JANUARY 2021 WEATHER SUMMARY
FOR THE CENTRAL CALIFORNIA INTERIOR

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Table 1 – January 2021 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	47.8	+3.5	20th warmest	0.98	-0.18	50th highest
Fresno	46.6	+3.8	14th warmest	3.40	+1.21	19th highest
Hanford	45.3	+3.4	17th warmest	2.36	+0.32	22nd highest
Madera*	Missing	Missing	Missing	Missing	Missing	Missing
Merced	45.0	+3.1	21st warmest	3.33	+0.72	26th highest

*Missing high temperature data at Madera on the 8th-18th and precipitation data on the 26th-29th.

The calendar year of 2021 began with mainly seasonal temperatures, though with daytime highs slightly above average, and dry weather. A couple of weak systems brought light precipitation on the 2nd and on the 4th. Very little precipitation occurred with the system on the 2nd. However, the system on the 4th brought a decent amount of rain and higher elevation snow towards Yosemite. Around six to eight inches of snow accumulated in the Sierra Nevada near Yosemite above 6,500 feet with the later system, while lesser amounts fell further south, or as far south as Tulare County. Precipitation amounts were very light in the Central Valley and the southern Sierra Nevada foothills (south of Yosemite), or a trace up to a few hundredths of an inch, while amounts of around 0.25 to 0.50 inch occurred in the Sierra Nevada foothills near Yosemite.

Afterward, mainly clear skies prevailed, except for periods of nighttime and morning fog in much of the San Joaquin Valley for the next several days, or the 5th until the 13th. On the 14th, valley fog was not as widespread and dense; however, visibility around ¼ mile persisted around Madera and Merced with low clouds that lingered into the early afternoon hours. Temperatures were not unusually warm or cool during this period, with no freezes or frost reported in the San Joaquin Valley.

On the 15th, high pressure rebuilt over Central California and allowed dense fog to develop over much of the Central Valley once again. Locations above the valley floor reached much warmer

than average with highs well into the 70s in the Sierra foothills, Kern County desert, and into the West Side Hills. High temperatures peaked well into the 70s in the Sierra Nevada foothills, as well as the Kern County desert, especially on the 15th-17th. This pattern continued for the next few days, at least in terms of temperatures.

High temperatures continued at around 10-15 degrees above average until the 21st. However, the weather did become quite interesting one day, as a strong low-pressure system with very little moisture that moved southward from Canada into the Great Basin and eventually Central California, brought strong and gusty northeasterly winds to much of the region on the 19th. This is classified as a strong Mono wind event, with the strongest gusts in the Sierra Nevada and into the foothills. In the Sierra Nevada, gusts topped at 70 to 80 mph and above, especially in Madera and Mariposa Counties. Foothill communities such as Mariposa and Oakhurst experienced numerous downed trees and power lines; gusts reached at least 50 mph at these locations. In addition, trees fell onto the roadway of Highway 41 from Oakhurst to Yosemite National Park, and the park was closed for the next several days. Very little wind reached the floor of the San Joaquin Valley, except on the west side, Madera and Merced, as well the south end towards Bakersfield to Arvin. Local gusts in the Kern County mountain areas also reached around 60 to 70 mph, with some isolated gusts near 80 mph. The desert region of eastern Kern County also reported gusts around 45 to 50 mph. Gusts in the San Joaquin Valley were generally around 35 miles per hour or less, except towards Arvin and nearby areas just adjacent to the Tehachapi Mountains, where gusts reached as high as 60 mph. Some power lines and trees fell onto Highway 99 south of Bakersfield as a result of the strong winds. This system, despite the lack of moisture, managed to squeeze out some light rain showers in Fresno and Clovis in the predawn hours of the 19th and even some flurries just west of the Grapevine in Kern County later that morning.

The first in a series of storm systems arrived on the 22nd and brought showers and cooler temperatures to much of Central California. Precipitation was relatively light with this system, as Central Valley locations received around 0.10 to 0.25 inch of precipitation and a few inches of snow in the Sierra Nevada. Over the next several days, or until the 29th, precipitation occurred in much of the region. The strongest system arrived on the night of the 26th and lasted until the afternoon of the 29th, while the bulk of the precipitation occurred on the 27th and 28th. The next system arrived on the night of the 24th and brought low elevation snow to the Sierra Nevada foothills and the Kern County mountains. Precipitation amounts were generally light with this system, or around 0.10 to 0.25 inch in the San Joaquin Valley and up to several inches in the Sierra Nevada above 2,500 feet. Snow levels were around 1,500 feet where a dusting to around an inch or two of snow fell. Interstate 5 and Highway 58 were both closed in Kern County through the mountain passes from the afternoon of the 25th until the afternoon of the 26th. There was another closure on the evening of the 26th until the morning of the 27th at the Grapevine, as more snow accumulated at the pass level.

Throughout the 27th until the 28th, very heavy rain fell in Fresno, Madera, Merced, and Mariposa Counties, except for heavy snow above 4,000 to 5,000 feet. The heavy precipitation shifted southward by the evening of the 28th. Several feet of snow fell during the 27th until the 28th in the Sierra Nevada from Yosemite to Sequoia National Park; many locations received around 3-6 feet of snow, depending on elevation and location. A few spots received up to 8 feet of snow towards the Sierra Nevada crest. This was an impressive storm, as it brought strong and gusty winds in addition to the heavy precipitation. Many San Joaquin Valley locations received 2-3 inches of rain, even into the West Side Hills. Much of Kern County received near one inch of rain in the San Joaquin Valley. Gusty winds were a problem in Merced County and much of Kern County during the 27th and 28th; gusts reached 50 mph that caused many trees to fall at Merced on the 27th and near 80 mph on the highest peaks above the Grapevine. Gusts at the Grapevine CHP station peaked at 65 mph on the 27th. Otherwise, there were widespread gusts of 35 to 50 mph with isolated stronger gusts in other portions of the San Joaquin Valley, including a gust to 46 mph at Bakersfield. Stronger gusts occurred in the far southern San Joaquin Valley, Tehachapi Mountains, and the West Side Hills, where gusts were as high as 60 to 70 mph. In addition, there were fallen trees in Yosemite National Park due to heavy snow loading and the weakening from the strong gusty winds (Mono winds) during the prior week. Rain amounts in the Sierra Nevada foothills and the West Side hills reached 3 to 6 inches, with isolated heavier amounts of 7-8 inches and higher. Despite the impressive heavy rainfall amounts, there were relatively few issues, except for nuisance flooding in the San Joaquin Valley and Sierra Nevada foothills, as well as rises in the creeks near Coalinga and in the West Side Hills.

By the morning of the 29th, precipitation had generally ended except for scattered showers that continued into the afternoon. Dry and warmer weather returned for the last two days of the month. Some patchy nighttime and morning fog was observed in the Central Valley, but no widespread dense fog such as what occurred during previous weeks.

Table 2 – Number of Days with Freezing Low Temperatures (at or below 32 degrees Fahrenheit):

Location	January 2021	January Average	Departure	Seasonal total (Nov-Jan)	Seasonal Average (Nov-Jan	Departure
Bakersfield	0	4	-4	2	12	-10
Fresno	0	5	-5	0	13	-13
Hanford	3	9	-6	23	24	-1
Madera	3	8	-5	21	20	+1
Merced	5	8	-3	22	21	+1

Overall, the month ended up with above average temperatures (Fig 1), along with mainly above average precipitation (Fig 2), except for some below average precipitation in portions of Tulare and Kern Counties (unfortunately, there was missing precipitation data at Madera for this month).

Table 3 – Seasonal Precipitation for ASOS locations (ending on January 31st)

Location	Since Jan 1st (inches)	Departure from Normal (inches)	Since Jul 1st (inches)*	Departure from Normal (inches)	Since Oct 1st (inches)**	Departure from Normal (inches)
Bakersfield	0.98	-0.18	1.72	-1.52	1.72	-1.40
Fresno	3.40	+1.21	4.82	-0.97	4.82	-0.84
Hanford	2.36	+0.32	3.03	-2.35	3.03	-2.14
Madera	missing	missing	missing	missing	missing	missing
Merced	3.33	+0.72	2.28	-1.54	2.28	-1.23

*Rain Year 2020-2021 (July 1st-date)
**Water Year 2020-2021 (October 1st-date)

Table 4 – Warmest High Temperatures and Coolest Low Temperatures of the Month for ASOS locations				
Location	**High**	**Date(s)**	**Low**	**Date(s)**
Bakersfield	71	15th	34	1st & 8th
Fresno	70	17th	35	26th
Hanford	70	17th & 18th	29	26th
Madera	69*	19th, 21st	29	20th & 26th
Merced	75	18th	26	26th

*Missing high temperatures at Madera from Jan 8-18.

Daily Records Set During January 2021

Bakersfield – No daily records set.

Fresno – 28th: Daily record high rainfall of 1.78 inches set; old record was 0.75 inch set for the date in 1950.

Hanford – 28th: Daily record high rainfall of 1.47 inches set; old record was 0.45 inch set for the date in 1950.

Madera – No daily records set.

Merced –
18th: Record high maximum temperature of 75 degrees was set; old record was 70 degrees which was last set for the date in 2014.

27th: Daily record high rainfall of 1.42 inches set; old record was 0.63 inch set for the date in 1995.

28th: Daily record rainfall of 1.41 inches set; old record was 1.15 inches set for the date in 1924.

Figure 1 – Departure from Average Temperature for January 2021

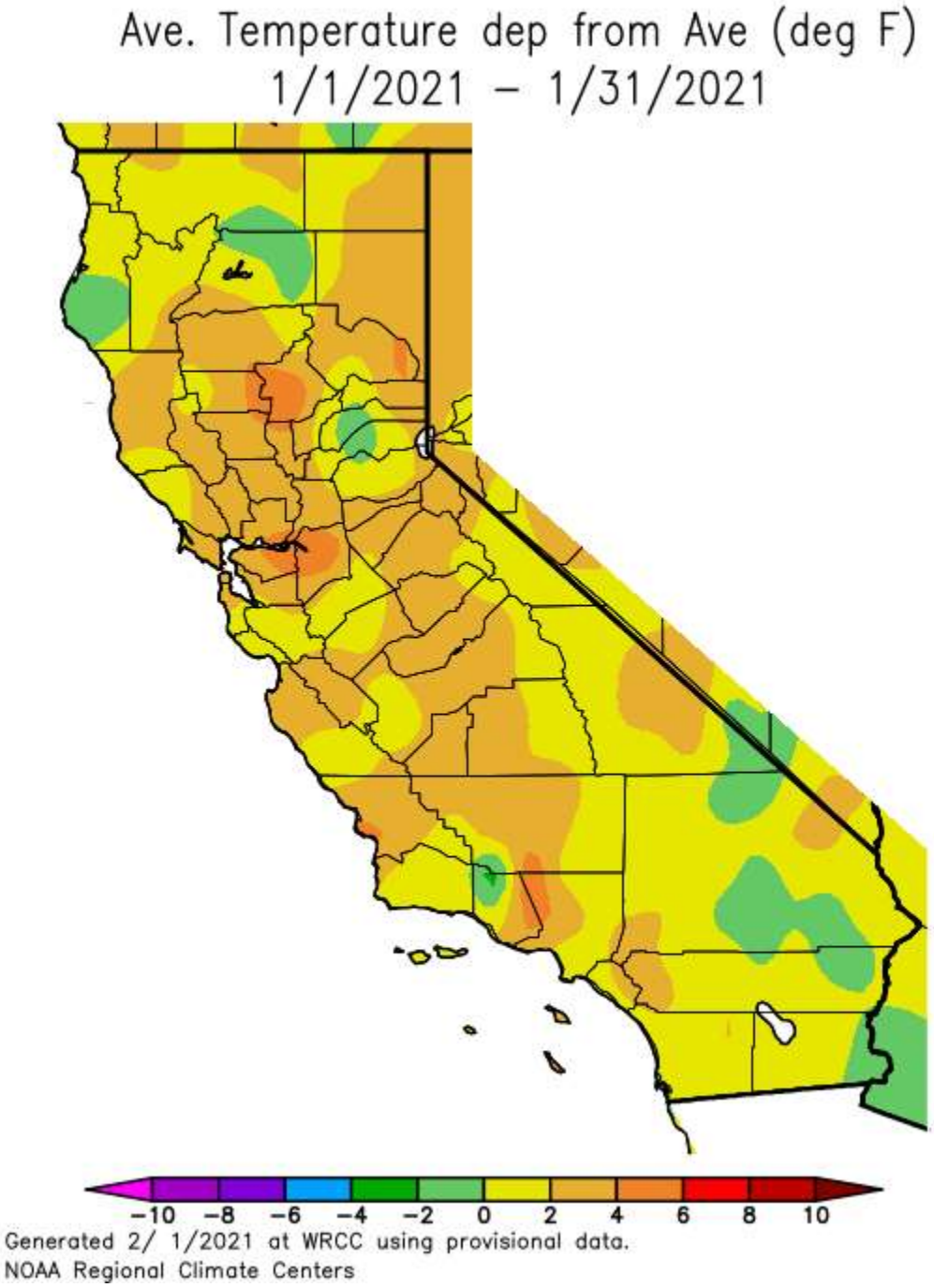

Figure 2 – Percent of Average Precipitation for January 2021