NOVEMBER 2017 WEATHER SUMMARY
FOR THE CENTRAL CALIFORNIA INTERIOR

By Brian Ochs, Climate Services Focal Point
Jim Andersen, Assistant Climate Services Focal Point
WFO San Joaquin Valley-Hanford

The month began with near average temperatures but soon cooled to below average. Some rain and mountain snow fell as early as the 3rd. Showers continued at times during 4th and the 5th. However, most locations in the San Joaquin Valley received little or no measurable rainfall during this period. Temperatures remained below average until the 7th as a cool northwesterly flow continued over the region.

High pressure built over central California during the 8th through the 10th. Temperatures rose to slightly above average during this time. On the night of the 10th, a weak cold front brought low clouds and fog to the San Joaquin Valley and adjacent foothills by the morning hours of the 11th. Dense fog developed on the east side of the valley, including in Hanford, Visalia, Fresno, and surrounding rural areas.

Relatively cool temperatures with occasional episodes of dense fog in the San Joaquin Valley continued until the 14th. Afterward, temperatures rose to above average during the 15th and 16th ahead of another stronger storm system that slowly moved southward during the night of the 16th into the 17th. The storm did affect northern portions of the forecast area, including in Yosemite and the Sierra Nevada foothills in Mariposa County as early as the late afternoon of the 15th; however, the storm barely progressed southward until the evening of the 16th. As a result, abundant precipitation fell over this area during this period. In addition, decent amounts of snow fell at locations above 8,000 feet with this system during the late afternoon of the 15th until the 17th; those that received snow measured one to two feet. So, this was the first significant winter-type storm system for the cool season that typically begins in October. Locations in the southern Sierra Nevada below the snow line received anywhere from around an inch to over four inches. Locations in the San Joaquin Valley received over half an inch towards Merced and Los Banos to as little as a hundredth of an inch in the far southern portion of the San Joaquin Valley. The Kern County desert areas received no more than one to two hundredths of an inch. As the system progressed southward during the 17th, it weakened considerably, especially when it reached into Kern County.

On the 18th and 19th, dry conditions returned, and mornings were much cooler. The coldest locations were in the Kern County mountains and desert; minimum temperatures reached as low as the mid-20s on the morning of the 19th such as in Edwards AFB, Boron, and Tehachapi.

Patchy dense fog returned to the San Joaquin Valley, especially on the morning of the 19th, as visibility dropped to near zero in a few areas.

High pressure built over central California during the week of Thanksgiving. A warming trend occurred for much of this week, and record highs were reached by the 22nd. Highs reached well into the 70s in the San Joaquin Valley (with near record highs) and as high as the 80s in the Sierra Nevada foothills, as well as the Kern County mountain and desert areas on the 22nd into the 23rd (Thanksgiving Day). Patchy morning and nighttime fog continued each morning that week in the San Joaquin Valley, with the lowest visibility (around a few hundred feet) mainly around Merced and Madera. There was a slight lowering in temperatures on the 24th and 25th, but highs were still well above average. Record high temperatures occurred on the 26th ahead of the next low pressure system that brought precipitation to the region, as highs in the warmest locations reached into the 80s, including in the San Joaquin Valley.

On the 27th, high temperatures in the lower elevations of the Sierra Nevada, including the foothills, fell by around 30 to 35 degrees, compared to the previous day. In addition, daytime highs in the San Joaquin Valley fell by around 15 to 20 degrees. The low pressure system brought rain and mountain snow mainly during the night of the 26th into the morning of the 27th. Rainfall amounts ranged from a trace in the Kern County desert areas to around a quarter of an inch in the San Joaquin Valley and over an inch (to as much as 1.75 inches) of precipitation fell in the Sierra Nevada in Yosemite National Park. Snow accumulated in the Sierra Nevada at elevations mainly around 6,000 feet and above, and most locations in these areas received around one to four inches of snow. Some areas experienced light snow accumulations, or generally less than an inch, as low as 4,000 feet during the morning of the 27th. In addition, wind gusts of around 50 to 60 mph were reported in the Kern County mountain and desert areas during the evening of the 26th and into the early morning hours of the 27th.

Cooler than average temperatures continued until the 28th, but warmed back to around average on the 29th and 30th. Nighttime and morning fog returned to the San Joaquin Valley, especially in Fresno and locations to the north by the morning of the 29th. Valley fog spread as far south as Corcoran on the morning of the 30th.

This month was much warmer than average (Fig 1). Bakersfield reached its 6th warmest November on record with an average temperature of 60.1 degrees (or 5 degrees above average). Fresno reached its 10th warmest with a monthly average temperature of 58.0 degrees (or almost 4 degrees above average). Below average precipitation prevailed throughout the region, except for portions of the Sierra Nevada in Yosemite National Park and northern portions of Merced and Mariposa Counties (Fig 2).

Table 1 – November 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	60.1	+5.0	0.03	-0.61
Fresno	58.0	+3.7	0.28	-0.79
Hanford	57.5	+5.5	0.31	-0.69
Madera	56.8	+4.1	0.24	-0.91
Merced	56.1	+3.7	0.88	-0.30

Temperature/Precipitation Rankings for November

Bakersfield – 6th warmest November on record; 25th driest November on record.
Fresno – 10th warmest November on record; 42nd driest November on record.

Figure 1 – Departure from Average Temperature for November 2017

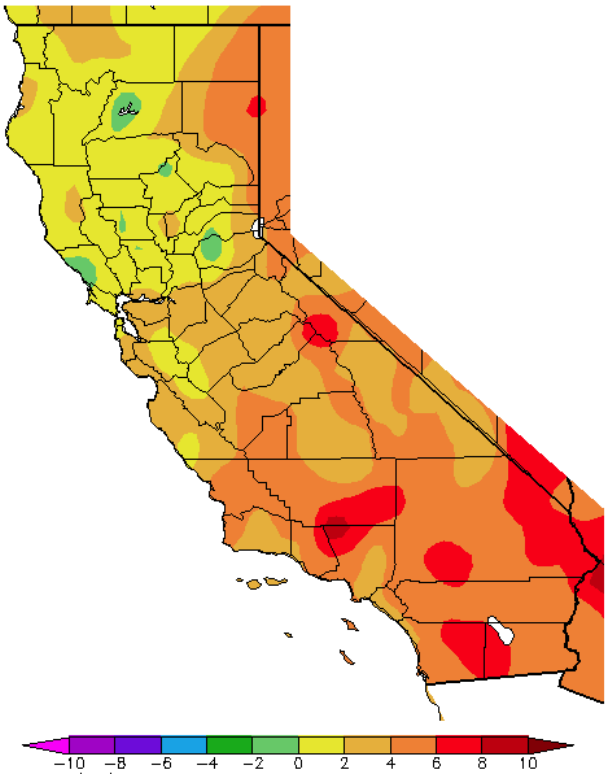
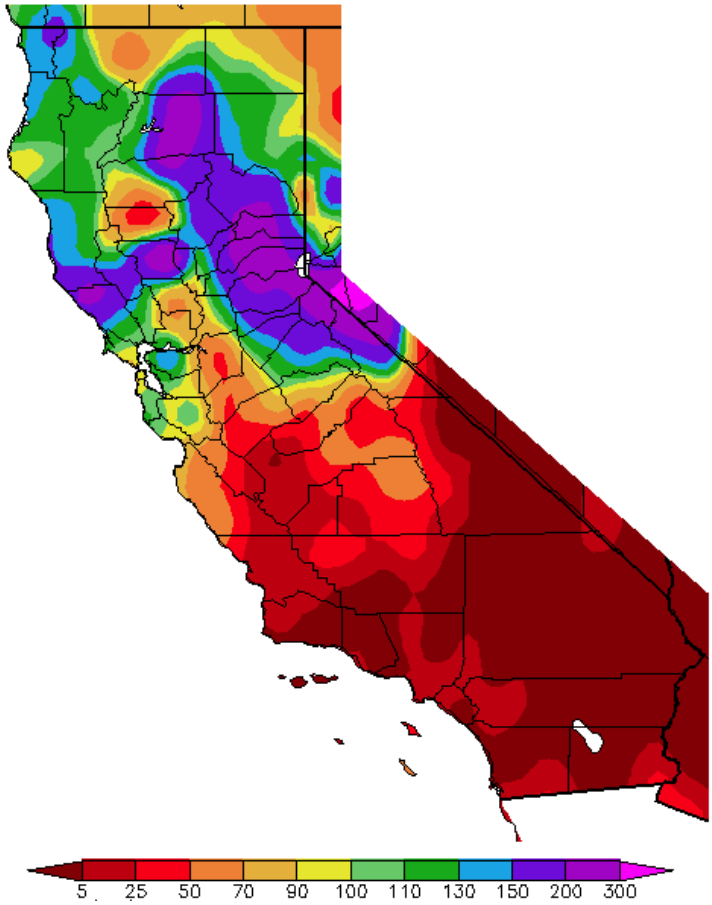


Figure 2 – Percent of Average Precipitation for November 2017



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