NOVEMBER 2022 WEATHER SUMMARY
FOR THE CENTRAL CALIFORNIA INTERIOR

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The first part of the month was generally mild with cool overnight and morning lows, although there was a storm system that brought light precipitation and cooler temperatures on the 2nd. After another mild and calm period, below average temperatures and stormy weather prevailed from the 7th until the 9th. Showers and thunderstorms developed in much of the region on both the 7th and 8th, or during the most active part of the period. Afterward, generally seasonably cool weather with frosty mornings in the Central Valley prevailed. Tule fog made a brief appearance during the 10th through the 13th; otherwise, mornings were generally hazy throughout the San Joaquin Valley until near the end of the month. However, there was a warming trend on the 24th and 25th when highs reached around ten to fifteen degrees above seasonal averages. Much cooler than average temperatures

Table 1 – November 2022 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	53.3	-3.0	Tied for 21st coldest	0.66	0.15	43rd wettest
Fresno	52.1	-3.0	Tied for 25th coldest	0.66	-0.21	Tied for 68th driest
Hanford	49.5	-3.7	12th coldest	0.59	-0.03	59th wettest
Madera	49.6	-4.5	9th coldest	0.50	-0.42	31st driest
Merced	50.0	-3.5	Tied for 13th coldest	0.99	-0.03	60th wettest

Number of Days with Minimum Temperatures of 32 Degrees or Lower

Bakersfield: 0 (Average for November: 1)
Fresno: 0 (Average for November: 1)
Hanford: 13 (Average for November: 3)
Madera: 6 (Average for November: 3)

Merced: 4 (Average for November: 3)

Note: The freeze season typically begins in November and ends by the following March.

The month of November began with seasonable temperatures before a trough moved through the San Joaquin Valley during the afternoon and evening of the 1st bringing the first rain of the season. The trough also brought snow to the Sierra Nevada. Winds were also strong in the Kern County Desert and the Sierras due to the trough. The snow led to the closure of Tioga Pass for the season. High temperatures plummeted into the high 50s to the low 60s for the San Joaquin Valley for the 2nd through 4th due to the passage of the cold front that brought rain. The first freezing temperatures of the season were observed on the 4th in Hanford and a few other locations in the San Joaquin Valley. Lows were in the 30s and low 40s in the same time frame from the 2nd through the 5th.

The 6th saw mostly cloudy conditions with temperatures in the 50s and 60s all day as an even bigger storm system slowly started to make its way into the San Joaquin Valley and Sierra Nevada in the overnight hours into the 7th, The 7th was when the first showers happened for much of the San Joaquin Valley with thunderstorms in the northern counties in the afternoon. Overnight lows on the 7th were in the upper 40s to mid-50s which are above average for the season while the highs were in the upper 50s to low 60s which are below average due to the cloud coverage and rain. Hanford recorded 0.32 inch of rain which is 0.04 inch short of breaking the daily rain record on the 7th.

The big story on the 8th was the rain in the San Joaquin Valley and snow in the Sierra Nevada. The rainfall in the Central Valley on the 8th kept temperatures in the mid-40s to mid-50s. There was a strong thunderstorm during the late afternoon and early evening that brought heavy rain, lightning and thunder, as well as small hail to portions of Clovis and Fresno; this storm cell moved into the Sierra Nevada foothills towards Auberry before weakening. Rainfall totals on the 8th were generally around 0.10 to 0.30 inch in the San Joaquin Valley, except for locally heavier amounts due to stronger storms. Snow amounts ranged from 1.5 to 2.5 feet in the Sierra Nevada, mainly above 6,000 feet from Yosemite to Tulare County. Otherwise, even heavier amounts of rain accumulated in the Sierra Nevada and foothills, with amounts up to around 2 to 3 inches on the 8th. On the 9th, the storm ended, though there were some lingering rain and snow showers towards the Sierra Nevada foothills and higher elevations during the daytime. Total precipitation for the period of the 7th through the 9th reached as high as 4 to 5 inches in the Sierra Nevada and foothills towards Yosemite and Mariposa County.

By the morning of the 10th, the Tule Fog formed in portions of the San Joaquin Valley, as skies were clear with calm winds, although most locations reported visibility at or above ¼ mile. Thus, no widespread dense fog that caused major travel impacts occurred, which is generally more

typical during December and January. The 11th had patchy fog to start in spots before clearing up in the late morning. The 12th seen deeper fog including visibilities less than ¼ mile in places such as Hanford. Temperatures were mainly lows in the 30s and highs in the upper 50s to low 60s.

On the 13th, there was still fog and low clouds reported in the San Joaquin Valley for much of the morning hours, and below normal high temperatures prevailed. An upper-level disturbance brought cooler air into the region, so daytime highs were mainly in the 50's throughout the Central Valley. For the 14th through the 16th, relatively cool temperatures prevailed throughout Central California with little or no valley fog development. There was a slight warming trend later in this period, and mainly calm conditions prevailed, except for gusty winds at times in the mountain areas, including on the 15th and 16th. There was an offshore wind pattern that brought gusty easterly winds during these two days, mainly into the Kern County mountain areas and the Tulare County portion of the Sierra Nevada. Gusts reached mainly around 35 to 45 mph in this portion of our forecast area, and humidity dipped below 10 percent in a few locations.

For the 17th and 18th, seasonably cool weather prevailed with frosty mornings in the San Joaquin Valley. Another easterly wind event occurred late on the 18th until the 19th, although gusts were not quite as strong; otherwise, there were minor changes in daytime temperatures for the next several days. Cool weather, typical of late November, prevailed until the 23rd, with freezing overnight low temperatures in much of the Central Valley from the 21st until the 23rd with limited fog development for much of the period. A warming trend began on the 24th (Thanksgiving Day) as an upper-level ridge of high pressure strengthened along the West Coast and into Central California. Temperatures were around the same on the 25th and 26th as the ridge was still over the area. However, clouds helped keep the lows warmer on the 27th while the highs dropped a few degrees due to the weakening of the ridge.

On the 28th, temperatures continued to lower further, although there was an increase in winds due to an upper-level low pressure disturbance that passed over the Great Basin. On the evening of the 28th into the early morning hours of the 29th, wind gusts reached as strong as 60 mph in a few locations in the canyons and passes towards eastern Kern County, including Mojave and Walker Pass. Cooler temperatures continued until the end of the month, and highs were around seasonal averages. Freezing overnight lows returned to the San Joaquin Valley for the last day of the month.

This month ended up much cooler than average (Fig 1) with near to above average precipitation in portions of the Sierra Nevada, Kern County mountains, and southern San Joaquin Valley. However, there was below average precipitation, such as over the Tulare County portion of the Sierra Nevada, coastal ranges from Kern to Fresno County and the middle of the San Joaquin Valley from Tulare and Kings Counties to Madera County (Fig 2).

Table 2 – Seasonal Precipitation for ASOS locations (ending on November 30th)						
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	2.52	-2.74	0.66	-0.18	0.66	-0.13
Fresno	1.85	-7.35	0.77	-0.74	0.66	-0.77
Hanford	2.37	-4.40	0.63	-0.51	0.59	-0.49
Madera	Missing	Missing	1.04	-0.36	0.50	-0.86
Merced	2.84	-7.05	1.19	-0.52	0.99	-0.67

Table 3 – Warmest High Temperatures and Coolest Low Temperatures of the Month for ASOS locations				
Location	**High**	**Date(s)**	**Low**	**Date(s)**
Bakersfield	79	24th	35	20th
Fresno	71	24th & 25th	36	21st, 22nd
Hanford	74	1st	28	20th
Madera	72	25th	31	20th-22nd
Merced	71	25th	30	22nd

Daily Records Set During November 2022

Bakersfield –

3rd: Record low maximum temperature of 57 degrees reached, which broke the old record of 58 degrees set for the date in 1994.

Fresno – No daily records reached.

Hanford – No daily records reached.

Madera – No daily records reached.

Merced - No daily records reached.

Fig 1 – Departure from Average Temperature for November 2022

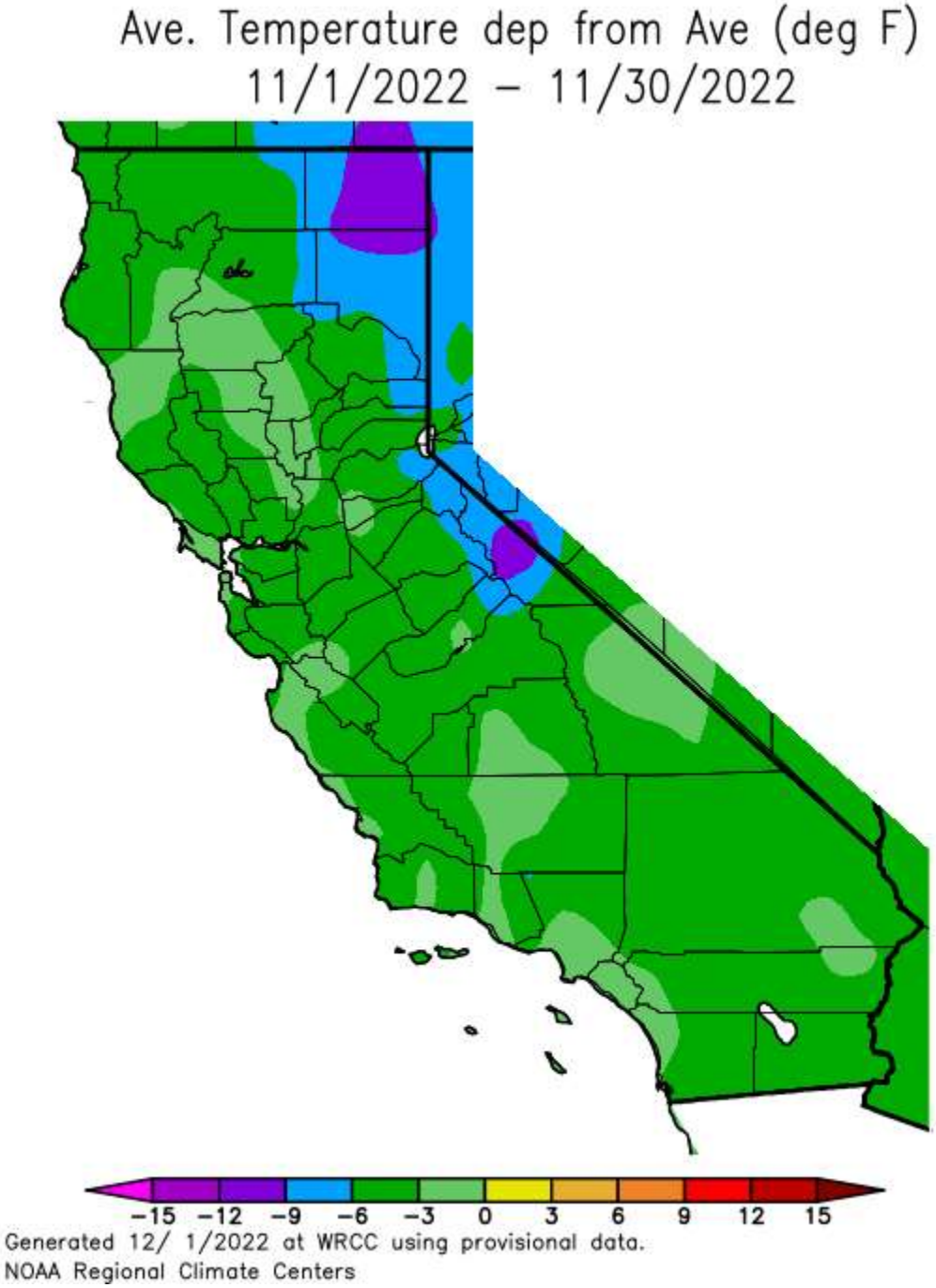

Fig 2 – Percent of Average Precipitation for November 2022