

U. S. DEPARTMENT OF AGRICULTURE
WEATHER BUREAU

CLIMATOLOGICAL SERVICE

DISTRICT No. 11, CALIFORNIA

PROF. ALEXANDER G. McADIE
DISTRICT EDITOR

REPORT FOR MAY, 1912

Prepared under direction of WILLIS L. MOORE, Chief U. S. Weather Bureau



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CLIMATOLOGICAL DATA FOR MAY, 1912.

DISTRICT NO. 11, CALIFORNIA.

Prof. ALEXANDER G. MCADIE, District Forecaster.

GENERAL SUMMARY.

May, 1912, was slightly cooler than the average May, but with more rain than usually falls in California at this season. Like the spring of 1911, the weather has been cold, although not so cold as that season was. The present month was about as cool as May, 1909, and nearly 5° cooler than May, 1910. There was more rain than has fallen in any May since 1909. There were three periods of rain during the month, the most important of which extended from the 19th to the 26th. This rain was of untold value to the crops and general industries of the State, although some slight damage was done to cut alfalfa, mown hay, and ripening cherries. The storm, however, did not bring much snow to the mountain sections; indeed, temperatures were so high that on two or three days warm rains occurred, and these materially decreased the already light snow cover. The season has been a peculiar one regarding snowfall. During February and March the snow cover both in depth and area was less than had been known for many years. Occasional storms during March and April added to the depth, and fortunately there were no warm periods to cause rapid melting. The run-off this season has been less than usual, and in fact the river stages are the lowest known for this period of the year. There have been no floods and no waste of water. While, therefore, the actual precipitation in nearly all sections of the State has been far below the normal, not exceeding 60 per cent in many places, the efficiency will equal that of a normal rainfall with the usual floods and waste. The distribution of the rain, both in frequency and intensity, has been remarkable. The rain seemed to come exactly when most needed and rarely in amounts heavy enough to cause floods even in the steepest watersheds.

The month began with a well-marked depression moving along the usual path of late winter storms. This caused rain in the central and northern counties of California on the 1st and 2d, with some thunderstorms in the northern portion of the Sacramento Valley. A period of fair weather followed with north winds of moderate velocity, and there were no high temperatures until the afternoon of the 6th. In the southern portion of the State unsettled weather and light showers occurred, due to the slow development of a storm of the Sonora type over the valley of the Colorado. A thunderstorm was reported at Fresno on the 8th, and the weather did not clear in the southern counties until the 9th and in the extreme south until the 10th. The Sonora storm, after a comparatively slow movement over the valley of the Colorado and the northwestern States of Mexico, moved eastward with increasing velocity, and by May 10 appeared as a well-defined storm over Texas and adjoining States. In California the weather continued fair with moderate temperatures and usual conditions of fog on the northern

coast and warm afternoons in the valleys. On May 19 a depression similar to that at the beginning of the month in its formation and path caused moderate rain in the central and northern counties, extending, however, over a much longer period. There was no rain in the south until May 25 and in the extreme south until the 26th.

The most noteworthy feature of the weather of the month was the warm spell which began on May 28, culminating at the end of the month. The high temperatures seem to be confined to the air strata near the earth's surface.

One interesting incident of the effect of weather conditions in the mountains upon the ordinary occupation of dwellers in the cities a hundred or more miles away is afforded by the local storms of May 6. The Sierra Light & Power Co. furnishes power for the United Railroads of San Francisco. During a thunderstorm in the mountains damage was done by either lightning or wind. The local railway system was deprived of power in pleasant weather at the very hour when men and women were returning home from the day's work. In the city of San Francisco 200 street cars had to be returned to the car barns.

In some of the southern counties of the State, particularly Riverside, Kern, and San Bernardino, some damage was done to grain by the thunderstorms of May 8. In the San Bernardino Valley the downpour was so heavy that fishing parties, travelers, and isolated ranchers were in danger of losing their lives in the rush of waters.

Compared with other Mays, there was much less wind than usual, and northwest winds along the coast did not reach the high velocities usually reported. There was less cloudiness this May than last, and there were few frosts, and these did no damage. From an agricultural point of view the weather of May was excellent, all crops making good growth. The season has agreeably disappointed expectations, inasmuch as the outlook during the early spring was most unfavorable.

TEMPERATURE.

The mean temperature for the State was 1.4° below the normal. The following table gives the means and departures for each May from 1897 to 1912, inclusive:

Year.	Mean.	Departure.	Year.	Mean.	Departure.
	°F.	°F.		°F.	°F.
1897.....	66.9	+4.8	1905.....	59.6	-2.5
1898.....	61.3	-0.8	1906.....	59.8	-2.3
1899.....	59.9	-2.2	1907.....	61.5	-0.6
1900.....	64.0	+1.9	1908.....	58.0	-4.1
1901.....	62.0	-0.1	1909.....	60.4	-1.7
1902.....	60.8	-1.3	1910.....	65.5	+3.4
1903.....	63.5	+1.4	1911.....	58.3	-3.8
1904.....	64.9	+2.8	1912.....	60.7	-1.4

The highest temperature recorded was 108° at Healdsburg on the 31st. This was 4° higher than the highest recorded during May, 1911, but 13° lower than the temperature recorded at a number of stations in California during May, 1910. The lowest temperature was 8° at Tamarack on the 7th, or 3° lower than the lowest temperature during May, 1911, which occurred at the same place.

PRECIPITATION.

While the precipitation for the season has been much below the normal, the precipitation for the month of May was about 60 per cent greater than the normal. It was much greater than that of May, 1911, 1910, and 1909, and slightly greater than that of 1908.

The following table gives the average and departure from the normal for each May from 1897 to 1912, inclusive:

Year.	Mean.		Year.	Mean.	
	Inches.	Departure.		Inches.	Departure.
1897.....	0.18	-1.04	1905.....	2.18	+0.96
1898.....	1.56	+0.34	1906.....	3.19	+1.97
1899.....	0.73	-0.49	1907.....	0.57	-0.65
1900.....	1.39	+0.17	1908.....	1.63	+0.41
1901.....	1.03	-0.19	1909.....	0.23	-0.99
1902.....	0.84	-0.38	1910.....	0.18	-1.04
1903.....	0.14	-1.08	1911.....	0.72	-0.50
1904.....	0.22	-1.00	1912.....	1.92	+0.70

The greatest monthly rainfall was 7.01 inches at For-dyce Dam, and there was no rainfall at five stations. The greatest 24-hour rainfall was 3.27 inches at Weitchpec, Humboldt County.

Snowfall.—May was a month of light snowfall. The outlook for water was only fair at the beginning of the month, but was somewhat improved by the rains and light snow. At Blue Canyon and other points in the Sierra below 5,000 feet elevation 4 to 6 inches of moist snow fell on May 22.

Summit.—The following table shows the depth of snow on the ground at Summit on given dates in May during the period 1907 to 1912:

	May 1.	May 15.	May 31.
	Inches.	Inches.	Inches.
1907.....	115	121	71
1908.....	20	42	16
1909.....	119	66	33
1910.....	13	12	3
1911.....	94	65	37
1912.....	36	13	6

SUNSHINE.

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

Station.	Hours.	Percent- age of possible.	Station.	Hours.	Percent- age of possible.
Eureka.....	185	41	Sacramento.....	273	61
Fresno.....	374	85	San Diego.....	225	52
Los Angeles.....	289	67	San Francisco.....	310	70
Mount Tamalpais.....	275	62	San Jose.....	346	79
Red Bluff.....	320	72	San Luis Obispo.....	234	54

A peculiar feature of the sunshine during May, 1912, was the comparatively small amount at Mount Tamalpais. Usually during the month of May the sunshine exceeds 70 per cent of the possible. This May the sunshine was

only 62 per cent, while at San Francisco, where the sunshine is usually below 60 per cent, this May reached 70 per cent. There was less sunshine in the valleys than usual.

NOTES ON THE RIVERS OF THE SACRAMENTO AND LOWER SAN JOAQUIN WATERSHEDS DURING MAY, 1912.

By N. R. Taylor, Local Forecaster.

Sacramento watershed.—While the rivers of this watershed were below the May normal generally they averaged from 1 foot to nearly 4 feet above that of April, and were higher than during any of the preceding 11 months, a condition that has probably never before occurred in the Sacramento Valley.

A slight swell, which was a continuation of the rise that was in progress during the last days in April, occurred in the Sacramento River during the first few days of May, and another rise occurred during the last decade of the month which culminated, at most points, in the highest stages of the month. At Sacramento city the highest stage, 16.7 feet, on the 30th and 31st, is the highest at this point for the season of 1911-12.

In the Feather-Yuba and American River watersheds there were no rises much in excess of 1 foot, and all streams averaged much below the usual stages for the month.

There was little departure from the usual May rainfall in the floor of the valley. The snowfall in the mountains was below that which usually falls, and the accumulated amounts of snow in the high Sierras dwindled rapidly during the last days of the month, but at no time were the effects of snow water noticeable in any of the main streams of the Sacramento drainage basin.

Lower San Joaquin watershed.—The rivers of this watershed, like those of the Sacramento, were much higher than during the preceding month. They were, however, below the May normal, especially the San Joaquin itself, below the mouth of the Stanislaus. There was a general rise in progress during the last few days of the month, due to melting snows in the southern Sierras.

NOTES ON THE STREAMS OF THE UPPER SAN JOAQUIN WATERSHED.

By W. E. Bonnett, Local Forecaster.

With the coming of the warmer weather of May, the streams of this district rose considerably, but there was nowhere any approach to flood conditions. The average monthly stages in the Merced at Merced Falls and in the San Joaquin at Friant were very slightly higher than the average stages for May, 1908, which were the lowest for the six years' record for this month. In the Kings at Piedra and in the San Joaquin at Firebaugh, the average stages were even lower than those of May, 1908.

The month closed with some very warm days, and the highest stages at all points were reached on the 30th or 31st, but the fall that has taken place during the first week of June coincident with some very warm weather would indicate that the highest stages for this season have already been reached and that the summer decline has begun.

In the season of 1907-8, which was a dry one followed by very low summer water in the streams, the snowfall occurred mainly during the midwinter months, and probably was of such a character as to yield a better sustained flow than is to be hoped for this year. Furthermore, May, 1908, was a very cool month, and this had its effect in retarding the melting of mountain snows and making

the stages of streams lower than those of the current month. All indications point to a considerable shortage of water by the middle of summer.

STUDIES IN FROST PROTECTION—EFFECT OF MIXING THE AIR.

By A. G. McAdie.

In the Monthly Weather Review for January, 1912, the writer calls attention to a marked illustration of temperature fluctuation at Kentfield, Cal., the base station of the Mount Tamalpais Observatory, during the frost period of December 11 to 14, 1911.

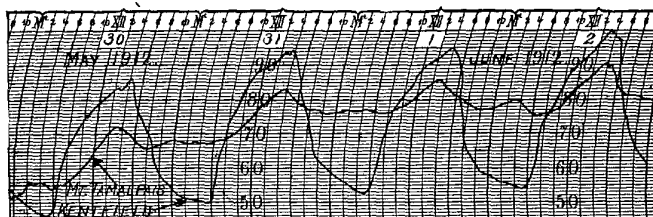
It was shown that as a result of thorough intermixing of the air strata there was a marked warming of the lower air at a time when under ordinary conditions and absence of circulation severe frosts would have occurred.

During the last two days of May, 1912, and the first two of June a warm spell occurred in California. Some of the temperatures were the highest recorded for nearly a year. This warm spell offered an interesting opportunity to compare temperature fluctuations at the two stations. The lower station, Kentfield, is 65 feet above sea level and 2,530 feet below the summit of the mountain.

It will be noted from the illustration that coincident with the passage of the sun west of the mountain crest, that is, about 4 p. m., the lower station is in shadow and the temperature falls for a period of 6 hours at an approximate rate of 5° per hour. It may be noted that this is a period of comparative stillness in the valley, except for light ascensional currents. It seems likely that the warm

air is displaced upward by a slow-moving stratum of surface air, which finds its way indirectly into the valley from the sea. This layer, however, is very thin, as is shown by the fact that the temperature rises abruptly after sunrise, and apparently there was little draining of the air down the mountain side.

It is interesting to compare the gains and losses of heat at the base station with that at the summit. There were approximately 600 hour degrees lost at the lower station during the night hours in excess of the amount lost during the same period at the upper station. During the hours



Comparative temperatures, Kentfield, Marin County, Cal., and Mount Tamalpais, from midnight May 30 to June 2, 1912, inclusive.

of bright sunlight the lower station shows an excess of approximately 500 hour degrees.

The comparison is interesting as showing that with proper ventilation and thorough mixing, the extreme temperatures experienced in the valley near the ground could have been avoided and a temperature record more like that experienced at the summit obtained.

DISTRICT NO. 11. CLIMATOLOGICAL SUMMARY.

MAY, 1912

TABLE 1.—Climatological data for May, 1912. District No. 11, California.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.						Precipitation, in inches.				Sky.				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 rainy days, 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.		Number of overcast days.	Prevailing wind direction.
Oregon.																		
Klamath Agency	Klamath	4,169	4	49.6	.....	74	11†	28	23	42	1.30	.....	.....	.....	.....	.....	.....	Edson C. Watson.
Klamath Falls	do	4,100	23	51.5	- 1.3	77	14†	28	22	37	1.45	+ 0.41	0.60	0.5	3	17	13	W. H. Heitman.
Lakeview	Lake	4,825	29	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Ralph E. Koozer.
Merrill	Klamath	4,070	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mrs. Agnes Ritchson.
Yonna	do	4,146	5	49.0	.....	76	13	24	2	44	2.07	.....	0.50	0	11	12	14	Jacob Ruecke.
California.																		
Alameda	Alameda	19	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Chas. E. Sears.
Alturas	Modoc	4,400	8	51.1	.....	82	31	28	2†	49	1.07	.....	0.16	0	10	15	9	Prof. C. B. Towle.
Angiola	Tulare	208	12	60.2	- 4.9	92	29	30	3†	55	T.	- 0.30	T.	0	0	28	2	Santa Fe Co.
Antioch**	Contra Costa	46	33	61.0	- 5.1	98	31	39	1	.....	1.05	+ 0.55	0.77	0	3	22	0	Southern Pacific Co.
Arrowhead Springs	Santa Cruz	102	27	61.0	+ 2.2	82	31	50	4	.....	2.00	+ 1.00	0.70	0	8	15	6	Do.
Auburn	San Bernardino	2,000	3	63.2	.....	98	29	42	3	36	0.47	.....	0.25	0	5	26	2	Dr. E. A. Crokat.
Avalon	Los Angeles	1,360	41	60.7	- 2.0	86	14	32	6	45	0.90	- 0.62	0.90	0	1	25	0	Southern Pacific Co.
Azusa	do	30	2	59.4	.....	70	26	50	2†	18	0.30	.....	0.19	0	4	28	0	T. S. Manning.
Bagdad	San Bernardino	540	10	64.6	+ 2.1	97	31	40	3	45	0.16	.....	0.09	0	4	22	2	A. P. Griffith.
Bakersfield	Kern	784	9	82.8	.....	106	29†	59	9	30	1.75	.....	1.75	0	1	.....	.....	Santa Fe Co.
Barstow	San Bernardino	2,105	9	67.2	+ 0.4	95	31	54	22†	33	0.00	- 0.38	0.00	0	0	.....	.....	Do.
Berkeley	Alameda	317	25	58.4	+ 0.9	87	31	43	2	48	0.25	+ 0.21	0.25	0	1	30	0	E. L. White.
Biggs**	Butte	98	13	63.4	+ 2.6	94	13†	48	2	33	1.56	+ 0.39	0.63	0	6	12	8	State University.
Bishop	Inyo	4,450	17	54.8	- 4.9	86	28†	25	22	49	0.51	+ 0.29	0.26	0	6	20	3	Southern Pacific Co.
Bishop Creek	do	8,500	2	44.6	.....	70	28	32	2	33	1.60	.....	0.60	16.0	5	23	0	Paul E. Lodge.
Blocksburg	Humboldt	1,700	6	56.2	.....	87	13	19	2	41	4.46	.....	1.45	0	9	18	3	Do.
Blue Canon	Placer	4,695	13	48.4	- 3.8	74	14	25	2	35	5.40	+ 1.84	1.60	13.0	9	23	0	Victor Hope.
Blythe	Riverside	268	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Southern Pacific Co.
Branscomb	Mendocino	2,000	12	54.0	.....	89	13†	33	2†	41	6.00	+ 3.18	1.60	0	10	20	2	C. L. Suitts.
Brawley	Imperial	-105	3	75.0	.....	102	28	52	1†	42	0.45	.....	0.20	0	3	.....	.....	A. J. Ham.
Burney	Shasta	3,300	2	52.4	.....	83	13†	26	3	51	3.04	.....	1.50	0	11	16	3	M. D. Witter.
Cahuilla	Riverside	3,600	1	54.8	.....	89	28†	25	3	47	1.13	.....	1.00	0	2	.....	.....	Mrs. M. D. Chambers.
Calexico	Imperial	0	7	75.1	.....	102	28†	52	5	41	0.53	.....	0.40	0	2	27	0	Carl Stevens.
Caliente**	Kern	1,290	36	69.2	- 0.8	104	29	5†	.....	.....	1.25	+ 0.65	0.88	0	2	20	1	J. E. Peck.
Calistoga	Napa	363	40	54.8	- 6.7	100	30†	40	7†	.....	2.10	+ 0.94	0.75	0	7	19	0	Southern Pacific Co.
Campbell	Santa Clara	217	15	58.0	+ 0.5	91	31	36	3	45	0.61	+ 0.05	0.29	0	4	19	7	Do.
Camptonville (near)	Yuba	3,500	5	58.8	.....	90	13†	30	1†	42	5.68	.....	1.40	0	11	17	4	F. M. Righter.
Cedarville	Modoc	4,075	18	52.2	+ 0.2	78	29†	28	3	49	0.86	- 0.41	0.29	0	5	17	14	Cal. Gas & Elect. Co.
Chico	Butte	189	42	64.3	- 4.1	98	13	38	3	52	1.80	+ 0.86	0.50	0	5	22	0	T. H. Johnstone.
China Flat	Humboldt	900	3	61.2	.....	95	13	40	2†	54	2.55	.....	0.62	0	9	15	7	G. H. Stephenson.
Chino**	San Bernardino	714	20	65.0	- 0.4	93	21	43	3†	.....	T.	- 0.46	T.	0	0	26	0	O. I. Westberg.
Cisco**	Placer	5,939	41	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Southern Pacific Co.
Claremont	Los Angeles	1,200	20	61.4	+ 0.2	96	31	40	5	46	0.09	+ 0.76	0.06	0	3	20	7	Do.
Cloverdale	Sonoma	340	10	58.4	- 3.3	96	31	40	2†	48	2.14	+ 0.75	0.82	0	10	.....	.....	Prof. F. P. Brackett.
Coalinga	Fresno	.....	.....	66.4	.....	98	14	38	2	43	0.31	.....	0.16	0	4	.....	.....	John O. Ogle.
Colfax	Placer	2,421	41	55.8	- 5.4	87	13	30	2	39	5.91	+ 3.53	1.60	0	9	27	2	Union Oil Co.
Colusa	Colusa	60	9	65.4	.....	94	31	45	1†	37	0.98	+ 0.28	0.54	0	3	20	0	Southern Pacific Co.
Corning**	Tehama	277	26	73.1	+ 4.9	95	31	55	20	.....	1.31	+ 0.36	0.38	0	5	20	7	C. D. McComish.
Cuyamaca	San Diego	4,677	13	53.2	+ 3.1	78	29	35	5†	28	1.69	- 0.50	0.82	0	4	10	12	Southern Pacific Co.
Davisville	Yolo	51	40	63.7	- 4.2	97	31	36	2†	49	1.12	+ 0.40	0.77	0	4	22	8	C. Macquarie.
Deer Creek	Nevada	3,700	5	51.4	.....	80	31	26	2	38	6.13	.....	2.03	1.0	10	19	2	Cal. Gas & Elect. Co.
Del Monte	Monterey	25	1	62.5	.....	75	31	46	3	22	0.43	.....	0.30	0	4	19	4	H. R. Warner.
Delta	Shasta	1,138	27	65.0	+ 0.7	91	31	34	22	41	5.84	.....	2.00	0	8	23	0	Southern Pacific Co.
Denair	Stanislaus	126	12	60.1	- 4.2	93	13	31	2	48	0.42	- 0.17	0.22	0	2	15	6	Santa Fe Co.
De Saba	Butte	2,500	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Cal. Gas & Elect. Co.
Dobbins (near)	Yuba	1,650	8	63.2	- 0.1	92	13	40	2	44	1.68	+ 0.55	0.58	0	5	19	2	Do.
Downville	Sierra	3,150	1	54.8	.....	90	31	31	2	50	5.72	.....	1.72	T.	10	14	7	J. T. Mason.
Dudley	Kings	595	.....	68.8	.....	102	13†	34	23	48	0.42	.....	0.17	0	5	13	9	Union Oil Co.
Dudleys	Mariposa	3,000	3	55.0	.....	84	31	29	2	38	2.03	.....	0.48	0	9	13	6	W. H. Dudley.
Dunlap (near)	Fresno	2,800	.....	58.3	.....	88	31	32	2	38	1.30	.....	0.45	0	5	17	8	U. S. Forest Service.
Dunnigan**	Yolo	65	35	73.1	+ 2.8	95	31	55	22	.....	1.03	+ 0.06	0.57	0	3	22	4	Southern Pacific Co.
Dunsmuir**	Siskiyou	2,285	25	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Do.
Durham	Butte	160	17	63.7	- 0.1	92	13	40	2	44	1.68	+ 0.55	0.58	0	5	19	2	R. W. Durham.
El Cajon	San Diego	482	13	62.5	- 0.2	92	14†	39	4	41	1.29	+ 0.85	0.62	0	5	24	0	H. H. Kessler.
Electra	Amador	725	8	63.8	.....	92	31	40	2	38	2.81	.....	0.83	0	7	23	5	Cal. Gas & Elect. Co.
Elsinore	Riverside	1,234	17	64.4	- 0.2	103	31	33	3	56	0.13	- 0.23	0.06	0	3	20	5	A. F. Schuit.
Emigrant Gap	Placer	5,230	38	50.4	+ 0.2	78	31	28	1	33	2.20	.....	1.20	22.0	4	21	2	Southern Pacific Co.
Escondido	San Diego	657	18	63.4	+ 0.4	88	15†	39	3†	40	1.58	+ 0.94	0.78	0	5	25	6	A. R. Moon.
Eureka	Humboldt	64	26	52.1	0.0	63	25	43	3	15	1.98	- 0.85	0.53	0	11	16	12	U. S. Weather Bureau.
Farmington**	San Joaquin	111	33	74.6	+ 8.5	100	29†	54	18	.....	0.26	- 0.57	0.13	0	3	27	3	Southern Pacific Co.
Folsom	Sacramento	252	40	63.7	- 2.8	97	31	39	2	44	1.47	+ 0.28	0.44	0	7	19	5	F. O. Hutton.
Fordyce Dam	Nevada	6,500	17	48.6	.....	73	28	31	2	34	7.01	+ 2.80	2.00	33.0	10	9	14	E. E. Roening.
Fort Bidwell	Modoc	4,735	23	48.2	- 6.8	80	28	20	1†	45	1.00	- 0.43	0.40	2.0	4	12	12	E. O. Franklin.
Fouts Springs	Colusa	1,650	8	57.6	.....	89	31	27	1	41	1.95	.....	0.98	0	8	.....	.....	A. J. Burgi.
Fresno	Fresno	293	25	67.4	- 1.0	98	31	40	2	38	0.41	+ 0.05	0.21	0	5	12	17	U. S. Weather Bureau.
Galt**	Sacramento	49	34	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Southern Pacific Co.
Georgetown	Eldorado	2,650	39	58.0	- 4.4													

TABLE 1.—Climatological data for May, 1912. District No. 11—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.					Precipitation, in inches.					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, unmelting.	Number of rainy days, 0.01 inch or more.	Number of clear days.			Number of partly cloudy days.	Number of cloudy days.	
California—Continued.																					
Indio	Riverside	-20	34	77.5	- 2.6	106	28	53	3	42	0.53	+ 0.51	0.39	0	2	23	8	0	nw.	F. N. Johnson.	
Inskip	Butte	4,975	5	51.2		82	31	26	2	30	6.71		1.74	7	0	6	12	13	0	Cal. Gas & Elect. Co.	
Ione**	Amador	287	34	69.2	+ 4.8	96	13†	46	2	46	1.14	- 0.05	0.34	0	6	19	2	10	nw.	Southern Pacific Co.	
Jamestown	Tuolumne	1,471	9	58.6		92	31	35	24	49	2.85		1.30	0	8	17	0	14		Sierra Railway Co.	
Kennett	Shasta	730	33	64.8		97	31	35	2	45	4.57		1.03	0	9	20	7	4	sw.	O. J. Eggleston.	
Kentfield	Marin	65	24	60.0		95	31	41	16	46	3.04	+ 0.76	1.03	0	6	20	3	8	n.	Miss M. E. Parsons.	
King City	Monterey	333	25	68.8	+ 8.9	104	31	33	6	44	4.04	+ 0.24	0.21	0	5	23	0	8	n.	Southern Pacific Co.	
Lake Eleanor	Tuolumne	4,700	2																	O. J. Todd.	
La Porte	Plumas	5,000	18	48.0	- 0.4	76	31	27	2	33	7.00	+ 2.68	1.99	22.0	11	13	11	7	n.	Chas. W. Hendel.	
Le Grand	Merced	255	12																	Santa Fe Co.	
Lemon Cove	Tulare	600	17	69.2	+ 1.4	99	29	45	1†	42	1.17	- 0.00	0.67	0	3	18	7	6	w.	G. W. Sandidge.	
Lick Observatory	Santa Clara	4,209	23	51.6	+ 0.4	77	13	30	2	21	1.31	- 0.30	0.33	0	8	18	4	9	n.	The Director.	
Livermore	Alameda	485	41	61.6	+ 0.2	98	31	34	2	47	0.94	+ 0.34	0.60	0	5	17	9	5	w.	E. G. Still.	
Lodi	San Joaquin	45	30	64.1	+ 0.7	94	13	41	2	41	1.28	+ 0.11	1.03	0	5	20	6	5	w.	Ezra Fiske.	
Lone Pine	Inyo	2,728	7	60.5		94	29†	32	2	55	1.14		0.44	0	3	21	10	0	s.	G. F. Marsh.	
Long Valley	Lassen	4,400	3	54.2		84	28	32	2	43	0.68		0.38	1.0	8	8	11	12	sw.	A. G. Evans.	
Los Angeles	Los Angeles	293	35	62.9	+ 2.4	86	15	50	5	27	0.12	- 0.31	0.10	0	2	12	13	6	sw.	U. S. Weather Bureau.	
Los Banos**	Merced	121	25	68.6	+ 0.3	93	18	54	2†	40	0.00	- 0.48	0.00	0	0	20	0	11	w.	Southern Pacific Co.	
Los Gatos	Santa Clara	600	25	60.4	+ 0.7	93	31	40	2	43	1.61	+ 0.54	1.07	0	6	19	5	7	n.	F. H. McCullagh.	
McCloud	Siskiyou	3,410	2	52.6		82	31	23	3	46	4.96		1.31	1	7	12	12	7	nw.	F. F. Spencer.	
Macdoel	do	4,258	5	47.4		79	31	23	3	46	0.74		0.24	0	7	12	12	7	nw.	Butte Valley Land Co.	
Madeline	Lassen	5,270	3	32.2		78	31	23	27	45	1.87		0.33	3.0	13	11	6	12	nw.	J. H. Williams.	
Magalia	Butte	2,321	8	58.7		90	12	31	1	42	5.07		1.64	0	9	21	2	8	se.	Butte Co. R. R. Co.	
Mammoth Tank	Imperial	257	34	76.0	- 7.6	105	31	52	4	40	0.65	+ 1.08	0.25	0	4	20	3	8	n.	Southern Pacific Co.	
Mariopoa	Kern	640	1	69.4		100	13	47	2	40	0.65		0.25	0	4	20	3	8	n.	Union Oil Co.	
Marysville	Yuba	67	41	65.0	- 3.8	98	31	42	3	45	1.15	+ 0.28	0.62	0	4	20	0	11	s.	Southern Pacific Co.	
Mecca	Riverside	-185	6	75.2		106	31	51	5	43	0.15		0.15	0	1	22	9	0	nw.	E. A. Palmer.	
Menlo Park**	San Mateo	174	34	62.9	+ 0.8	92	31	45	2	42	0.92	+ 0.34	0.26	0	5	21	5	5	se.	Southern Pacific Co.	
Merced	Merced	173	38																	Santa Fe Co.	
Middlewater	Kern	1	1	69.1		99	30	42	3	37	0.75		0.32	0	5	21	3	7	n.	Union Oil Co.	
Mill Creek No. 1	Amador	5	5	55.5		82	12†	32	5	39	4.65		1.12	0	11	17	5	9	n.	Cal. Gas & Elect. Co.	
Milton (near)	Calaveras	660	21	65.0	+ 1.3	93	13	39	1	35	1.34	+ 0.11	0.75	0	3	18	7	5	nw.	J. H. Southwick.	
Modesto**	Stanislaus	90	40	74.8	+ 5.4	93	13†	55	2	46	0.25	- 0.26	0.25	0	1	1	1	3		Southern Pacific Co.	
Mojave	Kern	2,751	35	63.2	- 4.8	82	31	46	8	16	0.50	+ 0.47	0.50	0	1	27	1	3		Do.	
Mokelumne Hill	Calaveras	1,550	19	61.4	+ 2.8	92	31	31	22	35	2.40	+ 0.83	1.14	0	5	14	10	7	n.	C. E. Prindle.	
Mono Ranch	Ventura	3,210	6	56.2		88	28	33	22	39	1.85		1.16	0	3	22	5	4	n.	Herbert Lathrop.	
Montague	Siskiyou	2,450	24	54.8	- 5.6	85	13†	29	24	48	2.45	+ 1.62	0.77	2.0	10	8	17	6	0	n.	I. E. Deboy.
Monterey**	Monterey	15	47	61.5	+ 3.2	74	31	54	11	42	0.84	+ 0.34	0.25	0	5	25	6	0	se.	Southern Pacific Co.	
Monterio	Kern	4,500	13	54.6	- 3.7	78	31	32	2	24	0.80	- 0.66	0.50	0	4	12	18	1	nw.	John C. Knecht.	
Mount Tamalpais	Marin	2,375	13	54.2	+ 0.5	82	31	35	21	26	1.88	+ 0.58	0.75	0	8	15	6	10	nw.	U. S. Weather Bureau.	
Napa City	Napa	20	35	58.7	- 0.7	96	31	36	2	49	1.95	+ 0.94	0.77	0	6	16	15	0	sw.	Alex. Hull.	
Napa (S. H.)	do	60	34	60.6	- 0.2	95	31	39	2	42	2.12	+ 1.11	0.68	0	8	20	5	6	sw.	W. H. Martin.	
Needles	San Bernardino	477	20	78.4	- 1.2	105	29	56	4	39	0.00	- 0.06	0.00	0	0	30	0	1		Santa Fe Co.	
Nellie	San Diego	5,350	3	54.2		93	30	28	1†	33	1.95		0.95	0	3	23	2	10	s.	T. O. Bailey.	
Nevada City	Nevada	2,580	20	55.7	+ 0.1	88	12†	28	2†	47	3.38	+ 0.99	1.21	0	13	18	3	6	se.	Southern Pacific Co.	
Newhall**	Los Angeles	1,200	35	64.3	+ 4.8	92	31	46	2	47	0.85	+ 0.31	0.36	0	4	22	3	6	n.	S. W. Wangerheim.	
Newman	Stanislaus	91	23	74.9	+ 5.8	96	17†	52	7	25	0.88	+ 0.73	0.30	0	3	26	0	5	se.	J. R. McIntosh.	
North Bloomfield	Nevada	3,214	15	61.1	+ 5.8	85	30†	41	2	30	3.38	+ 1.28	1.67	0	5	16	6	9	s.	U. S. Forest Service.	
North Fork	Madera	3,000	8	57.7		90	31	40	2	50	1.25		0.45	0	7	12	18	1	se.	Southern Pacific Co.	
Oakdale**	Stanislaus	156	18	67.1	+ 3.6	97	13	45	2	40	0.48	- 0.30	0.21	0	6	19	8	4	nw.	B. L. Johnson.	
Oak Grove	Alameda	2,751	2																	Chabot Observatory.	
Oakland	San Diego	36	36	60.7	+ 2.6	89	31	44	2	34	1.33	+ 0.48	0.67	0	6	14	10	7	w.	H. D. Brodie.	
Oceanside	San Diego	60	2	63.6		74	28	48	4	22	0.74		0.50	0	3	11	12	8	w.	W. H. Duncan.	
Ojai Valley	Ventura	900	6	60.9		93	28	37	2†	45	1.12		0.64	0	4	20	6	5	sw.	U. S. Reclamation Service.	
Orland	Glenn	254	30	67.5	- 2.9	98	31	41	1	39	0.76	- 0.17	0.33	0	7	21	7	3	se.	F. T. Hale.	
Orleans	Humboldt	520	9																	E. D. Fairchild.	
Oroville (near)	Butte	250	28	65.5	- 0.6	99	31	42	3	44	2.20	+ 0.74	0.65	0	7	19	2	10	s.	Western Pacific Co.	
Palermo	do	213	21	71.4	+ 6.4	103	16	42	2	51	2.70	+ 1.40	2.00	0	2	18	13	0	w.	Southern Pacific Co.	
Palm Springs**	Riverside	584	23	73.5	+ 4.5	106	29	56	3	52	1.00	+ 0.97	0.55	0	2	23	4	4	w.	E. D. Sorver.	
Pasadena	Los Angeles	827	22	62.2	+ 1.4	93	31	42	5†	41	0.22	- 0.21	0.08	0	5	27	2	2	sw.	Dr. F. W. Sawyer.	
Paso Robles	San Luis Obispo	800	25	60.6	- 1.8	96	29	30	22	51	0.91	+ 0.33	0.41	0	3	24	4	3	nw.	E. H. Farnell.	
Peachland	Sonoma	190	16	58.0	- 1.3	93	31	36	2	43	3.05	+ 1.43	1.30	0	8	17	8	6	sw.	A. Baring-Gould.	
Placerville	El Dorado	1,875	23	58.8	+ 0.8	88	30	34	2	42	2.80	+ 0.61	0.55	0	8					John Hyslop.	
Point Lobos	San Francisco	250	19	55.5	+ 0.4	83	31	46	11†	29	1.57	+ 0.83	0.88	0	7	7	11	13	sw.	U. S. Weather Bureau.	
Point Reyes	Marin	490	29	52.4	+ 0.6	76	31	45	12†	27	1.62	+ 0.52	0.82	0	7	10	6	15	nw.	Leslie McAniff.	
Porterville	Tulare	464	23	72.2	+ 1.9	101	30	40	4†	53	0.14	- 0.57	0.08	0	9	19	4	8	w.	U. S. Forest Service.	
Qu																					

DISTRICT NO. 11. CLIMATOLOGICAL SUMMARY.

TABLE 1.—Climatological data for May, 1912. District No. 11—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.						Precipitation, in inches.					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, unmelting.	Number of rainy days, 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of overcast days.		
<i>California—Continued.</i>																				
Seven Oaks.....	San Bernardino...	5,000	2	51.4	.....	84	28	25	20	43	0.47	.....	0.28	0	2	19	0	12	w.	M. Lewis.
Shasta.....	Shasta.....	1,048	16	59.8	- 5.7	97	10	33	20	54	5.52	+ 2.79	1.14	0	9	22	3	6	nw.	Dr. T. J. Edgecomb.
Sierra Madre.....	Los Angeles.....	1,400	15	63.2	+ 2.1	92	31	47	17	38	1.22	+ 0.02	0.81	0	6	16	6	9	s.	Mrs. A. E. Gregory.
Sierraville.....	Sierra.....	5,000	2	48.6	.....	80	11†	22	4	52	1.54	.....	0.60	2.0	3	15	5	11	sw.	C. D. Johnson.
Sisson.....	Siskiyou.....	3,555	23	51.2	- 3.4	78	13†	32	17	36	2.20	+ 0.04	0.65	2.0	8	18	0	13	n.	Southern Pacific Co.
Soledad**.....	Monterey.....	188	38	67.8	+ 5.5	95	31	57	8†	.....	0.70	+ 0.41	0.40	0	5	14	0	17	s.	Do.
Sonora.....	Tuolumne.....	1,825	24	61.2	.....	90	17	39	22	39	2.24	+ 0.26	0.97	0	6	18	9	4	nw.	Chas. P. Jones.
Southeast Farallon.....	San Francisco.....	30	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	U. S. Weather Bureau.
Springville.....	Tulare.....	4,000	5	54.4	.....	85	31	31	2†	43	0.04	.....	0.04	0	1	17	0	14	.....	D. L. Wishon.
Squirrel Inn.....	San Bernardino.....	5,280	2	51.3	.....	78	28†	28	2	25	1.11	.....	0.42	0	7	18	5	8	s.	A. D. Frantz.
Stanwood.....	Butte.....	2,140	8	57.6	.....	78	9†	32	3	36	4.71	.....	1.50	0	4	23	0	8	.....	Cal. Gas & Elect. Co.
Stirling City.....	do.....	3,525	8	55.3	.....	90	31	30	2	49	4.80	.....	1.40	0	9	13	5	13	se.	Butte Co. R. R. Co.
Stockton (S. H.).....	San Joaquin.....	23	41	64.0	- 0.1	95	31	40	2	40	1.32	+ 0.65	0.93	0	4	20	8	3	nw.	State Hospital.
Storey.....	Madera.....	296	12	63.6	+ 0.8	93	13†	38	4	44	0.40	+ 0.12	0.21	0	3	29	0	2	.....	Santa Fe Co.
Suisun**.....	Solano.....	20	32	64.3	+ 0.5	100	31	49	2	.....	1.46	+ 0.63	0.75	0	7	23	1	7	.....	Southern Pacific Co.
Sulphur Banks.....	Lake.....	1,350	16	60.6	.....	91	13†	38	2	45	1.14	.....	0.41	0	8	20	7	4	.....	Geo. D. Ruddock.
Summerdale.....	Mariposa.....	5,270	16	51.4	+ 1.5	76	31	28	21	29	2.46	+ 0.15	0.88	0	8	12	8	11	s.	Mrs. J. E. Lowry.
Summit.....	Placer.....	7,017	39	41.6	+ 1.0	65	18	26	1†	35	1.88	+ 0.25	0.90	18.0	4	20	0	11	.....	Southern Pacific Co.
Susanville.....	Lassen.....	4,175	23	52.2	+ 2.6	89	8	30	1	55	0.95	- 0.43	0.30	0	8	16	11	4	sw.	James Branham.
Tamarack.....	Alpine.....	8,000	6	34.2	.....	62	31	8	7	38	3.26	.....	0.80	35.0	8	12	12	7	nw.	Cal. Gas & Elect. Co.
Tehachapi**.....	Kern.....	3,964	35	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Southern Pacific Co.
Tehama.....	Tehama.....	220	41	63.0	- 5.9	100	31	40	2	.....	0.85	- 0.05	0.41	0	3	21	0	10	n.	Do.
Tejon Rancho.....	Kern.....	1,500	10	59.1	.....	82	12†	39	1	42	0.75	.....	0.36	0	3	.....	.....	.....	.....	S. E. Bailey.
Three Rivers.....	Tulare.....	876	2	65.2	.....	97	31	38	3	43	0.88	.....	0.55	0	6	13	15	3	sw.	E. D. Barton.
Towle.....	Placer.....	3,704	26	54.0	- 2.0	82	31	29	2	34	5.63	+ 2.72	1.12	0	10	17	4	10	sw.	Southern Pacific Co.
Tracy**.....	San Joaquin.....	64	32	70.1	+ 1.0	91	12†	58	25	.....	0.59	+ 0.01	0.29	0	4	18	8	5	nw.	Do.
Ukiah.....	Mendocino.....	620	19	60.8	+ 1.6	95	31	34	2	50	1.78	+ 0.52	0.80	0	8	14	12	5	nw.	Dr. Geo. McCowen.
Upper Lake.....	Lake.....	1,350	27	59.0	- 0.5	94	31	40	2	49	1.91	+ 0.78	0.48	0	9	19	3	9	nw.	C. M. Hammond.
Vacaville.....	Solano.....	1,75	24	64.0	- 0.2	100	31	30	4	53	1.43	+ 0.10	0.65	0	7	18	11	2	sw.	G. O. Coburn.
Valley Springs**.....	Calaveras.....	673	23	67.2	+ 1.0	95	31	50	3	.....	1.25	+ 0.10	0.36	0	6	17	7	7	nw.	Southern Pacific Co.
Visalia.....	Tulare.....	334	24	60.4	- 5.7	97	19	29	4	60	0.00	- 0.58	0.00	0	0	31	0	0	.....	Santa Fe Co.
Warner Springs.....	San Diego.....	3,165	4	58.7	.....	89	28	33	2	40	1.09	.....	0.54	0	3	23	5	3	.....	Mrs. F. S. Sandford.
Wasco.....	Kern.....	336	12	66.8	+ 0.3	105	31	37	2	53	0.05	- 0.25	0.05	0	1	27	2	2	.....	Santa Fe Co.
Watsonville.....	Santa Cruz.....	23	16	54.0	- 6.1	90	31	26	2	54	1.64	+ 0.77	0.53	0	6	10	18	3	w.	Spreckels Sugar Co.
Weaverville.....	Trinity.....	.....	.....	56.2	.....	88	31	29	2	49	3.67	.....	1.12	0	9	17	4	10	w.	U. S. Forest Service.
Weitchpec.....	Humboldt.....	1,700	2	54.4	.....	85	12†	30	2	37	6.98	.....	3.27	0	11	20	2	9	.....	M. E. Lathrop.
Westley**.....	Stanislaus.....	90	23	73.0	+ 2.9	95	13	55	22	.....	0.78	+ 0.19	0.30	0	4	24	0	7	n.	Southern Pacific Co.
Wheatland.....	Yuba.....	84	25	63.8	- 0.3	94	31	39	2	41	1.52	+ 0.24	0.95	0	8	14	10	7	n.	William Lumbard.
Willows.....	Glenn.....	136	33	67.0	- 1.5	98	13†	37	2	46	1.16	+ 0.44	0.32	0	6	19	3	9	n.	E. C. Mills.
Yosemite.....	Mariposa.....	3,945	8	54.8	.....	88	31	22	21	53	0.74	.....	0.30	0	7	11	3	17	s.	J. P. Kelley.

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 May, 1912. 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.																																				
Mount St. Helena.	Coast.					.35														1.10		*	*	*	*	*	1.35								2.80	
Napa City.	do.	.14																		.77	.12	.12				.70			.10					1.95		
Napa (S. H.)	do.	.16				.05														.68	.19	.17	.11			.46	.30							2.12		
Needles.	Desert.																																		0.00	
Nellie.	Coast.							.95	.85	.15																									1.95	
Nevada City.	Sacramento.	.68	.14		.02	.02			.03											T.	1.21	.34	.18	.01	T.	.63	.09	.01		.02	T.			3.38		
Newhall.	Coast.					.10	.23	.16																			.36								0.85	
Newman.	San Joaquin.					.24																.01				.23									0.98	
North Bloomfie.d.	Sacramento.	.81					.40												1.69	.75	.20													3.83		
North Fork.	San Joaquin.	.18	.23	.07					.06	.02											.52	.30	.10	.15		.45								1.25		
North Lakeport.	Coast.	.11																		.05	.30	.10	.15		.04	.35								1.10		
Oakdale.	San Joaquin.	.04					.04	T.												T.	.03	.05	T.		.21	.11								0.48		
Oak Grove.	Coast.																																		1.33	
Oakland.	do.	T.					T.				T.									T.	.31	.09	.18		T.	.67	.07	.01						1.51		
Oakville.	do.	.05																									.38	.29							0.74	
Oceanside.	do.						T.	.22	.50	.02			T.								T.														1.12	
Ojai Valley.	do.						.05		.40			.03		T.							T.					.64									0.76	
Orland.	Sacramento.	.05																			.33		.05	.03	T.	.11	.16	.03							2.20	
Orleans.	Klamath.																																			0.77
Oroville.	Sacramento.					T.														.65	.47	.21	.31		.25	.17									2.70	
Ozeana.	Coast.				.16	.11			.50																										2.00	
Palermo.	Sacramento.		T.																																1.00	
Palm Springs.	Desert.							.45	.55																											0.94
Parkfield.	Coast.						.11	.22																			.54	.07							0.22	
Pasadena.	do.						.02	.06			.03															.08									.03	0.91
Paso Robles.	do.						.41	.40																				.10								3.05
Peachland.	do.	.30																																	2.50	
Phoenix Dam.	San Joaquin.	.28				.10	.17																				.89								5.19	
Pilot Creek.	Sacramento.	1.32				T.		.08	.22	.11																	1.05	.16					.09		2.03	
Pinchot.	Coast.						*	*	1.20																										2.00	
Pine Crest.	do.								.22	.11																									2.80	
Placeville.	Sacramento.	.47	.48					T.																											1.57	
Point Lobos.	Coast.	.15																			.01	.27	.06	.34	T.	T.	.68	.06						0.16		
Point Loma.	do.	.01								.07		.03		T.	.01	.01	.01	.01																	1.62	
Point Reyes.	do.	T.																			.49	.12	.12	.02		.43	.41	.03						10.14		
Porterville.	San Joaquin.																																			2.77
Portulaca.	do.																																		1.82	
Prattville.	Sacramento.					.01															.05														4.05	
Priest Valley.	Coast.						.43	.60	.12																										1.58	
Quincy.	Sacramento.	1.00				.10																													2.85	
Red Bluff.	do.	.10																			.03	.41	.42	.25	.03	.03	.27	.04						T.	1.73	
Redding.	do.	.10	.17																																	1.66
Redlands.	Coast.						T.	T.	1.62	.09	.02																									0.77
Reedley.	San Joaquin.																																			1.20
Represa.	Sacramento.	.09																																		0.38
Rialto (near).	Coast.		.05				T.	.08	.20	T.																										1.72
Rio Vista.	Sacramento.	.06																																		2.84
Riverside.	Coast.						.10	.27	.01																											0.94
Rocklin.	Sacramento.																																			1.63
Rohnerville.	Coast.	.95				T.																													0.70	
Sacramento.	Sacramento.	.04																																		0.52
Saint Helena.	Coast.					T.																													1.47	
Salinas.	do.	.04																																	1.18	
San Bernardino.	do.					.01	.25	.16	.10																											0.70
San Diego.	do.					T.	.04	T.	.04	.05																										1.47
San Francisco.	do.	.01																																		1.18
San Jacinto.	do.							.53	.50	.05	.10																									0.70
San Jose.	do.	.01				.01	.01	.54																												2.08
San Luis Obispo.	do.					.23	.19	.54																												1.46
San Mateo.	do.																																			2.89
San Miguel.	do.					T.	.21	2.30	.18																											1.17
San Miguel Island.	Ocean.																																			0.77
Sanger.	San Joaquin.								.11	.07																										1.58
Santa Ana River.	Coast.					.01	.01	.67	.08																											0.78
Santa Barbara.	do.							.02																												1.92
Santa Clara.	do.	.02																																		1.60
Santa Cruz.	do.	.07					.07																													0.23
Santa Margarita.																																				

TABLE 2.—Daily precipitation for May, 1912. 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		
<i>California—Contd.</i>																																			
Towle	Sacramento	.73	.35					.30												.88	1.12	.70	.20		.35	.75				.25				5.63	
Tracy	San Joaquin																			.06				.12	.12	.29								0.59	
Tulare	do						T.														T.													T.	0.24
Tustin (near)	Coast								.04	.01	.19																								0.24
Ukiah	do	.80																																	1.78
Upper Lake	Sacramento	.48				.15															T.	.39	.02	.23	.02	.02	.27	.03							1.91
Upper Mattole	Coast	.15	.55																			1.85	.55	.45	1.11	.20	.22	.42	.19			.01		5.70	
Vacaville	Sacramento																			.18	.07	.05	.03			.65	.43	.02						1.43	
Valley Springs	San Joaquin	.15	.04																		.34	.09				.27	.36							1.25	
Visalia	do																																		0.00
Warner Springs	Coast					T.	.50	.54	.05																										1.09
Wasco	San Joaquin						.05																												0.05
Watsonville	Coast						.09															.30		.36	.07		.29	.53							1.64
Weaverville	do	.86								T.												.19	1.12	.27	.46	.08	.29	.16	.24					3.67	
Weitchpec	Klamath	3.27	.02																		.16	1.02	.56	.26	.19	.37	.10	.76			.27			6.98	
West Branch	Sacramento	1.56	T.							T.											.14	1.13	.62	.58	.15		.92	.42	T.					5.52	
Westley	San Joaquin							.10																	.20		.30	.18							0.78
West Point	do																																		
West Saticoy	Coast								T.	.28																	.47								0.75
Wheatland	Sacramento	.10	.02			T.			T.	.01											.02	.95	.02	T.			.30	.10						1.52	
Willows	do	.15																			.32	.28	.07	.21			.13							1.16	
Yosemite	San Joaquin	.13					.01			.01												.20	.30	.03			.06								0.74

* 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 at selected stations May, 1912. District No. 11, California.

Date.	Lakeview, Oreg.	California.																											
		Alturas.		Barstow.		Branscomb.		Brawley.		Colusa.		Eureka.		Fresno.		Independence.		Los Angeles.		Mount Tamalpais.		Nevada City.		Porterville.		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.		
1		48	29	72	45	52	34	92	52	68	45	51	46	67	47	69	43	67	51	45	36	56	36	81	47	62	46		
2		48	28	74	44	62	33	79	56	72	45	53	44	69	40	58	37	72	51	53	36	62	28	82	48	66	44		
3		59	28	75	42	64	35	82	54	75	46	53	43	76	42	66	40	70	51	64	48	72	28	80	42	74	49		
4		60	34	82	46	68	36	66	36	77	52	54	47	79	52	68	38	72	51	63	49	70	32	83	40	76	53		
5		58	30	82	47	67	36	87	56	79	52	53	49	81	51	68	43	66	50	64	51	68	39	82	43	75	58		
6		64	36	75	50	80	39	83	52	83	52	58	47	76	55	62	43	62	54	67	44	74	37	85	40	82	60		
7		75	35	70	46	73	54	79	56	77	51	60	47	75	54	63	42	58	55	57	44	74	39	86	46	85	63		
8		78	35	68	42	65	39	79	57	77	51	54	49	77	56	60	41	68	56	63	43	73	40	85	48	80	56		
9		70	41	80	47	67	40	80	55	73	50	56	48	79	52	73	38	66	55	50	41	70	42	88	49	73	50		
10		72	32	88	47	72	35	83	54	79	46	57	47	81	49	78	50	63	56	64	38	76	41	90	43	84	50		
11		74	31	91	48	78	44	91	60	84	51	56	44	87	55	80	48	66	54	70	56	80	42	91	44	90	55		
12		78	43	92	50	84	49	97	64	91	54	56	43	92	58	81	52	65	54	76	62	88	42	94	41	90	56		
13		78	33	91	50	89	50	93	67	92	60	54	48	96	63	80	48	76	54	78	61	88	43	98	58	93	58		
14		80	34	87	51	68	43	90	62	87	56	56	47	92	59	78	46	80	53	61	42	81	43	97	59	84	54		
15		76	45	95	47	70	38	94	52	78	52	56	45	85	54	82	49	86	61	58	42	73	41	96	58	77	55		
16		76	29	95	47	70	36	99	52	83	49	57	45	89	53	83	48	83	57	70	50	80	34	98	56	84	52		
17		76	32	96	54	75	35	99	62	85	53	58	46	93	57	85	50	78	51	72	59	81	34	97	54	86	55		
18		78	37	94	54	78	37	93	57	83	54	58	50	91	58	82	54	77	51	66	52	82	41	92	56	87	59		
19		73	33	88	51	57	43	93	68	78	55	60	47	80	60	76	52	72	56	54	42	69	43	93	57	71	55		
20		56	34	81	46	51	41	91	64	67	53	57	46	72	52	74	50	67	56	49	41	56	43	94	59	66	50		
21		52	31	71	47	50	38	81	62	67	45	56	46	71	47	67	39	69	54	48	35	51	38	95	60	64	48		
22		47	36	78	48	49	33	86	55	65	46	56	45	73	44	68	38	68	52	47	41	54	35	96	59	61	41		
23		59	33	86	46	51	41	92	58	70	49	60	48	79	52	77	43	71	51	53	41	65	38	98	58	66	50		
24		69	33	92	52	55	40	96	58	72	52	57	52	77	54	78	50	75	53	51	44	71	40	99	52	67	54		
25		58	39	76	55	65	48	91	60	64	54	63	53	69	56	69	56	63	56	50	46	57	44	88	53	64	54		
26		60	41	83	50	58	48	89	63	71	54	58	53	76	51	76	39	68	53	51	46	61	45	94	54	66	54		
27		69	39	90	50	65	42	94	57	78	49	58	49	82	52	85	50	73	55	62	44	74	36	94	50	78	50		
28		78	35	98	55	73	41	102	61	90	56	62	47	91	56	90	58	80	58	75	58	85	43	96	60	88	58		
29		72	40	96	61	75	38	101	68	87	59	58	52	92	62	92	58	74	58	64	48	75	46	100	67	82	62		
30		70	35	96	54	78	39	101	65	87	58	58	48	89	51	84	53	74	58	73	52	80	39	101	66	84	59		
31		82	33	97	52	89	49	102	63	94	70	59	48	98	60	87	50	81	56	82	66	88	47	100	68	93	69		
Mns.		67.6	34.6	85.1	49.2	67.4	40.5	90.9 ^b	59.2 ^b	78.5	52.3	56.8	47.4	81.7	3.2	75.5	46.6	71.6	54.2	61.3	47.0	72.1	39.3	91.4	53.0	77.4	54.3		

California—Continued.

Date.	Redlands.		Sacramento.		San Diego.		San Francisco.		San Jose.		San Luis Obispo.		Santa Barbara.		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.	Max.	Min.
1	70	44	62	46	64	52	57	49	61	47	63	44	70	44	61	42	45	32	64	47	32	26	52	30	56	33	
2	71	49	67	45	64	52	62	47	65	42	56	45	72	45	70	34	46	33	69	40	38	26	50	32	58	28	
3	72	49	75	50	68	49	68	51	73	39	66	42	78	55	75	37	57	39	77	45	48	28	55	31	68	24	
4	77	41	74	50	68	49	63	50	73	41	66	40	69	46	72	40	56	41	79	49	50	28	64	33	69	29	
5	73	41	76	53	61	54	66	50	74	44	67	47	60	48	77	40	67	42	80	52	52	29	57	37	68	33	
6	59	49	84	55	60	56	63	52	75	45	62	50	58	62	81	44	72	36	86	49	51	27	67	32	74	34	
7	70	48	72	48	66	56	67	52	74	48	67	50	66	48	67	40	73	45	76	50	55	32	70	33	70	34	
8	66	48	75	50	65	56	59	52	69	48	64	51	62	54	65	49	68	32	76	49	57	30	89	34	72	33	
9	62	51	64	49	62	57	55	50	67	52	61	50	65	52	59	49	70	35	68	48	56	31	78	40	68	30	
10	63	51	78	46	61	55	56	48	69	49	58	50	50	50	67	47	71	36	78	46	60	33	77	45	74	32	
11	76	53	84	48	60	58	56	47	71	45	60	48	62	48	66	46	72	37	84	48	59	31	78	34	80	34	
12	76	52	91	51	60	56	59	46	77	51	66	48	62	51	73	43	70	38	89	50	62	34	71	36	81	38	
13	89	49	93	59	65	56	66	47	85	49	74	49	67	52	83	44	78	42	92	52	58	31	73	34	86	40	
14	89	50	77	51	72	55	61	50	72	52	69	49	66	51	71	49	72	45	77	52	61	34	79	33	87	43	
15	89	54	78	49	72	57	63	51	69	45	74	49	78	45	76	40	76	46	77	51	62	34	78	43	85	46	
16	89	52	82	49	70	57	69	49	78	39	80	44	76	46	80	49	65	33	86	47	64	30	73	35	82	35	
17	84	50	85	54	68	53	66	51	80	44	76	46	70	52	78	41	70	46	88	53	61	32	77	35	83	42	
18	80	49	82	53	67	54	57	48	75	47	69	47	64	50	68	41	68	42	85	52	65	35	77	41	82	40	
19	82	50	65	52	69	57	60	51	66	51	65	50	65	55	61	48	70	40	66	52	43	33	70	40	78	38	
20	72	50	63	50	64	57	59	52	66	51	61	46	63	55	63	46	48	35	67	52	41	30	54	40	73	32	
21	69	47	63	47	64	57	59	49	63	45	62	43	70	45	62	45	49	33	67	48	38	27	52	33	50	22	
22	71	45	61	46	65	51	59	51	65	44	65	40	65	46	63	45	45	34	65	44	39	30	52	31	65	28	
23	78	42	69	50	67	52	64	54	72	51	67	45	66	46	67	45	66	46	67	50	36	72	52	40	60	35	
24	84	48	68	57	68	54	64	56	69	53	63	44	67	49	64	50	55	44	69	54	43	35	70	39	75	35	
25	67	48	62	53	67	59	61	54	64	53	64	54	62	55	64	52	51	44	68	54	38	31	69	45	64	39	
26	70	49	67	52	67	58	62	54	67	53																	

Total Precipitation, May, 1912.



Departure of the Mean Temperature from the Normal, May, 1912.

