

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

## CALIFORNIA SECTION.

G. H. WILLSON, District Forecaster.

VOL. XX. SAN FRANCISCO, NOVEMBER, 1916. No. 11.

## GENERAL SUMMARY.

November, 1916, was the third successive month with a mean temperature below the normal in California. The mean temperature,  $48.0^{\circ}$ , was  $4.9^{\circ}$  below the normal. It was the coldest November in the period of 20 years during which state-wide records have been kept. At both Eureka and Fresno it was the coldest November in a record covering 30 years, while at San Francisco it was the coldest since 1897. The average precipitation was 1.77 inches, or 1.04 inches less than the usual amount. Unlike the two preceding months, the southern half of the State received little or no precipitation, while moderately heavy rainfall occurred throughout the northern half. The sunshine received was somewhat in excess of the normal amount, while the winds were generally light. Cold northerly winds prevailed in the interior valleys, while along the coast the winds were prevailingly west or southwest. Frosts occurred with extraordinary frequency in the agricultural portions of the State, Sacramento reporting frosts on 13 days and Fresno on 19 days.

The first decade of November was a period of cloudy and unsettled weather. The highest temperatures of the month occurred at most stations on the 1st or 2d. Between the 4th and 7th moderately heavy rains fell in the interior valleys, while the elevated portions of the Sierra Nevada Mountains received heavy snow. The second decade was clear and cold. The air was of unusual clearness, causing the sunshine to seem warm and pleasant for November, while the accelerated radiation at night caused unusually low minimum temperatures, with many destructive frosts. The cold was particularly severe on the mornings of the 12th to the 17th, when temperatures in the agricultural regions fell to  $10^{\circ}$  or more below the freezing point, while subzero temperatures were recorded at several of the mountain stations. The last decade of the month was cold, cloudy and unsettled, the second storm of the month occurring between the 25th and 28th. This storm brought general rains throughout the Sacramento Valley and moderately heavy snow in the high Sierra, while only light showers fell in the San Joaquin Valley, and little or no rain fell in southern California.

From an agricultural point of view the weather of November was generally unfavorable, principally because of the persistent cold and the frequent severe frosts. The damage sustained by citrus fruits varied in different parts of the State. In some regions the damage was negligible, while in others, notably in the lowlands of the San Joaquin Valley, the loss was considerable, injury having been sustained by young trees as well as by immature fruit. Fortunately, a considerable portion of the interior valley crop of citrus fruits was harvested before the severest frosts occurred. Olives were frozen and table grapes still remaining on the vines were almost entirely destroyed. Severe injury to garden vegetables occurred in all save a few sections, but this is not unusual for November. Celery in the delta district was mostly unhurt. While the rice harvest was delayed, neither the quality nor the quantity of the crop was affected. Potatoes were actually benefitted, as the cold weather chilled the ground sufficiently to enable growers to start digging potatoes for storage. The long continued drought in the extreme north portion of the State was effectually broken by the two general rains. However, a serious drought still persisted at the close of the month in the southern half of the State, where lack of moisture has contributed in no small measure to the harm caused by the cold weather.

A. H. P.

## PRESSURE.

The monthly mean atmospheric pressure for the State, reduced to sea level, was 30.14 inches.

The highest was 30.48 inches at Red Bluff on the 13th.

The lowest was 29.78 inches at Red Bluff on the 4th.

The range for the State was 0.70 inch.

## TEMPERATURE.

The monthly mean temperature for the State was  $48.0$  degrees, which is  $4.9$  degrees below the normal.

The highest monthly mean was  $62.4$  degrees, at Sterling; and the lowest was  $26.8$  degrees, at Bridgeport.

The highest temperature,  $99$  degrees, occurred at Calexico on the 2d; and lowest,  $-12$  degrees, occurred at Tamarack, on the 13th.

The range for the State was 111 degrees.

## PRECIPITATION.

The average precipitation for the State was 1.77 inches, or 1.04 inches below the normal.

The greatest monthly amount was 11.19 inches, at Branscomb. 27 stations reported no precipitation.

The greatest amount in 24 hours was 5.20 inches at Branscomb, on the 25th.

## RELATIVE HUMIDITY.—(Per Cent.)

Stations.	5 a.m.	5 p.m.	Mean.
Eureka.....	85	79	82
Fresno.....	81	45	63
Los Angeles.....	61	54	57
Mount Tamalpais.....	52	53	53
Red Bluff.....	66	40	53
Sacramento.....	80	43	62
San Diego.....	76	72	74
San Francisco.....	78	56	67
San Jose.....	83	49	66
San Luis Obispo.....	75	54	64

## SUNSHINE AND CLOUDINESS.

Stations.	Actual hours of sunshine.	Per cent of the possible.
Eureka.....	187	63
Fresno.....	242	79
Los Angeles.....	271	87
Mount Tamalpais.....	242	80
Red Bluff.....	212	71
Sacramento.....	200	66
San Diego.....	253	81
San Francisco.....	206	68
San Jose.....	232	76
San Luis Obispo.....	235	76

## WIND MOVEMENT.—(Miles.)

Stations.	Total movement for month.	Average hourly velocity.	Maximum velocity.	Direction.	Date.
Eureka.....	4,275	5.9	33	n.	11
Fresno.....	3,163	4.4	26	nw.	14
Independence.....	4,166	5.8	32	w.	7
Los Angeles.....	3,765	5.2	19	nw.	18
Mount Tamalpais.....	14,223	19.8	60	n.	19
Point Reyes.....	12,182	16.9	54	nw.	18
Red Bluff.....	4,688	6.5	33	nw.	11
Sacramento.....	5,284	7.3	33	nw.	19
San Diego.....	3,380	4.7	19	w.	5
San Francisco.....	4,508	6.3	27	sw.	2
San Jose.....	3,946	5.5	26	n.	12
San Luis Obispo.....	2,677	3.7	23	n.	28

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

## Climatological Data for November, 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	34.8	.....	73	1	-2	13	55	0.63	-0.53	0.23	3.5	6	19	5	6	.....	
American Camp.....	Tuolumne.....	2,600	1	46.6	.....	75	2	17	13	44	2.35	0.90	0.50	0	5	21	2	7	s. U. S. Forest Service.	
Angiola.....	Tulare.....	205	16	47.4	-4.6	80	3	17	14	44	0.00	-0.68	0.00	0	0	27	0	3	nw. Santa Fe Co.	
Antioch.....	Contra Costa.....	46	37	53.2	-0.6	75	42	29	14	44	0.54	-0.84	0.26	0	0	32	5	3	e. C. G. McDaniel.	
Arrowhead Springs.....	San Bernardino.....	2,000	7	56.4	.....	78	41	30	14	40	0.36	0.36	0	1	28	0	2	..... Arrowhead Springs Co.		
Atascadero.....	San Luis Obispo.....	837	.....	47.2	.....	79	1	15	14	53	0.36	0.36	0	1	30	0	0	..... Colony Holding Corp.		
Auburn.....	Fresno.....	2,050	47.6	80	2	26	20	39	13	31	1.14	0.23	0	3	22	7	1	nw. S. J. & E. Ry. Co.		
Auburn.....	Placer.....	1,360	45	50.1	-4.9	73	22	29	13	35	2.54	-1.33	1.35	0	5	22	0	8	ne. Southern Pacific Co.	
Avalon.....	Los Angeles.....	30	6	57.3	.....	76	9	43	29	22	0.09	0.09	0	1	28	2	0	w. T. S. Manning.		
Azusa.....	do.....	540	14	54.8	-4.2	85	1	29	14	43	0.29	-1.27	0.29	0	1	26	3	1	sw. C. O. Hillis.	
Bagdad.....	San Bernardino.....	784	13	56.2	-5.7	82	41	34	14	46	0.63	+0.17	0.63	0	1	20	2	8	do. Santa Fe Co.	
Bakersfield.....	Kern.....	404	27	46.6	-9.0	82	2	24	14	46	0.00	-0.30	0.00	0	0	30	0	0	w. E. L. White.	
Barstow.....	San Bernardino.....	2,105	13	50.6	-4.3	80	3	14	14	41	0.00	-0.35	0.00	0	6	16	11	3	State University.	
Berkeley.....	Alameda.....	317	29	52.2	-2.0	71	9	36	13	36	1.33	-1.22	0.35	0	2	26	2	2	Union Sugar Co.	
Betteravia.....	Santa Barbara.....	153	3	49.8	.....	70	10	28	13	40	0.49	0.47	0	2	26	2	0	do. Southern Pacific Co.		
Biggs **.....	Butte.....	98	17	58.6	-3.5	86	2	32	16	40	2.11	-0.46	1.19	0	2	27	3	0	W. A. Chalfant.	
Bishop.....	Imyo.....	4,450	21	42.1	-4.1	72	1	11	14	46	0.00	-0.43	0.00	0	0	27	3	0	Floyd E. Van Cleave.	
Bishop Creek.....	do.....	8,390	6	35.6	.....	61	1	11	13	29	0.02	0.02	6.0	1	17	9	4	s. Victor Hope.		
Blocksburg.....	Humboldt.....	1,700	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	..... Southern Pacific Co.		
Blue Canon.....	Placer.....	4,695	17	47.0	-6.0	70	2	24	12	32	4.65	-4.10	2.40	20.0	5	24	2	4	C. L. Suits.	
Blythe.....	Riverside.....	268	7	55.3	.....	90	1	21	15	54	0.00	0.00	0	0	0	24	2	4	R. M. Allen.	
Bonita.....	San Diego.....	110	.....	56.1	.....	83	10	29	14	43	T.	T.	0	0	25	4	1	A. J. Haun.		
Branscomb.....	Mendocino.....	2,000	16	40.9	-2.3	74	12	24	13	48	11.19	-2.86	5.20	1.0	6	14	7	9	M. D. Witter.	
Brawley.....	Imperial.....	105	6	57.8	.....	89	1	30	15	47	0.00	0.00	0	0	0	21	8	1	Geo. Delury, Jr.	
Bridgeport.....	Mono.....	6,500	2	26.8	.....	64	2	15	20	52	0.24	0.24	2.0	1	21	8	8	Mrs. M. D. Chambers.		
Burney.....	Shasta.....	3,300	6	36.4	.....	64	1	8	14	52	1.71	0.80	1.7	4	14	8	8	Dr. W. L. Shawk.		
Cahuilla.....	Riverside.....	3,600	5	43.0	.....	86	3	7	14	73	0.00	0.00	0	0	28	2	4	U. S. Forest Service.		
Calaveras Ranger Sta. ....	Calaveras.....	3,400	45	55.6	.....	70	2	22	13	38	3.51	1.37	2.0	5	15	10	sw. F. R. Spencer.			
Calexico.....	Imperial.....	0	11	58.5	-3.4	99	2	30	14	52	0.00	-0.34	0.00	0	0	27	0	3	F. M. Righter.	
Campbell.....	Santa Clara.....	217	19	48.4	-4.3	71	10	25	11	37	0.63	-0.95	0.57	0	3	23	2	5	Pacific Gas & Electric Co.	
Camptonville (near).....	do.....	3,500	4	46.8	.....	70	10	28	7	32	6.85	2.55	2.0	7	19	4	9	Great Western Power Co.		
Canon Dam.....	Plumas.....	4,570	2	37.4	.....	65	1	10	14	38	3.56	1.20	0	6	19	2	9	do. S. J. & E. Ry. Co.		
Cascade.....	Fresno.....	4,900	.....	47.9	.....	73	2	28	17	42	1.80	1.42	9.0	4	26	0	4	T. H. Johnstone.		
Cedarville.....	Modoc.....	4,675	22	35.2	-4.1	68	2	32	13	40	0.86	-1.01	0.32	3.0	5	11	13	6	U. S. Forest Service.	
Center Ranger Station.....	Tuolumne.....	3,850	45	50.0	.....	66	2	27	13	26	2.81	1.65	5.0	4	18	5	7	Pacific Gas & Electric Co.		
Centerville.....	Butte.....	490	2	46.2	.....	73	10	21	13	40	3.89	1.28	0	5	20	3	7	do. U. S. Bureau Plant Ind.		
Chico.....	do.....	189	46	48.4	-5.4	73	1	20	12	47	2.09	-0.54	0.76	0	5	15	8	7	O. I. Westerburg.	
China Flat.....	Humboldt.....	600	7	43.0	.....	69	3	20	14	32	5.27	2.10	0	8	12	8	1	Prof. F. P. Brackett.		
Claremont.....	Los Angeles.....	1,200	24	54.8	-3.5	88	1	30	14	43	0.28	-1.03	0.28	0	1	26	3	1	John O. Ogle.	
Cloverdale.....	Sonoma.....	340	14	51.2	-2.9	77	10	25	13	44	2.53	-1.50	0.75	0	6	23	1	6	Producers Trans. Co.	
Coalinga.....	Fresno.....	663	4	48.8	.....	70	21	26	12	40	0.23	0.23	0	1	22	8	0	Southern Pacific Co.		
Colfax.....	Placer.....	2,421	45	42.0	-0.7	81	1	13	10	30	4.10	-0.98	1.86	0	6	21	1	8	Co usa Sun.	
Colusa.....	do.....	60	13	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	..... Southern Pacific Co.		
Converse Nursery.....	San Bernardino.....	6,000	2	46.9	.....	78	2	25	13	36	0.27	0.27	T.	1	21	8	1	w. Edw. N. Munns.		
Corona.....	Riverside.....	615	2	56.6	.....	84	1	33	23	49	0.11	0.11	0	1	20	10	0	nw. J. W. Garthwaite.		
Crescent City.....	Del Norte.....	125	2	42.2	-8.7	69	20	27	12	33	9.15	-2.03	2.34	0	12	15	4	11	sw. Thos. E. Peacock.	
Cuyamaca.....	San Diego.....	4,677	17	46.2	+2.2	74	1	25	14	31	0.13	-3.22	0.13	0	1	28	1	1	Cuyamaca Water Co.	
Davis.....	Yolo.....	51	44	49.8	-5.9	76	1	20	14	45	0.35	-1.35	0.18	0	4	19	9	2	S. H. Beckett.	
Deer Creek.....	Nevada.....	3,700	9	40.0	.....	68	1	18	12	46	6.42	2.33	18.0	6	18	5	7	Pacific Gas & Electric Co.		
Del Monte.....	Monterey.....	25	5	49.0	.....	70	20	26	11	39	0.65	0.30	0	4	17	5	8	Hotel Del Monte.		
Delta.....	Shasta.....	1,138	31	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	..... Southern Pacific Co.		
Denair.....	Stanislaus.....	126	16	47.4	-7.1	74	2	23	15	41	T.	-1.44	T.	0	0	23	0	7	do. Santa Fe Co.	
De Sabla.....	Butte.....	2,700	12	43.5	.....	72	10	16	13	44	7.29	+1.08	2.12	0	6	20	6	7	Pacific Gas & Electric Co.	
Dobbins (near).....	Yuba.....	1,650	12	51.9	-3.9	74	1	30	14	32	4.96	+0.65	2.32	0	6	17	6	7	do. J. T. Mason.	
Downieville.....	Sierra.....	3,150	5	42.4	.....	71	11	19	12	46	4.81	1.44	1.0	7	18	5	7	Producers Trans. Co.		
Dudley.....	Kings.....	595	4	50.8	.....	83	2	24	13	40	0.00	0.00	0	0	0	26	1	3	W. H. Dudley.	
Dudley's.....	Mariposa.....	3,000	7	43.9	.....	74	11	21	14	41	2.89	1.75	3.0	4	20	3	7	do. R. W. Durham.		
Dunsmuir.....	Siskiyou.....	2,285	27	.....	.....	.....	.....	.....	.....	.....	4.34	-1.47	1.57	2.5	7	11	11	11	do. R. W. Durham.	
Durham.....	Butte.....	160	21	47.4	-5.0	72	1	20	12	45	1.80	-1.35	1.10	0	5	22	3	5	J. J. Lea.	
East Park.....	Colusa.....	2,408	2	46.8	.....	78	10	19	14	47	1.02	0.64	0	0	2	16	9	4	So. Cal. Edison Co.	
Edison.....	Kern.....	2,500	2	59.2	.....	74	2	34	13	23	0.71	-0.35	0.54	0	3	18	8	4	H. H. Kessler.	
El Cajon.....	San Diego.....	482	17	49.8	-4.5	76	2	30	13	37	2.34	-0.35	0.98	0	6	19	4	7	Pacific Gas & Electric Co.	
Electra.....	Amador.....	725	12	47.4	.....	76	2	30	13	37	2.34	-0.35	0.98	0	0	1	29	1	1	U. S. Forest Service.
Elsinore.....	Riverside.....	1,300	52	53.2	.....	83	1	25	40	44	0.04	0.04	0	1	29	1	5	do. Southern Pacific Co.		
Emigrant Gap.....	Placer.....	5,230	42	43.8	+0.8	80	2	18	7	45	4.57	+0.30	2.10	22.0	6	25	0	5	do. A. R. Moon.	
Escondido.....	San Diego.....	657	22	52.7	-3.1	82	9	28	16	48	0.28	-0.95	0.28	0	1	8	22	7	do. U. S. Weather Bureau.	
EUREKA.....	Humboldt.....	64	30	47.5	-3.5	64	2	31	19	26	3.13	-2.19	1.56	0	12	12	7	11	do. G. L. Marvin.	
Folsom.....	Sacramento.....	252	40	51.2	-3.4	76	2	30	13	33	1.69	-1.00	1.10	0	5	17	7	11	Fontana Co.	
Fontana.....	San Bernardino.....	1,825	4	57.6	.....	91	1	24	12	45	0.13	0.13	0	1	23	7	0	do. E. J. Roening.</		

## Climatological Data for November, 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 (unmeted).	Precipitation of inch or more.	Clear.	Partly cloudy.	Cloudy.		
La Porte.....	Plumas.	5,000	22	34.6	-6.4	62	1	14	114	30	5.74	-3.32	1.49	13.5	7	21	3	6	n.	C. W. Hendel.
Las Plumas.....	Butte.	506	2	49.1	.....	67	2	31	12	29	3.92	.....	1.87	0	6	18	5	7	n.	Great Western Power Co.
Le Grande.....	Merced.	255	16	49.3	-2.4	79	2	25	17	43	0.79	-0.65	0.79	0	1	20	0	10	w.	Santa Fe Co.
Lemon Cove.....	Tulare.	600	21	48.8	-7.8	70	2	28	113	30	0.40	-1.16	0.37	0	2	26	3	1	nw.	T. E. Bence.
Lick Observatory.....	Santa Clara.	4,209	27	.....	.....	.....	.....	27	13	1	1.69	-1.25	0.48	1.5	6	24	3	3	se.	The Director.
Lindsay.....	Tulare.	384	2	48.3	.....	79	2	23	13	39	0.00	.....	0.00	0	0	22	5	3	nw.	Basil Prior.
Livermore.....	Alameda.	485	45	53.7	-1.2	88	1	26	114	49	0.68	-0.99	0.56	0	3	28	0	2	n.	E. G. Still.
Lompoc (near).....	Santa Barbara.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	A. R. Poott.
Lone Pine.....	Inyo.	3,728	11	51.4	-4.4	77	1	20	9	50	T.	-0.15	T.	0	0	28	2	0	s.	G. F. Marsh.
LOS ANGELES.....	Los Angeles.	293	39	59.4	+1.0	81	10	41	28	30	0.09	-1.29	0.09	0	1	22	6	2	ne.	U. S. Weather Bureau.
Los Gatos.....	Santa Clara.	600	23	52.0	-2.0	74	10	34	14	29	0.48	-2.89	0.88	0	4	22	1	7	n.	F. H. McCullagh.
McCloud.....	Siskiyou.	3,270	6	37.5	.....	65	9	8	13	41	3.15	.....	1.01	7.0	6	21	4	5	sw.	J. A. Thomas.
Madelaine.....	Lassen.	5,270	7	31.4	.....	72	1	12	12	52	0.72	.....	0.25	5.0	7	12	10	10	sw.	J. H. Williams.
Magalia.....	Butte.	2,321	12	48.4	-1.0	70	9	28	22	38	6.90	-0.25	3.00	0	5	10	0	20	n.	Southern Pacific Co.
Maricopa.....	Kern.	640	5	54.6	.....	78	2	28	18	42	0.16	.....	0.16	0	1	25	0	5	n.	Producers Trans. Co.
Marysville.....	Yuba.	67	45	50.9	-5.5	80	1	24	14	43	1.99	-0.26	1.40	0	3	21	4	5	n.	Southern Pacific Co.
Mecca.....	Riverside.	-185	10	*58.1	.....	*91	1	*30	116	*45	0.00	.....	0.00	0	0	25	3	2	se.	E. A. Palmer.
Merced.....	Merced.	173	42	48.8	-6.6	78	2	25	114	39	0.75	-0.46	0.66	0	4	22	3	5	nw.	Santa Fe Co.
Middlewater.....	Kern.	803	5	50.0	.....	79	2	26	13	33	0.06	.....	0.06	0	1	21	2	7	ne.	Producers Trans. Co.
Mill Creek—1.....	Amador.	2,500	9	47.9	.....	73	11	25	113	42	3.92	.....	1.43	1.5	5	23	0	7	n.	Pacific Gas & Electric Co.
Milton (near).....	Calaveras.	669	25	52.4	-3.2	78	2	31	112	33	1.06	-1.17	0.70	0	3	21	8	1	nw.	J. H. Southwick.
Mineral.....	Tehama.	4,750	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	U. S. Forest Service.
Mokelumne Hill.....	Calaveras.	1,550	23	49.6	-2.2	76	2	29	12	28	2.13	-1.59	0.94	0	4	19	3	8	sw.	C. E. Prindle.
Montague.....	2,450	28	36.2	-8.2	71	2	4	14	47	11.11	-0.73	0.50	T.	6	15	7	8	n.	I. E. De Boy.	
MOUNT TAMALPAIS.....	Marin.	2,375	17	47.6	-3.0	64	1	34	13	18	1.95	-3.47	0.91	0	6	17	6	7	ne.	U. S. Weather Bureau.
Napa City.....	Napa.	20	39	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Thos. Hull.
Needles.....	San Bernardino.	477	24	48.6	-12.1	65	19	29	123	32	0.00	-0.42	0.00	0	0	30	0	0	o.	Santa Fe Co.
Nellis.....	San Diego.	5,350	7	47.2	.....	77	1	25	13	24	0.51	.....	0.51	0	1	20	6	4	ne.	Esther P. Hewlett.
Nevada City.....	Nevada.	2,850	24	44.0	-3.8	75	20	14	12	53	4.05	-2.14	1.44	0.5	6	22	4	4	sw.	B. H. Proston.
Newman.....	Stanislaus.	91	27	*49.2	-6.9	*80	3	*21	14	*53	0.26	-0.87	0.20	2	2	19	3	8	s.	E. S. Wangenheim.
North Bloomfield.....	Nevada.	3,214	19	44.7	-3.4	70	2	21	113	36	5.00	-1.51	1.80	T.	5	19	3	8	sw.	J. R. McIntosh.
North Fork.....	Madera.	3,000	12	47.4	.....	80	18	25	14	46	1.52	-0.93	1.00	0	3	24	3	3	sw.	U. S. Forest Service.
Oak Grove.....	San Diego.	2,751	6	52.2	.....	91	1	22	22	53	T.	.....	0	0	26	2	2	e.	Chabot Observatory.	
Oceanside.....	Alameda.	36	40	51.6	-2.2	69	10	30	13	28	1.60	-1.22	0.46	0	7	14	10	6	w.	H. D. Brodie.
Ojai Valley.....	San Diego.	60	6	55.0	.....	78	19	40	123	28	0.00	.....	0.00	0	0	24	6	0	w.	W. H. Duncan.
Orland.....	Ventura.	900	10	55.2	.....	86	1	25	14	52	0.13	.....	0.13	0	1	28	2	0	sw.	U. S. Rec. Service.
Orleans.....	Glenn.	254	34	51.8	-4.6	78	10	29	18	39	0.80	-1.41	0.51	0	3	15	6	9	n.	F. W. Gent.
Oroville (near).....	Humboldt.	376	18	46.8	-6.1	72	2	24	113	25	5.75	-2.91	1.55	0	9	14	1	15	nw.	E. D. Fairchild.
Oroville.....	Butte.	250	32	50.8	-5.1	77	10	27	15	41	2.62	-0.85	1.73	0	5	15	1	14	nw.	U. S. Forest Service.
Pacific.....	El Dorado.	3,400	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	sw.
Pasadena.....	Los Angeles.	827	26	54.8	-4.3	83	1	29	14	46	0.29	-0.11	0.29	0	1	27	2	0	sw.	Harlan W. Hall.
Paso Robles.....	San Luis Obispo.	809	29	47.6	-3.9	83	2	16	14	53	0.47	-0.73	0.45	0	2	26	4	0	ne.	Dr. F. W. Sawyer.
Peachland.....	Sonoma.	190	20	49.2	-3.9	75	11	23	14	43	3.69	-1.17	0.95	0	6	19	8	3	s.	E. H. Parnell.
Petaluma.....	do.	2	49.0	.....	76	1	20	14	49	1.14	-1.52	0.28	0	6	23	4	3	n.	John Landis.	
Placerville.....	El Dorado.	1,875	27	48.8	-4.3	65	2	22	13	32	2.79	-2.05	1.32	0	6	24	0	6	sw.	A. Baring Gould.
Point Loma.....	San Diego.	302	10	56.4	.....	75	10	41	14	23	0.08	-1.08	0.08	0	5	20	6	4	se.	Fred J. Dick.
POINT REYES.....	Marin.	490	24	51.6	-2.3	65	15	42	13	18	0.95	-2.00	0.41	0	7	16	7	7	n.	U. S. Weather Bureau.
Pomona.....	827	5	53.2	.....	86	1	27	14	50	0.20	.....	0.17	0	2	21	4	5	sw.	J. E. Adamson.	
Porterville.....	Tulare.	464	27	49.8	-5.1	80	2	26	14	40	0.49	-0.27	0.47	0	2	21	6	3	sw.	Leslie McAuliffe.
Portola.....	Plumas.	1	40.2	.....	71	1	17	5	12	59	0.13	.....	0.07	3.00	2	16	0	14	sw.	Western Pacific Co.
Quincy.....	do.	3,400	21	44.4	+3.2	80	11	14	52	4.70	-1.02	2.00	5.00	0	5	20	2	8	sw.	D. N. Rogers.
REED BLUFF.....	Tehama.	307	39	49.6	-3.8	73	10	19	14	40	1.28	-1.82	1.00	0	5	17	6	7	nw.	U. S. Weather Bureau.
Redding.....	Shasta.	552	41	50.0	-4.1	87	10	27	15	44	3.24	-0.93	1.63	0	5	14	9	7	sw.	J. H. Buick.
Redlands.....	San Bernardino.	1,352	23	56.0	-2.1	89	1	29	14	44	0.03	-0.32	0.03	0	1	24	4	2	sw.	P. W. Moore.
Reedley.....	Fresno.	347	16	49.4	-4.2	77	2	26	14	34	0.00	-0.88	0.00	0	0	23	3	2	sw.	Santa Fe Co.
Rialto (near).....	San Bernardino.	2,250	10	51.1	.....	89	1	37	13	38	0.55	.....	0.55	0	1	20	7	3	nw.	So. Cal. Edison Co.
Riverside.....	Riverside.	851	34	59.2	+1.0	86	1	32	122	55	0.03	-0.74	0.03	0	1	23	6	1	sw.	J. H. D. Cox.
Rocklin.....	Placer.	249	45	47.7	-6.2	74	2	22	11	40	1.27	-0.96	1.00	0	2	20	1	9	sw.	Southern Pacific Co.
Rohnerville.....	Humboldt.	75	13	48.8	.....	73	2	25	12	42	3.05	-3.04	1.15	0	8	15	1	14	w.	W. D. Gray.
Ruth.....	Trinity.	2,925	2	44.2	.....	67	1	20	14	45	5.56	.....	1.96	2.0	7	17	4	9	sw.	U. S. Forest Service.
SACRAMENTO.....	Sacramento.	71	39	50.5	-2.9	72	2	30	14	31	0.49	-1.66	0.42	0	4	18	8	4	se.	U. S. Weather Bureau.
St. Helena.....	Napa.	255	8	50.8	.....	78	10	25	14	44	2.02	.....	0.88	0	5	23	3	4	n.	W. F. Bornhorst.
Salinas.....	Monterey.	40	42	51.2	-1.9	74	9	28	12	36	0.63	-0.75	0.35	0	2	10	13	7	sw.	Miss E. Ruth Abbott.
San Bernardino.....	San Bernardino.	1,054	24	55.9	-1.5	92	1	30	10	515	0.03	-1.36	0.03	0	1	24	4	2	sw.	Dr. A. K. Johnson.
SAN DIEGO.....	San Diego.	87	45	56.5	-2.5	74	10	39	14	29	0.05	-0.73	0.05	0	1	20	0	0	ne.	U. S. Weather Bureau.
SAN FRANCISCO.....	San Francisco.	207	45	54.4	-1.1	73	10	44	13	23	1.50	-1.18	0.76	0	5	19	6	5	ne.	do.
San Jacinto.....																				

## Climatological Data for November, 1916.—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahr.						Precipitation, in inches.						Number of days.	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 (.01 inch or more).	Partly cloudy.	Cloudy.			
Ukiah .....	Mendocino .....	620	23	47.2	-3.4	73	†9	20	†13	45	3.28	-0.87	1.35	0	6	18	5	7	nw. Dr. George McCowen.	
Vacaville .....	Solano .....	175	28	52.3	-3.1	78	10	22	14	44	1.42	-1.44	0.62	0	5	25	2	3	n. J. E. Bassford.	
Valyermo .....	Los Angeles .....	3,750	28	48.6	-5.0	68	†1	27	†14	36	0.00	-0.85	0.00	0	0	26	1	3	nw. U. S. Forest Service.	
Visalia .....	Tulare .....	334	2	48.8	.....	70	†2	23	14	39	0.78	-1.90	0.47	0	3	.....	.....	.....	Sanite Fe Co.	
Walnut Creek .....	Contra Costa .....	149	2	48.8	.....	91	1	27	22	50	0.16	.....	0.16	0	1	26	2	2	R. L. Nougaret.	
Warner Springs .....	San Diego .....	3,165	8	53.8	.....	91	1	22	15	37	0.00	-0.50	0.00	0	0	25	0	5	J. A. Ream.	
Wasco .....	Kern .....	336	16	48.4	-5.0	91	1	22	15	37	1.20	-1.36	0.67	0	5	13	12	5	Santa Fe Co.	
Watsonville .....	Santa Cruz .....	23	20	52.0	-2.6	80	10	30	14	44	3.51	-1.59	1.56	0	6	15	6	9	Spreckels Sugar Co.	
Weaverville .....	Trinity .....	2,182	4	41.3	.....	71	1	14	12	48	3.51	.....	3.14	0	9	20	3	7	U. S. Forest Service.	
Weitchpec .....	Humboldt .....	1,700	6	43.7	.....	66	2	24	12	32	8.75	.....	2.46	5.0	7	17	2	11	G. S. Garnett.	
West Branch .....	Butte .....	3,216	2	41.9	.....	68	†1	17	12	40	8.98	.....	1.70	-0.75	1.31	0	4	18	7	s. Pacific Gas & Electric Co.
Wheatland .....	Yuba .....	84	29	48.8	-3.8	73	2	26	14	35	25	.....	0	0	2	22	2	6	Win. Lumbard.	
Willows .....	Glenn .....	136	37	50.2	-4.6	79	10	25	15	43	0.71	-1.25	0.36	0	2	10	18	2	F. E. Barnhouse.	
Yorba Linda .....	Orange .....	405	2	57.1	.....	86	8	34	19	45	0.06	.....	0.06	0	1	10	8	3	S. J. Walker.	
Yosemite .....	Mariposa .....	3,960	12	40.2	.....	69	†1	18	†13	43	0.38	-2.45	0.20	4.0	2	19	8	3	Superintendent National Park.	
Yreka .....	Siskiyou .....	2,625	27	35.8	.....	72	2	9	14	46	1.70	.....	0.57	0	6	13	5	12	U. S. Forest Service.	
Means and Extremes .....	.....	.....	.....	48.0	-4.9	99	2	-12	13	73	1.77	-1.04	5.20	.....	3	21	4	5	sw.	

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 NOVEMBER.

## MEAN MONTHLY TEMPERATURE FOR THE STATE.

1897.....	50.8	1907.....	.....	52.7
1898.....	51.6	1908.....	.....	52.9
1899.....	52.1	1909.....	.....	50.7
1900.....	54.7	1910.....	.....	52.8
1901.....	54.9	1911.....	.....	51.1
1902.....	50.8	1912.....	.....	52.2
1903.....	55.2	1913.....	.....	52.2
1904.....	53.4	1914.....	.....	54.2
1905.....	52.8	1915.....	.....	50.8
1906.....	52.6	1916.....	.....	48.0

## AVERAGE PRECIPITATION FOR THE STATE.

1897.....	1.41	1907.....	.....	0.28
1898.....	0.99	1908.....	.....	1.85
1899.....	8.82	1909.....	.....	4.62
1900.....	5.21	1910.....	.....	1.91
1901.....	2.65	1911.....	.....	1.00
1902.....	3.61	1912.....	.....	2.85
1903.....	5.03	1913.....	.....	5.00
1904.....	1.44	1914.....	.....	0.80
1905.....	2.26	1915.....	.....	1.96
1906.....	1.92	1916.....	.....	1.77

## DELAYED REPORTS.

Stations.	Month.	Temperature.					Total precipitation.
		Mean	Max.	Date	Min.	Date	
Georgetown .....	September.	.....	.....	.....	.....	.....	0.50
Pacoma .....	October.	59.5	85	25	40	+27	0.40
Bonita .....	"	.....	.....	.....	.....	.....	1.17
Camp Baldy .....	"	.....	.....	.....	.....	.....	7.31
Fort Ross .....	"	.....	.....	.....	.....	.....	0.00
Georgetown .....	"	.....	.....	.....	.....	.....	3.25
Hayfork .....	"	50.2	84	16	17	23	T.
Las Plumas .....	"	58.6	89	1	42	29	2.67
Los Alamos .....	"	47.0	+72	26	+25	3	2.54
Wells Meadow .....	"	.....	.....	.....	.....	.....	1.48

## DATES OF MISCELLANEOUS PHENOMENA.

Thunderstorms.—Camptonville (near), 6; Crescent City, 4; Hetch Hetchy, 25; Las Plumas, 6; Los Gatos, 4; Nevada City, North Bloomfield, 6; Redding, Santa Clara, 4; Weitchpec, 6.

Earthquakes.—Cahuilla, 26; Calexico, 2; Lone Pine, 9; Santa Cruz, Los Gatos, 3; Spreckels, 27.

**Daily Precipitation for November, 1916.**

NOVEMBER, 1916.

Daily Precipitation for November, 1916.—Continued

Daily Precipitation for November, 1916.—Continued

Except as otherwise indicated observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation. \*\*\* Regular Weather Bureau station; precipitation is for the 24-hour period, midnight to midnight.

■ Precipitation measured in the morning; amount then recorded is for the preceding 24 hours. \* Precipitation included in the next following measurement.  
† Separate dates of fall not recorded. T. Trace, or less than 0.01 inch.

Note: Stations indicated thus [3] in the above table are located as follows:

Note: Stations indicated thus [S] in the above table are located as follows: Camp Baldy, lat. 34 15 N., long. 117 38 W.; Camp Bonita, lat. 34 14 N., long. 117 45 W.; Camp Iron Forks, lat. 34 18 N., long. 117 44 W.; Camp Rincon, lat. 34 15 N., long. 117 49 W.; Clearwater Power House, lat. 34 35 N., long. 117 27 W.; Dorman's Ranch, lat. 34 14 N., long. 117 10 W.; Littleton Ranch, lat. 34 15 N., long. 118 17 W.; Mount Wilson, lat. 34 14 N., long. 118 5 W.; Nenachah, lat. 34 48 N., long. 118 33 W.; Pacoima, lat. 34 22 N., long. 118 21 W.; Rialto (near), Lytle Creek Canon; Santa Anita Forest Station, lat. 34 12 N., long. 116 2 W.; Summit--2, Cajon Pass; Tujunga Canon, lat. 34 18 N., long. 118 11 W.

## Daily Temperature for November, 1916.

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.....	73	68	62	54	40	42	49	59	64	47	35	32	43	54	60	64	51	63	55	56	48	47	51	46	56	54	52	56	52	56	52.6			
	19	28	18	32	26	29	21	18	16	18	11	4	-2	6	9	11	14	18	7	15	19	21	12	21	31	29	17	13	23	17.0				
Bakersfield.....	79	82	76	73	73	68	66	70	71	70	71	57	65	68	73	64	71	72	70	65	75	73	66	61	65	72	67	67	65	60.0				
	40	43	42	41	41	37	39	33	34	36	37	29	25	24	27	27	31	32	31	30	29	30	30	30	40	35	35	35	33.2					
Barstow.....	79	76	80	75	55	56	68	70	70	74	73	70	60	55	58	64	70	72	70	66	63	67	70	66	68	70	70	70	70	68.3				
	41	40	42	40	38	35	40	38	31	35	34	32	27	14	20	25	28	35	40	31	26	27	29	28	30	35	40	40	32	34	33.0			
Blocksburg.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Calexico.....	89	99	89	86	78	76	73	71	81	85	84	76	61	68	72	74	79	82	75	73	75	75	78	79	78	78	81	81	81	77.6				
	47	47	43	47	54	41	45	42	39	40	41	41	31	30	32	32	37	39	35	51	45	31	31	35	35	38	38	38	40	38	39.4			
Chico.....	73	68	67	62	55	60	65	67	68	64	54	67	61	61	67	69	68	61	64	70	64	63	61	56	51	55	55	56	59	60	62.4			
	40	44	45	51	41	45	30	33	38	35	28	20	29	25	26	32	34	28	27	36	33	38	39	37	31	31	31	31	31	34.5				
Colfax.....	81	73	72	50	48	44	64	76	80	70	56	52	63	70	77	75	77	72	70	72	62	56	57	52	53	54	64	64	64	64	64.3			
	34	42	36	44	30	32	26	26	32	32	26	20	20	35	32	30	38	28	27	30	30	32	32	32	32	32	32	32	32	33.8				
Colusa.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
Escondido.....	81	71	62	64	59	62	71	74	82	80	67	63	65	73	75	73	78	75	62	63	70	67	66	64	75	66	68	70	73	78	69.9			
	38	42	49	42	51	35	43	42	40	37	33	50	29	43	30	28	30	33	33	31	30	29	29	32	32	32	32	32	32	32	35.5			
Eureka.....	57	64	61	55	52	54	55	53	50	52	53	55	59	53	49	51	61	53	52	49	58	56	52	55	43	56	52	52	52	54.2				
	46	48	53	41	38	48	42	39	43	45	39	33	35	34	35	36	36	40	31	35	43	44	45	50	47	45	38	35	42	40.8				
Fresno.....	73	79	67	69	58	62	58	66	67	68	63	52	56	61	61	66	65	65	58	63	69	66	60	56	67	53	53	64	64	63	63.0			
	47	47	45	44	46	44	40	43	41	41	33	28	30	34	37	36	37	33	36	37	39	38	32	45	47	45	37	39	39	39.5				
Hanford.....	79	72	66	60	58	54	52	56	54	52	56	50	52	52	52	58	54	56	50	52	50	52	54	50	50	50	50	50	50	56.1				
	42	46	35	32	40	30	32	42	38	40	34	32	38	42	42	32	42	44	40	44	42	44	40	32	39	38	42	38	38	38.2				
Hollister.....	75	68	64	63	55	58	62	66	71	73	68	61	59	63	68	71	79	76	66	65	66	63	63	58	58	60	60	60	64	64	64.1			
	40	41	49	44	42	44	32	32	36	38	37	27	25	25	33	30	29	36	41	32	31	28	40	39	33	30	30	30	30	36.4				
Independence.....	73	72	69	64	57	64	56	58	67	63	70	44	48	52	56	60	62	60	58	56	59	60	60	59	59	59	59	59	59	58.8				
	34	34	31	30	34	22	34	26	27	30	27	20	16	17	23	21	24	23	30	28	30	24	25	25	25	25	25	25	25	26.0				
Indio.....	91	90	86	84	76	75	74	77	83	84	76	78	73	76	79	74	79	77	77	78	72	76	78	66	81	76	80	82	78.2					
	49	50	46	50	55	49	50	49	37	40	35	52	37	34	37	34	43	41	34	55	50	35	33	38	41	38	39	40	42.4					
La Porte.....	62	60	52	40	35	32	35	37	58	40	50	30	39	44	37	40	40	41	34	47	46	46	34	38	38	39	46	43	42	42.4				
	33	38	32	35	27	27	20	24	28	35	28	15	15	14	14	20	19	21	30	30	30	31	31	28	31	31	31	31	31	26.8				
Lemon Cove.....	68	70	68	63	67	58	61	60	62	63	65	64	57	55	58	54	56	52	62	53	52	55	61	58	59	55	54	52	60.8					
	45	45	40	41	45	41	36	40	36	39	32	38	32	38	37	32	38	34	30	33	31	31	31	32	32	32	32	32	32	36.9				
Los Angeles.....	74	65	63	59	61	63	72	73	81	81	65	66	73	78	77	70	79	63	64	65	66	65	67	70	69	70	70	70	70	70.1				
	51	48	50	49	50	47	50	49	53	57	54	51	44	44	49	54	53	48	48	47	48	47	48	48	47	47	47	47	48.7					
Merced.....	73	78	69	65	57	61	61	65	67	70	62	48	45	50	56	60	64	64	66	66	65	66	65	66	65	65	65	65	65	62.8				
	38	40	42	39	42	48	45	38	35	35	34	36	31	25	26	25	26	32	34	32	29	31	31	31	31	31	31	31	31	34.8				
Mokelumne Hill.....	47	76	67	63	50	50	57	63	68	65	60	49	53	67	65	65	63	63	62	55	57	51	59	59	50	60	63	63	63	59.9				
	45	52	43	44	33	39	35	38	43	44	40	29	33	35	39	41	42	38	35	39	37	37	37	37	37	37	37	37	37	39.4				
Needles.....	62	62	63	61	60	59	59	58	55	50	48	47	48	48	50	58	64	64	65	63	60	60	59	63	63	65	65	65	65	59.2				
	45	44	44	44	45	43	43	42	40	39	37	34	32	34	33	35	35	35	33	30	29	31	31	31	31	31	31	31	31	38.0				
North Fork.....	77	79	65	58	60	54	62	61	68	65	67	62	50	58	60	65	80	71	64	55	62	64	64	64	64	64	64	64	64	64.7				
	34	34	32	32	30	39	28	29	35	33	28	26	25	25	28	30	32	36	31	30	32	33	31	31	30	30	30	30	30	30.2				
Oakland.....	64	63	60	58	55	57	61	62	66	66	59	55	56	56	61	64	64	66	66	65	65	65	65	65	65	65	65	65	65	59.6				
	46	50	51	50	43	42	47	47	46	47	46	33	30	32	30	32	31	31	31	31	31	31	31	31	31	31	31	31	31	43.7				
Orland.....	74	70	64	64	61	60	65	62	64	67	70	67	60	66	67	70	69	67	66	65	66	67	66	67	67	67	67	67	67	64.8				
	41	47	43	52	46	46	35	34	35	34	37	37	31	30	32	31	31	31	31	31	31	31	31	31	31	31	31	31	31	38.8				
Orleans.....	70	72	60	51	50	52	57	62	61	61	60	52	56	62	60	62	60	59	59	58	58	58	58	58	58	58	58	58	58	57.0				
	47	50	48	41	37	37	42	45	37	37	42	39	38	32	30	32</																		

**SNOWFALL IN THE MOUNTAINS.**

On November 1, 1916, there was little or no snow on the ground in the mountains of California. The general storm which brought precipitation throughout the State between November 4th and 7th gave moderately heavy snow in the Sierra Nevada Mountains along the eastern border. From 15 to 20 inches of snow accumulated on the ground above the 5,000-foot level. In the mountains of southern California and throughout the Coast Ranges the temperatures were such that most of the precipitation accompanying this storm fell in the form of rain. Clear weather prevailed during the middle decade of the month, the warm sunshine causing the snow in the Sierra to melt rapidly, and it disappeared entirely, except at the very crest of the divide. A second general storm occurred between the 25th and 28th. Again the temperatures were above freezing in the mountains of the south portion of the State and in those along the coast, and again the precipitation was almost entirely in the form of rain. In the Sierra Nevada Mountains the temperatures were higher than those which accompanied the earlier storm, but were sufficiently low to cause the precipitation at the higher levels to occur in the form of snow. Below the 5,000-foot level the precipitation was in the form of rain, but at the very summit more than 15 inches of snow fell. For the month as a whole the snowfall was less than the usual amount in the mountains of southern California and in the Coast Ranges, but was somewhat above the normal in amount in the high Sierra. At the close of the month there was practically no snow on the ground in the mountains of California except above the 5,000-foot level in the Sierra, where 10 inches or more of rapidly melting snow still remained.

A. H. P.

**COMPARATIVE SNOWFALL DATA FOR NOVEMBER.**

(Amount on the Ground.)

	FORDYCE DAM.			SUMMIT.			TAMARACK.		
	1st.	15th.	End of mo.	1st.	15th.	End of mo.	1st.	15th.	End of mo.
1907.....	0	0	0	2	0	2	0	3	0
1908.....	0	0	12	2	0	27	0	0	29
1909.....	6	32	5	4	47	4	6	55	22
1910.....	0	0	6	0	3	9	0	5	8
1911.....	0	12	5	0	16	2	0	31	6
1912.....	5	9	6	2	4	T.	1	17	3
1913.....	0	15	34	0	15	32	0	11	36
1914.....	0	0	9	0	0	12	0	0	11
1915.....	0	7	9	0	8	6	0	4	3
1916.....	0	10	9	0	10	20	0	4	7

**Snowfall Data. [In inches.]**

WATERSHED, COUNTY, STATION.	Eleva-tion, feet.	Total snow-fall.	Compr'd with normal.	Amt' on ground 15th.	Amt' on ground end mo.
<b>Klamath Watershed.</b>					
<i>Siskiyou County.</i>					
Yreka.....	2,626	0	.....	0	0
<i>Trinity County.</i>					
Hayfork.....	2,300	0	.....	0	0
Ruth.....	2,925	2	.....	0	0
<i>Humboldt County.</i>					
Weitchpec.....	1,700	0	- 1	0	0
<b>Mountain Lakes.</b>					
<i>Modoc County.</i>					
Cederville.....	4,675	3	- 3	0	0
Fort Bidwell.....	4,375	10	.....	3	0
<i>Lassen County.</i>					
Eagle Lake.....	5,000	5	+ 1	0	0
Madeleine.....	5,270	.....	.....	.....	.....
Susanville.....	4,175	.....	.....	.....	.....
<i>Nevada County.</i>					
Boca.....	5,531	7	0	0	0
Truckee.....	5,817	11	0	0	0
<i>Mono County.</i>					
Bridgeport.....	6,500	2	.....	0	0
<i>Placer County.</i>					
Tahoe.....	6,230	12	.....	4	0
<i>Inyo County.</i>					
Bishop Creek.....	8,500	6	- 4	0	0
Lone Pine.....	3,728	0	.....	0	0
Wells Meadow.....	5,280	0	.....	0	0
<b>Sacramento Watershed.</b>					
<i>Siskiyou County.</i>					
Dunsmuir.....	2,285	2	0	0	0
McCloud.....	3,270	7	+ 3	0	0
Sisson.....	3,555	2	- 2	0	0
<i>Modoc County.</i>					
Alturas.....	4,400	4	+ 1	0	0
<i>Shasta County.</i>					
Burney.....	3,300	0	- 2	0	0
<i>Plumas County.</i>					
Bucks.....	5,515	35	+33	19	4
Canon Dam.....	4,570	0	.....	0	0
Chester.....	4,550	8	0	0	0
Clover Valley.....	5,700	3	- 4	0	0
La Porte.....	5,000	14	- 1	0	0
Portola.....	4,832	3	.....	0	0
Quincy.....	3,400	5	+ 2	0	0
<i>Butte County.</i>					
De Sabla.....	2,500	0	0	0	0
Inskip.....	4,975	14	+ 7	5	0
Stirling City.....	3,525	6	+ 5	0	0
West Branch.....	3,216	5	+ 4	0	0
<i>Yuba County.</i>					
Camptownville.....	3,500	2	+ 1	0	0
<i>Sierra County.</i>					
Downieville.....	3,150	1	0	0	0
Sierra City.....	4,300	10	+ 6	0	0
Sierraville.....	5,000	6	+ 2	0	0
Table Rock.....	5,980	26	+ 1	8	3
<i>Nevada County.</i>					
Deer Creek.....	3,700	18	+15	0	0
Fordyce Dam.....	6,500	40	+ 7	10	9
Lake Spaulding.....	4,600	21	+11	3	0
<i>Placer County.</i>					
Blue Canon.....	4,695	20	+11	0	0
Emigrant Gap.....	5,230	22	+ 9	0	0
Summit.....	7,017	36	+ 2	10	20
<b>San Joaquin Watershed.</b>					
<i>Alpine County.</i>					
Tamarack.....	8,000	31	-22	4	7
<i>Tuolumne County.</i>					
Center Ranger Station.....	3,850	5	.....	0	0
Hetch Hetchy.....	3,665	.....	.....	0	0
Lake Eleanor.....	4,700	12	+ 4	0	0
<i>Mariposa County.</i>					
Yosemite.....	3,945	4	0	0	0
<i>Fresno County.</i>					
Cascada.....	4,900	9	.....	0	0
Huntington Lake.....	6,950	16	.....	2	0
Stevenson Creek.....	4,250	4	.....	0	0
<i>Tulare County.</i>					
Hot Springs.....	3,300	0	0	0	0
Springville.....	4,000	2	- 2	0	0
<b>Mountains of Southern California.</b>					
Bear Valley Dam.....	6,700	2	- 5	0	0
Converse Nursery.....	6,000	0	.....	0	0
Squirrel Inn.....	5,280	0	- 2	0	0
Seven Oaks.....	5,000	0	- 1	0	0
Nellie.....	5,350	0	.....	0	0
Julian.....	4,222	0	.....	0	0
Valyermo.....	3,750	.....	.....	.....	.....