

## **FEBRUARY 2022 WEATHER SUMMARY FOR THE CENTRAL CALIFORNIA INTERIOR**

*By Brian Ochs, Climate Services Focal Point  
Colin McKellar, Assistant Climate Services Focal Point  
WFO San Joaquin Valley-Hanford*

This month was mainly near to below average in terms of temperatures for the month of February, except for an area of above average temperatures in an area from Fresno County to Mariposa County, including Yosemite (Fig 1). Well below average precipitation once again occurred throughout the region (Fig 2). This was the second consecutive month (out of 2 months this year so far) with well below average precipitation. The lowest precipitation amounts for locations throughout the San Joaquin Valley, such as at Fresno, Madera, and Merced were recorded for both January and February combined. Bakersfield and Hanford had their 2<sup>nd</sup> lowest precipitation for the entire January-February period (total amounts less than a tenth of an inch in most cases; the above San Joaquin Valley locations receive around two to four inches for this period on average). There were a lot of days with overnight lows at or below freezing at most locations in Central California, including in the San Joaquin Valley. These cold nights occurred during the first and last weeks of the month. However, Bakersfield reported one day with a minimum temperature at freezing, but Fresno did not reach freezing this month as their lowest temperature was 33 degrees. During the middle of the month, mainly from the 10<sup>th</sup> until the 14<sup>th</sup>, strong high pressure brought a few days with record high maximum temperatures in the lower to mid-80's; highs reached as warm as 85 degrees at Bakersfield on the 12<sup>th</sup>.

**Table 1 – February 2022 Summary Statistics  
NWS Hanford, CA ASOS Sites**

<b>Location</b>	<b>Monthly Average Temp (deg F)</b>	<b>Departure from Average (deg F)</b>	<b>Temperature Rank</b>	<b>Total Monthly Precipit ation (inches)</b>	<b>Departure from Normal (inches)</b>	<b>Precipitation Rank</b>
Bakersfield	53.4	-0.4	54 <sup>th</sup> warmest	0.11	-1.07	9 <sup>th</sup> lowest
Fresno	53.8	+1.5	24 <sup>th</sup> warmest	0.04	-1.89	6 <sup>th</sup> lowest
Hanford	50.4	-0.5	57 <sup>th</sup> warmest	0.17	-1.27	13 <sup>th</sup> lowest
Madera	50.4	-1.3	48 <sup>th</sup> coolest	0.04	-1.95	4 <sup>th</sup> lowest
Merced	50.0	-0.5	60 <sup>th</sup> coolest	0.02	-2.18	3 <sup>rd</sup> lowest

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

Bakersfield: 1 day (average of 1 for February); 1 day since November 1<sup>st</sup> (average 10 days)  
Fresno: 0 days (average of 1 for February); 0 days since November 1<sup>st</sup> (average 11 days)  
Hanford: 12 days (average of 4 for February); 29 days since November 1<sup>st</sup> (average 26 days)  
Madera: 12 days (average of 3 for February); 24 days since November 1<sup>st</sup> (average 22 days)  
Merced: 13 days (average of 4 for February); 24 days since November 1<sup>st</sup> (average 25 days)

A dry start to the month occurred, although a cold front approached from the north on the morning of the 1<sup>st</sup>. This brought gusty winds at times in the west side of the San Joaquin Valley and adjacent coastal ranges where gusts of 35 mph to around 45 mph occurred. Before the front arrived, dense fog developed in the Central Valley, mainly from Hanford to Madera, but dissipated by mid-morning once the front moved to the south over our region. By the evening of the 1<sup>st</sup>, gusty winds developed in the Kern County desert with gusts of 45 to 50 mph; these winds continued into the 2<sup>nd</sup>. Some of the higher peaks in the Sierra Nevada by the morning of the 2<sup>nd</sup> had already reported gusts to 55 mph. Drier air in the Central Valley allowed for limited fog development on the morning of the 2<sup>nd</sup> and again on the 3<sup>rd</sup>. Cooler than average temperatures prevailed throughout Central California, with widespread subfreezing temperatures during the nights and mornings for these couple of days.

While the chilly mornings continued, temperatures were no longer as cool during the afternoons, beginning on the 4<sup>th</sup>. Daytime highs trended to several degrees above average by the 5<sup>th</sup>, and the warming trend brought near record high temperatures by the 10<sup>th</sup>. During days with record warmth, or from the 10<sup>th</sup> until the 14<sup>th</sup>, high temperatures were over 15 degrees above average. Overnight lows eventually moderated but remained cool.

On the 15<sup>th</sup>, an upper-level low pressure system arrived to the region and brought showers and isolated thunderstorms. Lightning strikes were observed mainly over Kern County, including in the Tehachapi Mountains and southern San Joaquin Valley. This was a relatively cold storm with some dynamics and instability associated with the low pressure center that moved just east of the Sierra Nevada, so isolated thunderstorms developed. Snow levels were below 4,000 feet with this system, including over the Sierra Nevada in Tulare County to the mountains in Kern County. Some of the heavier storms produced small hail and graupel. However, moisture was limited with this system, and precipitation amounts were generally light, or around one tenth of an inch up to near one-half inch. Snow amounts ranged from a dusting up to five inches in the high country, including along the Sierra Nevada crest, although some locations down to around 3,500 feet received a dusting of snow. Cool weather and gusty winds, with gusts around 40 to 50 mph along with isolated stronger gusts, occurred in some areas, including the typical prone areas in the West Side Hills, west side of the San Joaquin Valley, Tehachapi Mountains, and the Mojave Desert Slopes in eastern Kern County. Maximum temperatures lowered by around 15 to 20

degrees on the 15<sup>th</sup>, compared to the previous day. Afterward, dry weather with cool nighttime lows once again prevailed.

On the evening of the 16<sup>th</sup> into the morning hours of the 17<sup>th</sup>, northerly winds picked up over the Sierra Nevada and Kern County mountain areas, due to an upper-level disturbance that passed over the Great Basin. Gusts of mainly 40 to 50 mph were reported over exposed ridge tops, with some local gusts around 60 mph. Otherwise, temperatures remained seasonably cool for the middle of February, but a gradual warming trend continued until the 19<sup>th</sup>. Highs in the warmest locations returned to above average, or by several degrees with highs in the lower 70's.

On the 20<sup>th</sup>, temperatures remained relatively warm and were slightly lower than those on the 19<sup>th</sup> due to increased cloud cover. By the 21<sup>st</sup>, an upper-level disturbance ahead of a larger system, knocked temperatures back down to slightly below average, with daytime highs only reaching near 60 degrees in most lower elevation locations. In addition, westerly winds picked up in the Kern County mountains and desert. Gusts around 45 to 55 mph occurred in these areas, with isolated stronger gusts at times.

On the 22<sup>nd</sup> and 23<sup>rd</sup>, a low pressure system and associated trough brought cold and unstable air to the region. This system produced showers and isolated thunderstorms with pea-sized hail and graupel. Precipitation amounts were generally at a tenth of an inch to near one-half inch. Snow fell at elevations just below 2,000 feet, and more significant snow accumulations (one inch to near a foot) occurred at around 2,500 feet and above in the Sierra Nevada south to the mountain areas in Kern County. During the night of the 22<sup>nd</sup> into the morning of the 23<sup>rd</sup>, enough snow accumulated on the passes in Tehachapi and the Grapevine that resulted in road closures for at least several hours and snarled traffic.

After the storm passed, or by the evening of the 23<sup>rd</sup>, a cold and dry airmass persisted for a couple of days so that low temperatures dropped below freezing in many locations, including in the San Joaquin Valley. Lows in the valley bottomed out in the mid-20's at the coldest locations on the 24<sup>th</sup> and 25<sup>th</sup>, which caused concerns to farmers who have trees that contained blossoms. High temperatures were also well below average until the 25<sup>th</sup>. Low temperatures in the mountains and desert were also well below average and fell into the teens and single digits in quite a few locations up to around 6,000 feet, with even colder temperatures above. The below average temperatures lasted until the 25<sup>th</sup> but began to moderate on the 26<sup>th</sup> as afternoon temperatures rose back to near seasonal values. For the remainder of the month, temperatures warmed a few degrees each day, and daytime highs were several degrees above average by the last day of the month.

<b>Table 2 – Seasonal Precipitation for ASOS locations (ending on February 28<sup>th</sup>)</b>						
<b>Location</b>	<b>Since Jan 1<sup>st</sup> (inches)</b>	<b>Departure From Average (inches)</b>	<b>Since Jul 1<sup>st</sup> (inches)</b>	<b>Departure From Average (inches)</b>	<b>Since Oct 1<sup>st</sup> (inches)</b>	<b>Departure From Normal (inches)</b>
Bakersfield	0.12	-2.25	3.67	-0.64	3.67	-0.59
Fresno	0.04	-4.05	5.25	-2.14	5.25	-2.06
Hanford	0.18	-2.82	4.78	-0.72	4.78	-0.66
Madera *	0.10	-3.97	Missing	Missing	Missing	Missing
Merced	0.08	-4.49	5.87	-2.32	5.87	-2.27

\* Missing data in December 2021 at Madera

<b>Table 3 – Warmest High Temperatures and Coolest Low Temperatures of the Month for ASOS locations</b>				
<b>Location</b>	<b>High</b>	<b>Date(s)</b>	<b>Low</b>	<b>Date(s)</b>
Bakersfield	85	12 <sup>th</sup>	32	24 <sup>th</sup>
Fresno	82	12 <sup>th</sup>	33	24 <sup>th</sup>
Hanford	81	12 <sup>th</sup> & 13 <sup>th</sup>	28	24 <sup>th</sup>
Madera	81	12 <sup>th</sup> & 13 <sup>th</sup>	27	2nd, 24 <sup>th</sup> & 25 <sup>th</sup>
Merced	80	13 <sup>th</sup>	26	25 <sup>th</sup>

## **Daily Records Set During February 2022**

### **Bakersfield –**

12<sup>th</sup>: Record high maximum temperature of 85 degrees set, which broke the old record of 80 degrees last set for the date in 1921.

13<sup>th</sup>: Record high maximum temperature of 83 degrees tied, which last occurred in 1924.

14<sup>th</sup>: Record high maximum temperature of 80 degrees set, which broke the record of 78 degrees last set on this date in 2014.

**Fresno –**

10<sup>th</sup>: Record high maximum temperature of 76 degrees set, which broke the old record of 75 degrees last set for the date in 1961.

11<sup>th</sup>: Record high maximum temperature of 77 degrees set, which broke the old record of 73 degrees set for the date in 2016 and 1925.

12<sup>th</sup>: Record high maximum temperature of 82 degrees set, which broke the old record of 76 degrees last set for the date in 1921.

13<sup>th</sup>: Record high maximum temperature of 81 degrees set, which broke the old record of 79 degrees last set for the date in 1921.

**Hanford –**

11<sup>th</sup>: Record high of 77 degrees tied for the date, which last occurred in 1902.

12: Record high maximum temperature of 81 degrees set, which broke the old record of 77 degrees last set for the date in 1902.

**Madera –**

10<sup>th</sup>: Record high maximum temperature of 76 degrees set, which broke the old record of 73 degrees last set for the date in 1941.

11<sup>th</sup>: Record high of 76 degrees tied for the date, which last occurred in 1961.

12<sup>th</sup>: Record high maximum temperature of 81 degrees set, which broke the old record of 74 degrees last set for the date in 2011.

13<sup>th</sup>: Record high maximum temperature of 81 degrees set, which broke the old record of 76 degrees last set for the date in 1996.

14<sup>th</sup>: Record high maximum temperature of 76 degrees set, which broke the old record of 75 degrees last set for the date in 2015.

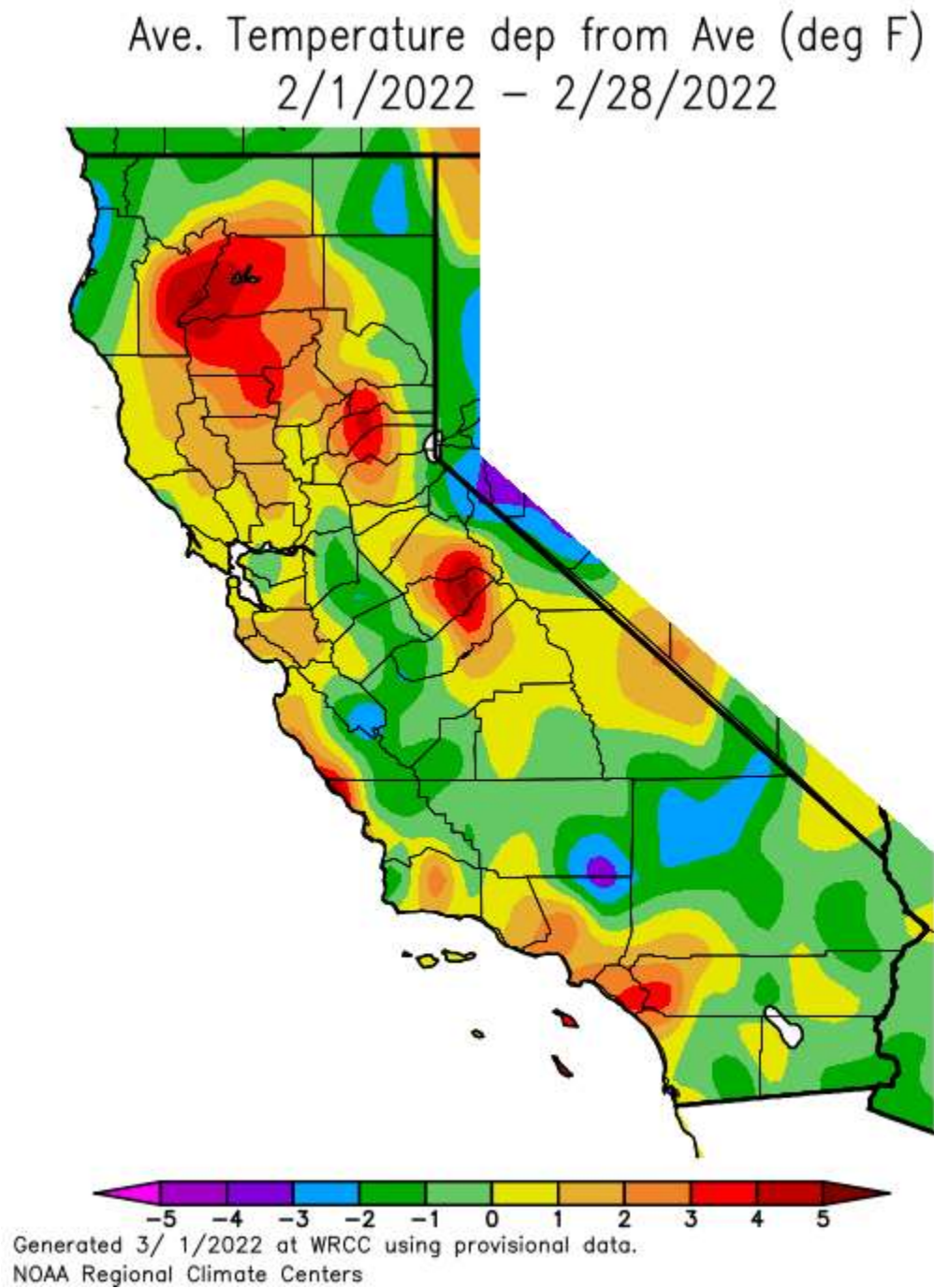
**Merced –**

11<sup>th</sup>: Record high maximum temperature of 76 degrees set, which broke the old record of 72 degrees last set for the date in 1988.

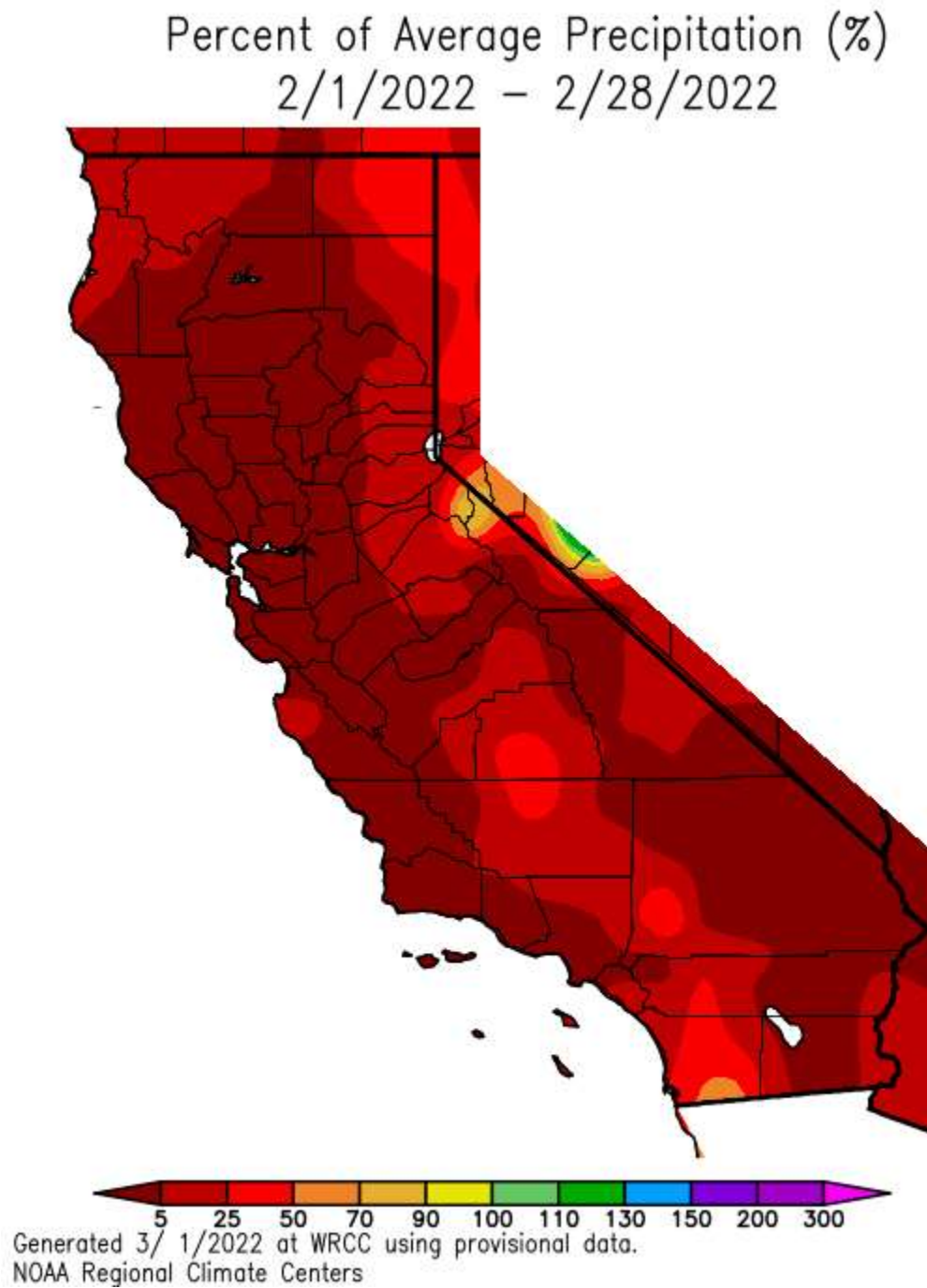
12<sup>th</sup>: Record high maximum temperature of 76 degrees set, which broke the old record of 75 degrees last set for the date in 1988.

13<sup>th</sup>: Record high maximum temperature of 80 degrees set, which broke the old record of 76 degrees last set for the date in 1921.

**Fig 1 – Departure from Average Temperature for February 2022**



**Fig 2 – Percent of Average Precipitation for February 2022**



\*Images above (i.e., Figures 1-2) courtesy of Western Region Climate Center