

FEBRUARY 2024 WEATHER SUMMARY FOR THE CENTRAL CALIFORNIA INTERIOR

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Wet weather was the general rule for the first week of the month as a series of strong storms brought abundant rain and mountain snow. Snow levels were around 5,000 feet in Sierra Nevada and about 6,000 feet in the Kern County mountains, except lowered to around 3,500 feet on the 6th and even further, or down to 2,000 feet, by the evening of the 7th. Very strong winds occurred on the 4th, and strong, gusty winds were reported, including a gust of 56 mph at Bakersfield and 64 mph at Merced. A drier pattern began on the 9th and lasted until the 13th, before another storm brought mainly light precipitation and locally gusty winds on the 14th and 15th. Showers and thunderstorms prevailed throughout the region from the 17th until the 20th with brief heavy rainfall at times. Relatively cool temperatures remained until the 21st. A relatively quiet pattern with a warming trend occurred on the 22nd until the end of the month, except for a storm that arrived in northern portions of our service area late on the 29th.

Number of Days with Freezing Temperatures

Bakersfield: 0 for February (month's average of 1 day); total since November 1st: 2 (season average of 11 days)

Fresno: 0 for February (month's average of 1 day); total since November 1st: 0 (season average of 11 days)

Hanford: 0 for February (month's average of 4 days); total since November 1st: 16 (season average of 26 days)

Madera: 1 for February (month's average of 3 days); total since November 1st: 20 (season average of 22 days)

Merced: 0 for February (month's average of 4 days); total since November 1st: 12 (season average of 25 days)

Table 1 – February 2024 Summary Statistics– NWS Hanford, CA ASOS Sites						
Location	Monthly Average Temp (deg F)	Departure from Average (deg F)	Temperature Rank	Total Monthly Precipitation (inches)	Departure from Normal (inches)	Precipitation Rank
Bakersfield	54.9	+1.1	30th highest	2.22	+1.04	13th highest
Fresno	54.1	+1.8	19th highest	3.36	+1.43	21st highest
Hanford	53.6	+2.7	13th highest	2.99	+1.55	11th highest
Madera	52.8	+1.1	16th highest	2.71	+0.72	24th highest
Merced	52.8	+2.3	20th highest	3.92	+1.72	13th highest

The first four days of the month were wet with near to above average temperatures throughout much of the region due to a couple of strong storms laden with subtropical moisture. On the 1st, the first storm brought thunderstorms to the San Joaquin Valley as colder unstable air moved into the region; these storms brought mainly brief heavy rainfall and small hail. Snow levels with each of the storms on the 1st and the 3rd through the 4th or 5th were around 5,000 feet in the Sierra Nevada and above 6,000 feet in the Kern County mountain areas to the south with each of the storms. In addition strong southerly winds were reported on the 4th throughout Central California, with gusts of 40 to 50 mph at many Central Valley locations. Some of the strongest gusts were a bit stronger, as Bakersfield reached 56 mph while Merced reached 64 mph on the 4th. As for the mountain areas, gusts of 70 to 85 mph were reported over many of the exposed ridgetops that day, with some gusts locally above 90 mph to as much as 120 mph (at a gage known as Upper Bull which is located near Lake Wishon., about 43 miles ENE of Fresno). Many of the windy spots were in the Sierra Nevada, coastal ranges adjacent to the west side of the Central Valley, as well as in Kern County, including the Tehachapi Mountains, the Grapevine, and the adjacent Mojave Desert slopes. Total snow amounts were around two to four feet in the Sierra Nevada, as of the 4th. Rainfall amounts were around 0.75 inch to 2.00 inches in the San Joaquin Valley, about 0.50 inch to 1.50 inches in the Kern County desert, and 2 to 5 inches in the Kern County mountains and lower Sierra Nevada on the 1st through the 4th.

Another system arrived on the 5th and continued over the region into the 6th. Showers and isolated thunderstorms brought widespread precipitation amounts of 0.25 to 0.75 inch along with reports of funnel clouds in Lemoore, between Tipton and Tulare, and in Bakersfield. On the 6th, another 0.50 to 0.75 of rain was reported in the Mojave Desert portion of eastern Kern County and in the Tehachapi Mountains. Lighter precipitation amounts were reported elsewhere on the 6th. Snow levels were mainly around 5,000 feet on the 6th, but lowered to around 3,500 feet by the evening.

On the 7th, a third storm brought additional showers and isolated thunderstorms; this system was colder as snow accumulated in the Sierra Nevada foothills as low as 2,000 feet, and several inches accumulated down to around 3,000 feet. In Kern County, snow accumulated mainly at around 3,500 feet and above. Flurries and light snow were reported at the Grapevine with little accumulation (less than an inch), although Tehachapi received more significant accumulation, or a few inches. Precipitation amounts were around 0.50 inch to nearly one inch in many locations in the San Joaquin Valley and into the lower Sierra Nevada foothills. The desert portions of eastern Kern County received another 0.10 to 0.25 inch of rain. Activity began to decrease on the night of the 7th, but showers finally ended by the afternoon of the 8th, except for a few light showers in Merced County during the following evening. There was a funnel cloud reported in Madera on the 8th during the early afternoon.

On the 9th through the 13th, a drier pattern prevailed, initially with below average temperatures. A gradual warming trend in terms of daytime highs occurred for this period, although it generally remained seasonably cool in the afternoons from the 11th until the 13th. Nighttime lows were near freezing at times in the coldest locations in the Central Valley. Below freezing overnight lows prevailed in the Kern County desert. Patchy valley fog developed in the mornings each day and cleared by the late morning hours, although low clouds persisted over the San Joaquin Valley into the afternoon of the 9th.

Precipitation returned to the service area on the 14th and again on the 17th. Mainly light amounts occurred with each of these storms, including around 0.10 inch to 0.25 inch. Gusty winds developed on the 14th in the typical prone areas, including over the Coastal Ranges and the Mojave Desert slopes, with gusts around 45 to 50 mph. Snow accumulated at elevations above 6,000 feet with several inches per system on the 14th and 17th. Otherwise, mainly seasonably cool temperatures prevailed with patchy valley fog at times, including on the 15th and 16th.

A stronger storm arrived on the 18th and lasted until the 20th. Scattered showers and thunderstorms developed each afternoon during this period, but increased in coverage on the 19th. The stronger storms produced brief heavy rainfall on the 19th and redeveloped on the afternoon of the 20th. Precipitation amounts were around 0.25 to 1.00 inch in the San Joaquin Valley during the 19th and 20th, while several inches up to around three feet of snow accumulated in the Sierra Nevada above 6,000 feet. Locations in the Sierra Nevada foothills, the

Sierra Nevada up to around 6,000 feet, and the Kern County mountains received around 1.00 inch to just over 2.00 inches of rainfall. Locations in the Kern County desert reported some rainfall, but was generally lighter, or up to 0.50 inch. Precipitation with this event was overall widespread, although some locations reported light amounts. However, some locations reported nuisance flooding and road closures where heavier the showers developed, including in the San Joaquin Valley. There were reports of flooding that caused road closures on the 20th as far south as the area between Bakersfield and the Grapevine, or the south end of the San Joaquin Valley.

A warming and drying trend began on the 21st, although some isolated showers and thunderstorms briefly developed in the Central Valley along the west side and brought mainly light precipitation during the afternoon. Otherwise, a break from precipitation lasted from the 22nd until the end of the month, except for some very light amounts on the 25th-26th and the evening of the 29th. Temperatures remained warmer than average during this last part of the month with highs in the lower 70's at the warmest spots, and the month was overall warmer than average for much of the region (Fig 1). As for precipitation, amounts were generally much above average, except for an area of below average precipitation in the Sierra Nevada (Fig 2). However, none of the ASOS sites reached the top 10 highest temperatures and precipitation on record for the month of February.

Table 2 – Seasonal Precipitation for ASOS Locations (ending on February 29th, 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	3.87	+1.50	5.91	+1.60	4.83	+0.57
Fresno	4.09	+1.18	6.35	-1.04	6.16	-1.15
Hanford	4.69	+1.69	6.45	+0.95	5.97	+0.53
Madera	5.02	+0.95	7.04	-0.25	7.25	-0.34
Merced	7.46	+2.89	10.58	+2.39	10.46	+2.32

Table 3– Warmest High Temperatures and Coolest Low Temperatures of the Month for ASOS Locations				
Location	High	Date(s)	Low	Date(s)
Bakersfield	72	18th	37	11th
Fresno	73	25th	36	9th & 10th
Hanford	72	18th, 24th & 25th	33	11th
Madera	73	25th	31	9th
Merced	71	24th & 25th	33	10th

Daily Records Set During February 2024

Bakersfield – No daily records reached.

Fresno –

7th: Record high daily precipitation of 0.75 inch broken; old record of 0.52 inch set for the date in 1962.

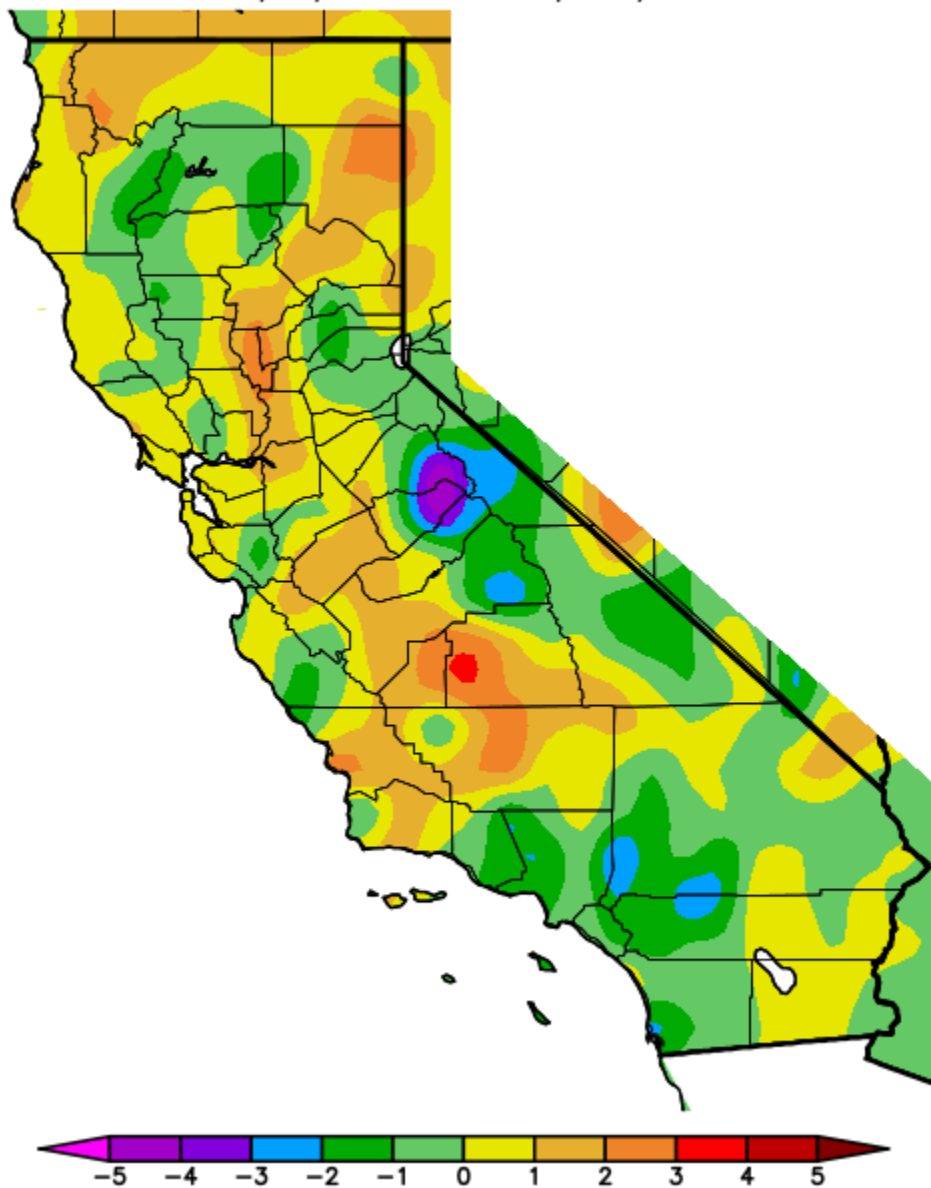
Hanford – No daily records reached.

Madera – No daily records reached.

Merced – No daily records reached.

Fig 1 – Departure from Average Temperature for this month

Ave. Temperature dep from Ave (deg F)
2/1/2024 – 2/29/2024



Generated 3/ 1/2024 at WRCC using provisional data.
NOAA Regional Climate Centers

Fig 2 – Percent of Average Precipitation for this month

Percent of Average Precipitation (%)
2/1/2024 – 2/29/2024

