

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

**CALIFORNIA SECTION**  
**EDWARD A. BEALS, METEOROLOGIST.**

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### GENERAL SUMMARY.

Abnormally warm and dry weather prevailed throughout California during the first half of November. Conditions changed abruptly about the middle of the month, and the latter half was moderately cold, with heavy precipitation in the extreme north portion of the State, and light rainfall in the southern. For the State as a whole the average precipitation for the month was but 51 per cent of the normal. During the cold spell of the 17th-20th, abnormally low temperatures occurred in central and northern California, and at several stations new records for minimum temperatures for a month of November were established; at a number of mountain stations the temperatures fell below zero on several mornings. Snowfall was light in the elevated portions of the State; at the close of the month only the highest portions of the Sierra Nevada Mountains remained snow-covered. Sunshine was abundant during the first half of the month, but there was much cloudiness during the latter half. There were no destructive general storms; the wind movement was moderate.

Agriculturally, the weather was favorable. It was good weather for general farm work; the showers of the latter half of the month were sufficiently heavy to permit long delayed plowing. Harvests completed during the month included those of late grapes, rice, sugar beets and beans. The picking of cotton in the Imperial Valley continued, and the harvest of olives in the Sacramento Valley was well advanced. The gathering of navel oranges began in northern California near the close of the month; in southern California citrus fruits made good progress toward maturity, but they did not size up well on account of previous dry weather; navel oranges colored rapidly, but the crop as a whole is maturing later than usual. The frosts which accompanied the cold spell terminated the growth of all tender vegetation, and brought to a close the season for tomatoes and late grapes. Unharvested olives were damaged slightly by frost, and lemon blossoms and small green lemons were also injured; tender new growth of orange and lemon trees was nipped by freezing temperatures. Summer fallowed land was seeded to winter growing grains, but germination was slow. Pastures and ranges became dry, and water for stock was scarce until near the close of the month when conditions were much improved by the timely rains. At the end of the month the general agricultural situation continued good; harvests have been satisfactory, both in quality and quantity.

A.H.P.

#### PRESSURE.

The mean sea-level pressure, determined from the records of 11 regular Weather Bureau stations, was 30.11 inches. The highest was 30.44 inches at Eureka on the 18th; the lowest was 29.64 inches at Independence on the 15th; the range for the State was 0.80 inch.

#### TEMPERATURE.

The monthly mean temperature for the State, as shown by the records of 96 stations, was 54.3°, which is 1.4° above normal. The highest monthly mean was 67.4°, at San Pedro; and the lowest was 37.1°, at La Porte. The highest temperature, 98°, occurred at San Bernardino on the 3d; and the lowest, -3°, occurred at Portola on the 18th. The range for the State was 101°.

#### PRECIPITATION.

The average precipitation for the State, as shown by the records of 236 stations, was 1.44 inches, or 1.37 inches below the normal. The greatest monthly amount was 15.09 inches, at Crescent City. No rain fell at 10 stations. The greatest amount in 24 hours was 4.35 inches at Crescent City on the 29th.

#### 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.....	89	82	86	93	31
Fresno.....	65	39	52	244	80
Independence.....	45	30	38	234	77
Los Angeles.....	64	62	63	240	77
Red Bluff.....	75	49	62	186	60
Sacramento.....	81	56	68	209	70
San Diego.....	73	73	73	219	70
San Francisco.....	85	69	77	194	64
San Jose.....	53	53	53	219	71
San Luis Obispo.....	70	53	62	234	75

#### WIND MOVEMENT.—(Miles.)

Stations.	Total mov. for month.	Ave. hr. velocity.	Maximum velocity.	Direction.	Date	Prev. dir.
Eureka.....	4,067	5.6	30	nw.	27	se.
Fresno.....	3,090	4.3	36	nw.	27	nw.
Independence.....	2,952	4.1	25	sw.	15	nw.
Los Angeles.....	3,470	4.3	21	E.	15	de.
Point Reyes.....	12,633	17.5	70	uw.	27	nw.
Red Bluff.....	2,887	4.0	24	nw.	28	nw.
Sacramento.....	3,697	5.1	17	w.	27	se.
San Diego.....	3,538	4.8	25	w.	28	nw.
San Francisco.....	4,361	6.1	26	w.	8	w.
San Jose.....	3,100	4.3	22	sw.	3	s.
San Luis Obispo.....	2,505	3.5	20	ne.	28	n.

#### COMPARATIVE DATA FOR NOVEMBER.

Year	Mean temp.	Ave. precip.	Year	Mean temp.	Ave. precip.	Year	Mean temp.	Ave. precip.	Year	Mean temp.	Ave. precip.
1897....	50.8	1.41	1904....	53.4	1.44	1911....	51.1	1.00	1918....	50.5	3.10
1898....	51.6	0.99	1905....	52.8	2.26	1912....	52.2	2.85	1919....	50.9	0.90
1899....	52.1	3.82	1906....	52.6	1.92	1913....	52.2	5.00	1920....	51.2	5.24
1900....	54.7	5.21	1907....	52.7	0.28	1914....	54.2	0.80	1921....	54.3	1.44
1901....	54.9	2.65	1908....	52.9	1.85	1915....	50.8	1.96	.....	.....	.....
1902....	50.8	3.61	1909....	50.7	4.52	1916....	48.0	1.77	.....	.....	.....
1903....	55.2	5.03	1910....	52.8	1.91	1917....	54.1	1.53	.....	.....	.....

#### Daily evaporation (inches) and wind movement (miles) for November.

Stations.	Data.	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		
Chula Vista**	Evaporation.....	140	149	201	187	230	200	134	103	066	095	106	082	103	111	078	091	131	086	146	182	110	059	073	047	097	094	062	105	100	070	.....	3,483	
	Wind movement.....	67	51	60	49	63	67	63	47	48	76	69	45	61	64	51	77	101	55	100	141	77	68	52	62	73	81	104	88	61	68	.....	2,084	
Dodgeland*	Evaporation.....	052	046	053	013	018	076	065	048	042	024	027	047	024	024	037	006	034	066	094	014	052	057	003	011	030	014	034	054	136	007	.....	1,208	
	Wind movement.....	8	23	6	27	20	5	25	16	12	12	10	5	9	9	25	20	19	39	21	10	26	26	20	14	55	31	31	104	84	208	.....	740	
Oakdale (near)*	Evaporation.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Wind movement.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Tahoe**	Evaporation.....	060	065	125	065	055	040	055	075	090	105	095	030	055	075	070	060	†	100	135	085	095	†	115	125	115	065	125	045	055	120	.....	2,300	
	Wind movement.....	38	82	60	83	36	53	33	50	54	98	74	17	41	60	87	81	83	132	101	70	57	68	49	74	80	54	27	32	88	78	.....	1,927	

\* Observations taken at 7 a. m.; \*\* at 8 a. m. † Included in the next following entry.

Climatological Data for November, 1921.

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, Clear, Partly cloudy, Cloudy), Prevailing direction of wind, and Observers. The table lists 100+ stations across California with their respective data for November 1921.



Daily Temperature for November, 1921.

Table with 32 columns (Stations, 1-31, Mean) and 40 rows of station names (Bakersfield to Stockton) with their respective daily temperature data for November 1921.

SUPPLEMENTAL PRECIPITATION TABLE.

Table with 12 columns (Stations, Drainage-basin, Precip. inches) and 40 rows of station names (Abbotts to Dinuba) with their respective precipitation data.

\*Data obtained from 3-inch rain gage.