

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU.

CALIFORNIA SECTION.

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GENERAL SUMMARY.

June was an extremely dry month in California. Measurable precipitation occurred at only 15 out of 247 stations from which reports were received. What little rain fell was limited to light showers on the 12th and 13th in the northwestern portion of the State. The mean temperature for the State as a whole was somewhat below normal. During the second week of the month, temperatures below freezing occurred throughout the Sierra Nevada Mountains. It was much warmer during the last decade of the month, when temperatures exceeding 100° were common in the interior valleys, while maxima of 120° and higher were recorded in the desert plateau of the southeastern portion of the State. Cloudless skies prevailed in the Sacramento and San Joaquin Valleys. More than the usual amount of sunshine was received along the coast, where there was less fog than is usual during June. The wind movement was high. No storms were reported except in the high Sierras, where several thunderstorms occurred. Most streams maintained low stages, and continued to decline at the close of the month.

June weather was favorable for the harvesting of grain and the curing of hay and alfalfa. The cool weather of the first half of the month was favorable for all cereal crops except corn, in that the grain filled out better than was at first expected, though desiccating northerly winds reduced the condition somewhat. Pastures and ranges deteriorated because of deficient moisture, and sugar beets, beans and rice made slow progress for the same reason. The fruit crop prospects, however, continue well above the average, and there is every indication that the yield will be the largest on record. Temperatures were favorable for producing good growth and quality of all fruits, and no premature ripening has resulted. In a few cases the "June drop" was heavy, but with the exception of Navel oranges, it seems to have had little effect on crops as a whole. Berries, cherries, peaches, plums, apricots and cantaloupes were harvested in large quantities. At the close of the month there were excellent prospects for unusually large yields of grapes, figs and walnuts. The rapid decrease in the water supply of the San Joaquin Valley made it appear that there would be a shortage of water for irrigation and power purposes during the summer. However, at the close of the month the agricultural situation was generally satisfactory, and in many places it was the best in years.

A. H. P.

PRESSURE.

The mean sea level pressure, determined from the records of twelve regular Weather Bureau stations, was 29.94 inches. The highest was 30.27 inches at Eureka on the 8th; the lowest was 29.58 inches at Independence on the 29th; the range for the State was 0.69 inch.

TEMPERATURE.

The monthly mean temperature for the State, as shown by the records of 100 stations, was 67.9°, which is 1.1° below the normal. The highest monthly mean was 92.8°, at Greenland Ranch; and the lowest was 50.7°, at Blue Canon and La Porte. The highest temperature, 121°, occurred at Blythe on the 26th, and also at Greenland Ranch on the 29th; and the lowest, 22°, occurred at La Porte on the 11th. The range for the State was 99°.

PRECIPITATION.

The average precipitation for the State, as shown by the records of 247 stations, was 0.01 inch, or 0.30 inch below the normal. The greatest amount was 0.47 inch, at Crescent City. No rain fell at 217 stations. The greatest amount in 24 hours was 0.30 inch at Yreka on the 27th.

RELATIVE HUMIDITY, SUNSHINE AND CLOUDINESS.

Stations.	Relative humidity. (Per cent.)			Sunshine.	
	5 a. m.	5 p. m.	Mean.	Actual No. of hours	Per cent. of possible.
Eureka.....	91	80	86	319	71
Fresno.....	51	14	32	340	100
Independence.....	33	10	22	406	92
Los Angeles.....	79	52	66	392	91
Mount Tamalpais.....	46	43	44	435	98
Red Bluff.....	53	16	34	450	98
Sacramento.....	78	30	54	443	99
San Diego.....	84	71	78	337	79
San Francisco.....	84	67	76	415	94
San Jose.....	78	50	64	422	96
San Luis Obispo.....	78	57	68	380	88

WIND MOVEMENT.—(Miles.)

Stations.	Total mov. for month.	Ave. hr. velocity.	Maximum velocity.	Direction.	Date.	Prev. dir.
Eureka.....	5,110	7.1	28	sw.	13	nw.
Fresno.....	7,568	10.5	27	nw.	15	nw.
Independence.....	4,571	6.3	27	sw.	6	nw.
Los Angeles.....	4,193	5.7	17	s.	11	sw.
Mount Tamalpais.....	15,534	21.6	88	nw.	19	nw.
Point Reyes.....	22,755	31.6	68	nw.	10	nw.
Red Bluff.....	4,386	6.1	21	nw.	9	se.
Sacramento.....	6,364	8.8	22	s.	26	s.
San Diego.....	4,610	6.4	22	nw.	1	nw.
San Francisco.....	10,348	14.4	37	nw.	11	sw.
San Jose.....	4,882	6.8	24	nw.	11	nw.
San Luis Obispo.....	3,587	5.0	20	nw.	19	nw.

COMPARATIVE DATA FOR JUNE.

Year.	Mean temp.	Ave. precip.	Year.	Mean temp.	Ave. precip.	Year.	Mean temp.	Ave. precip.	Year.	Mean temp.	Ave. precip.
1897.....	69.8	0.46	1903.....	70.9	0.07	1909.....	68.1	0.19	1915.....	67.3	0.01
1898.....	71.3	0.25	1904.....	71.1	0.04	1910.....	67.3	0.05	1916.....	66.2	0.22
1899.....	71.5	0.57	1905.....	67.5	0.07	1911.....	66.7	0.15	1917.....	69.2	0.02
1900.....	71.4	0.19	1906.....	66.7	1.05	1912.....	68.0	0.49	1918.....	72.5	0.12
1901.....	70.5	0.01	1907.....	66.1	1.02	1913.....	65.8	0.27	1919.....	67.9	0.01
1902.....	70.2	0.10	1908.....	65.0	0.17	1914.....	66.4	0.85	.....	.....	.....

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.
 † Also on other dates. a, b, c, etc., indicate respectively, 1, 2, 3, etc., days missing from the record.

Daily evaporation (inches) and wind movement (miles) for June, 1919.

Stations.	Data.	Day of Month.																															Monthly.
		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	
Chula Vista**1..	Evaporation.....	310	413	346	224	253	286	278	228	247	273	269	266	251	250	286	251	235	246	271	252	231	263	241	256	244	227	247	232	250	259	.....	7,885
	Wind movement.....	115	86	78	115	113	155	131	128	133	131	126	137	120	122	113	100	104	101	133	104	113	97	100	111	125	107	112	104	127	107	.....	3,445
Dodgeland*2....	Evaporation.....	431	391	351	539	453	466	193	366	409	371	328	422	357	323	297	395	243	329	444	415	458	351	308	377	410	503	427	419	434	323	.....	11,536
	Wind movement.....	100	58	55	65	44	70	54	35	64	88	75	93	116	77	63	100	35	43	76	100	83	29	36	41	77	86	79	101	58	.....	2,038	
Oakdale (near)*3	Evaporation.....	507	419	463	510	470	562	416	372	442	473	402	438	502	552	412	413	371	444	501	520	409	407	492	480	526	457	441	482	440	475	.....	13,798
	Wind movement.....	145	58	58	58	80	153	127	123	99	153	116	142	77	170	108	134	119	125	106	148	145	151	130	92	99	119	132	131	141	140	.....	3,579
Tahoe**4.....	Evaporation.....	200	160	100	090	100	230	190	180	140	210	330	070	200	340	120	170	150	040	250	150	280	180	130	130	140	130	360	190	180	260	.....	5,400
	Wind movement.....	40	30	94	80	31	108	107	113	4	108	109	109	78	92	52	8	81	126	56	60	104	117	106	12	78	27	80	44	74	53	.....	2,181

* Observation taken at 7 a. m.; ** at 8 a. m. † Included in next following entry.
 1 Ele. 9 ft.; 10 miles SE of San Diego. 2 Ele. 125 ft.; 16 miles SW of Chico. 3 Ele. 215 ft.; Woodward Reservoir, 8 miles N of Oakdale. 4 Ele. 6230 feet; float in Lake Tahoe.

Climatological Data for June, 1919.

Table with columns: Stations, Counties, Elevation, Length of record, Temperature (Mean, Departure from normal, Highest, Date, Lowest, Date, Greatest daily range), Precipitation (Total, Departure from normal, Greatest in 24 hours, Snowfall, Precipitation 0.1 inch or more, Clear, Partly cloudy, Cloudy), Number of days (Prevaling direction of wind), and Observers. The table lists data for numerous California locations including Alturas, Antioch, Atascadero, Azusa, Bakersfield, Barstow, Berkeley, Betteravia, Blue Canon, Blythe, Bonita, Branscomb, Bransley, Calexico, Camptonville, Chico, Claremont, Cloverdale, Colfax, Corona, Crescent City, Davis, Downville, Durham, El Cajon, Elsinore, Escondido, EUREKA, Folsom, Fontana, Fort Bidwell, Fresno, Grass Valley, Greenland Ranch, Hanford, Headsburg, Hollister, INDEPENDENCE, Indio, Inskip, Kennett, King City, La Porte, Lemon Cove, Lick Observatory, Lindsay, Lone Pine, LOS ANGELES, McCloud, Madeline, Marysville, Mecca, Merced, MOUNT TAMALPAIS, Mount Wilson, Napa, Needles, Nevada City, Newman, Oakland, Orland, Oroville, Pasadena, Paso Robles, Petaluma, Placerville, POINT REYES, Pomona, Porterville, Portola, RED BLUFF, Redding, Redlands, Riverside, Rocklin, Rohnerville, SACRAMENTO, St. Helena, Salinas, San Bernardino, SAN DIEGO, SAN FRANCISCO, San Jacinto, SAN JOSE, SAN LUIS OBISPO, Santa Ana, Santa Barbara, Santa Cruz, Santa Rosa, Sisson, Spreckels, Squirrel Inn, Stockton, Summit, Ukiah, Visalia, Watsonville, Weaverville, Willows, Yosemite, and Yuba.

Daily Temperature for June, 1919.

Table with columns for Stations, 1-31, and Mean. Rows include Bakersfield, Calexico, Chico, Escondido, Eureka, Fresno, Independence, Los Angeles, Merced, Mount Tamalpais, Oakland, Orland, Oroville, Paso Robles, Point Reyes, Pomona, Porterville, Red Bluff, Redlands, Sacramento, San Bernardino, San Diego, San Francisco, San Jose, San Luis Obispo, Santa Barbara, Santa Rosa, and Stockton.

SUPPLEMENTAL PRECIPITATION TABLE.

Table with columns for Stations, Watersheds, and Precip. inches. Rows include Abbotts, Aguanga, Angiola, Antelope Valley, Arrowhead Springs, Auburn, Avalon, Bagdad, Barrett Dam, Beaumont, Beaumont (near), Bellota, Big Bar, Big Sur, Bishop, Owens, Bishop Creek, Cabulla, Calaveras R. S., Campbell, Campo, Canon Dam, Cascada, Cedarville, Centerville, Chester, China Flat, Chula Vista, Churn Creek, Clovis, Coalinga, Colgate, Colusa, Covelo, Crockett, Cuyamaca, Deer Creek, Del Monte, Denair, De Saba, Dinuba, Dobbins (near), Dogdland, Dudley, Dudleys, East Park, Edison, Electra, Emigrant Gap, Fairmont, Firebaugh, Fordyce Dam, Fort Bragg, Fort Ross, Georgetown, Glennville, Goffs, Gold Run, Gray Mountain, Happy Camp, Hayfork, Head Dam, Helen Mine, Hetch Hetchy, Hullville (near), Huntington Lake, Idria, Indio, Jolon, Julian, Kennedy Mine, Kentfield, Kernville, Knights Landing, La Jolla, Lake Eleanor, Lake Spaulding, Las Plumas, Lathrop, Le Grand, Livermore, Llanano, Lompoc, Lordsburg, Los Alamos, Los Gatos, Lytle Creek, Maricopa, Mariposa, Merced Falls, Mesa Grande, Middlewater, Mill Creek-1, Mill Creek-2, Milo, Milton (near), Mokelumne Hill, Monroeville, Montague, Montgomery Creek, Nello, Nicolaus, Niles, North Bloomfield, North Fork, North Lakeport, Oakdale (near), Oak Grove, Oceanside, Ojai Valley, Orleans, Ozena, Parkfield, Pattiway, Peachland, Piedra, Point Loma, Priest Valley, Quincy, Reedley, Represa, Rio Vista, Rosamond, Rath, San Miguel Island, Santa Ana River, Santa Clara, Santa Maria, Santa Monica, Seven Oaks, Shively, Sierra Madre, Sierraville, Sonora, Springville (near), Standish, Stanwood, Stevenson Creek, Storey, Tahoma, Tamarack, Tejon Ranch, Three Rivers, Tule, Truckee, Tustin (near), Twin Lakes, Twin Valley, Upper Mattole, Visalia, Walnut Creek, Warner Springs, Wasco, Wasioja, West Branch, Wrights, Yorba Linda.