FEBRUARY 2017 WEATHER SUMMARY
FOR THE CENTRAL CALIFORNIA INTERIOR

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This month began with active weather, or similar to what occurred during the previous month. While the weather was relatively quiet for the first day of the month, a low pressure system was approaching California. Patchy dense fog developed around Hanford during the morning hours. Ahead of this system, high temperatures reached around 5 to 10 degrees above average on the first day of the month. The storm system arrived on the 2nd, and it brought rain and mountain snow above 6,000 feet to locations mainly north of Kern County. This system continued to bring precipitation into the 3rd; mountain areas below the snow line received around two to three inches of rain, especially around Yosemite.

There was a brief break between active weather periods on the 4th and the daytime of the 5th, and temperatures remained generally mild or slightly above average. The next series of storm systems began on the evening of the 5th and brought rain and higher elevation snow to the region. This system continued to bring precipitation into the afternoon of the 6th. Yet another system arrived by the evening of the 6th. These systems were relatively warm, so snow levels gradually rose over the next couple of days. By the morning of the 7th, the snow level had risen to around 9,000 feet. Significant rainfall also occurred with this system; the most fell in the mountain areas, including the Sierra Nevada and adjacent foothills. The rainfall caused enough flooding to prompt evacuations on the afternoon of the 7th, including in North Fork and near Bass Lake. There were also reports of flooding on Highway 41 near Oakhurst.

A break between systems occurred on the 8th and 9th, and temperatures rose to around 10 to 15 degrees above average. High temperatures reached well into the 70s in the San Joaquin Valley during this time. By the evening of the 9th, the next low pressure system arrived in Merced County and into Yosemite, and temperatures were still quite warm at the onset of the precipitation. During this period, very mild, or record high daily minimum, temperatures prevailed throughout the San Joaquin Valley, as lows only reached the upper 50s to lower 60s.

The low pressure system gradually moved southward during the overnight hours and into the morning of the 10th. Most of the precipitation fell in Yosemite, as well as in the foothills in Mariposa County and rural areas in Merced County to the southeast of Merced and continued for much of the day. Mariposa and Yosemite received around 3.00 to 3.50 inches in a 24-hour period, and these reports were the highest in our forecast area. The storm made little southward progression through the day, so heavy rain from thunderstorms would develop over the same

locations for at least a couple of hours or longer. Unfortunately, the heavy precipitation led flooding on the roadways and even a failure of an earthen dam along a downstream creek that flows into the San Joaquin Valley in eastern Merced County, including in the rural communities of LeGrand and Planada. In the afternoon, some thunderstorms brought heavy rain to Madera, and as much as one inch fell in about an hour, and roadway flooding was a problem for many motorists during the late afternoon hours. In addition, Friant Dam began releasing water downstream into the San Joaquin River for flood control purposes that afternoon and continued through the next several days. Snow levels were around 8,000 feet in many locations, especially from Kings Canyon National Park and locations in the Sierra Nevada to the south. Otherwise, snow levels were around 6,500 feet in Yosemite by the following afternoon. By the night of the 10th, the colder air began to move southward, so that low temperatures were able to drop below the record high values that were recently observed.

On the 11th and 12th, the temperatures were relatively cool, and some showers, though mainly light, lingered in the mountains during the daytime of the 11th. Low clouds prevailed for much of the day on the 11th, but clearing finally occurred by the afternoon. Some lingering moisture also allowed low clouds to redevelop on the night of the 11th and into the morning of the 12th, but little or no precipitation was observed. High pressure finally built over the region during the 12th and for the next few days and brought generally quiet weather with the exception of patchy dense fog during the nights and mornings in the San Joaquin Valley. Many rivers and creeks continue to flow high and fast due to the amount of precipitation during the last couple of months.

Another low pressure system brought precipitation to the region on the morning of the 16th. Rainfall amounts in the San Joaquin Valley were around a tenth to a quarter of an inch. Gusty winds also developed in eastern Kern County, especially through and below the passes and canyons where gusts to around 50 mph and locally stronger were reported. Local gusts to around 50 mph were also reported near the west side of the San Joaquin Valley. Additional precipitation accumulated over much of central California during the 17th as another wave of subtropical moisture associated with the low pressure system. In addition, gusty southerly winds developed in parts of the San Joaquin Valley and along Interstate 5 through the Grapevine. Quite a few locations reported gusts above 50 mph in the San Joaquin Valley on the 17th, as well as through the Grapevine. Even a few locales in the Kern County desert areas experienced strong southerly winds and reported gusts that reached above 50 mph; usually winds that produces gusts of this magnitude have a westerly component (for example, southwest). Snow fell at elevations mainly above 6,000 feet in the Sierra Nevada during the daytime hours of the 17th. Heavy precipitation fell over Kern County and locations to the south on the 17th. This heavy rain caused flooding along Interstate 5 through the Grapevine and around Frazier Park, as rainfall amounts exceeded four inches, especially during the afternoon.

A brief break between systems occurred on the 18th and into the morning of the 19th. Another round of precipitation moved over central California during the afternoon and evening hours of the 19th. Precipitation continued to accumulate into the 20th, and temperatures gradually rose so that snow levels rose to around 8000-9000 feet.

Additional showers associated with a cold front fell over the region on the 21st. Snow levels in the Sierra Nevada remained around 9,000 feet ahead (south) of the front but lowered to around 6,000 feet by the evening. On the following day, mainly light showers persisted in central California, although a few somewhat heavier showers briefly developed during the afternoon, including along the west side of the San Joaquin Valley. Winds picked up during the evening and into the 23rd as the brunt of the colder air arrived with locally gusty winds along the west side of the San Joaquin Valley and through the passes in eastern Kern County.

Temperatures fell to below average for the first time since the previous month. Even daily highs struggled to reach above the mid-50s for the next several days. Some light showers developed over the Sierra Nevada; any precipitation fell mainly as snow, including below 5,000 feet. Low temperatures in the San Joaquin Valley were mainly in the 30s with quite a few locations reaching freezing or below, especially on the morning of the 24th. Fresno even reported a low of 30 degrees that morning. Cooler than average temperatures continued into the following day.

On the night of the 25th, a cold system moved along the coast of central California and moved inland over southern California by the morning of the 26th. While this system was moisture starved, some light snow fell at the summit of the Grapevine along Interstate 5, as well as in Tehachapi. The snow cover was generally a dusting at the passes, though barely exceeded an inch in some mountain locations such as Pine Mountain Club and Frazier Park. A few locations, mainly in Kern County, reported precipitation around a trace to just above a tenth of an inch, including in the desert areas.

Another system passed over the area on the 27th and brought a cold front that produced mainly cooler temperatures and relatively light precipitation. Rainfall amounts were generally a few hundredths of an inch or less in the San Joaquin Valley and up to a third of an inch in the Sierra Nevada. About 1 to 2 inches of snow fell at elevations around 3,000 feet and up to 6 inches was reported in Yosemite National Park at Tuolumne Meadows. Finally, the last day of the month was dry with cooler than average, including near freezing temperatures, reported in the San Joaquin Valley.

In summary, temperatures and precipitation were well above average throughout much of the region this month, due to an active storm track from the Pacific Ocean with multiple events dominated with warm, moist tropical moisture that resulted in higher snow levels and warmer than average overnight low temperatures.

Table 1 - February 2017 Summary Statistics for ASOS locations				
Location	**Monthly Average Temp (deg F)**	**Departure From Average (deg F)**	**Total Monthly Precipitation (inches)**	**Departure From Normal (inches)**
Bakersfield	55.9	+3.3	1.46	+0.22
Fresno	53.9	+2.4	2.52	+0.49
Hanford	53.2	+2.9	2.86	+1.13
Madera	53.8	+3.3	3.85	+1.72
Merced	52.4	+2.7	3.51	+1.17

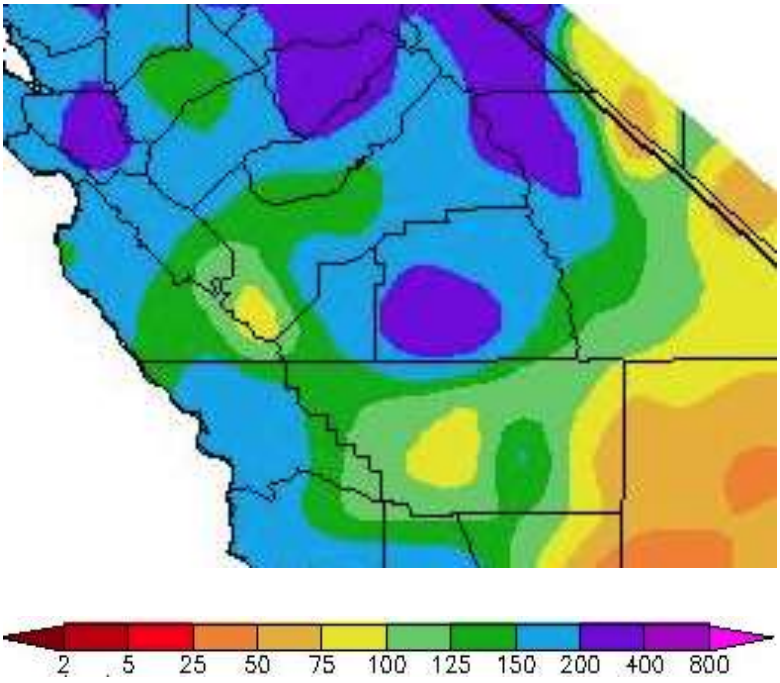
Number of Days with Minimum Temperature of 32 Degrees or Lower

Bakersfield – 0 (Average for February: 1 day)
Fresno – 1 (Average for February: 2 days)

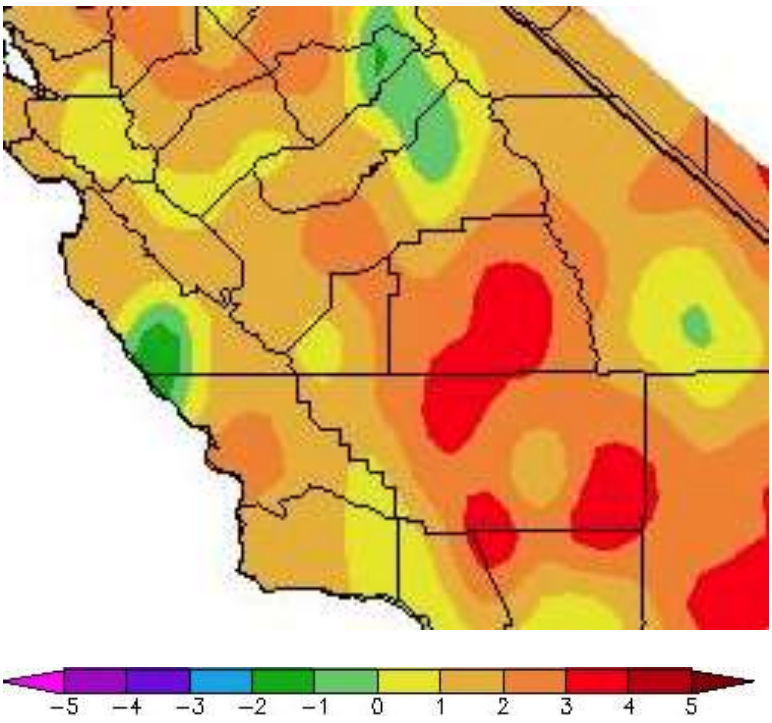
Temperature/Precipitation Rankings for February

Bakersfield – 18th warmest February on record; 38th wettest February on record
Fresno – 28th warmest February on record; 21st wettest February on record

February Precipitation – Percent of Average



February Temperature – Departure from Average (deg F)



Graphics above courtesy of Western Region Climate Center.