DECEMBER 2022 WEATHER SUMMARY
FOR THE CENTRAL CALIFORNIA INTERIOR

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The month began with precipitation in Central California and near seasonal temperatures. Active weather prevailed for much of the first two weeks of December with strong winds and rain at times in the Central Valley. There was a brief period between storms, or the 7th and 8th, when patchy, dense Tule Fog developed. Abundant snow fell in the Sierra Nevada at the beginning of the month, as well as during the 10th and 11th, and the heaviest amounts accumulated above 6,000 feet. Overnight lows reached below freezing in portions of the San Joaquin Valley, mainly outside Bakersfield and Fresno, during the middle part of the month after the storm exited the region. Tule fog returned to the Central Valley on the 13th and persisted until the 26th, and this led to below average temperatures. The night of the 26th brought a wetter but warmer pattern for the rest of the month. Above average precipitation and near to below average temperatures prevailed for this month.

Table 1 – December 2022 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	47.8	-1.4	Tied for 61st warmest	1.69	0.59	14th highest
Fresno	47.3	-0.5	Tied for 50th warmest	4.59	2.80	4th highest
Hanford	46.6	0.6	Tied for 35th warmest	3.06	1.70	8th highest
Madera	46.4	-0.5	Tied for 39th warmest	2.39	0.57	25th highest
Merced	45.9	-0.1	Tied for 53rd warmest	5.22	3.31	2nd highest

Number of Days with Temperatures at or below 32 degrees Fahrenheit

Bakersfield: 2 days (average 5 days for December); 2 days since November 1st (average 6 days)
Fresno: 1 day (average 5 days for December); 1 days since November 1st (average 6 days)
Hanford: 5 days (average 11 days for December); 18 days since November 1st (average 14 days)
Madera: 6 days (average 9 days for December); 12 days since November 1st (average 12 days)
Merced: 5 days (average 10 days for December); 9 days since November 1st (average 13 days)

The month started off with rain in the San Joaquin Valley and snow in the Sierra Nevada with the temperatures a few degrees below average before the overnight lows into the 2nd. On the 1st, rainfall amounts ranged from a hundredth of an inch to over a half inch in the San Joaquin Valley. Snowfall amounts were around one to two feet in the Sierra Nevada, mainly above 5,000 feet. Patchy dense fog developed towards Madera and Merced on the morning of the 2nd. Another storm system arrived by the late night hours of the 2nd and early morning of the 3rd. As of the evening of the 3rd, rainfall amounts in the San Joaquin Valley and the coastal ranges were around a few hundredths of an inch up to around 0.70 inch. Also on the 3rd, rainfall amounts in the Sierra Nevada below 7,000 feet and into the foothills ranged from 0.50 inch to just over 1.25 inches, while locations in the Kern County mountain areas received less than 0.25 inch. Rain and higher elevation snow continued to fall throughout the region into the 4th. The 5th was quiet with a few passing clouds and high temperatures in the low 60s and overnight lows in the 40s. Fog happened on the 6th through 8th which led the overnight low temperatures to rise slightly above average and kept daytime temperatures close to seasonable. The 9th was a transition day with cloudy weather and seasonably cool prior to a strong winter storm that lasted for a couple of days.

From the 10th until the 12th, active weather prevailed throughout Central California as the strong winter storm approached. Before the heavy precipitation arrived, or until the late afternoon and evening hours, this system brought strong and gusty winds to the West Side Hills and coastal ranges adjacent to the west side of the San Joaquin valley, as well as towards Merced and the lower Sierra Nevada foothills in Mariposa County. Gusts in these areas ranged from 35 to 55 mph. In the higher elevations of the Sierra Nevada, Grapevine and Frazier Park, as well as over the highest peaks in the coastal ranges, local gusts reached 55 to 65 mph. The precipitation began in earnest over much of the region on the evening of the 10th and continued until the early morning hours of the 11th. Precipitation amounts were around three to five inches in the Sierra Nevada, including the liquid equivalent amounts in areas that received heavy snow, or around three to five feet at elevations of 6,000 feet and above. Areas in the lower Sierra Nevada and foothills, mainly received rainfall, including amounts of one to three inches, although there were periods of light snow down to 3,000 feet by the evening of the 11th. As for the San Joaquin Valley rainfall, amounts were 0.50 inch to over an inch in quite a few areas from the 10th until

the 11th. Precipitation mainly tapered off in the mountains by the morning of the 12th, although a few lingering light showers remained into the afternoon.

By the morning of the 13th, cool and dry weather prevailed with daytime highs near to a few degrees below average. However, patchy dense fog developed in parts of the San Joaquin Valley during the morning hours, as well as on the 14th through the 17th, along with freezing overnight lows in quite a few spots. However the 17th was the start of a ten day period of fog and stratus that did not dissipate and high temperatures in the period were 10 to 15 degrees below normal for most of the days.

The 26th started off foggy and with below average temperatures; however, the pattern shifted, as the leading edge of a major storm started to move into the San Joaquin Valley in the evening. The 27th was a very wet but warmer day with daily rainfall records broken for numerous spots in the San Joaquin Valley as between half an inch and a full inch of rain was recorded for most locations before the skies cleared that night. An atmospheric river was responsible for widespread heavy rain and high elevation snow.

The 28th began foggy before dissipating early with temperatures being to slightly above average and clouded up. The 29th and 30th were both cloudy and had showers in the early morning before dissipating and popping up later in the evening however temperatures increased each day. The temperatures on the 30th were 5 to 10 degrees above average which reversed the trend of the below average temperatures.

The last day of the month and year was a very wet but warm day with the overnight lows having been in the mid to upper 50s, courtesy of a strong atmospheric river. Heavy rain fell throughout Central California and brought numerous rocks falling and mudslides onto the roadways in the Sierra Nevada and foothills as well as ponding of water onto roadways. Highway 168 was closed on the four-lane section between Prather and Shaver Lake during this storm due to small boulders falling onto the roadway. Snow levels were generally above 8,000 feet where two to four feet of snow fell. The warm, heavy rain led to rain falling and melting existing snowpack below 8,000 feet and even significant rises in rivers and streams, although no flood stages were reported at the forecast points monitored by the California-Nevada River Forecast Center. Although, one forecast point, Bear Creek at McKee Road in Merced, did rise to action stage (20 feet, or just three feet shy of reaching flood stage). However, the temperatures dropped as a cold front moved through near the end of the day to the low 50s and upper 40s. The front also led to an end to the showers that started the previous night. The rain also brought rocks and mudslides to the foothills and Kern County.

Mainly near to below average temperatures (Fig 1) and above average rainfall (Fig 2) occurred this month.

Table 2 – Seasonal Precipitation for ASOS locations (ending on December 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	4.21	-2.15	2.35	0.41	2.35	0.46
Fresno	6.44	-4.55	5.36	2.06	5.25	2.03
Hanford	5.43	-2.70	3.69	1.19	3.65	1.21
Madera	Missing	Missing	3.43	0.21	2.89	-0.29
Merced	8.06	-3.74	6.41	2.79	6.21	2.64

Table 3 – Warmest High Temperatures and Coolest Low Temperatures of the Month for ASOS locations				
Location	**High**	**Date(s)**	**Low**	**Date(s)**
Bakersfield	67	31st	31	22nd
Fresno	63	4th	32	17th
Hanford	65	4th & 30th	31	14th
Madera	63	4th & 10th	29	17th
Merced	61	4th & 5th	31	16th

Daily Records Set During December 2022

Bakersfield –
31st: 54 degrees sets the daily record for warmest low temperature (old record 53 in 1981).

Fresno –
18th: 41 degrees ties the daily record for coldest high temperature set in 1963.
27th: 1.18 inches of rain breaks the daily record of 0.74 inch set in 1977.

Hanford –
1st: 0.34 inch of rain breaks the daily record (old record 0.27 inch set in 2019).
3rd: 0.49 inch of rain breaks the daily record (old record 0.45 inch set in 1941).
27th: 0.95 inch of rain breaks the daily record (old record 0.94 inch in 1991).
31st: 52 degrees sets the daily record for warmest low temperature (old record 51 in 1913).

Madera – No daily records tied/broken.

Merced –
10th: 1.05 inches of rain breaks the daily record (old record 0.94 inch set in 1937).
31st: 0.86 inch of rain breaks the daily record (old record 0.70 inch set in 1952).

Fig 1 – Departure from Average Temperature for December 2022

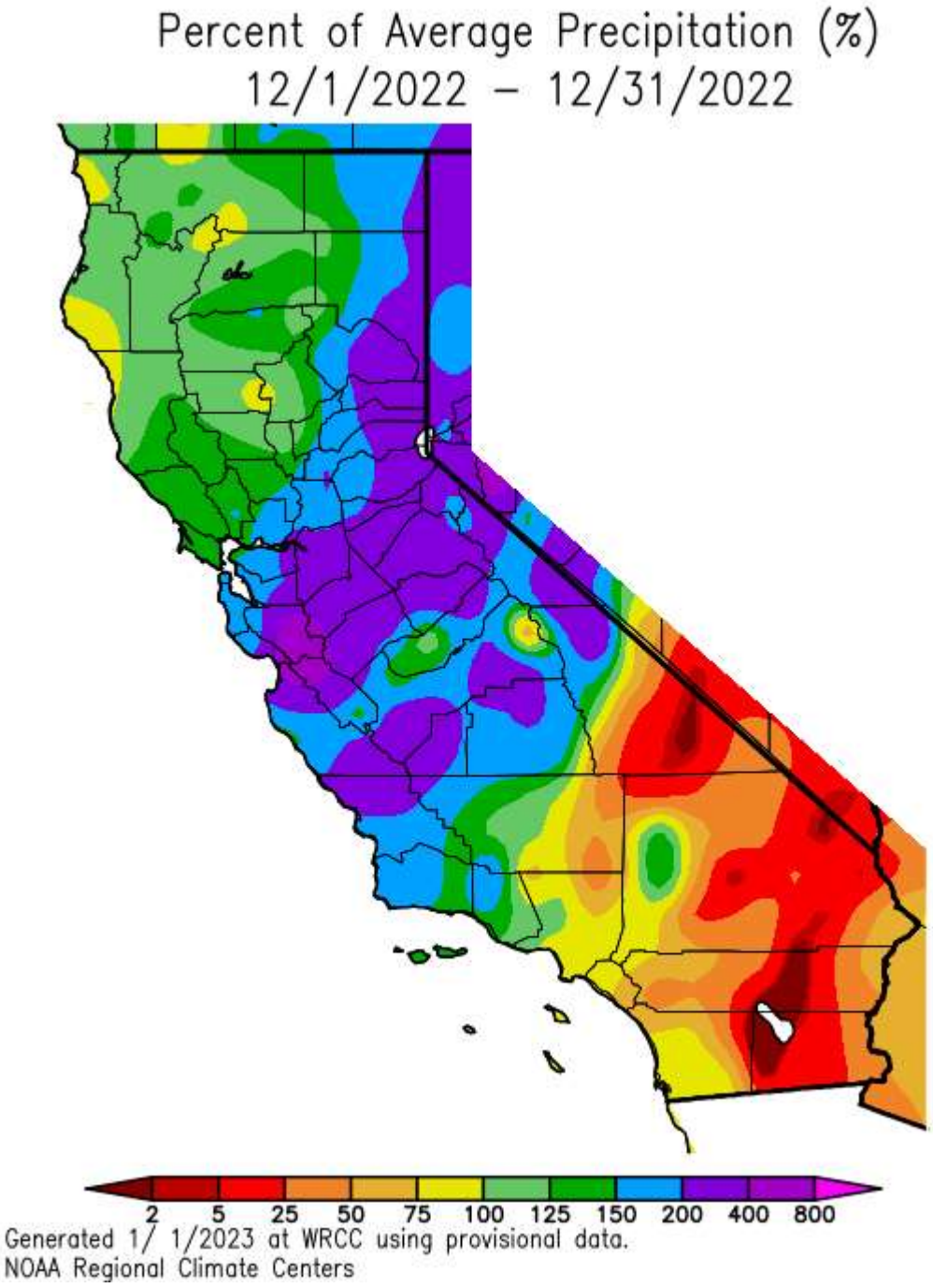

Fig 2 – Percent of Average Precipitation for December 2022