

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU.

CALIFORNIA SECTION.

G. H. WILLSON, District Forecaster.

VOL. XX. SAN FRANCISCO, SEPTEMBER, 1916. No. 9.

GENERAL SUMMARY.

September, 1916, was abnormally cool in California. Taking the State as a whole, the mean temperature, 66.4°, was 2.1° below normal. The average precipitation was 0.56 inch, or 0.07 inch more than the usual amount. A total of 8 stations reported no precipitation whatever, while 11 others reported only a trace. Contrary to the usual condition, the south portion of the State received copious rains, while the north portion received little or none. Sunshine was deficient, while wind movement was about normal. As in the preceding month, thunderstorms were of unusual frequency and of extraordinary violence. Observers in the mountain regions report that lightning has been particularly severe throughout the summer. No material damage was caused by frosts, which were limited to the more elevated regions.

The first decade of the month was generally fair, and seasonable temperatures occurred throughout the State. In the extreme north portion thunderstorms on the 2d were accompanied by scattered light showers. The second decade was also fair but considerably warmer, the highest temperatures of the month occurring at most stations between the 13th and 16th. The last decade of the month was one of unsettled and showery weather, with temperatures well below normal. Thunderstorms occurred throughout the central and south portions of the State on the 21st and 22d. Destructive lightning attended these storms, while in the region surrounding Monterey Bay a hailstorm on the 21st was accompanied by hailstones an inch and a half in diameter. In the high Sierra Nevada Mountains lightning discharges on the 22d resulted in numerous forest fires, but the rain which followed was sufficiently heavy to extinguish them. General and wide-spread rains began on the 29th and continued into October.

From an agricultural point of view the weather of September was favorable in certain characteristics and unfavorable in others. At this time of the year there is an inevitable conflict of interests in California regarding the kind of weather desired. Fruit growers who are harvesting and curing their crops want warm, dry weather, while those who are preparing to put in winter-growing crops or orchardists whose fruits ripen in the winter want rain. The weather of September, 1916, came about as near satisfying the varied agricultural interests as is possible in this State. The rains which began near the close of the month and continued into October prepared the soil for early fall plowing, while in large sections they were heavy enough to encourage the sowing of grain on summer-fallowed land. They also resulted in an unusually early growth of new grass on the cattle ranges. Citrus fruit trees have been greatly benefitted, and the new crop is well ahead of the season. On the other hand, the early rains have been harmful to raisin and table grapes, beans, sugar beets, olives, and figs. Though ample warnings of the rains were provided, certain conditions over which there was no control brought about serious damage to the raisin crop. According to conservative estimates, 25 per cent of the crop has been lost because of persistent showery and cloudy weather, with subnormal temperatures. The rains have discolored beans which were harvested but not threshed, leached out some of the sugar content of sugar beets, and promoted the spread of mildew. Lack of sunshine during the latter part of the month caused injury to the color of bleaching fruits. However, it is probable that the gain in forage and the early preparation of the soil for new growth have more than offset the damage thus sustained.

A. H. P.

PRESSURE.

The monthly mean atmospheric pressure for the State, reduced to sea level, was 29.93 inches. The highest was 30.24 inches at Eureka on the 25th. The lowest was 29.65 inches at Independence on the 5th. The range for the State was 0.59 inch.

TEMPERATURE.

The monthly mean temperature for the State was 66.4 degrees, which is 2.1 degrees below the normal. The highest monthly mean was 90.2 degrees, at Greenland Ranch; and the lowest was 49.2 degrees, at Fordyce Dam. The highest temperature, 116 degrees, occurred at Greenland Ranch on the 1st; and the lowest, 17 degrees, occurred at Bridgeport on the 11th. The range for the State was 99 degrees.

PRECIPITATION.

The average precipitation for the State was 0.56 inch, or 0.07 inch above the normal. The greatest monthly amount was 2.36 inches, at Point Reyes. 8 stations reported no precipitation. The greatest amount in 24 hours was 2.05 inches at Betteravia on the 29th.

RELATIVE HUMIDITY.—(Per Cent.)

Stations.	5 a. m.	5 p. m.	Mean.
Eureka.....	91	79	85
Fresno.....	60	24	42
Los Angeles.....	92	69	80
Mount Tamalpais.....	49	45	47
Red Bluff.....	51	22	37
Sacramento.....	76	29	52
San Diego.....	91	82	87
San Francisco.....	89	68	79
San Jose.....	91	54	72
San Luis Obispo.....	91	62	76

SUNSHINE AND CLOUDINESS.

Stations.	Actual hours of sunshine.	Per cent. of the possible.
Eureka.....	204	54
Fresno.....	350	94
Los Angeles.....	255	69
Mount Tamalpais.....	338	91
Red Bluff.....	327	88
Sacramento.....	330	88
San Diego.....	229	62
San Francisco.....	260	70
San Jose.....	279	75
San Luis Obispo.....	272	73

WIND MOVEMENT.—(Miles.)

Stations.	Total movement for month.	Average hourly velocity.	Maximum velocity.	Direction.	Date.
Eureka.....	4,150	5.8	39	n.	26
Fresno.....	5,504	7.6	32	nw.	21
Independence.....	4,206	5.8	33	se.	2
Los Angeles.....	3,513	4.9	14	sw.	22
Mount Tamalpais.....	10,735	14.9	72	nw.	8
Point Reyes.....	13,106	18.2	64	nw.	8
Red Bluff.....	3,898	5.4	30	nw.	26
Sacramento.....	5,590	7.8	29	n.	26
San Diego.....	4,199	5.8	19	nw.	12
San Francisco.....	6,132	8.5	32	sw.	29
San Jose.....	3,672	5.1	24	s.	30
San Luis Obispo.....	2,685	3.7	22	w.	25

The prevailing direction of the wind for the State was west.

Climatological Data for September, 1916.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahr.					Precipitation, in inches.					Number of days.			Prevailing direction of wind.	Observers.		
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Snowfall (unmelted).	Precipitation 0.1 inch or more.	Clear.			Partly cloudy.	Cloudy.
Alturas	Modoc	4,400	12	58.4		99	114	25	11	64	0.16	-0.53	0.16	0	1	20	9	1	w.	Prof. C. R. Towle.
American Camp	Tuolumne	2,600	1	66.9		96	113	45	4	46	2.30		1.84	0	3	26	1	3	sw.	U. S. Forest Service.
Angiola	Tulare	208	16								0.32	-0.03	0.32	0	1				e.	Santa Fe Co.
Antioch	Contra Costa	46	37	78.7	+7.6	100	11	48	114	50	0.15	-0.13	0.15	0	1	28	1	1	e.	C. G. McDaniel.
Arrowhead Springs	San Bernardino	2,000	7	71.1		85	115	54	125	26	1.34		1.34	0	1	27	0	3		Arrowhead Springs Co.
Atascadero	San Luis Obispo	837		65.8		101	14	36	18	58	0.82		0.82	0	1	24	4	2		Colony Holding Corp.
Auberry	Fresno	2,050		70.2		95	15	45	26	39	0.74		0.43	0	2	26	3	1	nw.	S. J. & E. Ry. Co.
Auburn	Placer	1,360	45	72.6	+1.6	96	16	52	24	32	0.20	-0.33	0.20	0	1	27	0	3	ne.	Southern Pacific Co.
Avalon	Los Angeles	30	6	61.5		77	29	54	12	15	0.20		0.17	0	4	21	9	0	w.	T. S. Manning.
Azusa	do	540	14	68.6	-2.4	100	13	45	13	55	0.75	+0.47	0.75	0	1	23	4	3	sw.	C. O. Hillis.
Bagdad	San Bernardino	784	13	83.6	-2.1	105	2	61	12	35	0.00	-0.14	0.00	0	0					Santa Fe Co.
Bakersfield	Kern	404	27	73.8	-0.9	104	15	48	17	48	0.33	+0.14	0.33	0	1	26	2	2		do
Barstow	San Bernardino	2,105	13	71.8	-2.5	98	16	46	12	39	0.10	-0.06	0.10	0	1	28	1	1	w.	E. L. White.
Berkeley	Alameda	317	29	63.4	+2.0	92	27	46	14	38	1.35	+0.77	0.74	0	4	15	8	7	w.	State University.
Betteravia	Santa Barbara	155	3	60.1		78	14	42	15	32	2.09		2.05	0	2	26	2	2	w.	Union Sugar Co.
Riggs **	Butte	98	17								T.	-0.46	T.	0	0	30	0	0		Southern Pacific Co.
Bishop	Inyo	4,450	21											0	1	26	3	1	s.	W. A. Chalfant.
Bishop Creek	do	8,790	6	51.2		80	5	26	11	37	0.50		0.50	0	1	26	3	1	s.	Floyd E. Van Cleave.
Blocksburg	Humboldt	1,700	10																	Victor Hope.
Blue Canon	Placer	4,695	17	54.4	-5.0	82	1	33	19	45	0.80	-0.27	0.80	0	1	27	1	2		Southern Pacific Co.
Blythe	Riverside	268	7	80.6		109	28	52	112	52	1.01		1.01	0	1	19	1	6		G. L. Suits.
Bonita	San Diego	110		67.0		84	26	51	27	26	0.23		0.23	0	1	26	2	2	w.	R. M. Allen.
Branscomb	Mendocino	2,000	16	60.8	0	93	27	37	22	42	0.64	-0.51	0.48	0	4	26	1	3	n.	A. J. Haun.
Brawley	Imperial	-105	6	82.0		108	1	56	26	44	T.		T.	0	0					M. D. Witter.
Bridgeport	Monro	6,500	2	49.9		80	11	17	11	58	0.30		0.20	0	2	18	7	5	w.	Geo. Delury, Jr.
Burney	Shasta	3,300	6	57.4		90	14	27	18	56	0.40		0.25	0	2	19	7	4	w.	Mrs. M. D. Chambers.
Cahuilla	Riverside	3,600	5	56.4		94	113	20	28	67	0.18		0.18	0	1	26	1	3	sw.	Dr. W. L. Shawk.
Calaveras Ranger Sta.	Calaveras	3,400		62.3		88	15	40	13	42	0.69		0.63	0	2	27	0	3	sw.	U. S. Forest Service.
Calxico	Imperial	0	11	83.0	-0.5	110	1	57	26	44	0.40	+0.31	0.40	0	1	28	2	0		F. R. Spencer.
Campbell	Santa Clara	217	19	61.8	-1.2	91	13	38	18	47	0.85	+0.42	0.63	0	2	25	0	5	nw.	F. M. Righter.
Camptonville (near)	Yuba	3,500	9	67.4		90	113	44	24	35	0.72		0.72	0	1	24	3	3	w.	Pacific Gas & Electric Co.
Canon Dam	Plumas	4,570	2	59.7		91	13	34	24	52	0.16		0.16	0	1	26	3	1	n.	Great Western Power Co.
Cascada	Fresno	4,900		65.3		85	15	45	22	27	0.07		0.07	0	1	28	0	2		S. J. & E. Ry. Co.
Cedarville	Modoc	4,675	22	61.3	+2.2	90	15	42	11	47	0.16	-0.39	0.16	0	1	13	16	1		T. H. Johnstone.
Center Ranger Station	Tuolumne	3,850		65.7		83	14	47	23	32	1.97		1.48	0	2	16	10	4	w.	U. S. Forest Service.
Centerville	Butte	490	2	67.5		94	113	43	116	47	0.36		0.36	0	1	21	8	1	s.	Pacific Gas & Electric Co.
Chico	do	189	46	71.1	-3.5	100	19	45	110	52	0.40	-0.10	0.40	0	1	24	4	2	se.	U. S. Bureau Plant Ind.
China Flat	Humboldt	600	7	63.2		87	114	40	11	43	0.27		0.27	0	1	24	3	3	w.	O. I. Westerburg.
Claremont	Los Angeles	1,200	24	68.6	-2.0	101	14	47	11	45	0.34	+0.21	0.34	0	1	15	14	1		Prof. F. P. Brackett.
Cloverdale	Sonoma	340	14	68.6	+1.0	97	12	41	18	49	0.09	-0.57	0.05	0	2	25	0	5	s.	John O. Ogle.
Coalinga	Fresno	663	4	73.9		102	13	48	9	45	0.28		0.28	0	1	28	0	2	e.	Producers Trans. Co.
Colfax	Placer	2,421	45	66.8	-2.7	92	29	44	17	37	0.92	+0.26	0.82	0	2	27	0	3		Southern Pacific Co.
Colusa	Colusa	60	13	68.6	-0.4	86	11	50	18	32	0.24	-0.08	0.24	0	1	25	2	3	se.	Cousins Sun.
Converse Nursery	San Bernardino	6,000	2	60.4		85	14	38	23	38	0.62		0.44	0	3	23	6	1	w.	Edw. N. Munns.
Corona	Riverside	615	2	69.3	+4.1	100	13	47	112	48	0.55	-1.14	0.55	0	1	6	19	5	nw.	J. W. Garthwaite.
Crescent City	Del Norte	125	2	69.3	+4.1	85	10	43	24	41	0.88		0.88	0	1	6	19	5	nw.	Thos. E. Peacock.
Cuyamaca	San Diego	4,677	17	63.3	+2.2	84	14	41	24	36	1.35	+0.75	1.05	0	2	25	1	4	w.	Cuyamaca Water Co.
Davis	Yolo	51	44	70.4	-1.6	101	13	39	-18	54	0.17	-0.09	0.17	0	1	25	5	0	n.	S. H. Beckett.
Deer Creek	Nevada	3,700	9	59.7		86	14	35	24	47	1.08		0.88	0	2	27	1	2	w.	Pacific Gas & Electric Co.
Del Monte	Monterey	25	5	60.4		82	110	45	26	34	0.65		0.55	0	2	21	4	5	nw.	Hotel Del Monte.
Delta	Shasta	1,138	31	67.4	-2.3	97	15	41	18	45	T.	-1.11	T.	0	0	18	10	2	sw.	Southern Pacific Co.
Denair	Stanislaus	126	16	69.2	-1.9	98	13	47	24	45	0.55	+0.38	0.50	0	2	26	0	4	w.	Santa Fe Co.
De Saba	Butte	2,700	12	66.3		94	113	42	15	46	0.22		0.22	0	1	28	2	0	sw.	Pacific Gas & Electric Co.
Dobbins (near)	Yuba	1,650	12	72.4	-0.2	96	114	54	13	38	0.68	-0.36	0.67	0	2	22	4	4	s.	do
Downieville	Sierra	3,150	5	62.0		93	20	36	14	54	0.69		0.69	0	1	24	5	1	s.	J. T. Mason.
Dudley	Kings	595	4	73.9		103	15	48	26	44	0.39		0.24	0	2	27	2	1	ne.	Producers Trans. Co.
Dudleys	Mariposa	3,000	7	60.6		88	114	37	9	49	0.52		0.42	0	2	25	3	2	nw.	W. H. Dudley.
Dunsmuir	Siskiyou	2,285	27	65.2	+3.9	96	13	40	18	48	0.07	-1.07	0.07	0	1					Southern Pacific Co.
Durham	Butte	160	21	69.0	-1.2	95	16	42	23	50	0.60	-0.15	0.57	0	2	23	4	3	s.	R. W. Durham.
East Park	Colusa	2	2	70.0		104	3	44	13	60	0.10		0.10	0	1	26	2	2		J. J. Lea.
Edison	Kern	2,500	2	75.5		102	15	58	123	31	0.72		0.72	0	1	26	2	2		So. Cal. Edison Co.
El Cajon	San Diego	482	17	68.7	-2.2	92	20	48	27	37	0.22	+0.10	0.22	0	1	28	1	1	sw.	H. H. Kessler.
Electra	Amador	725	12	70.0	-1.5	96	114	48	117	43	0.53	-0.13	0.53	0	1	26	1	3	sw.	Pacific Gas & Electric Co.
Elsinore	Riverside	1,300		73.0		104	14	47	12	50	0.51		0.51	0	1	28	2	0	sw.	U. S. Forest Service.
Emigrant Gap	Placer	5,230	42								0.80	+0.31	0.80	0	1	26	0	4	sw.	Southern Pacific Co.
Escondido	San Diego	657	22	69.2	+0.7	93	113	45	13	48	0.30	+0.22	0.30	0	1	19	10	1	w.	A. R. Moon.
EUREKA	Humboldt	64	30	65.8	+0.9	95	11	44	20	26	0.38	-1.00	0.22	0	3	11	9	10	n.	U. S. Weather Bureau.
Folsom	Sacramento	352	44	71.4	-0.4	98	15	50	75	41	0.42	+0.02	0.42	0						

Climatological Data for September, 1916.—Continued.

Table with columns: Stations, Counties, Elevation, Length of record, Temperature (Mean, Departure from normal, Highest, Date, Lowest, Date, Greatest daily range), Precipitation (Total, Departure from normal, Greatest in 24 hours, Snowfall), Number of days (Precipitation, Clear, Partly cloudy, Cloudy), Prevailing direction of wind, and Observers.

Climatological Data for September, 1916.—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahr.						Precipitation, in inches.				Number of days.			Prevailing direction of wind.	Observers.		
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Snowfall (un-melted), inch or more.	Clear.	Partly cloudy.			Cloudy.	
Ukiah	Mendocino	620	23	65.9	+0.3	97	†13	39	18	55	0.15	-0.42	0.10	0	2	19	0	11	nw.	Dr. George McCowen.
Vacaville	Solano	175	28	68.1	-2.7	95	†27	†41	23	48	0.15	-0.28	0.15	0	1	26	2	2	nw.	J. E. Bassford.
Valyermo	Los Angeles	3,750	28	55.8	.....	94	14	39	12	48	0.39	.....	0.39	0	1	26	2	2	nw.	U. S. Forest Service.
Visalia	Tulare	334	28	73.6	+1.9	94	15	51	22	34	0.26	-0.16	0.18	0	2	26	0	4	nw.	Santa Fe Co.
Walnut Creek	Contra Costa	149	2	70.0	+1.2	97	13	50	†14	44	0.43	-0.14	0.38	0	2	26	0	4	nw.	R. L. Nougaret.
Warner Springs	San Diego	3,165	8	70.5	.....	100	14	41	10	52	0.14	.....	0.10	0	3	25	0	5	nw.	J. A. Ream.
Wasco	Kern	336	16	72.2	-0.4	99	15	50	†21	44	0.80	+0.47	0.80	0	1	27	0	3	nw.	Santa Fe Co.
Watsonville	Santa Cruz	23	20	60.8	+0.3	92	27	38	17	44	1.42	+1.05	0.98	0	3	10	16	4	sw.	Spreckels Sugar Co.
Weaverville	Trinity	2,162	4	64.4	.....	98	†13	33	19	61	0.33	.....	0.33	0	1	21	6	3	nw.	U. S. Forest Service.
Weitchpec	Humboldt	1,700	6	63.8	.....	92	14	40	†23	44	0.43	.....	0.28	0	2	25	2	3	w.	Wm. Lumbard.
West Branch	Butte	3,216	2	62.2	.....	90	†13	34	10	47	0.36	.....	0.36	0	1	22	3	5	n.	Pacific Gas & Electric Co.
Wheatland	Yuba	84	29	70.0	+0.1	93	†12	47	18	40	0.27	-0.24	0.27	0	1	22	6	2	s.	J. E. Barnhouse.
Willows	Glenn	136	37	72.8	-2.8	99	19	48	25	49	0.38	+0.07	0.38	0	1	25	3	2	n.	S. J. Walker.
Yorba Linda	Orange	405	2	67.6	.....	92	13	46	†3	44	0.56	.....	0.56	0	1	26	2	2	w.	Supt. National Park.
Yosemite	Mariposa	3,960	12	65.2	.....	89	†14	38	†3	51	1.84	.....	0.81	0	3	20	3	7	s.	U. S. Forest Service.
Yreka	Siskiyou	2,625	27	61.8	.....	93	†15	33	†3	53	0.16	.....	0.13	0	2	15	8	7	ne.	U. S. Forest Service.
Means and Extremes..				66.4	-2.1	116	1	17	11	67	0.56	+0.07	2.05	0	2	23	4	3	w.	

The departures from the normal temperature and precipitation are computed only for such stations as have ten or more years of record, but all complete reports are used in determining section or division means.

** 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.

a, b, c, etc., indicate respectively, 1, 2, 3, etc., days missing from the record.

COMPARATIVE DATA FOR SEPTEMBER.

MEAN MONTHLY TEMPERATURE FOR THE STATE.

1897	67.7	1907	65.6
1898	69.2	1908	68.1
1899	70.9	1909	68.2
1900	65.4	1910	67.3
1901	66.0	1911	63.9
1902	70.7	1912	66.5
1903	68.7	1913	70.7
1904	70.3	1914	66.2
1905	68.6	1915	66.2
1906	68.6	1916	66.4

AVERAGE PRECIPITATION FOR THE STATE.

1897	0.03	1907	0.13
1898	0.64	1908	0.49
1899	0.03	1909	0.52
1900	0.22	1910	0.69
1901	0.94	1911	0.19
1902	0.01	1912	1.65
1903	0.10	1913	0.07
1904	2.66	1914	0.23
1905	0.16	1915	0.06
1906	0.25	1916	0.66

DELAYED REPORTS.

Stations.	Month.	Temperature.					Total precipitation.
		Mean.	Max.	Date.	Min.	Date.	
Brawley	July.	89.6	111	30	63	4	0.00
Delta	"	73.1	102	†23	45	†1	0.30
Dunsmuir	"	.....	.....	.....	.....	.....	1.59
Glenn Ranch	"	.....	.....	.....	.....	.....	0.00
Los Alamos	"	.....	.....	.....	.....	.....	0.00
Mariposa	"	.....	.....	.....	.....	.....	0.01
Meadow Valley	"	.....	.....	.....	.....	.....	0.00
Milton (near)	"	77.7	102	10	53	2	T.
Phoenix Dam	"	.....	.....	.....	.....	.....	0.00
Reedley	"	74.4	109	23	43	3	0.00
Auberry	August.	74.4	98	3	42	18	0.18
Canon Dam	"	65.2	101	24	33	18	T.
Coalinga	"	78.3	109	4	48	†9	0.00
Davis	"	73.2	103	†2	46	9	0.02
Delta	"	71.8	100	†2	42	16	0.00
Denair	"	73.6	100	2	47	19	0.00
Dunsmuir	"	.....	.....	.....	.....	.....	0.64
Glenn Ranch	"	.....	.....	.....	.....	.....	0.45
Le Grand	"	.....	.....	.....	.....	.....	0.00
Los Alamos	"	.....	.....	.....	.....	.....	T.
Meadow Valley	"	.....	.....	.....	.....	.....	0.00
Newman	"	74.8	100	†17	46	23	0.00
Ozena	"	.....	.....	.....	.....	.....	0.00
Pattaway	"	.....	.....	.....	.....	.....	0.30
Priest Valley	"	.....	.....	.....	.....	.....	0.00
Santa Anita Forest Station	"	.....	.....	.....	.....	.....	0.00
Wells Meadows	"	.....	.....	.....	.....	.....	1.04

DATES OF MISCELLANEOUS PHENOMENA.

Thunderstorms.—Abbotts, 22; Alturas, 2, 16; Auberry, 22; Berkeley, Big Sur, Bridgeport, 21; Burney, 2; Cahuilla, 18, 19; Calaveras, 22, 30; Campbell, 21; Camptonville (near), 22; Center Ranger Station, 21, 22, 30; Centerville, 22; Cloverdale, 21, 23; Coalinga, 30; Cuyamaca, 8, 16, 19; Deer Creek, 21, 22; Denair, 21; Dobbins (near), 21, 22; Downieville, 21, 30; Dudleys, 21, 22; Durham, 21; Electra, 22; Fordyce Dam, Fresno, Gridley, Hetch Hetchy, Hollister, Hullville (near), 21; Jolon, 20, 29, 30; Kennett, 2; Kinsley, Lake Eleanor, 21; La Porte, 22; Las Plumas, Lick Observatory, Lindsay, 21; Los Angeles, 30; Los Gatos, 21; McCloud, 2; Magalia, 2, 22; Merced, Middlewater, Mill Creek (No. 1), 21; Mill Creek (No. 2), 19; Mills College, Milton (near), 21; Mitchell Mill, 22; Moke-jumne Hill, 21; Montague, 2, 24; Mount Tamalpais, 21, 30; Nellie, 19; Nevada City, North Bloomfield, 22; Oakland, 21; Oak Grove, 16, 18, 19; Oceanside, Pasadena, 19; Peachland, Petaluma, 21; Point Reyes, 21, 30; Redding, 2; Riverside, 19; Sacramento, Salinas, San Francisco, Santa Clara, Santa Cruz, San Jose, Stanwood, Stockton, Stevenson Creek, Stirling City, Sulphur Banks, 21; Seven Oaks, 16; Sterling, 8; Summit (No. 1), 22; Tamarack, Three Rivers, Twin Valley, West Branch, Wheatland, 21; West Point, 21, 30.

Earthquakes.—Holcomb, 1; Spreckels, 6, 8; Hollister 27; Arrowhead Springs, Beaumont, Cahuilla, Calexico, El Cajon, Indio, Julian, La Jolla, Mecca, Nellie, Point Loma, Redlands, Riverside, San Diego, Warner Springs, 29.

ERRATA. AUGUST, 1916.

Inskip, pages 94 and 98, greatest precipitation in 24 hours, 0.08, should be 0.07; total precipitation, 0.16, should be 0.15.
Seven Oaks, page 95, mean temperature, 63.9°, should be 64.0°.

Daily Temperature for September, 1916.

Table with columns for Stations, days 1-31, and Mean. Rows list various California locations such as Alturas, Bakersfield, Barstow, etc., with their respective daily temperature ranges and monthly averages.