

FEBRUARY 2023 WEATHER SUMMARY FOR THE CENTRAL CALIFORNIA INTERIOR

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This month began with freezing overnight low temperatures and periods of nighttime/morning dense fog in the San Joaquin Valley. However, the Tule Fog became less frequent by the 10th of the month, while warmer than average daytime high temperatures prevailed. After a very windy day on the 14th, another period with cold overnight lows occurred in the Central Valley that lasted for several days. Even Bakersfield and Fresno reported at least one morning of freezing temperatures during this period. Warmer temperatures prevailed briefly on the 20th and 21st before a colder and wet pattern dominated on the 22nd through the end of the month. Most valley locations finish the month having exceeded the average rainfall in a water year. There was some rare snow and graupel at times, though mainly a dusting in terms of accumulation, during the last week of the month in the San Joaquin Valley and lower foothills adjacent to the east and west sides of the Central Valley. None of the ASOS sites reported snow. However, as much as ten inches of snow reported in the Coalinga Hills/Los Gatos Valley about 12 miles west of Coalinga, as of 8 AM PST on the 25th.

Table 1 – February 2023 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	49.6	-4.2	13 th lowest	2.44	+1.26	9 th highest
Fresno	48.8	-3.5	20 th lowest	4.26	+2.33	12 th highest
Hanford	47.7	-3.2	19 th lowest	3.73	+2.29	8 th highest
Madera	47.4	-4.3	11 th lowest	2.86	+0.87	21 st highest
Merced	47.0	-3.5	10 th lowest	2.77	+0.57	40 th highest

Number of Days with Minimum Temperatures at or below 32 degrees Fahrenheit

Bakersfield: 1 day (average of 1 for February); 4 days since November 1st (average 10 days)
Fresno: 1 day (average of 1 for February); 3 days since November 1st (average 11 days)
Hanford: 9 days (average of 4 for February); 35 days since November 1st (average 26 days)
Madera: 9 days (average of 3 for February); 24 days since November 1st (average 22 days)

Merced: 8 days (average of 4 for February); 22 days since November 1st (average 25 days)

Mainly calm conditions prevailed for the first couple days across the region, although freezing overnight low temperatures were recorded at some San Joaquin Valley locations. Patchy dense fog also developed each morning in the Central Valley until the 4th.

By the afternoon of the 4th, a trough of low pressure brought rain to the San Joaquin Valley on the 4th into the 5th with some thunderstorms. The thunderstorms that developed on the afternoon of the 5th brought accumulating pea-sized hail to quite a few locations, including in both the valley and mountain areas. Light to moderate snow also fell at most areas above 4,000 feet in the Sierra Nevada, Tehachapi, and the near the summit of Tejon Pass on the Grapevine. Snow accumulations in the Sierra up until the morning of the 5th were around two to ten inches for elevations above 6,000 feet and around an inch near the 4,000 foot level. Gusty winds also accompanied this low pressure system, as gusts reached around 50 to 60 mph over the ridge tops and below the passes of the Sierra Nevada and Tehachapi Mountains.

Calmer conditions returned on the 6th with daily high temperatures remaining at or above average until the 10th and chilly overnight lows continuing. On the 10th, daytime highs reached into the mid 70's at the warmest locations in the San Joaquin Valley, including in Bakersfield, or about 10-15 degrees above average. In addition, dense fog redeveloped in portions of the San Joaquin Valley each morning from the 6th until the 10th.

Another low pressure system arrived on the 11th and brought light rain and mountain snow showers to the district until the morning of the 12th. Conditions cleared out for the afternoon of the 12th and mostly high clouds were in the area overnight and into the 13th.

Gusty winds developed on the 14th, and gusts to over 40 mph occurred in parts of the San Joaquin Valley. These winds also produced local visibility below one quarter mile at times that afternoon, especially near fields with loose soil. On Highway 152 in Madera County, there was a section closed due to a multi-vehicle pile-up, including in an area where visibility was poor. Even stronger gusts were reported in the Kern County desert and mountains, with gusts over 80 mph recorded. In addition, isolated light showers passed over the region late in the afternoon into the evening with some small hail reported and light snow accumulations on the passes of Highway 58 and Interstate 5 in Kern County that caused road closures due to vehicle crashes on slick roadways, including black ice, on the night of the 14th into the morning of the 15th.

Also on the night of the 14th into the morning of the 15th, cold air settled in and allowed nighttime lows to reach below freezing in many locations in the Central Valley. Below average daytime highs occurred on the 15th, and another night with widespread freezing temperatures followed. While daytime temperatures warmed to around seasonal averages during the 16th

through the 19th, chilly nights and mornings continued. Freezing overnight lows also continued at the coldest locations in the San Joaquin Valley each morning until the 19th. The 20th and 21st had very warm high temperatures for the Valley which got into the upper 60s. The night of the 21st had very strong winds as a very cold storm moved in overnight into the 22nd bringing rain to the Valley and below average temperatures. On the 22nd, graupel was reported in many Valley locations. The wet and cold pattern would continue for a few more days as a second storm moved in on the 23rd into the 24th bringing record breaking rain to Hanford and the Valley. Hanford broke its all-time single day rain record on the 24th with 2.70 inches. In addition, there were daily precipitation records tied or broken on the 25th at Bakersfield and Fresno, as the storm ended. The rain became more showery as more cold systems moved through to end the month, and episodes of gusty winds continued. Low elevation snow was reported in Avenal and Arvin on the night of the 24th into the morning of the 25th where a trace to near an inch accumulated.

February 2023 ended up much cooler than average with much above average precipitation, at least in the Central Valley. Otherwise, the mountain areas from south of Yosemite to Kern County and the desert areas reported below to near average precipitation. While the snowpack remains well above average (or around 200 to 250 percent of average for this time of year) throughout the Sierra Nevada, the liquid water content was below average in some of these areas during February due to the cold nature of the storms late in the month.

Table 2 – Seasonal Precipitation for ASOS locations (ending on February 28th)

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	4.41	+2.04	6.76	+2.45	6.76	+2.50
Fresno	8.21	+4.12	13.57	+6.18	13.46	+6.15
Hanford	6.89	+3.89	10.58	+5.08	10.54	+5.10
Madera	4.83	+0.76	7.88	+0.59	7.34	+0.09
Merced	9.47	+4.90	15.88	+7.69	15.68	+7.54

Table 3 – Warmest High Temperatures and Coolest Low Temperatures of the Month for ASOS locations				
Location	High	Date(s)	Low	Date(s)
Bakersfield	74	10 th	31	16 th
Fresno	69	10 th	31	15 th
Hanford	69	10 th & 20 th	29	16 th
Madera	69	10 th	28	15 th , 17 th & 18 th
Merced	67	20 th	29	18 th

Daily Records Set During February 2023

Bakersfield –

24th: New daily rain record set at 0.93 inches of accumulation breaking the previous record of 0.68 inches set in 1969.

25th: Daily rain record set at 0.98 inches which breaks the previous record of 0.44 inches of rain set in 1958.

Fresno –

24th: New daily rain record set at 2.16 inches of accumulation which breaks the previous record of 1.83 inches set in 1969.

25th: Daily rain record set at 0.69 inches which ties the record which was set in 1940.

Hanford –

24th: All-time single day rain record broken with an accumulation of 2.70 inches. The old daily record was 2.44 inches on February 10th, 1978. The daily record for the 24th was also broken as the old record for the 24th was 1.01 inches of rain set back in 1969.

Madera –

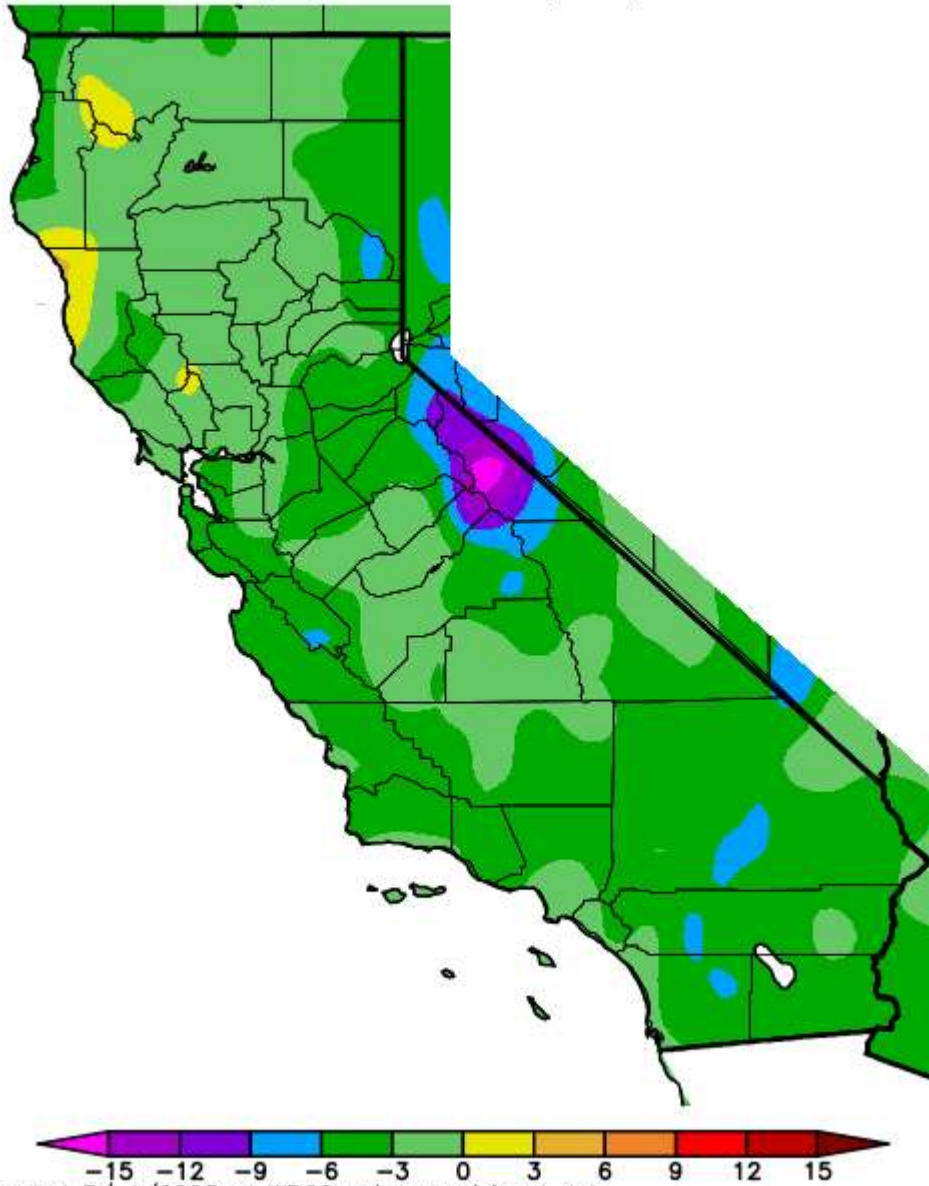
18th: Record low minimum temperature broken with a low of 28 degrees. The old record was 30 degrees, last set for the date in 1956.

Merced –

No daily records were reached.

Fig 1 – Departure from Average Temperature for February 2023

Av. Max. Temperature dep from Ave (deg F)
2/1/2023 – 2/28/2023



Generated 3/ 1/2023 at WRCC using provisional data.
NOAA Regional Climate Centers

Fig 2 – Percent of Average Precipitation for February 2023

