U. S. DEPARTMENT OF AGRICULTURE
WEATHER BUREAU

CLIMATOLOGICAL SERVICE

DISTRICT NO. 11. CALIFORNIA

PROF. ALEXANDER G. MCADIE
DISTRICT EDITOR

REPORT FOR AUGUST, 1911

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

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1911

DISTRICT No. 11, CALIFORNIA.

Prof. ALEXANDER G. McADIE, District Editor.

GENERAL SUMMARY.

August was both cool and dry. Regarding temperature, it may be said that the present month was one in which the usual high afternoon temperatures did not occur. The cause is not apparent, but is probably connected with some general condition affecting the whole Pacific slope. There was considerable cloudiness and less sunshine than usual. The month is normally one of little rain and much sunshine. This month there was less rain than in any month since records have been kept. August, 1910, was a dry August, but August, 1911, surpassed it in this respect. Last year 87 per cent of the stations reported no rain during the month; while this year 96 per cent of the stations made the same report.

Notwithstanding the dryness, the month was on the whole a pleasant one. There was a good supply of water, and visitors and tourists were able to get into the mountains and view waterfalls running full, which usually at this time of year show a marked decrease in the volume of water moving. The present month was in marked contrast with the same month last year. Then the early stoppage of the rains and the limited water supply caused lower stages in the rivers and drier watercourses than had been known for many years. Last year the waterfalls ran dry at an early date and roads were unusually dusty. Snow was found only at elevations of 12,000 feet or above, whereas this year snow was in sight at elevations of 10,000 feet.

The weather was favorable from an agricultural standpoint and fruit ripened nicely, though somewhat late. It is reported by certain orchardists that there is less sugar in the fruit than in other years.

The month was a quiet month and there were few storms. The usual summer depression existed over the valley of the Colorado, and from August 22 to August 26 conditions were favorable for afternoon thunderstorms in the southeastern portion of the State. There were, however, no well-marked Sonora storms. On the other hand, none of the northern lows came south.

TEMPERATURE.

The mean temperature for the State was 2° below the normal. The following table gives the mean temperature for California during the time for which such records have been kept:

Year.	Mean.	Departure.	Year.	Mean.	Departure.
	°F.	°F.		°F.	°F.
1897	73.9	+1.8	1905	73.4	+1.3
1898	74.5	+2.4	1906	73.6	+1.5
1899	70.8	−1.3	1907	71.0	−1.1
1900	71.0	−1.1	1908	73.3	+1.2
1901	75.6	+3.5	1909	72.1	0.0
1902	71.8	−1.3	1910	72.5	+0.4
1903	72.6	+0.5	1911	70.1	−2.0
1904	73.9	+1.8			

The highest mean temperature was 96.6° at Bagdad, and nearly all the stations in the Colorado Desert had mean temperatures for the month exceeding 90°. The lowest mean temperature was 52.4° at Point Reyes Light. Many of the stations along the immediate coast had mean temperatures approximating 55°. This shows the controlling influence of the ocean. The mean temperature at Eureka was 55.8°; at San Francisco, 56.6°; at Monterey, 58.6°; at Point Lobos, 55°; and at the Southeast Farallon, which perhaps is the most significant value of all, inasmuch as the station is practically a rock in the sea, 53.8°. It is interesting to note that the mean temperature of Tamarack, elevation 8,000 feet, was 54°, or practically the same as the ocean.

The highest temperature of the month was 114°, and occurred at Mammoth Tank on the 19th and also at Heber and Indio on the 30th. Last year the highest temperature was 120°. It may be noted in passing that temperatures as high as 130° have been recorded in the Salton Desert section during the month of August.

The lowest temperature was 28°, and occurred at Sierraville on the 15th. This is 8° higher than the lowest temperature recorded during August, 1910.

PRECIPITATION.

The average monthly precipitation for California for August is as follows:

Years.	Mean.	Departure.	Years.	Mean.	Departure.
	Inch.	Inch.		Inch.	Inch.
1897	0.03	−0.04	1905	0.03	−0.04
1898	.02	− .05	1906	.13	+ .06
1899	.11	+ .04	1907	.11	+ .04
1900	.02	− .05	1908	.12	+ .05
1901	.12	+ .05	1909	.19	+ .12
1902	.06	− .01	1910	.01	− .06
1903	.02	− .05	1911	.00	− .07
1904	.17	+ .10			

The month, as stated above, will go into history as the driest on record. The greatest monthly rainfall was 0.08 of an inch at Eureka. This year there was practically no rain in the southeastern portion of the State, whereas last year there were some heavy showers. The heaviest 24-hour rainfall was 0.05 of an inch at Eureka.

SUNSHINE.

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

Stations.	Hours.	Per cent of possible.	Stations.	Hours.	Per cent of possible.
Eureka	142	33	Sacramento	382	90
Fresno	419	100	San Diego	322	78
Los Angeles	343	83	San Francisco	200	48
Mount Tamalpais	408	97	San Jose	340	81
Red Bluff	422	99	San Luis Obispo	327	78

There was less sunshine this August than in August, 1910, the difference being greatest at the coast stations.

LOCAL STORMS.

Thunderstorms occurred at Campo on the 18th, at Eastpark on the 3d, and at Tamarack on the 26th and 28th.

NOTES ON THE RIVERS OF THE SACRAMENTO AND SAN JOAQUIN WATERSHEDS FOR AUGUST, 1911.

By N. R. TAYLOR, Local Forecaster.

Sacramento watershed.—The Sacramento River fell steadily but slowly during the month, and its average stage showed little departure from that usually maintained in August. It was, however, about 1 foot higher than during the corresponding month of 1910. The following average stages from the more important points in this stream are quoted: Kennett, 0.4 foot; Red Bluff, 1.3 feet; Colusa, 1.9 feet; Knights Landing, 1 foot; and Sacramento city, 6.8 feet.

The American River fell slowly, with only 1 foot between the highest and lowest stages. It averaged, at Folsom, 2.5 feet, which is the highest for any August since that of 1907.

The rivers of the Feather-Yuba territory, while considerably higher than during the preceding August, were practically normal. At Marysville the Yuba averaged 7.7 feet, which is 1.6 feet higher than the average of August of 1910. The Feather, at Oroville, averaged 1.5 feet, which is 0.7 foot above that of the precedingAugust.

San Joaquin watershed.—All streams in the drainage basin of the San Joaquin Valley carried more water than for any August since that of 1907. This was especially so of the San Joaquin River itself below the mouth of the Merced. At Lathrop the river maintained a stage of over 10 feet until the middle of the second decade, and the range at this point, between 13.8 feet on the 1st and 2.3 feet on the 31st, is the greatest that has ever occurred in any summer month since records have been kept. The average stage at San Joaquin bridge, near Lathrop, was 7 feet, which is 6 feet above that of the corresponding month in 1910.

Beginning with about October 1 a new river gage will be established on the Feather River at Nicolaus, which is 1 mile below the mouth of the Bear River, and about 10 miles above the junction of the Feather and Sacramento Rivers.

REFLECTION OF FOG SIGNALS AT POINT REYES LIGHT, CAL.

By JAMES JONES, Observer, Weather Bureau.

Lying directly across the course of coastwise craft, with its steep cliffs and jagged rocks on the south and a long stretch of sand beach on the north, Point Reyes is one of the most dangerous points on the Pacific coast of the United States. It is shrouded in dense fog 111 days out of the year, average for 18 years, and during the months of July and August fog prevails more than half the time. The average number of foggy days for August, the foggiest month, is 19.

During the year ending July 1, 1911, fog was the cause of the American schooner *Annie E. Smale* and the American steamship *Tallac* going ashore on Point Reyes, and of a disastrous collision between the American steamship *Beaver* and the Norwegian steamship *Selja*, in which the latter was sunk off the same point. Three lives were lost in these accidents, in addition to property worth nearly $1,000,000. From the evidence at hand it seems that in all of these cases the accidents were due either to inaudibility of fog signals or to inability to properly locate the signals when heard.

In a comprehensive article on "Fog," in the Climatology of California, Prof. McAdie points out the importance of any increase in our knowledge of the dispersion and aberration of fog signals, and the accidents previously referred to accentuate the need of experimental work in this direction. If such work has been delayed through underestimation of the extent of variations in audibility due to stratification of the atmosphere, the following description of effects noted here may serve as an incentive to further study of the subject.

On September 1, 1910, the fog signal at Point Reyes was changed from a steam whistle to a compressed air siren, the amplifying horn of which is placed so as to project the sound out over the ocean where there is a free expanse of water with no land or rocks whatever to interfere with the sound waves. Yet, since the installation of the siren, it is not uncommon for a loud, clear echo to be thrown back, from a fraction of a second to eight seconds after the siren sounds; showing that there is a very effective reflecting surface distant from a few feet up to about 4,400 feet from the siren.

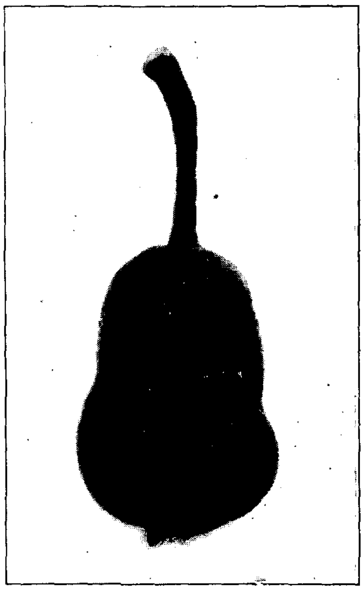
The fact that a sharply defined boundary surface between two air columns of different temperatures will reflect and refract sound waves is well known. Now, if the echo in question is due to reflection from such a surface it would indicate the proximity of a mass of air the temperature of which differs from that in which the fog prevails, and it is an observed fact that, so far, in every instance where the echo has been heard the fog has cleared away, at least temporarily, within a short time thereafter, though it may have continued for days before. One of the quickest changes occurred on August 26, 1911. Dense fog came on during the early morning. At 4.38 p. m. the first echo was heard, eight seconds after the blast, which, since the sound must travel out and back again, would locate the reflecting surface at a distance of about 4,400 feet. The signal continued to operate and the echo to be heard until 4.45 p. m., when the fog cleared away in an instant, leaving only a few scattered patches of light fog over the ocean. By 5.20 p. m. the fog had disappeared entirely.

But the main point, which it is the purpose of these notes to emphasize and which should be brought to the attention of mariners, is the effectiveness of these reflecting surfaces in the free air. The echo of the fog signal that comes back from out over the ocean is as clear and sharp as any echo from other surfaces ever noted by the writer. The warning sounds, after suffering such great reflection, must, if heard at all beyond the reflecting surface, be very difficult to detect. Masters of vessels should, therefore, approach with caution dangerous points at which there are fog-signal stations, and Point Reyes in particular. Too much reliance should not be placed in the audibility of the fog signals, for, though heard at a certain distance normally, they may be entirely inaudible even at a much shorter distance under abnormal atmospheric conditions.

FROST RINGS.

By Prof. RALPH E. SMITH.

Through the courtesy of the editor of the Pacific Rural Press, Prof. E. J. Wickson, we are able to furnish the accompanying photograph, showing the effect of spring frosts in California upon fruit, particularly Bartlett pears. So far as known the cause of this particular blemish has not previously been determined. It is called "ring around the pear" and is of quite general occurrence during certain seasons. It is often the cause of considerable



The frost ring on the pear.

loss, as both the quality and selling price are affected. The blemish consists of a scabby ring of surface tissue, sometimes extending uniformly around the pear, or again occurring only on one side or part way around the fruit. The effect somewhat resembles that of pear scab; but it is quite distinct from the latter and is easily distinguished by one familiar with scab. The scab fungus, Fusicladium Pirinum, is never found in connection with the trouble we are describing, although it may occur simultaneously with it.

Observations during the present season have established clearly that this ring around the pear is a frost effect occurring when the fruit is very young. During the past spring immense damage was caused to fruit crops all over the central and northern parts of California by late frosts, and as an aftereffect of this these ringed pears have been quite abundant. The surface tissue of the young fruit is slightly frozen just back of the petals of the flower, and such pears as are not affected severely enough to cause them to fall go on developing until they reach the condition shown in the photograph. The growth of the tissue under the frozen ring is retarded and the developing fruit becomes constricted at this point.

THE WINDS OF THE YOSEMITE VALLEY.[1]

By F. E. MATTHES, U. S. Geological Survey.

To most folks roaming about the Yosemite Valley its winds and breezes seem a matter of small interest or consequence. They come and go, now one way, now another, apparently without regularity or system—moody, capricious beyond analysis. In the midst of the grand tumult of the Yosemite landscape, our senses fairly bewildered with its many glories, we can not stop to consider these little breaths that blow about us, and let them puff by unheeded. The Yosemite region is not a windy country anyway; but once or twice in a season does a gale arise to disturb its wonted tranquillity, and its daily zephyrs are such light, airy little nothings as to scarcely seem worthy of downright study. And yet they become singularly interesting when once rightly understood. They turn out to be surprisingly systematic and withal so intimately connected with the configuration of the valley itself, that, to one who has at length mastered their secret they grow to be one of its immanent features, as characteristic and inseparable as El Capitan or the Yosemite Falls.

It happens to be so ordained in nature that the sun shall heat the ground more rapidly than the air. And so it comes that every slope or hillside basking in the morning sun soon becomes itself a source of heat. It gradually warms the air immediately over it, and the latter, becoming lighter, begins to rise. But not vertically upward, for above it is still the cool air pressing down. Up along the warm slope it ascends, much as shown by the arrows in the accompanying diagram. (Fig. 1.) Few visitors to the valley but will remember toiling up some never-ending zigzags on a hot and breathless day, with the sun on their backs and their own dust floating upward with them in an exasperating, choking cloud. Perhaps they thought it was simply their misfortune that the dust should happen to rise on that particular day. It always does on a sun-warmed slope.

But, again, memories may arise of another occasion when, on coming down a certain trail, the dust ever de-

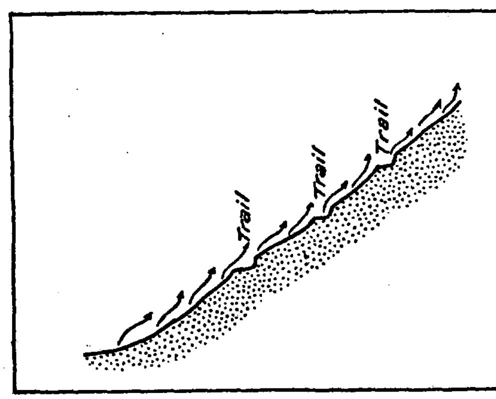


FIG. 1.

scended with the travelers, wafting down upon them from zigzag to zigzag as if with malicious pleasure. That, however, undoubtedly happened on the shady side of the valley, for there the conditions are exactly reversed. When the sun leaves a slope the latter begins at once to lose its heat by radiation, and in a short time is colder than the air. The layer next to the ground then gradually chills by contact, and, becoming heavier as it condenses, begins to creep down along the slope. (See fig. 2.) There is thus normally a warm updraft on a sunlit slope and a cold downdraft on a shaded slope—and that rule

[1] Reprinted from the Sierra Club Bulletin, Vol. VIII, No. 2, June, 1911.

one may depend on almost any day in a windless region like the Yosemite. Indeed, one might readily take advantage of it and plan his trips so as to always have a dust-free journey. One might time his ascent for an hour when the route lies wholly in shadow; the dust will then obligingly pour over the edge of the trail, perhaps upon others following on a lower zigzag, but that, of course, is their lookout. Conversely one might time the descent for an hour when the trail is wholly in the sun; the dust will then float up behind one, leaving ever a clear path ahead. The writer, in fact, did deliberately put this in practice on more than one occasion during his sojourn in the valley, whenever the choice of hour mattered little otherwise—always with the desired result. Thus, he would be careful to make the ascent of the short trail to Glacier Point before its zigzags emerged from the morning shadows, and to descend again before the sun had set on them. But the casual tourist is seldom favored in this way. His sight-seeing trips are laid out for him with little regard for any rules like these, and as a consequence he eats Yosemite dust a good share of the time.

But, it may be objected, the valley sides lie ever part in sun, part in shadow. The very lay and configuration of

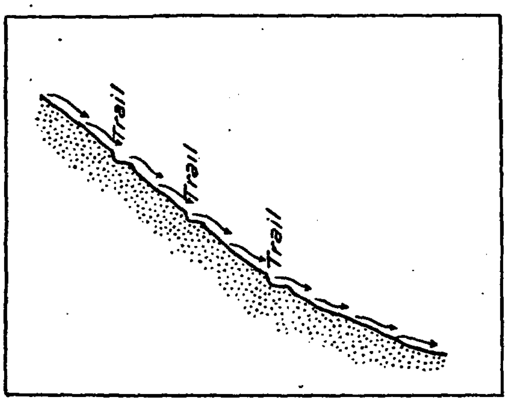


FIG. 2.

the valley are such that at no hour of the day is either of its slopes entirely sunlit; what with the many cliffs and headlands and recesses there is always a shadow here or there. Is there, then, really an updraft wherever the sun shines and a downdraft in every shadow patch? Most assuredly there is. That is one of the peculiarities of the valley, the immediate outcome of its exceptionally bold cliff topography. Every cliff that casts a shadow thereby creates a downward breeze. And thus there are in spots throughout the valley local breezes that recur daily at certain hours as the shadows come and go. One may readily test this to his satisfaction on a place like Glacier Point. In the morning, when the great cliff is still in shadow, a bit of paper tossed over the brink at once disappears, sucked down by a descending current, but at noon, when the sun beats on the cliff, the very opposite will happen; instead of sailing down, the paper shoots upward, and continuing upward disappears like a tiny white speck in the blue.

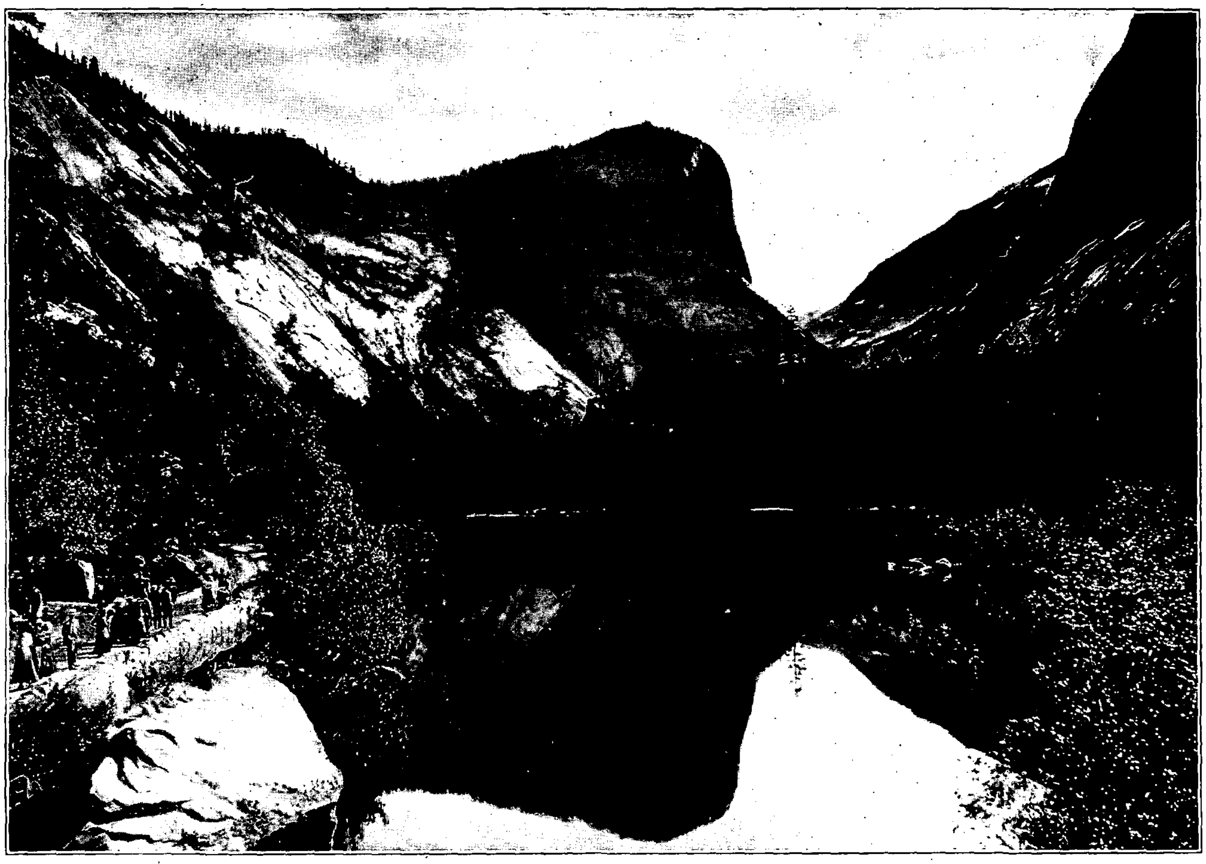
But let it not be thought that there are none but local air currents in the valley. There is also a great general movement, itself the resultant of all the lesser ones. How it is brought about is not difficult to explain. As the afternoon wears on and the lengthening shadows advance over the landscape the downward breezes progressively gain in force, exting ishing one after another the upward currents, until at last with the lowering of the sun they become general over the entire surface of the cooling land. Sliding down from every slope and cliff, they join in the bottom of the valley, there to form a broad air stream or river that flows on toward the plains below. Every side valley or canyon, moreover, sends its reenforcements, for in every one of them the same thing is happening; and thus with nightfall there is organized a great system of confluent air streams corresponding closely to the valley system of the land.

All night long this down-valley movement continues, until at length the morning brings the warming sun again. Then, as summit after summit and slope after slope is heated—insolated is the technical term—the warm updrafts are revived again. At first feeble and in spots only, they soon wax stronger and more general, and, as the shadows retreat and dwindle before the oncoming light invasion, they finally gain the upper hand. The nocturnal air streams cease to flow and a general movement is inaugurated in the opposite direction up toward the highlands at the valley head. It is not usually so noticeable as the night wind, for its tendency is naturally to spread and diffuse upward, while the nocturnal movement is one of condensation and concentration, especially vigorous along the valley floor. But it is none the less a well-defined, characteristic movement that continues throughout the day. Late in the afternoon with the growing of the shadows it gradually comes to a stop and the tide turns back again. Thus the air of the Yosemite Valley goes through a daily ebb and flood, reversing early every morning and again late in the afternoon.

Most mountain valleys have similar alternating night and day winds, but those of the Yosemite Valley are exceptionally pronounced. All conditions in its case favor the orderly consummation of the process and conspire to accentuate each phase. No general winds sweep over the country to interfere with the local up or down drafts, except at intervals of many weeks; and so exceedingly dry and pure is the atmosphere of the Sierra, so few particles of dust or moisture does it hold, that the sun's rays plunge through it almost without let or hindrance. Insolation, consequently, is particularly intense and begins almost immediately with the rising of the sun, while radiation is equally rapid and sets in promptly the moment the sun disappears. And thus it comes that the reversals in the Yosemite Valley take place with clocklike regularity, and the entire movement assumes the rhythmic swing of a pendulum. Nothing was better calculated to make this visible to the eye than the smoke column from the forest fires that raged persistently at the lower end of the valley during the summer of 1905. Every morning the valley was clear, having been swept out, so to speak, by the nocturnal down-valley current, and the smoke pall could be seen floating off to the southwest, low down on the Sierra flank. But with the rising of the warm day breezes the smoke would gradually advance up the valley, becoming denser by degrees, until by 9 or 10 o'clock one could scarcely see across from rim to rim. This condition would prevail all day until with the afternoon reversal the down-valley wind would set in again and take the smoke back with it. Much to the chagrin of the writer, who at the time was engaged in the survey of the valley and depended on the clearness of the air for his long-distance sights, this daily smoke invasion persisted for four long months with scarcely an interruption.

It may be imagined that he came to understand the phenomenon right well.

Oddly enough it is precisely upon this daily atmospheric seesaw that one of the Yosemite's chief attractions depends. As is well known, one must go to Mirror Lake at an early morning hour if he wishes to see it at its best. The surprised and usually somewhat vexed tourist who finds he must arise at an impossible hour in order to enjoy a perfect reflection, little dreams that what he is undertaking really amounts to keeping a tryst with the early morning reversal out on the shores of Mirror Lake; and that, unless he be quite punctual he will miss it because of its almost momentary briefness. Yet such is actually the case. The stillness of the water surface sets in just as the down-valley draft dies out; but as soon as the upper cliffs of Tenaya Canyon become sufficiently insolated, updrafts begin to stir the air again and a faint tremor forthwith steals over the lake. Accepting the correctness of this explanation, one is tempted to believe there might be another calm corresponding to the afternoon reversal—an ever so much more convenient hour for the tourist. But, alas, experience has shown that this can not always be depended on. The reason is, no doubt, that in the afternoon there is no well-defined pause in the circulation of the air of the Tenaya Canyon, because of the presence of great shadows on its north side which send down eddying breezes at various times.



MIRROR LAKE, YOSEMITE VALLEY.

Photograph by Pillsbury Picture Co.

This discussion of the winds of the Yosemite Valley would scarcely be complete without a word about the breezes that play near the great waterfalls. Each of these, it will be remembered, leaps from the mouth of an elevated hanging valley. At night, when the down-valley currents are organized, the stream issuing from each of these valleys plunges down over the cliff very much like a waterfall. Few people probably are aware of the existence of these—shall we call them "air falls?" Nevertheless, they are by no means imaginary, as one may readily find out by ascending either the Yosemite Falls trail or the Nevada Falls trail in the evening. The writer had occasion to do so many times when returning to his high-level camps above the valley, and the unpleasant memory of the chilling downdrafts that poured upon him on these evening trips is with him yet. During the daytime, on the other hand, the air rises vertically along the cliffs and up into the hanging valleys, taking part of the spray from the falls along with it. A pretty example of this may be seen at the Bridal Veil Falls, where two little combs of spray, one on each side of the stream, steadily curve upward over the brink. As soon as the sun is off the cliff, however, they at once cease to exist.

Many other features about the valley that find their explanation in the wind system here outlined might be added, but the foregoing will suffice to direct attention to them.

TABLE 1.—*Climatological data for August, 1911. District No. 11, California.*

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.
Oregon.																				
Klamath Agency	Klamath	4,169	3	55.4		91	29	24	25	66	0		0	0	0	29	2	0	nw.	Edson C. Watson.
Klamath Falls	do	4,100	22																	W. H. Heileman.
Lakeview	Lake	4,825	28																	Bert Rice.
Merrill	Klamath	4,070	5	61.0		89	28	34	18	47	0		0	0	0	29	1	0		Mrs. Agnes Ritchson.
Yonna	do	4,146	4	59.4		92	30	29	16	51	0		0	0	0	20	11	0	w.	Jacob Ruecke.
California.																				
Alameda	Alameda		1	62.6		83	20	52	8†	30	0.00		0.00	0	0	4	27	0	nw.	Chas. E. Sears.
Alturas	Modoc	4,460	7	63.0		96	30	30	16	61	0.00		0.00	0	0	31	0	0	sw.	Prof. C. B. Towle.
Angiola	Tulare	208	11	76.2	- 1.2	107	1	48	18	53	0.00	0.00	0.00	0	0	31	0	0	w.	Santa Fe Co.
Antioch **	Contra Costa	46	32	82.0	+ 7.5	97	11	61	29		0.00	- 0.01	0.00	0	0	31	0	0	e.	Southern Pacific Co.
Aptos **	Santa Cruz	102	26	61.4	0.0	80	20	51	16		0.00	- 0.05	0.00	0	0	27	0	4	nw.	Do.
Arrowhead Springs	San Bernardino	2,000	2	79.7		102	31	49	27	34	0.00		0.00	0	0					Dr. E. Soegaard.
Auburn	Placer	1,360	40	72.4	- 3.5	98	1†	45	4	49	0.00	- 0.02	0.00	0	0	31	0	0		Southern Pacific Co.
Avalon	Los Angeles		1	65.6		78	20	57	9†	15	0.00		0.00	0	0	31	0	0	w.	T. S. Manning.
Azusa	do	540	9	75.4		107	31	47	13	55	0.00	- 0.09	0.00	0	0	31	0	0	sw.	A. P. Griffith.
Bagdad	San Bernardino	784	8	96.6		112	19	80	27†	25	0.00		0.00	0	0	31	0	0		Santa Fe Co.
Bakersfield	Kern	404	22	76.4	- 8.3	99	1	54	28	35	0.00	- 0.01	0.00	0	0	31	0	0		Do.
Barstow	San Bernardino	2,105	8	84.6		112	18	53	11	50	0.00	- 0.12	0.00	0	0	31	0	0	n.	E. L. White.
Berkeley	Alameda	317	24	59.0	- 1.9	79	19†	50	15	27	0.00	- 0.07	0.00	0	0	6	15	10	sw.	State University.
Biggs **	Butte	98	12	71.4	- 2.6	93	21	58	5†		0.00	- 0.02	0.00	0	0	31	0	0	s.	Southern Pacific Co.
Bishop	Inyo	4,450	16																	W. A. Chalfant.
Bishop Creek	do	8,500	1	59.0		78	19	36	12	37	0.00		0.00	0	0					Paul E. Lodge.
Blocksburg	Humboldt	1,700	5	65.8		95	24	41	15†	49	0.00		0.00	0	0	30	0	1	nw.	Victor Hope.
Blue Canon	Placer	4,695	12	64.7	+ 2.0	88	24	41	20	37	0.00	- 0.16	0.00	0	0	31	0	0		Southern Pacific Co.
Blythe	Riverside		2																	Ray W. Ward.
Branscomb	Mendocino	2,000	11	63.8		93	24	36	11†	43	0.00	- 0.02	0.00	0	0	29	2	0	n.	A. J. Haun.
Brawley	Imperial	- 105	2	91.0n		111	19	65	8†	41	0.00		0.00	0	0					M. D. Witter.
Brush Creek	Butte	2,140	7	71.4		100	22	42	26†	54	0.00		0.00	0	0	31	0	0	s.	Cal. Gas & Elec. Co.
Burney	Shasta	3,300	1	61.4		90	24†	32	16	51	0.00		0.00	0	0	29	2	0	sw.	Mrs. M. D. Chambers.
Calexico	Imperial	0	6	90.8		112	30	65	4	41	0.00		0.00	0	0	24	7	0	se.	J. E. Peck.
Caliente **	Kern	1,290	35	88.5	+ 5.4	104	3†	70	5		0.00	- 0.01	0.00	0	0	31	0	0		Southern Pacific Co.
Calistoga **	Napa	363	39	71.2	+ 0.9	100	2†	50	31		0.00	- 0.01	0.00	0	0	31	0	0		Do.
Campbell	Santa Clara	217	14	61.6	- 2.5	88	20	39	16	47	0.00	- 0.04	0.00	0	0	31	0	0	nw.	F. M. Righter.
Camptonville (near)	Yuba	3,500	4	74.4		100	2	48	15	46	0.00		0.00	0	0	31	0	0		Cal. Gas & Elec. Co.
Cedarville	Modoc	4,675	17	67.4	- 0.5	89	27	43	10	43	0.00	- 0.26	0.00	0	0	30	1	0	sw.	T. H. Johnstone.
Chico	Butte	189	41	74.8	- 6.7	102	1	50	8†	46	0.00	- 0.03	0.00	0	0	31	0	0	s.	G. H. Stephenson.
China Flat	Humboldt	600	2	72.8		104	25	45	16	52	0.00		0.00	0	0	30	1	0	s.	O. I. Westerburg.
Chino **	San Bernardino	714	19	84.4	+ 9.2	105	17	68	12		0.00	0.00	0.00	0	0	30	0	1	e.	Southern Pacific Co.
Cisco **	Placer	5,939	40	61.0	- 0.8	84	1	42	11†		0.00	- 0.02	0.00	0	0	31	0	0		Do.
Claremont	Los Angeles	1,200	19	74.6	+ 4.0	107	31	49	7†	44	T.	- 0.05	T.	0	0	21	9	1	w.	F. P. Brackett.
Cloverdale	Sonoma	340	8	69.3		97	21	41	12	59	0.00		0.00	0	0	31	0	0	s.	John O. Ogle.
Colfax	Placer	2,421	40	69.7	- 6.8	91	1	49	15	32	0.00	- 0.02	0.00	0	0	31	0	0	n.	Southern Pacific Co.
Colusa	Colusa	60	8	70.8		94	24	50	10†	40	0.00	0.00	0.00	0	0	31	0	0	s.	C. D. McCormish.
Corning **	Tehama	277	25	84.3	+ 3.2	101	24	66	28		0.00	- 0.03	0.00	0	0	26	5	0	s.	Southern Pacific Co.
Cuyamaca	San Diego	4,677	12	71.0	+ 6.5	91	17†	48	26	34	T.	- 0.07	T.	0	0	19	11	1	e.	L. L. Macquarie.
Daunt	Tulare	4,000	4	69.1		91	18†	49	11	41	0.00		0.00	0	0	31	0	0		D. L. Wishon.
Davisville	Yolo	51	39	68.2	- 5.9	99	30	37	16†	58	0.00	- 0.01	0.00	0	0	31	0	0	sw.	S. H. Beckett.
Deer Creek	Nevada	3,700	4	61.4		88	22†	34	20	52	0.00		0.00	0	0	31	0	0	w.	Cal. Gas & Elec. Co.
Del Monte	Monterey			61.7		72	21†	48	16	20	0.00		0.00	0	0	25	0	6	n.	H. R. Warner.
Delta	Shasta	1,138	26	71.5	- 4.8	99	24†	48	3†	47	0.00	- 0.01	0.00	0	0	31	0	0	s.	Southern Pacific Co.
Denair	Stanislaus	126	11	71.2	- 5.2	97	1†	47	11	48	0.00	0.00	0.00	0	0	31	0	0		Santa Fe Co.
Dobbins	Yuba	1,650	7	74.6		98	30	54	12†	38	0.00		0.00	0	0	28	3	0	s.	Cal. Gas & Elec. Co.
Dudleys	Mariposa	3,000	2	63.5		93	31	38	21	50	0.00		0.00	0	0	30	1	0	nw.	W. H. Dudley.
Dunnigan **	Yolo	65	34	83.6	+ 3.9	100	1†	58	11		0.00	- 0.02	0.00	0	0	30	0	1	s.	Southern Pacific Co.
Dunsmuir **	Siskiyou	2,285	22	65.8	- 1.1	99	1	47	12		0.00	- 0.10	0.00	0	0	31	0	0	n.	Do.
Durham	Butte	160	16	73.4	- 2.3	99	24†	47	16†	47	0.00	- 0.03	0.00	0	0	30	1	0	s.	R. W. Durham.
El Cajon	San Diego	482	12	73.2	+ 2.2	103	30	49	16	52	0.00	- 0.11	0.00	0	0	31	0	0	sw.	H. H. Kessler.
Electra	Amador	725	7	74.5		102	2†	48	15†	50	0.00		0.00	0	0	31	0	0		Cal. Gas & Elec. Co.
Elsinore	Riverside	1,234	16	75.4	- 1.7	111	31	43	22	59	0.00	- 0.05	0.00	0	0	29	1	1	w.	A. F. Schult.
Emigrant Gap	Placer	5,230	37	67.6	+ 1.7	86	1†	49	12†	32	0.00	- 0.04	0.00	0	0	31	0	0		Southern Pacific Co.
Escondido	San Diego	657	17	72.8	+ 0.7	103	31	46	13†	51	0.00	0.00	0.00	0	0	18	13	0	w.	A. R. Moon.
Eureka	Humboldt	64	25	55.8	0.0	65	19	48	16	16	0.08	- 0.06	0.05	0	4	0	19	12	n.	U. S. Weather Bureau.
Farmington **	San Joaquin	111	32	77.0	+ 0.8	96	21†	55	27		0.00	0.00	0.00	0	0	31	0	0	nw.	Southern Pacific Co.
Folsom	Sacramento	252	39	72.8	- 6.6	98	31	50	10	43	0.00	- 0.03	0.00	0	0	31	0	0	s.	F. O. Hutton.
Fordyce Dam	Nevada	6,500	16	57.0		79	29	38	5†	36	0.00	- 0.38	0.00	0	0	31	0	0	sw.	E. E. Roening.
Fouts Springs	Colusa	1,650	7	69.6		99	6	42	15	45	0.00		0.00	0	0					A. J. Burgi.
Fresno	Fresno	293	24	77.2	- 4.0	104	31	55	5	42	0.00	0.00	0.00	0	0	31	0	0	w.	U. S. Weather Bureau.
Fruto **	Glenn	624	22	77.2	- 3.4	100	24	58	15		0.00	- 0.05	0.00	0	0	31	0	0	s.	Southern Pacific Co.
Galt **	Sacramento	49	33																	Do.
Georgetown	El Dorado	2,650	38	72.7	- 5.2	95	24	52	8†	36	0.00	- 0.02	0.00	0	0	31	0	0	sw.	H. D. Jerrett.
Gilroy **	Santa Clara	193	37	64.9	- 3.0	95	20†	50	6†		0.00	- 0.04	0.00	0	0	31	0	0	se.	Southern Pacific Co.
Gilta	Siskiyou	3,300	1	65.9		93	30	38	15	39	0.00		0.00	0	0	31	0	0	e.	A. Dannenbrink.
Glennville	Kern	5,500	1	63.8		83	21	48	13	33	0.00		0.00	0	0	30	1	0		C. H. Likely.
Gold Run	Placer	3,222	12	73.6	+ 1.0	93	1	55	12†	30	0.00	- 0.02	0.00	0	0	31	0	0		Southern Pacific Co.
Gonzales **	Monterey	127	12	71.7	+10.4	94	8	52	3†		0.00	0.00	0.00	0	0	31	0	0	nw.	Do.
Grass Valley	Nevada	2,690	39	70.2		91	30	50	11†	35	0.00	- 0.02	0.00	0	0	31	0	0	sw.	F. R. Hull.
Greenville	Plumas	3,600	17	59.7	- 3.8	95	29	31	18†	58	0.00	- 0.30	0.00	0	0	31	0	0	sw.	C. H. Higbie.
Groveland	Tuolumne	2,828	2	69.0		93	31	48	17	39	0.00		0.00	0	0	30	1	0		H. S. Richardson.
Guinda **	Yolo	350	13																	Southern Pacific Co.
Hanford	Kings	249	11	70.9	- 6.6	94	30	48	16	44	0.00	0.00	0.00	0	0	29	2	0		Santa Fe Co.
Healdsburg	Sonoma	110	18	66.9	+ 2.1	99	20	42	13	50	0.00	- 0.02	0.00	0	0	8	23	0	s.	F. J. Kinley.
Hearst	Mendocino	1,800	1	69.4		96	1†	44	5†	51	0.00		0.00	0	0	30	1	0	sw.	H. D. Ellmaker.
Heber	Imperial	-20	5	90.0		114	30	63	4	45	0.05		0.05	0	1	23	8	0	se.	C. J. Booth.
Hetch Hetchy	Tuolumne	3,665																		E. W. Brown.
Hollister	San Benito	284	37	61.6	- 5.1	94	20†	42	17	50	0.00	- 0.04	0.00	0	0	30	1	0	w.	J. N. Thompson.
Hornbrook **	Siskiyou	2,154	23	65.0	-10.3	86	2†	48	15		0.00	- 0.14	0.00	0	0	30	0	1		Southern Pacific Co.
Hot Springs	Tulare	3,300	4	71.6		91	1†	52	13	32	0.00		0.00	0	0	31	0	0		U. S. Forest Service.
Hullville (near)	Lake	2,250	4	68.5		95	24	40	15	47	0.00		0.00	0	0	12	19	0	sw.	T. H. Betterton.
Idyllwild	Riverside	5,250	10	68.4	+ 1.1	91	24†	36	25	51	0.00	- 1.33	0.00	0	0	29	2	0	sw.	Earl Powers.
Independence	Inyo	3,907	15	74.6	- 1.8	100	18	50	13	47	0.00	- 0.22	0.00	0	0	31	0	0	nw.	U. S. Weather Bureau.
Indio	Riverside	-20	33	91.2	- 1.8	114	30	65	27	38	0.00	- 0.14	0.00	0	0	29	2	0	nw.	F. N. Johnson.
Inskip	Butte	4,975	4	66.4		86	24	46	15	32	0.00		0.00	0	0	25	6	0		Cal. Gas & Elec. Co.
Ione **	Amador	287	33	74.8	- 3.3	96	21†	56	16†		0.00	0.00	0.00	0	0	30	0	1	nw.	Southern Pacific Co.

Table 1.—*Climatological data for August, 1911. 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.																				
Jamestown	Tuolumne	1,471	8	72.0		96	1†	48	14†	42	0.00		0.00	0	0	31	0	0		Sierra Railway Co.
King City	Monterey	333	24	66.2	− 0.2	100	30	35	27	60	0.00	0.00	0.00	0	0	31	0	0		Southern Pacific Co.
Lake Eleanor	Tuolumne	4,700	1																	O. J. Todd.
La Porte	Plumas	5,000	17	60.4	+ 0.6	85	24	38	20	40	0.00	− 0.22	0.00	0	0	31	0	0	n.	Chas. W. Hendel.
Le Grand	Merced	255	11	73.3	− 2.9	101	21†	47	17	52	0.00	0.00	0.00	0	0	31	0	0		Santa Fe Co.
Lemon Cove	Tulare	600	16	79.4	− 0.5	105	28	52	25	49	0.00	0.00	0.00	0	0	31	0	0	sw.	G. W. Sandidge.
Lick Observatory	Santa Clara	4,209	22	66.9	− 2.2	83	30	51	21	28	0.00	− 0.03	0.00	0	0	31	0	0	nw.	The Director.
Livermore	Alameda	485	40																	E. G. Still.
Lodi	San Joaquin	45	29	67.6	− 5.4	92	21†	45	15†	42	0.00	− 0.05	0.00	0	0	31	0	0	w.	Ezra Fiske.
Lone Pine	Inyo	2,728	6	72.2		99	1†	49	10†	46	0.00		0.00	0	0	31	0	0	s.	G. F. Marsh.
Long Valley	Lassen	4,400	2	68.2		92	30	38	20	48	0.00		0.00	0	0	22	7	2	sw.	A. G. Evans.
Los Angeles	Los Angeles	293	34	70.6	+ 2.0	95	18	55	12	32	0.00	− 0.03	0.00	0	0	22	8	1	sw.	U. S. Weather Bureau.
Los Banos **	Merced	121	24	73.3	− 6.0	96	1	56	26	....	0.00	0.00	0.00	0	0	30	0	1	w.	Southern Pacific Co.
Los Gatos	Santa Clara	600	24	64.4	− 2.8	93	20	45	15†	44	0.00	− 0.05	0.00	0	0	31	0	0	n.	F. H. McCullagh.
McCloud	Siskiyou	3,410	1	60.4		83	24	34	16	40	0.00		0.00	0	0	31	0	0	s.	F. F. Spencer.
Macdoel	....do	4,258	4	60.3		91	30	32	20	49	0.00		0.00	0	0	30	1	0	nw.	Butte Valley L. Co.
Madeline	Lassen	5,270	2	61.2		87	29	31	16	51	0.00		0.00	0	0	31	0	0	nw.	J. H. Williams.
Magalia	Butte	2,321	7	69.2		94	1†	45	13†	45	0.00		0.00	0	0	31	0	0	se.	Butte C. R. R. Co.
Mammoth Tank	Imperial	257	33	92.8	− 4.0	114	19	69	5†	38	0.00	− 0.23	0.00	0	0	28	1	2	w.	Southern Pacific Co.
Marysville	Yuba	67	40	71.6	− 7.3	97	20†	48	10†	46	0.00	0.00	0.00	0	0	31	0	0	s.	Do.
Mecca	Riverside	−185	5	89.7		113	30	63	4	40	0.00		0.00	0	0	24	7	0	se.	E. A. Palmer.
Menlo Park **	San Mateo	64	33	66.5	− 0.2	89	19	51	30	....	0.00	− 0.04	0.00	0	0	31	0	0		Southern Pacific Co.
Merced	Merced	173	7																	Santa Fe Co.
Mill Creek (1)	Amador		4	66.5		89	31	48	22	40	0.00		0.00	0	0	31	0	0	n.	Cal. Gas & Elec. Co.
Milton (near)	Calaveras	660	20	73.5	− 3.0	97	21	51	5†	38	0.00	− 0.01	0.00	0	0	26	5	0	nw.	J. H. Southwick.
Modesto **	Stanislaus	90	39	82.5	+ 2.8	97	1†	65	10†	....	0.00	0.00	0.00	0	0	31	0	0		Southern Pacific Co.
Mojave	Kern	2,751	34																	Do.
Mokelumne Hill	Calaveras	1,550	18	73.4	+ 0.8	94	30	53	15	34	0.00	− 0.02	0.00	0	0	31	0	0		C. E. Prindle.
Mono Ranch	Ventura	3,210	5	66.4		95	31	46	12†	45	0.00		0.00	0	0	31	0	0	w.	Herbert Lathrop.
Montague	Siskiyou	2,450	23	69.6	− 8.1	95	24†	43	21	47	0.00	− 0.15	0.00	0	0	24	7	0	n.	I. E. Deboy.
Monterey **	Monterey	15	46	58.6	− 3.3	70	10†	46	3†	....	0.00	− 0.03	0.00	0	0	31	0	0	sw.	Southern Pacific Co.
Monterio	Kern	4,500	12																	John C. Knecht.
Mount Tamalpais	Marin	2,375	12	66.1	+ 0.2	89	30	44	14	26	0.00	− 0.01	0.00	0	0	29	2	0	nw.	U. S. Weather Bureau.
Napa City	Napa	20	34	61.6	− 3.4	88	30	45	16†	42	0.00	− 0.03	0.00	0	0	4	27	0	sw.	Alex. Hull.
Napa (S. H.)	....do	60	33	61.4	− 3.6	90	20	43	15	42	0.00	− 0.03	0.00	0	0	30	1	0	sw.	W. H. Martin.
Needles	San Bernardino	477	19	92.2	− 0.1	110	19†	73	7	32	0.00	− 0.22	0.00	0	0	30	0	1		Santa Fe Co.
Nellie	San Diego	5,350	2	58.1[d]		91	31	46	6†	44	0.00		0.00	0	0	31	0	0		T. O. Bailey.
Nevada City	Nevada	2,580	19	67.0	0.0	95	21†	38	20	56	0.00	− 0.05	0.00	0	0	31	0	0	sw.	S. W. Marsh.
Newcastle	Placer	970	18																	G. D. Kellogg.
Newhall **	Los Angeles	1,200	34	76.8	− 0.5	108	31	60	2†	....	0.00	− 0.03	0.00	0	0	29	0	2	se.	Southern Pacific Co.
Newman	Stanislaus	91	22	77.7	− 4.1	105	1	58	17	35	0.00	− 0.01	0.00	0	0	31	0	0	n.	E. S. Wangenheim.
Nimshew	Butte	2,500	7	69.2		98	3	46	18	41	0.00		0.00	0	0	31	0	0	s.	Cal. Gas & Elec. Co.
North Bloomfield	Nevada	3,200	14	71.6	+ 1.7	90	20†	51	24	39	0.00	− 0.02	0.00	0	0	29	2	0	s.	J. R. McIntosh.
North Fork	Madera	3,000	7	69.5		96	31	42	22	50	0.00		0.00	0	0	30	0	1	w.	U. S. Forest Service.
Oakdale **	Stanislaus	156	17	72.5	− 3.8	98	21†	55	5	....	0.00	− 0.02	0.00	0	0	31	0	0	nw.	Southern Pacific Co.
Oak Grove	San Diego		1	70.7		104	31	40	4†	55	0.00		0.00	0	0	30	1	0	nw.	U. S. Forest Service.
Oakland	Alameda	36	35	60.2	− 1.1	80	20	51	6	26	T.	− 0.03	T.	0	0	7	15	9	w.	Cabot Observatory.
Oceanside	San Diego		1	71.3		86	19	56	28	25	T.		T.	0	0	22	9	0	w.	H. D. Brodie.
Ojai Valley	Ventura	900	5	70.6		108	31	44	23†	52	0.00		0.00	0	0	29	2	0	sw.	W. H. Duncan.
Orland	Glenn	254	29	76.2	− 8.0	105	24	50	14	46	0.00	− 0.02	0.00	0	0	29	2	0	s.	U. S. Reclamation Service.
Orleans	Humboldt	520	8	76.6		108	24	46	15	53	0.00		0.00	0	0	31	0	0		F. T. Hale.
Oroville (near)	Butte	250	27	74.0	− 5.3	100	30	49	15	44	0.00	− 0.02	0.00	0	0	30	1	0	s.	E. D. Fairchild.
Palermo	....do	213	20	74.2	− 2.9	106	17	48	29	51	0.00	− 0.06	0.00	0	0	21	10	0	s.	Western Pacific Co.
Palm Springs **	Riverside	584	22	89.5	− 3.7	112	16†	78	4†	....	0.00	− 0.19	0.00	0	0	26	5	0	w.	Southern Pacific Co.
Pasadena	Los Angeles	827	21	69.9	− 3.6	101	31	45	12	46	0.00	− 0.02	0.00	0	0	31	0	0	sw.	E. D. Sorver.
Paso Robles	San Luis Obispo	800	24	67.6	− 3.5	106	1	36	26	61	0.00	− 0.12	0.00	0	0	30	1	0	nw.	Dr. F. W. Sawyer.
Peachland	Sonoma	190	15	62.4	− 0.9	93	20	38	15	48	0.01	− 0.05	0.01	0	1	13	18	0	sw.	E. H. Parnell.
Penstock Camp	Tuolumne	3,750	4																	Tuolumne Water Power Co.
Placerville	El Dorado	1,875	22	69.0	− 0.8	94	1†	44	16†	46	0.00	− 0.02	0.00	0	0	31	0	0		A. Baring-Gould.
Point Lobos	San Francisco	250	18	55.0	− 2.0	74	20	48	6	20	T.	− 0.06	T.	0	0	8	5	18	w.	John Hyslop.
Point Reyes	Marin	490	19	52.4	− 2.1	58	19	47	6	9	0.00	− 0.13	0.00	0	0	5	5	21	nw.	U. S. Weather Bureau.
Porterville	Tulare	464	22	78.2	− 6.6	103	21†	55	5†	45	0.00	− 0.01	0.00	0	0	31	0	0		Leslie McAuliff.
Quincy	Plumas	3,400	16	59.7	− 3.9	88	29	31	20†	52	0.00	− 0.17	0.00	0	0	31	0	0	sw.	U. S. Forest Service.
Red Bluff	Tehama	307	34	76.6	− 4.4	102	24	54	15	40	0.00	− 0.02	0.00	0	0	31	0	0	se.	U. S. Weather Bureau.
Redding	Shasta	552	35																	
Redlands	San Bernardino	1,352	18	76.2	− 1.3	106	31	51	11	46	T.	− 0.52	T.	0	0	28	2	1	w.	P. W. Moore.
Reedley	Fresno	347	11	75.7	− 4.3	101	1	52	29	45	0.00	0.00	0.00	0	0	31	0	0	n.	Santa Fe Co.
Rialto (near)	San Bernardino	2,250	5	76.2		103	31	52	5	36	0.00		0.00	0	0	28	2	1	se.	So. Cal. Edison Co.
Riverside	Riverside	851	29	74.8	− 1.6	110	31	48	12†	58	0.00	− 0.18	0.00	0	0	28	3	0	sw.	J. H. Cox.
Rocklin	Placer	249	40																	Southern Pacific Co.
Rohnerville	Humboldt	75	8	58.6		74	16†	41	16	33	0.00		0.00	0	0	12	16	3	nw.	Dr. R. Callahan.
Sacramento (1)	Sacramento	71	34	68.8	− 3.3	93	30	50	10	38	0.00	0.00	0.00	0	0	31	0	0	s.	U. S. Weather Bureau.
Sacramento (2)	....do	35	58	67.2	− 5.4	88	20	50	10†	34	0.00	− 0.01	0.00	0	0	31	0	0	s.	S. H. Gerrish.
St. Helena	Napa	255	3	65.4		99	20	40	15	52	0.00		0.00	0	0	9	21	1		Frank Kettlewell.
Salinas	Monterey	40	37	59.8	− 1.8	78	20	46	20	32	0.00	− 0.02	0.00	0	0	29	0	2		Miss E. Ruth Abbott.
San Bernardino	San Bernardino	1,054	19	75.6	+ 0.7	109	31	47	12†	58	0.00	− 0.18	0.00	0	0	29	1	1		Dr. A. K. Johnson.
San Diego	San Diego	93	40	67.4	− 1.3	84	19	58	13	18	0.00	− 0.12	0.00	0	0	28	3	0	nw.	U. S. Weather Bureau.
San Francisco	San Francisco	207	40	56.6	− 1.4	79	20	49	30	25	0.00	− 0.01	0.00	0	0	6	18	7	sw.	Do.
San Jacinto	Riverside	1,550	18	76.3	+ 0.3	108	31	46	27	45	0.00	− 0.10	0.00	0	0	29	0	2	w.	E. T. Tanner.
San Jose	Santa Clara	95	36	62.4	− 4.3	88	20	42	16	44	0.00	− 0.03	0.00	0	0	31	0	0	nw.	U. S. Weather Bureau.
San Leandro	Alameda	48	16	61.2	− 3.4	86	20	43	20	43	T.	− 0.12	T.	0	0	24	3	4	w.	Frank Jones.
San Luis Obispo	San Luis Obispo	201	16	63.0	− 0.5	95	20	45	15	42	0.00	0.00	0.00	0	0	18	13	0	nw.	U. S. Weather Bureau.
San Mateo **	San Mateo	22	37	65.5	+ 0.3	82	20	57	25	....	0.00	− 0.02	0.00	0	0	9	22	0	nw.	Southern Pacific Co.
San Miguel **	San Luis Obispo	616	24	73.9	+ 1.0	97	30	52	26†	....	0.00	− 0.05	0.00	0	0	25	6	0		Do.
San Miguel Island	Santa Barbara	500	17	56.3		66	20†	51	1†	12	0.00	− 0.02	0.00	0	0	20	0	11	nw.	Capt. W. G. Waters.
Sanger **	Fresno	371	22																	Southern Pacific Co.
Santa Barbara	Santa Barbara	130	27	65.2	− 1.7	88	13†	50	1†	35	0.00	0.00	0.00	0	0	21	10	0	w.	G. W. Russell.
Santa Clara	Santa Clara	90	22	62.7	− 1.0	90	30	39	16	48	0.00	− 0.04	0.00	0	0	31	0	0	nw.	Santa Clara College.
Santa Cruz	Santa Cruz	20	38	61.8	− 2.7	85	19	44	12†	40	0.00	− 0.04	0.00	0	0	27	2	2	w.	W. R. Springer.
Santa Margarita **	San Luis Obispo	996	22																	Southern Pacific Co.
Santa Maria	Santa Barbara	220	23	67.4	+ 2.5	87	17	50	2†	28	0.00	0.00	0.00	0	0	31	0	0	w.	Edwin Morris.
Santa Monica	Los Angeles	110	26	61.8	− 8.5	79	18	51	13†	26	0.00	− 0.03	0.00	0	0	28	2	1	w.	N. D. Ingham.
Santa Rosa	Sonoma	181	22																	M. L. McDonald, jr.
Selma **	Fresno	311	25	80.6	− 2.5	98	31	68	9†	....	0.00	0.00	0.00	0	0	31	0	0	nw.	Southern Pacific Co.
Seven Oaks	San Bernardino	5,000	1	67.4		92	31	43	12	41	0.00		0.00	0	0	31	0	0	w.	M. Lewis.
Shasta	Shasta	1,048	15	77.0	− 2.4	108	13	45	10	54	0.00	− 0.06	0.00	0	0	31	0	0	nw.	Dr. T. J. Edgecomb.

TABLE 1.—*Climatological data for August, 1911. 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.																				
Sierra Madre	Los Angeles	1,400	14	74.3	+ 2.1	100	31	55	7†	38	0.00	− 0.07	0.00	0	0	31	0	0	s.	Mrs. A. C. Gregory.
Sierraville	Sierra	5,000	1	59.7	....	92	29	28	15	59	0.00	....	0.00	0	0	31	0	0	....	C. D. Johnson.
Sisson	Siskiyou	3,555	22	61.8	− 5.8	88	31	33	15	48	0.00	− 0.15	0.00	0	0	31	0	0	n.	Southern Pacific Co.
Soledad **	Monterey	188	37	....	....	....	....	.....	....	....	.....	....	.....	....	....	....	....	....	....	Do.
Southeast Farallon	San Francisco	30	8	53.8	....	59	28	48	3	6	T.	....	T.	0	0	8	4	19	nw.	U. S. Weather Bureau.
Sonora	Tuolumne	1,825	23	72.4	....	95	31	52	5†	43	0.00	− 0.05	0.00	0	0	31	0	0	sw.	Chas. P. Jones.
Squirrel Inn	San Bernardino	5,280	1	66.8	....	89	31	50	13†	31	0.00	....	0.00	0	0	30	1	0	s.	A. D. Frantz.
Stirling City	Butte	3,525	7	67.7	....	92	5†	42	28	50	0.00	....	0.00	0	0	31	0	0	se.	Butte Co. R. R. Co.
Stockton (S. H.)	San Joaquin	23	40	68.8	− 3.7	94	30	50	11†	39	0.00	− 0.01	0.00	0	0	31	0	0	nw.	State Hospital.
Storey	Madera	296	11	70.4	− 7.0	103	31	41	17	61	0.00	0.00	0.00	0	0	31	0	0	nw.	Santa Fe Co.
Suisun **	Solano	20	31	72.0	+ 1.3	87	24	61	27	....	0.00	− 0.04	0.00	0	0	26	1	4	w.	Southern Pacific Co.
Summerdale	Mariposa	5,270	15	64.7	− 0.8	85	31	47	15	32	0.00	− 0.14	0.00	0	0	30	1	0	s.	Mrs. J. E. Lowry.
Summit	Placer	7,017	38	54.0	− 6.3	78	27	32	16	39	0.00	− 0.05	0.00	0	0	31	0	0	sw.	Southern Pacific Co.
Susanville	Lassen	4,175	22	63.2	− 7.5	86	30	39	20	40	0.00	− 0.12	0.00	0	0	28	3	0	....	James Branham.
Tamarack	Alpine	8,000	5	54.0	....	74	20†	32	12†	40	0.00	....	0.00	0	0	26	5	0	se.	William Bennett.
Tehachapi **	Kern	3,964	34	78.5	+ 4.0	86	2	69	31	....	0.00	− 0.11	0.00	0	0	....	....	....	....	Southern Pacific Co.
Tehama **	Tehama	220	40	78.6	− 2.7	99	2	66	15†	....	0.00	− 0.05	0.00	0	0	31	0	0	....	Do.
Tejon Rancho	Kern	1,500	9	72.6	....	89	1†	57	12†	24	0.00	....	0.00	0	0	31	0	0	n.	S. E. Bailey.
Three Rivers	Tulare	870	1	74.5	....	102	1	51	15	48	0.00	....	0.00	0	0	31	0	0	sw.	E. D. Barton.
Towle	Placer	3,704	25	66.3	− 2.4	89	31	45	12†	42	0.00	− 0.12	0.00	0	0	31	0	0	sw.	Southern Pacific Co.
Tracy **	San Joaquin	64	31	79.6	+ 2.1	95	3†	60	8	....	0.00	− 0.01	0.00	0	0	25	6	0	nw.	Do.
Ukiah	Mendocino	620	18	70.5	− 1.3	111	22	40	15	62	0.00	− 0.01	0.00	0	0	29	2	0	nw.	Dr. Geo. McCowen.
Upland	San Bernardino	1,750	14	73.0	0.0	102	17	48	11	44	0.00	− 0.01	0.00	0	0	31	0	0	w.	A. P. Harwood.
Upper Lake	Lake	1,350	26	72.8	− 0.4	104	30	42	15	52	0.00	− 0.06	0.00	0	0	31	0	0	nw.	C. M. Hammond.
Vacaville	Solano	175	23	69.5	− 5.7	99	30	45	26	50	0.00	− 0.04	0.00	0	0	31	0	0	sw.	G. O. Coburn.
Valley Springs **	Calaveras	673	22	75.0	− 3.3	99	1	62	11†	....	0.00	− 0.01	0.00	0	0	31	0	0	nw.	Southern Pacific Co.
Visalia	Tulare	334	23	73.1	− 5.7	100	21	46	16†	50	0.00	− 0.01	0.00	0	0	30	1	0	....	Santa Fe Co.
Warner Springs	San Diego	3,165	3	71.8	....	98	31	45	25	42	0.00	....	0.00	0	0	31	0	0	....	Mrs. F. S. Sandford.
Wasco	Kern	336	11	77.9	− 2.1	110	6	44	17	57	0.00	− 0.02	0.00	0	0	....	....	....	....	Santa Fe Co.
Watsonville	Santa Cruz	23	15	59.3	− 3.5	85	19	39	15†	46	0.00	0.00	0.00	0	0	7	23	1	se.	Spreckels Sugar Co.
Weitchpec	Humboldt	1,700	1	66.0	....	94	24†	40	15	40	0.00	....	0.00	0	0	31	0	0	s.	M. E. Lathrop.
Westley **	Stanislaus	90	22	76.8	− 2.8	95	30	60	10†	....	0.00	0.00	0.00	0	0	31	0	0	....	Southern Pacific Co.
Wheatland	Yuba	84	24	71.2	− 4.3	94	2†	49	16	40	0.00	− 0.04	0.00	0	0	31	0	0	s.	Wm. Lumbard.
Willows	Glenn	136	32	73.0	− 8.6	98	1	49	14	40	0.00	− 0.04	0.00	0	0	28	2	1	se.	L. C. Stiles.
Yosemite	Mariposa	3,945	7	65.8	....	95	18†	35	19	59	0.00	....	0.00	0	0	31	0	0	n.	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 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 August, 1911. 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																																0.00
Klamath Falls	do.																																
Lakeview	Pitt																																
Long Valley	do.																																0.00
Merrill	Int. drainage																																0.00
Yonna	do.																																0.00
California.																																	
Abertine	Sacramento																																
Aguanga	Coast																																0.00
Alameda	do.																																0.00
Alturas	Sacramento																																0.00
Angels Camp	San Joaquin																																0.00
Angiola	do.																																0.00
Antioch	do.																																0.00
Aptos	Coast																																0.00
Arrowhead Springs	do.																																0.00
Auburn	Sacramento																																0.00
Avalon	Ocean																																0.00
Azusa	Coast																																0.00
Bagdad	Desert																																0.00
Bakersfield	San Joaquin																																0.00
Barstow	Desert																																0.00
Bear River	San Joaquin																																
Bear Valley (1)	Sacramento																																
Bear Valley (2)	San Joaquin																																
Bear Valley Dam	Coast																																0.00
Belotta	San Joaquin																																0.00
Ben Lomond	Coast																																0.00
Berkeley	do.																																0.00
Biggs	Sacramento																																0.00
Bishop	Owens																																
Bishop Creek	do.																																0.00
Blocksburg	Coast																																0.00
Blue Canon	Sacramento																																0.00
Blythe	Desert																																0.00
Boulder Creek	Coast																																0.00
Bowmans Dam	Sacramento																																
Branscomb	Coast																																0.00
Brush Creek	Sacramento																																0.00
Burney	do.																																0.00
Butte Valley	do.																																
Calexico	Desert																																0.00
Caliente	do.																																0.00
Calistoga	Coast																																0.00
Campbell	do.																																0.00
Campo	do.																																0.00
Camptonville (near)	Sacramento																																0.00
Cedarville	M't'n Lakes																																0.00
Chester	Sacramento																																0.00
Chico	do.																																0.00
Chico (near)	do.																																0.00
China Flat	Coast																																0.00
Chino	do.																																0.00
Cisco	Sacramento																																0.00
Claremont	Coast										T.																						T.
Cloverdale	do.																																0.00
Colfax	Sacramento																																0.00
Colgate	do.																																0.00
Colusa	do.																																0.00
Corning	do.																																0.00
Corona	Coast																																
Cuyamaca	do.																									T.							T.
Daunt	San Joaquin																																0.00
Davisville	Sacramento																																0.00
Deer Creek	do.																																0.00
Del Monte	do.																																0.00
Delta	do.																																0.00
Denair	San Joaquin																																0.00
Des Canso	Coast																																0.00
Dinuba	San Joaquin																																
Dobbins	Sacramento																																0.00
Downieville	do.																																0.00
Dudleys	San Joaquin																																0.00
Dunnigan	Sacramento																																0.00
Dunsmuir	do.																																0.00
Durham	do.																																0.00
Dyerville	Coast																																
East Park	Sacramento																																0.00
Edgewood	Klamath																																0.00
Edison	San Joaquin																																0.00
El Cajon	Coast																																0.00
Electra	San Joaquin																																0.00
Elsinore	Coast																																0.00
Emigrant Gap	Sacramento																																0.00
Escondido	Coast																																0.00
Eureka	Coast			.01	.04	.01					.02																						0.08
Fairmont	do.																																0.00
Farmington	San Joaquin																																0.00
Felton	Coast																																0.00
Firebaugh	San Joaquin																																0.00
Folsom	Sacramento																																0.00
Fordyce Dam	do.																																0.00
Fort Bragg	Coast																																0.00
Fort Ross	do.																																
Fouts Springs	Sacramento																																0.00
Fredalba	Coast																																0.00
Fresno	San Joaquin																																0.00
Fruto	Sacramento																																0.00
Galt	San Joaquin																																
Georgetown	do.																																0.00

TABLE 2.—*Daily precipitation for August, 1911. 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—Cont'd.																																	
Gilroy	Coast																																0.00
Gilta	do																																0.00
Glendora	do																																.....
Glen Ranch	do																																0.00
Glennville	San Joaquin.																																0.00
Glenwood	Coast																																0.00
Gold Run	Sacramento																																0.00
Gonzales	Coast																																0.00
Grass Valley	Sacramento																																0.00
Greenville	do																																0.00
Gridley	do																																0.00
Groveland	San Joaquin.																																0.00
Guinda	Sacramento																																.....
Hanford	San Joaquin.																																0.00
Head Dam	Sacramento																																0.00
Healdsburg	Coast																																0.00
Hearst	do																																0.00
Heber	Desert																																0.00
Helen Mine	Coast																																0.00
Hesperia	Desert																																.....
Hetch Hetchy	San Joaquin.																																.....
Holcomb	Coast																																0.00
Hollister	do																																0.00
Hornbrook	Klamath																																0.00
Hot Springs	San Joaquin.																																0.00
Hullville	Coast																																0.00
Idylwild	do																																0.00
Independence	Owens																																0.00
Indio	Desert																																0.00
Inskip	Sacramento																																0.00
Ione	San Joaquin.																																0.00
Jacksonville	do																																0.00
Jamestown	do																																0.00
Jenny Lind	do																																0.00
Jolon	Coast																																.....
Julian	do																																0.00
Kennedy Mine	San Joaquin.																																0.00
Kennett	Sacramento																																0.00
Kentfield	Coast																																0.00
Kernville	San Joaquin.																																.....
King City	Coast																																0.00
Knights Landing	Sacramento																																0.00
La Grange	San Joaquin.																																0.00
Lake Eleanor	do																																.....
Lakeside	Coast																																0.00
La Porte	Sacramento																																0.00
Lathrop	San Joaquin.																																0.00
Laurel	Coast																																0.00
Laytonville	do																																.....
Le Grand	San Joaquin.																																0.00
Lemon Cove	do																																0.00
Lick Observatory	Coast																																0.00
Livermore	do																																.....
Lodi	San Joaquin.																																0.00
Lone Pine	Owens																																0.00
Long Camp	San Joaquin.																																.....
Long Valley	Mountain Lakes.																																0.00
Lordsburg	Coast																																0.00
Los Alamos	do																																.....
Los Angeles	do																																0.00
Los Banos	San Joaquin.																																0.00
Los Gatos	Coast																																0.00
Los Molinos	Sacramento																																.....
Low Observatory	Coast																																0.00
McCloud	Sacramento																																0.00
Macdoel	Klamath																																0.00
Madeline	M't'n Lakes.																																0.00
Magalia	Sacramento																																0.00
Mammoth Tank	Desert																																0.00
Mariposa	San Joaquin.																																.....
Marysville	Sacramento																																0.00
Mecca	Desert																																0.00
Melones	Sacramento																																0.00
Menlo Park	Coast																																0.00
Merced	San Joaquin.																																.....
Merced Falls	do																																0.00
Mesa Grande	Coast																																0.00
Mill Creek (1)	San Joaquin.																																0.00
Mill Creek (2)	Coast																																0.00
Mills College	do																																.....
Milo	San Joaquin.																																0.00
Milton (near)	do																																0.00
Modesto	do																																0.00
Mojave	Desert																																.....
Mokolumne Hill	San Joaquin.																																0.00
Mono Ranch	Coast																																0.00
Monroeville	San Joaquin.																																.....
Montague	Klamath																																0.00
Monterey	Coast																																0.00
Monterio	San Joaquin.																																.....
Montgomery Creek	Sacramento																																.....
Mount Tamalpais	Coast																																0.00
Mount St. Helena	do																																.....
Napa City	do																																0.00
Napa (S. H.)	do																																0.00
Needles	Desert																																0.00
Nellie	Coast																																0.00
Nevada City	Sacramento																																0.00
Newcastle	do																																.....
Newhall	Coast																																0.00
Newman	San Joaquin.																																0.00

TABLE 2.—*Daily precipitation for August, 1911. District No.* 11—Continued.

Stations.	Watershed.	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—Cont'd.																																	
Nimshew	Sacramento																																0.00
North Bloomfield	do																																0.00
North Fork	San Joaquin																																0.00
North Lakeport	Coast																																0.00
Oakdale	San Joaquin																																0.00
Oakgrove	Coast																																0.00
Oakland	do				T.	T.				T.	T.																						T.
Oakville	do																																0.00
Oceanside	do																									T.							T.
Ojai Valley	do																																0.00
Orland	Sacramento																																0.00
Orleans	Klamath																																0.00
Oroville	Sacramento																																0.00
Ozeana	Coast																																0.00
Palermo	Sacramento																																0.00
Palm Springs	Desert																																0.00
Parkfield	Coast																																0.00
Pasadena	do																																0.00
Paso Robles	do																																0.00
Peachland	do							T.			T.																	.01					0.01
Penstock Camp	San Joaquin																																....
Phoenix Dam	do																																0.00
Pilot Creek	Sacramento																																0.00
Pinchot	Coast																																....
Pine Crest	do				T.																												T.
Placerville	Sacramento																																0.00
Point Lobos	Coast					T.			T.																								T.
Point Loma	do	.01																			.03											.02	0.06
Point Reyes	do																																0.00
Polasky	San Joaquin																																0.00
Porterville	do																																0.00
Portulaca	do																																....
Prattville	Sacramento																																....
Priest Valley	Coast																																....
Quincy	Sacramento																																0.00
Red Bluff	do																																0.00
Redding	do																																....
Redlands	Coast	T.																															T.
Reedley	San Joaquin																																0.00
Repressa	Sacramento																																0.00
Rialto (near)	Coast																																0.00
Rio Vista	Sacramento																																0.00
Riverside	Coast																																0.00
Rocklin	Sacramento																																....
Rohnerville	Coast																																0.00
Sacramento (1)	Sacramento																																0.00
Sacramento (2)	do																																0.00
St. Helena	Coast																																0.00
Salinas	do																																0.00
San Bernardino	do																																0.00
San Diego	do																																0.00
San Francisco	do																																0.00
San Jacinto	do																																0.00
San Jose	do																																0.00
San Leandro	do			T.	T.																												T.
San Luis Obispo	do																																0.00
San Mateo	do																																0.00
San Miguel	do																																0.00
San Miguel Island	Ocean																																0.00
Sanger	San Joaquin																																....
Santa Ana River	Coast																																0.00
Santa Barbara	do																																0.00
Santa Clara	do																																0.00
Santa Cruz	do																																0.00
Santa Margarita	do																																....
Santa Maria	do																																0.00
Santa Monica	do																																0.00
Santa Rosa	do																																....
Sausalito	do																																0.00
Selma	San Joaquin																																0.00
Seven Oaks	Coast																																0.00
Shasta	Sacramento																																0.00
Shingle Springs	San Joaquin																																0.00
Sierra Madre	Coast																																0.00
Sierraville	M't'n lakes																																0.00
Sisquoc Ranch	Coast																																....
Sisson	Sacramento																																0.00
Soledad	Coast																																....
Sonora	San Joaquin																																0.00
S. E. Farrallon	Ocean														T.																		T.
Spreckels	Coast																																0.00
Squirrel Inn	do																																0.00
Stirling City	Sacramento																																0.00
Stockton (S. H.)	San Joaquin																																0.00
Storey	do																																0.00
Suisun	Sacramento																																0.00
Summerdale	San Joaquin																																0.00
Summit (1)	Sacramento																																0.00
Summit (2)	Coast																																....
Susanville	M't'n lakes																																0.00
Tamarack	Sacramento																																0.00
Tehachapi	San Joaquin																																0.00
Tehama	Sacramento																																0.00
Tejon Rancho	San Joaquin																																0.00
Three Rivers	do																																0.00
Towle	Sacramento																																0.00
Tracy	San Joaquin																																0.00
Tulare	do																																0.00
Tustin (near)	Coast																																0.00
Ukiah	do																																0.00
Upland	do																																0.00
Upper Lake	Sacramento																																0.00

TABLE 2.—*Daily precipitation for August, 1911. District No. 11*—Continued.

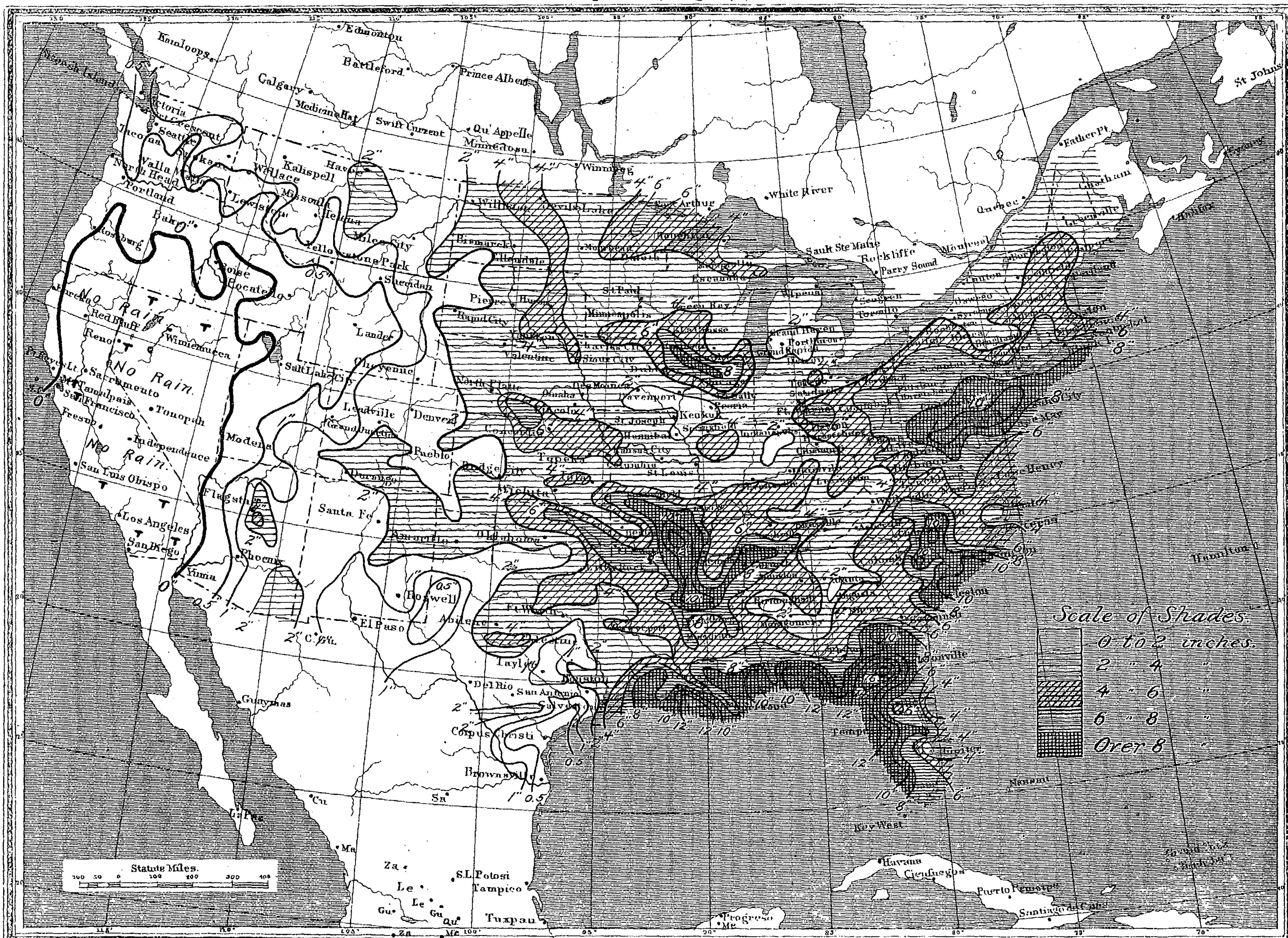
Stations.	Watershed.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total.
California—Cont'd.																																	
Upper Mattole	Coast																																0.00
Vacaville	Sacramento																																0.00
Valley Springs	San Joaquin																																0.00
Visalia	do																																0.00
Warner Springs	Coast																																0.00
Wasco	San Joaquin																																0.00
Watsonville	Coast																																0.00
Weitchpec	Klamath																																0.00
West Branch	Sacramento																																0.00
Westley	San Joaquin																																0.00
West Point	do																																
West Saticoy	Coast																																0.00
Wheatland	Sacramento																																0.00
Willows	do																																0.00
Yosemite	San Joaquin																																0.00

TABLE 3.—*Maximum and minimum temperatures at selected stations for August, 1911. District No. 11, California.*

Date.	Lakeview, Oreg.		California.																											
			Alturas.		Barstow.		Branscomb.		Brawly.		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.	Max.	Min.
1	....	....	81	41	107	66	86	44	106	75	89	58	59	52	100	64	97	59	84	62	72	62	93	47	100	58	97	61
2	....	....	86	39	107	84	90	47	....	....	93	58	59	52	96	63	93	61	78	62	78	61	92	47	101	57	99	71
3	....	....	85	42	105	65	85	44	....	....	88	57	58	51	97	65	94	59	77	61	71	45	90	47	100	60	94	66
4	....	....	85	42	104	65	85	42	....	....	81	54	57	52	92	58	94	60	76	59	70	56	88	46	98	60	90	63
5	....	....	83	44	107	67	87	45	....	....	84	52	55	52	92	55	93	63	75	58	68	56	91	43	96	55	91	61
6	....	....	87	42	107	60	88	48	....	....	89	55	59	52	96	58	92	61	76	58	75	64	91	45	100	56	93	63
7	....	....	86	42	103	60	79	41	106	83	84	53	60	54	98	60	94	57	76	58	69	59	92	44	101	57	90	64
8	....	....	87	39	108	62	76	40	105	65	84	52	61	54	94	59	94	54	76	58	72	58	88	45	98	59	88	58
9	....	....	84	40	104	65	80	38	102	79	82	53	59	54	93	61	92	55	76	58	70	54	92	43	97	57	89	59
10	....	....	87	38	105	65	80	37	....	....	84	50	57	53	92	56	88	52	77	59	69	57	87	42	96	56	90	58
11	....	....	86	41	99	55	79	36	....	....	83	51	60	54	92	56	88	54	76	58	66	55	84	39	96	56	87	60
12	....	....	84	34	104	54	76	37	....	....	85	52	60	53	93	57	90	52	76	55	70	57	88	40	95	56	87	57
13	....	....	86	36	106	58	72	36	....	....	85	53	60	54	95	56	89	50	79	56	73	58	86	41	96	55	89	59
14	....	....	81	35	102	59	70	36	....	....	90	50	61	50	94	60	89	51	83	61	64	44	87	42	95	63	86	60
15	....	....	84	37	103	64	75	38	....	....	86	51	63	48	92	57	90	53	86	60	72	47	90	40	93	65	87	54
16	....	....	91	30	107	63	76	42	110	....	84	52	64	48	95	57	94	54	83	59	76	56	90	40	96	64	92	58
17	....	....	88	42	108	65	77	43	107	80	82	55	63	50	92	56	97	60	90	61	71	54	87	43	94	64	92	59
18	....	....	87	36	112	69	79	44	108	83	86	53	64	56	95	58	100	53	95	64	75	57	90	40	96	56	91	60
19	....	....	83	39	109	74	83	40	111	77	88	54	65	54	94	58	98	59	93	67	71	57	90	41	97	57	90	63
20	....	....	83	35	110	70	85	44	107	79	91	53	64	54	96	58	96	55	92	66	82	60	94	38	97	55	97	61
21	....	....	88	37	106	66	89	48	105	79	94	55	61	54	100	58	95	59	84	62	82	67	95	42	103	60	95	60
22	....	....	90	36	104	68	90	50	....	....	92	53	59	54	97	61	92	54	82	62	78	66	95	42	100	62	94	61
23	....	....	89	38	102	65	92	52	....	....	89	61	60	54	97	58	92	60	79	61	82	67	95	44	98	62	96	61
24	....	....	90	43	105	64	93	53	104	76	91	62	57	53	99	60	93	59	78	60	86	71	95	45	99	57	102	64
25	....	....	91	37	104	64	89	46	106		89	60	55	52	100	62	93	62	81	60	78	63	90	47	102	57	96	66
26	....	....	91	39	104	65	89	48	110	75	86	59	56	51	92	60	92	54	76	58	72	53	92	43	95	62	95	55
27	....	....	92	39	100	60	90	48	107	77	82	50	56	52	92	55	91	55	75	58	67	46	85	45	95	56	91	57
28	....	....	90	38	104	64	91	50	....	....	85	51	56	52	93	56	90	54	75	57	69	45	92	46	96	56	93	55
29	....	....	92	40	103	63	91	52	106	65	90	53	56	51	97	57	91	54	82	57	82	67	89	45	98	58	98	60
30	....	....	96	40	105	61	90	49	103	65	92	55	58	48	101	61	94	55	86	61	89	72	94	48	101	59	97	66
31	....	....	91	39	107	63	83	45	110	72	90	58	59	50	104	65	93	57	94	62	77	68	93	46	103	62	94	62
Mns.	....	....	87.2	38.7	105.0	64.2	83.7	44.0	106.6a	....	87.3	54.3	59.4	52.2	95.5	58.9	92.8	56.3	81.2	59.9	74.1	58.1	90.5	43.4	97.8	58.6	92.6	60.7

Date.	California.																									
	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.
1	99	59	84	54	69	60	61	50	74	50	72	50	75	50	....	....	78	42	88	56	68	44	82	46	92	42
2	91	57	89	56	68	64	59	51	79	50	68	50	70	59	....	....	82	42	90	57	71	40	80	46	94	46
3	89	57	77	54	69	63	58	51	79	52	68	52	69	58	....	....	81	41	83	55	68	36	83	50	93	40
4	87	59	76	52	70	63	57	51	71	53	69	52	68	54	....	....	83	47	80	54	68	37	82	49	90	43
5	87	53	78	52	68	64	56	50	70	54	71	52	68	50	....	....	82	46	81	52	68	43	82	49	82	42
6	92	54	84	51	70	64	56	49	73	53	71	52	67	51	....	....	83	44	85	52	69	41	83	48	90	42
7	93	53	77	53	71	61	58	50	72	52	70	52	68	56	....	....	80	44	82	52	71	40	81	51	93	40
8	94	54	80	53	70	61	61	50	71	49	72	52	74	57	....	....	78	40	82	52	68	47	81	44	92	41
9	91	54	79	53	69	61	57	51	72	49	67	48	73	59	....	....	82	43	82	53	68	45	79	44	89	40
10	91	53	79	50	70	61	59	50	71	51	66	52	70	58	....	....	86	44	80	51	67	36	81	47	88	41
11	94	51	77	52	71	59	60	50	73	49	70	52	75	56	....	....	79	39	80	50	66	37	79	42	88	39
12	94	52	79	52	70	59	62	50	71	45	73	46	79	54	....	....	78	39	81	50	65	40	77	40	88	39
13	95	54	83	54	73	58	62	50	72	45	81	46	88	54	....	....	81	42	83	53	64	40	79	41	89	38
14	98	55	77	53	76	60	63	53	72	46	80	46	82	55	....	....	80	41	78	54	61	34	79	40	90	38
15	98	58	86	52	79	62	62	51	75	43	77	45	80	54	....	....	81	33	82	50	68	37	77	41	90	38
16	100	57	87	53	76	60	68	51	79	42	75	50	88	53	....	....	82	34	86	51	66	32	80	40	92	38
17	105	60	88	55	78	62	66	53	76	45	88	50	85	53	....	....	82	39	84	52	70	42	81	42	92	38
18	105	65	87	56	80	63	67	52	76	47	82	53	86	53	....	....	83	38	86	55	68	39	81	42	95	38
19	102	65	88	55	84	66	71	53	79	46	90	57	86	54	....	....	80	35	86	55	66	37	80	40	93	35
20	102	63	92	57	75	64	79	54	88	44	95	53	85	56	....	....	73	42	93	56	70	38	76	39	95	36
21	97	61	90	58	73	66	79	51	76	46	78	48	75	54	....	....	82	40	90	56	69	37	80	40	95	37
22	92	56	86	52	74	63	61	52	77	54	72	50	74	60	....	....	84	45	89	51	70	43	79	43	94	38
23	94	56	90	52	74	62	61	51	77	49	72	50	68	55	....	....	82	44	90	52	70	38	84	48	93	39
24	90	63	90	54	74	65	61	50	82	51	73	50	75	53	....	....	83	42	91	52	72	41	80	48	93	42
25	93	59	87	53	74	60	60	50	75	51	68	50	71	52	....	....	81	41	86	53	73	34	84	47	93	41
26	89	56	79	51	70	64	59	52	72	51	68	50	67	58	....	....	85	38	80	50	75	38	84	50	94	38
27	88	53	79	51	70	61	62	53	75	51	68	52	68	51	....	....	84	41	79	50	78	43	85	51	91	42
28	94	52	87	52	70	63	63	53	73	52	72	52	69	52	....	....	84	45	84	50	73	42	84	50	92	40
29	100	56	91	53	72	62	66	50	81	55	77	52	77	50	....	....	85	46	88	52	74	42	84	51	90	42
30	105	59	93	59	77	60	67	49	87	51	92	51	82	56	....	....	87	46	94	56	75	54	86	50	95	44
31	106	64	85	56	72	60	61	52	75	53	90	53	87	58	....	....	88	44	88	56	72	44	85	45	95	45
Mns.	95.3	57.0	84.0	53.5	72.8	62.1	62.0	51.1	75.6	49.3	75.3	50.6	75.8	54.6	....	....	81.9	41.6	84.8	52.8	69.4	38.7	81.2	45.3	91.6	40.1

Total Precipitation, August, 1911.



Departure of the Mean Temperature from the Normal, August, 1911.