

U. S. DEPARTMENT OF AGRICULTURE  
WEATHER BUREAU  
CHARLES F. MARVIN, CHIEF

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# CLIMATOLOGICAL DATA

## CALIFORNIA SECTION

DECEMBER, 1915

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BY  
GEORGE H. WILLSON  
DISTRICT FORECASTER AND SECTION DIRECTOR

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SAN FRANCISCO, CAL.  
WEATHER BUREAU OFFICE  
JANUARY 21, 1916

**Departure of the Mean Temperature from the Normal, December, 1915.**



## U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU.

## CALIFORNIA SECTION.

G. H. WILLSON, District Forecaster.

VOL. XIX. SAN FRANCISCO, DECEMBER, 1915. No. 12.

## GENERAL SUMMARY.

In California December was slightly below the average in temperature, while the precipitation was somewhat above the normal.

Throughout the greater part of the State there were two relatively warm periods, December 2-4, and 21-24, the maximum temperatures for the month occurring at most stations on the 2nd. The last three days of the month brought abnormally cold weather, with wide-spread freezing temperatures. In the interior valleys the lowest temperatures in several years occurred on the 30th and 31st, while southern California was saved from a severe freeze by the clouded skies and a generous rainfall.

The long continued drought was broken in all parts of the State by the excessive precipitation accompanying the storm of December 2-4, the rainfall being especially heavy in the San Francisco Bay region and in the upper Sacramento Valley. At San Francisco the 24-hour rainfall of 3.40 inches which fell on December 2-3 is the greatest on record for that month. High southerly winds prevailed during this first real storm of the season. Besides doing some slight damage to vessels along the coast, shipping schedules were affected, and delays of 24 to 36 hours occurred. A second storm brought copious rain in the central and north portions of the state on December 11-14, while southern California received practically no precipitation. The 24-hour rainfall of 9.04 inches at Magalia, in Butte County, on December 11-12 has rarely been exceeded in California. The third storm of the month, that of December 29-31, brought precipitation principally south of the Tehachapi. While at the beginning of the month the rainfall at all stations was well below the normal, the whole State had received the normal rainfall by the end of the month. In spite of the excessive precipitation none of the larger streams reached flood stages, as the ground readily absorbed most of the rain as it fell.

From an agricultural point of view December was a favorable month in California. The long dry autumn had been ideal for out-door work, and as a result, the timely rains were welcome. The winds accompanying the first two storms did some damage in the citrus regions of the Sacramento Valley, particularly in blowing down unharvested oranges. The cold weather of the last three days, while causing considerable anxiety among gardeners and fruit growers, did little damage, except to tender garden produce in the interior valleys. In most places, however, the cold arrived too late to do any real injury. No widespread damage from frosts was reported.—A. H. P.

## PRESSURE.

The monthly mean atmospheric pressure for the State, reduced to sea-level, was 30.08 inches.

The highest was 30.48 inches at Red Bluff on the 20th.

The lowest was 29.31 inches at Independence on the 3rd.

The range for the State was 1.17 inches.

## TEMPERATURE.

The monthly mean temperature for the State was 45.7 degrees, which is 1.0 degree below the normal.

The highest monthly mean was 60.0 degrees at Biggs and the lowest was 27.0 degrees at Bridgeport.

The highest temperature, 88 degrees, occurred at San Miguel on the 16th and 17th, and also at Edison on the 2nd, and the lowest, -13 degrees, at Madaline on the 30th.

The range for the State was 101 degrees.

## PRECIPITATION.

The average precipitation for the State was 5.56 inches, or 1.53 inches above the normal.

The greatest monthly amount was 18.61 inches at Branscomb, while none occurred at 3 stations.

The greatest amount in 24 hours was 9.04 inches at Magalia on December 11-12.

## MISCELLANEOUS PHENOMENA.

*Thunderstorms.*—Converse Nursery, 14; Crescent City, 11; Fort Bragg, 31; McCloud, 4; Monte Vista, 3, 13; Oakland, 13; Oceanside, 29; Spreckels, 28.

*Earthquakes.*—Abbotts, 26; Corona, 1; Eureka, 31; Holcomb Valley, 1; Lonoak, 26; Redlands, 1, 14; Riverside, 1; Salinas, 26; San Bernardino, 14; San Jose, Santa Cruz, 26; Shively, 31; Spreckels, Watsonville, 26.

## RELATIVE HUMIDITY.—(Per Cent.)

Stations.	5 A. M.	5 P. M.	Mean.
Eureka.....	88	79	84
Fresno.....	87	62	74
Los Angeles.....	68	61	64
Mount Tamalpais.....	74	77	76
Red Bluff.....	84	69	76
Sacramento.....	84	72	78
San Diego.....	73	69	71
San Francisco.....	81	65	73
San Jose.....	90	70	80
San Luis Obispo.....	78	60	69

## SUNSHINE AND CLOUDINESS.

Stations.	Actual Hours of Sunshine.	Percent of the Possible.
Eureka.....	148	51
Fresno.....	169	56
Los Angeles.....	241	78
Mount Tamalpais.....	165	56
Red Bluff.....	99	31
Sacramento .....	122	42
San Diego.....	227	73
San Francisco.....	296	47
San Jose.....	165	55
San Luis Obispo.....	110	66

## WIND MOVEMENT.—(Miles.)

Stations.	Total Movement for Mo.	Avr. Hr. Vel.	Max. Vel	Dir.	Date.
Eureka.....	6079	8.2	38	n	28
Fresno.....	3879	5.2	36	nw	3
Independence.....	5060	6.8	36	se	3
Los Angeles.....	4711	6.3	30	e	4
Mount Tamalpais.....	16487	22.2	67	nw	28
Point Reyes.....	15114	20.3	68	nw	28
Red Bluff.....	4548	6.1	32	se	12
Sacramento .....	6386	8.6	35	nw	30
San Diego.....	3960	5.3	36	s	4
San Francisco.....	5568	7.5	40	sw	3
San Jose.....	4684	6.3	40	s	3
San Luis Obispo.....	3265	4.4	24	se	13

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

## Climatological Data for December, 1915.

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).	Precipitation (1 inch or more).	Clear.	Partly cloudy.	Cloudy.			
Alturas.....	Modoc.....	4,400	11	38.0	.....	60	7	-10	31	37	0.55	-1.06	0.16	3.5	12	4	19	8	s.	Prof. C. B. Towle.	
American Camp.....	Tuolumne.....	3,200	43.6	23	+3.3	68	23	16	26	48	6.09	0	3.14	0	2	22	5	4	.....	U. S. Forest Service.	
Angiola.....	Tulare.....	203	15	46.4	+3.3	79	2	23	27	38	1.43	+0.64	1.38	0	2	20	0	11	nw.	Santa Fe Co.	
Antioch **.....	Contra Costa.....	46	36	50.2	+1.9	76	3	30	30	30	3.57	+1.24	1.15	0	8	0	0	31	e.	Southern Pacific Co.	
Aptos **.....	Santa Cruz.....	102	30	49.2	-0.5	64	8	26	31	58.2	+1.46	2.30	0	7	17	1	13	nw.	do		
Arrowhead Springs.....	San Bernardino.....	2,000	6	54.1 <sup>a</sup>	.....	77 <sup>b</sup>	2	31 <sup>a</sup>	20	44 <sup>b</sup>	3.12	1.05	7.0	4	24	5	2	.....	John Jurgens.		
Auburn.....	Placer.....	1,360	44	45.3	-1.3	65	1	31	25	6.09	+0.17	1.55	0	10	13	4	14	ne.	Southern Pacific Co.		
Avalon.....	Los Angeles.....	30	5	.....	.....	78	1	27	31	37	2.41	+1.00	1.15	0	6	18	7	6	w.	T. S. Manning.	
do.....	do.....	540	13	49.2	-4.7	78	1	27	31	37	2.41	+1.00	1.15	0	6	18	7	6	do	A. C. G. Fruit Exchange.	
Bagdad.....	San Bernardino.....	784	12	52.1	-0.9	74	23	30	29	34	6.87	+3.67	2.60	0	7	16	5	5	se.	E. L. White.	
Bakersfield.....	Kern.....	404	26	51.1	+3.6	87	2	26	27	42	1.18	+0.49	0.97	T.	3	15	0	11	Union Sugar Co.		
Barstow.....	San Bernardino.....	2,105	12	46.0	-0.8	70	1 <sup>c</sup>	21	16	44	0.60	0	0.50	5.0	2	23	4	4	.....	Southern Pacific Co.	
Berkeley.....	Alameda.....	317	28	.....	.....	76	24	30	36	3.74	2.45	0	7	19	3	9	9	.....	Paul E. Lodge.		
Betteravia.....	Santa Barbara.....	155	2	49.6	.....	76	24	30	36	3.74	2.45	0	7	19	3	9	9	w.	Victor Hope.		
Biggs **.....	Butte.....	98	16	60.0	+12.3	80	1	28	30 <sup>b</sup>	30 <sup>b</sup>	6.87	+3.67	2.60	0	7	16	5	5	.....	Southern Pacific Co.	
Bishop.....	do.....	4,450	20	37.0	-1.9	70	24	5	31	47	0.08	-0.34	0.08	0.8	1	15	0	16	.....	C. L. Suits.	
Blocksburg.....	Humboldt.....	1,700	9	43.0 <sup>a</sup>	.....	48	7 <sup>c</sup>	-2	31	31	2.80	.....	2.64	0	17	1	12	18	.....	A. J. Haun.	
Blue Canon.....	Placer.....	4,695	16	29.2	-11.0	44	9	13	30	33	6.85	-3.18	2.50	29.0	9	14	0	17	.....	M. D. Witter.	
Blythe.....	Riverside.....	268	6	50.2	.....	81	12	17	17	50	0.22	0.22	0	1	19	6	6	.....	A. F. Scott.		
Branscomb.....	Mendocino.....	2,000	15	43.4	-1.1	66	26	23	31	41	18.61	+5.63	3.48	0	15	15	5	16	.....	Mrs. M. D. Chambers.	
Brawley.....	Imperial.....	-105	5	53.0	.....	79	1	27	17	43	T.	.....	T.	0	0	16	10	5	.....	Dr. W. L. Shaw.	
Bridgeport.....	Mono.....	6,500	1	27.0	.....	51	23	-4	31	33	0.40	0.15	8.0	3	12	5	14	.....	J. E. Peck.		
Burney.....	Shasta.....	3,300	5	32.9 <sup>a</sup>	.....	78	27 <sup>b</sup>	8 <sup>b</sup>	30	28 <sup>b</sup>	7.89	2.18	13.0	9	6	5	5	18	.....	F. M. Righter.	
Cahuilla.....	Riverside.....	3,600	4	39.2	.....	72	23	10	15 <sup>b</sup>	49	3.57	0.75	12.0	5	15	10	6	.....	Cal. Gas and Electric Co.		
Calexico.....	Imperial.....	0	10	51.1	.....	82	9	28	17	42	T.	.....	T.	0	0	24	6	.....	K. W. Robarts.		
Callente **.....	Kern.....	1,200	39	47.0 <sup>a</sup>	-2.7	70 <sup>a</sup>	24	29 <sup>a</sup>	30	30	1.75	-0.20	0.70	T.	3	17	2	12	e.	T. H. Johnstone.	
Calistoga **.....	Napa.....	363	43	44.9	-4.3	66	3	18	31	30	4.49	+4.04	4.20	0	10	11	0	20	.....	G. H. Stephenson.	
Campbell.....	Santa Clara.....	217	18	48.2	+1.4	71	2	22	31	30	5.27	+3.43	3.00	0	7	15	7	8	.....	O. I. Westerborg.	
Campionville (near).....	Yuba.....	3,500	8	42.2	.....	66	22	20	29 <sup>b</sup>	27	11.62	4.95	8.0	3	12	5	14	.....	Southern Pacific Co.		
Canon Dam.....	Plumas.....	4,570	1	40.6	.....	44	2	30 <sup>b</sup>	19	9.04	3.35	19.0	9	5	10	16	16	.....	do		
Cedarville.....	Modoc.....	4,675	21	33.5 <sup>a</sup>	+3.1	55 <sup>a</sup>	21	-2 <sup>c</sup>	31	29	0.22	-1.39	0.13	2.0	3	9	16	4	sw.	Pacific Gas & Electric Co.	
Centerville.....	do.....	490	1	45.8	.....	66	11 <sup>c</sup>	19	15 <sup>b</sup>	28	9.58	4.08	0	11	9	9	13	.....	John O. Ogle.		
Chico.....	do.....	189	45	44.6	-2.9	60	21	22	31	22	6.85	+2.71	0	10	9	6	16	.....	Producers Trans. Co.		
China Flat.....	Humboldt.....	600	6	44.6	.....	52	2 <sup>c</sup>	20	30	24	7.87	1.75	0.2	16	8	13	10	10	.....	Southern Pacific Co.	
Chino **.....	San Bernardino.....	714	23	52.7	+0.5	80	7 <sup>c</sup>	30	31	38	2.65	+0.75	1.01	0	4	15	6	10	w.	do	
Cisco **.....	Placer.....	5,939	44	33.4	0	47	22	8	30	30	7.95	-0.79	2.70	6.77	8	16	0	15	.....	Cal. Gas and Electric Co.	
Claremont.....	Los Angeles.....	1,200	23	52.1	-0.3	83	1	29	31	41	2.42	+0.54	0.86	1.0	6	21	4	3	w.	Thos. E. Peacock.	
Cloverdale.....	Sonoma.....	340	13	48.2	+0.2	70 <sup>b</sup>	22 <sup>b</sup>	26	30	30 <sup>b</sup>	10.45	+4.94	3.75	T.	14	14	1	16	.....	John O. Beckett.	
Coalinga.....	Fresno.....	663	4	43.8	.....	76	7	20	31	39	1.17	0.90	0	5	18	1	11	.....	W. H. Dudley.		
Colfax.....	Placer.....	2,421	44	43.2	-3.4	68	21	15	31	33	7.02	-1.38	2.72	0	5	15	4	12	.....	Edw. N. Mumus.	
Colusa.....	Colusa.....	60	12	46.4	+1.2	63	23	31	35	38	0.74	+0.74	1.36	0	8	16	0	15	.....	Edw. N. Mumus.	
Converse Nursery.....	San Bernardino.....	6,000	1	41.1	.....	71	23	14	16	39	3.42	1.37	30.0	5	11	11	9	11	.....	do	
Corning **.....	Tehama.....	277	29	51.7	+4.4	66	5 <sup>c</sup>	29	30	39	3.05	+0.37	1.10	0	6	15	1	15	.....	Cal. Gas and Electric Co.	
Corona.....	Riverside.....	615	1	52.6	.....	79	1	30	17	38	2.98	1.27	0.5	13	12	6	6	16	.....	do	
Crescent City.....	Del Norte.....	125	1	46.2	-1.0	63	2	26	30	32	11.03	-0.67	2.36	0	6	9	16	16	.....	Thos. E. Peacock.	
Cuyamaca.....	San Diego.....	4,677	16	41.2	+2.6	65	2 <sup>c</sup>	18	21	31	7.08	+2.01	2.19	12.5	6	15	4	12	.....	do	
Davis.....	Yolo.....	51	43	47.0	.....	65	1	22	31	33	6.03	2.62	7	12	13	6	6	13	.....	do	
Deer Creek.....	Nevada.....	3,700	8	39.4	.....	65	19	10	31	43	12.05	5.50	7.0	9	17	1	13	.....	do		
Del Monte.....	Monterey.....	25	4	50.2	.....	72	24	24	31	38	4.53	1.64	0	6	13	10	8	10	.....	do	
Delta.....	Shasta.....	1,138	30	41.7	-3.3	58	2 <sup>c</sup>	22	26	261	18.98	+9.05	4.80	0	10	12	3	16	.....	do	
Denair.....	Stanislaus.....	128	15	.....	.....	66	26	20	29 <sup>b</sup>	27	13.75	+3.97	5.02	0	15	6	10	16	.....	Cal. Gas and Electric Co.	
Do Sabla.....	Butte.....	2,500	11	42.1	.....	66	26	20	29 <sup>b</sup>	27	13.75	+3.97	5.02	0	15	6	10	16	.....	do	
Dobbins (near).....	Yuba.....	1,650	29	49.2	+0.4	68	21	31	36	36	2.94	3.38	0	11	7	10	14	14	.....	J. T. Mason.	
Downieville.....	Sierra.....	3,150	4	38.9	.....	62	24	12	31	32	15.59	5.40	3.8	12	12	6	13	13	.....	Producers Trans. Co.	
Dudley.....	Kings.....	595	3	47.5	.....	84	11	18	4	53	1.35	0.95	0	3	17	5	9	9	.....	do	
Dudleys.....	Mariposa.....	3,000	6	40.6	.....	69	22	13	31	38	5.43	1.40	1.40	2.19	6	23	4	12	.....	do	
Dunlap (near).....	Fresno.....	2,800	3	43.2	.....	74 <sup>b</sup>	8	17 <sup>b</sup>	31	38 <sup>b</sup>	7.18	-0.83	1.60	52.0	9	16	4	11	.....	do	
Dunnigan **.....	Yolo.....	65	38	47.0	-0.3	60	1	30	24	30	2.19	-2.09	1.94	0	19	6	10	15	15	.....	R. W. Durham.
Dunsmuir.....	Siskiyou.....	2,285	26	41.4 <sup>a</sup>	+1.1	68 <sup>b</sup>	16	18 <sup>b</sup>	30	31	11.26	+1.54	2.67	1.0	14	2	14	14	14	.....	J. J. Lea.
Durham.....	Butte.....	160	20	47.3	+2.6	65	21	21	31	27	6.03	+2.44	2.10	0	9	15	2	14	.....	So. Cal. Edison Co.	
East Park.....	Colusa.....	1	43.8	67	24	17	31	35	35	5.33	1.72	T.	7	11	6	13	14	14	.....	do	
Edison.....	Kern.....	2,500	1	52.4 <sup>b</sup>	.....	88	2	28 <sup>b</sup>	31	32	2.01	+0.61	1.22	T.	12	17	5	9	.....	do	
El Cajon.....	San Diego.....	482	16	51.6	-2.5	86	24	29	27	47	3.47	+2.19	0.87	6	23	4	12	14	14	.....	do
Electra.....	Armador.....	725	11	46.4	.....	63	24	21	31	29	8.39	+3.57	2.58	0	9	15	8	8	.....	do	
Emigrant Gap.....	Placer.....	5,230																			

## Climatological Data for December, 1915.—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 (unmelted).	Precipitation, 0.1 inch or more.	
Jamestown.	Tuolumne.	1,471	12	46.2		63	2	23	30	23	7.06	+1.87	1.67	0	10	16
Kennett.	Amador.	1,500	1	44.9		64	24	25	29	25	15.95		5.07	0	14	15
Kentfield.	Shasta.	730	3	44.9		63	1	17	31	25	12.09	+3.85	4.22	T.	14	7
King City.	Marin.	65	27	45.7		72	14 <sup>+</sup>	52	12	33	2.92	+1.08	2.26	0	4	9
La Jolla.	Monterey.	833	28	52.6	+3.5	75 <sup>*</sup>	2	30 <sup>*</sup>	61	24 <sup>*</sup>	4.93		1.88	0	19	11
Lake El Dorado.	San Diego.	2,715	1	46.0 <sup>*</sup>		70	22	8	31	41	6.84		2.31	9.0	9	13
Lake Shasta.	Tuolumne.	4,700	5	38.0		58	24	9	31	30	10.80		3.30	0	11	17
Le Porte.	Nevada.	1,600	1	36.4		54	24	9	31	30	10.80		3.30	0	11	n.
Lake Spaulding.	Plumas.	5,000	21	30.6	-4.9	46	6 <sup>+</sup>	2	27	25	10.97		3.74	29.0	11	15
Le Plumas.	Butte.	506	1	48.2		65	22	30	29	21	11.74		5.10	0	11	13
Le Grande.	Merced.	255	15	48.8	+3.6	70	15	27	31	35	2.80	+1.43	2.20	0	3	17
Le Mou Cove.	Tulare.	600	20	49.3	+1.6	76	3	31	27	38	2.80	+1.16	0.94	0	6	10
Lick Observatory.	Santa Clara.	4,209	26	41.4 <sup>*</sup>	-0.5	61 <sup>*</sup>	7	14 <sup>*</sup>	30	22 <sup>*</sup>	5.56	-0.75	2.22	T.	15	6
Lindsey.	Tulare.	384	1	46.1		76	2	24	31	33	1.50		1.00	0	5	8
Livermore.	Alameda.	485	44	50.8	+0.3	72	1 <sup>+</sup>	21	31	40	4.41	+1.52	1.95	0	9	13
Lone Pine.	Inyo.	3,728	10	48.4		74	3	22	26 <sup>*</sup>	43	1.12	+0.70	0.60	10.5	4	21
Los Angeles.	Los Angeles.	293	38	57.4	+2.1	82	24	38	31	25	2.52	-1.46	1.37	T.	5	19
Los Baños **.	Merced.	121	28	51.4	-2.8	68	6 <sup>+</sup>	30	31	31	2.65	+1.37	1.75	0	4	14
Los Gatos.	Santa Clara.	600	28	49.9	+1.5	69	24	27	31	25	10.85	+5.14	5.60	0	10	18
Lyon Valley.	San Diego.	2,250	1													
McCloud.	Siskiyou.	3,410	5	34.7		54	1 <sup>+</sup>	9	30	28	12.10		3.40	7.0	13	16
Macdoel.	do	4,528	10													
Madeline.	Lassen.	5,270	6	32.4		61	8	-13	30	45	0.80		0.50	7.0	3	4
Magalia.	Butte.	2,321	11	45.2	+1.8	69	20	20	29	41	17.70	+5.97	9.04	0	5	10
Mammoth Tank.	Imperial.	257	37	52.8	-2.6	79	2	29	20	38	0.00	-0.35	0.00	0	24	1
Maricopa.	Kern.	640	4	46.6		80	3	20	31	41	1.50		1.26	0.2	6	19
Marysville.	Yuba.	67	44	50.4	+0.5	73	6	20	31	34	6.09	+2.54	2.05	0	7	11
Mecca.	Riverside.	-185	9	53.4		82	24	24	17	43	0.15		0.15	0	2	8
Merced.	Merced.	173	41	46.8	-1.5	70	2	21	31	31	2.36	+0.77	2.03	0	4	8
Middlewater.	Kern.	803	4	47.6		74	2	22	31	30	1.24		0.94	2.0	5	7
Mill Creek—1.	Amador.	2,500	8	43.4		64	6	21	31	33	9.33		2.82	1.0	10	16
Mill Creek—2.	San Bernardino.	2,950	1	52.4		76	23	30	31	26	3.54	+1.26	1.57	9.0	5	23
Milton (near).	Calaveras.	600	24	48.0	+1.1	69	2	24	31	22	5.12	+1.68	2.15	0	9	15
Mineral.	Tehama.															
Modesto **.	Stanislaus.	90	43	47.5	-0.6	67	2	18	31	31	2.85	+1.08	2.00	0	5	10
Mokelumne Hill.	Calaveras.	1,550	22	46.6	+2.4	65	23 <sup>*</sup>	61	23	27	6.27		3.17	6	14	2
Montague.	Siskiyou.	2,450	27	37.3	+0.7	58	8	12	30	23	1.58	-0.16	0.82	0.2	12	4
Monterey **.	Monterey.	15	50	48.9	-2.8	68	7	28	30 <sup>*</sup>	30 <sup>*</sup>	3.79	+1.00	1.85	0	4	4
MOUNT TAMALPAIS.	Marin.	2,375	1	46.7		59	24	39	18	18	4.21	+1.93	1.42	1.5	15	10
Napa City.	Napa.	20	38	49.1	+2.7	74	1	23	31	37			T.	3	20	8
Napa (H.)	do	60	37	52.0	+4.3	65	22	36	19	22	6.68	+2.53	2.60	0	10	13
Needles.	San Bernardino.	477	23	49.3	-3.5	70	2	26	18	32	0.05	-0.39	0.05	0	1	7
Nellie.	San Diego.	5,350	6	42.2		68	7	16	31	24	6.20		2.10	24.5	6	16
Nevada City.	Nevada.	2,850	33	43.6	+1.2	72	21 <sup>*</sup>	12	31	43	11.82	+1.43	5.67	0.5	9	17
Newhall **.	Los Angeles.	1,200	38	50.6	+1.1	82	23	26	16	16	1.08	-2.05	0.73	3.5	2	22
Nowman.	Stanislaus.	91	26	46.2	-1.8	68	3	20	30	43	3.04	+1.10	1.06	0	6	14
North Bloomfield.	Nevada.	3,214	18	40.3	-2.7	65	21 <sup>*</sup>	15	31	37	12.60	+3.28	6.00	0	7	14
North Fork.	Madera.	3,000	11	43.0		73	1	17	31	40	6.08	+1.34	2.60	0.8	7	14
Oakdale **.	Stanislaus.	1,500	21	48.8	+4.6	69	2	22	31	31	3.79	+1.58	2.36	0	5	8
Oak Grove.	San Diego.	2,751	5	40.6		65	1	16	31	34	2.04		0.90	5.8	4	11
Oakland.	Alameda.	36	39	49.6	+0.4	63	2	30	31	19	6.74	+2.88	3.27	T.	10	14
Oceanside.	San Diego.	60	55	53.6		77	24	36	17	27	3.12		1.34	0	6	19
Ojai Valley.	Ventura.	900	9	53.1		87	23	25	31	47	2.88		2.15	0	2	21
Orland.	do	254	33	47.6	+0.3	66	23	29	29 <sup>*</sup>	26	5.60	+2.70	2.41	0	11	14
Orleans.	Humboldt.	520	12	46.4	+0.5	63	7	28	27 <sup>*</sup>	29	7.49	-1.10	2.20	0	18	7
Oroville (near).	Butte.	250	31	48.0	+0.2	67	25	21	31	25	6.95	+2.17	2.55	3.0	7	10
Pacific.	El Dorado.	3,400														
Palm Springs **.	Riverside.	584	26	54.4	-0.8	78	1	36	17	31	1.00	+0.04	1.00	0	1	5
Pasadena.	Los Angeles.	827	25	53.0	-1.0	82	24	29	31	37	2.99	+0.35	1.70	0	3	24
Paso Robles.	San Luis Obispo.	800	28	48.2	+2.8	74	3 <sup>+</sup>	17	31	45	0.95	-1.70	0.78	0	5	14
Peachland.	Sonoma.	190	19	47.6 <sup>*</sup>	+0.5	67 <sup>*</sup>	22	22 <sup>*</sup>	30	30 <sup>*</sup>	11.67	+5.58	4.20	0	13 <sup>a</sup>	8 <sup>b</sup>
Petaluma.	do	1	47.5			60	23	18	31	40	6.24	+1.38	2.75	0	12	9
Phoenix Dam.	Tuolumne.	2,500	1			68	3				2.62		1.02	0	3	20
Placer.	El Dorado.	1,875	26	42.0	-0.4	60	2	20	31	36	7.52	+0.30	2.12	0	7	12
Point Loma.	San Diego.	302	9	54.7		73	25	40	16 <sup>+</sup>	20	2.52	+1.38	0.74	0	8	25
POINT REYES.	Marin.	490	23	50.4	-0.5	59	7	34	30	17	5.05	+1.65	2.06	0	4	12
Pomona.	Los Angeles.	857	1	50.2		80	1	27	26	16	4.44		0.95	1.0	5	14
Porterville.	Tulare.	464	26	48.4	+0.6	76	8	28	26 <sup>*</sup>	37	1.95	+0.46	1.08	T.	6	10
Portola.	Plumas.	346	4	50.6	-5	65	6	20	31	30	2.20		2.00	19.5	6	9
Quinty.	do	3,400	20	37.4	+3.2	66	10	10	29	41	9.12	+3.04	3.52	5.0	7	11
RED Bluff.	Tehama.	307	38	46.9	+0.5	67	23	28	30	25	7.48	+2.17	2.97	0	10	8
Redding.	Shasta.	552	40	46.5	-0.5	65	22	31	25	34	9.48	+2.94	2.50	0	11	9
Redlands.	San Bernardino.	1,362	22	51.6	-1.3	83	23	27	31	41	3.13	+0.78	1.54	T.	7	15
Reedley.	Fresno.	347	15	47.2	+1.7	75	2	27	31	40	2.23	+0.67	1.63	0	3	19
Rialto (neu.).	San Bernardino.	2,250	9	53.5		73	23	31	30	24	4.95		1.68	18.4	5	18
Riverside.	San Bernardino.	851	33	53.6	+0.2	82	1	28	17	49	2.80	+1.23	1.28	T.	4	13
Rocklin.	Placer.	249	44	48.8	-4.1	62	5	25	30	32	6.85	+0.32	1.90	0	14	7
Roxerville.	Humboldt.	75	12	48.4		72	2	22	30	37	6.85	+0.32	1.90	0	16	13
Ruth.	Trinity.	2,925	1	40.8		60	7	19	30	32	12.67		4.07	T.	16	12
SACRAMENTO.	Sacramento.	71	38	47.5	+1.2	63	21	24	31	32	4.42	+0.28	2.18	0	9	13
St. Helena.	Napa.	255	7	48.4		69	22 <sup>*</sup>	21	31	32	9.83		4.55	0	11	17
Salinas.	Monterey.	40	41	50.4	+0.3	72	6	26	31	31</td						

## Climatological Data for December, 1915.—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).	Precipitation of 1 inch or more.	Clear.	Partly cloudy.	Cloudy.		
Sierraville.....	Sierra .....	5,000	5	31.2	—	56	2	—4	30	31	4.17	—	2.00	5.8	4	4	7	20	n.w.	C. D. Johnson.
Sisson .....	Siskiyou .....	3,555	26	42.6	+7.9	89	2	31	43	6.86	+0.46	2.55	8.0	9	12	11	15	s.s.	Southern Pacific Co.	
Soledad **.....	Monterey .....	188	41	58.0	+8.7	75	16†	30	31	3.12	+1.74	2.00	T.	3	6	9	16	s.s.	do	
Sonora.....	Tuolumne .....	1,825	4	45.9	—	67	3	20	31	29	6.56	+0.81	1.97	0	8	16	4	11	s.s.	Chas. P. Jones.
Spreckels.....	Monterey .....	48	1	46.5	—	71	24	19	31	39	3.25	—	1.40	0	7	15	9	7	w.	Spreckels Sugar Co.
Springville.....	Tulare .....	4,000	8	36.2	—	66	2	12	25†	52	5.03	—	2.50	15.0	6	13	0	18	n.	Mrs. Claire McGeorge.
Squirrel Inn.....	San Bernardino .....	5,280	5	39.0	—	60	3†	16	30†	22	7.83	+2.27	4.15	43.0	5	25	2	4	n.	A. D. Frantz.
Stanwood.....	Butte .....	2,140	11	42.6	+3.0	61	24	19	31	28	11.70	—	5.10	0	8	11	10	10	w.	Cal. Gas and Electric Co.
Stirling City.....	do .....	3,525	11	42.2	—	60	2†	24	20	24	13.70	+2.59	7.00	0	3	3	0	28	s.w.	Butte Co. R. R. Co.
Stockton (S. H.).....	San Joaquin .....	23	44	47.8	+0.7	65	2	24	31	23	3.99	+1.21	1.20	0	9	14	7	10	se.	State Hospital.
Storey.....	Madera .....	296	15	44.8	+0.6	70	2	21	17	39	1.95	+0.58	1.85	0	2	22	0	9	.....	Santa Fe Co.
Suisun **.....	Solano .....	20	35	50.2	+1.6	62	3†	25	30†	30†	3.18	—0.32	1.00	0	6	0	15	16	n.	Southern Pacific Co.
Sulphur Banks.....	Lake .....	1,350	3	40.8	—	64	22	12	31	38	4.74	—	1.98	0	6	4	0	27	w.	M. S. Walters.
Summit.....	Placer .....	7,017	42	31.3	+0.8	50	23	—2	31	25	7.90	+0.51	3.30	79.0	8	17	0	14	sw.	Southern Pacific Co.
Susanville.....	Lassen .....	4,175	26	37.4‡	—	63‡	6	3°	31	—	—	—	—	—	6	12	13	—	.....	G. H. Taylor.
Tahoe.....	Placer .....	6,500	1	29.4	—	52	8	—3	29†	38	6.20	—	2.46	42.0	7	10	11	10	w.	Mrs. Northrup A. Pomin.
Tamarack.....	Alpine .....	8,000	9	34.8	—	58	24	2	19	46	7.89	+0.44	2.40	78.0	14	14	0	17	sw.	Cal. Gas and Electric Co.
Teahoma **.....	Teahoma .....	220	44	48.4	—0.2	64	7	28	31	—	5.66	+2.19	1.90	0	7	3	0	25	.....	W. B. de Billier.
Tejon Rancho.....	Kern .....	1,500	12	47.4	—0.1	78	9	20	30	29	1.85	+0.51	0.75	6.0	2	17	5	9	w.	J. H. Pierce.
Three Rivers.....	Tulare .....	870	5	47.7	—	83	8	25	31	48	3.77	—	1.68	0	7	13	2	16	ne.	Southern Pacific Co.
Towle.....	Placer .....	3,704	29	40.6	—1.4	68	8	13	30	42	13.11	+3.66	3.76	2.0	9	8	8	15	ne.	Irvine Co.
Tracy **.....	San Joaquin .....	64	35	44.5	—5.1	64	2	30	30†	30†	2.01	+0.03	1.02	0	7	17	0	10	do	U. S. Forest Service.
Truckee.....	Nevada .....	5,819	44	34.0*	+5.3	58‡	2	—8‡	31	47‡	2.50	—2.09	1.80	25.0	3	12	9	10	se.	Dr. George McCowen.
Tustin (near).....	Orange .....	125	1	53.2	—	84	24	32	16	41	2.07	—0.20	0.91	0	6	3	20	8	w.	C. M. Hammond.
Twin Valley.....	Lake .....	—	—	43.2*	—	75‡	—21	13‡	31	46‡	13.77	—	4.62	0	14	10	5	16	s.s.	J. E. Bassford.
Ukiah.....	Mendocino .....	620	22	46.6	+1.1	67	22	20	30	25	8.15	+1.50	2.50	0	14	12	6	13	.....	R. L. Nouaret.
Upper Lake.....	Lake .....	1,350	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	.....	J. A. Ream.
Vacaville.....	Solano .....	175	27	49.0	+1.6	64	23	28	29	31	9.10	+3.92	4.52	0	8	17	5	9	n.	Santa Fe Co.
Valley Springs **.....	Calaveras .....	673	26	50.2	+2.3	67	10	25	31	—	6.04	+2.04	3.50	T.	4	17	7	7	n.w.	U. S. Forest Service.
Visalia.....	334	27	49.4	+3.2	75	3	26	31	32	1.59	+0.11	1.05	0	6	15	6	10	.....	Dr. George McCowen.	
Walnut Creek.....	Contra Costa .....	149	1	49.8	—	67	2	28	31	22	6.59	+1.92	2.30	0	9	—	—	—	.....	R. G. Garnett.
Warner Springs.....	San Diego .....	3,165	7	48.6	—	80	2	21	31	43	2.55	—	0.94	5.0	6	22	3	6	.....	Cal. Gas and Electric Co.
Watsonville.....	Kern .....	336	15	46.2	—	79	2	25	31	35	1.63	+1.22	1.53	T.	3	22	0	9	n.w.	Southern Pacific Co.
Weaverville.....	Santa Cruz .....	23	19	51.5	+0.6	74	24	22	31	34	7.01	+3.57	2.95	0	8	14	8	9	n.w.	Spreckels Sugar Co.
Trinity.....	2,162	3	34.5	—	53	9	9	31	35	8.19	+0.92	1.42	0	15	15	0	16	.....	U. S. Forest Service.	
Weitchpec.....	Humboldt .....	1,700	5	40.9	—	63	2	20	30	25	12.06	—	3.00	0	24	9	7	15	s.	G. S. Garnett.
West Branch.....	Butte .....	3,216	1	40.1	—	68	21	13	31	34	13.26	—	4.28	T.	10	13	3	15	s.	Cal. Gas and Electric Co.
Westley **.....	Stanislaus .....	90	26	50.0	+1.5	62	5	30	30†	30†	2.92	+1.16	1.54	0	2	10	3	18	n.	Southern Pacific Co.
Wheatland.....	Yuba .....	84	28	46.8	+1.8	61	6	23	3	23	6.60	+2.92	3.53	0	10	16	2	13	n.	Wm. Lumbard.
Willows.....	Glenn .....	136	36	47.2	0	68	4	26	31	26	5.24	+2.20	2.06	0	10	14	2	15	n.	F. E. Barnhouse.
Yorba Linda.....	Orange .....	405	1	54.7	—	81	24	34	37	35	2.59	—	1.37	0	4	12	16	3	w.	S. J. Walker.
Yosemite.....	Mariposa .....	3,945	11	41.2	—	65	15	14	31	31	2.82	—2.96	2.50	6.5	3	0	31	s.	J. P. Kelly.	
Yreka.....	Siskiyou .....	2,625	26	36.0	—	55	2†	6	30	23	2.06	—	0.35	1.5	18	3	2	26	se.	U. S. Forest Service.
Means and Extremes.....	—	—	45.7	-1.0	88	2†	-13	30	59	5.56	+1.53	9.04	3.9	8	13	6	12	s.	—	

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.

‡ 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 DECEMBER.

(MEAN MONTHLY TEMPERATURE FOR THE STATE.)

Year	Mean	Max.	Min.	Max.	Min.
1897.....	44.4	1907.....	48.3	—	—
1898.....	44.4	1908.....	43.2	—	—
1899.....	45.8	1909.....	43.3	—	—
1900.....	47.3	1910.....	47.8	—	—
1901.....	47.4	1911.....	43.3	—	—
1902.....	46.6	1912.....	44.7	—	—
1903.....	48.0	1913.....	44.8	—	—
1904.....	47.2	1914.....	41.8	—	—
1905.....	45.3	1915.....	45.7	—	—
1906.....	47.3	—	—	—	—

## (AVERAGE PRECIPITATION FOR THE STATE.)

Year	Mean	Max.	Min.	Max.	Min.
1897.....	1.75	1907.....	5.41	—	—
1898.....	1.20	1908.....	2.33	—	—
1899.....	3.03	1909.....	6.92	—	—
1900.....	1.68	1910.....	1.87	—	—
1901.....	1.45	1911.....	2.05	—	—
1902.....	2.96	1912.....	1.58	—	—
1903.....	1.44	1913.....	7.04	—	—
1904.....	3.04	1914.....	5.00	—	—
1905.....	1.56	1915.....	5.56	—	—
1906.....	8.42	—	—	—	—

## DELAYED REPORTS.

Stations.	Month.	Temperature.				Total precipitation
		Mean	Max.	Date	Min.	
Dudley .....	September.	74.0	102	22	42	19
Greenland Ranch.....	October.	75.8	101	7	49	30
American Camp .....	November.	52.6	82	3	28	10 <sup>+</sup>
Greenland Ranch .....	“	61.2	89	4	33	20
Hearst .....	“	48.1	76	2	30	8 <sup>+</sup>
Livermore .....	“	54.5	92	1	31	12 <sup>+</sup>
Rocklin .....	“	51.3	81	1	29	13
Dunsmuir .....	“	45.0	70	1	28	13

## ERRATA. OCTOBER, 1915.

Berkeley, page 118, monthly mean temperature 62.0, should be 61.9.

Campbell, page 118, snowfall 9 inches, should be 0.

North Bloomfield, page 119, monthly mean temperature 60.4, should be 59.6.

Paso Robles, page 119, monthly mean temperature 60.2a, should be 61.8a.

Portola, page 119, monthly mean temperature 48.6, should be 48.4.

Daily Precipitation for December, 1915.

DECEMBER, 1915.

**Daily Precipitation for December, 1915.—Continued.**

## Daily Precipitation for December, 1915.—Continued.

Stations.	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		
Pacific.....	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1.00
Palm Springs.....	.	.	1.30	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1.62	
Parkfield.....	.	1.70	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2.99	
Pasadena.....	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0.95	
Paso Robles.....	T.	.81	4.20	.	.13	.52	.	.26	.22	T.	.31	.75	3.85	.18	.	.09	.	.16	.	.	.	.	.	.	.	.	.	.	.	.	11.67		
Peachland.....	T.	.18	2.75	.	.02	.	.	.02	.	.03	.07	.30	2.55	.09	.	.78	.01	.	.34	.	.08	.	.06	.	.	.	.	.	.	.	.	0.4	
Petaluma.....	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0.99	
Phoenix Dam.....	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0.98	
Pilot Creek.....	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2.62	
Pine Crest.....	T.	.82	4.21	.	.13	.52	.	.26	.22	T.	.31	.75	3.85	.18	.	.09	.	.16	.	.	.	.	.	.	.	.	.	.	.	.	1.08		
Placerville   .....	T.	.46	T.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	7.52	
Point Loma***.....	T.	1.33	.81	.01	.01	.20	.	.07	.	.03	.	.86	1.28	.02	.	.09	.74	.	T.	.	.01	.	.	.	.	.	.	.	.	.	6.25		
POINT REYES**.....	T.	1.33	.81	.01	.01	.20	.	.07	.	.03	.	.86	1.28	.02	.	.09	.74	.	T.	.	.01	.	.	.	.	.	.	.	.	.	10.05		
Pomona   .....	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2.45	
Porterville   .....	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1.95	
Portola.....	.	.01	.20	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2.20	
Priest Valley   .....	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	3.64	
Quincey.....	.	.65	3.53	.44	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	9.12	
RED BLUFF***.....	T.	1.76	2.26	.	.42	.46	.	.23	.04	.	.01	.42	.68	.20	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	7.48	
Redding   .....	T.	.77	2.13	.85	.	1.17	.05	.	.78	.66	.02	.	.25	.50	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	9.48		
Redlands.....	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	3.13	
Reedley.....	.	.08	1.63	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2.23	
Repsra    .....	T.	2.00	.45	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	7.12	
Rialto (near).....	.	.01	1.35	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	4.95	
Rio Vista.....	.	.07	.63	1.17	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	4.97		
Riverside.....	.	.	1.28	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1.25		
Rocklin    .....	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2.80	
Rohnerville.....	.	1.90	1.20	.	.35	.	.10	.49	.	.30	.	.30	.65	.25	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	6.85	
Ruta.....	T.	.63	4.07	.02	1.55	1.12	.	.50	.32	.14	.51	.31	1.40	.71	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	12.67		
SACRAMENTO***.....	T.	.08	1.70	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	4.42	
St. Helena   .....	T.	2.71	.97	.	.26	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	9.83	
Salinas.....	.	.	1.42	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	3.27	
San Bernardino.....	.	1.45	.04	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	3.92	
SAN DIEGO***.....	T.	.51	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2.60	
SAN FRANCISCO***.....	T.	13	3.28	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0.05	
San Jacinto.....	.	.	.78	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0.22	
San Jose**.....	.	2.73	.07	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	4.37	
SAINT LUIS OBISPO***.....	T.	.01	1.78	.47	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	3.58	
San Mateo.....	.	1.00	1.93	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	6.54	
San Miguel Island.....	.	70	1.76	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2.94	
San Simeon.....	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1.30	
Santa Ana River.....	.	.	1.86	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	4.61	
Santa Barbara.....	.	.	2.20	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	4.06	
Santa Clara.....	T.	2.38	.33	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	4.75	
Santa Cruz.....	T.	.37	2.15	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	4.45	
Santa Margarita.....	.	.	2.55	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	3.60	
Santa Monica.....	.	.	.88	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1.63	
Santa Rosa.....	T.	15	2.90	1.00	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	8.34	
Selma.....	T.	.05	1.21	2.13	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	8.08	
Seven Oaks   .....	T.	.	20	.80	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2.56	
Shively.....	T.	.53	2.10	1.35	.33	.35	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	8.28	
Sierra Madre.....	.	.	1.40	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2.79	
Sierraville.....	T.	.	2.00	2.29	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	4.17	
Sisson    .....	T.	.50	2.55	2.20	.15	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	6.86	
Soledad.....	.	.	2.00	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	3.12	
Sonora.....	.	.03	1.28	1.97	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	6.56		
Spreckels    .....	T.	.	1.40	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	3.25	
Springville.....	T.	.03	40	1.40	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	5.03	
Squirrel Inn.....	T.	.	1.62	T.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	7.88	
Stanwood.....	T.	.80	40	.20	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	11.70	
Stirling City   .....	.	.	3.90	2.83	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	13.70		
Stockton (S. H.)    .....	T.	.03	1.20	.92	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	3.99		
Storey.....	.	.	1.85	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1.95	
Suisun.....	.	.	.98	1.00	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	3.18		
Sulphur Banks.....	.	.	.50	1.93	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	4.74		
Summit-1.....	.	.	1.30	1.40</td																													

**Daily Temperature for December, 1915.**

Stations.	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	Mean.
Alturas.....	54	52	48	47	45	54	60	59	47	48	42	43	44	40	32	38	43	45	45	56	53	51	52	41	38	40	27	27	27	44.5		
	24	41	33	31	25	37	24	32	32	20	27	27	36	26	21	18	23	12	13	31	33	27	17	33	11	9	25	-4	4	23.0		
Bakersfield.....	72	87	72	68	62	65	68	73	64	65	63	69	55	58	55	63	55	64	60	65	65	65	62	56	54	66	56	46	50	63.9		
	33	45	46	47	44	48	45	45	45	46	45	43	38	40	48	44	30	32	37	35	34	33	36	32	35	34	26	33	39	35	26	38.3
Barstow.....	70	69	66	60	65	65	70	65	66	64	70	68	69	60	55	60	58	62	63	65	67	65	60	66	55	60	33	42	35	26	62.0	
	32	35	33	30	32	31	35	33	34	33	32	30	34	40	32	21	21	27	24	28	31	30	31	26	27	24	29	22	30	30	27	30.0
Blocksburg.....	52	60	57	48	48	54	60	55	53	45	44	45	47	54	44	47	46	49	54	48	53	54	53	44	43	47	44	44	42	43	50.0	
	38	40	36	34	30	40	41	40	45	35	36	34	41	34	26	26	36	38	41	42	43	41	47	43	42	32	23	21	21	31	36.1	
Burney.....	38	45	42	40	38	33	45	43	47	47	46	43	39	39	35	37	37	39	45	39	41	43	43	49	..	35	37	37	23	31	40.1	
	24	31	40	31	31	37	37	33	34	28	34	31	32	33	18	12	29	17	11	29	30	23	28	33	26	23	..	..	3	7	25.7	
Calexico.....	79	80	74	72	71	79	80	79	72	76	72	73	71	68	66	63	66	63	66	69	70	74	78	75	71	67	63	67	55	59	70.7	
	38	44	43	47	44	49	41	42	41	43	38	35	37	43	47	35	28	32	31	31	30	32	40	41	33	39	37	29	34	34	33	37.5
Chico.....	54	52	53	55	53	54	52	53	57	48	44	43	42	42	45	35	30	31	40	34	32	45	40	43	32	39	30	27	24	22	38.0	
	35	48	45	47	47	44	45	44	43	42	42	42	41	42	43	35	30	31	40	34	32	45	40	43	32	39	30	27	24	22	38.0	
Colfax.....	66	60	49	53	50	62	64	57	60	55	49	48	45	41	49	46	50	52	55	63	67	65	61	53	55	44	41	44	40	40	53.4	
	36	40	41	32	35	33	31	38	39	31	35	36	35	33	24	24	34	31	28	33	35	34	32	40	39	33	35	30	25	33.3		
Colusa.....	60	55	54	54	55	57	55	53	56	55	52	56	54	51	49	48	50	55	63	57	53	53	53	48	47	46	46	46	46	46	53.3	
	48	48	50	50	50	45	42	41	40	40	41	46	41	39	36	35	34	31	33	35	37	38	43	42	35	40	37	29	23	39.6		
Escondido.....	35	43	42	51	51	36	35	37	38	39	41	49	34	36	44	35	28	30	31	39	33	36	41	43	26	29	23	29	43	41	31	37.2
	Maximum.....	65	65	58	56	57	64	61	63	51	54	53	56	56	51	50	53	54	53	59	60	56	57	53	51	50	53	49	45	44	47	54.7
Eureka.....	41	55	41	39	52	52	46	48	41	42	41	50	44	42	36	35	41	44	31	51	50	48	46	41	33	34	33	28	33	42.1		
	66	69	66	54	56	61	63	72	59	55	58	59	63	54	54	59	54	56	61	60	62	62	57	54	54	49	44	41	41	57.4		
Fresno.....	39	45	41	34	37	44	37	42	42	44	38	37	43	49	42	37	33	36	42	37	35	37	41	40	41	34	33	37	38	24	39.1	
	67	65	63	62	60	64	62	59	57	55	57	54	58	54	52	52	52	55	54	58	56	57	54	57	53	56	58	55	54	58	58.1	
Hanford.....	32	27	38	32	35	32	31	32	34	32	35	34	29	28	27	29	31	32	33	28	27	30	32	33	31	30	29	26	23	21	31.0	
	65	63	63	57	59	64	65	60	53	53	56	62	58	54	53	53	53	53	53	63	62	67	62	56	55	53	49	44	46	57.8		
Hollister.....	39	47	53	46	38	33	43	40	48	44	42	40	47	42	40	43	36	44	42	37	39	32	32	32	32	32	32	32	32	32	37.9	
	58	58	54	52	62	60	58	52	50	47	48	46	38	42	44	46	46	48	53	58	67	58	56	40	58	32	32	32	32	50.1		
Independence.....	28	29	44	34	28	29	29	28	27	22	27	20	26	23	21	20	26	23	25	25	25	25	22	22	13	10	10	10	10	25.0		
	Maximum.....	53	61	56	53	56	58	63	61	57	52	53	53	55	51	51	49	52	59	61	60	61	65	63	52	53	45	50	43	43	41	54.3
Indio.....	80	81	71	69	76	84	81	81	76	77	71	72	67	68	68	67	60	64	70	71	74	74	80	83	69	67	67	64	65	56	56	71.3
	37	47	47	50	43	44	43	48	41	39	47	50	36	37	31	33	40	39	37	34	34	32	29	33	45	40	45	32	30	29	37	35.2
La Porte.....	45	43	37	33	36	46	45	40	31	34	33	31	31	33	31	32	35	31	33	34	35	34	35	35	35	35	35	35	35	35	35.2	
	66	69	66	54	56	61	63	72	59	55	58	59	63	54	54	54	54	54	59	61	60	62	62	57	54	54	54	54	54	54	54	60.7
Lemon Cove.....	36	38	44	42	39	33	39	36	36	39	38	39	46	44	39	33	34	36	34	36	35	33	34	34	34	34	34	34	34	34	34	34
	79	76	65	59	64	70	80	78	58	63	63	60	59	62	62	59	58	67	72	78	72	78	72	70	65	61	57	54	53	63.0		
Los Angeles.....	55	55	57	50	47	46	45	56	46	49	46	49	46	51	44	41	43	45	46	51	55	57	55	55	55	55	55	55	55	55	55	
	63	70	63	63	58	61	62	56	51	57	55	53	55	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	
Merced.....	32	44	55	47	36	37	35	35	37	35	34	38	39	37	36	34	34	35	33	31	31	31	35	36	35	34	34	34	34	34	34	37.1
	Maximum.....	53	61	56	53	56	58	63	61	59	62	53	55	51	51	55	52	50	55	52	53	55	52	53	53	53	53	53	53	53	53	53
Mokelumne Hill.....	40	49	50	48	43	40	49	43	40	41	44	39	41	43	30	31	37	34	31	34	45	37	44	42	42	42	42	42	42	42	42	42
	69	70	68	66	68	67	65	68	67	65	64	61	64	61	61	61	61	61	61	61	62	62	62	62	62	62	62	62	62	62	62	
Needles.....	40	38	39	40	41	38	36	36	37	38	36	36	36	36	32	32	32	32	30	29	29	34	34	34	34	34	34	34	34	34	34	
	Maximum.....	73	72	62	57	52	50	67	71	59	57	53	54	55	47	43	43	47	48	55	57	53	58	65	63	64	65	65	65	65	65	65
North Fork.....	33	36	43	32	30	29	31	33	34	32	29	31	31	31	34	35	34	25	23	23	19	21	30	36	33	34	35	35	35	35	35	35
	Maximum.....	62	62	54	59	55	53	53	51	50	56	51	53	54	54	53	54	53	54	53	54	53	54	61	60	61	60	60	60	60	60	60
Orland.....	38	49	47	35	34	37	37	36	38	39	37	36	38	39	44	46	33	27	30	30	39	34	37	37	37	37	37	37	37	37	37	37.1
	Maximum.....	47	42	50	41	47	43	44	45	44	44	45	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44
Orleans.....	47	42	47	41	43	45	46	44	45	46	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	
	Maximum.....	43	42	47	41	43	45	44	45	44	44	44	44																			

## Snowfall Data. [In inches.]

WATERSHED, COUNTY, STATION.	Total snow-fall.	Water equivalent.	Am't on ground 15th.	Am't on ground 31st.	Compr'd with normal.
<b>Klamath Watershed.</b>					
Siskiyou County.					
Gilta	2		0	0	
<b>Yreka</b>					
Trinity County.					
Hayfork	T.		0	0	
Ruth	T.		0	0	
Humboldt County.					
Weitchpee	0		0	0	-14
<b>Mountain Lakes.</b>					
Modoc County.					
Cederville	2		1	T.	-9
Fort Bidwell	2		0	T.	
Lassen County.					
Eagle Lake					
Fredonia					
Madeline	7		3	2	-4
Susanville	2				-14
Tehama County.					
Mineral					
Nevada County.					
Boca	9				
Truckee	25		18	2	-7
Inyo County.					
Bishop Creek	28		14	14	0
Lone Pine	1		0	0	
Wells Meadow	3			1	
<b>Sacramento Watershed.</b>					
Siskiyou County.					
Dunsmuir	1		3	0	-10
McCloud	7		0	0	-22
Sisson	8		0	0	-16
Modoc County.					
Alturas	4		2	2	-3
Shasta County.					
Burney	13		8	3	-5
Plumas County.					
Bucks	59		54	42	
Canon Dam	19		12	7	
Chester					
Clover Valley	27		17	9	
La Porte	22		26	5	-15
Portola	20		6	2	
Quincy	5		0	0	-5
Butte County.					
De Sabla	0		0	0	-10
Inskip	20		17	9	-21
Stirling City	0		0	0	-16
West Branch	T.		0	0	-21
Yuba County.					
Camptonville	T.		0	0	-13
Sierra County.					
Bunker Hill					
Dorsey's					
Downieville	4		0	0	-13
Sierra City	13		3	0	-14
Sierraville	6		5	2	-12
Table Rock	72		48	32	+22
Nevada County.					
Bowman's Dam					
Deer Creek	7		T.	0	-16
Fordyce Dam	80		47	45	+27
Lake Spaulding	51		31	21	-3
Placer County.					
Blue Canon	29		12	2	0
Cisco	63		48	43	-8
Emigrant Gap	52		25	3	+13
Summit	79		67	40	+7
El Dorado County.					
Pacific					
<b>San Joaquin Watershed.</b>					
Alpine County.					
Tamarack	78		67	48	-17
Tuolumne County.					
Center Ranger Station					
Hetch Hetchy	4		0	0	-3
Lake Eleanor	9		2	2	-15
Mariposa County.					
Yosemite	6		1	1	-11
Fresno County.					
Cascada	22		2	7	
Hume					
Huntington Lake	46		22	24	
Tulare County.					
Hot Springs	0.5		0	0	-2
Springville	15		2	0	+3
<b>Mountains of Southern California.</b>					
Bear Valley Dam					
Converse Nursery	30		1	9	
Holecomb	29		6	13	+13
Squirrel Inn	43		2	37	+32
Seven Oaks	20		18	16	+8
Nellie	24		1	22	
Julian	12		2	10	

## SNOWFALL IN THE MOUNTAINS.

Though the precipitation for the State as a whole was above the normal during December, 1915, the snowfall in the mountains was everywhere deficient, except in southern California. In the Sierra Nevada Mountains, where there was little or no snow on the ground at the beginning of the month, two storms brought moderate amounts of snow. These storms occurred December 3-4 and 12-14. On December 15 the amount on the ground throughout the Sierra ranges was slightly in excess of the normal for that date. However, no considerable amounts fell during the remainder of the month, and as much of that which fell during the first half of the month melted, there was only a fraction of the usual amount left on December 31.

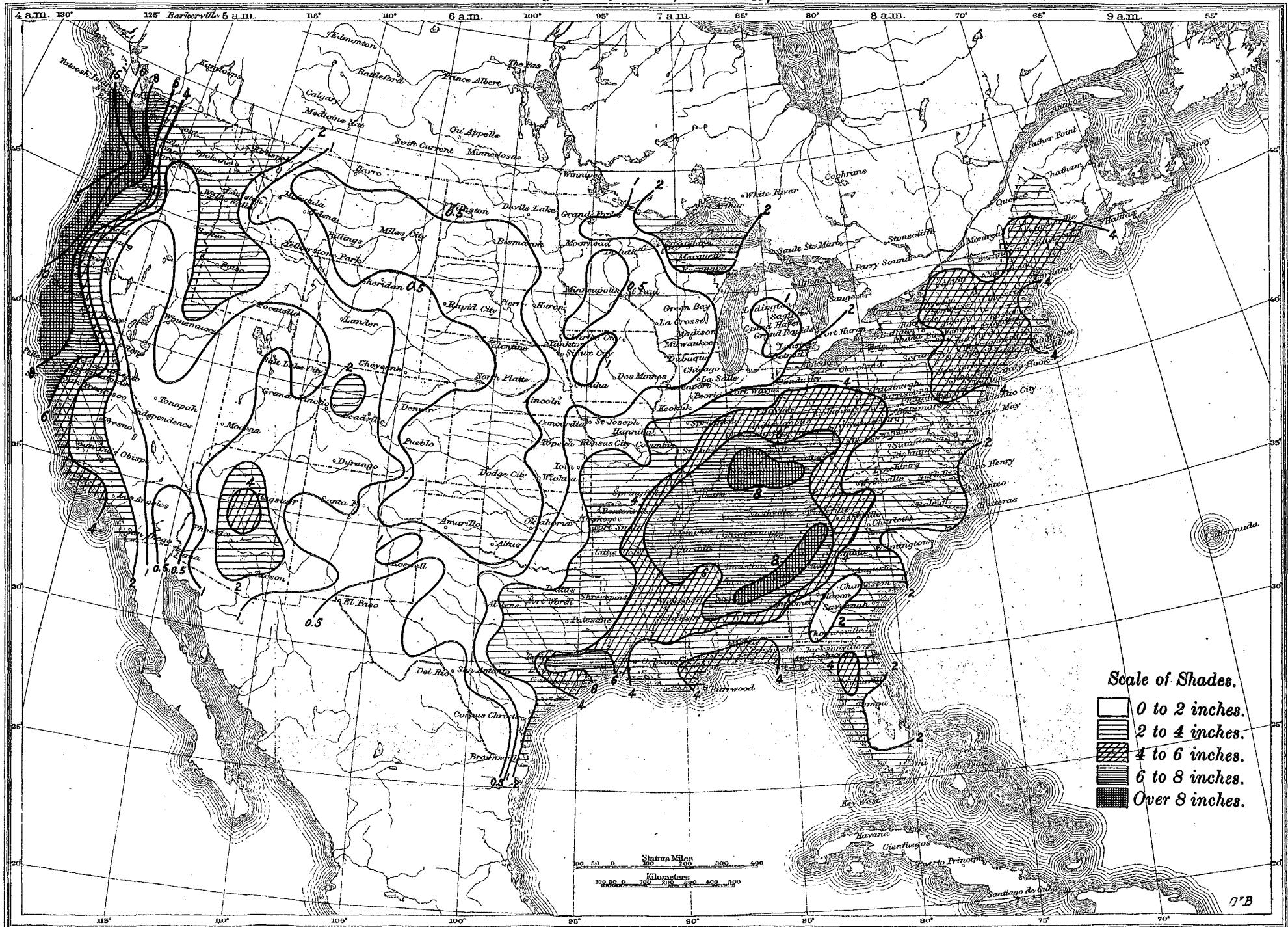
In the mountains of southern California the snowfall was above the average for the month, and came in three storms, those of December 3-4, 13-15, and 29-31. The last of the three brought the largest amount, and as the storm was accompanied by unusually low temperatures, much of the precipitation at relatively low levels was in the form of snow. At many stations where snow is an unusual phenomenon, the first snowfall in years occurred on the 30th and 31st. This was true not only in southern California, but in parts of the Sacramento Valley as well.—A. H. P.

## COMPARATIVE SNOWFALL DATA FOR DECEMBER.

(Amount on the Ground.)

	FORDYCE DAM.			SUMMIT.			TAMARACK.		
	1st.	15th.	31st.	1st.	15th.	31st.	1st.	15th.	31st.
1906	2	60	60	5	70	46	55	101	125
1907	0	30	72	0	42	87	0	39	74
1908	11	27	21	24	32	21	29	43	32
1909	2	25	43	2	24	45	26	52	65
1910	5	2	0	7	4	4	8	21	24
1911	4	1	44	1	2	56	3	5	45
1912	6	22	30	T.	14	19	3	29	42
1913	35	35	60	31	24	80	35	41	110
1914	8	40	31	12	46	26	10	31	27
1915	9	57	45	6	67	40	3	67	48

Total Precipitation, Inches, December, 1915.





The influence of the diversified topography of California upon its precipitation is shown by the lines of equal rainfall in inches, on the accompanying relief map.