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CALIFORNIA SECTION.

G. H. WILLSON, District Forecaster.

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SAN FRANCISCO, MARCH, 1916.

No. 3.

GENERAL SUMMARY.

March, 1916, was relatively warm and dry in California. Taking the State as a whole, the mean temperature for the month was 1.2° above the normal, while the precipitation was 1.36 inches less than the average.

The first week of the month was characterized by unsettled and showery weather throughout the State, the heaviest precipitation having occurred on the 4th and 5th. The period from the 7th to the 17th, inclusive, was delightfully warm and pleasant, with unbroken sunshine. The maximum temperatures recorded on the 10th and 11th were unusually high for March, temperatures exceeding 90° having occurred in the interior valleys, while temperatures over 100° were reported from several stations in the desert regions. A stormy period followed, from the 19th to the 24th, inclusive, with heavy rains on the 19th and 20th. On the 23rd freakish weather occurred at many places in the central and southern portions of the State. Thunderstorms accompanied by sleet and snow were common. High winds, with momentary gusts exceeding 60 miles per hour in velocity, were also reported from many stations. In spite of moderate gales along the coast, shipping suffered but little damage, while piers and construction work along the southern California coast sustained some slight damage. The sharp fall in temperature immediately following this period of rainy weather resulted in the coldest weather of the month, on the 24th, when freezing temperatures occurred in many places, and severe frosts were reported from the interior valleys. The remainder of the month was clear, with temperatures increasing from day to day, moderately warm weather again prevailing at the close of the month. The average stages of streams were higher than those of last year, and higher than the averages for ten years. However, no wide-spread floods occurred, as the runoff from the melting snow in the mountains has proceeded at a slow rate, and the rainfall was well distributed through the month. Tulare Lake, which began to rise during February, when 2,000 acres of rich grain land in the vicinity were submerged, continued to rise during March, overflowing 40,000 additional acres.

From an agricultural point of view the weather of March was favorable in certain characteristics and unfavorable in others. The rain of the first week was readily absorbed by the soil, and did much good. The fine warm weather of the ten days following was extremely favorable for blossoming deciduous fruit trees, there being no rain, little wind, and an abundance of sunshine. However, the severe weather of the 19th to the 24th caused considerable damage. Heavy rains and violent winds injured blossoms and the budding leaves, in the fruit-growing sections of the State, while grain was laid low in other restricted regions. The most serious damage was that sustained by fruit trees and other tender vegetation from the frosts and cold weather of the 24th. While the State as a whole suffered from frosts on that date, the damage was greatest in the San Joaquin and Santa Clara valleys, where the estimate of the size of such crops as peaches, apricots and prunes has been materially reduced as a result. Garden produce also suffered severely. The harder apples and pears were uninjured during the month, and the grain and grass crops have progressed under generally favorable weather conditions. The month was well adapted for outdoor farm work, which is far advanced for the season. Taking the State as a whole, the agricultural outlook remains favorable.

A. H. P.

PRESSURE.

The monthly mean atmospheric pressure for the State, reduced to sea-level, was 30.06 inches.

The highest was 30.53 inches at Eureka on the 7th.

The lowest was 29.29 inches at Independence on the 23rd.

The range for the State was 1.24 inches.

TEMPERATURE.

The monthly mean temperature for the State was 53.0° degrees, which is 1.2° degrees above the normal.

The highest monthly mean was 72.4° degrees, at Greenland Ranch; and the lowest was 28.5° degrees, at Bridgeport.

The highest temperature, 104° degrees, occurred at Indio on the 10th; and the lowest, -14° degrees, at Tamarack on the 22nd.

The range for the State was 118 degrees.

PRECIPITATION.

The average precipitation for the State was 3.38 inches, or 1.36 inches below the normal.

The greatest monthly amount was 15.53 inches, at Crescent City. One station reported no precipitation.

The greatest amount in 24 hours was 3.55 inches at Placerville on 19th and 20th.

RELATIVE HUMIDITY.—(Per Cent.)

Stations.	5 a.m.	5 p.m.	Mean.
Eureka.....	91	78	84
Fresno.....	88	53	70
Los Angeles.....	75	56	66
Mount Tamalpais.....	68	67	68
Red Bluff.....	76	46	61
Sacramento.....	84	50	67
San Diego.....	56	69	78
San Francisco.....	80	62	71
San Jose.....	95	56	76
San Luis Obispo.....	85	65	75

SUNSHINE AND CLOUDINESS.

Stations.	Actual hours of sunshine.	Per cent of the possible.
Eureka.....	175	47
Fresno.....	277	75
Los Angeles.....	274	74
Mount Tamalpais.....	263	71
Red Bluff.....	231	62
Sacramento.....	295	79
San Diego.....	256	69
San Francisco.....	246	66
San Jose.....	251	68
San Luis Obispo.....	261	70

WIND MOVEMENT.—(Miles.)

Stations.	Total movement for month.	Average hourly velocity.	Maximum velocity.	Direction.	Date.
Eureka.....	5,929	8.0	35	w.	1
Fresno.....	4,493	6.0	44	n.w.	23
Independence.....	6,699	9.0	40	n.	23
Los Angeles.....	4,365	5.9	24	w.	23
Mount Tamalpais.....	13,597	18.3	63	n.w.	23
Point Reyes.....	15,945	21.4	81	n.w.	23
Red Bluff.....	4,631	6.3	25	se.	4
Sacramento.....	5,666	7.6	40	se.	4
San Diego.....	4,727	6.4	46	w.	23
San Francisco.....	5,486	7.4	30	ne.	30
San Jose.....	4,205	5.7	28	se.	4
San Luis Obispo.....	3,547	4.8	25	w.	23

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

Climatological Data for March, 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 (un-melted).	Precipitation (0.1 inch or more).	Clear.	Partly cloudy.	Cloudy.	
Alturas.....	Modoc.....	4,400	12	42.6	77	±10	14	2	55	0.64	-1.14	0.16	2.5	9	14	10	7	sw.
American Camp.....	Tuolumne.....	2,600	1	52.6	.....	88	11	26	24	44	9.93	2.15	0	8	19	4	8	s.
Angiola.....	Tulare.....	204	16	54.2	+0.6	83	18	30	5	39	1.30	-0.12	0.50	0	6	16	1	14	
Antioch.....	Contra Costa.....	46	37	58.4	+4.0	87	±1	36	24	38	0.58	-1.72	0.25	0	3	26	2	3	
Arrowhead Springs.....	San Bernardino.....	2,000	7	64.1	.....	92	10	31	23	40	3.23	0.95	0	6	20	3	3	
Atascadero.....	San Luis Obispo.....	837	.....	56.6	.....	88	11	28	24	46	1.55	0.70	0	5	23	4	4	
Auberry.....	Fresno.....	2,050	53.0	53.0	.....	85	11	26	24	34	4.24	1.93	T.	7	15	12	4	
Auburn.....	Placer.....	1,360	45	54.0	+2.3	82	12	34	22	29	2.60	-3.12	1.02	0	8	21	5	5	
Avalon.....	Los Angeles.....	30	6	59.5	.....	85	8	42	25	35	1.32	0.80	0	5	22	7	5	
Azusa.....	do.....	540	14	60.8	+4.5	100	10	34	±24	49	2.39	-1.89	0.80	0	7	21	5	5	
Bagdad.....	San Bernardino.....	734	13	71.8	-7.9	95	11	50	24	29	0.00	-0.65	0.00	0	.....	.....	.....	.....
Bakersfield.....	Kern.....	404	27	60.2	+3.5	94	±11	33	6	48	1.23	+0.24	0.60	0	8	22	0	9	
Barstow.....	San Bernardino.....	2,105	13	59.6	+1.8	88	15	36	6	38	0.20	-0.36	0.20	0	1	24	5	9	
Berkeley.....	Alameda.....	317	29	65.9	+4.1	82	10	37	24	32	1.91	-2.99	0.74	0	8	16	6	6	
Betteravia.....	Santa Barbara.....	155	3	55.5	.....	80	10	32	23	36	1.33	0.73	0	4	22	2	7	
Biggs **.....	Butte.....	98	17	64.8	+11.6	92	14	40	12	47	0.73	-3.49	0.55	0	2	23	6	2	
Bishop.....	Inyo.....	4,450	21	51.6	+5.5	85	19	22	1	55	0.70	-0.34	0.60	0	2	23	6	2	
Bishop Creek.....	do.....	8,500	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Blocksburg.....	Humboldt.....	1,700	10	48.4	.....	75	±10	25	24	43	8.44	1.57	5.0	17	13	1	17	.....
Blue Canon.....	Placer.....	4,695	17	39.0	-0.8	52	11	17	24	41	8.20	-6.20	2.30	26.5	9	19	1	11	
Blythe.....	Riverside.....	268	7	63.9	.....	100	±9	30	23	59	.....	.....	.....	.....	.....	.....	.....	.....
Bonita.....	San Diego.....	110	60.0	60.0	.....	86	9	36	25	38	1.19	0.45	0	7	12	5	11	
Branscomb.....	Mendocino.....	2,006	16	48.0	+2.6	84	10	25	24	45	10.55	-2.19	2.84	T.	15	15	6	10	
Brawley.....	Imperial.....	-105	6	67.3	.....	96	12	40	25	44	1.04	0.95	0	2	.....	.....	.....	.....
Bridgeport.....	Mono.....	6,500	28	55.5	.....	53	±26	4	7	43	1.22	0.48	10.0	4	18	7	6	
Burney.....	Shasta.....	3,300	6	43.3	.....	85	10	16	24	55	1.43	0.30	3.0	8	15	4	12	
Cahuilla.....	Riverside.....	3,600	5	46.4	.....	84	9	23	58	2.25	.....	0.70	2.0	5	20	2	4	
Calaveras Ranger Sta.....	Calaveras.....	3,400	47.5	78	.....	11	21	24	34	38	7.63	2.22	10.0	8	20	5	6	
Calexico.....	Imperial.....	0	11	67.8	+4.2	100	10	42	15	43	1.41	+1.14	1.17	0	2	26	2	3	
Campbell.....	Santa Clara.....	217	19	56.6	+2.0	79	11	31	24	39	0.84	-2.75	0.30	0	7	18	6	7	
Camptonville (near).....	Yuba.....	3,500	9	50.5	.....	80	10	25	24	36	6.81	1.85	10.0	10	15	8	8	
Canon Dam.....	Plumas.....	4,570	2	42.6	.....	78	31	14	2	50	3.21	0.86	9.0	8	16	7	8	
Cascade.....	Fresno.....	4,900	46.3	46.3	.....	75	10	18	24	35	6.28	2.28	8.0	11	23	0	8	
Cedarville.....	Modoc.....	4,675	22	44.2	+6.2	74	11	19	1	41	0.59	-1.36	0.23	4.0	6	15	15	1	
Center Ranger Station.....	Tuolumne.....	3,850	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Centerville.....	Butte.....	490	2	52.7	.....	81	10	27	24	41	3.23	1.35	0	8	20	8	3	
Chico.....	do.....	189	46	56.2	+0.6	86	10	27	24	42	1.91	-1.34	1.33	0	3	16	8	7	
China Flat.....	Humboldt.....	600	7	51.2	.....	75	11	33	±1	36	5.90	1.53	0.8	13	15	7	9	
Claremont.....	Los Angeles.....	1,200	24	69.7	+5.8	97	10	32	21	43	1.92	-2.36	0.60	0	7	20	6	9	
Cloverdale.....	Sonoma.....	340	14	54.1	+1.6	86	±16	33	5	43	3.21	-6.28	1.31	0	12	16	6	9	
Coalinga.....	Fresno.....	663	4	54.4	.....	84	16	31	2	35	0.93	0.29	0	6	19	3	9	
Colfax.....	Placer.....	2,421	45	53.0	+3.9	86	10	24	33	40	6.26	-1.84	2.65	3.0	6	23	0	8	
Colusa.....	Colusa.....	60	13	.....	.....	78	15	30	13	39	1.57	-0.73	0.73	0	3	25	0	6
Converse Nursery.....	San Bernardino.....	6,000	2	43.2	.....	77	11	19	24	36	4.72	1.17	8.0	7	20	3	8	
Corona.....	Riverside.....	615	2	59.6	.....	95	10	32	24	44	1.56	0.85	0	4	19	6	6	
Crescent City.....	Del Norte.....	125	2	48.7	+1.1	74	10	32	23	35	15.53	+4.22	2.23	0	17	14	1	16	
Cuyamaca.....	San Diego.....	4,677	17	50.0	+9.3	75	10	21	24	30	4.51	-3.46	1.89	0	6	20	3	8	
Davis.....	Yolo.....	51	44	55.8	-0.4	83	12	30	24	36	1.14	-1.45	0.49	0	5	18	10	3	
Deer Creek.....	Nevada.....	3,700	9	45.6	.....	74	11	19	24	38	9.37	2.00	23.0	9	17	5	9	
Del Monte.....	Monterey.....	25	5	57.8	.....	82	±10	34	9	36	1.63	0.37	0	7	20	6	5	
Delta.....	Shasta.....	1,138	31	46.4	-3.5	70	12	28	24	36	12.00	+1.76	3.22	0	6	20	3	8	
Denair.....	Stanislaus.....	126	16	54.0	+0.7	78	15	30	13	39	1.57	-0.73	0.73	0	3	25	0	6	
De Sabl.....	Butte.....	2,500	12	49.3	.....	82	10	24	24	40	5.17	-9.03	1.65	2.0	8	17	5	9
Dobbins (near).....	Yuba.....	1,650	22	56.6	+2.0	86	±12	34	24	43	3.47	-5.06	0.88	0	9	18	3	7	
Downieville.....	Sierra.....	3,150	5	49.0	.....	82	11	21	25	40	5.71	1.67	9.0	12	18	4	9	
Dudley.....	Kings.....	595	4	56.4	.....	84	11	30	24	36	1.26	0.62	0	5	19	9	3	
Dudleys.....	Mariposa.....	3,000	7	48.0	.....	82	11	19	2	45	8.34	2.22	9.0	7	19	6	6	
Dunsmaire.....	Siskiyou.....	2,285	27	49.4	+4.6	82	11	26	24	40	7.56	-1.51	2.06	10.5	13	14	0	17	
Durham.....	Butte.....	160	21	53.8	+1.6	84	10	23	24	44	1.60	-2.26	1.04	0	6	19	4	6	
East Park.....	Colusa.....	2	52.2	.....	84	10	24	24	45	0.78	0.29	0	6	15	10	6	8	
Edison.....	Kern.....	2,500	2	53.6	.....	79	11	42	6	19	2.15	-0.71	0.81	0	8	15	4	12
El Cajon.....	San Diego.....	482	17	60.4	+4.0	92	±9	37	25	48	1.27	-1.44	0.40	0	7	23	2	6	
Electra.....	Amador.....	725	12	54.7	-0.1	85	±11	32	24	35	5.26	-2.09	2.30	0	8	18	6	8	
Elsinore.....	Riverside.....	1,300	60.6	60.6	.....	94	10	34	24	46	1.14	0.63	0	4	23	4	4	
Emigrant Gap.....	Placer.....	5,230	42	46.1	+8.4	74	18	31	24	35	8.92	+0.28	2.10	51.0	11	22	2	2	
Escondido.....	San Diego.....	657	22	58.8	+3.9	90	10	33	24	41	1.15	-1.87	0.41	0	5	20	9	8	
EUREKA.....	Humboldt.....	64	30	48.4	+0.4	64	30	34	24	42	4.08	-1.80	1.59	0	14	8	5	18	
Folsom.....	Sacramento.....	252	44	57.0	+2.2	80	±10	34	24	34	2.37	-1.62	1.10	0	5	22	2	7	
Fontana.....	San Bernardino.....	1,325	4	60.6	.....	96	11	30	24	35	2.38	0.94	0	4	21	4	6	
Fordyce Dam.....	Nevada.....	6,500	21	30.6	.....	44	13	15	1	16	11.14	-2.09	2.53	69.0	10	14	9	8
Fort Bidwell.....	Fresno.....	4,375	27	40.8	+1.4	71	9	16	24	38	1.40	-1.19	0.36	11.0	8	12	4	15	
Hot Springs.....	Fresno.....	293	29	57.4	+2.5	86	11	35	24	36	1.81	+0.49	0.71	0	7	20	6	5	
Georgetown.....	El Dorado.....	2,650	43	51.0	-0.9	82	17	23	24	32	8.45	-1.83	2.27	1.0	6	15	9	7	

Climatological Data for March, 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, 01 inch or more.	Clear.	Partly cloudy.	Cloudy.			
La Porte.....	Plumas.....	5,000	22	35.7	+0.5	58	31	10	6	29	6.43	-9.43	1.67	27.5	10	17	3	11	s.	C. W. Hendel.	
Las Plumas.....	Butte.....	506	2	57.2		82	11	35	24	35	2.80	0	1.13	0	4	25	0	6	w.	Great Western Power Co.	
Le Grande.....	Merced.....	255	16	59.6	+1.3	82	11	31	7	45	2.80	-0	0.84	0	8	15	9	7	nw.	Santa Fe Co.	
Lemon Cove.....	Tulare.....	600	21	61.7	+5.5	92	12	34	24	43	2.43	-0.98							ne.	Logan Tabler.	
Lick Observatory.....	Santa Clara.....	4,209	27	2	57.8	86	11	31	6	39	1.96								sw.	The Director.	
Lindsay.....	Tulare.....	384	2	57.8		84	11	31	24	42	1.47	-1.11	0.60	0	9	17	6	8	w.	Basil Prior.	
Livermore.....	Alameda.....	485	45	55.9	+2.1	84	11	31	24	42	1.47	-1.11	0.61	0	7	19	5	7	s.	E. G. Still.	
Lompoc (near).....	Santa Barbara.....																		ne.	A. R. Poett.	
Lone Pine.....	Inyo.....	3,728	11	55.1	+5.7	82	12	30	2	43	0.07	-1.04	0.07	T.	1	28	2	1	s.	G. F. Marsh.	
LOS ANGELES.....	Los Angeles.....	233	32	62.0	+6.4	96	10	45	16	25	0.90	-2.08	0.53	0	4	16	7	8	sw.	U. S. Weather Bureau.	
Los Gatos.....	Santa Clara.....	600	20	55.2	+2.9	82	14	33	24	33	2.35	-3.55	0.70	0	8	19	1	11	sw.	F. H. McCullagh.	
McCloud.....	Siskiyou.....	3,410	6	61.0		72	10	13	2	44	8.22		2.54	23.0	11	17	4	10	sw.	F. F. Spencer.	
Madelaine.....	Lassen.....	5,270	7	36.4		72	11	10	24	44	2.35		0.80	17.0	9	11	5	15	sw.	J. H. Williams.	
Magalia.....	Butte.....	2,321	12	52.0	+4.4	98	14	28	1	60	5.15	-10.77	3.00		7	20	0	11	sw.	Southern Pacific Co.	
Maricopa.....	Kern.....	640	5	57.0		96	11	30	24	54	1.56		1.04	0	5	14	12	12	w.	Producers Trans. Co.	
Marysville.....	Yuba.....	67	45	57.8	+0.4	82	11	37	2	34	1.37	-2.45	1.00	0	2	17	9	5	s.	Southern Pacific Co.	
Mesca.....	Riverside.....	-185	10	68.2		102	10	39	24	51	0.20		0.20	0	1	22	9	9	e.	E. A. Palmer.	
Meredoc.....	Merced.....	173	42	55.4	+0.4	81	15	35	22	36	2.94	+1.17	0.95	0	8	21	5	5	nw.	Santa Fe Co.	
Middlewater.....	Kern.....	803	5	55.8		83	15	35	13	35	0.70		0.43	0	5	14	12	5	nw.	Producers Trans. Co.	
Mill Creek—1.....	Amador.....	2,500	9	51.4		89	13	25	24	49	7.42		2.27	4.5	9	19	3	9	nw.	Pacific Gas & Electric Co.	
Milton (near).....	Calaveras.....	660	25	55.2	+1.5	78	11	33	24	26	4.39	+0.07	1.90	0	9	21	4	6	nw.	J. H. Southwick.	
Mineral.....	Tehipema.....	1																	sw.	U. S. Forest Service.	
Mokelumne Hill.....	Calaveras.....	1,550	23	64.5	+5.8	84	11	31	24	27	5.65	-0.59	2.78	0	8	17	3	11	sw.	C. E. Prindle.	
Montague.....	Siskiyou.....	2,450	28	45.8	+0.1	77	11	21	14	47	1.05	-2.02	0.52	3.5	15	11	5	5	nw.	I. E. De Boy.	
MOUNT TAMALPAIS.....	Marin.....	2,375	17	49.8	+2.7	72	14	31	5	18	1.32	-3.81	0.48	T.	12	16	6	9	nw.	U. S. Weather Bureau.	
Napa City.....	Napa.....	20	39																sw.	Thos. Hull.	
Needles.....	San Bernardino.....	477	24	61.3	-2.5	85	14	42	1	40	0.04	-0.37	0.03	0	2	21	3	7	sw.	Santa Fe Co.	
Nellie.....	San Diego.....	5,350	7	49.9		75	10	20	24	24	6.31		1.89	1.0	7	19	4	8	sw.	Esther P. Hewlett.	
Nevada City.....	Nevada.....	2,850	24	48.7	+3.9	85	10	20	24	47	5.71	-3.22	1.50	2.0	12	18	4	9	sw.	S. W. Marsh.	
Newman.....	Stanislaus.....	91	27	54.4	-1.3	82	15	31	29	42	1.44	-0.68	0.81	0	6				sw.	E. S. Wangenheim.	
North Bloomfield.....	Nevada.....	3,214	19	48.2	+4.1	84	10	21	24	44	8.56	-1.05	2.00	11.0	10	16	0	15	w.	J. R. McIntosh.	
North Fork.....	Madera.....	3,000	12	52.8		92	12	27	24	55	5.81	-2.32	2.30	1.0	8	18	5	8	se.	U. S. Forest Service.	
Oak Grove.....	San Diego.....	2,751	6	51.4		88	10	22	24	46	1.64		0.79	0	7	20	4	7	w.	Chabot Observatory.	
Oakland.....	Alameda.....	36	40	55.8	+2.8	78	10	40	24	29	1.42	-2.68	0.62	0	7	15	9	7	w.	H. D. Brodie.	
Oceanside.....	San Diego.....	60	6	57.2		75	11	41	6	26	1.37		0.51	0	4	23	1	7	sw.	W. H. Duncan.	
Ojai Valley.....	Ventura.....	900	10	58.9		95	10	32	24	50	1.52		0.87	0	8	22	6	3	sw.	U. S. Rec. Service.	
Orland.....	Gleno.....	254	34	56.6	+0.9	85	10	31	23	41	1.07		-1.58	0.39	0	6	18	7	6	nw.	F. W. Gent.
Orleans.....	Humboldt.....	520	13	52.3	-2.3	82	11	34	24	44	5.37	-1.63	1.07	0	16	15	0	16	sw.	E. D. Fairchild.	
Oroville (near).....	Butte.....	250	32	56.4	+2.1	85	12	31	24	42	1.77	-2.43	0.85	0	5	22	2	7	se.	U. S. Forest Service.	
Pacific.....	El Dorado.....	3,400	1																sw.	E. R. Sorver.	
Pasadena.....	Los Angeles.....	827	26	59.7	+5.3	98	10	34	24	43	1.36	-2.32	0.88	0	3	20	7	4	sw.	Dr. F. W. Sawyer.	
Paso Robles.....	San Luis Obispo.....	800	29	55.3	-3.7	91	12	28	24	54	1.82	-1.41	0.76	0	8	21	7	3	nw.	E. H. Parnell.	
Peachland.....	Sonoma.....	190	20	54.0	+2.1	84	10	30	24	42	8.25	-4.26	1.54	0	11	17	9	5	n.	John Landis.	
Petaluma.....	do.....	2	52	4		82	11	31	24	44	1.92	-1.17	0.59	0	9	16	11	4	n.	A. Baring Gould.	
Placerville.....	El Dorado.....	1,875	27	50.8	+3.4	76	11	28	24	32	6.84	-1.02	3.55	T.	7	15	7	9	sw.	Fred J. Diek.	
Point Loma.....	San Diego.....	302	10	57.7		75	10	44	25	47	1.14	-1.04	0.45	0	9	18	5	8	sw.	U. S. Weather Bureau.	
POINT REYES.....	Marin.....	490	24	52.1	+1.7	76	14	39	23	47	0.78	-2.97	0.46	0	9	14	10	7	nw.	J. E. Adamson.	
Porterville.....	Pomona.....	857	2	59.2		99	10	30	24	54	2.12		1.00	0	7	19	8	12	sw.	Leslie McAluliffe.	
Portola.....	Los Angeles.....	464	27	58.2	+2.0	89	11	31	3	41	1.93	+0.09	0.65	0	7	24	4	8	sw.	Western Pacific Co.	
Plumas.....	do.....	1	38	1		66	16	11	2	31	2.43	-2.15	1.02	0	5	22	2	7	se.	D. N. Rogers.	
Quincy.....	do.....	3,400	21	46.8	+6.0	77	8	20	23	49	4.40	-4.21	1.30	5.35	9	18	2	11	sw.	U. S. Weather Bureau.	
Red BLUFF.....	Tehama.....	307	29	56.4	+2.6	89	10	34	2	37	1.25	-2.02	0.68	0	7	17	6	8	sw.	E. D. Fairchild.	
Redding.....	Shasta.....	559	41	56.4	+2.6	88	10	33	24	42	2.40	-2.98	0.92	0	7	15	13	15	sw.	U. S. Weather Bureau.	
Redlands.....	San Bernardino.....	1,352	23	62.6	+7.1	96	10	33	24	44	1.65	-1.45	0.56	0	6	19	4	8	sw.	P. W. Moore.	
Reedley.....	Fresno.....	347	16	56.2	0	91	12	33	24	44	1.98	-0.45	1.32	0	4	24	0	7	n.	Santa Fe Co.	
Rialto (near).....	San Bernardino.....	2,250	10	61.8		90	11	31	24	29	4.33		2.26	0	6	19	5	7	n.	So. Cal. Edison Co.	
Riverside.....	San Bernardino.....	851	34	61.5	+5.6	102	10	30	24	45	5.38	-0.96	0.54	0	6	21	7	3	w.	J. H. D. Cox.	
Rocklin.....	Placer.....	249	45	54.8	-0.1	82	12	29	24	35	1.56		2.15	1.02	0	5	22	2	7	se.	Southern Pacific Co.
Rohnerville.....	Humboldt.....	75	13	50.2		74	10	32	24	37	6.13	-0.85	1.70	0	12	13	3	15	nw.	W. D. Gray.	
Ruth.....	Trinity.....	2,925	2	49.7		79	10	25	24	50	8.25		2.10	16.0	15	15	6	10	sw.	U. S. Forest Service.	
SACRAMENTO.....	Sacramento.....	71	39	56.5	+2.2	79	11	37	24	27	1.06	-1.88	0.75	0	5	19	10	10	sw.	U. S. Weather Bureau.	
Saint Helena.....	Santa Barbara.....	255	8	54.3		86	11	31	24	43	2.57		1.39	0	8	20	3	8	sw.	E. E. Hooper.	
Salinas.....	Monterey.....	40	42	55.4	+2.7	83	10	36	7	40									sw.	Miss E. Ruth Abbott.	
San Bernardino.....	San Bernardino.....	1,054	24	61.3	-5.8	97	10	32	24	50	1.90	-1.01	0.80	0	6	20	7	4	sw.	Dr. A. K. Johnson.	
San DIEGO.....	San Diego.....	87	45	59.2	+3.0	81	8	43	25	28	0.98	-0.56	0.47	0	6	16	9	6	nw.	U. S. Weather Bureau.	
SAN FRANCISCO.....	San Francisco.....	207	45	56.6	+3.9	77	10	44	24	27	1.33	-1.75	0.65	0	6	18	4	9	n.	E. T. Tanner.	
San Jacinto.....	Riverside.....	1,550	23	63.2	+9.1	99	10	32	24	49	0.99	-1.77	0.3								

Climatological Data for March, 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 (un-melted).	Precipitation of 0.1 inch or more.		
Ukiah.....	Mendocino.....	620	23	49.0	-0.7	87	+10	27	24	50	3.78	-1.77	1.25	0	14	nw.	
Vacaville.....	Solano.....	175	28	55.0	+1.1	80	+13	29	24	36	2.22	-1.98	1.64	0	5	n.	
Valyermo.....	Los Angeles.....	3,750	51.2	.....	.....	85	12	2	5	44	1.42	.....	0.90	0	2	22	J. E. Bassford.
Visalia.....	Tulare.....	334	28	59.2	+6.7	78	28	38	23	28	1.79	-0.13	0.55	0	8	3	U. S. Forest Service.
Walnut Creek.....	Contra Costa.....	149	2	54.6	+0.6	77	11	33	24	34	0.99	-1.80	0.45	T.	8	5	Santa Fe Co.
Warner Springs.....	San Diego.....	3,165	8	56.4	.....	90	9	29	24	45	1.92	.....	0.55	0	5	7	R. L. Nougaret.
Wasco.....	Kern.....	336	16	55.6	+1.2	*82	10	30	5	*39	1.45	+0.45	0.86	0	5	0	J. A. Ream.
Watsonville.....	Santa Cruz.....	23	20	56.1	+1.4	88	10	32	24	42	1.91	-3.48	0.83	0	7	13	Santa Fe Co.
Weaverville.....	Trinity.....	2,162	4	51.0	.....	84	11	27	13	49	3.77	-0.68	1.18	0	11	6	U. S. Forest Service.
Weitchpec.....	Humboldt.....	1,700	6	46.4	.....	75	31	26	24	39	10.41	.....	1.25	4.0	16	2	G. S. Garnett.
West Branch.....	Butte.....	3,216	2	47.6	.....	80	11	22	24	42	7.83	.....	1.47	4.0	10	5	Pacific Gas & Electric Co.
Wheatland.....	Yuba.....	84	29	55.2	+2.6	77	11	30	24	30	1.22	-2.28	0.40	0	7	5	Wm. Lumbard.
Willows.....	Glenn.....	136	37	55.2	+0.6	*84	12	29	24	45	1.12	-1.08	0.31	0	5	24	F. E. Barnhouse.
Yorba Linda.....	Orange.....	405	2	59.8	.....	*91	10	33	24	42	1.03	.....	0.61	0	3	11	S. J. Walker.
Yosemite.....	Mariposa.....	3,945	12	53.7	.....	90	31	27	3	48	5.41	-2.47	2.00	17.0	7	8	J. R. Kelly.
Yreka.....	Siskiyou.....	2,625	27	45.9	.....	77	11	20	24	46	1.72	.....	0.84	8.0	11	12	U. S. Forest Service.
Means and Extremes.....	.....	.....	53.0	+1.2	104	10	-14	22	60	3.38	-1.36	3.55	4.4	7	18	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 MARCH.

MEAN MONTHLY TEMPERATURE FOR THE STATE.

1897.....	48.0	1907.....	49.0
1898.....	48.8	1908.....	51.8
1899.....	51.2	1909.....	48.5
1900.....	55.7	1910.....	54.7
1901.....	58.0	1911.....	52.7
1902.....	49.7	1912.....	48.6
1903.....	50.9	1913.....	49.6
1904.....	51.1	1914.....	55.0
1905.....	54.7	1915.....	53.1
1906.....	50.8	1916.....	53.0

AVERAGE PRECIPITATION FOR THE STATE.

1897.....	3.98	1907.....	10.67
1898.....	0.66	1908.....	1.49
1899.....	6.10	1909.....	3.56
1900.....	2.38	1910.....	2.43
1901.....	1.01	1911.....	6.02
1902.....	3.39	1912.....	5.17
1903.....	5.80	1913.....	2.06
1904.....	8.52	1914.....	1.16
1905.....	5.42	1915.....	2.33
1906.....	9.19	1916.....	3.88

ERRATA. FEBRUARY, 1916.

Independence, page 17, wind movement, total for the month 3014, should be 2780; average hourly velocity 4.3, should be 4.0; page 24, mean maximum temperature 47.3, should be 47.2.

Hyampom, page 22, total precipitation 5.06, should be 5.23.

Page 17, highest temperature in the State, 96° at Deer Creek, should be 92° at Biggs.

DELAYED REPORTS.

Stations.	Month.	Temperature.					Total precipitation
		Mean	Max.	Date	Min.	Date	
Santa Ana River.....	January.	43.2	56	3	30	1	30.81
Angiola.....	February.	52.2	69	20	25	1	0.20
Arrowhead Springs.....	"	59.6	81	18	39	1	3.33
Stirling City.....	"	47.2	64	17	30	3	3.11
Walnut Creek.....	"	55.2	73	24	34	1	1.86
Meadow Valley.....	"	.....	.....	.....	.....	.....	6.37
Tejon Rancho.....	"	53.5	74	17	28	1	0.55

MISCELLANEOUS PHENOMENA.

Thunderstorms.—Camptonville, 20, 23; Claremont, Converse Nursery, Corona, 23; Deer Creek, 20, 22; Fresno, 23; Glennville, 17, 23; Hot Springs, 23, Kinsley, 3; Lindsay, Milton (near), 23; Mokelumne Hill, 20; Riverside, Seven Oaks, 23; Three Rivers, 17, 23; Weitchpec, 22; West Branch, 20.

Earthquakes.—Imperial, 11; Lone Pine, 31; Los Alamos, 1; Mount Wilson, 21.

Daily Precipitation for March, 1916.

Daily Precipitation for March, 1916.—Continued.

Stations.	Day of Month.																																	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total		
Goffs.....																																		5.75
Gold Run|||	.60																		T.		2.50	.40										5.54		
Grass Valley.....	1.10																		.09	1.25	.69											0.02		
Gray Mountain.....																																	1.84	
Greenland Ranch.....																																	9.21	
Gridley|||																																	1.44	
Groveland.....	1.20	2.05	2.40	.35																													6.39	
Hanford|||	.09			.08	.52																											2.88		
Happy Camp.....	1.50																		T.	.01	1.10	.11										4.06		
Hayfork.....	.67	T.																															3.63	
Head Dam.....	.98																																5.88	
Healdsburg |||	.32																																5.82	
Hearst (near).....																																	9.11	
Helen Mine.....	1.20																																5.01	
Hetch Hetchy.....	.18	.02																															1.42	
Holcomb.....	.07																																1.19	
Hollister.....	.07																																4.66	
Hot Springs |||	.75	.40	T.	.08	.75	.08																										3.63		
Hullville (near).....	.71	.10		.29	1.60	.44	.18																									5.82		
Hume |||																																	9.11	
Huntington Lake.....	.60																																6.40	
Hyampom |||	1.49																																5.45	
INDEPENDENCE***																																	0.31	
Indio.....																																	0.02	
Inskip.....	1.86																																9.14	
Jacksonville.....	.55	.80																															5.81	
Jenny Lind.....	.32																																4.09	
Jolon.....	.09																																3.08	
Julian.....	1.15	.58																															5.40	
Kennedy Mine.....	.42																																3.91	
Kennett|||	.75																																7.23	
Kernville.....	.43																		T.	1.43	.45										3.08			
King City.....	.19																																1.98	
Kinsley.....	.04	.05	T.	.25	.64	T.																										1.67		
Knights Landing.....	.70	.15																															6.75	
La Jolla.....	.42	.10																															2.51	
Lake Eleanor.....	1.11																		T.	.67	.34										3.53			
Lake Spaulding |||	1.40	.15	T.																													9.45		
La Porte.....	.90																																6.43	
Las Plumas.....																																	3.25	
Lathrop.....	.26	.08																															1.29	
Laurel.....	.57																																4.01	
Le Grand.....																																	2.40	
Lemon Cove |||	.31	.11																															1.96	
Lick Observatory.....																																	1.48	
Lindsay |||	.30	.06																															3.45	
Littlelands|||	.06	.05																															2.32	
Livermore.....	.61																																0.90	
Lone Pine.....																																	0.07	
Lordsburg.....																																	2.32	
Los Alamos.....	.24																		T.	T.	.14	.48										1.35		
LOS ANGELES***																			T.	T.	.53											0.90		
Los Gatos.....	.70																																0.35	
Lowe Observatory.....																																	4.15	
McCloud.....	.80	.08																															4.15	
Madelaine.....	.80	.16	T.	.10	.25	T.																										4.15		
Magalia |||	.50																																2.35	
Maricopa |||	.06																																1.56	
Mariposa|||	.29	.56																															5.98	
Marysville.....																																	1.37	
Meadow Valley.....																																	2.57	
Mecca.....	.52	.74																															2.57	
Merced Falls.....	.05	.35																															2.94	
Mesa Grande.....	.06	.26																															3.54	
Mill Creek-1.....	1.56	.07																														0.70		
Mill Creek-2.....	.50	.03																														1.36		
Mills College.....	.34																															1.16		
Milo.....	.50	.04																														2.00		
Milton (near).....																																4.39		
Mitchell Mill.....	.93	.03																														7.44		
Mokelumne Hill |||	.77																															5.65		
Montague.....	.17																															1.05		
Montgomery Creek.....	.75																															6.85		
MOUNT TAMALPAIS ***	1.12	.03	.06	.48	.01																										1.32			
Mount Wilson|||	.09	.16		</																														

Daily Precipitation for March, 1916.—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				
Pine Crest	.03	.05	T.	.82															.05	.59	.12	.23	.03									1.92			
Placerville	1.15	.13		1.65															3.55	.15	.18	.01										6.84			
Poin Loma	.04	.02		.38		T.													.18	.45	.01	.03										1.14			
POINT REYES**	T.	.01	.02	.45	.01														.01	.10	.07	.02	.09								0.78				
Pomona	.30	.20		.30	.05														24	1.00												2.12			
Porterville	.25			.17	.24														.65	.07		.33	.22								1.93				
Portola	.40			.06	.60														1.01	.03	.33										2.43				
Priest Valley	.12			.49	.99														23	.73	.15	.22	.19								3.12				
Quincy	.65	T.	.13	1.35															.98	.41	.10	.02	.36								4.40				
Red Bluff***			.05	.64															.34	.19		.01	.01								1.25				
Redding	.48			.18	.92														T.	.39	.34	.03	T.								2.40				
Redlands	.16	.13		.42																.56	.34		.04									1.65			
Reedley	.21																			1.32	.07		.38									1.98			
Represa				.32	.80														.34	.02	T.											1.48			
Rialto (near) \$	.29			.57	.96														.08	.16	.04										4.33			
Rio Vista	.52	.10		.99																.26	.14		.11									2.01			
Riverside	.22	.02		.38																.05	.54	.05	.17									1.38			
Rocklin	.17			1.02															.01	.35	.01											1.56			
Rohnerville	1.70			1.10	.30	.25													.20	.35		.73	.45	.10	.25						6.13				
Ruth	1.05	.10	20	2.10	.60	.04													25	1.84	1.35		.22	.46	.10	.08	.16	.20			8.25				
SACRAMENTO***	.06			.75															.03	.18	.04		T.									1.06			
St. Helena	.47	.02	.04	1.39															.01	.50	.04		.10								2.57				
Salinas																				.80	.02														
San Bernardino	.40	.04		.59																.45	.02	.01	.03									1.90			
SAN DIEGO***	.01			.46															T.	.11	.20	.05	.15		T.							0.98			
SAN FRANCISCO***	.14			.65																.05	.08	.52		.12								1.33			
San Jacinto	.02			.20															T.	.11	.33	.16	.07	.12	.02							0.99			
SAN JOSE***	.17			.16	T.														T.	.17	.15	.11	.10	.03								1.10			
SAN LUIS OBISPO***	.23			.06	.84	.09													T.	.02	.16	.52	T.	.20								2.12			
San Miguel Island																																			
San Pedro																																			0.40
Santa Ana River																																			
Santa Anita Forest Station \$.25	.26		.97																	90	2.00		.23	.07								4.68		
Santa Barbara	.09			.85															T.	.05	.08	.52		.12								1.71			
Santa Clara	.19	.01		.10	.10													T.	.11	.33	.16	.07	.12	.02							1.21				
Santa Cruz	.16		.20	1.35														T.	.10	.50	.40		.15								2.85				
Santa Margarita				.17	.72													T.	.05	.68		.03	.06								1.71				
Santa Monica				.36																	.51													0.87	
Santa Rosa	.23			10	1.00																												1.89		
Seven Oaks	.20			.35																														2.90	
Shively	1.76	.07	23	1.90	.42															.50	.65	.36		.60	.25	.21	.11	.02	.31		7.39				
Sierra Madre	.06			.46																														2.93	
Sierraville	.80	.20		1.00	.55																												4.97		
Siison	.60	.50		.40	.30																												3.86		
Sonora	1.37	.22		1.09	1.17																											6.79			
Spreckels																																			
Springville	.46	.40		.41	1.35	.20																										5.73			
Squirrel Inn	.60			.13	.36														T.	1.30	.10		.20								5.28				
Stanwood	.10			1.65	1.72																											5.12			
Sterling																																		0.30	
Stevenson Creek																																			
Stirling City	.60				.30																													7.10	
Stockton (S. H.)	.47			.72																T.	.08	.16	.20		.05								1.68		
Storey	.25			1.30																														2.75	
Sulphur Banks	.18	.10		.20	.11																												0.96		
Summit-1	.60	.60		.30	1.00	.10																									5.00				
Summit-2 \$																																	0.90		
Susanville																																			
Tahoe	1.78	.26		.18	.89														T.	.32	.62	*	.42		T.	T.						4.47			
Tamarack	2.40	.40		2.40	1.20	T.													T.	.51	.40	.80				T.						8.11			
Tejon Rancho					.39																												2.08		
Tujunga Canon \$																																			
Three Rivers	.18			.16	.49															14	.05	1.02		.40	.04										

Daily Temperature for March, 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.....	Maximum	34	40	51	47	41	44	64	73	71	77	70	63	71	73	77	69	61	59	53	59	51	40	48	45	63	56	60	55	61	73	58.9					
	Minimum	22	14	27	34	23	25	18	24	26	22	28	25	20	17	26	23	27	38	42	42	19	32	25	16	30	33	40	32	22	21	25.3					
Bakersfield.....	Maximum	57	64	64	62	61	59	79	82	94	85	81	88	94	85	79	77	71	76	70	67	60	60	69	74	74	77	81	73.8								
	Minimum	52	42	44	52	50	33	35	36	46	52	53	59	51	46	46	53	56	54	46	47	51	43	38	37	39	45	48	47	47	45.6						
Barstow.....	Maximum	53	57	60	56	55	52	68	78	80	85	81	80	84	85	83	78	79	70	64	72	82	83	85	80	84	82	70	77	74.2							
Blocksburg.....	Maximum	38	40	40	38	42	36	38	44	45	50	44	43	45	52	50	45	44	45	44	43	45	44	48	48	51	51	50	50	51	46	48	45.1				
	Minimum	41	43	45	45	43	48	60	68	70	75	69	73	71	68	60	58	57	56	53	50	51	50	50	51	50	50	51	50	50	51	46	48	45.1			
Calexico.....	Maximum	31	32	39	36	30	35	36	39	49	46	35	33	32	40	38	34	40	41	30	39	39	32	25	33	38	40	38	39	38	36	34	36.4				
	Minimum	66	74	76	87	78	78	83	89	96	100	97	99	95	92	92	91	71	79	76	58	70	75	83	89	92	88	76	79	83.9							
Chico.....	Maximum	49	46	42	45	52	43	42	50	48	57	50	54	59	52	49	55	56	60	54	62	60	55	43	42	44	48	58	55	54	54	51	51.7				
Colfax.....	Maximum	59	55	56	55	56	69	72	75	79	86	83	84	76	76	77	71	63	66	65	65	62	60	66	66	67	73	74	76	66	66	66	66	66	66		
Colusa.....	Maximum	42	38	43	39	37	32	35	43	46	44	50	49	43	33	48	45	46	51	43	38	37	45	44	37	43	49	45	38	37	41	42.4					
	Minimum	45	55	50	44	50	56	68	80	82	86	81	84	81	82	80	72	74	71	64	51	59	48	45	54	66	67	66	73	74	76	66	66	66	66	66	66
Corona.....	Maximum			
	Minimum			
Colusa.....	Maximum			
	Minimum			
Escondido.....	Maximum	54	60	68	69	68	73	84	85	90	86	81	65	77	76	72	73	79	65	59	54	59	67	76	77	69	65	68	76	71	71.2						
	Minimum	46	46	42	44	51	37	39	45	44	50	51	49	51	55	48	48	55	47	48	54	56	56	47	33	34	36	40	46	54	53	38	46.5				
Eureka.....	Maximum	48	53	56	53	50	53	53	57	58	52	52	53	61	50	49	51	53	64	55	59	54	46	51	57	64	57	54	57	54	57	54.4					
	Minimum	40	40	50	40	37	39	45	44	48	47	40	40	45	46	48	49	50	41	40	36	34	41	49	51	44	41	42	44	42.7							
Fresno.....	Maximum	54	60	54	58	56	57	63	68	71	77	86	81	72	80	85	84	71	76	70	64	61	55	57	66	71	70	68	70	72	76	68.5					
	Minimum	44	38	41	45	44	37	41	48	49	53	53	53	52	51	48	51	52	58	50	44	43	49	35	38	44	46	50	48	46	50	46.2					
Hanford.....	Maximum	69	65	67	69	68	66	78	70	72	73	88	80	81	72	73	75	77	74	71	68	65	64	71	69	68	74	75	71	79	71.9						
	Minimum	41	36	38	41	40	35	36	39	41	45	46	42	43	42	41	43	42	49	52	45	43	39	33	33	39	42	35	37	43	47.1						
Hollister.....	Maximum	54	56	53	56	54	59	66	72	76	80	84	76	75	80	69	63	64	62	61	55	58	66	69	70	67	63	70	69	73	66.3						
	Minimum	44	34	38	45	43	35	35	39	41	45	50	46	45	40	43	49	45	49	50	40	43	35	44	45	41	42	35	47	42.7							
Independence.....	Maximum	52	55	60	57	56	60	67	75	79	80	78	70	73	75	74	72	66	66	69	67	65	65	70	72	73	71	65	68.6								
	Minimum	28	26	26	36	31	26	33	31	38	42	43	49	40	39	33	36	46	48	46	34	36	30	26	33	35	40	36	38	35.0							
Indio.....	Maximum	70	73	78	77	78	80	85	95	102	104	97	97	94	96	97	92	90	92	81	84	81	66	71	77	84	90	93	90	82	85	86.5					
	Minimum	44	51	46	45	53	48	50	53	65	66	62	65	63	59	53	58	51	57	50	49	42	43	48	45	59	60	62	61	51	54.3						
La Porte.....	Maximum	27	30	34	35	29	34	44	46	54	54	45	57	51	45	45	45	47	43	41	38	41	31	29	35	40	41	39	47	49	46	58	42.3				
	Minimum	24	16	19	26	15	10	15	21	26	31	37	32	38	30	33	35	36	37	40	31	30	29	22	15	30	34	30	35	35	35	35	29.1				
Lemon Cove.....	Maximum	57	61	63	59	61	63	66	69	77	81	85	92	91	80	89	91	82	83	77	70	71	55	61	61	71	72	76	77	74	71.4						
	Minimum	43	44	43	49	49	48	50	43	54	51	52	58	51	50	52	48	52	58	50	51	41	44	39	43	49	52	51	55	49	49.3						
Los Angeles.....	Maximum	47	46	49	50	49	45	52	58	63	67	67	53	52	53	46	49	54	54	53	56	55	54	50	54	53	51	52	52	52	52	52					
	Minimum	53	58	53	57	56	59	62	69	73	75	79	78	72	71	77	81	77	68	66	66	66	66	66	66	66	66	66	66	67.0							
Mered.....	Maximum	44	35	40	40	45	38	36	37	40	44	50	51	52	44	45	47	47	50	52	52	49	43	45	42	41	41	41	41	41	41	43.7					
	Minimum	35	34	38	42	37	39	38	38	40	44	44	49	53	51	49	49	48	52	52	52	52	49	47	45	43	41	41	41	41	41	41					
Mokelumne Hill.....	Maximum	46	54	54	50	49	50	53	56	57	59	51	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	44.7						
	Minimum	35	34	38	42	33	33	33	39	40	38	37	35	38	40	36	34	34	39	40	42	47	33	39	36	39	39	39	39	39	39	40.4					
Needles.....	Maximum	60	60	76	78	78	76	80	84	84	84	81	82	81	85	83	81	80	81	71	63	65	65	65	68	69	72	74	74	70	74.5						
	Minimum	42	43	46	43	44	45	45	44	56	52	55	53	53	50	48	45	46	50	55	45	44	43	44	41	41	41	41	41	41	41	41	48.1				
North Fork.....	Maximum	43	37	40	46	38	33	41	45	48	47	52	43	33	48	43	47	44	43	47	40	37	36	36	36	36	36	36	36	36	36	36					
	Minimum	32	27	29	36	27	29	34	37	40	40	42	41	38	36	33	33	39	41	42	46	33	31	33	30	22	25	25	25	25	35.5						
Oakland.....	Maximum	55	57	58	55	58	60	69	73	77	74	74	70	73																							

Snowfall Data. [In inches.]						
WATERSHED, COUNTY, STATION.	Total snow-fall.	Compr'd with normal.	Am'ton ground 15th.	Am'ton ground end mo.	Water equivalent.	
Klamath Watershed.						
Siskiyou County. Yreka.....	8	.....	0	0	.....
Trinity County. Hayfork Ruth.....	16	.....	0	0	.....
Humboldt County. Weitchpee.....	4	+ 3	0	0	.....
Mountain Lakes.						
Modoc County. Cedarville.....	4	-10	0	0	.....
Fort Bidwell.....	11	.....	0	0	.....
Lassen County. Eagle Lake.....	10	-5	10	2	.....
Fredonia.....	17	+ 7	8	0	.....
Madeline.....	.....	.....	.....	.....	.....
Susanville.....	.....	.....	.....	.....	.....
Tehama County. Mineral.....	.....	.....	.....	.....	.....
Nevada County. Boca.....	24	-16	15	0	.....
Truckee.....	.....	.....	.....	.....	.....
Inyo County. Bishop Creek.....	0	.....	0	0	.....
Lone Pine.....	0	.....	0	0	.....
Wells Meadow.....	0	.....	0	0	.....
Sacramento Watershed.						
Siskiyou County. Dunsmuir.....	10	0	0	0	.....
McCloud.....	23	+ 7	15	0	.....
Sisson.....	18	- 4	0	0	.....
Modoc County. Alturas.....	2	- 3	0	0	.....
Shasta County. Burney.....	3	0	0	0	.....
Plumas County. Bucks.....	48	.....	106	72	.....
Canon Dam.....	9	.....	39	21	.....
Chester.....	14	-12	37	20	.....
Clover Valley.....	23	+ 9	37	12	.....
La Porte.....	28	-33	71	48	.....
Portola.....	13	.....	0	0	.....
Quincy.....	6	-14	0	0	.....
Butte County. De Sabla.....	2	-11	0	0	.....
Inskip.....	21	-27	80	56	.....
Stirling City.....	6	-16	0	0	.....
West Branch.....	4	-14	0	0	.....
Yuba County. Camptownville.....	10	-5	0	0	.....
Sierra County. Bunker Hill.....	.....	.....	.....	.....	.....
Dorsey's.....	.....	.....	.....	.....	.....
Downieville.....	9	0	0	0	.....
Sierra City.....	19	-9	9	0	.....
Sierraville.....	23	-9	0	0	.....
Table Rock.....	41	-10	108	82	.....
Nevada County. Bowman's Dam.....	.....	.....	.....	.....	.....
Deer Creek.....	23	-9	13	0	.....
Fordyce Dam.....	69	-17	148	133	.....
Lake Spaulding.....	35	-32	82	63	.....
Placer County. Blue Canon.....	26	-28	31	12	.....
Cisco.....	66	+ 3	119	96	.....
Emigrant Gap.....	51	-3	60	24	.....
Summit.....	50	+ 3	139	120	.....
San Joaquin Watershed.						
Alpine County. Tamarack.....	76	-20	179	160	.....
Tuolumne County. Center Ranger Station.....	1	-9	0	0	.....
Hetch Hetchy.....	10	-26	0	0	.....
Lake Eleanor.....	.....	.....	.....	.....	.....
Mariposa County. Yosemite.....	17	-3	3	0	.....
Fresno County. Cascada.....	8	.....	0	0	.....
Hume.....	.....	.....	.....	.....	.....
Huntington Lake.....	28	.....	80	62	.....
Tulare County. Hot Springs.....	0	-4	0	0	.....
Springville.....	13	-1	0	0	.....
Mountains of Southern California.						
Bear Valley Dam.....	7	-7	0	0	.....
Converse Nursery.....	8	.....	0	0	.....
Holcomb.....	5	-12	0	0	.....
Squirrel Inn.....	1	-10	0	0	.....
Seven Oaks.....	4	-6	0	0	.....
Nellie.....	1	.....	0	0	.....
Julian.....	2	.....	0	0	.....

SNOWFALL IN THE MOUNTAINS.

The snowfall in the mountains of California during March, 1916, was somewhat below the normal. Though a few stations reported more than the usual amount of new snow, the State as a whole received a relatively small amount.

In the Sierra Nevada Mountains the snow cover at the beginning of the month was about normal in depth, or slightly below the normal. Considerable precipitation accompanied the eastward passage of two storms during the first week of the month. As the temperatures were below freezing, most of the precipitation in the mountain regions was in the form of snow. The mild weather which followed caused considerable settling and accelerated melting of the snow. This was particularly true in the lower foothills. The storm of March 18-23, inclusive, was accompanied by relatively high temperatures, and as a result, further melting occurred. The coldest weather of the month followed, and melting was checked for a few days. At the close of the month warm weather again prevailed, and the snow was disappearing steadily. Throughout the Sierras the snow has been so well packed since the excessive snowfall of January that melting has progressed at a very slow rate. The lower layers of snow are densely packed, almost with the consistency of ice. A snow survey made near Summit station at the close of the month revealed the fact that the surface layer (1 foot thick) was 56 per cent water, that at a depth of 5 feet was 63 per cent water, while that at the bottom of the 10-foot cover was 66 per cent water.

In the Siskiyou Mountains the snowfall during the month was above the normal, most of it having occurred during March 1-6 and 20-24. At the close of the month it was melting steadily, but a considerable deposit remained above the 3,500 foot level, and it was well packed.

In the mountains of southern California the snowfall during March was abnormally light. Scattered light snow fell on several days during the first week of the month. Though considerable precipitation occurred in the southern portion of the State between the 19th and 24th, the temperatures prevailing at the time were so high that only in the more elevated regions was the precipitation in the form of snow. At the close of the month but little snow remained except upon the lofty peaks.

During the past winter the snowfall in the mountains of California was relatively light during December, February and March, but it was abnormally heavy during November and January. That which occurred during January was so excessive that unprecedented amounts were reported from many stations. Partly because of the excessive snowfall during January and partly because of the slow melting which has followed, the runoff has been slight, and no wide-spread floods have occurred to date. It is readily apparent that ample water for irrigation and power purposes is assured for the coming summer. A. H. P.

COMPARATIVE SNOWFALL DATA FOR MARCH.

(Amount on the Ground.)

	FORDYCE DAM.			SUMMIT.			TAMARACK.		
	1st.	15th.	End of mo.	1st.	15th.	End of mo.	1st.	15th.	End of mo.
1907.....	98	119	154	104	191	262	101	210	348
1908.....	105	87	75	116	130	60	131	126	84
1909.....	131	116	126	201	196	191	256	255	253
1910.....	72	58	71	65	88	68	101	82	90
1911.....	128	154	124	222	276	138	443	440	338
1912.....	45	80	67	26	81	53	44	79	62
1913.....	80	72	82	52	42	50	115	103	107
1914.....	130	113	108	178	140	124	271	255	258
1915.....	133	117	100	182	153	119	185	161	143
1916.....	165	148	133	151	139	120	192	179	160