JANUARY 2024 WEATHER SUMMARY
FOR THE CENTRAL CALIFORNIA INTERIOR

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Generally cool weather prevailed for the first part of the month with below average temperatures and periods of gusty winds and light to moderate precipitation. Snow levels were around 4,000 feet with the colder system, including at the Grapevine and in Tehachapi. The second half of the month was associated with additional precipitation and dense fog throughout the Central Valley, though temperatures were milder. On the 22nd, a strong storm system brought record high rainfall in Madera and Merced along with some localized flooding and thunderstorms in the San Joaquin Valley and in the Kern County desert.. Heavy snow accumulated in the Sierra Nevada above 7,000 feet that day. Additional precipitation continued until the 23rd and again on the 24th, as another storm passed over the region. With the exception of nighttime and morning fog in the Central Valley, a warm and dry period prevailed for the last week of the month, although a winter storm approached on the afternoon of the 31st.

Number of Days with Freezing Temperatures

Bakersfield: 2 for January (month's average of 4 days); total since November 1st: 2 (season average of 10 days)

Fresno: 0 for January (month's average of 4 days); total since November 1st: 0 (season average of 10 days)

Hanford: 3 for January (month's average of 8 days); total since November 1st: 16 (season average of 22 days)

Madera: 5 for January (month's average of 7 days); total since November 1st: 19 (season average of 19 days)

Merced: 3 for January (month's average of 8 days); total since November 1st: 13 (season average of 21 days)

Table 1 – January 2024 Summary Statistics– NWS Hanford, CA ASOS Sites						
Location	**Monthly Average Temp (deg F)**	**Departure from Average (deg F)**	**Temperature Rank**	**Total Monthly Precipi-tation (inches)**	**Departure from Normal (inches)**	**Precipitation Rank**
Bakersfield	51.5	+2.0	18th highest	1.65	+0.46	25th highest
Fresno	51.5	+3.5	7th highest	1.91	-0.25	66th highest
Hanford	50.7	+3.9	2nd highest	1.70	+0.14	41st highest
Madera	50.9	+3.1	4th highest	2.31	+0.23	32nd highest
Merced	50.4	+4.1	3rd highest	3.54	+1.17	27th highest

Low clouds and fog developed in the Central Valley during the nights and mornings at times on the 1st through the 3rd. Otherwise, cool temperatures prevailed throughout the interior region of Central California. A storm system arrived on the night of the 3rd into the 4th and brought light precipitation to the region. Another system arrived on the night of the 6th and lasted until the morning of the 7th. This storm was colder and brought locally strong gusty winds to the Kern County mountains and desert; gusts near 65 mph were observed in some locations with locally stronger gusts over the higher peaks. In addition, snow accumulated on Interstate 5 at the Grapevine and nearby areas (such as Frazier Park and Pine Mountain Club), which prompted road closures and slowdowns on the morning of the 7th. Afterward, freezing overnight low temperatures were observed in many locations of the San Joaquin Valley during the 7th-9th.

The next storm arrived on the evening of the 10th, although there were a few light showers and isolated sprinkles that occurred on the evening of the 9th. The main impacts were snow in the Sierra Nevada, rain showers in the lower elevations below 3,000 feet, and gusty winds with the passage of the cold front. Gusts measured ranged from 30 to 40 mph in the San Joaquin Valley and were as strong as 60 to 65 mph with isolated stronger gusts in the higher peaks of the Sierra Nevada and Kern County mountains, as well as the Mojave Desert slopes in eastern Kern County. Gusts on the desert floor reached 45 to 55 mph, except for some isolated stronger gusts

around 65 mph. Snow amounts in the Sierra Nevada were around a foot to 15 inches in Yosemite National Park and the higher elevations just to the south, while lesser accumulations were reported elsewhere in the mountain areas. Precipitation amounts were generally a quarter inch or less, except in the mountains where amounts exceeded one inch, including in the Sierra Nevada where the greatest snow accumulations occurred.

Freezing low temperatures returned to the Central Valley on the morning of the 12th, and afternoon highs were at least several degrees below average. Another storm system soon followed with continued cool temperatures. During the daytime of the 13th, light rain fell in the San Joaquin Valley, while several inches of snow accumulated in the Sierra Nevada. In addition, gusty winds redeveloped over the higher peaks of the Mojave Desert Slopes and nearby areas on the night of the 13th until the morning of the 14th. Gusts were as strong as 45 to 50 mph in most areas, though some locally stronger gusts were reported over the higher peaks.

A warming trend, mainly in terms of overnight lows, began on the 14th, while high temperatures reached near to below seasonal averages on the 15th through the 17th when stratus cloud cover persisted in the San Joaquin Valley with nighttime and morning fog development. Fog was dense in quite a few Central Valley locations on the night of the 14th into the morning of the 15th and redeveloped each evening and morning for the next several days. This prompted the issuance of Dense Fog Advisories until the 19th. Despite the overall warming trend across the region, or outside of areas where low clouds did not last into the afternoon hours, another low pressure system managed to bring light precipitation (amounts of mainly a tenth of an inch) on the night of the 17th into the early morning of the 18th. Despite the presence of the low pressure system, patchy dense fog occurred in the valley once the system passed on the morning of the 18th. Highs reached into the mid to upper 60’s at the warmest locations by the 19th, although dense fog had redeveloped in some portions of the San Joaquin Valley, including towards Merced.

On the 20th through the 22nd, a series of storm systems brought generally light to moderate precipitation, with the exception of the activity reported on the 22nd. Bands of heavy rain towards Merced and Madera occurred on the 22nd, as well as isolated thunderstorms in the Central Valley. Also on the 22nd, localized flooding was reported in the San Joaquin Valley and the Kern County desert. Rainfall amounts were anywhere from 0.25 inch to over 1.50 inches during the 22nd. Total precipitation amounts reached as high as two to three inches in the Sierra Nevada and adjacent foothills from the 20th until the 22nd. Snow amounts were about one to two feet in the Sierra Nevada at mainly above 7,000 feet and around six to twelve inches down to 6,000 feet. Light to moderate showers continued behind the system on the 23rd; quite a few locations received another 0.10 to 0.25 inch of precipitation. Some valley locations briefly reported dense fog in the early morning hours of the 23rd, although precipitation mitigated widespread development.

Another low pressure system arrived on the morning of the 24th. This storm brought mainly light precipitation to the region, with around 0.10 to 0.30 inch at most locations, including up to a few inches of snow at elevations of mainly above 7,000 feet in the Sierra Nevada. A warming and drying trend began on the 25th and lasted for the next several days. Patchy dense fog developed in some San Joaquin Valley locations each morning beginning on the morning of the 25th, although the lowest visibility was reported at Hanford and Visalia, as well as rural areas towards the center of the San Joaquin Valley.

Much warmer than average temperatures prevailed until the end of the month with highs in the upper 60's to the upper 70's at the warmest locations, mainly in the San Joaquin Valley. Record high maximum temperatures were tied or broken for some San Joaquin Valley locations on the 28th and 30th, while every ASOS location set a new record high temperature for the 29th. Widespread high temperatures in the 70's prevailed throughout the San Joaquin Valley on both the 29th and 30th. Warm temperatures continued until the 31st, but were slightly lower. Precipitation returned on the afternoon of the 31st and lasted into the overnight hours, although amounts on this date were relatively light.

The month ended with well above average temperatures, except for a few locations (Fig 1). Variable precipitation was recorded, with above average precipitation west of the Sierra Nevada and over western portions of Kern County. However, other areas such as the Kern County mountains and desert, as well as the Sierra Nevada recorded below average precipitation (Fig 2), and the mountain snowpack was roughly 50 percent of average as of the end of the month.

Table 2 – Seasonal Precipitation for ASOS Locations (ending on January 31st, 2024)						
Location	**Since Jan 1st (inches)**	**Departure From Average (inches)**	**Since Jul 1st (inches)**	**Departure From Average (inches)**	**Since Oct 1st (inches)**	**Departure From Normal (inches)**
Bakersfield	1.65	+0.46	3.69	+0.56	2.61	-0.47
Fresno	1.91	-0.25	2.99	-2.47	2.80	-2.58
Hanford	1.70	+0.14	3.46	-0.60	2.98	-1.02
Madera	2.31	+0.23	4.33	-0.97	4.20	-1.06
Merced	3.54	+1.17	6.66	+0.67	6.54	+0.60

Table 3– Warmest High Temperatures and Coolest Low Temperatures of the Month for ASOS Locations				
Location	**High**	**Date(s)**	**Low**	**Date(s)**
Bakersfield	76	29th, 30th & 31st	32	9th & 12th
Fresno	77	29th	33	8th
Hanford	75	29th	30	8th & 9th
Madera	78	29th	28	8th
Merced	73	29th & 30th	28	8th

Daily Records Set During January 2024

Bakersfield –

29th: Record high maximum temperature of 76 degrees broke the previous record of 74 degrees recorded for the date in 1986.

Fresno –

29th: Record high maximum temperature of 77 degrees broke the previous record of 73 degrees recorded for the date in 1960.

30th: Record high maximum temperature of 74 degrees tied the record set for the date in 2014.

31st: Record high minimum temperature of 56 degrees broke the old record of 55 degrees last set in 1963.

Hanford –

29th: Record high maximum temperature of 75 degrees broke the previous record of 72 degrees recorded for the date in 2014.

Madera –

22nd: Record high daily precipitation of 0.83 inch broke the previous record of 0.74 inch recorded for the date in 1983.

28th: Record high maximum temperature of 70 degrees tied the record set for the date in 2014.

29th: Record high maximum temperature of 78 degrees broke the previous record of 72 degrees recorded for the date in 2014.

30th: Record high maximum temperature of 75 degrees broke the previous record of 71 degrees recorded for the date in 1960.

31st: Record high minimum temperature of 55 degrees broke the old record of 54 degrees last set in 1963.

Merced –

22nd: Record high daily precipitation of 1.45 inches broke the previous record of 0.88 inch recorded for the date in 1997.

29th: Record high maximum temperature of 73 degrees broke the previous record of 71 degrees recorded for the date in 2014.

30th: Record high maximum temperature of 73 degrees broke the previous record of 70 degrees recorded for the date in 1906.

Fig 1 – Departure from Average Temperature for this month

(Data courtesy of Western Regional Climate Center)

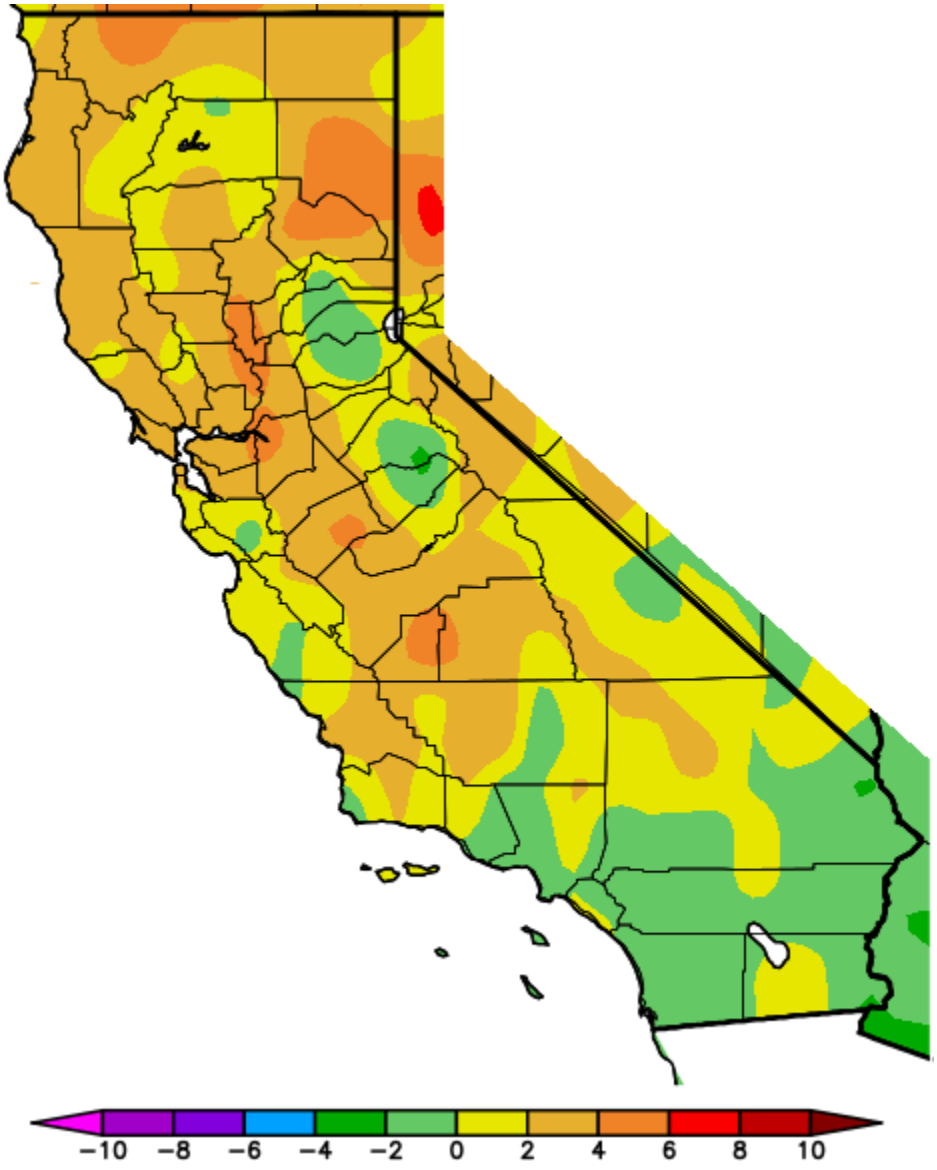

Fig 2 – Percent of Average Precipitation for this month

(Data courtesy of Western Regional Climate Center)