

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU.

CALIFORNIA SECTION.

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GENERAL SUMMARY.

Unseasonably cold and dry weather prevailed in California during October. The latter half of the month was especially cold, and at many stations the earliest killing frosts on record occurred during the last week of the month. The precipitation, which was but 43 per cent of the normal for October, was limited to the mountain and plateau regions. About 15 inches of snow fell in the high Sierra Nevada Mountains, but most of it disappeared before the close of the month. Cold and desiccating northerly winds prevailed throughout the State. General precipitation which began on September 27th continued until October 2d. Scattered showers again occurred between the 24th and 26th. The remainder of the month was practically rainless. Owing to the absence of storms, the percentage of the possible sunshine received was much above the normal for October. Streams maintained extremely low stages for a month which usually marks the advent of the rainy season.

Agriculturally, the weather during October was partly favorable, partly unfavorable. Good weather prevailed during the harvesting of a great variety of crops, including rice, corn, cotton, beans, sugar beets, potatoes, walnuts, almonds and apples. The sun-curing of fruit was completed without loss from wet weather. Wine and table grapes were shipped eastward in large quantities. While pastures and root crops were benefited by the showers, more rain was urgently needed at the close of the month. Much fall plowing was completed, and there was extensive seeding of wheat and barley. However, lack of moisture prevented the fall-sown grains from making much progress. Citrus fruit did well, and preparations were begun for an early harvest. No serious damage from frost was sustained by the maturing citrus fruit. Stock came down from the mountains to winter pastures in good condition. The yield of most agricultural crops during the season now drawing to a close has been satisfactory, with the exception of sugar beets, which are disappointing both in quality and in quantity, and also beans, which have produced a crop only about one-half as large as that of last year. The planting of winter growing vegetables was begun. The fine, dry weather and the moderately low temperatures were favorable for general farm work, much of which was accomplished.

A. H. P.

PRESSURE.

The mean sea level pressure, determined from the records of twelve regular Weather Bureau stations, was 29.99 inches. The highest was 30.39 inches at Independence on the 31st; the lowest was 29.62 inches at Independence on the 23d; the range for the State was 0.77 inch.

TEMPERATURE.

The monthly mean temperature for the State, as shown by the records of 98 stations, was 57.6°, which is 3.5° below the normal. The highest monthly mean was 69.9°, at Indio; and the lowest was 40.4°, at Madeline. The highest temperature, 95°, occurred at Healdsburg on the 11th, and also at Indio and Mecca on the 16th; and the lowest, 3°, occurred at Fortola on the 29th. The range for the State was 92°.

PRECIPITATION.

The average precipitation for the State, as shown by the records of 241 stations, was 0.63 inch, or 0.82 inch below the normal. The greatest monthly amount was 3.70 inches, at Blue Canon. No rain fell at 20 stations. The greatest amount in 24 hours was 2.75 inches at La Porte on the 1st.

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.....	90	76	83	242	70
Fresno.....	61	25	43	324	93
Independence.....	42	20	31	332	95
Los Angeles.....	76	61	68	294	84
Mount Tamalpais.....	44	46	45	325	94
Red Bluff.....	60	24	42	283	85
Sacramento.....	79	36	53	298	86
San Diego.....	79	70	74	264	75
San Francisco.....	80	58	69	270	78
San Jose.....	*46			287	83
San Luis Obispo.....	78	47	62	315	90

WIND MOVEMENT.—(Miles.)

Stations.	Total mov. for month.	Ave. hr. velocity.	Maximum velocity.	Direction.	Date.	Prev. dir.
Eureka.....	4,390	5.9	34	n.	17	n.
Fresno.....	4,111	5.5	27	nw.	29	nw.
Independence.....	4,494	6.0	26	se.	24	nw.
Los Angeles.....	4,074	5.5	18	sw.	24	sw.
Mount Tamalpais.....	12,613	15.6	78	nw.	29	nw.
Point Reyes.....	13,565	18.2	73	nw.	29	nw.
Red Bluff.....	4,778	6.4	33	nw.	8	nw.
Sacramento.....	5,988	8.0	32	nw.	9	nw.
San Diego.....	4,103	5.5	26	s.	24	nw.
San Francisco.....	6,559	8.2	32	w.	16	w.
San Jose.....	4,061	5.5	24	nw.	29	nw.
San Luis Obispo.....	2,804	3.8	18	nw.	3	nw.

COMPARATIVE DATA FOR OCTOBER.

Year.	Mean temp.	Ave. precip.	Year.	Mean temp.	Ave. precip.	Year.	Mean temp.	Ave. precip.	Year.	Mean temp.	Ave. precip.
1897.....	58.5	1.79	1903.....	64.0	0.49	1909.....	60.2	1.66	1915.....	62.3	0.14
1898.....	61.0	0.59	1904.....	61.6	2.74	1910.....	61.9	0.83	1916.....	55.0	1.91
1899.....	58.1	3.60	1905.....	60.7	0.12	1911.....	59.1	0.58	1917.....	64.4	0.01
1900.....	58.8	2.34	1906.....	63.4	0.09	1912.....	57.1	0.36	1918.....	62.9	1.02
1901.....	63.2	1.50	1907.....	62.0	1.56	1913.....	61.9	0.08	1919.....	57.6	0.63
1902.....	60.7	1.78	1908.....	58.3	1.37	1914.....	60.2	1.60			

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 October, 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.....	270	213	211	187	185	204	183	152	161	180	150	149	178	176	187	211	193	160	162	147	130	138	077	065	162	176	162	177	182	142	206	5.226
	Wind movement.....	103	108	86	56	82	78	68	79	100	89	80	73	175	81	97	82	68	72	77	86	71	76	85	121	77	102	89	77	126	78	89	2.643
Dodgeland*2....	Evaporation.....																							076	124	075	013	179	141	104	210	163	
	Wind movement.....	71	42	83	75	44	33		20	120	125	65	65	25	80	50	60	20	100	70	70	20	20	20	50	40	35	65	40	10	80	120	110
Oakdale (near)*3	Evaporation.....	130	172	266	215	203	238	261	249	269	288	234	238	235	295	271	203	200	306	303	194	223	247	164	247	118	119	140	139	198	252	263	6.880
	Wind movement.....	63	140	112	136	70	42	70	40	40	227	54	62	45	140	139	36	58	141	154	57	65	69	56	145	92	70	100	74	86	197	161	2.941
Tahoe**4.....	Evaporation.....	070	040	130	110	120	160	110	140	030	140	210	170	150	130	210	240	210	180	240	230	250	130	170	120	020	080	120	140	090	090	070	4.320
	Wind movement.....	97	112	95	83	105	74	72	109	55	33	63	61	84	67	86	80	79	66	87	63	125	84	123	81	64	70	91	83	61	114	83	2.550

* 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 October, 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 of inch or more), Number of days (Clear, Partly cloudy, Cloudy), Prevailing direction of wind, and Observers.

Daily Temperature for October, 1919.

Table with 32 columns (Stations, 1-31, Mean) and 31 rows of station names (Bakersfield to Stockton) with their corresponding temperature data for each day of the month.

SUPPLEMENTAL PRECIPITATION TABLE.

Table with 12 columns (Stations, Watersheds, Precip. inches) and 31 rows of station names (Abbotts to Dinuba) with their corresponding watershed and precipitation data.