FEBRUARY 2016 WEATHER SUMMARY
FOR THE CENTRAL CALIFORNIA INTERIOR

By Brian Ochs, Climate Services Focal Point
Scott Rowe, Assistant Climate Services Focal Point
WFO San Joaquin Valley-Hanford

The 1st was a very chilly morning with abundant snow cover in the mountains due to the storm during the previous day. The entire central California interior even experienced a cooler than average period for the first few days of the month. Plenty of snow remained on the ground on the morning of the 1st as the storm system that brought thunderstorms, hail, and heavy snow showers during the previous day shifted eastward. Snow fell as low as 1700 feet in the Sierra Nevada foothills and likely even lower. In addition, there was at least a dusting of snow at an elevation around 1000 feet over the hills along the west side of the San Joaquin Valley. Snow cover around 5000 feet measured at one foot in the Tehachapi Mountains, including at Bear Valley Springs, and several inches fell on the Grapevine and in Tehachapi. Elsewhere in the Sierra Nevada, or at 6500 feet and above, up to around 30 inches of snow fell during the 31st of January and continued into the 1st day of this month.

On the 2nd, there was a weak system that brought slightly moist northwest flow. There was enough cold air remaining so that flurries fell at an elevation 4000 feet in the Tehachapi Mountains during the afternoon. Temperatures remained well below average for the day throughout the region.

Afterward, during the 3rd and for several days afterward, dry conditions prevailed throughout the region. High pressure gradually set up over the region during this period. By the 7th, some offshore flow produced some southeasterly winds that brought gusts to around 50 mph at the base of the Grapevine along Interstate 5 south of Mettler. Temperatures warmed significantly during the 7th through the 10th, although dense fog developed at quite a few San Joaquin Valley locations during the late nights and mornings. On the 9th, the prevailing high pressure had strengthened enough to bring record high temperatures with temperatures around 15-20 degrees above average; a few locations in the Sierra Nevada foothills and parts of the San Joaquin Valley reached into the 80s.

Strong high pressure with warm daytime temperatures, along with patchy nighttime/morning fog in the San Joaquin Valley, continued to dominate the weather until the 16th, and no measurable precipitation has fallen in quite some time, or since the 2nd. On the 13th-14th, temperatures cooled noticeably due to a weak, dry cold front; however, daily maximum temperatures were still at least a few degrees above average for the middle part of the month. Temperatures briefly

warmed back up during the 15th and 16th as high pressure rebuilt over central California; however, the fog in the Central Valley continued to bring the primary weather impacts.

A low pressure system brought some showers to the region during the 17th-18th and around 2-6 inches of snow in most of the southern Sierra Nevada, although there were higher snow accumulations, or around 8-12 inches, in the high country of Yosemite National Park. Generally light snow fell at an elevation of around 5000 feet on the morning of the 18th; however, the heaviest snow fell during the afternoon and nighttime of the 17th above 7000 feet. These two days were a brief period when temperatures were around average to just below.

On the 19th and into the next several days, dry weather returned to the region while temperatures gradually warmed back up to several degrees above average. Patchy late night and morning fog returned to the San Joaquin Valley during this time. A minor cooldown occurred on the 27th and continued into the 29th due to a low pressure system moving over northern California and weak upper level disturbances at times moving over central California after the passage of the low; however, temperatures continued around or slightly above average for late February.

Overall, there was well below average precipitation for this month throughout the region (Fig 1). Well above average temperatures prevailed for most of the month (Fig 2); Fresno was warm enough to tie for the 9th warmest February on record since records began in the 1880s. Snowpack fell below average by the end of this month over the entire Sierra Nevada from Yosemite National Park and southward due to the extended periods of warm and dry weather. Finally, Table 1 below summarizes the temperature and precipitation departures from the monthly averages for our five NWS-owned ASOS stations in the San Joaquin Valley.

Note on El Nino: The warm phase of the current El Nino-Southern Oscillation (ENSO) peaked during January 2016 as sea surface temperatures in the tropical Pacific Ocean have gradually decreased this month but remain well above average. While there were extended periods of no precipitation and well above average temperatures this month, this El Nino event continued very strong, or similar to the ones during 1982-1983 and 1997-1998. Precipitation patterns have been more typical of El Nino in the southern states from Texas and eastward, rather than California and the rest of the Southwestern United States. Other climate teleconnections have been occurring that have caused a stagnant long-wave jet stream pattern to dominate throughout much of this month with a strong ridge of high pressure that persisted over the Western United States.

Table 1 - Feb 2016 Summary Statistics for ASOS locations				
Location	**Monthly Avg Temp**	**Departure From Normal**	**Total Monthly Precipitation**	**Departure From Normal**
Bakersfield	56.3	3.7	0.18	-1.06
Fresno	55.5	4.0	0.33	-1.70
Hanford	53.6	3.3	0.01	-0.72
Madera	54.2	3.7	0.06	-2.07
Merced	52.9	3.2	0.40	-1.94

Fig 1 - Percent of normal precipitation for February 2016

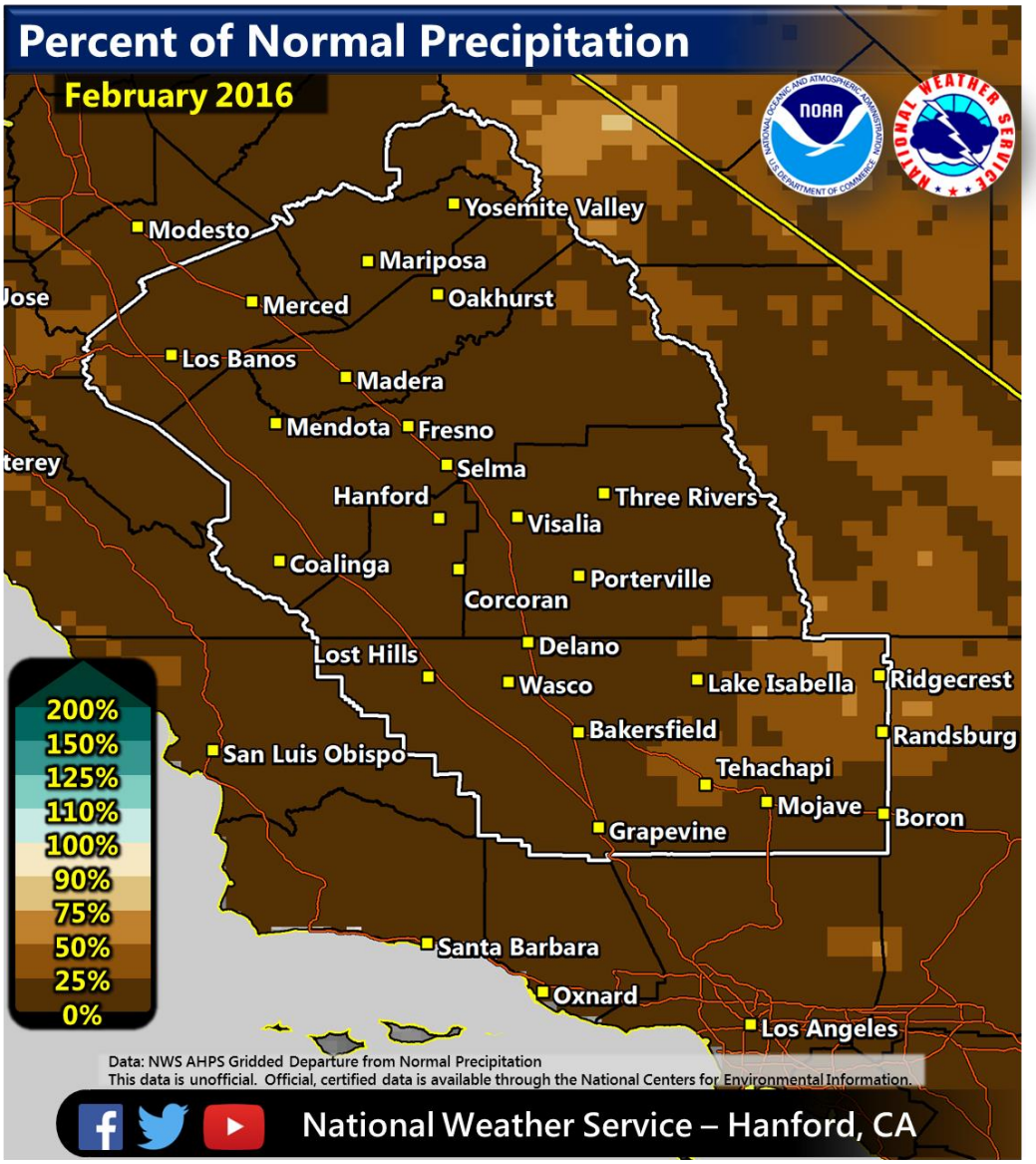

Fig 2 - Departure from average temperature for February 2016