MAY 2023 WEATHER SUMMARY
FOR THE CENTRAL CALIFORNIA INTERIOR

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The month began with cool, unsettled weather, including occasional mountain snow showers, as well as rain showers, and isolated thunderstorms, including some that produced cold air funnels. Much above average temperatures took place during the 14th until the 23rd, and cooler temperatures followed with temperatures near or slightly below seasonal normal. Gusty winds developed at times in the usual prone areas (such as the coastal ranges and the Mojave Desert slopes in eastern Kern County) during periods when cooler air arrived. For the latter half of the month, isolated thunderstorms occurred almost daily during the afternoons and evenings in the Sierra Nevada and occasionally developed towards the Tehachapi Mountains and the Mojave Desert portion of eastern Kern County.

Table 1 – May 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	71.1	0.0	45th warmest	0.15	+0.10	55th highest
Fresno	70.7	+0.5	35th warmest	0.35	-0.07	50th highest
Hanford	70.0	+0.8	31st warmest	0.08	-0.27	49th lowest
Madera	67.6	-0.5	46th warmest	0.79	+0.32	16th highest
Merced	66.6	-0.8	55th coolest	0.77	+0.22	27th highest

Number of Days with Maximum Temperature of 100 Degrees or Above for May 2023

Bakersfield – This May's total: 1 (average 1); total so far this year: 1 (average 1)

Fresno – This May's total: 0 (average 1); total so far this year: 0 (average 1)

Hanford – This May's total: 0 (average 1); total so far this year: 0 (average 1)

Madera – This May's total: 0 (average 1); total so far this year: 0 (average 1)

Merced – This May's total: 0 (average 1); total so far this year: 0 (average 1)

The first day of May 2023 was cool and unsettled with scattered showers and locally gusty winds. Well below average temperatures with showers and isolated thunderstorms at times prevailed for the first week of the month. Snow fell at elevations around 5,000 feet in the Sierra Nevada on the 2nd and 3rd, though relatively light amounts were recorded (up to several inches). On the 4th, light to moderate precipitation with isolated heavy showers and thunderstorms were reported across Central California. On the 4th, three funnel clouds due to stronger storm cells were reported in the San Joaquin Valley, including Dos Palos, Atwater, and Sanger. Cooler than average temperatures continued for the next several days, although daytime highs moderated a bit by the 6th.

Another storm system brought increased winds and a few showers to the Sierra Nevada on the 9th. Below average temperatures with some locally gusty winds in the typical prone areas of eastern Kern County continued until the 10th, but a warming trend returned due to a building ridge of high pressure across the region. Near average temperatures with dry conditions prevailed on the 11th and 12th, but warmed significantly thereafter.

The ridge of high pressure continued to build and remained over the region for the next few days. Temperatures warmed into the 90s on the 13th with the warmest day being the 14th with some spots hitting triple digits including Bakersfield which tied a record at 102 degrees. Temperatures cooled down slightly on the 15th through 17th, but the high temperatures in the 90s remained at the warmest locations. In addition, afternoon and evening thunderstorms became a daily occurrence in the Sierra Nevada on the 14th through the next several days.

The high pressure ridge weakened slightly on the 20th and 21st, but thunderstorm activity increased in coverage and intensity as moisture had moved into Central California from the south. Storms formed not only over the Sierra Nevada, but had moved southward into the Kern County mountain areas and the desert portion of eastern Kern County. A gust of 66 mph was reported at China Lake NWTC on the evening of the 21st. Rainfall amounts were around 0.10 inch to over 0.50 inch on the evenings of the 20th and 21st where showers and thunderstorms had developed. More showers and thunderstorms redeveloped on the afternoon into the early evening hours of the 22nd, though mainly over the mountains in Tulare and Kern Counties, as a dry upper-level low pressure system approached from the northwest. Warm temperatures continued on the 23rd and was followed by much cooler temperatures, and daytime highs began to drop sharply, or by around ten to fifteen degrees, in Merced and Madera Counties.

Temperatures on the 24th through the 25th were below seasonal averages, and the warmest locations reached into the lower 80's. Areas near the passes along the coastal ranges along the west side of the Central Valley were even cooler with daytime highs only in the lower 70's during this period. Occasional periods with breezy conditions continued in the usual prone areas, as gusts reached around 35 mph in these areas and about 45 to 50 mph in eastern Kern County.

On the 26th, mountain shower and thunderstorm coverage increased a bit due to an upper-level trough of low pressure. Otherwise, temperatures were remained relatively mild.

Relatively mild, or mainly near seasonal, temperatures continued until the end of the month as the longwave trough pattern lingered. Some days were either several degrees above or below average, depending on the short wave jet pattern. Showers and thunderstorms remained a daily occurrence over the mountain areas until the end of the month.

Table 2 – Seasonal Precipitation for ASOS locations (ending on May 31st)

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	7.54	+3.17	9.89	+3.58	9.89	+3.63
Fresno	12.56	+5.11	17.92	+7.17	17.81	+7.14
Hanford	10.90	+5.34	14.59	+6.53	14.55	+6.55
Madera	8.73	+1.32	12.16	+1.53	11.62	+1.03
Merced	14.63	+6.57	21.04	+9.36	20.84	+9.21

Table 3 – Warmest High Temperatures and Coolest Low Temperatures of the Month for ASOS locations

Location	**High**	**Date(s)**	**Low**	**Date(s)**
Bakersfield	102	14th	47	3rd
Fresno	99	14th	50	1st, 3rd, 4th, & 7th
Hanford	99	14th	47	3rd
Madera	99	14th	44	2nd & 3rd
Merced	95	17th	41	1st

Daily Records Set During May 2023

Bakersfield –

14th: Record high maximum temperature of 102 degrees reached, which tied the record last set for the date in 1979.

Fresno –

4th: Record high daily precipitation of 0.33 inch reached, which broke the old record of 0.20 inch last set for the date in 1998.

Hanford –

No daily records reached.

Madera –

4th: Record high daily precipitation of 0.79 inch reached, which broke the old record of 0.26 inch last set for the date in 1998.

Merced –

4th: Record high daily precipitation of 0.74 inch reached, which broke the old record of 0.45 inch last set for the date in 1930.

Fig 1 – Departure from Average Temperature for May 2023

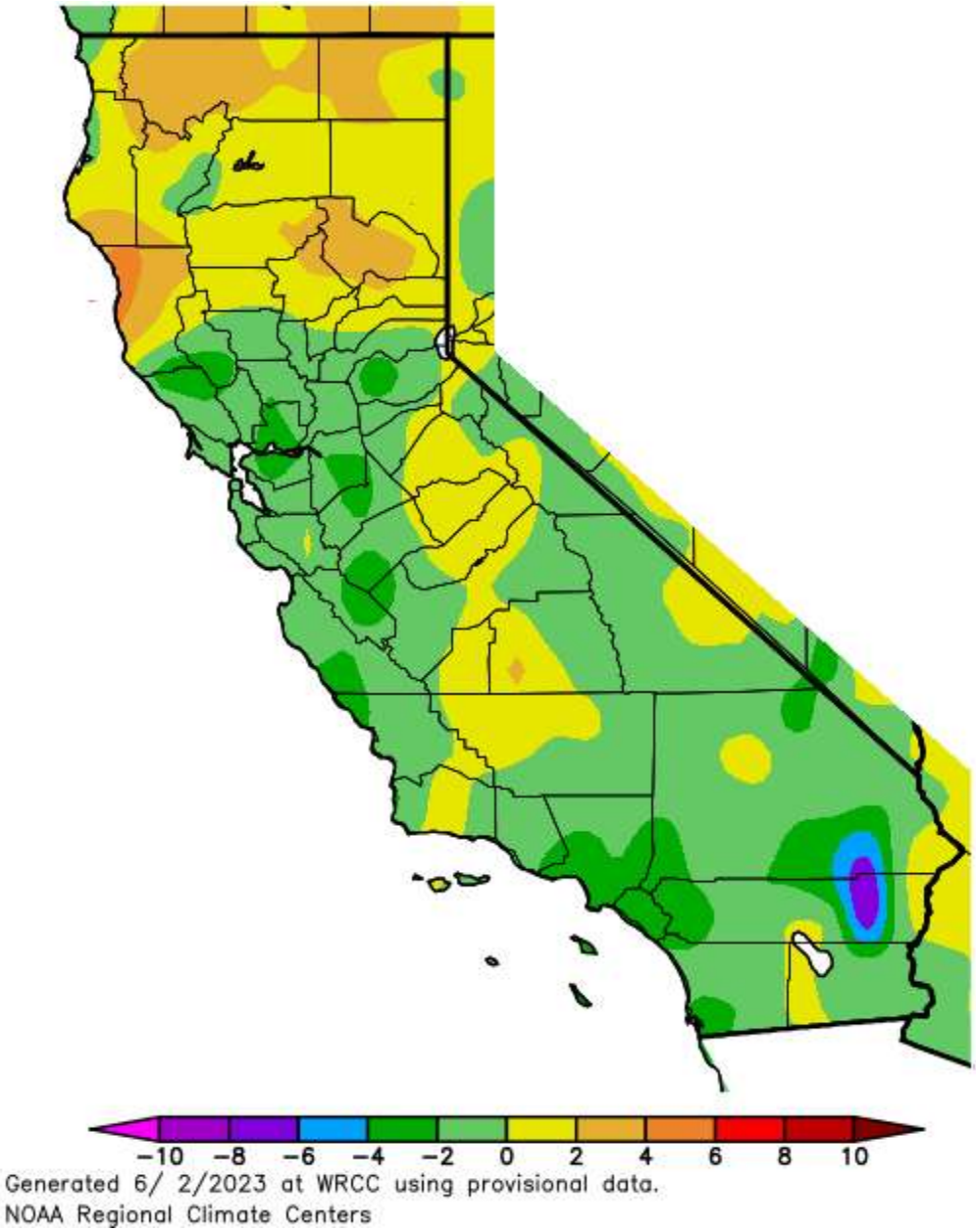

Fig 2 – Percent of Average Precipitation for May 2023