</sub> <sup>-</sup> )	Sulfate (SO <sub>4</sub> <sup>2-</sup> )	Sum cations	Sum anions	Percent charge balance
07/10/82	07/25/82	0.14	19.8	26.9	41.9	9.9	7.8	2.8	--	4.8	37.1	60.4	--	102.3	--
07/25/82	07/29/82	0.59	10.3	16.2	5.5	2.5	1.7	1.0	18.6	0.1	17.7	17.7	45.5	35.5	12.3
07/29/82	08/03/82	0.35	10.2	12.9	11.0	3.3	3.0	1.0	17.8	1.7	21.0	19.8	49.0	42.5	7.1
08/03/82	08/09/82	0.73	7.0	8.3	7.0	0.8	2.6	0.8	6.4	0.1	11.6	13.7	25.9	25.4	1.0
08/09/82	08/12/82	0.09	16.4	13.5	--	--	--	--	--	--	--	--	--	--	--
08/12/82	08/14/82	0.33	5.6	6.9	3.0	0.8	3.5	1.3	5.0	0.6	8.2	10.0	20.5	18.8	4.3
08/14/82	08/26/82	0.11	9.2	27.5	22.0	5.8	6.1	2.3	--	2.8	37.1	37.5	--	77.4	--
08/26/82	08/28/82	0.13	11.6	7.2	20.5	5.8	3.0	2.3	--	2.8	24.2	25.0	--	52.0	--
08/28/82	09/01/82	0.07	19.9	26.3	28.9	4.9	10.4	2.0	--	3.9	37.1	50.0	--	91.0	--
09/01/82	09/05/82	0.09	40.7	31.6	--	--	--	--	--	12.1	119.4	120.8	--	252.3	--
09/05/82	09/07/82	0.29	6.5	10.5	5.0	1.6	1.7	0.5	--	1.4	8.7	13.1	--	23.2	--
09/07/82	09/09/82	0.12	10.2	14.5	8.5	2.5	3.9	1.0	--	2.0	14.5	20.8	--	37.3	--
09/09/82	09/11/82	0.35	17.0	33.9	9.5	3.3	1.3	0.5	15.7	1.4	17.7	43.7	64.2	62.8	1.1
09/11/82	09/12/82	0.13	8.0	11.5	--	--	--	--	--	--	--	--	--	--	--
09/12/82	09/13/82	0.71	4.7	8.1	6.5	0.4	1.7	0.5	10.0	0.6	5.3	1.5	27.2	7.4	57.2
09/13/82	09/14/82	0.47	5.2	10.0	1.5	2.5	1.7	0.5	7.9	0.1	4.2	9.6	24.1	13.9	26.8
09/14/82	09/15/82	0.11	17.7	40.7	10.5	2.5	4.8	0.8	20.0	2.5	16.1	54.2	79.3	72.8	4.3
09/15/82	09/28/82	1.13	14.9	25.7	14.5	4.1	4.8	1.3	14.3	2.5	16.1	37.5	64.7	56.1	7.1
09/28/82	09/30/82	0.25	5.2	7.2	8.0	2.5	2.2	0.5	10.7	0.8	5.3	12.9	31.1	19.0	24.2
09/30/82	10/06/82	0.63	6.0	5.1	19.5	3.3	5.2	2.0	11.4	2.3	11.5	18.1	46.5	31.9	18.6
10/08/82	10/09/82	0.57	3.9	5.4	5.5	2.5	2.2	0.5	--	0.1	5.0	5.8	--	10.9	--
10/23/82	10/28/82	1.30	6.7	10.5	9.0	2.5	2.6	1.0	--	1.1	9.5	15.4	--	26.0	--
10/28/82	11/05/82	0.87	7.1	14.8	3.5	1.6	1.3	0.3	--	1.7	7.1	10.4	--	19.2	--
11/05/82	11/09/82	0.19	3.6	6.6	2.0	0.8	2.6	0.5	--	1.7	3.9	4.6	--	10.2	--
11/09/82	11/10/82	0.18	6.6	7.1	--	--	--	--	--	--	--	--	--	--	--
11/10/82	11/11/82	0.87	3.6	2.6	14.0	2.5	2.6	2.0	--	3.1	5.3	7.5	--	15.9	--
11/11/82	11/12/82	0.08	3.9	5.2	--	--	--	--	--	--	--	--	--	--	--
11/12/82	11/14/82	0--07	5.6	3.4	--	--	--	--	--	--	--	--	--	--	--
11/14/82	11/20/82	0.60	2.4	1.7	8.5	0.8	2.6	1.3	5.7	1.1	2.4	3.5	20.6	7.0	49.3
11/20/82	11/21/82	0.02	3.1	4.6	4.5	2.5	3.5	0.3	--	1.1	5.2	4.4	--	10.7	--
11/21/82	11/22/82	0.12	--	--	--	--	--	--	--	--	--	--	--	--	--
11/22/82	11/23/82	--	3.3	2.1	--	--	--	--	--	--	--	--	--	--	--

**Table 5. Precipitation volume, specific conductance, concentrations of dissolved ions, and percent charge balance for each sampling interval at Marvine Ranch, 1981–94—Continued**

[Precipitation volume in inches; specific conductance in microsiemens per centimeter at 25 degrees Celsius; dissolved ions in microequivalents per liter; --, no data]

Beginning date	Ending date	Precipitation	Specific conductance	Hydrogen (H <sup>+</sup> ) <sup>1</sup>	Calcium (Ca <sup>2+</sup> )	Magnesium (Mg <sup>2+</sup> )	Sodium (Na <sup>+</sup> )	Potassium (K <sup>+</sup> )	Ammonium (NH <sub>4</sub> <sup>+</sup> )	Chloride (Cl <sup>-</sup> )	Nitrate (NO <sub>3</sub> <sup>-</sup> )	Sulfate (SO <sub>4</sub> <sup>2-</sup> )	Sum cations	Sum anions	Percent charge balance
11/23/82	11/29/82	0.19	4.0	1.2	--	--	--	--	--	--	--	--	--	--	--
11/29/82	11/30/82	0.04	5.2	7.2	8.5	3.3	3.9	1.0	--	2.3	9.0	9.4	--	20.7	--
11/30/82	12/01/82	0.15	--	--	--	--	--	--	--	--	--	--	--	--	--
12/01/82	12/02/82	0.18	3.6	6.8	2.0	0.8	1.7	0.5	--	1.4	6.3	1.9	--	9.6	--
12/02/82	12/07/82	0.09	8.7	17.0	--	--	--	--	--	--	--	--	--	--	--
12/07/82	12/10/82	0.31	2.5	2.8	2.5	0.4	4.4	0.5	--	1.4	0.2	5.4	--	7.0	--
12/10/82	12/14/82	0.54	5.6	10.5	4.0	0.4	1.3	0.3	--	1.1	7.9	6.0	--	15.0	--
12/14/82	12/16/82	0.02	2.6	1.7	--	--	--	--	--	--	--	--	--	--	--
12/16/82	12/23/82	0.09	4.3	3.6	--	--	--	--	--	--	--	--	--	--	--
12/23/82	12/24/82	0.25	9.9	11.0	25.9	4.9	3.5	2.6	11.4	2.5	13.2	22.9	59.3	38.6	21.1
12/24/82	12/29/82	0.10	11.5	25.1	--	--	--	--	--	--	--	--	--	--	--
12/29/82	01/08/83	0.25	9.6	16.6	5.0	0.8	2.6	1.0	--	2.8	13.7	9.0	--	25.5	--
01/08/83	01/10/83	0.40	4.7	8.1	2.5	0.4	1.7	1.3	--	2.0	3.2	9.8	--	15.0	--
01/10/83	01/18/83	0.05	--	--	--	--	--	--	--	--	--	--	--	--	--
01/18/83	01/27/83	0.60	5.9	12.0	4.5	1.6	1.7	0.3	6.4	31.0	7.6	13.3	26.5	51.9	-32.4
01/27/83	01/29/83	0.20	14.1	30.2	14.5	1.6	1.7	0.8	--	2.3	24.2	20.2	--	46.7	--
01/29/83	02/03/83	0.11	19.0	36.3	--	--	--	--	--	--	--	--	--	--	--
02/03/83	02/05/83	0.23	3.4	5.9	3.5	1.6	1.7	0.5	--	0.8	5.6	3.3	--	9.7	--
02/05/83	02/08/83	0.62	6.1	11.5	7.0	1.6	1.7	0.5	5.0	0.8	4.8	12.1	27.3	17.7	21.3
02/08/83	02/09/83	0.17	9.7	20.9	1.5	0.4	2.2	0.8	--	1.4	12.1	14.4	--	27.9	--
02/09/83	02/11/83	0.26	7.3	13.5	4.0	1.6	3.5	1.0	--	3.9	12.7	9.2	--	25.8	--
02/11/83	02/13/83	0.10	4.1	6.3	36.9	12.3	11.7	30.7	--	1.1	6.5	10.2	--	17.8	--
02/13/83	02/19/83	0.94	4.1	5.2	10.0	1.6	1.7	0.5	5.7	1.4	9.4	7.1	24.7	17.9	16.0
02/19/83	02/28/83	0.37	6.5	12.6	7.5	0.4	0.9	0.5	7.1	1.1	7.4	13.3	29.0	21.8	14.2
02/28/83	03/05/83	0.58	10.0	16.2	3.5	0.8	5.2	0.8	--	7.9	9.2	20.8	--	37.9	--
03/05/83	03/06/83	0.31	6.6	11.7	3.5	1.6	1.7	0.5	10.0	1.1	8.9	11.7	29.0	21.7	14.4
03/06/83	03/07/83	0.18	4.1	2.3	10.0	0.8	4.4	0.8	--	4.5	8.1	6.7	--	19.3	--
03/07/83	03/08/83	0.20	7.9	15.1	2.5	1.6	2.2	0.3	--	3.4	6.0	17.3	--	26.7	--
03/08/83	03/16/83	0.49	4.0	6.6	4.5	1.6	1.3	0.3	5.7	0.8	5.3	7.3	20.0	13.4	19.8
03/19/83	03/20/83	0.03	5.4	9.1	13.0	0.4	0.9	0.8	--	1.1	8.4	11.9	--	21.4	--
03/20/83	03/23/83	0.26	5.2	9.1	10.0	0.4	1.3	0.8	--	1.4	8.1	9.4	--	18.9	--
03/23/83	03/24/83	0.23	5.3	9.1	26.4	4.1	2.6	0.8	--	1.1	8.7	9.8	--	19.6	--
03/24/83	03/25/83	0.47	2.5	3.7	8.5	1.6	2.6	0.3	--	0.8	2.4	3.5	--	6.7	--
03/25/83	03/26/83	0.01	3.4	5.9	2.5	0.8	2.2	0.3	4.3	1.1	4.8	4.4	16.0	10.3	21.7

**Table 5.** Precipitation volume, specific conductance, concentrations of dissolved ions, and percent charge balance for each sampling interval at Marvine Ranch, 1981–94—Continued

[Precipitation volume in inches; specific conductance in microsiemens per centimeter at 25 degrees Celsius; dissolved ions in microequivalents per liter; --, no data]

Beginning date	Ending date	Precipitation	Specific conductance	Hydrogen (H <sup>+</sup> ) <sup>1</sup>	Calcium (Ca <sup>2+</sup> )	Magnesium (Mg <sup>2+</sup> )	Sodium (Na <sup>+</sup> )	Potassium (K <sup>+</sup> )	Ammonium (NH <sub>4</sub> <sup>+</sup> )	Chloride (Cl <sup>-</sup> )	Nitrate (NO <sub>3</sub> <sup>-</sup> )	Sulfate (SO <sub>4</sub> <sup>2-</sup> )	Sum cations	Sum anions	Percent charge balance
03/26/83	03/28/83	0.27	5.1	9.3	2.5	0.8	2.6	0.3	--	1.1	6.6	7.3	--	15.0	--
03/29/83	03/31/83	0.32	5.6	2.1	21.5	5.8	7.8	0.8	--	2.8	11.9	16.7	--	31.4	--
03/31/83	04/03/83	0.35	2.8	4.1	5.5	0.8	2.6	0.5	4.3	0.8	2.7	6.2	17.8	9.7	29.5
04/03/83	04/09/83	0.10	5.1	8.5	3.5	0.8	2.2	0.8	--	0.6	11.6	6.0	--	18.2	--
04/09/83	04/12/83	0.17	3.0	3.5	5.5	0.8	2.2	0.3	--	0.6	5.2	7.1	--	12.9	--
04/12/83	04/22/83	0.50	7.0	9.3	17.0	1.6	3.0	0.5	--	1.1	10.5	14.8	--	26.4	--
04/22/83	04/29/83	1.03	11.5	10.7	26.4	6.6	5.7	0.8	19.3	3.7	25.8	25.0	69.5	54.5	12.1
04/29/83	04/30/83	0.45	4.1	5.6	5.5	1.6	2.6	0.8	5.7	0.8	5.3	6.2	21.8	12.3	27.9
04/30/83	05/01/83	0.43	2.7	4.3	4.5	0.8	1.7	0.3	5.7	0.8	3.2	4.6	17.3	8.6	33.6
05/01/83	05/02/83	0.05	3.7	5.5	6.0	0.8	2.2	0.5	--	1.7	5.3	8.1	--	15.1	--
05/02/83	05/03/83	0.17	6.0	8.7	3.5	0.8	2.6	0.8	--	0.6	7.6	13.7	--	21.9	--
05/03/83	05/04/83	0.34	4.9	6.0	5.0	1.6	1.7	0.1	--	0.8	8.2	12.3	--	21.3	--
05/04/83	05/06/83	0.38	9.9	0.1	74.9	20.6	7.8	2.3	--	4.2	16.1	20.8	--	41.1	--
05/06/83	05/07/83	0.02	3.8	0.8	--	--	--	--	--	--	--	--	--	--	--
05/07/83	05/12/83	0.11	18.5	0.5	--	--	--	--	--	--	--	--	--	--	--
05/12/83	05/15/83	0.05	8.5	13.8	--	--	--	--	--	--	--	--	--	--	--
05/15/83	05/17/83	1.73	2.4	4.2	3.5	0.8	1.7	0.1	4.3	0.6	3.4	3.5	14.6	7.5	32.1
05/17/83	05/19/83	0.38	3.5	3.8	6.0	2.5	2.2	0.8	--	1.1	4.5	9.2	--	14.8	--
06/01/83	06/03/83	0.14	17.1	0.2	59.9	20.6	11.3	5.9	--	28.2	43.6	47.9	--	119.7	--
06/07/83	06/13/83	0.65	5.8	0.6	31.9	7.4	6.1	2.3	--	3.9	13.2	15.6	--	32.7	--
06/15/83	06/16/83	--	5.9	0.5	32.4	8.2	6.1	2.6	9.3	3.9	12.9	15.6	59.1	32.4	29.2
06/16/83	06/25/83	0.38	9.2	14.1	7.0	1.6	2.2	1.5	9.3	1.4	13.7	19.2	35.7	34.3	2.0
06/25/83	06/26/83	0.58	10.4	11.7	11.5	2.5	7.4	5.9	--	4.5	16.1	29.2	--	49.8	--
06/26/83	06/27/83	0.32	7.6	13.2	3.5	0.8	2.2	1.0	--	1.7	7.6	17.1	--	26.4	--
06/27/83	07/03/83	0.17	18.3	6.9	74.9	18.1	17.0	7.7	--	17.4	47.6	66.0	--	131.0	--
07/03/83	07/20/83	0.19	12.1	0.6	74.9	15.6	8.7	4.9	--	7.3	28.2	42.9	--	78.4	--
07/20/83	07/22/83	0.23	8.3	12.0	5.5	2.5	4.4	1.0	--	3.6	17.3	13.5	--	34.4	--
07/22/83	07/22/83	0.46	6.3	8.3	7.0	1.6	3.0	0.8	11.4	3.0	10.9	13.1	32.1	27.0	8.6
07/24/83	07/25/83	0.10	8.5	14.1	5.5	0.8	3.9	0.8	--	4.0	17.3	12.5	--	33.8	--
07/25/83	07/29/83	0.26	8.9	10.2	--	--	--	--	--	--	--	--	--	--	--
07/29/83	07/31/83	0.13	13.1	24.0	1.5	0.8	2.2	1.5	--	1.9	8.6	12.1	--	22.6	--
07/31/83	08/01/83	0.02	10.4	8.3	--	--	--	--	--	--	--	--	--	--	--

**Table 5. Precipitation volume, specific conductance, concentrations of dissolved ions, and percent charge balance for each sampling interval at Marvine Ranch, 1981–94—Continued**

[Precipitation volume in inches; specific conductance in microsiemens per centimeter at 25 degrees Celsius; dissolved ions in microequivalents per liter; --, no data]

Beginning date	Ending date	Precipitation	Specific conductance	Hydrogen (H <sup>+</sup> ) <sup>1</sup>	Calcium (Ca <sup>2+</sup> )	Magnesium (Mg <sup>2+</sup> )	Sodium (Na <sup>+</sup> )	Potassium (K <sup>+</sup> )	Ammonium (NH <sub>4</sub> <sup>+</sup> )	Chloride (Cl <sup>-</sup> )	Nitrate (NO <sub>3</sub> <sup>-</sup> )	Sulfate (SO <sub>4</sub> <sup>2-</sup> )	Sum cations	Sum anions	Percent charge balance
08/01/83	08/02/83	0.02	9.6	10.5	--	--	--	--	--	--	--	--	--	--	--
08/02/83	08/07/83	0.14	13.6	22.9	6.5	2.5	4.8	2.8	--	4.8	24.8	22.9	--	52.5	--
08/07/83	08/09/83	0.14	5.9	1.6	--	--	--	--	--	--	--	--	--	--	--
08/09/83	08/10/83	--	7.5	10.5	6.0	2.5	2.2	1.8	--	2.5	11.3	16.7	--	30.5	--
08/10/83	08/12/83	2.66	5.7	9.1	4.5	0.8	1.7	1.5	10.0	1.7	8.7	12.7	27.6	23.1	8.9
08/12/83	08/13/83	0.16	12.3	25.1	2.0	0.8	1.7	1.5	--	2.1	15.7	20.7	--	38.5	--
08/13/83	08/17/83	0.08	11.4	17.4	4.5	2.5	3.5	1.5	--	2.7	16.9	26.2	--	45.8	--
08/17/83	08/18/83	0.71	12.0	21.9	229.5	11.5	2.6	2.8	8.6	2.8	2.1	32.7	276.9	37.6	76.1
08/18/83	08/31/83	0.44	14.2	18.2	14.0	4.1	3.9	1.5	--	3.4	26.3	37.3	--	67.0	--
08/31/83	09/05/83	0.30	14.2	22.9	17.5	3.3	1.7	1.8	11.4	2.3	22.4	31.2	58.6	55.9	2.4
09/05/83	09/19/83	0.34	15.2	10.0	14.0	2.5	5.7	2.3	--	5.6	34.7	46.9	--	87.2	--
09/19/83	10/11/83	1.42	5.1	8.1	6.0	1.6	0.9	1.0	2.1	1.1	6.8	9.0	19.7	16.9	7.7
10/11/83	10/20/83	0.90	9.6	14.5	54.9	4.1	3.0	1.3	5.7	2.0	13.1	21.9	83.5	37.0	38.6
10/20/83	11/11/83	1.31	4.8	7.8	239.5	7.4	1.3	1.8	--	0.6	6.1	9.8	--	16.5	--
11/11/83	11/18/83	0.79	4.3	1.9	15.0	4.1	1.3	1.5	2.9	1.1	10.5	11.0	26.7	22.6	8.3
11/18/83	11/19/83	0.29	5.0	7.2	7.5	0.8	1.7	1.0	--	1.4	12.6	6.2	--	20.2	--
11/19/83	11/25/83	0.87	4.8	7.1	6.0	0.4	1.3	0.8	--	1.7	7.9	7.9	--	17.5	--
11/25/83	11/27/83	0.51	2.0	2.9	4.5	0.4	1.3	0.8	--	0.6	1.3	2.9	--	4.8	--
11/27/83	11/28/83	0.05	6.5	7.2	2.0	0.8	3.9	8.2	--	3.1	12.4	7.1	--	22.6	--
11/28/83	11/30/83	0.29	8.6	16.6	2.5	0.8	2.2	2.8	--	3.7	17.6	6.7	--	28.0	--
11/30/83	12/03/83	0.53	10.6	20.9	10.0	0.4	1.3	0.8	1.4	1.1	10.3	19.0	34.8	30.4	6.7
12/03/83	12/06/83	0.65	4.2	5.0	7.0	2.5	2.6	3.6	--	2.8	0.5	6.0	--	9.3	--
12/06/83	12/11/83	0.10	29.5	55.0	--	--	--	--	--	--	--	--	--	--	--
12/11/83	12/12/83	0.09	28.9	47.9	18.0	4.9	3.9	2.3	--	3.9	53.6	55.4	--	112.9	--
12/12/83	12/15/83	0.65	6.3	11.7	3.5	0.8	0.9	0.8	--	1.7	11.3	5.0	--	18.0	--
12/15/83	12/20/83	1.04	6.5	12.0	8.0	1.6	0.9	1.0	0.7	1.1	12.6	6.9	24.2	20.6	8.0
12/20/83	12/23/83	0.62	4.5	7.6	6.0	0.8	1.7	1.0	--	1.4	11.5	2.9	--	15.8	--
12/23/83	12/24/83	--	9.8	15.1	13.5	3.3	4.8	1.5	--	5.1	30.8	5.6	--	41.5	--
12/24/83	12/25/83	--	6.7	12.6	129.7	4.9	3.9	2.0	--	1.7	10.3	9.6	--	21.6	--
12/25/83	12/26/83	--	2.5	4.4	25.4	0.8	1.3	0.5	--	0.6	2.3	3.1	--	6.0	--
12/26/83	12/27/83	--	2.2	3.7	5.0	0.4	0.9	0.5	--	0.8	2.3	2.1	--	5.2	--
12/27/83	12/28/83	--	6.4	12.6	--	--	--	--	--	--	--	--	--	--	--
12/28/83	12/30/83	0.07	3.6	4.3	--	--	--	--	--	--	--	--	--	--	--
12/30/83	12/31/83	0.40	7.3	13.5	1.0	0.4	1.7	0.8	--	1.4	9.0	10.0	--	20.4	--

**Table 5. Precipitation volume, specific conductance, concentrations of dissolved ions, and percent charge balance for each sampling interval at Marvine Ranch, 1981–94—Continued**

[Precipitation volume in inches; specific conductance in microsiemens per centimeter at 25 degrees Celsius; dissolved ions in microequivalents per liter; --, no data]

Beginning date	Ending date	Precipitation	Specific conductance	Hydrogen (H <sup>+</sup> ) <sup>1</sup>	Calcium (Ca <sup>2+</sup> )	Magnesium (Mg <sup>2+</sup> )	Sodium (Na <sup>+</sup> )	Potassium (K <sup>+</sup> )	Ammonium (NH <sub>4</sub> <sup>+</sup> )	Chloride (Cl <sup>-</sup> )	Nitrate (NO <sub>3</sub> <sup>-</sup> )	Sulfate (SO <sub>4</sub> <sup>2-</sup> )	Sum cations	Sum anions	Percent charge balance
12/31/83	01/01/84	--	5.4	10.5	15.0	0.8	1.3	0.8	--	1.1	6.5	7.5	--	15.1	--
01/01/84	01/13/84	0.27	8.7	13.2	9.5	2.5	3.9	2.6	--	5.1	18.9	7.3	--	31.3	--
01/13/84	01/14/84	0.20	8.3	15.1	4.5	0.4	3.0	1.0	--	3.1	19.8	4.0	--	26.9	--
01/14/84	01/15/84	0.25	4.9	9.1	35.9	2.5	0.9	0.8	--	1.1	9.2	4.8	--	15.1	--
01/15/84	01/24/84	0.21	7.5	14.1	--	--	--	--	--	3.8	8.0	9.2	--	21.0	--
01/24/84	01/26/84	0.45	7.5	15.5	2.5	0.8	1.3	0.5	3.6	1.9	13.3	8.0	24.2	23.2	2.1
01/26/84	02/15/84	0.43	8.9	16.6	--	--	--	--	--	1.9	21.0	9.1	--	32.0	--
02/15/84	02/20/84	0.10	5.1	2.1	26.4	9.9	19.6	3.8	--	2.3	14.5	7.6	--	24.4	--
02/20/84	03/04/84	0.32	11.2	0.5	--	--	--	--	--	7.3	25.8	25.0	--	58.1	--
03/04/84	03/05/84	0.01	3.9	1.3	--	--	--	--	--	3.0	6.1	4.7	--	13.8	--
03/05/84	03/16/84	1.40	4.0	1.9	--	--	--	--	--	2.8	9.7	7.7	--	20.2	--
03/16/84	03/18/84	0.99	3.9	0.6	8.0	1.6	2.6	1.0	--	1.7	6.4	6.1	--	14.2	--
03/18/84	03/25/84	0.40	5.8	4.1	20.0	1.6	3.0	0.8	2.1	1.5	7.9	8.4	31.6	17.8	27.9
03/25/84	03/31/84	0.36	8.2	12.9	--	--	--	--	--	3.2	16.5	14.9	--	34.6	--
03/31/84	04/01/84	0.11	7.4	5.0	--	--	--	--	--	--	--	--	--	--	--
04/02/84	04/03/84	0.10	8.8	13.2	--	--	--	--	5.7	2.5	15.4	14.8	--	32.7	--
04/03/84	04/10/84	0.53	3.8	1.4	--	--	--	--	--	2.3	6.5	8.4	--	17.2	--
04/10/84	04/11/84	1.13	5.4	1.7	6.5	1.6	3.9	0.5	5.0	1.9	7.4	7.7	19.2	17.0	6.1
04/11/84	04/12/84	--	6.0	0.7	--	--	--	--	--	--	--	--	--	--	--
04/12/84	04/23/84	0.65	5.8	1.0	24.5	4.9	3.9	1.3	9.3	3.4	12.8	19.0	44.9	35.2	12.1
04/23/84	04/26/84	1.37	6.9	0.7	29.4	6.6	4.8	1.3	15.7	4.1	16.7	19.1	58.5	39.9	18.9
04/26/84	05/04/84	0.91	5.3	0.7	18.0	5.8	4.4	1.3	10.7	2.7	10.6	14.4	40.9	27.7	19.2
05/04/84	05/05/84	0.30	5.3	1.0	16.5	4.9	4.4	1.0	--	3.7	10.3	17.3	--	31.3	--
05/05/84	05/06/84	0.07	3.6	1.1	10.0	3.3	3.5	1.0	--	2.1	6.3	10.0	--	18.4	--
05/06/84	05/26/84	0.10	--	--	--	--	--	--	--	--	--	--	--	--	--
05/26/84	06/01/84	1.47	7.0	3.2	16.5	4.9	3.9	1.8	10.0	3.7	14.4	20.8	40.3	38.9	1.8
06/01/84	06/02/84	--	4.8	3.2	7.0	1.6	3.0	1.3	--	3.4	10.3	12.9	--	26.6	--
06/02/84	06/03/84	0.32	4.8	2.5	--	--	--	--	--	--	--	--	--	--	--
06/03/84	06/04/84	0.02	5.0	4.2	7.0	1.6	2.6	1.3	7.1	3.0	10.7	12.8	23.8	26.5	-5.4
06/04/84	06/05/84	0.61	5.2	4.9	7.0	1.6	2.6	1.3	5.7	3.4	9.7	13.1	23.1	26.2	-6.3
06/05/84	06/06/84	0.92	4.9	3.3	10.0	1.6	3.0	1.3	5.7	3.4	9.6	13.0	24.9	26.0	-2.2
06/06/84	06/07/84	--	5.1	4.1	6.5	1.6	2.6	1.3	5.7	3.2	9.5	12.6	21.8	25.3	-7.4

**Table 5. Precipitation volume, specific conductance, concentrations of dissolved ions, and percent charge balance for each sampling interval at Marvine Ranch, 1981–94—Continued**

[Precipitation volume in inches; specific conductance in microsiemens per centimeter at 25 degrees Celsius; dissolved ions in microequivalents per liter; --, no data]

Beginning date	Ending date	Precipitation	Specific conductance	Hydrogen (H <sup>+</sup> ) <sup>1</sup>	Calcium (Ca <sup>2+</sup> )	Magnesium (Mg <sup>2+</sup> )	Sodium (Na <sup>+</sup> )	Potassium (K <sup>+</sup> )	Ammonium (NH <sub>4</sub> <sup>+</sup> )	Chloride (Cl <sup>-</sup> )	Nitrate (NO <sub>3</sub> <sup>-</sup> )	Sulfate (SO <sub>4</sub> <sup>2-</sup> )	Sum cations	Sum anions	Percent charge balance
06/07/84	06/08/84	--	4.7	4.1	6.0	1.6	2.6	1.3	5.0	2.8	8.5	11.5	20.6	22.8	-5.1
06/08/84	06/09/84	--	3.9	3.1	5.0	2.5	3.5	1.0	4.3	2.6	10.6	7.1	19.4	20.3	-2.3
06/09/84	06/12/84	--	--	--	--	--	--	--	--	--	--	--	--	--	--
06/12/84	06/24/84	0.23	8.7	13.2	8.0	1.6	2.2	2.0	--	1.8	11.8	13.1	--	26.7	--
06/24/84	06/25/84	--	11.0	12.3	15.0	1.6	3.0	1.3	6.4	2.2	12.2	14.1	39.6	28.5	16.3
06/25/84	06/26/84	0.03	9.1	12.6	17.5	1.6	3.5	1.3	7.1	1.6	11.2	13.8	43.6	26.6	24.2
06/26/84	06/27/84	0.01	7.8	8.9	--	--	--	--	--	1.9	11.8	17.1	--	30.8	--
06/27/84	06/29/84	--	11.2	13.5	--	--	--	--	--	2.6	17.4	24.6	--	44.6	--
06/29/84	06/30/84	--	13.1	24.0	6.5	1.6	2.6	1.0	13.6	1.9	17.9	20.0	49.3	39.8	10.7
06/30/84	07/01/84	0.17	10.9	21.4	--	--	--	--	--	--	--	--	--	--	--
07/01/84	07/02/84	--	15.3	22.9	10.5	1.6	4.4	1.3	--	2.8	17.3	24.2	--	44.3	--
07/02/84	07/09/84	0.25	13.3	15.5	22.5	6.6	4.4	1.5	17.1	2.7	18.1	29.8	67.6	50.6	14.4
07/09/84	07/10/84	0.38	15.2	18.2	40.4	3.3	3.9	2.6	14.3	3.9	18.7	30.4	82.7	53.0	21.9
07/10/84	07/14/84	0.43	15.3	24.0	15.0	3.3	5.7	1.8	--	4.0	11.3	30.2	--	45.5	--
07/14/84	07/15/84	--	13.7	19.1	16.5	4.1	3.5	1.5	12.9	2.8	18.1	30.6	57.6	51.5	5.6
07/15/84	08/17/84	3.29	18.0	10.0	8.5	1.6	3.0	2.0	--	2.6	12.1	19.3	--	34.0	--
08/17/84	08/19/84	0.02	7.6	11.5	4.0	1.6	2.6	1.3	--	2.8	12.0	14.1	--	28.9	--
08/19/84	08/20/84	1.13	8.0	13.2	5.5	0.8	2.2	0.8	5.0	2.3	11.6	13.0	27.5	26.9	1.1
08/20/84	08/21/84	--	8.8	14.1	4.0	0.8	2.6	1.3	5.0	2.6	14.3	13.1	27.8	30.0	-3.8
08/21/84	08/22/84	0.07	7.8	12.9	4.0	0.8	2.2	1.0	5.0	2.1	11.5	12.9	25.9	26.5	-1.1
08/22/84	08/30/84	0.39	7.2	12.6	4.5	0.4	1.7	0.8	4.3	1.9	8.0	12.7	24.3	22.6	3.6
08/30/84	09/01/84	0.95	8.1	2.6	31.4	9.0	4.4	1.3	14.3	3.2	22.3	28.3	63.0	53.8	7.9
09/01/84	09/02/84	0.01	5.5	8.5	3.0	0.8	2.2	0.5	3.6	1.3	8.2	10.4	18.6	19.9	-3.4
09/02/84	09/03/84	0.01	8.0	2.1	29.9	8.2	3.5	1.0	13.6	2.8	18.9	28.3	58.3	50.0	7.7
09/03/84	09/04/84	0.01	5.6	7.9	1.5	0.8	2.6	0.8	--	1.9	9.5	11.0	--	22.4	--
09/04/84	09/05/84	0.01	5.3	8.9	3.0	0.4	2.2	0.8	2.9	1.2	7.4	10.5	18.2	19.1	-2.4
09/05/84	09/13/84	0.28	8.1	9.1	8.5	2.5	3.9	1.5	--	3.6	15.4	14.8	--	33.8	--
09/13/84	09/15/84	--	8.1	11.2	7.5	1.6	3.5	0.8	7.1	1.8	10.6	17.6	31.7	30.0	2.8
09/15/84	09/16/84	1.10	7.8	10.0	9.0	1.6	3.0	0.8	7.1	2.1	11.1	17.4	31.5	30.6	1.4
09/16/84	09/21/84	0.50	16.3	30.9	15.0	3.3	2.6	1.5	--	3.2	26.9	37.9	--	68.0	--
09/21/84	09/22/84	0.05	16.0	21.9	13.5	4.9	5.7	2.6	--	4.1	30.3	41.2	--	75.6	--
09/22/84	09/24/84	0.02	16.9	24.5	--	--	--	--	--	--	--	--	--	--	--
09/24/84	09/28/84	0.19	8.2	0.6	34.9	9.9	8.7	2.0	--	6.3	12.3	22.9	--	41.5	--
09/28/84	10/13/84	1.41	4.2	2.0	8.0	4.9	3.0	4.9	--	3.8	8.1	11.9	--	23.8	--

**Table 5.** Precipitation volume, specific conductance, concentrations of dissolved ions, and percent charge balance for each sampling interval at Marvine Ranch, 1981–94—Continued

[Precipitation volume in inches; specific conductance in microsiemens per centimeter at 25 degrees Celsius; dissolved ions in microequivalents per liter; --, no data]

Beginning date	Ending date	Precipitation	Specific conductance	Hydrogen (H <sup>+</sup> ) <sup>1</sup>	Calcium (Ca <sup>2+</sup> )	Magnesium (Mg <sup>2+</sup> )	Sodium (Na <sup>+</sup> )	Potassium (K <sup>+</sup> )	Ammonium (NH <sub>4</sub> <sup>+</sup> )	Chloride (Cl <sup>-</sup> )	Nitrate (NO <sub>3</sub> <sup>-</sup> )	Sulfate (SO <sub>4</sub> <sup>2-</sup> )	Sum cations	Sum anions	Percent charge balance
10/13/84	10/14/84	0.24	4.0	2.4	13.0	4.9	3.0	4.3	--	2.9	5.7	10.6	--	19.2	--
10/14/84	10/16/84	0.16	3.6	0.9	14.0	9.0	2.6	5.1	--	2.8	0.3	10.8	--	13.9	--
10/16/84	10/18/84	0.67	2.4	1.1	10.0	1.6	2.2	1.8	--	0.5	6.2	3.3	--	10.0	--
10/18/84	10/20/84	0.35	5.1	8.9	6.0	2.5	1.7	2.0	--	1.6	9.8	6.5	--	17.9	--
10/20/84	10/24/84	0.25	3.5	7.1	3.5	1.6	2.2	1.0	--	1.6	6.0	5.0	--	12.6	--
10/24/84	10/27/84	--	5.5	7.9	18.5	0.8	3.0	1.5	5.7	2.2	5.2	17.5	37.4	24.9	20.1
10/27/84	11/09/84	--	4.8	0.7	25.0	5.8	5.2	1.5	--	3.4	8.8	11.0	--	23.2	--
11/09/84	11/25/84	1.15	8.9	3.6	31.4	8.2	6.1	1.0	--	3.4	16.6	36.0	--	56.0	--
11/25/84	11/28/84	0.33	7.2	0.5	--	--	--	--	--	--	--	--	--	--	--
11/28/84	11/30/84	0.36	3.0	2.5	10.0	1.6	3.5	1.3	--	1.8	6.7	4.4	--	12.9	--
11/30/84	12/02/84	0.26	3.3	3.5	7.0	2.5	2.6	2.3	--	1.7	9.5	5.2	--	16.4	--
12/02/84	12/09/84	0.37	11.2	24.0	1.5	0.8	1.3	0.8	--	1.5	9.2	25.4	--	36.1	--
12/09/84	12/11/84	0.08	13.3	28.8	--	--	--	--	--	--	--	--	--	--	--
12/11/84	12/14/84	1.13	3.3	5.2	5.0	0.8	1.7	0.8	--	1.5	9.2	3.1	--	13.8	--
12/14/84	12/15/84	0.05	2.5	3.5	2.0	0.8	1.7	1.0	--	1.4	5.7	2.9	--	10.0	--
12/15/84	12/17/84	0.11	3.4	5.5	--	--	--	--	3.6	1.2	8.3	4.2	--	13.7	--
12/17/84	12/23/84	0.49	5.7	10.0	6.0	13.2	2.2	1.8	2.1	2.5	14.3	6.5	35.3	23.3	20.5
12/23/84	12/31/84	0.28	7.3	10.5	11.5	2.5	4.4	1.0	--	3.7	12.6	18.5	--	34.8	--
12/31/84	01/03/85	0.04	5.4	9.1	--	--	--	--	--	--	--	--	--	--	--
01/03/85	01/08/85	0.32	3.9	5.8	10.5	1.6	1.7	1.0	1.4	0.6	7.5	6.1	22.0	14.2	21.5
01/08/85	01/10/85	0.07	--	--	--	--	--	--	--	--	--	--	--	--	--
01/10/85	01/17/85	0.12	--	--	--	--	--	--	--	--	--	--	--	--	--
01/17/85	01/20/85	0.24	11.5	20.9	5.5	0.8	2.6	0.8	--	2.9	24.0	10.5	--	37.4	--
01/20/85	01/21/85	--	4.7	9.5	0.5	0.4	1.7	0.8	--	1.2	9.7	2.2	--	13.1	--
01/21/85	01/22/85	--	5.0	9.8	1.5	0.4	1.3	1.3	2.1	0.5	7.1	6.0	16.4	13.6	9.3
01/22/85	01/27/85	0.02	8.6	14.1	--	--	--	--	--	--	--	--	--	--	--
01/27/85	01/28/85	0.03	11.6	20.4	--	--	--	--	--	--	--	--	--	--	--
01/28/85	01/29/85	0.40	3.3	6.2	2.0	0.4	1.7	1.0	--	0.6	5.9	2.5	--	9.0	--
01/29/85	02/11/85	1.01	7.5	15.1	3.0	0.8	2.2	0.5	2.9	1.5	15.5	5.9	24.5	22.9	3.4
02/11/85	02/12/85	0.17	9.3	17.0	0.2	1.6	2.6	1.3	--	2.3	8.6	17.6	--	28.5	--
02/12/85	02/24/85	0.12	10.6	20.4	3.5	1.6	3.0	1.3	--	2.5	17.7	18.8	--	39.0	--
02/24/85	02/28/85	0.22	6.0	1.9	21.5	4.1	7.4	1.5	--	5.5	20.8	11.8	--	38.1	--

**Table 5.** Precipitation volume, specific conductance, concentrations of dissolved ions, and percent charge balance for each sampling interval at Marvine Ranch, 1981–94—Continued

[Precipitation volume in inches; specific conductance in microsiemens per centimeter at 25 degrees Celsius; dissolved ions in microequivalents per liter; —, no data]

Beginning date	Ending date	Precipitation	Specific conductance	Hydrogen (H <sup>+</sup> ) <sup>1</sup>	Calcium (Ca <sup>2+</sup> )	Magnesium (Mg <sup>2+</sup> )	Sodium (Na <sup>+</sup> )	Potassium (K <sup>+</sup> )	Ammonium (NH <sub>4</sub> <sup>+</sup> )	Chloride (Cl <sup>-</sup> )	Nitrate (NO <sub>3</sub> <sup>-</sup> )	Sulfate (SO <sub>4</sub> <sup>2-</sup> )	Sum cations	Sum anions	Percent charge balance
02/28/85	03/15/85	1.51	3.1	1.2	19.5	2.5	2.6	1.3	5.0	1.6	5.8	6.9	32.1	14.3	38.4
03/15/85	03/28/85	1.38	5.2	0.5	25.0	4.9	4.8	1.8	7.1	3.1	8.9	11.6	44.1	23.6	30.3
03/28/85	03/29/85	0.05	2.2	1.4	6.0	0.8	2.6	2.0	1.4	2.3	5.5	2.5	14.2	10.3	15.9
03/29/85	03/30/85	0.10	4.9	4.4	6.5	1.6	4.8	1.0	—	5.4	8.3	10.6	—	24.3	—
03/30/85	03/31/85	—	5.9	5.1	8.5	1.6	4.8	1.5	—	6.8	10.7	13.0	—	30.5	—
04/06/85	04/12/85	—	11.1	1.2	—	—	—	—	—	—	—	—	—	—	—
04/12/85	04/19/85	0.80	3.7	3.3	6.5	0.8	2.2	0.5	7.1	4.1	6.8	9.8	20.4	20.7	-0.7
04/19/85	04/20/85	—	3.9	3.2	5.0	1.6	3.5	1.5	10.0	2.1	8.2	9.2	24.8	19.5	12.0
04/20/85	04/21/85	—	1.8	2.2	4.0	0.4	2.2	0.5	3.6	2.0	3.8	2.8	12.9	8.6	20.0
04/21/85	04/22/85	0.15	3.2	2.2	—	—	—	—	—	—	—	—	—	—	—
04/22/85	04/23/85	—	2.4	2.9	—	—	—	—	—	—	—	—	—	—	—
04/23/85	04/24/85	0.17	7.6	1.9	—	—	—	—	—	—	—	—	—	—	—
04/24/85	04/26/85	0.60	5.8	4.4	17.5	3.3	3.0	1.8	12.1	3.6	18.5	12.9	42.1	35.0	9.2
04/26/85	05/12/85	1.24	14.4	11.2	27.4	6.6	8.3	1.5	13.6	3.3	14.8	17.3	68.6	35.4	31.9
05/12/85	05/13/85	0.17	5.2	2.2	27.9	3.3	7.4	1.8	—	2.3	13.5	10.2	—	26.0	—
05/13/85	05/17/85	0.23	7.0	9.1	13.0	1.6	2.2	1.8	—	2.9	14.0	13.3	—	30.2	—
05/17/85	05/18/85	0.10	10.1	2.6	40.9	7.4	10.9	3.1	—	6.9	30.3	26.7	—	63.9	—
05/18/85	05/19/85	0.20	6.0	3.4	11.0	2.5	4.8	0.5	—	4.8	17.4	12.3	—	34.5	—
05/19/85	05/20/85	0.12	9.0	4.9	10.0	2.5	3.0	2.0	—	3.9	26.6	22.3	—	52.8	—
05/20/85	05/22/85	0.25	13.9	26.9	11.0	0.8	0.4	1.0	—	2.1	18.7	27.3	—	48.1	—
05/22/85	05/27/85	0.10	17.8	18.6	27.4	9.0	11.3	5.4	—	8.5	42.7	49.0	—	100.2	—
05/27/85	06/01/85	0.47	4.9	7.4	5.0	2.5	0.2	1.5	—	1.7	9.9	9.0	—	20.6	—
06/01/85	06/02/85	—	13.3	6.9	—	—	—	—	—	—	—	—	—	—	—
06/02/85	06/19/85	0.13	14.4	2.5	29.9	13.2	13.5	20.5	—	10.9	35.2	32.3	—	78.4	—
06/19/85	06/26/85	1.28	6.6	4.6	16.5	4.1	1.7	2.0	—	3.4	12.0	16.5	—	31.9	—
06/26/85	06/27/85	—	20.0	0.3	—	—	—	—	—	—	—	—	—	—	—
06/27/85	07/13/85	0.27	12.8	14.8	15.0	4.1	3.0	2.3	—	4.7	23.9	26.0	—	54.6	—
07/13/85	07/19/85	0.50	10.0	14.8	3.5	0.8	1.7	0.8	—	2.9	18.7	12.7	—	34.3	—
07/19/85	07/19/85	0.05	12.4	17.4	—	—	—	—	—	4.0	27.1	19.4	—	50.5	—
07/19/85	07/29/85	0.62	8.6	15.1	10.0	3.3	1.7	0.5	—	2.6	16.6	10.3	—	29.5	—
07/29/85	08/29/85	0.90	11.7	3.2	23.5	9.0	9.6	1.8	18.6	8.0	28.4	33.5	65.7	69.9	-3.1
08/29/85	09/11/85	0.45	13.1	12.9	4.0	4.1	7.0	1.3	15.7	4.7	21.6	27.1	45.0	53.4	-8.5
09/11/85	09/16/85	0.77	10.1	14.5	2.0	0.8	4.4	1.5	7.1	2.8	8.7	21.7	30.3	33.2	-4.6
09/16/85	09/24/85	0.87	8.5	11.5	3.0	1.6	2.2	1.0	7.9	2.3	14.1	15.7	27.2	32.1	-8.3

**Table 5. Precipitation volume, specific conductance, concentrations of dissolved ions, and percent charge balance for each sampling interval at Marvine Ranch, 1981-94—Continued**

[Precipitation volume in inches; specific conductance in microsiemens per centimeter at 25 degrees Celsius; dissolved ions in microequivalents per liter; --, no data]

Beginning date	Ending date	Precipitation	Specific conductance	Hydrogen (H <sup>+</sup> ) <sup>1</sup>	Calcium (Ca <sup>2+</sup> )	Magnesium (Mg <sup>2+</sup> )	Sodium (Na <sup>+</sup> )	Potassium (K <sup>+</sup> )	Ammonium (NH <sub>4</sub> <sup>+</sup> )	Chloride (Cl <sup>-</sup> )	Nitrate (NO <sub>3</sub> <sup>-</sup> )	Sulfate (SO <sub>4</sub> <sup>2-</sup> )	Sum cations	Sum anions	Percent charge balance
09/24/85	09/28/85	0.50	11.3	12.0	16.0	6.6	3.5	2.0	15.7	3.8	20.2	23.3	55.8	47.3	8.2
09/28/85	10/08/85	--	4.9	3.2	7.0	5.8	0.9	5.4	7.1	2.9	0.3	5.2	29.4	8.4	55.6
10/08/85	10/09/85	--	4.4	6.3	1.5	2.5	0.9	1.3	7.1	1.9	6.7	6.4	19.6	15.0	13.3
10/09/85	10/13/85	--	7.5	14.5	0.5	2.5	1.7	0.8	5.0	3.0	8.0	9.9	25.0	20.9	8.9
10/13/85	10/14/85	0.05	5.0	5.2	--	--	--	--	--	--	--	--	--	--	--
10/14/85	10/22/85	0.19	8.1	2.5	18.5	4.9	4.4	3.6	--	2.2	11.4	32.3	--	45.9	--
10/22/85	10/31/85	0.34	7.2	0.3	2.5	3.3	0.9	1.5	7.1	1.6	8.8	14.7	15.6	25.1	-23.3
10/31/85	11/06/85	0.37	8.1	11.5	4.0	3.3	0.9	1.0	5.7	1.4	10.7	10.9	26.4	23.0	6.9
11/06/85	11/09/85	2.22	3.3	3.3	5.0	1.6	2.6	0.8	2.1	1.2	5.7	4.7	15.4	11.6	14.1
11/09/85	11/10/85	0.38	19.9	0.9	69.9	23.9	74.0	6.9	--	20.8	41.6	38.3	--	100.7	--
11/10/85	11/11/85	0.08	6.0	1.4	--	--	--	--	--	5.3	12.8	14.8	--	32.9	--
11/11/85	11/15/85	0.47	4.2	4.7	5.5	0.8	1.3	1.3	2.1	2.5	8.1	6.1	15.7	16.7	-3.1
11/15/85	11/17/85	0.29	3.4	6.0	1.0	0.4	1.3	0.3	--	2.0	6.5	1.4	--	9.9	--
11/17/85	11/18/85	1.06	3.7	5.5	3.0	0.4	0.9	1.0	1.4	2.4	5.2	3.3	12.2	10.9	5.6
11/18/85	11/19/85	0.03	4.7	7.9	54.9	48.5	2.2	0.5	--	2.4	9.6	3.2	--	15.2	--
11/19/85	11/21/85	0.32	7.3	13.8	1.0	0.8	1.3	1.5	2.9	3.8	14.8	4.7	21.3	23.3	-4.5
11/21/85	11/24/85	0.25	9.4	6.2	24.5	7.4	3.5	3.8	--	4.4	21.9	26.7	--	53.0	--
11/24/85	11/27/85	0.11	6.0	10.2	4.5	1.6	1.7	1.5	--	3.1	8.1	9.9	--	21.1	--
11/27/85	11/29/85	0.27	6.9	13.2	3.0	0.8	1.3	1.3	6.4	1.3	11.7	8.8	26.0	21.8	8.8
11/29/85	11/30/85	0.36	2.7	6.2	0.5	0.4	0.9	1.0	1.4	1.3	4.2	2.4	10.4	7.9	13.7
11/30/85	12/01/85	0.21	4.4	9.5	2.0	0.4	1.7	1.0	2.1	2.1	6.0	5.3	16.7	13.4	11.0
12/01/85	12/02/85	0.42	4.3	7.9	2.0	0.4	1.7	1.5	1.4	0.9	4.7	4.2	14.9	9.8	20.6
12/02/85	12/04/85	0.35	6.3	12.9	1.0	0.4	1.3	1.3	3.6	1.1	9.5	8.3	20.5	18.9	4.1
12/08/85	12/13/85	0.19	2.9	5.1	2.5	2.5	2.2	0.8	--	1.8	4.4	1.5	--	7.7	--
12/13/85	12/14/85	0.01	--	--	--	--	--	--	--	--	--	--	--	--	--
12/14/85	12/16/85	--	4.9	7.6	9.5	3.3	3.9	1.0	--	2.2	9.4	6.5	--	18.1	--
12/16/85	12/18/85	0.02	--	--	--	--	--	--	--	--	--	--	--	--	--
12/18/85	12/24/85	0.02	--	--	--	--	--	--	--	--	--	--	--	--	--
12/24/85	12/31/85	0.31	9.4	21.4	3.5	2.5	3.5	0.3	2.1	1.7	11.2	13.9	33.3	26.8	10.8
12/31/85	01/07/86	1.22	3.3	6.6	5.0	2.5	0.4	0.1	0.7	1.3	3.6	3.7	15.3	8.6	28.0
01/07/86	01/17/86	0.19	15.0	34.7	7.0	2.5	1.7	0.8	--	1.7	14.6	29.2	--	45.5	--
01/17/86	02/03/86	0.78	8.4	12.3	12.0	4.1	1.3	1.0	7.1	3.1	3.7	1.9	37.8	8.7	62.6

**Table 5.** Precipitation volume, specific conductance, concentrations of dissolved ions, and percent charge balance for each sampling interval at Marvine Ranch, 1981–94—Continued

[Precipitation volume in inches; specific conductance in microsiemens per centimeter at 25 degrees Celsius; dissolved ions in microequivalents per liter; --, no data]

Beginning date	Ending date	Precipitation	Specific conductance	Hydrogen (H <sup>+</sup> ) <sup>1</sup>	Calcium (Ca <sup>2+</sup> )	Magnesium (Mg <sup>2+</sup> )	Sodium (Na <sup>+</sup> )	Potassium (K <sup>+</sup> )	Ammonium (NH <sub>4</sub> <sup>+</sup> )	Chloride (Cl <sup>-</sup> )	Nitrate (NO <sub>3</sub> <sup>-</sup> )	Sulfate (SO <sub>4</sub> <sup>2-</sup> )	Sum cations	Sum anions	Percent charge balance
02/03/86	02/04/86	0.05	3.8	7.2	0.5	2.5	3.9	0.5	--	3.1	3.7	1.9	--	8.7	--
02/04/86	02/07/86	0.11	17.1	40.7	3.0	3.3	3.9	0.8	--	1.2	33.7	13.6	--	48.5	--
02/07/86	02/12/86	0.34	8.1	17.8	5.0	2.5	2.2	0.3	2.9	2.1	18.9	4.1	30.7	25.1	10.0
02/12/86	02/13/86	0.13	11.4	22.4	11.0	2.5	4.4	0.8	--	2.2	18.7	19.7	--	40.6	--
02/13/86	02/14/86	0.71	3.9	7.4	5.0	2.5	1.3	0.5	0.7	1.5	4.3	4.3	17.4	10.1	26.5
02/14/86	02/15/86	0.10	12.2	21.4	--	--	--	--	--	--	--	--	--	--	--
02/15/86	02/20/86	1.83	3.0	2.1	12.0	4.1	2.2	0.3	2.9	1.9	4.1	4.5	23.6	10.5	38.4
02/20/86	02/21/86	0.24	3.1	4.1	7.0	2.5	2.2	0.8	4.3	2.2	4.9	3.5	20.9	10.6	32.7
02/21/86	03/09/86	0.84	3.0	1.6	1.5	2.5	3.0	0.5	5.1	1.3	5.2	5.1	14.2	11.6	10.1
03/09/86	03/10/86	0.06	2.4	2.9	--	--	--	--	--	1.7	3.1	2.5	--	7.3	--
03/10/86	03/11/86	0.10	3.8	2.3	19.0	1.6	15.7	2.8	--	3.8	8.8	6.0	--	18.6	--
03/11/86	03/12/86	0.18	5.2	9.3	15.5	0.8	10.9	1.3	--	1.6	6.4	9.5	--	17.5	--
03/12/86	03/20/86	1.40	4.4	7.6	2.5	1.6	1.7	0.5	5.7	1.6	6.7	7.3	19.6	15.6	11.4
03/26/86	04/03/86	0.96	5.6	7.6	5.0	1.6	2.2	1.0	11.4	1.3	7.2	14.1	28.8	22.6	12.1
04/03/86	04/04/86	0.09	13.9	30.2	--	--	--	--	--	--	--	--	--	--	--
04/04/86	04/10/86	0.23	3.4	5.9	2.5	0.8	3.0	0.8	5.0	1.3	4.7	4.5	18.0	10.5	26.3
04/10/86	04/12/86	0.27	3.6	5.6	1.0	0.8	3.9	0.8	6.4	1.1	5.8	5.2	18.5	12.1	20.9
04/12/86	04/13/86	0.77	6.2	0.7	39.4	6.6	2.6	2.3	8.6	3.6	7.8	9.5	60.2	20.9	48.5
04/13/86	04/14/86	0.02	6.5	0.6	--	--	--	--	--	4.2	7.2	8.0	--	19.4	--
04/14/86	04/18/86	0.80	6.2	0.5	43.4	6.6	3.5	1.0	7.1	1.5	7.7	9.7	62.1	18.9	53.3
04/18/86	04/25/86	0.31	7.2	0.4	44.9	8.2	4.4	1.8	12.1	2.4	9.6	12.6	71.8	24.6	49.0
04/25/86	04/26/86	0.45	3.7	2.8	9.0	3.3	3.9	1.0	8.6	2.1	7.0	8.5	28.6	17.6	23.8
04/26/86	04/27/86	0.23	4.6	7.9	--	--	--	--	--	3.1	8.0	6.9	--	18.0	--
04/27/86	05/09/86	1.64	2.9	2.6	10.5	3.3	1.7	0.3	3.6	1.9	5.0	6.2	22.0	13.1	25.4
05/09/86	05/13/86	0.02	9.2	7.6	17.5	4.9	8.7	1.3	--	4.2	24.4	24.0	--	52.6	--
05/13/86	05/17/86	0.48	4.5	3.0	14.0	3.3	3.9	1.0	11.4	2.7	10.2	11.2	36.6	24.1	20.6
05/17/86	06/17/86	0.43	7.9	10.5	15.0	4.1	3.0	4.6	2.1	--	--	--	39.3	--	--
06/17/86	07/05/86	1.04	7.9	9.8	15.0	4.1	3.0	3.3	8.6	--	--	--	43.8	--	--
07/05/86	07/06/86	--	29.8	0.4	154.7	20.6	56.6	9.5	--	--	--	--	--	--	--
07/06/86	07/07/86	--	6.1	0.8	16.5	4.9	6.5	2.8	12.1	--	--	--	43.6	--	--
07/07/86	07/09/86	--	9.8	18.2	10.0	3.3	3.0	1.3	6.4	--	--	--	42.2	--	--
07/09/86	07/13/86	--	9.4	0.8	--	--	--	--	--	--	--	--	--	--	--
07/13/86	07/14/86	--	13.6	8.1	--	--	--	--	--	--	--	--	--	--	--
07/14/86	07/16/86	--	4.8	6.2	9.0	2.5	2.2	1.8	6.4	--	--	--	28.1	--	--

**Table 5. Precipitation volume, specific conductance, concentrations of dissolved ions, and percent charge balance for each sampling interval at Marvine Ranch, 1981–94—Continued**

[Precipitation volume in inches; specific conductance in microsiemens per centimeter at 25 degrees Celsius; dissolved ions in microequivalents per liter; --, no data]

Beginning date	Ending date	Precipitation	Specific conductance	Hydrogen (H <sup>+</sup> ) <sup>1</sup>	Calcium (Ca <sup>2+</sup> )	Magnesium (Mg <sup>2+</sup> )	Sodium (Na <sup>+</sup> )	Potassium (K <sup>+</sup> )	Ammonium (NH <sub>4</sub> <sup>+</sup> )	Chloride (Cl <sup>-</sup> )	Nitrate (NO <sub>3</sub> <sup>-</sup> )	Sulfate (SO <sub>4</sub> <sup>2-</sup> )	Sum cations	Sum anions	Percent charge balance
07/16/86	07/17/86	--	4.9	8.5	--	--	--	--	--	2.8	8.6	7.0	--	18.4	--
07/17/86	07/18/86	--	14.9	21.4	--	--	--	--	--	6.0	31.6	33.4	--	71.0	--
07/18/86	07/21/86	0.22	8.7	12.9	10.0	3.3	5.7	2.8	15.0	4.9	16.8	18.9	49.7	40.6	10.1
07/21/86	07/25/86	0.63	7.9	13.8	5.0	3.3	2.6	2.3	--	2.6	13.2	14.2	--	30.0	--
07/25/86	07/31/86	0.17	15.2	25.1	17.0	4.9	4.4	1.8	--	4.2	26.3	35.3	--	65.8	--
07/31/86	08/13/86	0.71	10.5	15.5	14.5	4.1	2.6	2.8	16.4	3.3	19.7	20.6	55.9	43.6	12.4
08/13/86	08/22/86	0.87	11.5	24.5	6.0	3.3	2.6	1.0	15.7	2.6	18.6	19.1	53.1	40.3	13.7
08/22/86	08/23/86	0.05	9.3	15.1	13.5	4.1	2.6	3.3	15.7	4.0	18.8	20.4	54.3	43.2	11.4
08/23/86	08/24/86	--	10.7	20.9	6.0	3.3	2.6	2.3	16.4	2.6	19.4	19.9	51.5	41.9	10.3
08/24/86	08/25/86	0.35	6.6	12.0	6.0	2.5	2.2	1.8	9.3	2.5	12.9	10.0	33.8	25.4	14.2
08/25/86	09/08/86	0.42	39.9	0.7	214.6	98.7	15.2	153.4	--	17.5	0.7	37.3	--	55.5	--
09/08/86	09/12/86	0.94	4.8	0.7	24.5	6.6	5.7	1.5	7.9	3.4	10.0	11.7	46.9	25.1	30.3
09/12/86	09/22/86	0.80	7.3	1.0	43.9	7.4	9.6	5.6	6.4	6.2	17.9	15.0	73.9	39.1	30.8
09/22/86	09/25/86	0.68	2.0	2.0	9.5	2.5	4.8	0.8	--	1.1	1.4	2.3	--	4.8	--
09/25/86	09/26/86	0.23	3.3	5.2	7.5	2.5	6.1	0.5	--	1.9	4.5	4.0	--	10.4	--
09/26/86	09/28/86	0.60	11.0	30.9	7.5	2.5	8.3	0.5	6.4	3.1	12.6	18.5	56.1	34.2	24.3
09/28/86	10/04/86	1.08	9.6	21.4	12.5	3.3	9.1	0.8	5.7	4.8	12.9	17.3	52.8	35.0	20.3
10/04/86	10/08/86	0.09	13.1	8.9	--	--	--	--	--	9.9	35.5	40.4	--	85.8	--
10/08/86	10/24/86	1.12	8.4	19.1	9.5	2.5	1.3	1.3	--	2.1	11.8	14.6	--	28.5	--
10/24/86	11/02/86	1.01	13.9	22.9	21.0	4.9	2.6	2.0	--	2.1	26.0	32.9	--	61.0	--
11/02/86	11/07/86	0.75	3.9	7.8	5.0	1.6	0.2	1.0	--	0.6	5.5	4.6	--	10.7	--
11/07/86	11/09/86	0.76	7.0	0.5	54.9	15.6	4.8	6.1	--	5.4	8.4	12.7	--	26.5	--
11/09/86	11/19/86	0.77	3.7	3.2	14.0	4.1	2.6	1.3	--	2.5	6.9	8.5	--	17.9	--
11/19/86	11/22/86	0.21	15.3	30.9	14.0	3.3	1.3	1.8	--	1.6	22.3	31.9	--	55.8	--
11/22/86	11/26/86	0.02	11.6	3.4	--	--	--	--	--	5.9	32.4	24.4	--	62.7	--
11/26/86	12/19/86	0.82	7.9	15.5	11.0	2.5	1.7	1.3	--	1.4	10.0	12.3	--	23.7	--
12/19/86	01/02/87	0.83	6.2	12.9	9.0	2.5	1.3	0.8	--	1.5	10.5	8.5	--	20.5	--
01/02/87	01/07/87	0.18	7.4	12.0	17.5	4.1	2.2	2.6	--	1.7	13.9	13.3	--	28.9	--
01/07/87	01/21/87	0.04	8.0	15.5	11.0	1.6	2.6	1.3	--	2.4	17.6	6.9	--	26.9	--
01/21/87	01/24/87	0.07	15.2	31.6	--	--	--	--	--	--	--	--	--	--	--
01/24/87	01/25/87	--	7.8	16.2	--	--	--	--	--	2.8	16.3	5.4	--	24.5	--
01/25/87	01/29/87	0.46	3.2	2.4	15.0	1.6	0.9	1.8	2.9	1.3	5.3	8.1	24.6	14.7	25.2

**Table 5. Precipitation volume, specific conductance, concentrations of dissolved ions, and percent charge balance for each sampling interval at Marvine Ranch, 1981–94—Continued**

[Precipitation volume in inches; specific conductance in microsiemens per centimeter at 25 degrees Celsius; dissolved ions in microequivalents per liter; --, no data]

Beginning date	Ending date	Precipitation	Specific conductance	Hydrogen (H <sup>+</sup> ) <sup>1</sup>	Calcium (Ca <sup>2+</sup> )	Magnesium (Mg <sup>2+</sup> )	Sodium (Na <sup>+</sup> )	Potassium (K <sup>+</sup> )	Ammonium (NH <sub>4</sub> <sup>+</sup> )	Chloride (Cl <sup>-</sup> )	Nitrate (NO <sub>3</sub> <sup>-</sup> )	Sulfate (SO <sub>4</sub> <sup>2-</sup> )	Sum cations	Sum anions	Percent charge balance
01/29/87	02/04/87	0.11	6.1	10.7	8.5	0.8	3.5	0.5	--	2.1	14.7	5.0	--	21.8	--
02/04/87	02/13/87	0.26	9.1	19.5	5.0	0.8	2.6	1.0	5.7	2.8	10.5	15.2	34.6	28.5	9.7
02/13/87	02/15/87	0.84	2.6	4.9	3.5	0.4	1.7	0.3	1.4	2.1	2.7	2.9	12.2	7.7	22.6
02/15/87	02/25/87	0.10	2.7	4.3	4.5	0.8	1.7	0.5	--	1.3	4.0	4.2	--	9.5	--
02/25/87	03/11/87	1.08	5.8	12.9	2.5	0.4	1.3	0.8	4.3	1.4	6.0	8.3	22.2	15.7	17.2
03/11/87	03/13/87	0.07	6.6	12.3	11.5	1.6	2.2	0.5	--	1.7	10.0	11.9	--	23.6	--
03/13/87	03/14/87	0.30	6.4	0.5	38.4	8.2	5.7	1.3	7.9	2.8	13.1	12.3	62.0	28.2	37.5
03/14/87	03/17/87	0.18	3.8	7.4	6.0	0.8	1.7	0.5	--	1.4	5.0	5.8	--	12.2	--
03/17/87	03/20/87	0.66	4.4	2.5	19.5	3.3	2.2	0.5	6.4	2.6	11.0	9.4	34.4	23.0	19.9
03/20/87	03/23/87	0.09	12.6	11.2	--	--	--	--	--	4.8	32.7	27.7	--	65.2	--
03/23/87	03/27/87	0.22	7.2	5.9	25.4	4.9	3.0	1.3	--	3.1	17.3	19.8	--	40.2	--
03/27/87	04/06/87	0.17	7.7	14.8	6.5	1.6	1.7	0.8	--	1.7	8.7	13.3	--	23.7	--
04/06/87	04/10/87	0.07	12.2	1.3	42.4	9.9	7.0	2.3	--	6.5	44.0	24.6	--	75.1	--
04/10/87	04/13/87	0.45	5.1	4.1	14.5	3.3	4.4	3.1	8.6	4.2	12.4	8.7	38.0	25.3	20.1
04/13/87	04/28/87	0.24	16.6	0.3	89.8	16.5	20.4	5.1	--	14.4	22.7	31.0	--	68.1	--
04/28/87	05/03/87	0.53	5.9	7.6	9.5	2.5	1.7	1.3	10.0	2.7	8.5	13.1	32.6	24.3	14.6
05/03/87	05/15/87	0.17	6.5	1.8	--	--	--	--	--	4.5	15.3	16.7	--	36.5	--
05/15/87	05/20/87	0.74	7.6	9.3	8.0	3.3	1.7	1.3	13.6	2.8	13.1	17.3	37.2	33.2	5.7
05/20/87	05/21/87	0.36	7.1	12.9	4.0	1.6	1.7	1.0	8.6	24.5	7.4	15.0	29.8	46.9	-22.3
05/21/87	05/26/87	0.20	9.0	14.8	8.5	2.5	2.2	1.3	10.0	2.8	12.1	19.0	39.3	33.9	7.4
05/26/87	05/31/87	0.34	5.7	5.8	7.5	1.6	27.4	1.5	4.3	4.2	8.1	10.4	48.1	22.7	35.9
05/31/87	06/09/87	0.73	5.1	2.8	17.5	2.5	2.2	2.8	5.7	3.7	11.8	14.0	33.5	29.5	6.3
06/09/87	06/10/87	0.13	4.9	6.8	5.5	1.6	--	1.5	4.3	2.7	8.4	8.7	--	19.8	--
06/10/87	06/29/87	0.24	10.0	11.5	15.5	3.3	10.9	5.4	9.3	5.6	16.1	25.0	55.9	46.7	9.0
06/29/87	07/01/87	0.18	--	--	16.0	3.3	7.8	5.1	--	7.9	7.7	8.3	--	23.9	--
07/01/87	07/18/87	1.02	--	--	12.0	2.5	3.9	1.5	6.4	3.7	9.4	9.6	--	22.7	--
07/18/87	07/26/87	0.16	--	--	25.0	4.1	2.2	1.3	--	2.7	16.6	19.2	--	38.5	--
07/26/87	07/29/87	1.03	--	--	10.0	1.6	1.7	1.0	7.1	2.5	10.6	7.9	--	21.0	--
07/29/87	07/30/87	0.16	--	--	10.5	1.6	3.9	1.8	--	4.8	13.5	7.5	--	25.8	--
07/30/87	07/31/87	0.07	6.8	10.5	--	--	--	--	--	2.0	14.8	9.4	--	26.2	--
07/31/87	08/07/87	0.93	4.7	6.9	6.5	2.5	1.3	1.0	6.4	1.8	8.1	7.1	24.6	17.0	18.3
08/07/87	08/08/87	--	4.5	3.4	--	--	--	--	--	3.1	8.7	7.7	--	19.5	--
08/08/87	08/14/87	0.39	8.4	1.2	41.9	11.5	4.4	2.6	17.8	6.2	26.6	22.5	79.4	55.3	17.9
08/14/87	08/22/87	0.18	9.1	2.6	39.4	11.5	7.8	1.8	10.0	8.2	22.6	26.9	73.1	57.7	11.8

**Table 5. Precipitation volume, specific conductance, concentrations of dissolved ions, and percent charge balance for each sampling interval at Marvine Ranch, 1981–94—Continued**

[Precipitation volume in inches; specific conductance in microsiemens per centimeter at 25 degrees Celsius; dissolved ions in microequivalents per liter; --, no data]

Beginning date	Ending date	Precipitation	Specific conductance	Hydrogen (H <sup>+</sup> ) <sup>1</sup>	Calcium (Ca <sup>2+</sup> )	Magnesium (Mg <sup>2+</sup> )	Sodium (Na <sup>+</sup> )	Potassium (K <sup>+</sup> )	Ammonium (NH <sub>4</sub> <sup>+</sup> )	Chloride (Cl <sup>-</sup> )	Nitrate (NO <sub>3</sub> <sup>-</sup> )	Sulfate (SO <sub>4</sub> <sup>2-</sup> )	Sum cations	Sum anions	Percent charge balance
08/22/87	08/24/87	0.57	5.6	9.8	4.5	0.8	1.7	0.8	4.3	1.3	7.6	6.0	21.9	14.9	19.0
08/24/87	08/26/87	0.69	2.6	5.2	4.5	1.6	0.9	0.8	2.9	1.3	3.7	2.7	15.9	7.7	34.7
08/26/87	09/04/87	0.13	13.0	0.5	42.9	19.7	8.7	3.1	--	3.7	14.5	19.8	--	38.0	--
09/04/87	09/15/87	0.16	8.5	4.6	27.4	4.9	9.1	3.1	28.6	10.7	23.2	18.7	77.7	52.6	19.3
09/15/87	09/17/87	0.13	7.2	3.4	3.0	11.5	7.0	2.8	--	5.6	0.5	20.6	--	26.7	--
09/17/87	10/14/87	0.42	5.4	9.3	7.5	1.6	3.0	1.3	7.1	1.9	6.3	11.7	29.8	19.9	19.9
10/14/87	10/17/87	0.25	11.3	9.8	18.0	3.3	7.8	5.1	--	8.5	20.3	25.8	--	54.6	--
10/17/87	11/03/87	1.54	3.6	6.3	3.5	0.4	0.4	0.5	2.9	1.7	4.5	5.8	14.0	12.0	7.7
11/03/87	11/13/87	0.54	4.4	10.0	5.0	0.8	3.9	1.8	3.6	2.5	9.4	8.3	25.1	20.2	10.8
11/13/87	11/16/87	0.35	5.7	10.0	34.9	1.6	0.9	1.0	1.4	13.8	10.5	10.0	49.8	34.3	18.4
11/16/87	11/17/87	0.50	5.5	0.8	14.5	2.5	5.2	6.4	4.3	6.2	16.8	4.2	33.7	27.2	10.7
11/17/87	11/24/87	0.20	6.6	13.2	12.5	1.6	1.7	1.8	5.0	3.9	17.1	8.5	35.8	29.5	9.6
11/24/87	12/20/87	0.94	--	--	--	--	--	--	--	--	--	--	--	--	--
12/20/87	12/23/87	1.42	6.6	4.8	8.5	0.8	1.3	1.0	2.1	2.5	8.1	5.8	18.5	16.4	6.0
12/23/87	12/24/87	0.06	4.9	10.7	5.5	0.8	0.9	0.5	--	3.4	12.9	2.5	18.4	18.8	-1.1
12/24/87	12/27/87	0.49	4.7	5.1	6.5	0.8	1.3	0.8	3.6	2.3	10.3	3.1	18.1	15.7	7.1
12/27/87	12/30/87	0.13	4.2	5.0	14.5	2.5	1.3	2.0	2.9	3.1	15.0	4.8	28.2	22.9	10.4
12/30/87	01/01/88	--	18.1	45.7	15.0	4.9	2.6	1.0	--	5.9	56.9	5.8	--	68.6	--
01/01/88	01/05/88	0.53	4.9	10.5	6.0	0.8	0.9	0.1	1.4	1.2	8.4	6.7	19.7	16.3	9.4
01/05/88	01/06/88	0.50	3.6	4.9	9.0	1.6	1.3	1.0	1.4	--	--	--	19.2	--	--
01/06/88	01/09/88	1.00	3.3	6.2	9.0	1.6	2.2	0.5	5.7	1.7	6.5	2.9	25.2	11.1	38.8
01/09/88	01/11/88	0.42	5.0	9.3	6.5	0.8	0.9	0.3	--	1.9	12.4	3.3	--	17.6	--
01/11/88	01/11/88	0.22	3.6	1.0	--	--	--	--	--	4.5	9.2	7.3	--	21.0	--
01/11/88	01/16/88	0.33	7.3	11.0	13.5	2.5	4.8	1.3	4.3	3.9	16.5	13.3	37.4	33.7	5.2
01/16/88	01/17/88	0.11	4.7	22.9	--	--	--	--	--	5.1	14.7	9.8	--	29.6	--
01/17/88	01/18/88	0.09	4.7	2.2	--	--	--	--	--	6.2	7.7	4.8	--	18.7	--
01/18/88	01/29/88	0.33	7.6	9.8	17.5	3.3	3.0	2.0	6.4	4.5	24.2	8.7	42.0	37.4	5.8
01/29/88	02/01/88	1.23	12.3	19.5	9.0	1.6	4.4	1.0	10.0	3.4	24.5	19.4	45.5	47.3	-1.9
02/01/88	02/02/88	0.37	12.1	15.8	13.5	3.3	5.7	2.0	16.4	5.9	42.6	11.9	56.7	60.4	-3.2
02/02/88	02/20/88	1.08	5.0	5.4	13.5	2.5	3.5	1.0	7.1	3.1	15.6	8.3	33.0	27.0	10.0
02/20/88	02/28/88	0.16	10.2	22.4	5.0	0.4	0.9	0.3	--	1.9	12.3	18.1	--	32.3	--
02/28/88	03/03/88	0.39	8.2	16.6	8.5	1.6	2.6	0.5	8.6	2.2	13.4	14.8	38.4	30.4	11.6

**Table 5.** Precipitation volume, specific conductance, concentrations of dissolved ions, and percent charge balance for each sampling interval at Marvine Ranch, 1981–94—Continued

[Precipitation volume in inches; specific conductance in microsiemens per centimeter at 25 degrees Celsius; dissolved ions in microequivalents per liter; --, no data]

Beginning date	Ending date	Precipitation	Specific conductance	Hydrogen (H <sup>+</sup> ) <sup>1</sup>	Calcium (Ca <sup>2+</sup> )	Magnesium (Mg <sup>2+</sup> )	Sodium (Na <sup>+</sup> )	Potassium (K <sup>+</sup> )	Ammonium (NH <sub>4</sub> <sup>+</sup> )	Chloride (Cl <sup>-</sup> )	Nitrate (NO <sub>3</sub> <sup>-</sup> )	Sulfate (SO <sub>4</sub> <sup>2-</sup> )	Sum cations	Sum anions	Percent charge balance
03/03/88	03/07/88	0.91	2.7	2.0	10.5	1.6	0.9	0.5	5.7	2.1	6.0	6.5	21.2	14.6	18.4
03/07/88	03/08/88	0.27	3.2	3.8	9.0	0.8	1.3	0.5	--	1.7	7.9	5.2	--	14.8	--
03/08/88	03/11/88	0.44	16.6	0.3	104.8	14.0	65.3	3.1	--	12.1	16.3	23.3	--	51.7	--
03/11/88	03/30/88	0.96	32.0	0.1	159.7	24.7	165.3	4.3	7.1	34.7	16.1	112.7	361.2	163.5	37.7
03/30/88	04/05/88	0.24	13.1	0.1	7.5	18.9	22.6	2.8	--	17.8	26.3	31.5	--	75.6	--
04/05/88	04/22/88	0.61	4.5	6.6	8.0	1.6	1.3	0.8	5.7	0.1	8.7	12.3	24.0	21.1	6.4
04/22/88	04/23/88	0.29	3.5	4.9	3.0	0.4	1.3	0.3	5.7	0.1	7.9	7.1	15.6	15.1	1.6
04/23/88	04/24/88	0.35	4.6	5.2	4.5	0.8	1.3	0.8	7.9	0.1	8.1	10.4	20.5	18.6	4.9
04/24/88	04/25/88	0.79	3.7	3.0	8.0	2.5	2.2	0.8	10.7	3.7	7.1	14.0	27.2	24.8	4.6
04/25/88	04/26/88	--	6.2	0.2	--	--	--	--	--	6.2	7.3	11.7	--	25.2	--
04/26/88	05/17/88	0.99	4.1	1.1	28.4	4.9	4.4	1.0	5.7	6.8	12.4	15.2	45.5	34.4	13.9
05/17/88	05/18/88	0.71	5.8	2.3	22.5	3.3	4.4	1.0	4.3	2.8	12.1	15.2	37.8	30.1	11.3
05/18/88	05/19/88	0.29	5.8	2.8	23.0	4.1	4.4	1.3	5.0	3.1	12.1	15.4	40.6	30.6	14.0
05/19/88	06/01/88	0.17	17.4	0.3	149.7	22.2	16.5	6.4	--	--	--	--	--	--	--
06/01/88	06/24/88	0.58	14.8	8.9	36.4	7.4	4.4	6.6	18.6	5.1	23.1	39.6	82.3	67.8	9.7
06/24/88	06/25/88	0.15	11.0	3.0	28.9	8.2	5.2	7.7	--	4.8	22.9	39.8	--	67.5	--
06/25/88	06/27/88	0.05	7.6	5.8	--	--	--	--	--	2.8	18.9	16.2	--	37.9	--
06/27/88	06/28/88	0.05	9.0	12.0	18.0	2.5	1.7	1.5	11.4	2.3	18.7	15.2	47.1	36.2	13.1
06/28/88	08/02/88	0.97	9.4	6.5	41.4	5.8	3.9	2.3	13.6	4.2	22.9	20.8	73.5	47.9	21.1
08/02/88	08/03/88	0.12	8.3	4.7	42.4	5.8	3.5	2.0	--	5.4	23.1	21.5	--	50.0	--
08/03/88	08/04/88	0.53	10.1	5.2	37.9	4.9	2.6	2.0	14.3	4.5	22.6	20.2	66.9	47.3	17.2
08/04/88	08/07/88	0.30	8.7	12.9	15.5	2.5	2.2	0.5	11.4	2.3	14.7	16.0	45.0	33.0	15.4
08/07/88	08/13/88	0.05	17.6	17.8	--	--	--	--	--	5.9	44.0	42.9	--	92.8	--
08/13/88	09/11/88	1.70	13.9	18.2	22.0	4.9	3.9	2.3	12.1	3.4	23.7	28.5	63.4	55.6	6.6
09/11/88	09/12/88	1.39	2.8	5.4	2.5	0.4	4.4	1.3	0.7	2.3	3.9	3.1	14.7	9.3	22.5
09/12/88	09/22/88	0.84	7.5	6.8	12.0	3.3	7.0	1.3	10.0	7.6	13.9	16.7	40.4	38.2	2.8
09/22/88	11/09/88	1.99	7.5	2.1	27.4	8.2	6.1	2.6	9.3	5.9	20.8	22.3	55.7	49.0	6.4
11/09/88	11/12/88	0.69	5.7	9.1	7.0	1.6	3.0	0.8	4.3	4.2	8.9	9.0	25.8	22.1	7.7
11/12/88	11/19/88	0.84	4.4	5.2	11.5	1.6	2.6	1.8	1.4	2.3	10.3	7.9	24.1	20.5	8.1
11/19/88	11/24/88	0.24	38.4	0.4	204.6	90.5	21.3	69.0	--	37.8	23.9	74.4	--	136.1	--
11/24/88	11/26/88	0.26	2.8	1.2	7.5	1.6	2.2	2.3	--	9.9	7.7	3.1	--	20.7	--
11/26/88	11/28/88	0.14	3.3	3.7	9.5	1.6	1.7	1.0	2.1	2.4	7.7	4.2	19.6	14.3	15.6
11/28/88	12/07/88	0.68	4.6	5.5	4.0	0.4	1.7	1.3	--	1.4	7.9	2.3	--	11.6	--
12/07/88	12/15/88	0.48	10.7	19.1	10.5	1.6	1.7	1.3	3.6	2.0	27.9	5.0	37.8	34.9	4.0

**Table 5. Precipitation volume, specific conductance, concentrations of dissolved ions, and percent charge balance for each sampling interval at Marvine Ranch, 1981-94—Continued**

[Precipitation volume in inches; specific conductance in microsiemens per centimeter at 25 degrees Celsius; dissolved ions in microequivalents per liter; --, no data]

Beginning date	Ending date	Precipitation	Specific conductance	Hydrogen (H <sup>+</sup> ) <sup>1</sup>	Calcium (Ca <sup>2+</sup> )	Magnesium (Mg <sup>2+</sup> )	Sodium (Na <sup>+</sup> )	Potassium (K <sup>+</sup> )	Ammonium (NH <sub>4</sub> <sup>+</sup> )	Chloride (Cl <sup>-</sup> )	Nitrate (NO <sub>3</sub> <sup>-</sup> )	Sulfate (SO <sub>4</sub> <sup>2-</sup> )	Sum cations	Sum anions	Percent charge balance
12/15/88	12/19/88	0.43	5.3	10.2	10.5	1.6	1.7	0.5	5.0	7.3	6.1	7.5	29.5	20.9	17.1
12/19/88	12/31/88	2.14	8.5	15.1	10.5	1.6	1.7	0.5	5.0	2.8	20.2	7.5	34.4	30.5	6.0
12/31/88	01/11/89	1.38	3.5	5.1	8.5	1.6	1.3	0.5	5.7	1.7	7.7	2.3	22.7	11.7	32.0
01/11/89	01/25/89	0.48	7.6	16.2	9.0	0.8	1.3	0.5	--	1.7	15.6	4.4	--	21.7	--
01/25/89	02/05/89	1.01	5.9	4.8	17.0	3.3	3.5	1.5	3.6	2.3	16.5	8.1	33.7	26.9	11.2
02/05/89	02/11/89	0.69	16.2	24.5	--	--	--	--	--	29.3	16.3	32.5	--	78.1	--
02/11/89	02/12/89	0.15	6.2	11.5	5.0	0.8	1.7	0.5	2.9	4.5	6.1	10.0	22.4	20.6	4.2
02/12/89	02/14/89	0.24	13.7	27.5	8.0	1.6	16.1	0.3	--	28.2	29.7	5.6	--	63.5	--
02/14/89	02/20/89	0.56	7.4	13.2	7.0	0.8	1.3	0.1	2.9	2.8	11.3	8.7	25.3	22.8	5.2
02/20/89	03/20/89	1.32	17.2	0.1	119.8	31.3	34.8	4.1	5.7	11.6	19.4	37.3	195.8	68.3	48.3
03/20/89	03/31/89	0.44	1.8	1.3	8.5	1.6	2.2	0.8	2.9	0.3	2.6	2.9	17.3	5.8	49.8
03/31/89	04/05/89	1.47	5.7	0.4	27.4	5.8	10.4	1.5	10.7	5.4	9.2	15.8	56.2	30.4	29.8
04/14/89	04/28/89	0.20	1.6	0.1	104.8	18.1	12.2	6.6	--	16.6	35.6	29.2	--	81.4	--
04/28/89	05/01/89	0.18	8.2	0.9	28.4	8.2	2.6	1.3	--	2.5	23.7	19.2	--	45.4	--
05/01/89	05/12/89	0.39	45.8	--	279.4	39.5	34.4	7.9	34.3	20.9	52.1	78.3	395.5	151.3	44.7
05/12/89	05/17/89	0.34	9.5	1.7	23.0	5.8	6.1	1.3	17.1	7.9	18.4	29.2	55.0	55.5	-0.5
05/17/89	06/10/89	0.26	10.2	3.5	32.9	8.2	31.8	2.6	15.7	9.9	28.4	24.8	94.7	63.1	20.0
06/10/89	06/11/89	0.27	11.6	5.9	23.0	7.4	28.3	2.6	--	9.9	33.4	21.2	--	64.5	--
06/11/89	06/17/89	0.15	12.7	0.1	54.9	14.0	36.5	2.3	--	7.9	16.9	16.2	--	41.0	--
06/17/89	07/15/89	0.57	8.9	5.4	23.5	5.8	1.3	2.0	18.6	5.4	19.7	21.9	56.6	47.0	9.3
07/15/89	07/23/89	0.55	6.0	6.6	8.0	3.3	2.6	0.8	--	3.7	9.5	13.1	--	26.3	--
07/23/89	07/24/89	0.60	6.7	8.1	3.5	1.6	2.2	0.5	14.3	2.5	12.6	10.0	30.2	25.1	9.2
07/24/89	08/02/89	0.62	9.4	12.3	7.5	1.6	3.9	0.8	15.0	2.3	18.9	13.7	41.1	34.9	8.2
08/02/89	08/12/89	1.08	6.2	2.1	10.5	2.5	7.8	3.8	9.3	8.2	9.8	9.8	36.0	27.8	12.9
08/17/89	08/18/89	0.14	3.1	1.0	9.0	3.3	2.2	1.3	--	3.4	6.3	5.2	--	14.9	--
08/18/89	08/21/89	0.51	5.6	3.6	10.0	3.3	4.8	0.5	12.1	3.1	11.5	11.2	34.3	25.8	14.1
08/21/89	09/08/89	0.57	12.3	1.6	59.9	11.5	7.4	4.6	--	9.3	35.3	37.1	--	81.7	--
09/08/89	09/12/89	0.56	7.0	7.2	17.0	3.3	2.6	1.0	9.3	2.8	18.7	8.7	40.4	30.2	14.4
09/12/89	09/20/89	0.43	5.0	7.6	6.5	1.6	1.7	0.1	3.6	1.4	7.6	6.2	21.1	15.2	16.3
09/20/89	10/17/89	0.91	13.8	0.2	69.9	9.0	3.5	2.0	7.9	7.1	21.1	19.0	92.5	47.2	32.4
10/17/89	10/22/89	0.10	5.1	1.3	12.5	4.1	2.6	0.8	--	3.9	6.6	10.6	--	21.1	--
10/27/89	10/28/89	0.17	7.7	0.4	41.9	5.8	2.6	2.8	7.1	2.5	11.0	11.0	60.6	24.5	42.4

**Table 5. Precipitation volume, specific conductance, concentrations of dissolved ions, and percent charge balance for each sampling interval at Marvine Ranch, 1981–94—Continued**

[Precipitation volume in inches; specific conductance in microsiemens per centimeter at 25 degrees Celsius; dissolved ions in microequivalents per liter; --, no data]

Beginning date	Ending date	Precipitation	Specific conductance	Hydrogen (H <sup>+</sup> ) <sup>1</sup>	Calcium (Ca <sup>2+</sup> )	Magnesium (Mg <sup>2+</sup> )	Sodium (Na <sup>+</sup> )	Potassium (K <sup>+</sup> )	Ammonium (NH <sub>4</sub> <sup>+</sup> )	Chloride (Cl <sup>-</sup> )	Nitrate (NO <sub>3</sub> <sup>-</sup> )	Sulfate (SO <sub>4</sub> <sup>2-</sup> )	Sum cations	Sum anions	Percent charge balance
10/28/89	10/29/89	0.01	7.3	0.9	--	--	--	--	--	--	--	--	--	--	--
10/29/89	11/05/89	0.14	7.4	4.4	21.0	4.1	3.5	1.3	--	--	--	--	--	--	--
11/05/89	11/07/89	0.12	16.1	11.7	35.9	7.4	8.3	1.5	--	10.2	47.1	22.9	--	80.2	--
11/07/89	11/21/89	--	18.2	0.1	--	--	--	--	--	16.9	11.3	27.1	--	55.3	--
11/21/89	11/26/89	0.55	6.7	7.6	10.0	1.6	1.7	0.8	7.1	14.1	13.5	7.9	28.8	35.5	-10.4
11/26/89	11/28/89	1.05	3.2	0.5	21.0	3.3	1.3	1.3	3.6	1.7	3.9	3.7	31.0	9.3	53.8
11/28/89	12/08/89	0.35	77.3	--	344.3	123.4	87.0	89.5	14.3	53.6	101.0	188.7	658.5	343.3	31.5
12/08/89	12/12/89	0.19	48.1	1.2	17.0	3.3	3.5	1.3	7.1	2.6	--	5.2	33.4	7.8	62.1
12/12/89	12/14/89	--	5.8	6.8	10.0	1.6	1.7	0.1	2.9	3.1	15.3	1.9	23.1	20.3	6.5
12/14/89	12/17/89	--	5.1	4.9	10.0	1.6	1.3	0.1	3.6	3.1	11.5	3.7	21.5	18.3	8.0
12/17/89	12/21/89	--	9.7	16.2	11.5	2.5	2.2	1.0	2.9	6.5	20.5	2.5	36.3	29.5	10.3
12/21/89	01/01/90	--	9.6	17.4	9.5	1.6	2.2	0.8	4.3	2.3	21.9	3.7	35.8	27.9	12.4
01/01/90	01/03/90	0.03	8.4	9.5	--	--	--	--	--	2.3	24.7	7.1	--	34.1	--
01/03/90	01/10/90	0.17	7.4	4.4	--	--	--	--	--	5.1	--	6.2	--	--	--
01/10/90	01/12/90	--	3.2	0.9	14.5	3.3	2.2	0.5	--	1.6	5.0	5.6	--	12.2	--
01/12/90	01/14/90	0.02	13.2	15.5	--	--	--	--	--	--	--	--	--	--	--
01/14/90	01/31/90	0.68	6.6	0.3	42.4	7.4	7.4	1.5	3.6	5.4	--	9.4	62.6	--	--
01/31/90	02/02/90	0.14	9.0	14.5	11.0	1.6	1.7	0.5	--	1.2	11.3	4.8	--	17.3	--
02/02/90	02/09/90	0.25	4.7	5.6	12.0	1.6	1.3	0.8	1.4	1.5	--	4.0	22.7	--	--
02/09/90	02/15/90	0.68	62.2	--	548.9	23.9	33.9	5.4	5.7	8.2	--	19.8	617.8	--	--
02/15/90	02/18/90	0.24	4.6	0.1	30.4	4.1	1.3	1.3	2.1	3.1	--	6.0	39.3	--	--
02/18/90	03/08/90	0.92	10.9	17.0	10.5	1.6	1.3	0.5	10.7	2.6	--	17.1	41.6	--	--
03/08/90	03/12/90	0.18	16.3	0.4	109.8	13.2	7.0	0.8	10.0	7.6	--	39.4	141.2	--	--
03/12/90	03/15/90	0.59	4.0	3.2	13.0	1.6	1.7	0.5	7.1	2.3	--	4.2	27.1	--	--
03/15/90	03/26/90	0.24	35.2	21.4	99.8	21.4	25.7	0.8	--	14.1	130.8	63.1	--	208.0	--
03/26/90	03/30/90	0.36	20.4	30.9	19.5	4.1	3.9	0.8	17.8	5.6	--	34.8	77.0	--	--
03/30/90	04/12/90	0.58	12.9	14.1	23.5	4.1	3.9	3.6	21.4	4.5	--	20.6	70.6	--	--
04/12/90	04/23/90	0.05	19.9	2.7	--	--	--	--	--	12.7	66.9	64.2	--	143.8	--
04/23/90	04/25/90	0.45	5.2	5.1	9.5	1.6	2.2	0.8	9.3	2.8	--	7.9	28.5	--	--
04/25/90	04/27/90	0.33	5.2	3.5	9.5	1.6	0.9	1.0	7.9	2.4	--	12.5	24.4	--	--
04/27/90	05/10/90	0.59	14.0	0.1	84.8	14.8	16.5	2.8	9.3	7.1	--	28.1	128.3	--	--
05/10/90	05/13/90	0.54	7.2	4.6	14.5	3.3	2.6	0.8	12.9	4.8	--	12.9	38.7	--	--
05/13/90	05/16/90	0.65	6.8	1.0	27.9	6.6	5.2	1.0	11.4	4.8	--	11.2	53.1	--	--
05/16/90	06/02/90	0.59	5.1	1.1	23.0	4.1	2.6	1.3	7.9	2.5	--	11.5	40.0	--	--

**Table 5.** Precipitation volume, specific conductance, concentrations of dissolved ions, and percent charge balance for each sampling interval at Marvine Ranch, 1981–94—Continued

[Precipitation volume in inches; specific conductance in microsiemens per centimeter at 25 degrees Celsius; dissolved ions in microequivalents per liter; --, no data]

Beginning date	Ending date	Precipitation	Specific conductance	Hydrogen (H <sup>+</sup> ) <sup>1</sup>	Calcium (Ca <sup>2+</sup> )	Magnesium (Mg <sup>2+</sup> )	Sodium (Na <sup>+</sup> )	Potassium (K <sup>+</sup> )	Ammonium (NH <sub>4</sub> <sup>+</sup> )	Chloride (Cl <sup>-</sup> )	Nitrate (NO <sub>3</sub> <sup>-</sup> )	Sulfate (SO <sub>4</sub> <sup>2-</sup> )	Sum cations	Sum anions	Percent charge balance
06/02/90	06/13/90	1.02	5.7	1.1	17.5	4.1	3.5	1.3	15.0	4.8	17.6	13.3	42.5	35.7	8.7
06/13/90	07/04/90	0.58	10.2	12.3	32.4	5.8	3.5	2.6	2.1	4.2	18.9	26.7	58.7	49.8	8.2
07/04/90	07/08/90	0.42	8.2	4.8	19.0	4.9	5.2	3.3	18.6	6.2	21.1	20.2	55.8	47.5	8.0
07/08/90	07/09/90	0.38	5.6	9.8	6.0	0.8	1.7	4.9	9.3	2.3	9.4	11.2	32.5	22.9	17.3
07/09/90	07/10/90	0.08	6.8	1.3	--	--	--	--	--	4.2	20.2	16.0	--	40.4	--
07/10/90	07/19/90	0.05	16.2	28.2	23.5	4.9	3.0	1.5	--	4.8	38.4	23.5	--	66.7	--
07/19/90	07/25/90	0.41	8.9	10.2	17.0	3.3	3.0	1.3	15.7	5.9	24.4	16.7	50.5	47.0	3.6
07/25/90	08/04/90	0.15	15.8	0.5	89.8	21.4	9.1	3.6	--	10.4	46.9	45.6	124.4	102.9	9.5
08/04/90	08/21/90	0.42	11.5	11.0	26.9	5.8	3.0	2.3	15.7	4.8	24.0	27.1	64.7	55.9	7.3
08/21/90	09/01/90	0.13	23.2	38.9	26.4	4.9	4.8	2.3	--	6.5	44.0	37.7	--	88.2	--
09/01/90	09/05/90	0.97	11.7	17.8	10.5	1.6	0.9	0.5	15.0	3.1	14.0	17.3	46.3	34.4	14.7
09/05/90	09/17/90	0.28	8.2	9.1	14.5	2.5	1.3	0.8	--	3.9	14.7	16.2	--	34.8	--
09/17/90	10/02/90	1.05	8.8	14.8	7.5	1.6	0.4	0.5	6.4	3.1	10.5	17.5	31.2	31.1	0.2
10/02/90	10/09/90	0.95	11.6	17.8	12.0	2.5	2.2	0.5	11.4	3.1	17.1	20.0	46.4	40.2	7.2
10/09/90	10/17/90	0.48	6.9	0.3	48.4	9.9	6.1	1.3	10.0	4.5	13.7	16.7	76.0	34.9	37.1
10/17/90	10/21/90	1.32	2.9	3.8	4.0	0.8	0.9	0.3	2.1	1.1	3.9	4.2	11.9	9.2	12.8
10/21/90	11/07/90	1.05	5.2	6.3	9.0	1.6	0.2	1.0	4.3	2.0	7.6	11.0	22.4	20.6	4.2
11/07/90	11/22/90	0.28	4.1	0.3	29.4	4.9	2.2	2.6	4.3	3.7	6.6	6.9	43.7	17.2	43.5
11/22/90	11/27/90	0.18	2.9	1.9	--	--	--	--	--	3.4	9.0	2.9	--	15.3	--
11/27/90	12/14/90	1.03	5.4	5.6	15.5	2.5	3.0	1.3	4.3	3.7	12.7	10.4	32.2	26.8	9.2
12/14/90	12/17/90	0.15	10.0	16.6	--	--	--	--	--	3.9	20.8	9.2	--	33.9	--
12/17/90	12/21/90	0.79	33.2	0.1	189.6	46.1	19.6	35.8	12.1	15.2	61.5	88.3	303.3	165.0	29.5
12/21/90	12/27/90	--	8.2	2.7	--	--	--	--	--	--	--	--	--	--	--
12/27/90	12/31/90	0.20	8.8	21.4	16.0	2.5	0.9	0.5	--	2.8	34.4	5.6	--	42.8	--
12/31/90	01/06/91	0.59	1.4	1.9	7.0	0.4	0.9	0.3	--	4.5	3.5	1.0	--	9.0	--
01/06/91	01/10/91	0.03	4.7	11.5	9.0	0.8	0.4	0.3	2.1	1.1	11.9	5.8	24.1	18.8	12.4
01/10/91	01/16/91	1.10	3.2	6.3	7.0	0.4	0.9	0.1	2.1	3.1	6.6	4.4	16.8	14.1	8.7
01/16/91	01/22/91	0.17	4.6	11.0	6.5	0.8	0.4	0.1	--	4.5	9.8	5.4	--	19.7	--
02/01/91	02/14/91	0.65	5.1	6.2	7.5	1.6	3.5	1.5	7.1	5.1	13.7	6.5	27.4	25.3	4.0
02/14/91	02/14/91	--	4.3	5.8	3.0	0.4	0.4	0.5	3.6	1.4	7.3	6.7	13.7	15.4	-5.8
02/14/91	03/03/91	1.83	2.8	2.8	7.5	0.8	1.3	2.3	2.1	3.7	5.8	4.6	16.8	14.1	8.7
03/03/91	03/06/91	0.67	6.2	0.4	42.9	7.4	3.0	2.0	6.4	3.4	18.7	12.3	62.1	34.4	28.7

**Table 5. Precipitation volume, specific conductance, concentrations of dissolved ions, and percent charge balance for each sampling interval at Marvine Ranch, 1981–94—Continued**

[Precipitation volume in inches; specific conductance in microsiemens per centimeter at 25 degrees Celsius; dissolved ions in microequivalents per liter; --, no data]

Beginning date	Ending date	Precipitation	Specific conductance	Hydrogen (H <sup>+</sup> ) <sup>1</sup>	Calcium (Ca <sup>2+</sup> )	Magnesium (Mg <sup>2+</sup> )	Sodium (Na <sup>+</sup> )	Potassium (K <sup>+</sup> )	Ammonium (NH <sub>4</sub> <sup>+</sup> )	Chloride (Cl <sup>-</sup> )	Nitrate (NO <sub>3</sub> <sup>-</sup> )	Sulfate (SO <sub>4</sub> <sup>2-</sup> )	Sum cations	Sum anions	Percent charge balance
03/06/91	03/07/91	0.04	--	--	--	--	--	--	--	--	--	--	--	--	--
03/07/91	03/16/91	0.70	3.6	0.7	22.5	3.3	1.7	1.0	5.0	3.4	11.8	8.5	34.2	23.7	18.1
03/16/91	03/25/91	0.77	3.2	2.2	12.5	2.5	1.7	0.8	5.0	2.5	10.3	6.0	24.7	18.8	13.6
03/25/91	03/27/91	0.69	2.7	2.6	8.0	1.6	1.3	0.5	2.1	4.2	8.7	4.4	16.1	17.3	-3.6
03/27/91	03/30/91	0.45	3.4	4.2	10.0	1.6	1.3	0.5	2.9	58.7	22.6	16.9	20.5	98.2	-65.5
03/30/91	04/08/91	0.06	13.1	0.4	54.9	11.5	21.3	2.6	--	5.9	39.7	33.3	--	78.9	--
04/08/91	04/11/91	0.35	7.3	0.4	31.4	6.6	14.4	1.8	--	4.8	15.6	18.7	--	39.1	--
04/11/91	04/14/91	0.30	5.0	5.9	10.0	1.6	6.5	0.8	--	3.1	13.9	5.6	--	22.6	--
04/14/91	04/23/91	0.48	6.5	1.3	24.0	4.9	11.3	1.3	13.6	3.7	20.2	14.2	56.4	38.1	19.4
04/23/91	04/27/91	1.07	4.7	0.6	24.0	4.1	9.1	1.3	8.6	3.1	10.5	8.7	47.7	22.3	36.3
04/27/91	04/28/91	0.14	3.4	2.0	12.5	1.6	12.6	1.3	--	2.8	9.2	4.2	--	16.2	--
04/28/91	04/29/91	0.27	5.6	0.9	17.0	3.3	21.3	2.0	--	2.8	16.0	10.4	--	29.2	--
04/29/91	05/06/91	0.64	2.8	2.0	9.0	1.6	3.0	0.3	3.6	2.3	5.3	6.0	19.5	13.6	17.8
05/06/91	05/20/91	0.52	7.3	0.5	42.9	6.6	3.5	1.3	7.9	4.5	15.8	20.2	62.7	40.5	21.5
05/20/91	05/23/91	0.12	10.0	0.5	41.4	8.2	7.4	2.3	--	6.8	19.5	30.4	--	56.7	--
05/23/91	06/02/91	0.41	8.8	0.6	41.9	7.4	3.9	1.8	17.1	4.8	20.2	24.4	72.7	49.4	19.1
06/02/91	06/19/91	0.98	8.8	3.9	22.5	4.9	3.0	3.1	17.1	4.8	20.2	22.1	54.5	47.1	7.3
06/19/91	07/09/91	2.88	4.8	4.1	13.5	1.6	0.4	0.8	10.0	2.8	9.0	10.0	30.4	21.8	16.5
07/09/91	07/11/91	0.94	3.9	2.8	8.5	1.6	0.2	0.5	10.7	2.3	8.7	6.9	24.3	17.9	15.2
07/11/91	07/20/91	0.22	12.5	17.4	14.5	2.5	0.9	1.0	--	3.7	18.5	20.0	--	42.2	--
07/20/91	07/25/91	0.26	8.4	11.7	10.0	1.6	1.3	0.8	--	3.1	13.1	12.3	--	28.5	--
07/25/91	08/02/91	0.72	7.3	9.5	12.0	1.6	0.2	0.5	6.4	2.8	12.3	12.1	30.2	27.2	5.2
08/02/91	08/04/91	0.48	8.4	12.0	7.5	1.6	1.3	0.8	--	2.5	14.4	10.2	--	27.1	--
08/04/91	08/24/91	0.34	9.9	12.0	17.0	3.3	1.7	0.8	--	--	--	--	--	--	--
08/24/91	09/01/91	0.05	14.5	21.9	15.0	3.3	0.9	0.5	--	--	--	--	--	--	--
09/01/91	09/11/91	0.74	7.1	9.5	8.0	1.6	0.9	0.5	6.4	2.3	10.2	10.4	26.9	22.9	8.0
09/11/91	09/14/91	0.60	11.3	15.1	14.0	2.5	5.2	0.5	--	3.9	16.6	15.6	--	36.1	--
09/14/91	09/15/91	0.02	8.1	1.7	28.4	7.4	5.7	1.0	16.4	3.9	19.8	19.2	60.6	42.9	17.1
09/15/91	10/29/91	1.54	3.8	3.1	8.5	0.8	1.3	0.5	4.3	2.8	5.5	4.4	18.5	12.7	18.6
10/29/91	11/28/91	3.69	17.5	0.1	104.8	14.0	6.5	18.7	11.4	7.6	10.5	28.7	155.5	46.8	53.7
11/28/91	12/27/91	1.10	11.4	14.4	6.5	1.6	7.0	1.0	4.3	4.5	19.7	4.4	34.8	28.6	9.8
12/27/91	01/25/92	1.30	4.7	5.1	4.8	0.9	8.9	0.9	2.8	2.9	8.2	4.0	23.4	15.1	21.6
01/25/92	02/28/92	2.25	5.5	5.6	3.1	0.9	8.0	1.6	7.8	2.8	9.2	7.3	27.0	19.3	16.6
02/28/92	03/24/92	2.48	5.2	4.9	5.3	1.3	1.1	1.3	6.4	--	--	--	20.3	--	--

**Table 5.** Precipitation volume, specific conductance, concentrations of dissolved ions, and percent charge balance for each sampling interval at Marvine Ranch, 1981–94—Continued

[Precipitation volume in inches; specific conductance in microsiemens per centimeter at 25 degrees Celsius; dissolved ions in microequivalents per liter; --, no data]

Beginning date	Ending date	Precipitation	Specific conductance	Hydrogen (H <sup>+</sup> ) <sup>1</sup>	Calcium (Ca <sup>2+</sup> )	Magnesium (Mg <sup>2+</sup> )	Sodium (Na <sup>+</sup> )	Potassium (K <sup>+</sup> )	Ammonium (NH <sub>4</sub> <sup>+</sup> )	Chloride (Cl <sup>-</sup> )	Nitrate (NO <sub>3</sub> <sup>-</sup> )	Sulfate (SO <sub>4</sub> <sup>2-</sup> )	Sum cations	Sum anions	Percent charge balance
03/24/92	04/23/92	1.25	5.8	2.4	14.6	3.1	2.7	1.5	7.8	3.4	11.8	15.2	32.1	30.4	2.7
04/23/92	05/31/92	2.40	8.1	8.1	7.9	1.8	3.6	1.1	13.6	3.1	13.8	16.3	36.1	33.2	4.2
05/31/92	06/15/92	0.29	18.7	0.1	96.0	16.0	7.1	3.1	16.4	7.1	28.9	33.3	138.7	69.3	33.4
06/15/92	07/14/92	2.60	7.0	3.6	13.2	2.6	2.9	0.3	13.6	3.4	13.6	16.2	36.2	33.2	4.3
07/14/92	08/31/92	1.24	10.7	11.0	14.4	3.5	3.9	1.8	--	5.1	22.4	21.9	--	49.4	--
08/31/92	09/25/92	1.43	10.9	0.3	40.2	8.6	8.0	11.7	9.3	9.6	14.5	27.5	78.1	51.6	20.4
09/25/92	10/29/92	0.81	6.4	6.3	7.0	1.2	2.6	--	5.0	1.1	11.1	10.2	--	22.4	--
10/29/92	11/20/92	3.84	9.7	0.6	36.2	11.0	4.8	.	5.0	4.8	9.0	21.7	--	35.5	--
11/20/92	12/31/92	2.63	5.3	5.9	7.4	1.1	3.8	--	--	0.6	6.1	6.5	--	13.2	--
12/31/92	01/19/93	2.84	4.6	7.6	3.1	0.3	2.1	--	--	0.6	1.5	6.0	--	8.1	--
01/19/93	03/08/93	3.45	6.2	11.2	8.4	0.3	4.4	1.7	3.8	1.7	8.1	4.0	29.8	13.8	36.7
03/08/93	03/30/93	--	7.2	9.5	4.1	0.8	0.9	0.3	6.9	1.1	9.7	13.1	22.5	23.9	-3.0
03/30/93	04/28/93	--	7.4	2.1	19.2	3.6	7.9	1.3	10.4	5.6	18.2	18.7	44.5	42.5	2.3
04/28/93	05/21/93	1.03	9.6	1.1	33.1	5.6	5.1	1.9	0.1	5.1	22.1	27.9	46.9	55.1	-8.0
05/21/93	06/05/93	0.89	12.0	0.3	54.4	11.1	5.7	5.3	19.3	9.3	28.1	29.4	96.1	66.8	18.0
06/05/93	07/05/93	0.24	10.2	1.1	--	--	--	--	--	--	--	--	--	--	--
07/05/93	07/26/93	0.64	34.8	0.1	97.7	31.3	12.7	20.4	107.1	14.1	80.0	92.9	269.3	187.0	18.0
07/26/93	08/22/93	0.13	5.6	2.6	10.7	3.2	1.8	0.4	17.0	4.5	14.7	11.9	35.7	31.1	6.9
08/22/93	08/27/93	1.47	10.0	4.1	26.1	7.2	3.6	1.2	19.8	5.6	24.8	28.5	62.0	58.9	2.6
10/07/93	10/30/93	3.02	5.8	2.6	12.5	3.2	1.4	1.2	5.0	3.1	11.2	9.6	25.9	23.9	4.0
10/30/93	12/11/93	2.96	5.3	3.7	13.1	2.3	2.4	2.7	4.4	2.3	13.9	9.0	28.6	25.2	6.3
12/11/93	12/31/93	0.98	6.7	11.7	5.0	0.8	0.4	--	--	0.7	12.8	4.7	--	18.2	--
12/31/93	01/16/94	0.83	5.6	1.2	18.0	4.1	3.4	0.4	6.2	1.8	15.1	9.5	33.3	26.4	11.6
01/16/94	03/01/94	1.91	7.0	8.7	9.5	1.6	1.5	0.6	3.1	1.3	13.9	8.5	25.0	23.7	2.7
03/01/94	03/20/94	0.16	12.7	14.8	12.0	2.5	2.4	0.7	11.6	2.3	24.6	23.9	44.0	50.8	-7.2
03/20/94	03/31/94	0.10	16.8	0.1	115.6	15.3	10.5	1.1	6.8	3.7	16.9	22.3	149.4	42.9	55.4
03/31/94	05/02/94	2.57	6.4	3.0	19.8	4.0	2.6	0.8	6.1	2.5	16.1	15.0	36.3	33.6	3.9
05/02/94	05/28/94	0.76	19.0	1.6	51.7	14.2	6.2	9.2	63.2	8.2	57.7	58.5	146.1	124.4	8.0
05/28/94	07/10/94	1.27	9.6	6.9	24.7	5.2	2.6	2.3	12.6	3.1	26.0	22.6	54.3	51.7	2.5
07/10/94	08/28/94	1.43	11.7	7.9	26.3	5.4	2.9	1.5	13.4	3.0	29.8	25.2	57.4	58.0	-0.5
08/28/94	09/04/94	0.22	19.3	18.6	30.9	7.8	6.8	1.3	19.3	5.8	44.1	42.5	84.7	92.4	-4.3
09/04/94	09/11/94	0.05	17.6	26.9	17.0	4.1	3.6	0.9	14.0	4.5	29.4	28.1	66.5	62.0	3.5

**Table 5.** Precipitation volume, specific conductance, concentrations of dissolved ions, and percent charge balance for each sampling interval at Marvine Ranch, 1981–94—Continued

[Precipitation volume in inches; specific conductance in microsiemens per centimeter at 25 degrees Celsius; dissolved ions in microequivalents per liter; --, no data]

Beginning date	Ending date	Precipitation	Specific conductance	Hydrogen (H <sup>+</sup> ) <sup>1</sup>	Calcium (Ca <sup>2+</sup> )	Magnesium (Mg <sup>2+</sup> )	Sodium (Na <sup>+</sup> )	Potassium (K <sup>+</sup> )	Ammonium (NH <sub>4</sub> <sup>+</sup> )	Chloride (Cl <sup>-</sup> )	Nitrate (NO <sub>3</sub> <sup>-</sup> )	Sulfate (SO <sub>4</sub> <sup>2-</sup> )	Sum cations	Sum anions	Percent charge balance
09/11/94	10/22/94	2.72	7.2	9.5	7.0	1.6	1.4	4.1	7.2	2.4	11.9	12.3	30.8	26.6	7.3
10/22/94	11/30/94	1.53	4.5	1.5	22.5	2.5	1.9	0.7	4.4	2.2	13.3	9.1	33.5	24.6	15.3
11/30/94	12/30/94	1.26	8.4	15.5	4.0	0.8	1.5	0.6	3.6	1.7	11.3	6.8	26.0	19.8	13.5

<sup>1</sup>Values of pH can be calculated from hydrogen concentration by multiplying the log of the product of hydrogen concentration times  $1 \times 10^{-6}$  by -1.

**Table 6.** Summary statistics of specific conductance and concentrations of dissolved ions at Marvine Ranch, 1981–94

[Specific conductance in microsiemens per centimeter at 25 degrees Celsius; dissolved ions in microequivalents per liter]

	Specific conductance	Hydrogen (H <sup>+</sup> )	Calcium (Ca <sup>2+</sup> )	Magnesium (Mg <sup>2+</sup> )	Sodium (Na <sup>+</sup> )	Potassium (K <sup>+</sup> )	Ammonium (NH <sub>4</sub> <sup>+</sup> )	Chloride (Cl <sup>-</sup> )	Nitrate (NO <sub>3</sub> <sup>-</sup> )	Sulfate (SO <sub>4</sub> <sup>2-</sup> )
Number of samples	662	659	572	572	570	555	326	603	586	603
Mean	8.6	8.6	22.4	4.8	5.2	2.4	8.6	4.1	14.8	16.0
Median	7.0	6.3	10.6	2.5	2.6	1.3	7.1	2.8	11.8	12.3
Standard deviation	6.8	8.2	42.5	9.2	10.2	8.4	8.2	5.1	12.5	15.5
Minimum	1.4	0.1	0.2	0.3	0.2	0.1	0.1	0.1	0.2	1.0
Maximum	77.3	55.0	548.9	123.4	165.3	153.4	107.1	58.7	130.8	188.7

Table 7. Daily precipitation volume for Douglas Pass, 1980-91

[--, no data]

Day	Precipitation (Inches)											
	January	February	March	April	May	June	July	August	September	October	November	December
1980												
1	--	--	--	--	--	--	--	--	--	--	--	--
2	--	--	--	--	--	--	--	--	--	--	--	--
3	--	--	--	--	--	--	--	--	--	--	--	--
4	--	--	--	--	--	--	--	--	--	--	--	--
5	--	--	--	--	--	--	--	--	--	--	--	--
6	--	--	--	--	--	--	--	--	--	--	--	--
7	--	--	--	--	--	--	--	--	--	--	--	--
8	--	--	--	--	--	--	--	--	--	--	--	--
9	--	--	--	--	--	--	--	--	--	--	--	--
10	--	--	--	--	--	--	--	--	--	--	--	--
11	--	--	--	--	--	--	--	--	--	--	--	--
12	--	--	--	--	--	--	--	--	--	--	--	0.00
13	--	--	--	--	--	--	--	--	--	--	--	0.00
14	--	--	--	--	--	--	--	--	--	--	--	0.00
15	--	--	--	--	--	--	--	--	--	--	0.00	0.00
16	--	--	--	--	--	--	--	--	--	--	0.00	0.00
17	--	--	--	--	--	--	--	--	--	--	0.00	0.00
18	--	--	--	--	--	--	--	--	--	--	0.00	0.00
19	--	--	--	--	--	--	--	--	--	--	0.00	0.00
20	--	--	--	--	--	--	--	--	--	--	0.00	0.00
21	--	--	--	--	--	--	--	--	--	--	0.00	0.00
22	--	--	--	--	--	--	--	--	--	--	0.00	0.00
23	--	--	--	--	--	--	--	--	--	--	0.00	0.00
24	--	--	--	--	--	--	--	--	--	--	0.00	0.00
25	--	--	--	--	--	--	--	--	--	--	0.00	0.00
26	--	--	--	--	--	--	--	--	--	--	0.00	0.00
27	--	--	--	--	--	--	--	--	--	--	0.00	0.00
28	--	--	--	--	--	--	--	--	--	--	0.00	0.00
29	--	--	--	--	--	--	--	--	--	--	0.00	0.00
30	--	--	--	--	--	--	--	--	--	--	0.00	0.00
31	--	--	--	--	--	--	--	--	--	--	0.00	0.00
SUM	--	--	--	--	--	--	--	--	--	--	--	--

<sup>1</sup>Chart was not marking from 11/29 to 12/11. Total accumulation for the period was 0.65 inch. Site was installed on November 14, 1980.

Table 7. Daily precipitation volume for Douglas Pass, 1980-91—Continued

[—, no data]

Day	Precipitation (Inches)											
	January	February	March	April	May	June	July	August	September	October	November	December
	1981											
1	0.00	0.00	0.00	0.00	0.00	0.04	0.10	0.06	0.00	0.00	0.35	0.00
2	0.00	0.00	0.59	0.13	0.43	0.14	0.00	0.00	0.00	0.62	0.31	0.00
3	0.00	0.00	0.16	0.74	0.68	0.42	0.00	0.00	0.03	0.88	0.00	0.00
4	0.00	0.00	0.19	0.11	0.03	0.00	0.00	0.00	0.00	0.87	0.00	0.00
5	0.31	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.17	0.15	0.00	0.00
6	0.00	0.00	0.41	0.00	0.28	0.00	0.00	0.00	0.03	0.05	0.00	0.00
7	0.00	0.00	0.12	0.00	0.24	0.00	0.00	0.00	0.16	0.00	0.02	0.00
8	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.53	0.00	0.00
9	0.00	0.10	0.03	0.00	1.09	0.00	0.00	0.00	0.00	0.04	0.00	0.00
10	0.00	0.05	0.00	0.00	1.05	0.00	0.00	0.20	0.64	0.02	0.00	0.00
11	0.00	0.00	0.02	0.00	0.27	0.00	0.00	0.00	0.40	0.15	0.00	0.00
12	0.00	0.00	0.09	0.00	0.00	0.00	0.62	0.07	0.00	0.25	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.43	0.14	0.48	0.05	0.08
14	0.00	0.00	0.00	0.00	0.03	0.05	0.00	0.00	0.07	0.22	0.17	0.00
15	0.00	0.00	0.00	0.24	0.07	0.00	0.00	0.24	0.00	0.08	0.00	0.05
16	0.00	0.00	0.00	0.00	0.32	0.00	0.00	0.00	0.00	0.00	0.00	0.04
17	0.00	0.00	0.16	0.00	0.13	0.00	0.00	0.00	0.00	0.25	0.09	0.00
18	0.00	0.00	0.07	0.06	0.08	0.00	0.00	0.00	0.00	0.97	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.00	0.00
20	0.00	0.00	0.16	0.00	0.62	0.00	0.00	0.00	0.00	0.03	0.00	0.00
21	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.68
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.03
23	0.05	0.00	0.00	0.00	0.00	0.00	0.18	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	0.17	0.00	0.02	0.00	0.20	0.29	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.00	0.00	0.17	0.47	0.09
26	0.00	0.50	0.00	0.00	0.07	0.00	0.06	0.00	0.00	0.00	0.00	0.30
27	0.00	0.00	0.92	0.00	0.22	0.18	0.00	0.00	0.00	0.00	0.27	0.32
28	0.38	0.00	0.34	0.00	1.03	0.30	0.00	0.00	0.00	0.35	0.17	0.00
29	0.00	--	0.00	0.00	0.04	<sup>1</sup>	0.00	0.19	0.00	0.15	0.19	0.00
30	0.35	--	0.56	0.00	0.00	--	0.00	0.19	0.00	0.00	0.04	0.20
31	0.22	--	0.00	--	0.27	--	0.00	0.04	--	0.32	--	0.08
SUM	1.31	0.65	4.02	1.28	7.11	1.72	1.41	1.81	1.64	6.75	2.13	1.87

<sup>1</sup>Chart not marking from 6/29 to 6/30. Total accumulation for the period was 0.59 inch.

**Table 7. Daily precipitation volume for Douglas Pass, 1980-91—Continued**

[—, no data]

Day	Precipitation (Inches)											
	January	February	March	April	May	June	July	August	September	October	November	December
	1982											
1	0.82	0.11	0.00	0.00	0.00	0.01	0.00	0.02	0.00	0.00	0.00	0.18
2	0.15	0.02	0.00	0.30	0.00	0.00	0.00	0.01	0.00	0.00	0.07	0.12
3	0.00	0.14	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.05
4	0.60	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.15	0.00	0.00	0.00
5	0.50	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.17	0.05	0.00	0.00
6	0.07	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.12	0.04	0.00	0.00
9	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.03	0.35	0.17
10	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.21	0.00	0.09	0.60	0.07
11	0.00	0.04	0.20	0.00	0.00	0.00	0.00	0.06	0.64	0.27	0.56	0.01
12	0.00	0.00	0.45	0.05	0.00	0.00	0.00	0.35	0.06	0.00	0.00	0.00
13	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.77	0.03	0.03	0.29
14	0.00	0.00	0.12	0.00	0.00	0.00	0.00	0.00	0.53	0.00	0.00	0.01
15	0.00	0.00	0.38	0.06	0.00	0.00	0.02	0.02	0.00	0.00	0.00	0.00
16	0.00	0.11	0.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.69	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	0.25	0.00
19	0.08	0.00	0.25	0.00	0.03	0.00	0.00	0.00	0.07	0.03	0.35	0.00
20	0.22	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.13	0.00	0.09	0.00
21	0.59	0.00	0.00	0.00	0.00	0.15	0.00	0.01	0.00	0.00	0.01	0.00
22	0.00	0.02	0.00	0.00	0.00	0.00	0.06	0.03	0.00	0.00	0.09	0.70
23	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
24	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.07
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.03	0.00	0.00
26	0.09	0.00	0.32	0.01	0.00	0.00	0.45	0.00	0.20	0.66	0.00	1
27	0.04	0.00	0.08	0.00	0.00	0.00	0.03	0.40	1.27	0.36	0.00	0.00
28	0.00	0.00	0.02	0.00	0.00	0.00	0.13	0.00	0.02	0.00	0.05	0.00
29	0.18	--	0.38	0.00	0.00	0.01	0.06	0.00	0.00	0.00	0.55	0.00
30	0.00	--	0.08	0.00	0.14	0.00	0.00	0.00	0.68	0.60	2.35	0.00
31	0.15	--	0.00	--	0.00	--	0.00	0.02	--	0.33	--	0.00
SUM	3.57	0.49	3.44	0.42	0.20	0.17	0.75	1.56	4.96	2.83	5.35	1.97

<sup>1</sup>Chart slipped from 12/26/82 to 01/06/83. Probably no precipitation during this period.

Table 7. Daily precipitation volume for Douglas Pass, 1980-91—Continued

[--, no data]

Day	Precipitation (inches)											
	January	February	March	April	May	June	July	August	September	October	November	December
1	1.00	0.02	0.00	0.00	0.64	0.00	0.00	0.00	0.19	1.60	0.00	0.20
2	0.00	0.00	0.04	0.23	0.15	0.11	0.00	0.00	0.00	1.03	0.03	0.06
3	0.00	0.00	0.04	0.12	0.14	0.00	0.00	0.00	0.15	0.16	0.00	0.84
4	0.00	0.02	0.65	0.01	0.00	0.00	0.00	1.77	0.02	0.00	0.00	0.30
5	0.00	0.16	0.73	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
6	0.00	0.03	0.00	0.00	0.11	0.01	0.00	0.00	0.00	0.00	0.00	0.07
7	0.07	0.20	0.00	0.00	0.00	0.00	0.00	0.01	0.06	0.00	0.30	0.02
8	0.08	0.33	0.00	0.11	0.00	0.06	0.28	0.00	0.05	0.00	0.82	0.00
9	0.00	0.12	0.00	0.00	0.00	0.00	0.33	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.05	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.60	0.52	0.02	0.00	0.02	0.00	0.00	0.02	0.00
12	0.00	0.00	0.02	0.27	0.00	0.44	0.00	0.18	0.00	0.00	0.03	0.00
13	0.00	0.00	0.09	0.00	0.00	0.20	0.00	0.01	0.00	0.27	0.05	0.05
14	0.00	0.06	0.50	0.00	0.14	0.00	0.00	0.74	0.00	0.25	0.00	0.11
15	0.00	0.00	0.51	0.00	0.15	0.00	0.00	0.01	0.00	0.00	0.00	0.10
16	0.00	0.00	0.04	0.00	1.50	0.00	0.00	0.00	0.00	0.01	0.02	0.09
17	0.11	0.00	0.60	0.00	0.80	0.00	0.00	0.00	0.00	0.00	0.35	0.00
18	0.04	0.40	0.55	0.00	0.07	0.00	0.00	0.22	0.02	0.00	0.17	0.00
19	0.01	0.44	0.06	0.00	0.17	0.00	0.00	0.00	0.00	0.00	0.12	0.35
20	0.01	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	1.10	0.00
21	0.07	0.00	0.00	0.06	0.05	0.00	0.16	0.00	0.00	0.00	0.39	0.01
22	0.06	0.00	0.25	0.00	0.00	0.00	0.90	0.00	0.00	0.00	0.02	0.23
23	0.10	0.00	0.25	0.00	0.00	0.00	0.30	0.00	0.20	0.00	0.02	0.07
24	0.20	0.03	0.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.85	0.40
25	0.03	0.25	0.12	0.00	0.00	0.00	0.30	0.01	0.00	0.00	0.87	0.38
26	0.03	0.17	0.40	0.00	0.00	0.00	0.00	0.00	0.15	0.00	0.08	0.11
27	0.00	0.39	0.00	0.05	0.00	0.00	0.35	0.00	0.09	0.00	0.02	0.30
28	0.00	0.19	0.05	0.02	0.00	0.00	0.00	0.02	0.00	0.00	0.06	0.00
29	0.50	--	0.00	0.50	0.02	0.00	0.00	0.41	0.50	0.00	0.01	0.00
30	0.00	--	0.00	0.70	0.00	0.00	0.00	0.04	0.95	0.01	0.15	0.00
31	0.00	--	0.02	--	0.02	--	0.00	0.00	--	0.02	--	0.02
SUM	1.31	2.30	5.51	2.75	4.49	0.84	2.62	3.49	2.38	3.35	5.48	3.79

<sup>1</sup>Chart slipped from 12/26/82 to 01/06/83. Probably no precipitation during this period.

Table 7. Daily precipitation volume for Douglas Pass, 1980-91—Continued

[—, no data]

Day	Precipitation (Inches)											
	January	February	March	April	May	June	July	August	September	October	November	December
1	0.00	0.00	0.00	0.60	0.21	0.01	0.00	0.03	0.00	0.50	--	0.04
2	0.00	0.00	0.05	0.10	0.29	0.00	0.00	0.06	0.00	0.05	--	0.10
3	0.00	0.00	0.10	0.00	0.00	0.03	0.00	0.16	0.00	0.30	--	0.00
4	0.00	0.00	0.14	0.00	0.00	0.65	0.00	0.02	0.00	0.16	--	0.00
5	0.01	0.00	0.00	0.00	0.22	0.31	0.00	0.02	0.00	0.00	--	0.00
6	0.00	0.00	0.00	0.00	0.00	1.95	0.00	0.05	0.00	0.00	--	0.00
7	0.00	0.07	0.00	0.00	0.00	0.53	0.01	0.00	0.00	0.00	--	0.00
8	0.00	0.00	0.00	0.00	0.00	0.31	0.14	0.00	0.00	0.00	--	0.24
9	0.00	0.00	0.00	0.46	0.00	0.04	0.08	0.00	0.00	0.00	--	0.00
10	0.00	0.05	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00	--	0.14
11	0.14	0.08	0.04	0.02	0.00	0.00	0.00	0.03	0.42	0.05	--	0.38
12	0.01	0.00	0.01	0.00	0.36	0.00	0.00	0.27	0.12	0.82	--	0.86
13	0.25	0.13	0.00	0.00	0.00	0.00	0.02	0.01	0.00	0.05	--	0.24
14	0.38	0.67	0.60	0.00	0.00	0.00	0.14	0.01	0.00	0.04	--	0.00
15	0.00	0.00	0.30	0.00	0.00	0.00	0.68	0.04	0.00	0.38	--	0.25
16	0.00	0.02	0.01	0.00	0.00	0.00	0.00	0.01	0.16	0.10	--	0.60
17	0.07	0.17	0.70	0.05	0.00	0.03	0.00	0.00	0.00	0.45	--	0.13
18	0.00	0.00	0.11	0.08	0.00	0.01	0.00	0.00	0.00	0.15	--	0.00
19	0.00	0.00	0.00	0.15	0.00	0.00	0.00	0.72	0.00	0.01	--	0.12
20	0.00	0.00	0.00	0.15	0.00	0.00	0.00	0.86	0.30	0.19	--	0.35
21	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.03	0.05	0.00	--	0.00
22	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.05	--	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	--	0.00
24	0.00	0.02	0.05	0.00	0.00	0.00	0.00	0.00	0.62	1	--	0.00
25	0.00	0.11	0.03	1.05	0.00	0.04	0.01	0.00	0.00	--	0.50	0.00
26	0.00	0.03	0.29	0.17	0.00	0.00	0.00	0.00	0.00	--	0.63	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	--	0.04	1.06
28	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.00	--	0.00	1.12
29	0.00	0.00	0.11	0.03	0.00	0.00	0.00	0.00	0.00	--	0.00	0.02
30	0.00	--	0.31	0.11	0.00	0.01	0.04	0.01	0.00	--	0.04	0.00
31	0.00	--	0.07	--	0.56	--	0.00	0.06	0.00	--	0.07	0.02
SUM	0.86	1.35	3.24	3.28	1.64	3.92	1.12	2.39	1.67	5.67	SUM	0.86

<sup>1</sup>Clock was frozen from 10/23/84 to 11/14/84. Total accumulation for the period was 1.10 inches. From 11/14/84 to 11/23/84 the pen did not trace. Total accumulation for the period is unknown.

Table 7. Daily precipitation volume for Douglas Pass, 1980–91—Continued

[—, no data]

Day	Precipitation (inches)											
	January	February	March	April	May	June	July	August	September	October	November	December
1	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	1
2	0.01	0.07	0.17	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00	—
3	0.00	0.05	0.52	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	—
4	0.00	0.07	0.02	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	0.10	—
6	0.00	0.00	0.00	0.00	0.11	0.00	0.00	0.00	0.00	0.00	0.02	—
7	0.20	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	—
8	0.20	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.65	0.20	—
9	0.03	0.56	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.98	—
10	0.00	0.00	0.35	0.00	0.37	0.00	0.00	0.00	0.00	0.35	0.00	—
11	0.04	0.00	0.29	0.00	0.06	0.00	0.00	0.14	1.20	0.42	0.40	—
12	0.00	0.00	0.17	0.00	0.46	0.00	0.07	0.00	0.10	0.43	1.05	—
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.35	0.25	—
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	—
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.02	—
16	0.00	0.00	0.00	0.00	0.00	0.05	0.01	0.00	0.00	0.00	0.00	—
17	0.00	0.05	0.00	0.09	0.04	0.00	1.37	0.00	0.00	0.00	0.20	—
18	0.00	0.00	0.00	0.04	0.10	0.00	0.15	0.00	1.12	0.00	0.00	0.00
19	0.00	0.00	0.00	0.63	0.00	0.00	0.00	0.00	0.35	0.00	0.00	0.00
20	0.02	0.18	0.00	1.15	0.36	0.00	0.00	0.12	0.00	0.00	0.10	0.00
21	0.39	0.11	0.00	0.33	0.22	0.00	0.00	0.06	0.00	0.05	0.00	0.00
22	0.01	0.20	0.00	0.21	0.00	0.00	0.00	0.00	0.00	0.05	0.55	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	0.05	0.00	0.00	0.27	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	0.19	0.16	0.38	0.00	0.15	0.00	0.00	0.00	0.00	0.20	0.00
26	0.03	0.00	0.00	0.00	0.00	0.46	0.00	0.02	0.00	0.00	0.15	0.00
27	0.04	0.00	0.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	0.18	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.15	0.00
29	0.11	—	0.66	0.00	0.00	0.00	0.27	0.00	0.00	0.00	0.43	0.00
30	0.03	—	0.01	0.00	0.00	0.00	0.25	0.02	0.00	0.03	0.00	0.00
31	0.01	—	0.22	—	0.66	—	0.00	0.00	—	0.10	—	0.00
SUM	1.30	1.59	3.45	2.83	2.38	0.93	2.12	0.38	3.05	3.48	4.90	—

<sup>1</sup>Unable to interpret from the chart.

**Table 7. Daily precipitation volume for Douglas Pass, 1980-91—Continued**

[—, no data]

Day	Precipitation (Inches)											
	January	February	March	April	May	June	July	August	September	October	November	December
	1986											
1	0.00	0.00	0.00	1	0.00	0.00	0.00	0.00	0.11	0.00	0.05	0.00
2	0.00	0.10	0.00	--	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00
3	0.00	0.07	0.00	--	0.00	0.00	0.00	0.00	0.00	0.21	0.00	0.00
4	0.00	0.05	0.00	--	0.00	0.00	0.00	0.00	0.00	0.84	0.00	--
5	0.00	0.00	0.00	--	0.00	0.00	0.00	0.00	0.00	0.00	0.00	--
6	0.38	0.00	0.00	--	0.30	0.00	0.10	0.00	0.00	0.00	0.51	--
7	0.03	0.05	0.00	--	0.90	0.00	0.00	0.00	0.02	0.00	0.05	--
8	0.00	0.00	0.30	--	0.57	0.92	0.67	0.02	0.05	0.24	0.05	--
9	0.00	0.00	0.58	--	0.23	0.23	0.14	0.00	0.62	0.00	0.00	--
10	0.00	0.02	0.32	--	0.00	0.00	0.00	0.00	0.00	0.03	0.00	--
11	0.00	0.19	0.30	--	0.00	0.00	0.00	0.00	0.00	0.01	0.00	--
12	0.00	0.00	0.05	--	0.03	0.00	0.00	0.00	0.00	0.01	0.00	--
13	0.00	0.80	0.20	--	0.00	0.00	0.00	0.00	0.00	0.54	0.00	--
14	0.06	0.06	0.20	--	0.00	0.00	0.00	0.00	0.00	0.00	0.00	--
15	0.00	0.39	0.00	--	0.00	0.00	0.22	0.00	0.00	0.00	0.00	--
16	0.00	0.65	0.58	--	0.60	0.00	0.25	0.00	0.00	0.00	0.00	0.00
17	0.00	0.30	0.02	0.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.12	0.00	0.00	0.00	0.00	0.00	0.10	0.20	0.01
19	0.09	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.05	0.00	0.00
20	0.00	0.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.00	0.01
22	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.05	0.09	0.05	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.65	0.11	0.00	0.00
24	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.65	0.00	0.00	0.00
25	0.00	0.00	0.00	0.17	0.00	0.00	0.00	0.03	0.00	0.00	0.63	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.03	0.00	0.02	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.93	0.00	0.00	0.00
29	0.00	--	0.00	0.00	0.00	0.00	0.00	0.12	0.42	0.00	0.08	0.00
30	0.02	--	0.00	0.00	0.00	0.00	0.00	0.03	0.45	0.05	0.42	0.00
31	0.00	--	0.00	--	0.00	--	0.00	0.09	--	0.87	--	0.00
SUM	0.58	3.20	2.55	3.49	2.63	1.15	1.55	0.29	4.08	3.31	2.06	--

<sup>1</sup>Pen stopped marking. Total accumulation for the period is 2.70 inches.

Table 7. Daily precipitation volume for Douglas Pass, 1980-91—Continued

[--, no data]

Day	Precipitation (Inches)											
	January	February	March	April	May	June	July	August	September	October	November	December
	1987											
1	0.09	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.55	0.00
2	0.00	0.00	0.00	0.00	0.55	0.00	0.00	0.00	0.00	0.00	0.12	0.00
3	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.06	0.00	0.02	0.00
4	0.05	0.10	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
5	1.35	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.00	0.00	0.03	0.04
6	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.83	0.00	0.00	0.61	0.15
7	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.00	0.00	0.00	--
8	0.00	0.00	0.05	0.00	0.00	0.13	0.00	0.00	0.00	0.00	0.02	--
9	0.00	0.00	0.38	0.00	0.00	0.27	0.00	0.00	0.00	0.00	0.00	--
10	0.00	0.00	0.00	0.00	0.00	0.21	0.00	0.00	0.00	0.00	0.00	--
11	0.00	0.00	0.02	0.08	0.02	0.00	0.30	0.00	0.00	0.00	0.00	--
12	0.00	0.00	0.00	0.12	0.65	0.00	0.05	0.01	0.20	0.10	0.00	--
13	0.00	0.30	0.02	0.00	0.00	0.00	0.00	0.47	0.03	0.82	0.00	--
14	0.00	0.59	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.13	0.40	--
15	0.26	0.00	0.59	0.00	0.00	0.00	0.00	0.25	0.00	0.01	0.55	--
16	0.04	0.07	0.39	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	--
17	0.01	0.00	0.21	0.00	0.00	0.00	0.25	0.00	0.00	0.00	0.10	--
18	0.00	0.05	0.17	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.05	--
19	0.24	0.10	0.60	0.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	--
20	0.02	0.00	0.80	0.73	0.54	0.00	0.25	0.03	0.00	0.00	0.00	--
21	0.00	0.00	0.10	0.00	0.42	0.00	0.30	0.00	0.00	0.00	0.00	--
22	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.10	0.00	0.00	0.00	0.50
23	0.00	0.04	0.00	0.00	0.04	0.00	0.00	0.35	0.00	0.03	0.00	1.20
24	0.00	0.67	0.00	0.00	0.24	0.00	0.00	0.70	0.00	0.37	0.30	0.08
25	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.04	0.05	0.05	0.02	0.20
26	0.00	0.25	0.00	0.05	0.31	0.00	0.09	0.00	0.00	0.00	0.00	0.00
27	0.00	0.05	0.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.50	0.05
28	0.88	0.15	0.00	0.00	0.00	0.07	0.08	0.03	0.00	0.00	0.00	0.27
29	0.02	--	0.00	0.10	0.03	0.14	0.05	0.00	0.00	0.05	0.00	0.00
30	0.00	--	0.00	0.05	0.00	0.00	0.55	0.00	0.00	0.21	0.07	0.25
31	0.00	--	0.00	--	0.00	--	0.10	0.00	--	0.00	--	0.00
SUM	3.09	2.41	3.85	1.66	3.16	0.82	2.02	3.18	0.39	1.77	3.34	--

**Table 7. Daily precipitation volume for Douglas Pass, 1980-91—Continued**

[—, no data]

Day	Precipitation (Inches)											
	January	February	March	April	May	June	July	August	September	October	November	December
	1988											
1	0.00	0.05	0.32	0.00	0.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.12	0.07	0.00	0.07	0.00	0.00	0.09	0.00	0.00	0.02	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.13	0.00	0.00	0.03	0.00
4	0.00	0.00	0.00	0.04	0.00	0.00	0.27	0.00	0.00	0.03	0.00	0.00
5	0.40	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.00	0.07	0.00	0.00
6	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.22	0.00	0.26	0.00	0.11
7	0.06	0.00	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.27	0.00
9	0.00	0.07	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.00
10	0.26	0.00	0.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	0.25	0.00	0.00	0.00	0.00	0.00	0.08	0.00	0.40	0.00
12	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.37	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.04	0.00	0.00
14	0.00	0.00	0.00	0.16	0.00	0.00	0.00	0.00	0.00	0.00	0.45	0.02
15	0.10	0.03	0.00	0.00	0.00	0.00	0.00	0.27	0.00	0.00	0.14	0.18
16	0.00	0.00	0.51	0.11	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.55	0.00	0.00	0.29	0.69	0.00	0.00	0.10	0.00	0.00	0.15	0.00
18	0.54	0.00	0.00	0.14	0.55	0.01	0.00	0.00	0.00	0.00	0.07	0.00
19	0.03	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09
20	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.00	0.00	0.00	0.02
21	0.04	0.00	0.00	0.70	0.00	0.01	0.00	1.43	0.45	0.00	0.00	1.20
22	0.00	0.00	0.00	0.27	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.02
23	0.00	0.00	0.00	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.26
24	0.00	0.00	0.00	0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
25	0.00	0.00	0.00	0.27	0.00	0.34	0.00	0.00	0.00	0.00	0.05	0.94
26	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.23	0.00	0.00	0.25	0.12
27	0.00	0.00	0.00	0.00	0.00	0.10	1.32	0.00	0.05	0.00	0.00	0.05
28	0.00	0.25	0.00	0.00	0.00	0.00	0.09	0.02	0.00	0.02	0.00	0.00
29	0.10	0.00	0.00	0.00	0.15	0.11	0.00	0.00	0.00	0.00	0.00	0.00
30	0.07	--	0.85	0.02	0.28	0.00	0.00	0.03	0.00	0.00	0.00	0.00
31	0.22	--	0.08	--	0.00	--	0.00	0.03	--	0.00	--	0.06
SUM	2.42	0.52	3.06	2.46	2.00	0.59	1.75	2.74	1.00	0.42	2.05	3.26

Table 7. Daily precipitation volume for Douglas Pass, 1980-91—Continued

[—, no data]

Day	Precipitation (Inches)											
	January	February	March	April	May	June	July	August	September	October	November	December
	1989											
1	0.00	0.00	0.00	0.37	0.00	0.00	0.00	0.43	0.00	0.00	0.01	0.00
2	0.00	0.00	0.58	0.12	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00
3	0.00	1.18	0.65	0.02	0.00	0.02	0.00	0.00	0.00	0.10	0.00	0.00
4	1	0.82	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.00
5	--	0.05	0.04	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	0.18	0.00	0.00	0.00	0.00	0.00	0.12
7	--	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	0.35	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
10	--	0.15	0.00	0.00	0.00	0.00	0.03	0.04	0.00	0.00	0.00	0.16
11	--	0.01	0.00	0.00	0.00	0.00	0.13	0.00	0.00	0.00	0.00	0.00
12	--	0.12	0.00	0.00	0.02	0.83	0.10	0.00	0.56	0.00	0.00	0.00
13	--	0.03	0.00	0.00	0.01	0.00	0.00	0.00	0.07	0.00	0.00	0.00
14	--	0.01	0.00	0.00	0.15	0.00	0.00	0.21	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	0.55	0.00	0.05
16	--	0.05	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.03	0.00	0.10
17	--	0.00	0.00	0.03	0.00	0.00	0.00	0.10	0.00	0.00	0.00	0.02
18	--	0.15	0.00	0.00	0.00	0.00	0.02	0.02	0.00	0.00	0.00	0.07
19	0.00	0.37	0.12	0.00	0.00	0.00	0.01	0.23	0.30	0.00	0.00	0.00
20	0.00	0.08	0.23	0.00	0.00	0.00	0.00	0.20	0.25	0.00	0.00	0.00
21	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.30	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00
23	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	0.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	0.02	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.05	0.15	0.00
26	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.30	1.05	0.00
27	0.00	0.00	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00
28	0.00	0.00	0.00	0.05	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00
29	0.00	--	0.00	0.02	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00
30	0.00	--	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
31	0.00	--	0.00	--	0.02	--	0.00	0.00	--	0.04	--	0.00
SUM	1.72	3.03	1.73	0.67	0.27	1.13	0.56	1.39	1.53	1.37	1.38	0.54

<sup>1</sup>Clock stopped. Total accumulation was 1.34 inches.

**Table 7. Daily precipitation volume for Douglas Pass, 1980-91—Continued**

[--, no data]

Day	Precipitation (Inches)											
	January	February	March	April	May	June	July	August	September	October	November	December
	1990											
1	0.00	0.37	0.00	0.00	0.02	0.18	0.53	0.04	0.00	0.00	0.25	0.00
2	0.00	0.36	0.02	0.00	0.00	0.00	0.00	0.00	0.06	0.08	0.58	0.00
3	0.15	0.00	0.11	0.00	0.00	0.00	0.43	0.00	0.00	0.00	0.05	0.00
4	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.00
5	0.05	0.00	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00
6	0.00	0.00	1.25	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.00
7	0.00	0.27	0.00	0.00	0.00	0.00	0.31	0.00	0.00	0.42	0.00	0.00
8	0.00	0.16	0.00	0.40	0.00	0.00	0.14	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.18	0.00	0.00	0.75	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.45	0.00	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	0.78	0.00	0.10	0.60	0.00	0.08	0.00	0.00	0.00	0.00
12	0.00	0.02	0.08	0.00	0.08	0.15	0.00	0.00	0.00	0.00	0.00	0.11
13	0.17	0.20	0.13	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.30
14	0.05	0.27	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.30
15	0.50	0.06	0.03	0.00	0.20	0.00	0.01	0.00	0.00	0.00	0.00	0.00
16	0.16	0.05	0.00	0.00	0.00	0.00	0.00	0.10	0.87	0.05	0.00	0.08
17	0.00	0.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.22	0.00	0.20	0.00	0.00	0.18	0.00	0.91	0.00	0.00	0.00
19	0.13	0.03	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.80	0.03	0.37
20	0.01	0.00	0.00	0.15	0.00	0.00	0.00	0.05	0.00	0.13	0.77	0.43
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.01
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00
23	0.10	0.00	0.00	0.10	0.00	0.00	0.02	0.00	0.02	0.00	0.00	0.00
24	0.00	0.00	0.00	0.05	0.00	0.00	0.15	0.00	0.00	0.00	0.00	0.01
25	0.00	0.00	0.00	0.15	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.03
26	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.14	0.01
27	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.03	0.00	0.02	0.00
28	0.00	0.00	0.07	0.08	0.28	0.00	0.00	0.00	0.37	0.00	0.00	0.00
29	0.00	--	0.28	0.00	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.37
30	0.00	--	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	0.14	--	0.00	--	0.00	--	0.00	0.00	--	0.00	--	0.00
SUM	1.48	2.41	3.08	1.44	0.83	1.38	2.61	0.35	2.39	1.57	2.05	2.02

**Table 7.** Daily precipitation volume for Douglas Pass, 1980–91—Continued

[—, no data]

Day	Precipitation (inches)											
	January	February	March	April	May	June	July	August	September	October	November	December
	1991											
1	0.00	0.00	0.60	0.37	0.00	0.21	0.00	0.08	0.00	—	—	—
2	0.00	0.00	0.23	0.00	0.00	0.20	0.00	0.02	0.00	—	—	—
3	0.00	0.00	0.00	0.00	0.12	0.37	0.00	0.30	0.00	—	—	—
4	0.51	0.00	0.00	0.00	0.08	0.00	0.00	0.15	0.00	—	—	—
5	0.00	0.00	0.11	0.00	0.00	0.00	0.00	0.00	0.00	—	—	—
6	0.00	0.00	0.07	0.02	0.00	0.05	0.00	0.40	0.40	—	—	—
7	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.65	—	—	—
8	0.08	0.00	0.00	0.00	0.00	0.00	0.28	0.00	0.08	—	—	—
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	—	—
10	0.05	0.00	0.00	0.30	0.00	0.00	0.38	0.00	0.25	—	—	—
11	0.00	0.00	0.47	0.04	0.00	0.00	0.00	0.00	0.00	—	—	—
12	0.01	0.00	0.00	0.26	0.00	0.00	0.00	0.05	0.15	—	—	—
13	0.09	0.02	0.00	0.22	0.00	0.00	0.00	0.00	0.00	—	—	—
14	0.00	0.00	0.31	0.00	0.00	0.00	0.00	0.00	0.00	—	—	—
15	0.18	0.00	0.35	0.00	0.63	0.00	0.00	0.34	0.00	—	—	—
16	0.00	0.45	0.00	0.00	0.02	0.00	0.00	0.00	0.00	—	—	—
17	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	—	—
18	0.00	0.13	0.00	0.00	0.00	0.00	0.00	0.30	0.00	—	—	—
19	0.07	0.00	0.13	0.00	0.00	0.00	0.00	0.00	0.00	—	—	—
20	0.00	0.00	0.08	0.00	0.00	0.00	0.22	0.00	0.00	—	—	—
21	0.00	0.00	0.33	0.03	0.00	0.00	0.00	0.00	0.00	—	—	—
22	0.00	0.00	0.02	0.10	0.00	0.00	0.00	0.00	0.00	—	—	—
23	0.00	0.00	0.00	0.00	0.04	0.00	0.10	0.00	0.00	—	—	—
24	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	—	—	—
25	0.00	0.00	0.00	0.27	0.00	0.00	0.63	0.00	0.00	—	—	—
26	0.00	0.00	1.12	0.00	0.00	0.00	0.10	0.00	0.00	—	—	—
27	0.00	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	—	—	—
28	0.14	0.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	—	—
29	0.00	—	0.22	0.09	0.00	0.00	0.00	0.00	0.02	—	—	—
30	0.00	—	0.00	0.25	0.00	0.00	0.00	0.00	0.00	—	—	—
31	0.00	—	0.00	0.00	0.03	—	0.00	0.00	—	—	—	—
SUM	1.13	1.05	4.04	2.22	0.97	0.83	1.71	1.64	1.55	—	—	—

**Table 8.** Daily precipitation volume for Grand Mesa, 1981–91

[--, no data]

Day	Precipitation (inches)											
	January	February	March	April	May	June	July	August	September	October	November	December
	1981											
1	--	--	--	--	--	--	--	--	0.00	0.00	0.00	0.02
2	--	--	--	--	--	--	--	--	0.00	0.89	0.00	0.00
3	--	--	--	--	--	--	--	--	0.00	0.54	0.00	0.00
4	--	--	--	--	--	--	--	--	0.04	0.25	0.00	0.00
5	--	--	--	--	--	--	--	--	0.36	1.74	0.00	0.00
6	--	--	--	--	--	--	--	--	0.04	0.16	0.23	0.00
7	--	--	--	--	--	--	--	--	0.00	0.00	0.06	0.00
8	--	--	--	--	--	--	--	--	0.00	0.35	0.02	0.00
9	--	--	--	--	--	--	--	--	0.01	0.00	0.00	0.00
10	--	--	--	--	--	--	--	--	0.00	0.00	0.00	0.00
11	--	--	--	--	--	--	--	--	0.06	0.02	0.00	0.02
12	--	--	--	--	--	--	--	--	0.00	0.00	0.00	0.00
13	--	--	--	--	--	--	--	--	0.00	0.17	0.00	0.34
14	--	--	--	--	--	--	--	--	0.14	0.05	0.00	0.04
15	--	--	--	--	--	--	--	--	0.00	0.17	0.00	0.16
16	--	--	--	--	--	--	--	--	0.00	0.00	0.00	0.14
17	--	--	--	--	--	--	--	--	0.00	0.00	0.00	0.24
18	--	--	--	--	--	--	--	--	0.00	1.38	0.45	0.05
19	--	--	--	--	--	--	--	--	0.00	0.88	0.00	0.10
20	--	--	--	--	--	--	--	--	0.03	0.00	0.00	0.00
21	--	--	--	--	--	--	--	--	0.00	0.00	0.00	0.92
22	--	--	--	--	--	--	--	--	0.00	0.00	0.03	0.34
23	--	--	--	--	--	--	--	--	0.00	0.00	0.00	0.02
24	--	--	--	--	--	--	--	--	0.02	0.00	0.00	0.04
25	--	--	--	--	--	--	--	--	0.02	0.33	0.16	0.11
26	--	--	--	--	--	--	--	--	0.00	0.65	0.00	0.23
27	--	--	--	--	--	--	--	0.00	0.00	0.00	0.25	0.00
28	--	--	--	--	--	--	--	0.00	0.00	0.62	0.30	0.75
29	--	--	--	--	--	--	--	0.55	0.00	0.60	0.70	1
30	--	--	--	--	--	--	--	0.77	0.00	0.56	0.40	--
31	--	--	--	--	--	--	--	0.17	--	0.00	--	--
SUM	--	--	--	--	--	--	--	--	0.72	9.36	2.60	--

<sup>1</sup>Total accumulation from 12/29/81 to 01/06/82 was 0.63 inch.

Table 8. Daily precipitation volume for Grand Mesa, 1981-91—Continued

[—, no data]

Day	Precipitation (inches)											
	January	February	March	April	May	June	July	August	September	October	November	December
1	1	0.01	0.85	1.36	0.06	0.00	0.03	0.33	0.00	0.98	0.10	1.02
2	--	0.02	0.70	0.00	0.07	0.00	0.00	0.14	0.00	0.50	0.02	0.04
3	--	0.17	0.43	0.00	0.14	0.02	0.00	0.09	0.00	0.00	0.00	0.02
4	--	0.12	0.08	1.41	0.01	0.00	0.02	0.00	0.15	0.00	0.00	0.00
5	--	0.00	0.04	0.43	0.00	0.00	0.02	0.00	0.25	0.05	0.00	0.00
6	--	0.00	0.00	1.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.98	0.00	0.00	0.00	0.40	0.00	0.00	0.00	0.00
8	0.00	0.08	0.00	0.00	0.00	0.00	0.39	0.06	0.01	0.00	1.42	0.00
9	0.00	0.40	0.00	0.13	0.00	0.00	0.00	0.16	0.48	0.00	1.04	0.15
10	0.00	0.12	0.05	0.00	0.00	0.00	0.00	0.00	0.77	0.10	1.21	0.00
11	0.12	0.18	1.50	0.44	0.24	0.00	0.00	0.23	0.18	0.00	0.67	0.00
12	0.02	0.00	0.81	0.00	1.57	0.00	0.00	0.09	0.04	0.25	0.00	0.00
13	0.13	0.00	0.00	0.00	1.56	0.00	0.02	0.15	0.00	0.16	0.00	0.31
14	0.00	0.00	0.32	0.00	0.00	0.00	0.00	0.01	0.40	0.00	0.00	0.35
15	0.00	0.02	2.54 <sup>2</sup>	0.08	0.00	0.00	0.00	0.06	1.58	0.00	0.00	0.00
16	0.08	0.42	--	0.00	0.00	0.00	0.00	0.23	0.00	0.00	0.00	0.14 <sup>4</sup>
17	0.00	0.00	--	0.00	0.16	0.15	0.10	0.91	0.14	0.00	0.00	--
18	0.00	0.00	--	0.00	0.00	0.07	0.00	1.06	0.10	0.05	0.35	--
19	0.11	0.00	--	0.03	0.00	0.79	0.00	0.02	0.23	0.00	1.08	--
20	0.11	0.00	--	0.15	0.00	0.32	0.00	0.02	0.35	0.00	0.11	--
21	0.85	0.00	--	0.00	0.00	0.00	0.17	0.00	0.00	0.00	0.02	--
22	0.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19	--
23	0.00	0.00	0.00	0.49	0.00	0.00	0.00	0.13	0.00	0.00	0.01	--
24	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.06	0.00	0.30	0.00	--
25	0.00	0.01	0.00	0.00	0.00	0.00	0.02	0.22	0.06	0.10	0.02	--
26	0.00	0.01	0.90	0.10	0.00	0.00	0.24	0.06	0.60	2.20	0.00	--
27	0.10	0.04	0.23	0.15	0.00	0.00	0.01	0.00	0.20	0.73	0.00	--
28	0.40	0.00	0.22	0.00	0.00	0.00	0.09	0.12	0.00	0.22	0.05	--
29	0.06	--	<sup>3</sup>	0.00	0.00	0.00	0.20	0.00	0.00	0.00	0.90	--
30	0.00	--	--	--0.00	0.00	0.43	0.00	0.15	1.32	0.94	1.85	--
31	0.40	--	0.55	--	0.00	--	0.00	0.00	--	0.22	--	--
SUM	--	1.60	--	7.23	3.81	1.78	1.31	4.70	6.86	6.80	9.04	--

<sup>1</sup>Total accumulation for 12/29/81 to 01/06/82 was 0.63 inch.<sup>2</sup>Total accumulation for 03/16/82 to 03/21/82 was 1.77 inches.<sup>3</sup>Total accumulation for 03/29/82 to 03/30/82 is unknown.<sup>4</sup>No data available for 12/17/82 to 01/04/83.

**Table 8.** Daily precipitation volume for Grand Mesa, 1981–91—Continued

[—, no data]

Day	Precipitation (inches)											
	January	February	March	April	May	June	July	August	September	October	November	December
1	1	0.00	3	4	0.31	0.02	0.00	0.02	0.00	—	0.00	0.00
2	—	0.00	—	—	0.51	0.12	0.00	0.28	— <sup>5</sup>	—	0.00	0.00
3	—	0.00	—	—	0.05	0.00	0.00	0.27	—	—	0.00	0.00
4	—	0.31	—	—	0.01	0.00	0.00	0.00	—	—	0.00	0.00
5	0.00	0.09	—	0.57	0.00	0.00	0.00	0.25	—	0.00	0.00	0.00
6	0.00	0.05	—	0.00	0.30	0.08	0.20	0.07	—	0.00	0.00	0.00
7	0.00	0.50	—	0.25	0.01	0.01	0.02	0.02	—	0.01	0.80	0.00
8	0.24	1.03	—	0.05	0.00	0.07	0.05	0.00	—	0.02	0.56	0.00
9	0.05	0.17	—	0.09	0.00	0.03	0.05	0.01	—	0.00	0.03	0.00
10	0.05	0.19	—	0.09	0.01	0.02	0.00	0.06	—	0.07	0.06	0.00
11	0.00	<sup>2</sup>	—	0.00	0.00	0.00	0.00	0.00	—	0.00	0.08	0.00
12	0.00	—	—	0.11	0.00	0.62	0.00	0.03	—	0.00	0.18	0.50
13	0.00	—	—	0.00	0.00	0.17	0.00	0.26	—	0.55	0.37	0.00
14	0.00	—	—	0.00	0.12	0.00	0.00	0.00	—	0.34	0.10	0.45
15	0.00	—	—	0.75	0.26	0.00	0.00	0.02	—	0.00	0.00	0.90
16	0.00	—	—	0.39	1.09	0.00	0.00	0.07	—	0.00	<sup>6</sup>	0.04
17	0.09	—	—	0.21	0.86	0.00	0.00	0.10	—	0.17	—	0.00
18	0.22	—	—	0.02	0.14	0.00	0.30	0.15	—	0.12	—	0.00
19	0.00	—	—	0.00	0.15	0.00	0.24	0.16	—	0.00	—	0.07
20	0.02	—	—	0.14	0.00	0.00	0.31	0.01	—	0.00	—	0.00
21	0.10	—	—	0.63	0.12	0.00	0.00	0.00	—	0.20	—	0.05
22	0.00	—	—	0.04	0.17	0.00	0.79	0.00	—	0.00	—	0.46
23	0.06	—	—	0.00	0.00	0.10	0.31	0.00	—	0.00	—	0.11
24	0.57	—	—	0.00	0.00	0.49	0.00	0.00	—	0.00	—	0.15
25	0.07	—	—	0.00	0.00	0.58	0.34	0.00	—	0.00	—	<sup>7</sup>
26	0.00	—	—	0.00	0.00	0.23	0.54	0.00	—	0.00	—	—
27	0.27	—	—	0.25	0.00	0.18	0.45	0.02	—	0.00	—	—
28	0.12	—	—	0.42	0.00	0.13	0.00	0.20	—	0.00	—	—
29	0.40	—	0.40	0.19	0.00	0.09	0.01	—	0.00	—	—	—
30	0.00	—	—	1.56	0.00	0.00	0.16	0.01	0.00	0.00	—	—
31	0.00	—	—	—	0.10	—	0.14	0.00	—	0.00	—	0.09
SUM	—	4.54	—	—	4.40	2.85	3.99	2.02	—	—	2.94	3.74

<sup>1</sup>No data available from 12/17/82 to 01/04/83.

<sup>2</sup>Total accumulation from 02/11/83 to 02/28/83 was 2.20 inches.

<sup>3</sup>Total accumulation from 03/01/83 to 03/08/83 was 1.94 inches. No data available for the rest of the month.

<sup>4</sup>No data available from 04/01/83 to 04/04/83.

<sup>5</sup>Total accumulation from 09/02/83 to 10/04/83 was 3.12 inches.

<sup>6</sup>Total accumulation from 11/16/83 to 11/30/83 was 0.76 inch.

<sup>7</sup>Total accumulation from 12/25/83 to 12/29/83 was 0.90 inch.

**Table 8.** Daily precipitation volume for Grand Mesa, 1981–91—Continued

[—, no data]

Day	Precipitation (Inches)											
	January	February	March	April	May	June	July	August	September	October	November	December
	1984											
1	0.01	0.00	0.00	0.15	0.18	0.20	0.00	0.06	0.15	1.00	0.00	0.10
2	0.00	0.00	0.00	1	0.81	0.02	0.00	0.02	0.00	0.04	0.00	0.05
3	0.00	0.00	0.02	—	0.00	0.03	0.00	0.00	0.00	0.10	0.00	0.00
4	0.00	0.00	0.32	—	0.40	0.00	0.00	0.21	0.00	0.45	0.00	0.00
5	0.00	0.00	0.00	—	0.32	0.80	0.00	0.01	0.00	0.56	0.00	0.00
6	0.00	0.00	0.00	—	0.17	1.75	0.03	0.12	0.00	0.00	0.29	0.00
7	0.00	0.00	0.00	—	0.01	1.30	0.00	0.00	0.00	0.00	0.42	0.00
8	0.00	0.00	0.00	0.00	0.00	0.02	0.33	0.00	0.00	0.00	0.00	0.47
9	0.00	0.00	0.02	0.61	0.00	0.23	0.57	0.00	0.00	0.00	0.00	0.03
10	0.00	0.45	0.02	0.07	0.00	0.02	0.00	0.03	0.00	0.04	0.14	0.02
11	0.29	0.29	0.31	0.17	0.00	0.00	0.00	0.02	0.23	0.00	0.20	0.75
12	0.00	0.01	0.09	0.00	0.00	0.00	0.00	0.18	0.19	0.65	3	0.65
13	0.54	0.18	0.00	0.00	0.00	0.00	0.13	0.01	0.00	0.45	—	0.25
14	1.25	1.11	0.38	0.00	0.00	0.00	0.52	0.44	0.00	0.30	—	0.00
15	0.05	0.00	0.04	0.00	0.32	0.00	0.87	0.05	0.05	0.10	0.00	0.22
16	0.01	0.11	0.53	0.00	0.06	0.03	0.00	0.00	0.29	0.65	0.00	0.29
17	0.06	0.62	0.05	0.00	0.00	0.00	0.00	0.03	0.04	2	0.00	0.05
18	0.02	0.00	0.29	0.00	0.03	0.00	0.00	0.00	0.00	—	0.00	0.02
19	0.01	0.00	0.00	0.74	0.00	0.03	0.00	0.12	0.00	—	0.00	0.25
20	0.02	0.00	0.00	0.28	0.00	0.30	0.00	0.91	0.93	—	0.00	0.78
21	0.00	0.00	0.20	0.02	0.00	0.04	0.04	0.74	0.44	—	0.00	0.05
22	0.00	0.00	0.24	0.00	0.00	0.00	0.11	0.12	0.07	—	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.04	0.10	—	0.00	0.01
24	0.00	0.07	0.10	0.00	0.00	0.00	0.12	0.84	0.05	—	0.50	0.00
25	0.04	0.15	0.63	0.46	0.00	0.09	0.15	0.24	0.00	0.00	0.97	0.00
26	0.08	0.03	0.20	0.17	0.00	0.02	0.01	0.00	0.00	0.45	0.28	0.59
27	0.00	0.00	0.19	0.23	0.00	0.00	0.00	0.00	0.00	0.10	0.01	1.75
28	0.00	0.00	0.00	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00
29	0.00	0.00	0.05	0.15	0.00	0.00	0.65	0.00	0.00	0.00	0.12	0.00
30	0.00	—	0.61	0.18	0.00	0.00	0.44	0.00	0.00	0.00	0.01	0.00
31	0.00	—	0.19	—	0.35	—	0.07	0.00	—	0.00	—	0.00
SUM	2.38	3.02	4.48	3.71	2.65	4.88	4.06	4.19	2.54	5.94	3.11	6.33

<sup>1</sup>Total accumulation from 04/02/84 to 04/07/84 was 0.25 inch.

<sup>2</sup>Total accumulation from 10/17/84 to 10/25/84 was 1.05 inches.

<sup>3</sup>Total accumulation from 11/12/84 to 11/14/84 was 0.10 inch.

**Table 8. Daily precipitation volume for Grand Mesa, 1981–91—Continued**

[--, no data]

Day	Precipitation (Inches)											
	January	February	March	April	May	June	July	August	September	October	November	December
	1985											
1	--	--	0.00	0.60	0.00	0.22	0.00	0.00	0.35	0.00	0.00	0.00
2	--	--	0.00	0.13	0.00	0.00	0.00	0.09	0.15	0.00	0.00	0.00
3	--	--	0.50	0.00	0.06	0.00	0.00	0.00	0.08	0.00	0.00	1.71
4	--	--	0.04	0.00	0.03	0.00	0.00	0.00	0.02	0.00	0.00	0.05
5	0.00	--	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.27
6	0.00	--	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.32	--	0.00	0.00	0.00	0.00	0.06	0.24	0.46	1.10	0.00	0.00
8	0.74	--	0.00	0.00	0.00	0.00	0.02	0.00	0.02	1.18	0.08	0.23
9	0.05	0.10	0.00	0.00	0.02	0.00	0.00	0.03	0.00	0.17	0.27	0.07
10	1	0.20	0.86	0.00	0.23	0.08	0.00	0.00	0.00	0.00	0.00	0.00
11	--	0.15	0.42	0.00	0.28	0.00	0.03	0.03	0.83	0.60	2.14	0.32
12	--	0.00	0.72	0.00	0.47	0.00	0.07	0.05	0.00	0.02	0.45	0.00
13	--	0.00	0.00	0.00	0.50	0.00	0.01	0.00	0.00	0.92	0.09	0.00
14	--	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.35	0.04	0.05	0.43
15	--	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.72	0.00	0.06	0.02
16	--	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.32	0.00
17	--	0.10	0.00	0.00	0.24	0.00	0.07	0.00	0.00	0.00	1.37	0.00
18	--	0.00	0.02	0.42	0.00	0.00	0.47	0.00	1.25	0.00	1.02	0.00
19	--	0.00	0.00	0.48	0.12	0.00	0.75	0.00	0.00	0.00	0.13	0.00
20	--	0.38	0.00	1.00	0.28	0.00	0.23	0.00	0.15	0.00	0.00	0.00
21	--	0.05	0.14	1.85	0.41	0.00	0.20	0.00	0.02	0.00	0.00	0.00
22	--	0.13	0.00	0.55	0.00	0.00	0.22	0.00	0.44	0.21	0.32	0.00
23	--	0.00	0.00	0.15	0.00	0.00	0.03	0.00	0.04	0.00	0.53	0.00
24	--	0.00	0.00	0.00	0.08	0.31	0.04	0.00	0.00	0.00	0.66	0.00
25	--	0.25	0.00	0.92	0.00	0.11	0.14	0.00	0.00	0.00	0.56	0.00
26	--	0.00	0.43	0.10	0.00	0.08	0.54	0.00	0.00	0.00	0.35	0.00
27	--	0.00	0.80	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00
28	--	0.00	0.34	0.00	0.00	0.00	0.00	0.00	0.75	0.00	0.29	0.00
29	--	--	0.00	0.00	0.00	0.00	0.23	0.00	0.03	0.00	0.20	0.03
30	--	--	0.00	0.00	0.01	0.00	0.06	0.00	0.00	0.00	0.00	0.41
31	--	--	0.00	--	0.49	--	0.00	0.00	--	0.40	--	0.00
SUM	--	--	4.27	6.20	3.33	0.80	3.19	0.44	5.66	4.64	9.03	3.54

<sup>1</sup>Gage vandalized, no data.

**Table 8. Daily precipitation volume for Grand Mesa, 1981–91—Continued**

[—, no data]

Day	Precipitation (Inches)											
	January	February	March	April	May	June	July	August	September	October	November	December
	1985											
1	0.00	0.00	--	--	0.00	0.00	0.00	0.00	0.00	0.02	0.49	0.00
2	0.00	0.09	--	--	0.00	0.05	0.00	0.00	0.13	0.03	0.00	0.00
3	0.00	0.11	--	--	0.00	0.14	0.00	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	--	--	0.00	0.00	0.95	0.00	0.00	0.60	0.00	0.00 <sup>2</sup>
5	0.00	0.05	--	--	0.00	0.05	0.37	0.37	0.00	0.04	0.00	--
6	0.43	0.01	--	--	0.07	0.00	0.00	0.01	0.00	0.00	0.55	--
7	0.00	0.11	--	--	1.63	0.00	0.07	0.09	0.18	0.00	0.53	--
8	0.00	0.04	--	--	0.52	0.00	0.08	0.02	0.35	0.00	0.40	--
9	0.00	0.10	--	--	0.55	0.48	0.16	0.00	0.71	0.01	0.00	--
10	0.00	0.05	--	--	0.00	0.10	0.01	0.00	0.45	0.20	0.00	--
11	0.00	0.14	--	--	0.00	0.00	0.00	0.03	0.17	0.60	0.00	--
12	0.00	0.18	--	--	0.00	0.00	0.00	0.15	0.00	0.49	0.00	--
13	0.00	1.17	--	--	0.00	0.00	0.00	0.07	0.00	0.00	0.00	--
14	0.00	0.00	--	--	0.05	0.00	0.36	0.00	0.00	0.00	0.00	--
15	0.31	1.15	--	--	0.89	0.00	0.10	0.00	0.00	0.00	0.00	--
16	0.00	0.41	--	--	0.27	0.00	0.72	0.00	0.00	0.00	0.00	--
17	0.02	0.44	--	--	0.00	0.00	0.00	0.00	0.00	0.00	0.00	--
18	0.00	0.03	--	--	0.00	0.01	0.01	0.00	0.00	0.05	0.78	--
19	0.00	0.10	--	--	0.00	0.05	0.14	0.00	0.00	0.30	0.43	0.00
20	0.30	1 <sup>1</sup>	--	--	0.00	0.00	0.01	0.13	0.00	0.18	0.00	0.04
21	0.00	--	--	--	0.00	0.00	0.14	0.00	0.00	0.33	0.22	0.00
22	0.00	--	--	--	0.00	0.00	0.17	0.00	0.73	0.05	0.00	0.00
23	0.01	--	--	--	0.00	0.00	0.03	0.05	1.10	0.00	0.00	0.00
24	0.00	--	--	--	0.00	0.00	0.04	0.35	0.52	0.00	0.00	0.00
25	0.00	--	--	--	0.00	0.30	0.00	0.16	0.00	0.00	0.24	0.00
26	0.00	--	--	--	0.00	0.00	0.01	0.00	0.13	0.00	0.02	0.00
27	0.00	--	--	--	0.00	0.00	0.00	0.00	0.55	0.00	0.00	0.00
28	0.00	--	--	--	0.01	0.23	0.00	0.24	0.11	0.00	0.00	0.00
29	0.00	--	--	--	0.06	0.00	0.00	0.15	0.03	0.00	0.50	0.00
30	0.03	--	--	--	0.00	0.03	0.00	0.00	0.16	0.00	0.25	0.00
31	0.15	--	--	--	0.00	--	0.00	0.35	--	1.04	--	0.10
SUM	1.25	--	--	--	4.05	1.44	3.37	2.17	5.32	3.94	4.41	1.24

<sup>1</sup>Gage under snowpack.

<sup>2</sup>Total accumulation from 12/04/86 to 12/18/86 was 1.10 inches.

**Table 8.** Daily precipitation volume for Grand Mesa, 1981-91—Continued

[--, no data]

Day	Precipitation (Inches)											
	January	February	March	April	May	June	July	August	September	October	November	December
	1987											
1	0.32	--	0.00	0.00	0.36	0.00	0.00	0.03	0.00	0.00	0.52	0.00
2	0.00	--	0.00	0.00	0.62	0.00	0.00	0.00	0.14	0.00	0.21	0.00
3	0.00	--	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.17	0.00
4	0.90	--	0.00	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00
5	0.38	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.50
6	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.69	0.00
7	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.84	0.04	0.00	0.28	0.36
8	0.02	0.00	0.10	0.00	0.00	0.30	0.00	0.00	0.00	0.00	0.02	0.03
9	0.00	0.00	0.40	0.00	0.00	0.15	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00
11	0.00	0.12	0.41	0.30	0.00	0.00	0.16	0.04	0.00	0.00	0.00	0.13
12	0.00	0.13	0.05	0.37	0.10	0.00	0.12	0.00	0.00	0.18	0.00	0.06
13	0.00	0.03	0.00	0.00	0.05	0.00	0.00	0.15	0.30	0.23	0.00	0.04
14	1	1.84	0.00	0.00	0.32	0.00	0.00	0.00	0.00	0.01	0.85	0.02
15	--	0.05	0.15	0.00	0.02	0.00	0.00	0.00	0.00	0.76	0.64	0.00
16	--	0.05	0.56	0.00	0.00	0.00	0.00	0.00	0.02	0.14	0.00	0.00
17	--	0.00	0.02	0.00	0.06	0.00	0.78	0.00	0.00	0.00	0.44	0.45
18	--	0.34	0.03	0.00	0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	--	0.05	0.50	0.00	0.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.65	0.03	0.57	0.00	0.00	0.00	0.00	0.00	0.00	0.23
21	0.00	0.00	0.20	0.00	0.61	0.00	0.00	0.58	0.00	0.03	0.00	0.00
22	2	0.00	0.45	0.00	0.32	0.00	0.00	0.33	0.00	0.00	0.00	0.00
23	--	0.03	0.23	0.00	0.00	0.00	0.00	0.58	0.00	0.06	0.00	0.69
24	--	0.67	0.00	0.00	0.60	0.00	0.00	0.43	0.00	0.60	0.00	0.13
25	--	0.25	0.00	0.00	0.00	0.00	0.10	0.37	0.05	0.08	0.03	0.01
26	--	0.00	0.34	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.07	0.09
27	--	0.00	0.22	0.00	0.28	0.00	0.15	0.00	0.00	0.00	0.00	0.16
28	--	0.94	0.15	0.00	0.59	0.00	0.00	0.04	0.00	0.00	0.00	0.00
29	--	0.04	0.02	0.00	0.41	0.04	0.00	0.00	0.67	0.00	0.00	0.00
30	--	--	0.00	0.10	0.00	0.00	0.01	0.00	0.00	0.21	0.00	0.22
31	--	--	0.00	--	0.00	0.00	0.20	0.00	--	0.04	--	0.00
SUM	--	--	4.50	0.96	5.05	0.86	1.56	3.42	0.61	3.01	3.95	3.12

<sup>1</sup>Total accumulation from 01/14/87 to 01/19/87 was 0.78 inch.

<sup>2</sup>No chart.

**Table 8.** Daily precipitation volume for Grand Mesa, 1981–91—Continued

[--, no data]

Day	Precipitation (Inches)											
	January	February	March	April	May	June	July	August	September	October	November	December
	1988											
1	0.00	0.07	0.28	0.00	0.02	--	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.42	0.05	0.00	0.58	--	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.05	0.00	0.00	0.00	--	0.10	0.08	0.00	0.00	0.05	0.00
4	0.08	0.00	0.11	0.13	0.00	--	0.05	0.00	0.00	0.00	0.00	0.00
5	0.85	0.00	0.00	0.00	0.00	--	0.02	0.00	0.00	0.06	0.00	0.00
6	0.50	0.00	0.18	0.00	0.00	0.00	0.10	0.75	0.00	0.11	0.00	0.10
7	0.00	0.00	0.66	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.03
8	0.12	0.00	0.05	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.35	0.00
9	0.05	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.00
10	0.02	0.44	0.14	0.00	0.00	0.00	0.05	0.00	1.05	0.00	0.02	0.00
11	0.20	0.00	0.12	0.00	0.00	0.08	0.00	0.00	0.32	0.00	1.42	0.00
12	0.00	0.00	0.21	0.00	0.00	0.00	0.00	0.16	2.50	0.00	0.01	0.00
13	0.00	0.09	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00
14	0.00	0.00	0.00	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.89	0.02
15	0.10	0.00	0.07	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.13
16	0.03	0.05	0.48	0.08	0.00	0.00	0.00	0.20	0.00	0.00	0.01	0.00
17	1.02	0.00	0.02	0.10	0.35	0.00	0.00	0.40	0.00	0.00	0.21	0.00
18	0.94	0.00	0.00	0.13	0.40	0.00	0.00	0.00	0.00	0.00	0.14	0.00
19	0.09	0.00	0.00	0.00	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.53
20	0.00	0.00	0.00	0.57	1	0.00	0.00	0.16	0.00	0.00	0.00	0.12
21	0.17	0.00	0.00	0.44	--	0.00	0.00	0.22	0.49	0.00	0.00	1.23
22	0.00	0.00	0.08	0.32	--	0.00	0.00	0.00	0.00	0.00	0.00	0.16
23	0.15	0.00	0.02	0.61	--	0.00	0.00	0.00	0.00	0.00	0.00	0.70
24	0.02	0.00	0.00	0.22	--	0.00	0.00	0.00	0.00	0.00	0.10	0.37
25	0.00	0.00	0.00	0.22	--	0.05	0.18	0.00	0.00	0.00	0.23	1.68
26	0.00	0.00	0.00	0.00	--	0.00	0.18	0.05	0.00	0.00	0.80	0.03
27	0.00	0.03	0.00	0.00	--	0.57	0.40	0.00	0.00	0.00	0.42	0.00
28	0.00	0.02	0.02	0.00	--	0.50	0.27	0.00	0.00	0.00	0.03	0.03
29	0.03	0.00	0.00	0.00	--	0.28	0.10	0.00	0.00	0.00	0.00	0.00
30	0.32	--	0.37	0.00	--	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	0.16	--	0.34	--	--	--	0.00	0.00	--	0.00	--	0.00
SUM	4.85	1.18	3.28	3.62	--	00	1.45	2.02	4.36	0.26	5.07	5.13

<sup>1</sup>Chart missing.

**Table 8.** Daily precipitation volume for Grand Mesa, 1981-91—Continued

[--, no data]

Day	Precipitation (Inches)											
	January	February	March	April	May	June	July	August	September	October	November	December
	1989											
1	0.00	0.00	0.00	0.20	0.00	0.00	0.00	0.05	0.00	0.00	0.03	0.00
2	0.00	0.00	1.53	0.18	0.04	0.00	0.00	0.07	0.00	0.00	0.00	0.00
3	0.00	1.58	1.00	0.22	0.00	0.00	0.00	0.00	0.00	0.39	0.00	0.00
4	0.41	2.17	0.03	0.00	0.15	0.02	0.00	0.06	0.00	0.00	0.00	0.00
5	0.19	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
6	0.58	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.05	0.24
7	0.03	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
8	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.00	0.00	0.00
9	0.00	0.02	0.00	0.00	0.01	0.00	0.00	0.06	0.00	0.00	0.00	0.00
10	0.05	0.33	0.00	0.00	0.02	0.01	0.28	0.58	0.00	0.00	0.00	0.30
11	0.25	0.02	0.00	0.00	0.00	0.00	0.02	0.06	0.00	0.00	0.00	0.00
12	0.00	0.44	0.00	0.00	0.04	0.29	0.04	0.04	0.20	0.00	0.00	0.00
13	0.00	0.46	0.00	0.00	0.00	0.11	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.07	0.00	0.00	0.32	0.00	0.00	0.38	0.00	0.01	0.00	0.00
15	0.04	0.02	0.00	0.00	0.12	0.00	0.00	0.07	0.00	0.63	0.00	0.10
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.55	0.00	0.13
17	0.00	0.00	0.00	0.02	0.02	0.00	0.00	0.79	0.00	0.00	0.00	0.02
18	0.00	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
19	0.00	0.32	0.37	0.00	0.00	0.00	0.00	0.18	0.35	0.00	0.00	0.00
20	0.00	0.60	0.12	0.00	0.00	0.00	0.00	0.03	0.43	0.00	0.00	0.00
21	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.31	0.00	0.06
22	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.08	0.00	0.06
23	0.00	0.00	0.00	0.00	0.00	0.00	1.08	0.00	0.00	0.00	0.00	0.00
24	0.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.00
25	0.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.00
26	0.00	0.12	0.35	0.00	0.00	0.00	0.00	0.00	0.00	0.35	1.15	0.00
27	0.00	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.00
28	0.03	0.00	0.31	0.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
29	0.00	--	0.00	0.29	0.00	0.00	0.15	0.00	0.00	0.00	0.00	0.00
30	0.00	--	0.03	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
31	0.00	--	0.00	--	0.00	--	0.10	0.00	--	0.04	--	0.01
SUM	2.55	6.46	3.77	1.33	0.72	0.49	1.74	2.40	1.09	2.36	1.75	1.22

**Table 8.** Daily precipitation volume for Grand Mesa, 1981–91—Continued

[--, no data]

Day	Precipitation (Inches)											
	January	February	March	April	May	June	July	August	September	October	November	December
	1990											
1	0.00	0.85	0.00	0.00	0.29	0.28	0.03	0.06	0.00	0.00	0.40	0.00
2	0.21	0.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87	0.60	0.08
3	0.14	0.00	0.35	0.05	0.00	0.00	0.20	0.00	0.00	0.00	0.07	0.00
4	0.00	0.00	0.23	0.50	0.00	0.00	0.17	0.00	0.00	0.00	0.07	0.00
5	0.06	0.00	0.24	0.05	0.00	0.00	0.61	0.00	0.85	0.00	0.75	0.05
6	0.00	0.00	0.83	0.02	0.00	0.00	0.61	0.00	0.00	0.00	0.20	0.00
7	0.00	0.00	0.00	0.09	0.00	0.00	0.14	0.00	0.00	0.19	0.02	0.00
8	0.00	0.23	0.00	1.13	0.00	0.00	0.46	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.68	0.00	0.02	0.02	0.00	0.00	0.03	0.00	0.00
10	0.00	0.00	0.47	0.00	0.00	0.45	0.03	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	0.30	0.00	0.09	0.08	0.00	0.02	0.00	0.00	0.00	0.00
12	0.00	0.05	0.35	0.00	0.09	0.00	0.00	0.03	0.00	0.00	0.00	0.64
13	0.41	0.00	0.25	0.00	0.00	0.00	0.00	0.20	0.00	0.00	0.00	1.00
14	0.08	0.48	0.65	0.00	0.00	0.00	0.02	0.07	0.00	0.00	0.00	0.23
15	0.62	0.12	0.26	0.00	0.35	0.00	0.00	0.01	0.00	0.00	0.00	0.10
16	0.30	0.05	0.04	0.00	0.02	0.00	0.08	0.17	0.36	0.15	0.00	0.10
17	0.00	0.25	0.00	0.04	0.00	0.00	0.03	0.10	0.03	0.00	0.00	0.03
18	0.02	0.90	0.00	0.21	0.00	0.00	0.73	0.18	0.65	0.26	0.01	0.01
19	0.11	0.03	0.00	0.54	0.00	0.00	0.12	0.00	0.19	0.83	0.01	0.65
20	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.22	0.00	0.15	0.40	0.11
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.38	0.00	0.00	0.00	0.02
23	0.00	0.00	0.00	0.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.47
24	0.12	0.00	0.00	0.57	0.00	0.00	0.43	0.00	0.07	0.00	0.00	0.00
25	0.00	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	0.13	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	1.61	0.18
27	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.19	0.00
28	0.00	0.00	0.12	0.00	0.03	0.00	0.00	0.00	0.05	0.00	0.03	0.00
29	0.23	--	0.65	0.64	0.38	0.00	0.00	0.00	0.00	0.00	0.02	0.34
30	0.00	--	0.23	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	0.89	--	0.00	--	0.00	--	0.00	0.15	--	0.00	--	0.00
SUM	3.34	3.23	4.97	5.36	1.25	0.83	3.72	1.59	2.20	2.51	4.38	4.01

**Table 8. Daily precipitation volume for Grand Mesa, 1981-91—Continued**

[—, no data]

Day	Precipitation (Inches)											
	January	February	March	April	May	June	July	August	September	October	November	December
	1991											
1	0.00	0.00	1.80	0.18	0.00	0.04	0.00	0.12	0.17	—	—	—
2	0.00	0.00	0.85	0.27	0.00	0.28	0.00	0.25	0.00	—	—	—
3	0.00	0.00	0.00	0.00	0.00	0.24	0.00	0.00	0.00	—	—	—
4	0.98	0.01	0.30	0.00	0.09	0.00	0.00	0.00	0.00	—	—	—
5	0.02	0.00	0.57	0.00	0.00	0.00	0.00	0.00	0.01	—	—	—
6	0.00	0.00	0.15	0.00	0.00	0.00	0.00	0.47	0.31	—	—	—
7	0.00	0.00	0.03	0.27	0.00	0.00	0.00	0.00	1.12	—	—	—
8	0.05	0.00	0.00	0.03	0.00	0.00	0.52	0.00	0.48	—	—	—
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	—	—	—
10	0.05	0.00	0.21	0.22	0.00	0.03	0.05	0.00	0.23	—	—	—
11	0.00	0.00	0.86	0.37	0.00	0.00	0.00	0.00	0.41	—	—	—
12	0.05	0.00	0.00	0.21	0.00	0.22	0.00	0.20	0.01	—	—	—
13	0.30	0.05	0.00	0.13	0.00	0.07	0.00	0.00	0.32	—	—	—
14	0.22	0.00	0.30	0.02	0.01	0.30	0.00	0.00	0.20	—	—	—
15	0.30	0.00	0.47	0.00	0.55	0.02	0.00	0.06	0.00	—	—	—
16	0.00	0.87	0.06	0.00	0.04	0.00	0.00	0.00	0.00	—	—	—
17	0.00	0.75	0.00	0.00	0.00	0.00	0.10	0.00	0.00	—	—	—
18	0.00	0.11	0.00	0.00	0.00	0.00	0.00	0.05	0.00	—	—	—
19	0.27	0.00	0.25	0.00	0.00	0.00	0.00	0.00	0.00	—	—	—
20	0.00	0.00	0.45	0.00	0.00	0.00	0.45	0.00	0.00	—	—	—
21	0.00	0.00	0.35	0.05	0.00	0.00	0.02	0.00	0.00	—	—	—
22	0.00	0.00	0.40	0.20	0.00	0.00	0.07	0.00	0.00	—	—	—
23	0.00	0.00	0.00	0.35	0.00	0.00	0.00	0.56	0.00	—	—	—
24	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.00	0.00	—	—	—
25	0.00	0.00	0.00	0.12	0.05	0.00	0.05	0.00	0.00	—	—	—
26	0.00	0.00	1.07	0.26	0.00	0.00	0.06	0.00	0.00	—	—	—
27	0.00	0.00	0.52	0.45	0.00	0.00	0.00	0.00	0.00	—	—	—
28	0.00	0.65	0.01	0.16	0.00	0.00	0.00	0.09	0.00	—	—	—
29	0.06	—	0.65	0.25	0.00	0.05	0.00	0.00	0.36	—	—	—
30	0.00	—	0.04	0.06	0.00	0.00	0.00	0.00	0.00	—	—	—
31	0.00	—	0.00	—	0.00	—	0.00	0.00	—	—	—	—
SUM	2.30	2.44	9.34	3.60	0.74	1.25	1.47	1.80	3.73	—	—	—

**Table 9.** Daily precipitation volume for Marvine Ranch, 1981–94

[--, no data]

Day	Precipitation (Inches)											
	January	February	March	April	May	June	July	August	September	October	November	December
	1981											
1	--	--	--	--	0.00	0.00	0.10	0.00	0.00	0.04	0.00	0.38
2	--	--	--	--	0.70	0.00	0.15	0.00	0.15	0.44	0.00	0.01
3	--	--	--	--	0.45	0.40	0.00	0.00	0.00	0.17	0.01	0.01
4	--	--	--	--	0.33	0.00	0.00	0.00	0.00	0.25	0.00	0.00
5	--	--	--	--	0.05	0.00	0.00	0.00	0.15	0.25	0.00	0.00
6	--	--	--	--	0.45	0.07	0.00	0.00	0.05	0.03	0.00	0.00
7	--	--	--	--	0.08	0.07	0.07	0.00	0.13	0.00	0.03	0.00
8	--	--	--	--	0.05	0.00	0.00	0.00	0.00	0.76	0.01	0.00
9	--	--	--	--	0.10	0.00	0.83	0.00	0.00	0.00	0.02	0.00
10	--	--	--	--	0.00	0.00	0.00	0.12	0.04	0.00	0.00	0.00
11	--	--	--	--	0.30	0.00	0.35	0.09	0.00	0.40	0.00	0.00
12	--	--	--	--	0.00	0.00	0.05	0.03	0.00	0.09	0.00	0.12
13	--	--	--	--	0.00	0.00	0.00	0.00	0.03	0.20	0.00	0.12
14	--	--	--	--	0.00	0.00	0.00	0.00	0.19	0.00	0.00	0.15
15	--	--	--	--	0.05	0.00	0.00	0.12	0.00	0.50	0.00	0.25
16	--	--	--	--	0.07	0.00	0.00	0.00	0.00	0.05	0.00	0.12
17	--	--	--	--	0.35	0.00	0.22	0.00	0.00	0.10	0.17	0.01
18	--	--	--	--	0.00	0.00	0.09	0.00	0.00	0.00	0.46	0.01
19	--	--	--	--	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.12
20	--	--	--	--	0.07	0.00	0.00	0.00	0.07	0.00	0.01	0.37
21	--	--	--	--	0.40	0.00	0.00	0.00	0.00	0.00	0.00	0.55
22	--	--	--	--	0.35	0.00	0.00	0.00	0.00	0.00	0.13	0.06
23	--	--	--	--	0.05	0.00	0.17	0.00	0.13	0.00	0.02	0.03
24	--	--	--	--	0.00	0.00	0.15	0.48	0.00	0.37	0.02	0.05
25	--	--	--	--	0.06	0.00	0.17	0.00	0.00	0.00	0.15	0.50
26	--	--	--	--	0.00	0.36	0.06	0.00	0.00	0.00	0.00	0.45
27	--	--	--	--	0.22	0.89	0.00	0.00	0.00	0.00	0.28	0.00
28	--	--	--	--	0.34	0.01	0.00	0.00	0.06	0.08	0.09	0.12
29	--	--	--	--	0.13	0.00	0.00	0.28	0.00	0.42	0.01	0.33
30	--	--	--	--	0.17	0.00	0.02	0.17	0.00	0.50	0.08	1.24
31	--	--	--	--	0.17	--	0.00	0.03	--	0.03	--	0.35
SUM	--	--	--	--	4.94	1.80	2.43	1.32	1.00	4.68	1.50	5.35

**Table 9.** Daily precipitation volume for Marvine Ranch, 1981-94—Continued

[--, no data]

Day	Precipitation (Inches)											
	January	February	March	April	May	June	July	August	September	October	November	December
	1982											
1	0.24	0.01	0.13	0.14	0.07	0.00	0.00	0.00	0.00	0.10	0.17	0.28
2	0.23	0.00	0.20	0.16	0.00	0.00	0.00	0.26	0.00	0.03	0.04	0.01
3	0.00	0.06	0.15	0.00	0.21	0.00	0.00	0.09	0.00	0.00	0.00	0.01
4	0.25	0.03	0.06	0.22	0.11	0.00	0.00	0.00	0.09	0.00	0.00	0.03
5	0.40	0.01	0.04	0.02	0.00	0.00	0.30	0.00	0.26	0.25	0.00	0.00
6	0.00	0.00	0.02	0.01	0.00	0.00	0.01	0.00	0.02	0.00	0.00	0.05
7	0.00	0.00	0.00	0.21	0.08	0.00	0.00	0.00	0.01	0.14	0.00	0.00
8	0.00	0.15	0.00	0.02	0.00	0.00	0.03	0.68	0.11	0.27	0.12	0.00
9	0.00	0.05	0.00	0.00	0.12	0.00	0.23	0.05	0.01	0.40	0.10	0.28
10	0.00	0.02	0.00	0.00	0.00	0.00	0.01	0.04	0.30	0.03	0.30	0.03
11	0.00	0.00	0.21	0.13	0.00	0.00	0.00	0.04	0.12	0.00	0.78	0.00
12	0.05	0.00	0.01	0.27	1.78	0.05	0.00	0.01	0.49	0.00	0.02	0.00
13	0.21	0.00	0.00	0.03	0.29	0.00	0.00	0.30	0.35	0.05	0.07	0.37
14	0.03	0.07	0.02	0.01	0.00	0.01	0.00	0.03	0.51	0.00	0.00	0.17
15	0.01	0.02	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
16	0.06	0.28	0.43	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00
17	0.01	0.05	0.01	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	0.17	0.00	0.10	0.00	0.18	0.00	0.00	0.00	0.00	0.02	0.45	0.00
20	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.01	0.21	0.00	0.15	0.00
21	0.52	0.00	0.06	0.00	0.00	0.00	0.03	0.01	0.00	0.00	0.02	0.00
22	0.22	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.11	0.00	0.12	0.02
23	0.01	0.03	0.00	0.00	0.00	0.03	0.00	0.00	0.02	0.00	0.00	0.20
24	0.01	0.01	0.00	0.00	0.00	0.00	0.11	0.00	0.00	0.00	0.00	0.17
25	0.01	0.00	0.00	0.00	0.02	0.02	0.00	0.09	0.30	0.01	0.03	0.05
26	0.01	0.00	0.25	0.03	0.00	0.00	0.00	0.13	0.07	0.74	0.00	0.00
27	0.36	0.04	0.04	0.30	0.00	0.00	0.55	0.00	0.26	0.30	0.00	0.00
28	0.05	0.01	0.28	0.00	0.00	0.00	0.01	0.00	0.17	0.25	0.05	0.00
29	0.01	--	0.17	0.00	0.00	0.00	0.03	0.05	0.24	0.01	0.12	0.00
30	0.00	--	0.03	0.00	0.19	0.11	0.00	0.02	0.25	0.32	0.07	0.00
31	0.31	--	0.00	--	0.02	--	0.00	0.00	--	0.33	--	0.00
SUM	3.17	0.84	2.58	1.55	3.07	0.27	1.31	1.81	3.90	3.25	2.61	1.69

**Table 9.** Daily precipitation volume for Marvine Ranch, 1981–94—Continued

[--, no data]

Day	Precipitation (Inches)											
	January	February	March	April	May	June	July	August	September	October	November	December
	1983											
1	0.00	0.02	0.00	0.00	0.27	0.00	0.00	0.02	0.00	0.05	0.01	0.30
2	0.00	0.01	0.00	0.34	0.22	0.14	0.16	0.02	0.00	0.35	0.00	0.23
3	0.00	0.06	0.00	0.01	0.29	0.00	0.01	0.00	0.30	0.47	0.00	0.07
4	0.00	0.21	0.45	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.42
5	0.00	0.02	0.44	0.00	0.07	0.01	0.00	0.12	0.00	0.00	0.00	0.08
6	0.00	0.00	0.13	0.00	0.31	0.00	0.00	0.02	0.00	0.00	0.00	0.08
7	0.25	0.30	0.17	0.05	0.02	0.00	0.04	0.00	0.08	0.00	0.60	0.00
8	0.31	0.40	0.08	0.03	0.00	0.00	0.00	0.04	0.01	0.00	0.51	0.03
9	0.09	0.09	0.00	0.02	0.00	0.00	0.00	0.10	0.00	0.00	0.07	0.02
10	0.00	0.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.22	0.01	0.05
11	0.00	0.00	0.04	0.04	0.11	0.12	0.00	2.66	0.00	0.01	0.07	0.02
12	0.00	0.00	0.01	0.13	0.00	0.49	0.00	0.14	0.10	0.00	0.02	0.24
13	0.00	0.11	0.00	0.00	0.00	0.04	0.00	0.02	0.00	0.32	0.26	0.43
14	0.00	0.02	0.36	0.00	0.05	0.01	0.00	0.00	0.02	0.34	0.26	0.05
15	0.00	0.00	0.08	0.00	0.28	0.00	0.03	0.00	0.00	0.01	0.00	0.02
16	0.00	0.05	0.00	0.00	0.95	0.00	0.00	0.08	0.00	0.01	0.00	0.02
17	0.05	0.00	0.03	0.00	0.50	0.00	0.00	0.69	0.00	0.02	0.04	0.13
18	0.00	0.46	0.09	0.23	0.33	0.00	0.00	0.06	0.06	0.17	0.37	0.13
19	0.00	0.48	0.01	0.00	0.05	0.00	0.00	0.28	0.07	0.02	0.13	0.61
20	0.00	0.00	0.02	0.08	0.01	0.00	0.12	0.01	0.00	0.00	0.23	0.13
21	0.01	0.00	0.00	0.18	0.00	0.00	0.23	0.00	0.00	0.00	0.28	0.02
22	0.09	0.00	0.03	0.01	0.00	0.00	0.46	0.00	0.00	0.00	0.12	0.38
23	0.16	0.00	0.23	0.00	0.00	0.00	0.24	0.00	0.16	0.00	0.07	0.49
24	0.20	0.00	0.35	0.00	0.00	0.38	0.01	0.00	0.02	0.00	0.17	0.45
25	0.13	0.04	0.35	0.00	0.00	0.18	0.09	0.00	0.01	0.00	0.33	0.48
26	0.01	0.04	0.01	0.02	0.00	0.49	0.19	0.00	0.06	0.00	0.15	0.54
27	0.00	0.21	0.22	0.58	0.00	0.23	0.06	0.00	0.00	0.00	0.03	0.71
28	0.20	0.00	0.05	0.08	0.00	0.00	0.01	0.00	0.00	0.00	0.11	0.00
29	0.02	--	0.00	0.47	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.04
30	0.00	--	0.00	0.49	0.00	0.00	0.08	0.01	0.08	0.00	0.05	0.23
31	0.00	--	0.32	--	0.00	--	0.05	0.02	--	0.04	--	0.20
SUM	1.52	2.78	3.47	2.76	3.51	2.09	1.78	4.29	0.97	2.03	4.07	6.60

**Table 9.** Daily precipitation volume for Marvine Ranch, 1981–94—Continued

[--, no data]

Day	Precipitation (inches)											
	January	February	March	April	May	June	July	August	September	October	November	December
	1984											
1	0.00	0.00	0.00	0.11	0.58	0.11	0.17	0.03	0.45	0.41	0.02	0.02
2	0.00	0.00	0.15	0.09	0.07	0.00	0.00	0.04	0.01	0.01	0.01	0.25
3	0.02	0.00	0.03	0.10	0.03	0.32	0.00	0.00	0.01	0.07	0.02	0.04
4	0.00	0.00	0.01	0.01	0.17	0.02	0.00	0.00	0.01	0.57	0.03	0.02
5	0.00	0.00	0.01	0.00	0.13	0.61	0.00	0.45	0.01	0.07	0.00	0.00
6	0.00	0.00	0.00	0.00	0.07	1.17	0.00	0.10	0.00	0.02	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.80	0.00	0.00	0.00	0.00	0.00	0.00
8	0.00	0.02	0.00	0.00	0.00	0.67	0.25	0.00	0.01	0.01	0.00	0.27
9	0.00	0.00	0.11	0.32	0.00	0.08	0.37	0.10	0.01	0.01	0.47	0.01
10	0.00	0.02	0.04	1.03	0.00	0.00	0.01	0.00	0.01	0.01	0.68	0.08
11	0.19	0.05	0.12	0.30	0.00	0.00	0.01	0.00	0.07	0.00	0.00	0.31
12	0.04	0.00	0.09	0.12	0.00	0.00	0.07	0.00	0.16	0.23	0.01	0.76
13	0.05	0.20	0.00	0.00	0.00	0.00	0.35	0.00	0.02	0.14	0.00	0.05
14	0.37	0.09	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.17	0.01
15	0.05	0.10	0.42	0.00	0.00	0.00	0.00	0.00	1.05	0.14	0.02	0.05
16	0.01	0.00	0.12	0.00	0.00	0.00	0.00	0.02	0.05	0.02	0.00	0.11
17	0.08	0.04	0.59	0.17	0.00	0.20	0.00	0.01	0.02	0.47	0.00	0.00
18	0.01	0.01	0.40	0.00	0.00	0.01	0.00	0.02	0.00	0.30	0.00	0.01
19	0.00	0.00	0.00	0.18	0.00	0.01	0.00	0.62	0.00	0.25	0.00	0.01
20	0.00	0.00	0.00	0.09	0.00	0.01	0.00	0.51	0.18	0.08	0.00	0.30
21	0.00	0.00	0.16	0.00	0.00	0.00	0.05	0.00	0.30	0.08	0.00	0.15
22	0.04	0.00	0.04	0.00	0.00	0.00	0.02	0.07	0.05	0.01	0.00	0.01
23	0.04	0.00	0.00	0.31	0.00	0.00	0.76	0.35	0.02	0.08	0.00	0.01
24	0.03	0.02	0.20	0.92	0.10	0.00	0.45	0.03	0.00	0.01	0.00	0.01
25	0.43	0.10	0.05	0.13	0.00	0.00	0.42	0.01	0.16	0.01	0.00	0.02
26	0.02	0.01	0.02	0.14	0.00	0.03	0.00	0.00	0.00	0.00	0.25	0.00
27	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.03	0.48	0.06	0.09
28	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.00	0.00	0.07	0.02	0.01
29	0.00	0.00	0.00	0.09	0.00	0.00	0.56	0.00	0.00	0.01	0.22	0.00
30	0.00	--	0.27	0.10	0.00	0.00	0.10	0.00	0.00	0.00	0.16	0.13
31	0.00	--	0.02	--	1.36	--	0.06	0.50	--	0.00	--	0.04
SUM	1.38	0.66	3.35	4.21	2.51	4.05	3.77	2.86	2.63	3.66	2.14	2.77

**Table 9.** Daily precipitation volume for Marvine Ranch, 1981–94—Continued

[--, no data]

Day	Precipitation (Inches)											
	January	February	March	April	May	June	July	August	September	October	November	December
	1985											
1	0.01	0.00	0.00	0.02	0.05	0.06	0.00	0.00	0.20	0.00	0.00	0.09
2	0.01	0.17	0.26	0.00	0.00	0.00	0.00	0.04	0.17	0.00	0.00	0.46
3	0.00	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.25
4	0.00	0.09	0.02	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	0.02	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.37	0.00
6	0.00	0.04	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.05	0.05	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.45	0.00	0.00
8	0.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.30	1.10	0.20
9	0.05	0.33	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.55	1.22	0.00
10	0.00	0.03	0.72	0.00	0.45	0.00	0.00	0.01	0.00	0.06	0.28	0.00
11	0.01	0.02	0.20	0.00	0.32	0.00	0.00	0.57	0.33	0.40	0.15	0.00
12	0.00	0.15	0.16	0.00	0.33	0.00	0.24	0.02	0.00	0.10	0.19	0.15
13	0.00	0.00	0.03	0.00	0.08	0.00	0.03	0.00	0.00	0.27	0.01	0.04
14	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.03	0.15	0.01
15	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40	0.00	0.05	0.00
16	0.04	0.00	0.00	0.00	0.21	0.10	0.00	0.00	0.04	0.00	0.16	0.00
17	0.01	0.00	0.00	0.03	0.10	0.00	0.06	0.00	0.00	0.00	0.64	0.01
18	0.00	0.00	0.00	0.25	0.20	0.00	0.39	0.00	0.19	0.00	0.55	0.01
19	0.22	0.00	0.00	1.02	0.12	0.00	0.10	0.00	0.00	0.00	0.03	0.00
20	0.22	0.03	0.00	1.25	0.00	0.01	0.10	0.00	0.23	0.00	0.17	0.00
21	0.78	0.03	0.28	0.18	0.25	0.00	0.00	0.00	0.12	0.00	0.15	0.00
22	0.03	0.04	0.02	0.15	0.00	0.00	0.05	0.00	0.29	0.19	0.05	0.00
23	0.00	0.02	0.00	0.14	0.00	0.00	0.15	0.00	0.04	0.00	0.14	0.02
24	0.00	0.00	0.00	0.03	0.00	0.35	0.00	0.00	0.00	0.00	0.06	0.00
25	0.00	0.11	0.00	0.48	0.10	0.70	0.00	0.00	0.00	0.00	0.05	0.00
26	0.00	0.03	0.45	0.12	0.00	0.22	0.10	0.00	0.50	0.00	0.06	0.00
27	0.02	0.06	0.60	0.00	0.01	0.00	0.05	0.00	0.00	0.00	0.00	0.00
28	0.41	0.02	0.08	0.00	0.00	0.00	0.05	0.09	0.00	0.00	0.15	0.00
29	0.17	--	0.10	0.00	0.00	0.00	0.11	0.13	0.00	0.00	0.25	0.01
30	0.03	--	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43	0.29
31	0.00	--	0.70	--	0.40	00	0.00	0.00	--	0.34	--	0.01
SUM	2.41	1.34	4.04	3.67	2.82	1.47	1.43	0.86	2.59	3.69	6.41	1.55

**Table 9.** Daily precipitation volume for Marvine Ranch, 1981–94—Continued

[—, no data]

Day	Precipitation (inches)											
	January	February	March	April	May	June	July	August	September	October	November	December
	1986											
1	0.00	0.02	0.00	0.10	0.00	1	0.00	0.00	0.00	0.03	0.03	0.00
2	0.00	0.00	0.00	0.31	0.00	—	0.00	0.00	0.02	0.55	0.00	0.00
3	0.00	0.43	0.00	0.13	0.00	—	0.20	0.00	0.00	0.19	0.00	0.00
4	0.00	0.09	0.00	0.06	0.00	—	0.55	0.00	0.00	0.01	0.00	0.00
5	0.24	0.02	0.00	0.00	0.00	—	2	0.00	0.00	0.00	0.00	0.00
6	0.95	0.00	0.00	0.00	0.14	—	—	0.08	0.00	0.00	0.62	0.25
7	0.03	0.02	0.00	0.00	0.41	—	—	0.17	0.28	0.00	0.45	0.05
8	0.00	0.03	0.70	0.00	0.27	—	—	0.02	0.00	0.09	0.42	0.08
9	0.00	0.00	0.16	0.20	0.82	—	—	0.00	0.49	0.00	0.02	0.02
10	0.00	0.02	0.10	0.03	0.02	—	—	0.00	0.45	0.43	0.05	0.00
11	0.00	0.16	0.10	0.26	0.00	—	—	0.00	0.00	0.03	0.03	0.00
12	0.00	0.21	0.08	0.01	0.00	—	—	0.44	0.00	0.01	0.05	0.00
13	0.00	0.76	0.00	0.77	0.00	—	—	0.00	0.00	0.00	0.00	0.00
14	0.00	0.05	0.18	0.02	0.05	—	0.00	0.00	0.00	0.00	0.00	0.00
15	0.17	0.05	0.05	0.00	0.25	—	0.20	0.00	0.00	0.00	0.00	0.00
16	0.02	0.20	0.17	0.22	0.18	—	0.16	0.00	0.00	0.00	0.00	0.00
17	0.03	0.05	0.23	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00
18	0.01	0.07	0.10	0.03	0.00	0.00	0.04	0.00	0.00	0.00	0.11	0.05
19	0.00	0.65	0.67	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.49	0.07
20	0.21	1.10	0.00	0.00	0.00	0.00	0.18	0.27	0.22	0.00	0.00	0.01
21	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.28	0.54	0.45	0.21	0.00
22	0.02	0.00	0.00	0.00	0.00	0.00	0.08	0.32	0.17	0.20	0.00	0.00
23	0.01	0.00	0.00	0.00	0.00	0.00	0.20	0.05	0.15	0.00	0.00	0.00
24	0.00	0.02	0.00	0.27	0.00	0.00	0.23	0.33	0.33	0.00	0.00	0.00
25	0.00	0.02	0.00	0.28	0.00	0.27	0.05	0.02	0.20	0.00	0.02	0.00
26	0.00	0.00	0.00	0.31	0.00	0.02	0.17	0.00	0.08	0.00	0.00	0.00
27	0.00	0.00	0.00	0.13	0.00	0.00	0.00	0.00	0.32	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.35	0.00	0.00	0.00
29	0.00	—	0.00	0.00	0.00	0.00	0.00	0.07	0.01	0.00	0.15	0.00
30	0.00	—	0.40	0.00	0.00	0.00	0.00	0.05	0.22	0.30	0.15	0.02
31	0.08	—	0.05	—	0.00	—	0.00	0.00	—	0.68	—	0.00
SUM	1.77	3.97	2.99	3.68	2.14	0.72	3.63	2.10	3.85	2.97	2.84	0.55

<sup>1</sup>Clock stopped, total precipitation = 0.43 inch.

<sup>2</sup>Clock stopped, total precipitation = 1.50 inches.

**Table 9.** Daily precipitation volume for Marvine Ranch, 1981–94—Continued

[--, no data]

Day	Precipitation (Inches)											
	January	February	March	April	May	June	July	August	September	October	November	December
	1987											
1	0.38	0.00	0.00	0.00	0.39	0.00	0.02	0.00	0.00	0.00	0.36	0.00
2	0.42	0.00	0.00	0.00	0.13	0.00	0.00	0.00	0.00	0.00	0.02	0.00
3	0.01	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.11	0.00	0.00	0.00
4	0.03	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.04
5	0.02	0.01	0.00	0.08	0.00	0.08	0.00	0.00	0.00	0.00	0.15	0.15
6	0.12	0.00	0.00	0.05	0.00	0.00	0.00	0.50	0.00	0.00	0.00	0.01
7	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.35	0.04	0.00	0.03	0.06
8	0.00	0.00	0.36	0.05	0.00	0.29	0.00	0.00	0.00	0.00	0.01	0.00
9	0.00	0.00	0.13	0.02	0.00	0.34	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.01	0.01	0.00	0.00	0.13	0.00	0.00	0.00	0.00	0.35	0.40
11	0.00	0.11	0.15	0.30	0.00	0.02	0.60	0.13	0.00	0.00	0.00	0.00
12	0.00	0.08	0.02	0.15	0.00	0.00	0.35	0.00	0.00	0.00	0.00	0.00
13	0.00	0.40	0.23	0.00	0.00	0.00	0.00	0.23	0.00	0.25	0.00	0.00
14	0.00	0.47	0.07	0.00	0.13	0.00	0.00	0.03	0.12	0.15	0.33	0.00
15	0.00	0.02	0.00	0.00	0.02	0.12	0.00	0.18	0.02	0.25	0.02	0.00
16	0.00	0.00	0.18	0.00	0.03	0.00	0.00	0.00	0.10	0.00	0.15	0.00
17	0.00	0.00	0.05	0.00	0.00	0.00	0.05	0.00	0.01	0.00	0.35	0.03
18	0.00	0.00	0.10	0.00	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.16
19	0.04	0.00	0.15	0.09	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.08
20	0.00	0.00	0.38	0.06	0.47	0.00	0.00	0.00	0.00	0.00	0.00	0.01
21	0.00	0.00	0.03	0.00	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.22
22	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.90
23	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.25	0.00	0.00	0.16	0.32
24	0.07	0.00	0.00	0.00	0.11	0.00	0.00	0.88	0.00	0.85	0.04	0.04
25	0.00	0.10	0.00	0.00	0.00	0.00	0.15	0.11	0.02	0.11	0.00	0.00
26	0.03	0.34	0.14	0.00	0.18	0.00	0.01	0.02	0.00	0.00	0.00	0.36
27	0.00	0.11	0.08	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13
28	0.43	0.03	0.02	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	0.20	0.10	0.19	0.00	0.00	0.00	0.00	0.04
30	0.00	--	0.02	0.01	0.00	0.18	0.07	0.00	0.00	0.19	0.00	0.09
31	0.00	--	0.00	--	0.00	--	0.08	0.00	--	0.01	--	0.00
SUM	1.55	1.79	2.16	0.90	2.33	1.28	2.52	2.68	0.44	1.81	1.97	3.04

**Table 9. Daily precipitation volume for Marvine Ranch, 1981-94—Continued**

[—, no data]

Day	Precipitation (Inches)											
	January	February	March	April	May	June	July	August	September	October	November	December
	1988											
1	0.00	0.23	0.36	0.00	0.20	0.00	0.00	0.01	0.13	0.00	0.00	0.00
2	0.00	0.27	0.02	0.00	0.42	0.00	0.00	0.00	0.01	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.65	0.00	0.00	0.25	0.00
4	0.53	0.00	0.18	0.15	0.00	0.00	0.11	0.00	0.00	0.03	0.02	0.00
5	0.25	0.00	0.00	0.04	0.00	0.00	0.03	0.00	0.00	0.07	0.00	0.00
6	0.25	0.00	0.38	0.00	0.09	0.00	0.00	0.00	0.01	0.00	0.00	0.12
7	0.08	0.00	0.55	0.00	0.07	0.00	0.00	0.30	0.00	0.00	0.00	0.02
8	0.49	0.07	0.07	0.00	0.18	0.00	0.00	0.00	0.00	0.00	0.80	0.00
9	0.53	0.14	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.05	0.90	0.00
10	0.05	0.26	0.33	0.00	0.00	0.03	0.00	0.02	0.13	0.01	0.00	0.00
11	0.55	0.10	0.11	0.00	0.00	0.03	0.00	0.00	1.07	0.00	0.45	0.03
12	0.03	0.00	0.09	0.00	0.00	0.00	0.00	0.03	1.19	0.00	0.02	0.00
13	0.00	0.31	0.00	0.00	0.00	0.00	0.00	0.00	0.45	0.02	0.04	0.00
14	0.00	0.03	0.01	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.41	0.02
15	0.24	0.01	0.01	0.00	0.00	0.00	0.00	0.17	0.00	0.00	0.08	0.43
16	0.00	0.09	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00
17	0.11	0.02	0.01	0.21	0.30	0.00	0.00	0.00	0.01	0.00	0.24	0.00
18	0.09	0.00	0.00	0.00	0.44	0.00	0.00	0.04	0.00	0.00	0.02	0.00
19	0.00	0.00	0.00	0.20	0.26	0.00	0.00	0.00	0.00	0.00	0.00	0.88
20	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.00	0.00	0.00	0.07
21	0.07	0.00	0.00	0.20	0.00	0.00	0.00	0.16	0.16	0.00	0.00	0.55
22	0.02	0.00	0.00	0.11	0.00	0.52	0.00	0.00	0.19	0.00	0.00	0.17
23	0.03	0.00	0.28	0.30	0.00	0.00	0.00	0.00	0.01	0.00	0.04	0.31
24	0.09	0.00	0.12	0.32	0.00	0.11	0.00	0.00	0.00	0.00	0.20	0.02
25	0.00	0.00	0.00	0.70	0.00	0.04	0.00	0.00	0.00	0.00	0.06	0.30
26	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.24	0.22
27	0.00	0.02	0.18	0.00	0.00	0.08	0.00	0.03	0.00	0.00	0.08	0.01
28	0.00	0.14	0.00	0.00	0.00	0.34	0.09	0.02	0.05	0.00	0.37	0.02
29	0.06	0.01	0.00	0.00	0.00	0.19	0.00	0.00	0.00	0.00	0.14	0.00
30	0.28	--	0.16	0.00	0.17	0.00	0.00	0.00	0.00	0.00	0.05	0.02
31	0.81	--	0.00	--	0.00	--	0.12	0.00	--	0.00	--	0.00
SUM	4.68	1.70	3.01	2.23	2.16	1.36	0.43	1.56	3.44	0.18	4.46	3.19

**Table 9.** Daily precipitation volume for Marvine Ranch, 1981–94—Continued

[--, no data]

Day	Precipitation (inches)											
	January	February	March	April	May	June	July	August	September	October	November	December
	1989											
1	0.01	0.00	0.00	0.33	0.02	0.00	0.00	0.44	0.00	0.00	0.02	0.00
2	0.00	0.00	0.00	0.20	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
3	0.00	0.32	0.27	0.45	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.00
4	0.26	0.66	0.48	0.14	0.18	0.21	0.00	0.05	0.00	0.26	0.00	0.03
5	0.04	0.03	0.02	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.03
6	0.46	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.16
7	0.15	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.07	0.13
8	0.08	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.57	0.00	0.00	0.00
9	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.20	0.42	0.00	0.00	0.03	0.22	0.00	0.55	0.00	0.00	0.00	0.19
11	0.18	0.23	0.00	0.00	0.07	0.05	0.09	0.35	0.00	0.00	0.00	0.00
12	0.00	0.22	0.00	0.00	0.11	0.00	0.48	0.11	0.56	0.00	0.00	0.00
13	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.14
14	0.05	0.08	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.62
15	0.07	0.03	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.33	0.00	0.35
16	0.00	0.00	0.00	0.00	0.12	0.00	0.00	0.07	0.00	0.12	0.00	0.02
17	0.00	0.00	0.03	0.04	0.11	0.15	0.00	0.01	0.00	0.00	0.00	0.33
18	0.00	0.20	0.00	0.00	0.00	0.00	0.00	0.15	0.00	0.00	0.00	0.93
19	0.00	0.26	0.31	0.00	0.00	0.00	0.00	0.36	0.00	0.00	0.00	0.00
20	0.00	0.17	0.04	0.00	0.00	0.00	0.00	0.14	0.51	0.00	0.00	0.00
21	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.07	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.55	0.00	0.00	0.03	0.00	0.05
23	0.00	0.00	0.00	0.00	0.00	0.00	0.57	0.00	0.00	0.00	0.00	0.00
24	0.27	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.35	0.00
25	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.17	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.22	0.48	0.00
27	0.00	0.00	0.00	0.16	0.00	0.00	0.00	0.00	0.00	0.02	0.59	0.00
28	0.00	0.00	0.03	0.00	0.00	0.00	0.02	0.00	0.00	0.17	0.01	0.00
29	0.00	--	0.38	0.09	0.00	0.00	0.06	0.00	0.00	0.01	0.00	0.00
30	0.00	--	0.03	0.07	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.08
31	0.00	--	0.35	--	0.00	--	0.00	0.00	--	0.12	--	0.05
SUM	1.86	2.82	1.94	1.48	0.75	0.68	1.82	2.34	1.66	1.59	1.74	3.11

**Table 9.** Daily precipitation volume for Marvine Ranch, 1981–94—Continued

[--, no data]

Day	Precipitation (inches)											
	January	February	March	April	May	June	July	August	September	October	November	December
	1990											
1	0.00	0.12	0.00	0.00	0.00	0.30	0.58	0.10	0.03	0.00	0.04	0.00
2	0.03	0.02	0.00	0.00	0.00	0.03	0.00	0.02	0.01	0.00	0.16	0.05
3	0.00	0.00	0.23	0.00	0.00	0.00	0.00	0.03	0.70	0.00	0.08	0.00
4	0.04	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.25	0.00	0.10	0.01
5	0.08	0.00	0.43	0.00	0.00	0.00	0.10	0.00	0.01	0.00	0.64	0.00
6	0.00	0.00	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.01	0.00
7	0.00	0.10	0.06	0.00	0.00	0.00	0.13	0.00	0.00	0.62	0.01	0.02
8	0.00	0.15	0.03	0.18	0.00	0.00	0.57	0.00	0.00	0.08	0.00	0.00
9	0.05	0.00	0.00	0.37	0.00	0.00	0.08	0.00	0.00	0.02	0.00	0.00
10	0.00	0.10	0.00	0.03	0.00	0.05	0.00	0.07	0.00	0.00	0.01	0.00
11	0.00	0.00	0.15	0.00	0.17	0.75	0.00	0.00	0.00	0.00	0.01	0.01
12	0.00	0.00	0.03	0.00	0.35	0.22	0.00	0.00	0.00	0.00	0.00	0.20
13	0.02	0.18	0.12	0.00	0.02	0.00	0.00	0.05	0.00	0.00	0.00	0.24
14	0.00	0.33	0.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48
15	0.20	0.07	0.12	0.00	0.62	0.00	0.00	0.03	0.00	0.00	0.00	0.03
16	0.00	0.02	0.03	0.00	0.03	0.00	0.00	0.05	0.08	0.24	0.00	0.10
17	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.14	0.20	0.24	0.00	0.02
18	0.00	0.13	0.00	0.00	0.00	0.00	0.05	0.00	0.03	0.03	0.00	0.14
19	0.02	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.03	1.25	0.00	0.22
20	0.02	0.00	0.00	0.00	0.00	0.00	0.02	0.08	0.00	0.04	0.24	0.35
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.08
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.01	0.00
23	0.11	0.00	0.15	0.05	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00
24	0.06	0.00	0.00	0.24	0.00	0.00	0.31	0.00	0.00	0.00	0.00	0.00
25	0.02	0.00	0.00	0.21	0.00	0.00	0.02	0.00	0.05	0.00	0.00	0.00
26	0.10	0.00	0.00	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.02	0.00	0.00	0.12	0.00	0.00	0.00	0.00	0.06	0.00	0.15	0.00
28	0.00	0.00	0.17	0.15	0.00	0.00	0.00	0.00	0.85	0.00	0.03	0.00
29	0.10	--	0.14	0.32	0.16	0.00	0.00	0.00	0.03	0.00	0.00	0.18
30	0.03	--	0.05	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.02
31	0.00	--	0.00	--	0.03	--	0.00	0.05	--	0.01	0.00	0.00
SUM	0.90	1.31	2.29	2.00	1.45	1.35	1.92	0.67	2.33	2.76	1.52	2.15

**Table 9.** Daily precipitation volume for Marvine Ranch, 1981–94—Continued

[—, no data]

Day	Precipitation (inches)											
	January	February	March	April	May	June	July	August	September	October	November	December
	1991											
1	0.00	0.00	0.07	0.00	0.00	0.16	0.00	0.64	0.00	0.00	0.65	0.00
2	0.00	0.00	0.65	0.00	0.00	0.18	0.00	0.03	0.00	0.00	0.01	0.35
3	0.00	0.00	0.03	0.00	0.00	0.28	0.00	0.44	0.00	0.00	0.02	0.05
4	0.57	0.00	0.00	0.00	0.03	0.02	0.00	0.12	0.00	0.00	0.14	0.00
5	0.02	0.00	0.63	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.28	0.00
6	0.00	0.00	0.06	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.43	0.00
7	0.04	0.00	0.02	0.06	0.05	0.00	0.00	0.00	0.07	0.00	0.01	0.00
8	0.26	0.00	0.00	0.00	0.00	0.00	1.93	0.00	0.64	0.00	0.01	0.30
9	0.02	0.00	0.00	0.00	0.00	0.00	0.80	0.00	0.03	0.00	0.00	0.00
10	0.05	0.00	0.00	0.27	0.00	0.00	0.91	0.00	0.00	0.00	0.02	0.01
11	0.05	0.00	0.50	0.08	0.00	0.00	0.03	0.00	0.00	0.00	0.10	0.09
12	0.10	0.08	0.08	0.00	0.00	0.00	0.00	0.00	0.20	0.00	0.00	0.01
13	0.18	0.55	0.00	0.20	0.00	0.25	0.00	0.00	0.03	0.00	0.00	0.01
14	0.27	0.02	0.00	0.10	0.07	0.30	0.00	0.00	0.39	0.00	0.03	0.00
15	0.47	0.00	0.12	0.00	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.01	0.73	0.00	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.30	0.00	0.00	0.01	0.00	0.04	0.00	0.00	0.00	0.38	0.00
18	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.38	0.15
19	0.16	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.00	0.00	0.04	0.07
20	0.01	0.00	0.00	0.02	0.00	0.00	0.18	0.08	0.00	0.00	0.01	0.00
21	0.00	0.00	0.60	0.33	0.00	0.00	0.13	0.00	0.00	0.00	0.47	0.00
22	0.00	0.00	0.14	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.02	0.00
23	0.18	0.00	0.03	0.05	0.00	0.00	0.00	0.00	0.00	0.85	0.04	0.00
24	0.00	0.00	0.00	0.00	0.12	0.00	0.10	0.00	0.00	0.38	0.28	0.00
25	0.00	0.00	0.00	0.65	0.04	0.00	0.03	0.00	0.00	0.04	0.06	0.00
26	0.00	0.00	0.67	0.19	0.00	0.00	0.05	0.05	0.00	0.00	0.16	0.00
27	0.00	0.00	0.05	0.25	0.00	0.00	0.00	0.00	0.00	0.12	0.00	0.00
28	0.00	0.00	0.12	0.28	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00
29	0.04	--	0.28	0.48	0.00	0.15	0.00	0.00	0.07	0.13	0.03	0.00
30	0.00	--	0.02	0.22	0.00	0.00	0.00	0.00	0.00	0.03	0.03	0.00
31	0.00	--	0.00	--	0.00	--	0.00	0.00	--	0.01	--	0.03
SUM	2.43	1.73	4.07	3.28	0.83	1.38	4.20	1.54	1.43	1.62	3.60	1.07

**Table 9.** Daily precipitation volume for Marvine Ranch, 1981-94—Continued

[--, no data]

Day	Precipitation (inches)											
	January	February	March	April	May	June	July	August	September	October	November	December
	1992											
1	0.01	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.05	0.00	0.37	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.59	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.00
4	0.16	0.00	0.35	0.00	0.00	0.00	0.00	0.00	0.34	0.00	0.02	0.00
5	0.03	0.00	0.16	0.00	0.00	0.00	0.00	0.12	0.00	0.00	0.04	0.20
6	0.23	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.03	0.09
7	0.43	0.00	0.00	0.00	0.00	0.00	0.37	0.00	0.00	0.21	0.64	0.01
8	0.05	0.05	0.25	0.00	0.32	0.00	0.65	0.00	0.00	0.00	0.19	0.01
9	0.00	0.12	0.04	0.00	0.64	0.03	0.04	0.00	0.00	0.00	0.53	0.02
10	0.00	0.03	0.00	0.00	0.04	0.26	0.00	0.00	0.00	0.00	0.08	0.00
11	0.00	0.20	0.00	0.00	0.00	0.00	0.80	0.00	0.00	0.00	0.00	0.10
12	0.00	0.03	0.00	0.00	0.00	0.00	0.67	0.00	0.00	0.00	0.00	0.05
13	0.04	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.13	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
15	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.10
16	0.02	0.22	0.00	0.00	0.00	0.00	0.00	0.00	0.19	0.00	0.02	0.03
17	0.00	0.22	0.17	0.36	0.00	0.00	0.00	0.00	0.28	0.00	0.00	0.17
18	0.00	0.00	0.20	0.30	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.47
19	0.00	0.00	0.29	0.00	0.00	0.00	0.00	0.00	0.20	0.00	0.11	0.03
20	0.00	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.09	0.01
21	0.00	0.00	0.35	0.00	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.07
22	0.00	0.35	0.02	0.30	0.09	0.00	0.00	0.26	0.00	0.00	0.35	0.00
23	0.13	0.02	0.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00
24	0.00	0.00	0.19	0.00	0.00	0.00	0.48	0.05	0.10	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.07	0.10	0.24	0.00	0.00
26	0.00	0.00	0.00	0.00	0.78	0.00	0.04	0.05	0.00	0.00	0.00	0.00
27	0.00	0.00	0.19	0.00	0.21	0.00	0.00	0.00	0.00	0.00	0.14	0.00
28	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.20	0.08	0.02
29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.03
30	0.00	--	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.65	0.02	0.45
31	0.00	--	0.00	--	0.28	--	0.00	0.10	--	0.40	--	0.00
SUM	1.27	2.25	2.77	0.96	2.40	0.29	3.19	0.65	1.48	1.81	3.48	1.94

**Table 9.** Daily precipitation volume for Marvine Ranch, 1981-94—Continued

[--, no data]

Day	Precipitation (inches)											
	January	February	March	April	May	June	July	August	September	October	November	December
	1993											
1	0.00	0.08	0.00	--	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
2	0.15	0.31	0.00	--	0.00	0.38	0.00	0.00	0.00	0.00	0.00	0.08
3	0.11	0.03	0.00	--	0.00	0.34	0.05	0.00	0.00	0.00	0.00	0.04
4	0.05	0.02	0.00	--	0.06	0.07	0.04	0.00	0.13	0.00	0.04	0.07
5	0.00	0.00	0.00	--	0.05	0.00	0.00	0.00	0.03	0.00	0.08	0.02
6	0.30	0.00	0.00	--	0.25	0.28	0.00	0.00	0.31	0.17	0.00	0.05
7	0.60	0.22	0.00	--	0.44	0.27	0.00	0.00	0.00	0.45	0.00	0.00
8	0.25	0.09	0.00	0.00	0.05	0.05	0.00	0.10	0.00	0.28	0.00	0.00
9	0.11	0.09	0.00	0.20	0.00	0.00	0.00	0.18	0.00	0.17	0.00	0.00
10	0.03	0.20	0.00	0.02	0.00	0.00	0.00	0.13	0.00	0.09	0.00	0.00
11	0.35	0.07	0.00	0.00	0.00	0.00	0.00	0.12	0.00	0.17	0.14	0.00
12	0.00	0.13	0.00	0.49	0.00	0.00	0.00	0.00	0.31	0.16	1.00	0.11
13	0.24	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.02	0.04	0.23	0.04
14	0.10	0.00	0.34	0.00	0.00	0.00	0.00	0.00	0.00	0.44	0.00	0.02
15	0.11	0.00	0.25	0.02	0.00	0.00	0.00	0.00	0.00	0.27	0.00	0.08
16	0.27	0.06	0.03	0.45	0.03	0.00	0.00	0.00	0.13	0.30	0.00	0.10
17	0.17	0.16	1	0.03	0.15	0.08	0.00	0.00	0.02	0.25	0.00	0.05
18	0.00	0.03	--	0.40	0.00	0.53	0.00	0.00	0.33	0.30	0.11	0.00
19	0.10	0.27	--	0.20	0.00	0.00	0.00	0.00	0.02	0.10	0.00	0.03
20	0.00	0.32	--	0.05	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.00
21	0.05	0.02	--	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
22	0.08	0.00	--	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06
23	0.04	0.09	--	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.00
24	0.08	0.52	--	0.13	0.00	0.00	0.24	0.00	0.00	0.00	0.57	0.00
25	0.02	0.24	--	0.05	0.00	0.00	0.00	0.10	0.00	0.00	0.17	0.05
26	0.00	0.13	--	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.04	0.00
27	0.00	0.00	--	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.07	0.00
28	0.00	0.00	--	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.03	0.35
29	0.00	--	--	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.09
30	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	0.03	0.00	0.00	0.00	0.01	0.00
						--	0.00	0.00	--	0.00	--	0.00
SUM	3.21	3.08	--	--	1.13	2.07	0.36	0.74	1.30	3.19	2.65	1.29

<sup>1</sup>Pen off chart, no precipitation volume recorded.

**Table 9.** Daily precipitation volume for Marvine Ranch, 1981-94—Continued

[—, no data]

Day	Precipitation (inches)											
	January	February	March	April	May	June	July	August	September	October	November	December
	1994											
1	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.19	0.05	0.00
2	0.03	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.18	0.00	0.00
3	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	0.09	0.00	0.00	0.47	0.10	0.00	0.00	0.00	0.02	0.12	0.00	0.00
5	0.26	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.00	0.22	0.00	0.05
6	0.25	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.56	0.40
7	0.03	0.00	0.00	0.49	0.00	0.00	0.00	0.00	0.00	0.01	0.08	0.40
8	0.02	0.50	0.00	0.07	0.00	0.00	0.00	0.02	0.00	0.09	0.20	0.00
9	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.90	0.00	0.00	0.05	0.02
10	0.03	0.04	0.00	0.10	0.00	0.00	0.00	0.08	0.00	0.00	0.15	0.03
11	0.00	0.17	0.00	0.15	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.02
12	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.02
13	0.06	0.00	0.00	0.07	0.15	0.00	0.00	0.00	0.14	0.00	0.02	0.05
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58	0.00	0.00	0.06
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.05
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.32	0.03
17	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.00
18	0.00	0.07	0.00	0.00	0.00	0.05	0.00	0.04	0.00	0.15	0.00	0.00
19	0.00	0.32	0.00	0.00	0.00	0.43	0.00	0.06	0.00	0.09	0.00	0.00
20	0.00	0.05	0.11	0.00	0.00	0.14	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.15	0.00	0.00	0.00	0.19	0.00	0.00	0.03	0.00	0.00	0.00
22	0.00	0.05	0.00	0.00	0.00	0.43	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.04	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	0.05	0.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.37	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00
26	0.02	0.00	0.00	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.04	0.00	0.00	0.35	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00
28	0.00	0.32	0.00	0.12	0.35	0.00	0.00	0.06	0.00	0.00	0.00	0.00
29	0.02	—	0.00	0.10	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.04
30	0.03	—	0.00	0.00	0.00	0.00	0.00	0.01	0.13	0.00	0.00	0.04
31	0.00	—	0.00	—	0.00	—	0.05	0.00	—	0.00	—	0.05
SUM	0.96	1.78	0.26	2.57	0.76	1.24	0.08	1.43	1.15	1.79	1.53	1.26