CLIMATOLOGICAL DATA FOR MARCH, 1913

DISTRICT NO. 11, CALIFORNIA.

Prof. ALEXANDER G. MCADIE, District Editor.

GENERAL SUMMARY.

March, 1913, was cool and dry. Not quite as cool as March, 1912, but much drier. The month as a whole, however, was favorable for agriculture, except in certain areas, more particularly in the San Joaquin Valley and the central coast valleys. There were few injurious frosts and the great fruit crops came safely through the critical blossoming period. While the month was the driest March in the past five years, and with one exception the driest in 11 years, the distribution of the rain with regard to time was most favorable. Showers occurred when most needed and there was no waste of water. There were no floods nor at any time sufficient rain or snow to cause apprehension. The depth and extent of the snow cover exceeded somewhat those of last year and while there is no prospect of abundant water for irrigation, power, mining, and other purposes, there will probably be enough water in storage to meet the needs of the summer.

Perhaps the most interesting feature of the weather of the month is the early history of certain disturbances, having their origin on the Pacific coast, which, subsequently crossing the country, developed into disastrous record-breaking storms. This is particularly true of the disturbance of March 21, which within 48 hours devastated portions of Nebraska and adjoining States; and the southwestern disturbance of March 24, which within 36 hours caused memorable rainfalls and consequent floods in the Ohio Valley.

The month began with pressure distribution favorable for light north winds, cool mornings, and light frost in exposed places. There was a quick change in the surface circulation and by the 2d the winds had changed to south, and light showers had occurred in the central and northern counties. This was followed by a period of fair weather lasting more than a week. The pressure was high, the surface winds north-northeast, and the temperature unusually high in the afternoon. Well-marked foehn effects were noticeable from the 4th to the 7th. Afternoon temperatures exceeded 80° at many stations on the southern side of the Sierra Madre and were as high as 75° at many points on the northern side of the range. The dynamic heating could also be noticed on the two sides of the Sierra Nevada, the air moving westward or southwestward over the range and descending into the Great Valley of California was much warmer at a given elevation on that side than at a corresponding elevation on the other side.

Beginning March 10 a distinct change in pressure distribution over the southwestern portion of the country occurred. The pressure fell rapidly over the Great Basin, affecting the weather in southern California. Cold north winds prevailed in central and northern California, also Nevada, while high southerly winds prevailed in southern California and in Arizona. This storm passed eastward, increasing in energy, and by the 14th had developed into a remarkable cyclone, a pressure of 28.98 inches being recorded at the center of the storm; the isobars were unusually symmetrical and the pressure gradients phenomenally uniform. Meanwhile on the Pacific coast there had been a return to a normal type of pressure distribution and there were no indications of further unusual developments. On March 17 there was a rapid change over the North Pacific Ocean, more particularly in the Gulf of Alaska. For some reason as yet undetermined, the North Pacific low extended rapidly eastward, and meanwhile the pressure was abnormally high over the eastern half of the country and rising steadily in British America and Alaska. It was plain that a period of unsettled weather could be anticipated on the Pacific slope south of latitude 50°. Southwest storm warnings were displayed at Eureka and southward to San Luis Obispo on March 17 and at Los Angeles and south to San Diego on March 18. There was a slight rise in pressure on March 19, which, however, was misleading and only of a temporary character. Unsettled weather prevailed throughout California on March 20 and on the 21st the pressure distribution was favorable for a well-marked storm. Southeast warnings were displayed for 48 hours. The disturbance on Saturday morning, March 22, was over the Great Basin, and while there was no indication of its rapid movement eastward and the complete reversal of pressure conditions on the two sides of the continent which did occur within 24 hours, it was noticed that there was a strong indraft of southerly winds covering practically the whole territory northwest of a line drawn from Los Angeles to Yuma, to Dodge, to Chicago. On Sunday morning, March 23, Easter Sunday, the storm had developed into one of large proportions. On the Pacific coast the weather was unsettled, rain was general, and snow fell in the mountains. The pressure rose rapidly and high northwest winds prevailed along the coast. Frost occurred on the morning of the 25th and again on the 26th. The rest of the month was without special feature.

TEMPERATURE.

The mean temperature for the State was 2° below the normal. The following table gives the means and departures for each March from 1897 to 1913, inclusive:

Year.	Mean.	Departure.	Year.	Mean.	Departure.
	°F.	°F.		°F.	°F.
1897	48.0	−3.6	1906	50.8	−1.0
1898	48.8	−3.0	1907	49.0	−2.8
1899	51.2	−0.6	1908	51.8	0.0
1900	55.7	+3.9	1909	48.5	−3.3
1901	53.0	+1.2	1910	54.7	+2.9
1902	49.7	−2.1	1911	52.7	+0.9
1903	50.9	−0.9	1912	48.6	−3.2
1904	51.1	−0.7	1913	49.6	−2.2
1905	54.7	+2.9			

The highest temperature recorded was 95°, which occurred at Heber and Mojave on the 30th and at Blythe

on the 31st. This was 3° higher than the highest temperature recorded during March, 1912. The lowest temperature was −7° at Tamarack, which occurred on the 1st. This was 10° higher than the lowest during March, 1912, at the same place. The highest monthly mean was 66.2° at Mammoth, and the lowest was 21° at Tamarack.

PRECIPITATION.

The precipitation was much below normal. The following table gives the average precipitation and departure from normal for each March from 1897 to 1913, inclusive:

Year.	Mean.	Departure.	Year.	Mean.	Departure.
	Inches.	*Inches.*		*Inches.*	*Inches.*
1897	3.98	−0.76	1906	9.19	+4.45
1898	0.66	−4.08	1907	10.67	+5.93
1899	6.10	+1.36	1908	1.49	−3.25
1900	2.38	−2.36	1909	3.56	−1.18
1901	1.01	−3.73	1910	2.43	−2.31
1902	3.39	−1.35	1911	6.02	+1.28
1903	5.80	+1.06	1912	5.17	+0.43
1904	8.52	+3.78	1913	2.16	−2.58
1905	5.42	+0.68			

The greatest monthly precipitation was 9.45 inches at Nellie. At nine stations no precipitation was recorded during the month. The greatest 24-hour rainfall was 3.35 inches at Greenville on the 22d.

Snowfall.—March was a month of less than average snowfall. There were no heavy falls, except on the 22d. On the other hand, there were no warm spells, no rapid melting, and no excessive evaporation. During the third week the depth and area of the snow cover were materially increased, but, nevertheless, not enough snow fell to insure a bountiful supply of water during the coming summer. The State could well stand two or three heavy snowfalls in the mountains. The snow is well packed, at a low temperature, and the water content high. The loss by evaporation and melting was less than in a normal March. There has been no waste of water.

SNOW IN THE MOUNTAINS.

The following table shows the depth of snow on the ground at Summit on given dates in March during the period 1907 to 1913:

1907	104	1911	222
1908	116	1912	26
1909	201	1913	52
1910	65		

SUNSHINE.

The following gives the hours of sunshine and percentages of the possible:

Stations.	Hours.	Percentage of possible.	Stations.	Hours.	Percentage of possible.
Eureka	124	34	Sacramento	308	83
Fresno	300	81	San Diego	260	70
Los Angeles	302	81	San Francisco	261	70
Mount Tamalpais	270	73	San Jose	269	73
Red Bluff	253	70	San Luis Obispo	251	67

NOTES ON THE RIVERS OF THE SACRAMENTO AND LOWER SAN JOAQUIN WATERSHEDS DURING THE MONTH OF MARCH, 1913.

By N. R. TAYLOR, Local Forecaster.

Sacramento watershed.—From the mouth of the Pitt River to tidewater the Sacramento River was lower than for any previous March of which there is an authentic record. At Red Bluff, Colusa, Knights Landing, and Sacramento City the average stages for the month were 5.1, 8.0, 7.0, and 9.6 feet, respectively, below the averages which have been maintained at these places during all previous years of record.

The average stage of the American River equaled that of the corresponding month of 1912, when this stream was the lowest on record for the month.

In the Feather-Yuba watershed all previous low-water records for March were broken by from 0.5 of a foot to nearly 1 foot.

Light scattered showers occurred in the upper reaches of the Sacramento River during the first decade of the month, and rains, more or less general, fell throughout the drainage basin of the Sacramento Valley from about the 17th to 24th, inclusive. The rain was moderately heavy north of Red Bluff, causing rises ranging from 2.5 at Vernon to as much as 4 feet at Red Bluff between the 22d and 25th. Below the mouth of the Feather River the swell amounted to little more than 1 foot.

Lower San Joaquin watershed.—The stages of the Mokelumne and the Upper Cosumnes Rivers equaled the low-water stages that obtained during March, 1912. In all other streams in this watershed the average stages were the lowest recorded during the month of March. In the Lower San Joaquin itself, north of the Stanislaus, the river averaged nearly 10 feet below the normal for the past 15 years and over 1 foot below the lowest stages previously recorded during the month.

Rains, mostly light, were general from the 18th to about the 25th, inclusive, causing slight rises in all streams, which were still in progress at the close of the month.

The effects of snow water on run-off were not apparent at any time during the month.

NOTES ON THE STREAMS OF THE UPPER SAN JOAQUIN WATERSHED.

By W. E. BONNETT, Local Forecaster.

Deficient precipitation and cool weather, which prevented any considerable melting of mountain snows, have kept the streams of the Upper San Joaquin watershed at very low stages. Average gage heights are slightly higher than those of February at all points but they fall far short of the March average for the last seven years and were everywhere much lower than the lowest previously recorded March stages, namely, those of 1908.

At Merced Falls the average stage was 0.7 foot, the seven-year average for March is 1.4 feet, and the monthly range was from 0.4 to 1.1 feet. At Friant the average was −0.4, the seven-year average is 1.3 feet, and the monthly range −0.6 to 0.1 foot. There was no change at Firebaugh, the stage remaining at −0.9 foot throughout the month as compared with a seven-year mean of 3.5 feet. At Piedra, on the Kings River, the mean stage was 4.9 feet, the lowest for many years, and the monthly range was from 4.6 to 6 feet. The highest stages for the month at all points occurred on the last day following some warm days.

While the stages for March this year were lower than those of the same month in 1912, they are only slightly lower, but the situation with reference to the demand for water is vastly different than it was at this time last year. Somewhat more than 3 inches of rain fell over this portion of the valley in March, 1912, and it was followed by almost 2 inches in April, so that the ground was in excellent condition from the rains. There was consequently very little demand for irrigation water until the normal summer rise in the streams began in May.

In the month just closed the average rainfall in this vicinity was less than one-fourth of an inch, and there is a pressing demand for several times the water for irrigation that is now available. A flow sufficient to fill all ditches probably will not be available much before May 1, unless April is unusually warm, and irrigators are greatly disturbed by the shortage.

TABLE 1.—*Climatological data for March, 1913. District No. 11, California.*

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, 0.01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Oregon.																				
Klamath Agency	Klamath	4,169	4	28.8	.....	45	29†	3	1	32	0.65	.....	0.25	6.5	4	18	6	7	w.	N. D. Ginsbach.
Klamath Falls	....do	4,100	23	33.3	− 6.1	60	30	11	14	31	0.50	− 0.88	0.12	4.0	9	12	9	10	nw.	Augusta J. Hayden.
Lakeview	Lake	4,825	29	31.1	− 4.6	57	7†	4	24	32	0.61	− 1.17	0.11	5.3	10	10	3	18	s.	C. C. Gott.
Merrill	Klamath	4,070	6	33.9	.....	63	31	5	6	40	0.17	.....	0.09	.....	4	9	15	7	.....	U. S. Reclamation Service.
Yonna	....do	4,146	5	28.9	.....	54	9	1	1	39	0.82	.....	0.20	3.8	8	0	12	19	w.	Jacob Rueck.
California.																				
Alturas	Modoc	4,400	9	35.4	.....	65	31	5	25	41	1.43	.....	0.30	18.0	9	10	13	8	sw.	Prof. C. B. Towle.
Angiola	Tulare	208	13	57.6	+ 4.0	84	7	41	26	34	0.51	− 0.91	0.25	0	4	24	0	7	n.	Santa Fe Co.
Antioch**	Contra Costa	46	34	59.5	+ 5.1	82	13†	32	8	....	0.67	− 1.63	0.35	0	4	21	0	10	e.	Southern Pacific Co.
Aptos**	Santa Cruz	102	28	51.1	− 1.2	72	8	31	13	....	1.72	− 2.73	0.46	0	6	18	5	8	nw.	Do.
Arrowhead Springs	San Bernardino	2,000	4	59.0	.....	84	30	32	23	32	1.29	.....	0.42	T.	6	20	9	2	.....	Dr. E. J. Erekson.
Auburn	Placer	1,360	42	51.3	− 0.4	82	30	29	13†	37	2.06	− 3.66	0.70	1.0	7	20	5	6	ne.	Southern Pacific Co.
Avalon	Los Angeles	30	3	56.0	.....	77	7	45	16†	24	0.35	.....	0.25	0	4	27	3	1	w.	T. S. Manning.
Azusa	....do	540	11	54.6	− 1.7	88	6	30	12†	46	0.58	− 3.70	0.38	0	5	21	3	7	.....	A. P. Griffith.
Bagdad	San Bernardino	784	10	62.8	− 1.1	89	31	39	1	30	0.00	− 0.65	0.00	0	0	....	....	....	.....	Santa Fe Co.
Bakersfield	Kern	404	24	57.2	+ 0.5	86	10	32	15†	50	....	....	....	....	....	26	0	5	.....	Do.
Barstow	San Bernardino	2,105	10	54.8	− 3.0	88	30	30	27	42	0.45	− 0.11	0.45	0	1	29	0	2	w.	E. L. White.
Berkeley	Alameda	317	26	51.8	0.0	78	7	35	24	36	1.98	− 2.92	0.57	0	5	15	7	9	sw.	State University.
Betteravia	Santa Barbara	....	....	52.1	.....	78	30	29	14	40	0.60	.....	0.25	0	4	21	9	1	w.	Union Sugar Co.
Biggs**	Butte	98	14	50.6	− 2.6	80	7	27	24	....	1.89	− 2.33	0.90	0	5	18	3	10	s.	Southern Pacific Co.
Bishop	Inyo	4,450	18	42.4[1]	− 3.7	80	31	10	1	48	0.09	− 0.95	0.07	0.5	2	30	0	1	.....	Paul E. Lodge.
Bishop Creek	....do	8,500	3	30.2	.....	56	30	5	1†	37	1.00	.....	0.60	10.0	5	14	0	17	.....	Do.
Blocksburg	Humboldt	1,700	7	44.6	.....	75	6†	21	14	41	6.33	.....	1.25	6.0	11	3	8	20	s.	Victor Hope.
Blue Canon	Placer	4,695	14	39.0	− 0.8	67	6†	12	1	43	5.10	− 9.30	1.50	51.0	7	20	0	11	n.	Southern Pacific Co.
Blythe	Riverside	268	4	55.5	.....	95	31	24	1†	53	T.	.....	T.	0	0	25	2	4	n.	C. L. Suits.
Branscomb	Mendocino	2,000	13	45.0	− 0.4	79	7	23	14	39	6.17	− 6.57	1.85	6.0	12	13	8	10	w.	A. J. Haun.
Brawley	Imperial	−105	4	57.3	.....	89	30	29	1	44	0.00	.....	0.00	0	0	....	....	....	.....	M. D. Witter.
Burney	Shasta	3,300	3	38.3	.....	71	31	13	26	49	2.53	.....	0.71	16.1	7	10	10	11	sw.	Mrs. M. D. Chambers.
Cahuilla	Riverside	3,600	2	43.8	.....	77	30	20	2	42	0.75	.....	0.20	4.0	5	19	5	7	e.	Dr. W. L. Shawk.
Calexico	Imperial	0	8	59.7	.....	88	30†	32	25	45	0.00	.....	0.00	0	0	30	0	1	nw.	J. E. Peck.
Caliente**	Kern	1,290	37	49.1	− 6.9	66	20	34	14	....	1.32	− 0.70	0.65	0	4	18	0	13	e.	Southern Pacific Co.
Calistoga**	Napa	363	41	44.6	− 8.9	65	11	25	13†	....	3.21	− 2.47	1.54	0	4	21	0	10	w.	Do.
Campbell	Santa Clara	217	16	50.8	− 0.8	79	8	29	15	41	0.90	− 2.69	0.39	0	6	21	2	8	nw.	F. M. Righter.
Camptonville (near)	Yuba	3,500	6	46.6	.....	76	7†	20	24†	38	5.97	.....	1.54	35.0	9	17	4	10	s.	Cal. Gas & Electric Co.
Cedarville	Modoc	4,675	19	36.4[e]	− 1.6	68	31	9	20	34	1.05	− 0.90	0.35	18.0	5	6	24	1	w.	T. H. Johnstone.
Chico	Butte	189	43	51.1	− 4.5	79	8	28	13†	44	2.41	− 0.84	1.00	0	7	19	1	11	s.	G. H. Stephenson.
China Flat	Humboldt	600	4	50.4	.....	82	31	28	25	44	2.82	.....	1.03	0	11	10	6	15	w.	O. I. Westerburg.
Chino	San Bernardino	714	21	49.0	−11.8	71	11	35	3	....	0.00	− 3.74	0.00	0	0	23	0	8	.....	Southern Pacific Co.
Cisco**	Placer	5,939	42	35.6	+ 2.2	51	5†	18	13†	....	5.50	− 3.48	1.20	55.0	9	21	0	10	sw.	Do.
Claremont	Los Angeles	1,200	21	54.2	+ 0.3	83	6†	32	25	42	0.59	− 3.69	0.32	0	4	22	8	1	w.	Prof. F. P. Bracket.
Cloverdale	Sonoma	340	11	52.7	+ 0.2	84	6	28	25	40	2.61	− 6.88	0.88	0	6	23	2	6	n.	John O. Ogle.
Coalinga	Fresno	663	1	53.5	.....	82	9†	30	26	40	0.22	.....	0.12	0	4	23	0	8	w.	Union Oil Co.
Colfax	Placer	2,421	42	39.6	−10.5	71	9	12	25	33	1.70	− 6.40	0.62	8.0	7	24	1	6	se.	Southern Pacific Co.
Colusa	Colusa	60	10	51.8	− 1.3	78	6†	29	13	38	1.12	− 1.29	0.75	0	3	24	4	3	n.	C. D. McComish.
Corning **	Tehama	277	27	54.3	+ 1.7	79	6†	35	13†	....	1.39	− 1.92	0.82	0	6	12	13	6	n.	SouthernPacific Co.
Cuyamaca	San Diego	4,677	14	39.2	− 1.5	71	31	11	3	41	2.12	− 5.85	0.49	6.0	7	17	6	8	w.	Cuyamaca Water Co.
Davisville	Yolo	51	41	51.8	− 4.4	82	31	28	1†	43	1.08	− 1.51	0.33	0	5	17	8	6	n.	S. H. Beckett.
Deer Creek	Nevada	3,700	6	39.2	.....	68	7	12	25	42	5.36	.....	1.23	41.0	9	20	3	8	w.	Cal. Gas & Electric Co.
Del Monte	Monterey	25	2	52.6	.....	80	8	34	16	40	0.95	.....	0.45	0	4	20	5	6	n.	H. R. Warner.
Delta	Shasta	1,138	28	46.4	− 3.5	69	31	28	15	36	3.46	− 6.78	0.94	2.5	4	16	10	5	n.	Southern Pacific Co.
Denair	Stanislaus	126	13	51.8	− 1.5	80	7	25	1	36	0.65	− 1.65	0.55	0	2	18	0	13	nw.	Santa Fe Co.
De Sabla	Butte	2,500	9	44.4	.....	76	6†	14	24	37	6.56	.....	1.75	38.0	8	10	13	8	sw.	Cal. Gas & Electric Co.
Dobbins (near)	Yuba	1,650	9	51.6	.....	82	6	30	25	36	4.05	.....	1.55	0	9	12	10	9	s.	Do.
Downieville	Sierra	3,150	2	42.2	.....	74	30†	17	24	44	5.55	.....	1.33	23.5	9	14	7	10	s.	J. T. Mason.
Dudley	Kings	595	1	55.1	.....	82	8†	32	25†	37	0.24	.....	0.20	0	2	19	9	3	n.	Union Oil Co.
Dudleys	Mariposa	3,000	4	....	.....	....	....	....	....	....	....	.....	....	....	....	....	....	....	.....	W. H. Dudley.
Dunlap (near)	Fresno	2,800	1	45.2	.....	74	31	23	13	36	2.13	.....	0.46	T.	7	14	8	9	.....	U. S. Forest Service.
Dunnigan **	Yolo	65	36	59.3	+ 4.3	84	31	45	24	....	1.40	− 1.56	0.72	0	5	21	5	5	n.	Southern Pacific Co.
Dunsmuir **	Siskiyou	2,285	24	42.4	− 2.4	75	8	28	1†	....	2.94	− 6.13	1.21	5.5	8	19	0	12	n.	Do.
Durham	Butte	160	18	51.2	− 1.0	79	6	26	14	42	2.75	− 1.11	1.27	0	7	17	5	9	n.	R. W. Durham.
El Cajon	San Diego	482	14	53.5	− 2.9	84	6†	29	16	48	1.09	− 1.62	0.40	0	7	23	4	4	w.	H. H. Kessler.
Electra	Amador	725	9	53.0	.....	88	31	30	13†	52	1.97	.....	0.65	0	7	21	4	6	.....	Cal. Gas & Electric Co.
Emigrant Gap	Placer	5,230	39	37.6	− 0.1	60	7†	14	25	28	4.26	− 4.38	1.20	42.6	10	17	6	8	.....	Southern Pacific Co.
Escondido	San Diego	657	19	53.6	− 1.3	83	7	30	16†	43	1.46	− 1.56	0.59	0	6	6	23	2	w.	A. R. Moon.
Eureka	Humboldt	64	27	45.6	− 2.4	57	17	32	24	17	3.61	− 2.57	0.89	T.	17	2	15	14	n.	U. S. Weather Bureau.
Farmington **	San Joaquin	111	34	55.6	+ 1.7	80	31	35	12†	....	1.34	− 1.39	0.54	0	4	25	0	6	.....	Southern Pacific Co.
Folsom	Sacramento	252	41	52.0	− 2.8	80	31	30	13†	34	1.95	− 2.04	0.72	0	8	20	2	9	n.	F. O. Hutton.
Fordyce Dam	Nevada	6,500	18	40.2	.....	59	7†	17	1	32	5.42	− 7.81	1.18	53.0	11	13	9	9	sw.	E. E. Roening.
Fort Bidwell	Modoc	4,735	24	36.1	− 3.3	65	31	12	14†	32	1.10	− 1.49	0.60	17.0	6	8	10	13	sw.	C. R. Decious.
Fouts Springs	Colusa	1,650	9	....	.....	....	....	....	....	....	....	.....	....	....	....	....	....	....	.....	A. J. Burgi.
Fresno	Fresno	293	26	54.8	− 0.1	83	31	34	25	31	0.63	− 0.69	0.36	T.	4	16	11	4	e.	U. S. Weather Bureau.
Galt **	Sacramento	49	35	51.4	− 3.8	68	31	35	1†	....	1.68	− 1.67	0.68	0	5	16	4	11	.....	Southern Pacific Co.
Georgetown	El Dorado	2,650	40	45.2[1]	− 6.7	75	7†	24	24†	35	4.06	− 6.25	1.20	21.0	6	....	....	....	.....	G. L. Buchler.
Gilroy **	Santa Clara	193	39	56.6	+ 2.9	85	7†	30	15†	....	2.18	− 1.37	0.63	0	7	17	1	13	se.	Southern Pacific Co.
Gilta	Siskiyou	3,300	3	45.3	.....	70	18	22	24	39	4.84	.....	1.40	13.0	15	7	12	12	.....	A. Dannenbrink.
Glennville	Kern	3,300	3	43.5	.....	69	31	24	25	31	1.57	.....	0.51	3.5	6	14	12	5	w.	C. H. Likely.
Gold Run	Placer	3,222	14	45.2	− 0.1	74	8	20	25	35	5.45	− 6.83	2.00	35.0	8	16	6	9	.....	Southern Pacific Co.
Gonzales **	Monterey	127	14	54.6	+ 3.1	80	9	38	29	....	0.99	− 1.59	0.32	0	7	19	2	10	.....	Do.
Grass Valley	Nevada	2,690	41	45.8	.....	74	6	20	24	36	3.91	− 4.89	1.35	21.5	8	16	6	9	sw.	Mrs. L. M. Wentworth.
Greenland Ranch	Inyo	−178	2	....	.....	....	....	....	....	....	....	.....	....	....	....	....	....	....	.....	J. W. Corkhill.
Greenville	Plumas	3,600	19	45.6	+ 5.4	71	31	21	26	34	4.88	− 3.02	3.35	29.0	8	11	8	12	sw.	C. H. Higbie.
Groveland	Tuolumne	2,828	4	....	.....	....	....	....	....	....	....	.....	....	....	....	....	....	....	.....	H. S. Richardson.
Guinda **	Yolo	350	15	51.3	+ 0.1	71	11	25	24†	....	0.75	− 3.11	0.28	0	4	16	7	8	.....	Southern Pacific Co.
Hanford	King	249	13	51.7	− 2.6	80	9	29	26	35	0.34	− 1.61	0.12	0	5	7	15	9	.....	Santa Fe Co.
Healdsburg	Sonoma	110	20	52.4	+ 0.3	82	8	29	15	44	2.66	− 4.21	1.56	0	6	19	0	12	se.	Dr. F. J. Kinley.
Hearst	Mendocino	1,800	3	49.6	.....	82	8	32	26	48	5.03	.....	1.10	4.0	8	16	3	12	.....	H. D. Ellmaker.
Heber	Imperial	−20	7	58.5	.....	95	30	29	26	51	0.00	.....	0.00	0	0	22	9	0	nw.	F. E. Hamilton.
Hetch Hetchy	Tuolumne	3,665	3	42.6	.....	77	30†	19	25	44	2.94	.....	1.12	25.5	10	20	1	10	n.	E. J. Kopplitz.
Hollister	San Benito	284	39	51.6	− 2.9	81	7†	29	13	41	1.48	− 0.90	0.50	0	8	20	3	8	w.	J. N. Thompson.
Hornbrook **	Siskiyou	2,154	25	34.6	−10.1	48	7	18	15	....	0.00	− 1.45	0.00	0	0	19	0	12	.....	Southern Pacific Co.
Hot Springs	Tulare	3,300	6	45.6	.....	73	31	26	14†	31	1.88	.....	0.44	3.0	6	17	4	10	.....	U. S. Forest Service
Hullville	Lake	2,250	6	44.8	.....	78	6	20	24	42	4.54	.....	1.06	11.8	11	3	16	12	sw.	T. H. Betterton.
Independence	Inyo	3,907	17	43.6	− 6.0	78	30	14	1	37	0.06	− 0.42	0.04	T.	2	20	11	0	n.	U. S. Weather Bureau.
Indian Wells	Kern	2,500	....	....	.....	....	....	....	....	....	....	.....	....	....	....	....	....	....	.....	I. D. McCoy.

TABLE 1.—*Climatological data for March, 1913. District No. 11*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit. Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Precipitation, in inches. Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.	Number of rainy days, 0.01 inch or more.	Sky. Number of clear days.	Number of partly cloudy days.	Number of cloudy days.	Prevailing wind direction.	Observers.
California—Continued.																				
Indio	Riverside	−20	35	61.3	− 4.0	92	30	32	16	48	0.02	− 0.29	0.02	0	1	27	4	0	nw.	F. N. Johnson.
Inskip	Butte	4,975	6	41.3	.....	68	6†	16	25	32	8.46	.....	2.45	63.8	7	8	9	14	.....	Cal. Gas & Elec. Co.
Ione**	Amador	287	35	45.8	− 8.1	70	31	32	14†	....	1.89	− 2.05	0.66	0	4	23	7	1	.....	Southern Pacific Co.
Jamestown	Tuolumne	1,471	10	49.3	− 1.5	78	30†	24	14	36	2.11	− 6.09	0.90	0	6	20	2	9	.....	Sierra Railway Co.
Kennett	Shasta	730	1	48.9	.....	79	7†	25	25	38	3.56	.....	2.03	2.0	8	6	21	4	sw.	O. J. Egleston.
Kentfield	Marin	65	25	51.1	.....	79	6	29	15†	43	3.75	− 4.85	1.52	0	5	16	5	10	.....	Miss M. E. Parsons.
King City	Monterey	333	26	56.4	+ 3.3	87	9†	25	26	53	0.68	− 1.45	0.25	0	5	20	0	11	n.	Southern Pacific Co.
Lake Eleanor	Tuolumne	4,700	3	38.2	.....	70	31	10	25	43	4.65	.....	1.44	54.0	9	20	2	9	se.	O. J. Todd.
La Porte	Plumas	5,000	19	36.0	+ 0.8	61	8†	4	19	31	5.85	−10.01	1.42	58.5	9	14	8	9	s.	Chas. W. Hendel.
Le Grand	Merced	255	13	51.6	+ 0.3	80	21	31	1†	40	1.04	− 1.76	0.33	0	4	21	0	10	w.	Santa Fe Co.
Lemon Cove	Tulare	600	18	56.0	− 0.2	88	31	26	13	42	0.90	− 2.51	0.40	0	4	18	13	0	nw.	G. W. Sandidge.
Lick Observatory	Santa Clara	4,209	24	41.2	+ 0.2	66	31	21	25	17	3.40	− 2.27	0.90	0	9	17	6	8	n.	The Director.
Livermore	Alameda	485	42	52.8	− 1.0	84	8†	27	13†	46	1.65	− 0.93	0.67	0	7	20	2	9	n.	E. G. Still.
Lone Pine	Inyo	2,728	8	43.5	.....	80	31	19	1	46	0.70	.....	0.70	7.0	1	27	3	1	s.	G. F. Marsh.
Long Valley	Lassen	4,400	4	40.1	.....	76	19	15	26	41	0.06	.....	0.06	1.5	1	....	....	....	.....	A. G. Evans.
Los Angeles	Los Angeles	293	36	57.8	+ 2.2	84	6	39	23	26	0.33	− 2.65	0.28	0	3	19	8	4	sw.	U. S. Weather Bureau.
Los Banos**	Merced	121	26	58.8	+ 3.4	78	9	46	27	....	0.63	− 0.72	0.30	0	4	17	0	14	s.	Southern Pacific Co.
Los Gatos	Santa Clara	600	26	52.6	+ 0.3	81	8	32	25	35	3.28	− 2.62	1.08	0	6	21	3	7	n.	F. H. McCullagh.
McCloud	Siskiyou	3,410	3	38.7	.....	67	8†	11	24	39	1.42	.....	0.63	13.5	6	11	15	5	sw.	F. F. Spencer.
Macdoel	do	4,528	8	32.5	.....	60	30	9	1	29	0.45	.....	0.20	4.5	5	....	....	....	n.	Butte Valley Land Co.
Madeline	Lassen	5,270	4	32.0	.....	62	31	3	15†	40	1.16	.....	0.30	13.0	7	7	8	16	w.	J. H. Williams.
Magalia	Butte	2,321	9	48.3	.....	82	9	22	23	38	6.30	.....	2.48	16.0	7	24	0	7	se.	Butte Co. R. R. Co.
Mammoth Tank	Imperial	257	35	66.2	+ 0.1	93	31	44	1	35	0.00	− 0.20	0.00	0	0	27	4	0	w.	Southern Pacific Co.
Maricopa	Kern	640	2	54.1	.....	84	7	33	12	44	0.26	.....	0.11	0	3	19	4	8	ne.	Union Oil Co.
Marysville	Yuba	67	42	53.5	− 3.9	82	31	30	26	42	2.41	− 1.41	0.90	0	5	21	0	10	s.	Southern Pacific Co.
Mecca	Riverside	−185	7	59.0	.....	88	5†	30	1†	49	T.	.....	T.	0	0	23	8	0	nw.	E. A. Palmer.
Menlo Park**	San Mateo	64	35	52.0	− 1.4	65	20	33	14	....	1.00	− 2.01	0.33	0	6	....	....	....	.....	Southern Pacific Co.
Merced	Merced	173	39	53.8	− 1.2	80	31	32	1†	32	1.01	− 0.76	0.39	0	5	21	2	8	nw.	Santa Fe Co.
Middlewater	Kern	803	2	.....	.....	....	....	....	....	....	.....	.....	.....	....	....	....	....	....	.....	Union Oil Co.
Mill Creek (1)	Amador	2,500	6	47.2	.....	81	6	25	14†	46	3.60	.....	1.09	5.0	9	21	2	8	n.	Cal. Gas & Elec. Co.
Milton (near)	Calaveras	660	22	53.0	− 0.7	78	31	31	14	25	1.36	− 2.96	0.49	0	4	20	5	6	nw.	J. H. Southwick.
Modesto**	Stanislaus	90	41	50.7	− 5.2	78	9	32	1	....	0.37	− 1.25	0.25	0	2	23	0	8	.....	Southern Pacific Co.
Mojave	Kern	2,751	36	52.3	− 1.2	95	30	32	1	....	0.02	− 0.77	0.02	0.2	1	21	10	....	.....	Do.
Mokelumne Hill	Calaveras	1,550	20	52.5	+ 3.9	76	31	29	25	30	1.94	− 4.30	0.58	T.	7	17	4	10	.....	C. E. Prindle.
Mono Ranch	Ventura	3,210	7	44.9	.....	78	30	21	26	42	T.	−10.61	T.	0	0	22	9	0	w.	Herbert Lathrop.
Montague	Siskiyou	2,450	25	40.5	− 5.2	71	9	13	15	49	0.26	− 1.31	0.10	T.	4	8	13	10	s.	I. E. Deboy.
Monterey	Monterey	15	48	54.3	+ 0.4	72	8†	38	15	....	1.68	− 1.53	0.60	0	6	22	8	1	e.	Southern Pacific Co.
Monterio	Kern	4,500	14	42.2	− 7.7	80	30†	26	12†	36	2.25	− 1.89	0.55	0	7	16	8	7	nw.	John C. Knecht.
Mount Tamalpais	Marin	2,375	14	47.0	− 0.1	70	31	28	24	23	2.08	− 3.05	0.96	1.5	9	21	4	6	nw.	U. S. Weather Bureau.
Napa City	Napa	20	36	49.5	− 2.0	81	7	27	16†	47	2.12	− 1.58	0.95	0	4	6	25	0	s.	Alex. Hull.
Napa (S. H.)	do	60	35	53.0	+ 0.4	79	7	34	24	37	2.08	− 1.62	0.88	0	6	13	10	8	sw.	A. R. Edgar.
Needles	San Bernardino	477	21	64.8	+ 1.0	93	31	41	25†	35	0.00	− 0.41	0.00	0	0	25	3	3	w.	Santa Fe Co.
Nellie	San Diego	5,350	4	45.1	.....	65	8†	16	1	32	9.45	.....	.....	19.0	13	20	1	10	.....	T. O. Bailey.
Nevada City	Nevada	2,850	21	43.4	− 1.4	80	6	17	24†	52	4.02	− 4.91	1.54	11.0	10	15	10	6	sw.	S. W. Marsh.
Newhall**	Los Angeles	1,200	36	57.5	+ 3.4	87	29	36	25	....	0.11	− 3.26	0.08	0	2	21	0	10	se.	Southern Pacific Co.
Newman	Stanislaus	91	24	55.8	+ 0.1	86	31	30	15†	42	0.43	− 1.69	0.30	0	2	....	....	....	.....	E. S. Wangenheim.
North Bloomfield	Nevada	3,214	16	50.0	+ 5.9	72	6†	34	25	24	3.10	− 6.51	1.10	13.5	5	18	4	9	w.	J. R. McIntosh.
North Fork	Madera	3,000	9	.....	.....	....	....	....	....	....	.....	.....	.....	....	....	....	....	....	.....	U. S. Forest Service.
Oakdale**	Stanislaus	156	19	64.4	+12.6	89	10	40	1	....	0.78	− 2.03	0.28	0	4	25	0	6	nw.	Southern Pacific Co.
Oak Grove	San Diego	2,751	3	.....	.....	....	....	....	....	....	.....	.....	.....	....	....	....	....	....	.....	B. L. Johnson.
Oakland	Alameda	36	37	51.6	− 1.4	72	7	35	24	28	1.77	− 2.33	0.64	0	5	14	9	8	w.	Chabot Observatory.
Oceanside	San Diego	60	3	54.3	.....	77	8	40	1†	30	0.53	.....	0.22	0	6	23	5	3	w.	H. D. Brodie.
Ojai Valley	Ventura	900	7	53.2	.....	86	6	28	26	45	0.31	.....	0.18	0	3	22	9	0	sw.	W. H. Duncan.
Orland	Glenn	254	31	52.7	− 3.0	81	7	30	24	42	1.05	− 1.60	0.67	0	5	20	2	9	n.	U. S. Reclamation Service.
Orleans	Humboldt	520	10	51.6	− 3.0	84	9	30	1	45	3.88	− 3.12	0.95	0	14	9	0	22	.....	F. T. Hale.
Oroville (near)	Butte	250	29	51.8	− 2.5	81	31	28	14	38	2.95	− 1.25	1.50	0	6	15	6	10	nw.	E. D. Fairchild.
Palmero	do	213	22	53.1	+ 0.3	78	26	26	3	41	2.50	− 1.22	1.00	0	5	19	8	4	s.	Western Pacific Co.
Palm Springs**	Riverside	584	24	61.4	− 3.2	92	31	38	15†	....	0.00	− 0.59	0.00	0	0	31	0	0	.....	Southern Pacific Co.
Pasadena	Los Angeles	827	23	54.6	+ 0.2	85	6	32	25	39	0.35	− 3.33	0.22	0	4	22	6	3	sw.	E. D. Sorver.
Paso Robles	San Luis Obispo	800	26	50.8	− 0.8	85	31	26	12†	50	0.68	− 2.55	0.32	0	4	23	6	2	n.	Dr. F. W. Sawyer,
Peachland	Sonoma	190	17	49.6	− 2.3	81	7	27	11	46	2.84	− 4.67	0.88	0	5	20	4	7	sw.	E. H. Parnell.
Petaluma	do	....	....	50.2	.....	80	8	26	15	45	1.95	.....	0.60	0	5	12	11	8	s.	
Placerville	El Dorado	1,875	24	45.8	− 1.6	70	8†	26	13†	34	3.11	− 4.75	1.34	0	7	....	....	....	.....	A. E. May.
Point Lobos	San Francisco	250	20	52.2	− 0.2	75	7	41	24	30	1.50	− 2.04	0.48	0	6	10	3	18	nw.	John Hyslop.
Point Reyes	Marin	490	21	48.0	− 2.4	67	7	40	24	24	1.40	− 2.35	0.75	0	10	10	8	13	nw.	U. S. Weather Bureau.
Pomona	Los Angeles	....	....	.....	.....	....	....	....	....	....	.....	.....	.....	....	....	....	....	....	.....	J. E. Adamson.
Porterville	Tulare	464	24	56.2	0.0	87	8†	29	25	47	0.65	− 1.19	0.19	0	6	25	2	4	.....	Leslie McAuliff.
Quincy	Plumas	3,400	18	38.9	− 1.9	70	30	12	26	39	2.88	− 5.73	1.20	27.5	8	22	2	7	s.	U. S. Forest Service.
Red Bluff	Tehama	307	36	52.2	− 1.6	82	7	32	13	34	1.94	− 1.33	1.27	0	6	17	6	8	nw.	U. S. Weather Bureau.
Redding	Shasta	552	38	53.2	− 0.6	86	31	29	13	37	3.20	− 2.18	1.06	0	8	8	21	2	nw.	W. W. Jones.
Redlands	San Bernardino	1,352	20	54.2	− 1.3	83	30	32	1†	42	0.56	− 2.54	0.38	0	5	18	8	5	w.	W. S. Devol.
Reedley	Fresno	347	13	53.7	− 2.5	84	31	32	14†	38	0.77	− 1.66	0.34	0	3	23	0	8	n.	Santa Fe Co.
Rialto (near)	San Bernardino	2,250	7	54.5	.....	82	30	32	24	27	1.44	.....	0.47	2.0	7	17	6	8	n.	Southern Cal. Edison Co.
Riverside	Riverside	851	31	55.4	− 0.5	88	30	29	25	52	0.54	− 1.80	0.34	0	5	16	15	0	sw.	J. H. D. Cox.
Rocklin	Placer	249	42	49.6	− 5.3	80	8	26	13†	41	1.68	− 2.03	0.80	0	4	19	1	11	se.	Southern Pacific Co.
Rohnerville	Humboldt	75	10	48.0	.....	64	4†	28	14†	28	3.68	− 3.30	0.86	0	13	10	6	15	n.	Dr. R. Callahan.
Sacramento	Sacramento	71	36	52.6	− 1.6	80	31	33	26	31	1.34	− 1.60	0.62	0	6	22	7	2	se.	U. S. Weather Bureau.
St. Helena	Napa	255	5	50.7	.....	81	6†	28	1†	43	2.72	.....	1.41	0	5	23	1	7	.....	E. E. Hooper.
Salinas	Monterey	40	39	52.5[h]	− 0.2	80	7	31	27	38	1.46	− 0.95	0.43	0	8	....	....	....	.....	Miss E. Ruth Abbott.
San Bernardino	San Bernardino	1,054	21	55.4	− 0.1	89	30	30	25	50	0.63	− 2.28	0.45	0	4	15	10	6	sw.	Dr. A. K. Johnson.
San Diego	San Diego	93	42	55.1	− 1.1	76	7	42	26	25	0.42	− 1.12	0.29	0	5	16	10	5	nw.	U. S. Weather Bureau.
San Francisco	San Francisco	207	42	52.6	− 0.1	77	7	40	24	31	1.47	− 1.61	0.67	0	8	19	7	5	w.	Do.
San Jacinto	Riverside	1,550	20	55.6	+ 1.5	91	30	30	16†	52	0.97	− 1.79	0.45	0	5	18	3	10	w.	E. T. Tanner.
San Jose	Santa Clara	95	38	52.0	− 1.7	80	8	31	26	41	1.17	− 1.41	0.54	0	7	17	8	6	nw.	U. S. Weather Bureau.
San Luis Obispo	San Luis Obispo	201	18	53.3	+ 0.5	82	30	35	17	36	0.96	− 2.06	0.38	0	6	18	4	9	n.	Do.
San Mateo**	San Mateo	22	39	55.9	+ 2.8	74	6†	38	15	....	1.96	− 1.58	0.99	0	5	18	7	6	sw.	Southern Pacific Co.
San Miguel	San Luis Obispo	616	26	54.5	+ 0.8	81	30	32	1†	....	0.68	− 1.54	0.25	0	4	18	8	5	.....	Do.
San Miguel Island	Santa Barbara	500	19	.....	.....	....	....	....	....	....	.....	.....	.....	....	....	....	....	....	.....	Capt. W. G. Waters.
Sanger**	Fresno	371	24	53.8	− 3.7	82	31	32	14	....	1.07	− 0.97	0.47	0	6	15	4	12	.....	Southern Pacific Co.
Santa Barbara	Santa Barbara	130	29	53.5	− 2.1	80	6†	36	15	34	0.64	− 2.15	0.26	0	6	23	5	3	w.	G. W. Russell.
Santa Clara	Santa Clara	90	24	52.2	− 0.8	82	8	31	14†	43	0.66	− 2.45	0.32	0	7	22	1	8	nw.	Santa Clara University.
Santa Cruz	Santa Cruz	20	40	51.3	− 3.2	81	8	29	25	41	2.05	− 2.56	0.65	0	5	24	2	5	w.	W. R. Springer.
Santa Margarita**	San Luis Obispo	996	24	59.4	+ 8.3	87	30	28	15	....	0.95	− 4.65	0.42	0	4	16	1	14	.....	Southern Pacific Co.
Santa Monica	Los Angeles	110	28	53.0	− 3.5	76	7	37	23	27	0.27	− 2.67	0.27	0	1	19	7	5	w.	F. E. Hill.
Santa Rosa	Sonoma	181	24	49.2	− 2.9	77	8	27	13†	43	2.73	− 2.38	1.27	0	6	18	0	13	s.	Southern Pacific Co.
Selma**	Fresno	311	27	50.8	− 3.3	87	9	38	23	....	0.58	− 0.94	0.21	0	4	27	0	4	.....	Do.

TABLE 1.—*Climatological data for March, 1913. District No. 11*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, 0.01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
California—Continued.																				
Seven Oaks	San Bernardino	5,000	3																	M. Lewis.
Sierra Madre	Los Angeles	1,400	16	56.0	+ 0.7	82	6†	35	25	33	0.73	− 4.64	0.30	0	4	19	2	10	se.	Mrs. A. E. Gregory.
Sierraville	Sierra	5,000	3	34.4		70	31	−3	1	42	1.00		0.50	10.0	4	17	5	9	sw.	C. D. Johnson.
Sisson	Siskiyou	3,555	24	37.4	− 2.4	64	30	19	14	33	2.50	− 3.12	0.80	25.0	7	17	11	3	n.	Southern Pacific Co.
Soledad**	Monterey	188	39	62.3	+ 8.7	78	27	50	1†		1.40	− 0.26	0.40	0	7	16	0	15	s.	Do.
Sonora	Tuolumne	1,825	25	48.6		75	31	29	14†	32	2.44	− 4.70	0.79	0	7	21	3	7	sw.	Chas. P. Jones.
Southeast Farallon	San Francisco	30	10	48.4	− 3.1	57	3	42	23	7	1.34	− 2.35	0.64	0	10	9	6	16	nw.	U. S. Weather Bureau.
Springville	Tulare	4,000	6	48.0		72	30†	21	26	34	1.94		0.80	15.0	5	21	2	8		D. L. Wishon.
Squirrel Inn	San Bernardino	5,280	3	39.5		66	30	18	25	22	4.47		1.75	8.0	7	21	1	9	n.	A. D. Frantz.
Stanwood	Butte	2,140	9	50.7		78	7†	21	25	42	6.89		1.28	14.0	8	16	8	7	n.	Cal. Gas & Electric Co.
Stirling City	do	3,525	9	42.2		72	6†	12	25	37	4.25		1.60	49.0	7	16	1	14	se.	Butte County R. R. Co.
Stockton (S. H.)	San Joaquin	23	42	52.6	− 1.9	79	31	31	1	36	1.16	− 1.10	0.60	0	5	21	7	3	nw.	State Hospital.
Storey	Madera	296	13	51.2	− 1.1	80	31	29	26	37	1.09	− 0.77	0.27	0	6					Santa Fe Co.
Suisun**	Solano	20	33	53.1	− 2.7	89	30	29	24		1.44	− 1.84	0.70	0	4	21	4	6	n.	Southern Pacific Co.
Sulphur Banks	Lake	1,350	1	49.4		75	8†	29	16	45	1.54		0.44	T.	4	20	6	5	w.	L. S. Lorenzen.
Summit	Placer	7,017	40	29.0	− 2.4	48	31	10	24	23	3.20	− 5.82	0.70	32.0	6	16	1	14	s.	Southern Pacific Co.
Susanville	Lassen	4,175	24																	C. M. Penry.
Tamarack	Alpine	8,000	7	21.0		42	5†	−7	1	45	2.40	− 8.39	1.14	25.0	8	8	13	10	n.	Cal. Gas & Electric Co.
Tehachapi**	Kern	3,964	36	45.4	+ 1.3	74	17	27	24		5.06	+ 3.28	1.60	39.0	6					Southern Pacific Co.
Tehama	Tehama	220	42	50.6	− 4.3	78	8	32	14†		2.00	− 0.86	1.00	0	2	22	0	9	n.	Do.
Tejon Rancho	Kern	1,500	10	52.3	− 1.9	80	9	34	26	28	1.18	− 0.87	0.42	0	5					S. E. Bailey.
Three Rivers	Tulare	870	3	51.3		81	31	27	14	40	1.99		0.80	0	5	16	8	7	sw.	J. H. Pierce.
Towle	Placer	3,704	27	44.0	− 0.5	72	9	15	24	43	5.85	− 3.41	1.60	37.0	8	20	2	9		Southern Pacific Co.
Tracy**	San Joaquin	64	33	50.6	− 4.2	75	4†	32	1†		0.59	− 1.18	0.30	0	2					Do.
Ukiah	Mendocino	620	20	49.7	0.0	82	7	25	14	48	3.03	− 2.52	0.70	T.	9	20	2	9	nw.	Dr. Geo. McCowen.
Upper Lake	Lake	1,350	28	47.8	− 1.4	83	7	23	13	46	2.37	− 1.49	0.72	T.	5	17	5	9	nw.	C. M. Hammond.
Vacaville	Solano	175	25	52.5	− 1.4	86	9	27	26	47	1.54	− 2.66	0.85	0	6	12	14	5	n.	G. O. Coburn.
Valley Springs**	Calaveras	673	24	55.2	+ 0.4	83	31	35	13		1.45	− 3.24	0.46	0	6	21	3	7	nw.	Southern Pacific Co.
Visalia	Tulare	334	25																	Santa Fe Co.
Warner Springs	San Diego	3,165	5	49.4		83	6	28	26	42	1.04		0.40	2.0	6	18	11	2		Mrs. F. S. Sandford.
Wasco	Kern	336	13	52.4	− 2.0	80	8	30	26	37	1.00	0.00		0	4	19	0	12	nw.	Santa Fe Co.
Watsonville	Santa Cruz	23	17	51.6	− 3.1	80	7	27	15	47	1.49	− 3.90	0.35	0	7	19	8	4	w.	Spreckels Sugar Co.
Weaverville	Trinity	2,162	1	43.8		76	6	17	14	49	1.96	− 2.49	1.10	2.8	7	13	8	10		U. S. Forest Service.
Weitchpec	Humboldt	1,700	3	43.4		72	8	21	24	37	7.45		1.97	4.0	18	13	3	15	nw.	M. E. Lathrop.
Westley**	Stanislaus	90	24	57.1	+ 0.9	83	31	34	1		0.30	− 1.60	0.30	0	1	23	0	8	n.	Southern Pacific Co.
Wheatland	Yuba	84	26	51.0	− 1.6	76	6†	30	15†	35	1.97	− 1.53	0.60	0	7	16	7	8	s.	Wm. Lumbard.
Willows	Glenn	136	34	52.2	− 2.4	83	7	29	26	43	0.80	− 1.40	0.38	0	4	20	4	7	n.	E. C. Mills.
Yorba Linda	Orange			56.0		85	6	34	25	39	0.04		0.04	0	1	21	7	3	w.	S. J. Walker.
Yosemite	Mariposa	3,945	9	42.8		82	8	11	20	60	3.32		1.02	36.0	8	19	5	7	s.	J. P. Kelly.

[a], [b], [c], etc., indicate respectively 1, 2, 3, etc., days missing from the record.
** Temperature extremes are from observed readings of the dry bulb; means are computed from observed readings.
† Also on other dates.
T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 2.—*Daily precipitation for March, 1913. District No. 11, California.*

Stations.	Watershed.	Day of month.																															Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Oregon.																																	
Klamath Agency	Klamath		.20																	.10	.10	.25											0.65
Klamath Falls	do		.09										.04	.04				.03	.05	T.	T.	.12	T.	T.	.08	.01			.04				0.50
Lakeview	Pitt		.06								T.	.03	T.	.02				.03	.06	T.	T.	.06	.11	T.	.09		T.		.07	.08			0.61
Merrill	Interior drainage.																	T.		T.	.09	.04	T.	T.	T.	T.	.03		.01				0.17
Vistillas	Pitt	.08																.18	.20		.16	.10		.02	.03				T.	.03			0.80
Yonna	Interior drainage.		.15											T.				.08	.20		T.	.10	.08	.08	.09				.04				0.82
California.																																	
Aguanga	Coast												.35											.06	.24								0.65
Alturas	Sacramento		.10	.03								.35							.01	.04		.26	.30	.26	.08								1.43
Angels Camp	San Joaquin																	T.	1.29		.25	T.	T.	.78	.17	.30							2.79
Angiola	do										T.	.17						.25					.04	.05								0.51
Antelope Valley	do																		.20	.16			.03	.14	.03								0.56
Antioch	do																		.35			.06	.07		.19								0.67
Aptos	Coast																		.40	.20		.30	.46	.11	.25								1.72
Arrowhead Spring	do											.21							.05	.35			.11	.42	.15								1.29
Auburn	Sacramento																		.68	.04	.01	.20	.70	.33	.10								2.06
Avalon	Ocean											T.	.02						.02				.06		.25								0.35
Azusa	Coast											.05							.10	.04			.01		.38							T.	0.58
Bagdad	Desert																																0.00
Bakersfield	San Joaquin																																
Barstow	Desert											.45																					0.45
Bear River	San Joaquin																																
Bear Valley	do												.76							.70	.28			2.14	.78								4.66
Bear Valley Dam	do											1.26							.25				.80	.70									3.01
Beaumont	do											.20							.06				.13	.40									0.79
Beaumont (near)	do											.44							.25	.12			.23	.50									1.54
Belotta	do																		.55	.05		.12	.40	.14	.32								1.58
Ben Lomond	Coast											.18						1.55	T.	.05	.33	1.62	.22	.75									4.70
Berkeley	do																	.52	.32		T.	.17	.57	.40						T.			1.98
Betteravia	do																	.11	.04			.20		.25									0.60
Biggs	Sacramento																	T.	.58	.05	.06	.90		.30									1.89
Bishop	Owens											.02	.07																				0.09
Bishop Creek	do											.10	.10						.60			.10			.10								1.00
Blocksburg	Coast		.67	.13									T.	T.	T.		T.	1.25	.78	.90	.73	.13	.30	.35	T.			T.	.75	.34			6.33
Blue Canon	Sacramento																		1.20	.40	.30	.50	1.50	.70	.50					T.			5.10
Blythe	Desert																								T.								T.
Boulder Creek	Coast											.04	.11					T.	1.32	.02		.20	1.42	.13	.69								3.93
Bowmans Dam	Sacramento																																
Branscomb	Coast		.45	.08								T.						1.18	1.09	.17	.12	1.85	.43	.48	.03				.21	.08			6.17
Brawley	Desert																																0.00
Burney	Sacramento		.08									T.						T.	.70	.14	T.	.71	.65	.20	.05								2.53
Butte Valley	do																																
Cahuilla	Coast						.20												.15	.10				.10	.20								0.75
Calexico	Desert																																0.00
Caliente	San Joaquin												.12								.15		.65	.40									1.32
Calistoga	Coast																	T.	1.54			.12	1.16		.39								3.21
Campbell	do											T.						.39	.05		.06	.10	.26	.04									0.90
Campo	do											.20	.62	.05						.30			.20	.53									1.90
Camptonville (near)	Sacramento											.18						.56	1.54	.74	.10	.94	1.10	.53	.28								5.97
Cedarville	Mtn. Lakes											.35		T.				T.		.25		.04	.26	.15	T.				T.				1.05
Chester	Sacramento		.20									.10						.40	.40	.50	.10	.60	.80	.10					T.	.06			3.26
Chico	do																	.23	.67	.13		.10	1.00	.14	.14								2.41
Chico (near)	do		.02															*	1.12	.02	T.	1.13	.27	.31									2.87
China Flat	Coast	.16	.07										.06					1.03	.04	.07	.41	.45	.05					.34	.12				2.82
Chino	do																																0.00
Cisco	Sacramento											.20							1.20	.60	.40	.30	1.20	.60	.90	.10							5.50
Claremont	Coast												.11						T.	.13	.03				.32								0.59
Cloverdale	do	T.																.88	.62		T.	.41	.40	.28					.02				2.61
Coalinga	San Joaquin												.05						.12	.01			.04										0.22
Colfax	Sacramento																	T.	.62	.23	.09	.12	.24	.20	.20								1.70
Colgate	do											.02							1.22	.24	.08	.16	1.44	.18	.42								3.76
Colusa	do																	.75				T.	.25		.12								1.12
Corning	do	.06																.82	.08			.12	.18	.13									1.39
Corona	Coast					.10																	.03		.49								0.62
Cuyamaca	do											.28	.30								.35	.49	.09	.31	.30								2.12
Davisville	Sacramento																	.26	.33			.06	.16	.27									1.08
Deer Creek	do											.20						.36	1.32	.36	.11	.90	1.23	.83	.15				T.				5.36
Del Monte	Coast																		.45			.07	*	.43									0.95
Delta	Sacramento																	.94	.30	2.10	.12												3.46
Denair	San Joaquin																	.55							.10								0.65
De Sabla	Sacramento		.40															.25	1.75	.43		.73	1.70	1.10	.20								6.56
Descanso	Coast											*	*	1.20						*	.16			.20	1.06								2.62
Devils Canon	do											.11									.12		.06	.03	.50								0.82
Dinuba	San Joaquin																.38		.06				.17	.19									0.80
Dobbins	Sacramento											.02						.23	1.33	.08	.08	.30	1.55	.26	.20	T.							4.05
Downieville	do										T.	.15						.20	.33	.90	.20	.85	1.33	.47	.12								5.55
Dudley	San Joaquin																		.20					.04									0.24
Dudleys	do																																
Dunlap (near)	do											.03						.69	.19	.20			.44	.46	.12								2.13
Dunnigan	Sacramento																	T.	.72	.10		.05	.32		.21								1.40
Dunsmuir	do																		.56	1.21	.09	.39	.49	.03	.15				.02				2.94
Durham	do		.02								T.							*	.88	.10		.08	1.27	.40									2.75
East Park	do		.04															T.	.76				.10	.09									0.99
Edgewood	do																		.28				.10	.40									0.78
Edison	San Joaquin																																
El Cajon	Coast											.05	.37							.05	.07		.07	.08	.40								1.09
Electra	San Joaquin											T.						T.	.15	.12		.20	.60	.03	.31	.06							1.97
Emigrant Gap	Sacramento											.01					.10	.10	1.00	.20	.05	.95	1.20	.60	.05								4.26
Escondido	Coast											.05	.49							.08	.15		.10		.59								1.46
Eureka	do	.05	.01								.01		.14	.04				.23	.27	.24	.12	.84	.29	.33	.17	01		.40	.45	.01			3.61
Fairmont	do										.20									T.			.50										0.70
Farmington	San Joaquin																	.54	.17			.40		.23									1.34
Felton	Coast																	1.12	.03		.22	1.02	.15	.56									3.10
Firebaugh	San Joaquin																		.29				.05		.10								0.44
Folsom	Sacramento																	*	.46	.03	.02	.12	.72	.17	.43								1.95
Fordyce Dam	do											.16						.40	.92	.85	.46	.75	1.18	.52	.08	.05			.05				5.42
Fort Bidwell	Mt. Lakes		T.								T.	.10	T.	T.	T.			T.	.10	.10	T.	.10	.60	.10	T.				T.				1.10
Fort Bragg	Coast	.24	.10															1.10	.90	.36	.19												2.89
Fort Ross	do																	1.35	.15			.58	.12	.74					.06				3.00
Fouts Springs	Sacramento																																

TABLE 2.—*Daily precipitation for [redacted], 1913. District No. 11*—Continued.

Stations.	Watershed.	Day of month. 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total.
California—Contd.																																	
Fresno	San Joaquin											T.						T.	.36	.02		T.	.06	.19									0.63
Friant	do																		.05	.06			.21	.51	.32								1.15
Galt	do																		.68	.05		.04	.51		.40								1.68
Georgetown	do																		1.15	.44	.10	.20	.97										4.06
Gilroy	Coast																	T.	.63	.17	.10	.06	.37	.58	.27								2.18
Gilta	do		.08	.03								.01	.01					1.40	.25	.10	15	1.35	.05	.70	.01			.05	.60	.05	T.		4.84
Glen Ranch	do												.55											.06	.11								0.72
Glennville	San Joaquin											.08							.29	.18			.40	.51	.11								1.57
Glenwood	Coast											T.	T.						1.03	.06	T.	.27	1.12	.16	.55								3.19
Gold Run	Sacramento											.10							2.00	.50	.15	.40	.70	1.00	.60								5.45
Gonzales	Coast											.08	.12					.30	.06			.32	.03	.08									0.99
Grass Valley	Sacramento											.08						.08	1.35	.09		.55	1.16	.22	.38				T.				3.91
Greenland Ranch	Desert																																
Greenville	Sacramento											.10						.05	.55	.17	T.	.20	3.35	.28	.18				T.				4.88
Gridley	do																	T.	.62	.06		.10	1.24	.02	.34								2.38
Groveland	San Joaquin																																
Guinda	Sacramento																		.25	.02			.28		.20								0.75
Hanford	San Joaquin											.06							.12	.03			.02		.11								0.34
Head Dam	Sacramento											.19						.33	1.44	.25	.10	.50	1.71	.37	.23								5.12
Healdsburg	Coast																		1.56	T.	.03	.14	.49	.05	.39			T.					2.66
Hearst	do		.48															.30	.40	.75	.80	.80	1.10						.40				5.03
Heber	Desert																																0.00
Helen Mine	Coast																	1.19	1.58			1.10	1.60	.42									5.89
Hetch Hetchy	San Joaquin											.10	.02					.04	1.12	.19	.09	.07	.81	.15	.35								2.94
Holcomb	Coast											.10	.40										T.	.20	.43								1.13
Hollister	do												.02						.50	.24	.03	.01	.38	.03	.27								1.48
Hornbrook	Klamath																																0.00
Hot Springs	San Joaquin											.25							.41	.19			.44	.41	.18								1.88
Hullville	Coast		.39	.10								.01						1.04	.96	.11	.06	1.06	.43	.30	T.				.08				4.54
Hyampom	do		.63															*	*	*	2.15								.30				3.08
Independence	Owens											.04							.02														0.06
Indian Wells	Desert																																
Indio	do												.02												T.								0.02
Inskip	Sacramento		T.									T.			T.			T.	2.45	.84	T.	1.79	2.43	.62	.19				T.	.14			8.46
Ione	San Joaquin																	T.	.60		T.	.18	.66	T.	.45								1.89
Jacksonville	do																		1.20		.10	.05	.80	.20	.65								3.00
Jamestown	do																		.90	.05	.10	.15	.70	.21									2.11
Jenny Lind	do																		.47	.05		.10	.65		.33								1.60
Jolon	Coast												.03						.42	.07			.26		.10								0.88
Julian	do																																
Kennedy Mine	San Joaquin																																‡1.71
Kennett	Sacramento		.16								.07							*	2.03		*	*	.81	.49									3.56
Kentfield	Coast																	1.52	.40	T.		.49	.89	.45									3.75
Kernville	San Joaquin																																
King City	Coast	.08																	.20	.09			.25		.06								0.68
Knights Landing	Sacramento			T.									T.						.53	T.		.05	.24	.10	.34								1.26
La Grange	do																		.70				.40			.54							1.64
La Jolla	Coast												.19	.61	.14					.16	.84		.55	.18									2.67
Lake Eleanor	San Joaquin											.05	.05					T.	1.40	.30	.14	.05	1.44	.63	.59								4.65
Lakeside	Coast											.21	.10							.06	.09		.13	.15	.26								1.00
Lake Spaulding	Sacramento											.08						.45	.75	.60	.10	.67	1.30	.95	.05				T.				4.95
La Porte	do		T.	T.								.13						.45	1.14	.94	.13	.83	1.42	.78	.03				T.				5.85
Lathrop	San Joaquin												.07						.57	.14		.02	.06		.34								1.20
Laurel	Coast																	T.	1.25	.10		.30	1.25	.20	.55								3.65
Le Grand	San Joaquin																	.33				.33	.17	.21									1.04
Lemon Cove	do											T.						.15	.05	T.		.30	T.	.40									0.90
Lick Observatory	Coast											.06						.12	.55	.27	.02	.56	.90	.73	.19								3.40
Livermore	do											T.						.06	.67	.02		.08	.51	.30	.01								1.65
Lone Pine	Owens												.70																				0.70
Long Valley	M't'n Lakes										T.									T.		T.	T.	T.	.06			T.					0.06
Lordsburg	Coast																																
Los Alamos	do																		.25			.20	.05	.25									0.75
Los Angeles	do											.01							T.				.04		.28								0.33
Los Banos	San Joaquin																	.30	.12			.10		.11									0.63
Los Gatos	Coast											.04						.30	.90	T.		.27	1.08	.69									3.28
Los Molinos	Sacramento																	1.05				.41	.60	.07									2.13
Lowe Observatory	Coast																																
McCloud	Sacramento													T.				.63	.12	T.	T.	.48	.09	.06	.04								1.42
Macdoel	Klamath	.20	.05											.08				T.			.02	T.	T.	T.	T.	.10							0.45
Madeline	M't'n Lakes											.25	T.	T.				T.	T.	.30	.10	.08	.25	.15		T.			.03				1.16
Magalia	Sacramento																	2.48	.33	.33	.40	1.96	.20	.60									6.30
Mammoth Tank	Desert																																0.00
Maricopa	San Joaquin											.09								.11	.06												0.26
Mariposa	do																		1.11	.35	.04	.09	1.00	.20	.77								3.56
Marysville	Sacramento																	.70	.20	.06		.90		.55									2.41
Mecca	Desert																								T.								T.
Melones	San Joaquin																		.63	.03	.10	.13	.51	.15	.47	.04							2.06
Menlo Park	Coast																	.32	.02			.06	.32	.14	.13								1.00
Merced	San Joaquin																		.39			.01	.23	.05	.33								1.01
Merced Falls	do																		.41	.01			.03	.24	.15	.54							1.38
Mesa Grande	Coast											1.15	.10							T.	.46		.78	.12	.67								3.28
Middlewater	San Joaquin											.06						.02	.05	.07													0.20
Mill Creek (1)	do																	.04	.96	.34	.27	.47	1.09	.10	.32	.01							3.60
Mill Creek (2)	Coast											.50	.04						.64	.19	.03		.25	.10	.50								2.25
Mills College	do																	.32	.45	.01		.32	.64	.44	.05								2.23
Milo	San Joaquin																		.50	.23			.58		.60								1.91
Milton (near)	do																	.39		T.	T.	.15	.33	.49	T.								1.36
Modesto	do																	T.	.25					.12									0.37
Mojave	Desert																								.02								0.02
Mokelumne Hill	San Joaquin											.01						.10	.58	.09		.23	.50	T.	.43								1.94
Mono Ranch	Coast																		T.				T.	T.									T.
Montague	Klamath												T.	T.				T.		T.	T.	.03	.09	.10	.04								0.26
Monterey	Coast											.05						.50		.04		.05	.44	.60									1.68
Monterio	San Joaquin											.50							.50		.10		.10	.55	.45	.05							2.25
Montgomery Creek	Sacramento																		1.00	.75	.25	1.25	.70	2.05						.30			6.30
Mount Tamalpais	Coast		.01															.63	.33	.03	.06	.66	.22	.12						.02			2.08
Mount St. Helena	do																																
Napa City	do																		.95		.65		.10	.42									2.12
Napa (S. H.)	do																	.88			.10	.63	.02	.40					.05				2.08

TABLE 2.—*Daily precipitation for March, 1913. District No. 11*—Continued.

Stations.	Watershed.	Day of month.																																Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
California—Contd.																																		
Needles	Desert																																	0.00
Nellie	Coast										*	*	*	*	*	5.50			*	*	1.50	*	*	*	2.45								9.45
Nevada City	Sacramento											.08						.18	.97	.08	.08	.49	1.54	.29	.30	.01				T.			4.02
Nevis	do		.07									.12						.20	.40	.38	.20	.60	.98	.18	.05								3.18
Newhall	Coast																						.03	.08									0.11
Newman	San Joaquin																		.30					.13									0.43
North Bloomfield	Sacramento																	T.	.70	.20		.30	.80	1.10									3.10
North Fork	San Joaquin																																	
North Lakeport	Coast																	.55	.50	.04	.20	.50	.05	.34									2.18
Oakdale	San Joaquin																		.28	.02		.25		.23									0.78
Oak Grove	Coast																																	
Oakland	do		T.									T.						.44	.26			.10	.64	.33					T.				1.77
Oakville	do																		1.19	.05			.75	.15	.10	.35							2.59
Oceanside	do											.05	.04						.04	.10			.08	.22									0.53
Ojai Valley	do											T.						T.	.08				.05	T.	.18								0.31
Orland	Sacramento	T.																.67	T.	.08	T.	.07	.14	.09									1.05
Orleans	Klamath		.29											.02			.20	.95	.01	.01	.63	.36	.04	.15				.67	.52	.02		.01	3.88
Oroville	Sacramento																	.64	.05		.25	1.50	.17	.34						T.			2.95
Ozena	Coast																																	0.00
Palermo	Sacramento																	.20	T.	.15	.15	1.00	1.00										2.50
Palm Springs	Desert																																	0.00
Parkfield	Coast																		.18				.23	.15									0.56
Pasadena	do											.04							.03				.06		.22								0.35
Paso Robles	do																		.32	.07			.17		.12								0.68
Peachland	do	T.	T.													.88	.42		T.	.70	.43	.41							T.				2.84
Petaluma	do		T.															.58	.20		T.	.17	.40	.60									1.95
Phoenix Dam	San Joaquin																		.88	.15	.11	.19	.97	.07	.50								2.87
Pilot Creek	Sacramento											.10						*	*	*	1.82	1.43	2.30	.90	.48								7.03
Pinchot	Coast																																	
Pine Crest	do											.07						.13	.24				.14	.15									0.73
Placerville	Sacramento																		.63	.10	.15	.35	1.34	.26	.28								3.11
Point Lobos	Coast			T.														.48	.23	.01		.08	.40	.30					T.				1.50
Point Loma	do			.01	.01								.09	.04							.01			.09	.13	.02				.01		.01	0.42
Point Reyes	Coast		.12	.03														.70	.05	.03	.08	.22	.02	.14					.01				1.40
Pomona	do																																	
Porterville	San Joaquin												.14					.07	.03				.05	.19	.17								0.65
Priest Valley	Coast																																	
Quincy	Sacramento																.25	.07	.05	.01	.40	1.20	.80	.10									2.88
Red Bluff	do		.02															.95	.42		T.	.33	.12	.10					T.				1.94
Redding	do		.25															.64	.73	.05		1.06	.40	.05	.02								3.20
Redlands	Coast											.04	.05						.08	.01				T.	.38								0.56
Reedley	San Joaquin																	.23					.34	.20									0.77
Repressa	Sacramento																	.48			.12	.76	.16	.55									2.07
Rialto (near)	Coast											.38	.02						.02	.47			.12	.03	.40								1.44
Rio Vista	Sacramento																		.68			.10	.15		.52								1.45
Riverside	Coast											.08	.01						.04				.07		.34								0.54
Rocklin	Sacramento																	.28					.80	.10	.50								1.68
Rohnerville	Coast		T.	T.								.30	.06	.05				.25	.29	.15	.05	.50	.86	.61	.04			.14	.38	T.			3.68
Ruth	do		.99	.03										T.				.85	1.00	.11	.20	.30	1.35	.07					.33	.35			5.58
Sacramento	Sacramento																	.21	.10		.04	.17	.20	.62									1.34
St. Helena	Coast																	1.41			.17	.81	.02	.31					T.				2.72
Salinas	do										T.	T.	.04						.35	.31	.02	.02	.43	.12	.17								1.46
San Bernardino	do											.12							.02				.04		.45								0.63
San Diego	do											.08									.01		.02	.02	.29								0.42
San Francisco	do		T.															.61	.06	.01	.02	.39	.05	.32								.01	1.47
San Jacinto	do												.14						.15				.18	.05	.45								0.97
San Jose	do											T.						.17	.13	.01	.03	.43	.22	.18									1.17
San Luis Obispo	do											.01						.32	.06	.01		T.	.30	.26									0.96
San Mateo	do																		.99			.10	.45	.04	.38								1.96
San Miguel	do											T.						.18	.14		T.	T.	.25	.11									0.68
San Miguel Island	Ocean																																	
Sanger	San Joaquin																																	‡1.07
Santa Ana River	Coast											.52							.25	.75			.43	.15	.53								2.63
Santa Barbara	do											T.	.03						.21	.04			.16	.03	.17								0.64
Santa Clara	do		.01									T.						.02	.32	T.		.08	.06	.16	.01								0.66
Santa Cruz	do											.02						.65			.25	.55		.58									2.05
Santa Margarita	do																	T.	.42	.10	.06		.37										0.95
Santa Monica	do																								.27								0.27
Santa Rosa	do																		1.27		.04	.20	.80		.35	.07							2.73
Sausalito	do																		.38			T.	.28		.36								1.02
Selma	San Joaquin											.07						.20					.10	.21									0.58
Seven Oaks	Coast																																	
Shively	do		.30	.10								.09		.03				.90	45		.03	62	.52	.30	.03			.10	.23		.01		3.71
Sierra Madre	do												.30						.27				.06		.10								0.73
Sierraville	M'ntn Lakes											T.							.20			.10	.50		.20								1.00
Sisquoc Ranch	Coast																																	
Sisson	Sacramento										.10							.80			.30	.20	.30	.60	.20								2.50
Soledad	Coast								T.	.20	.10		.10	T.	.40	.20				.20	.20												1.40
Sonora	San Joaquin																	T.	.79	.16	.03	.11	.79	.07	.49								2.44
Southeast Farallon	Ocean		.09	.04								.02						.63	.01	.01	.03	.26	.08	.17									1.34
Spreckels	Coast										T.	.04	.09					T.	.33	.17	.02	T.	.33	.10	.17								1.25
Springville	San Joaquin											T.							.14	.30			.30	.40	.80								1.94
Squirrel Inn	Coast											1.75	1.25	T.					.20	.32			.30	.20	.45								4.47
Stanwood	Sacramento																	1.28	1.28	.19	.30	1.25	1.03	.89	.67								6.89
Stirling City	do											T.						.90	.50	.40	.25	1.60	.40	.20									4.25
Stockton (S. H.)	San Joaquin											T.							.60	.06		.03	.15		.32								1.16
Storey	do																		.17	.18	.10		.17	.27	.20								1.09
Suisun	Sacramento																	T.	.70		.07	.27		T.	.40								1 44
Sulphur Banks	do		T.															.44	.20	T.	T.	T.	.50	.40									1.54
Summit	do																		.70	.40	.60	.70	.60	.20									3.20
Susanville	M'ntn Lakes																																	
Tamarack	Sacramento											.12					T.	T.	.10	.18	.08	.38	.30	1.14	T.	.10	T.	T.					2.40
Tehachapi	San Joaquin											1.50							.36		.10		.20	1.30	1.60								5.06
Tehama	Sacramento																		1.00				1.00										2.00
Tejon Ranch	San Joaquin											.42								.21	.03			.27	.25								1.18
Three Rivers	do											T.	T.						.80	T.	.11		.50	.06	.52								1.99
Towle	Sacramento											.10							.75	1.25	.75	.60	1.60	.40					.40				5.85
Tracy	San Joaquin																	.30						.29									0.59
Tulare	do											T.						.22	.06				.20	.18									0.66
Tustin (near)	Coast																							.10	.52								0.62
Ukiah	do	T.	.33															.50	.70	.03	.05	.66	.43	.30					.03				3 03
Upper Lake	Sacramento																	.72	.55		T.	.52	.31	.27									2.37

TABLE 2.—*Daily precipitation for March, 1913. District No. 11*—Continued.

Stations.	Watershed.	Day of month.																															Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
California—Contd.																																	
Upper Mattole	Coast		.34	.17		.02						.12			.01	.01		.17	1.50	.13	.07	.22	.73	.37	.19	.05			.33	.19			4.62
Vacaville	Sacramento	T.																.85	.13		.08	.17	.01	.30									1.54
Valley Springs	San Joaquin																		.36	.16		.07	.46	.01	.39								1.45
Visalia	do																																
Warner Springs	Coast											.28	.03								.07		.22	.40	.04								1.04
Wasco	San Joaquin																					*	*	*	1.00								1.00
Watsonville	Coast											.07						.35	.23		.18	.29	.04	.33									1.49
Weaverville	do		.10											T.				1.10	.21	T.	T.	.36	T.	.08	T.			T.	.07	.04			1.96
Weitchpec	Klamath		.30	.03	T.								.03	.13	.02			1.19	.21	.24	.21	1.34	.13	.40	.12	.04		.27	1.97	.73	.09		7.45
West Branch	Sacramento		.12									T.						.44	1.37	1.14	.14	1.02	1.62	.70	.34								6.89
Westley	San Joaquin																		.30														0.30
West Point	do											T.							.76	.21	.25	.17	.77	.22	.25	T.							2.63
West Saticoy	Coast																		.09				T.		.27								0.36
Wheatland	Sacramento		T.									T.						.27	.40	.03		.17	.60	.20	.30				T.				1.97
Willows	do																	.38	.17	T.	T.	.08	.17										0.80
Yorba Linda	Coast																						.04										0.04
Yosemite	San Joaquin											.10							.50	.20			1.02	.40	.65	.42	.03						3.32

* Precipitation included in that of the next measurement.
‡ Separate dates of falls not recorded.
‖ Precipitation for the 24 hours ending on the morning when it is measured.
T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 3.—*Maximum and minimum temperatures for March, 1913. District No. 11, California.*

Date.	Lake View, Oreg.		California.																									
			Alturas.		Barstow.		Brans-comb.		Brawley.		Colusa.		Eureka.		Fresno.		Independ-ence.		Los Angeles.		Mount Tamalpais.		Nevada City.		Porter-ville.		Red Bluff.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1....	34	10	48	8	62	31	53	29	62	29	53	37	56	39	56	37	38	14	63	44	47	39	52	21	.....	.....	53	38
2....	36	27	43	29	66	34	54	35	69	40	55	39	58	49	64	42	43	21	64	47	54	38	63	33	.....	.....	54	42
3....	43	33	52	30	74	36	56	34	75	35	60	42	53	47	68	43	54	24	72	47	60	43	67	30	.....	.....	66	42
4....	46	29	53	22	75	33	60	30	79	39	69	39	54	42	71	45	57	27	79	56	61	46	68	29	.....	.....	67	44
5....	45	26	55	19	79	38	73	38	82	40	75	40	45	44	72	45	66	33	82	57	63	51	74	29	.....	.....	76	45
6....	53	26	57	18	78	37	76	40	82	47	78	40	47	39	74	49	64	38	84	60	65	55	80	28	.....	.....	78	52
7....	57	25	61	20	75	37	79	40	84	49	78	44	52	40	78	51	64	36	81	55	64	55	78	31	.....	.....	82	48
8....	57	26	63	22	79	39	76	39	78	45	75	42	54	42	80	52	66	34	79	57	70	59	75	30	.....	.....	80	46
9....	56	27	62	25	82	40	70	37	77	45	69	41	47	38	80	54	64	30	71	45	66	54	74	30	.....	.....	74	44
10....	43	23	57	25	80	42	70	34	67	52	69	40	49	42	76	47	62	32	61	46	57	34	70	32	.....	.....	69	46
11....	38	23	49	26	52	40	60	30	65	49	69	39	50	43	55	42	52	28	54	44	45	32	51	25	.....	.....	61	44
12....	34	14	41	15	64	42	50	28	66	46	69	39	48	38	64	40	54	30	62	41	47	34	58	22	.....	.....	64	42
13....	31	18	35	22	67	44	49	24	69	45	62	29	49	36	62	36	58	33	61	47	46	33	52	18	.....	.....	58	32
14....	34	5	42	17	66	36	58	23	66	44	62	38	46	33	63	34	47	25	68	48	50	33	58	18	.....	.....	60	36
15....	39	8	55	15	62	32	67	26	64	44	65	36	50	34	67	37	55	26	66	47	56	43	64	23	.....	.....	66	36
16....	45	23	59	23	71	35	66	32	58	35	68	34	56	39	73	42	60	26	77	52	61	46	64	25	.....	.....	66	38
17....	41	31	53	36	76	36	48	37	70	34	55	40	58	45	70	46	68	36	72	51	48	38	51	31	.....	.....	52	41
18....	36	26	43	27	65	43	50	35	75	36	58	43	53	43	63	45	54	30	60	49	46	38	47	30	.....	.....	55	39
19....	35	26	41	29	62	44	44	37	69	47	67	45	47	39	60	44	56	27	59	49	44	33	44	35	.....	.....	58	42
20....	29	13	34	15	70	40	42	26	69	40	54	43	46	36	57	39	55	30	62	44	42	31	42	29	.....	.....	50	36
21....	34	23	39	24	74	48	38	32	70	41	56	41	48	42	64	42	62	28	61	47	42	37	41	30	.....	.....	52	43
22....	44	22	37	26	62	42	40	32	70	49	58	42	44	37	56	41	52	40	55	43	41	31	41	30	.....	.....	51	38
23....	29	14	40	15	56	41	38	26	69	45	56	40	44	36	55	38	46	26	55	39	36	29	37	27	.....	.....	43	36
24....	29	4	32	8	61	40	45	24	67	45	54	33	46	32	51	37	46	24	56	43	41	28	44	17	.....	.....	53	34
25....	36	10	35	5	65	35	50	29	63	44	50	33	46	35	57	34	46	21	61	41	47	30	49	17	.....	.....	54	33
26....	35	8	40	8	65	32	58	26	65	34	59	33	50	33	65	36	52	21	69	45	54	38	57	20	.....	.....	59	33
27....	41	17	48	19	71	30	60	28	75	35	66	34	55	41	68	40	60	24	72	50	56	44	64	24	.....	.....	63	38
28....	37	30	47	34	73	38	55	32	79	36	65	44	54	48	71	41	64	30	69	48	53	42	57	28	.....	.....	64	44
29....	40	33	53	39	82	41	62	43	83	42	70	44	56	51	73	47	73	36	70	48	56	42	69	33	.....	.....	70	52
30....	49	35	64	37	88	49	70	40	89	45	76	45	56	49	79	48	78	41	77	53	64	49	76	34	.....	.....	74	49
31....	54	34	65	30	87	51	71	37	88	52	78	48	51	47	83	53	77	44	64	52	70	53	78	34	.....	.....	78	49
Mns..	40.6	21.6	48.5	22.2	70.6	38.9	57.7	32.4	72.4	42.2	64.5	39.2	50.6	40.6	66.9	42.8	57.8	29.5	67.3	48.2	53.3	40.6	59.5	27.2	.....	.....	62.9	41.4

Date.	California.																									
	Redlands.		Sacramento.		San Diego.		San Fran-cisco.		San Jose.		San Luis Obispo.		Santa Bar-bara.		Santa Rosa.		Sisson.		Stockton.		Summit.		Susanville.		Yosemite.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1.....	63	32	53	37	64	43	55	43	60	33	59	36	57	39	56	30	36	22	56	31	34	13	.....	.....	74	14
2.....	68	40	60	44	60	46	61	48	67	42	64	41	62	41	60	43	37	24	64	38	35	22	.....	.....	66	26
3.....	76	41	66	44	64	44	65	50	68	40	71	40	70	41	68	47	50	29	68	41	42	22	.....	.....	63	23
4.....	79	43	68	45	71	50	64	48	67	39	66	38	70	42	68	36	50	32	70	42	41	17	.....	.....	76	23
5.....	81	47	73	46	65	51	71	45	73	40	77	44	75	42	73	35	55	28	74	45	43	27	.....	.....	70	25
6.....	82	45	77	46	74	51	71	46	75	40	80	50	80	46	75	34	62	30	76	40	44	28	.....	.....	74	28
7.....	79	43	77	49	76	53	77	46	79	38	80	44	80	46	76	33	63	30	72	42	42	27	.....	.....	79	23
8.....	76	43	76	50	72	51	73	51	80	43	80	44	78	45	77	36	60	31	77	45	45	24	.....	.....	82	25
9.....	74	42	76	49	64	49	57	45	76	41	74	41	65	44	69	36	63	30	77	46	46	24	.....	.....	76	25
10.....	69	40	61	41	59	48	50	45	59	45	59	47	60	50	52	42	58	24	70	42	44	24	.....	.....	76	28
11.....	50	46	58	39	56	47	55	45	55	44	50	42	55	46	61	31	38	26	57	40	38	20	.....	.....	76	27
12.....	55	36	65	35	58	51	60	45	62	35	53	42	62	44	66	32	40	25	64	36	36	20	.....	.....	53	17
13.....	61	42	58	37	58	48	58	43	60	33	61	42	62	38	60	27	40	27	66	35	35	20	.....	.....	60	14
14.....	63	37	60	36	60	44	59	45	61	32	60	41	60	37	66	27	44	19	67	38	30	13	.....	.....	58	20
15.....	67	33	66	37	69	47	65	44	68	32	67	38	66	36	67	27	49	23	70	40	43	20	.....	.....	62	19
16.....	76	34	66	41	69	44	65	45	71	35	70	38	68	38	69	29	48	28	68	38	43	24	.....	.....	70	20
17.....	78	44	53	45	68	48	54	46	57	43	65	35	70	40	62	42	40	26	54	36	43	32	.....	.....	70	22
18.....	54	42	56	44	60	49	56	48	60	46	56	46	58	44	58	42	45	28	59	45	32	23	.....	.....	58	18
19.....	56	45	59	44	56	50	55	45	57	45	57	45	68	40	59	40	50	21	58	46	30	22	.....	.....	59	13
20.....	62	40	52	37	57	49	51	43	52	38	56	45	64	48	54	31	44	22	53	38	25	18	.....	.....	45	11
21.....	61	45	54	44	58	48	54	46	56	44	58	39	60	38	54	39	40	24	57	44	25	18	.....	.....	52	17
22.....	55	42	54	40	59	46	52	44	55	40	54	46	60	41	52	36	45	23	55	43	26	19	.....	.....	49	15
23.....	52	40	47	36	56	46	46	41	48	40	52	35	55	41	52	34	39	20	51	37	19	14	.....	.....	46	18
24.....	54	35	53	34	56	45	54	40	58	37	54	35	60	41	56	28	38	20	53	36	25	10	.....	.....	53	14
25.....	61	32	54	35	56	44	55	42	60	34	56	37	58	40	59	32	40	21	55	34	25	11	.....	.....	54	13
26.....	69	33	64	33	64	42	60	42	65	31	66	38	68	39	63	28	45	26	61	32	35	12	.....	.....	65	15
27.....	76	35	67	40	66	44	64	44	67	34	70	37	65	37	63	28	46	31	67	37	35	18	.....	.....	65	21
28.....	74	41	65	42	65	45	57	47	67	39	71	48	63	40	62	35	50	25	66	40	38	22	.....	.....	67	23
29.....	78	42	73	48	65	47	60	49	67	49	73	48	70	46	67	39	60	32	70	47	42	31	.....	.....	70	22
30.....	83	45	77	48	67	50	64	48	72	49	82	47	77	45	69	40	64	34	77	48	46	33	.....	.....	78	23
31.....	75	46	80	51	57	48	69	49	77	42	72	44	54	49	74	40	63	33	79	48	48	32	.....	.....	80	24
Mns.....	68.0	40.4	63.5	41.8	62.8	47.4	59.9	45.4	64.5	39.5	64.9	41.7	65.0	42.0	63.5	34.8	48.5	26.3	64.0	40.3	36.6	21.3	.....	.....	65.4	20.2

[a], [b], [c], etc., indicate respectively 1, 2, 3, etc., days missing from the record.
§§ Instruments are read in the morning; the maximum temperature then read is charged to the preceding day, on which it almost always occurs.