OCTOBER 2015 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

Relatively cool temperatures with scattered showers and isolated thunderstorms ushered in the month. High temperatures remained below 80 degrees in most San Joaquin Valley locations, except over Kern County, where temperatures rose into the mid-80s. The low pressure system that moved over central California brought only a few clouds to Kern County. Showers and thunderstorms were mainly confined to locations from Fresno County and northward on the 1st.

On the following day, high pressure returned to the region and allowed temperatures to warm slightly each day until the 3rd. The weather was quiet until late at night of the 3rd, or the early morning hours of the 4th, when a significant change in the weather occurred. Strong and gusty winds developed along the west side of the San Joaquin Valley due to an approaching low pressure system originating from the Gulf of Alaska. There were gusts around 60 mph through the hills, including Pacheco Pass along Highway 152 and Sunflower Valley along Highway 41 in far southwestern Kings County.

The strong low pressure system continued to bring impacts to the region during the 4th and into the evening of the 5th. There were quite a few showers and thunderstorms that had developed during this period. During the early morning hours of the 4th, showers and thunderstorms moved southward over the San Joaquin Valley; the heaviest showers brought around a tenth of an inch up to a quarter inch in the valley. Also, enough snow (around three inches) fell in the higher elevations of the Sierra Nevada to warrant the closure of Highway 120 through Tioga Pass in Yosemite National Park. By late in the morning, there were scattered showers and thunderstorms over much of Kern County, including over the southern San Joaquin Valley, the Tehachapi Mountains, and the desert areas. A few thunderstorms brought enough flooding to the desert floor where road closures became necessary, particularly on the usual flood-prone roads including Highway 14 near Redrock-Randsburg Road. A nearby NWS-owned station showed 0.38 inch of rain in less than an hour and a half at Red Rock Canyon State Park. Shower activity weakened significantly by the afternoon of the 4th. A few mountain locations received a total of around three-quarter to just over an inch of rain for that day.

By the morning of the 5th, quite a few locations in the high country (mainly above 9,000 feet) of the Sierra Nevada from Yosemite to Kings Canyon received 3-5 inches of snow. The 5th was generally a quiet, relatively cool early October day for the San Joaquin Valley. However, quite a few mountain and desert locations received another batch of rainfall; some locations in eastern Kern County had similar amounts or higher than on the previous day. Many locations in eastern

Kern County, including the desert, received half an inch to almost an inch of rain during both days. Some locations in the mountains of Kern County, mainly over the Piute Mountains and far southern Sierra Nevada, received as much as 1-1.5 inches of rain during the two-day period. As much as two inches of rain fell over the Sierra Nevada in Tulare County during the 4th-5th. During the late afternoon of the 5th, some heavy rain showers fell just east of Lake Isabella and forced the closure of Highway 178, as there was running water with a large boulder blocking the roadway. Over half an inch of rain had fallen in the areas east of Lake Isabella, including in Onyx and Weldon, in a relatively short period of time.

The weather finally became tranquil by the morning of the 6th as the low pressure system moved sufficiently east of the region. Temperatures remained relatively cool for the next couple of days but soon trended significantly upward as strong high pressure returned to central California. On the 8th, temperatures once again reached into the lower 90s in the warmest locations, including in the San Joaquin Valley.

By the 10th, temperatures rose as high as 15-20 degrees above average as the ridge of high pressure and offshore flow dominated over the region. High temperatures in the San Joaquin Valley reached just above 100 degrees in the warmest spots. Daytime maximum temperatures were slightly lower, or in the 90s, in the desert areas of eastern Kern County. Both Bakersfield and Hanford had yet another day of triple digits, as the temperature in these locations peaked at 100 degrees that day.

Temperatures were slightly cooler, while well above average, on the 11th as a westerly flow, set up over the region. However, a brief warming trend quickly followed on the following couple of days as high pressure continued to dominate over California. On the 13th, a few thunderstorms formed over the Sierra Nevada and Kern County mountains during the afternoon as some tropical moisture moved into the region from the south. In fact, the previous week's low pressure system had returned to just off the coast of southern California by the 14th. Even more thunderstorms developed over the Sierra Nevada and the San Emigdio Mountains in far southwestern Kern County by the evening of the 14th as more of tropical moisture from the south. Later that evening, thunderstorms began to form over much of the west side of the San Joaquin Valley and continued to move northeastward on the morning of the 15th as the low edged inland over southern California.

As the low pressure system slowly moved to the northeast on the 15th, scattered showers and thunderstorms impacted much of central California, especially during the afternoon and evening hours. There were even reports of mudslides due to torrential rainfall from isolated strong thunderstorms in the Kern County mountain areas, including along heavily traveled highways such as Interstate 5 through the Grapevine and Highway 58 through the Tehachapi Pass. Rainfall rates were around 2 inches or higher per hour in a few locations during the afternoon of the 15th.

In fact a station in Lamont reported 2 inches in just over an hour during that time. The mudslides were as much as 5-6 feet deep and stranded hundreds of motorists on both of the aforementioned highways. Locally heavy rain due to thunderstorms fell during the evening hours in much of the San Joaquin Valley, including Bakersfield and Fresno. The rain continued into the morning hours of the 16th as the low pressure system lingered over southern California. Skies were generally partly to mostly cloudy during the 15th and 16th, so daytime high temperatures gradually lowered while nighttime lows remained mild, or warmer than average. Some areas in the southern San Joaquin Valley briefly cleared on the morning of the 16th, so patchy dense fog formed as plenty of lower level moisture was available.

The gradual cooling trend continued into the 17th and 18th as the moisture from the low pressure system lingered over central California. Showers and thunderstorms redeveloped during the afternoon and evening on the 17th and continued into the morning hours of the 18th. Heavy rain fell in Visalia on the 18th; some locations received around a half inch to almost an inch due to thunderstorms that had developed. During the following afternoon, another cooler low pressure system trekked over northern California and allowed daytime highs to finally reach below average over the central California interior. Nighttime lows finally fell to around average by the 19th as the airmass began to dry out. The cooler and drier airmass persisted into the 20th, so temperatures changed very little.

A warming trend returned to the region on the 21st, as an offshore flow developed over the region due to the region of low pressure (that exited California about 3 days prior) made its transit over Arizona, and high pressure prevailed just off the West Coast. Thus, daytime high temperatures rose a few degrees compared to the previous day. This warming trend would bring about above average temperatures through the 23rd as high pressure remained in control over the region. A low pressure system made its way into the Pacific Northwest on the 24th and 25th, allowing for mid to high-level clouds to stream into the region.

Skies cleared on the 26th as high pressure returned to the region and temperatures continued to run 5 to 10 degrees above average. The cloud cover returned on the 27th as a low pressure system in the Pacific began impacting the region. Rain showers spread across the northern half of the San Joaquin Valley and Sierra Nevada on the morning of the 28th. Some rainfall totals included 0.65" at Lake McClure, 0.34" southwest of Oakhurst, and 0.22" at the San Luis National Wildlife Refuge Complex. Temperatures returned to near normal values on the 29th as the low pressure system moved inland and cooler air moved into the San Joaquin Valley. Temperatures then rebounded on both the 30th and 31st to above average territory as high pressure briefly returned to the area in advance of the first major Pacific storm system of the season. High temperatures on the 31st for Fresno and Bakersfield were 82 degrees and 83 degrees, respectively; each 10 degrees above average for Halloween.

Table 1 - Oct 2015 Summary Statistics for ASOS locations

Location	Monthly Avg Temp	Departure From Normal	Total Monthly Precipitation	Departure From Normal
Bakersfield	72.6	5.4	0.14	-0.16
Fresno	71.3	5.1	0.49	-0.14
Hanford	69.8	6.3	0.05	-0.45
Madera	69.7	5.7	0.32	-0.56
Merced	68.9	5.5	0.38	-0.43

Fig 1 - Percent of normal precipitation for October 2015 (graphics below provided by Western Regional Climate Center):

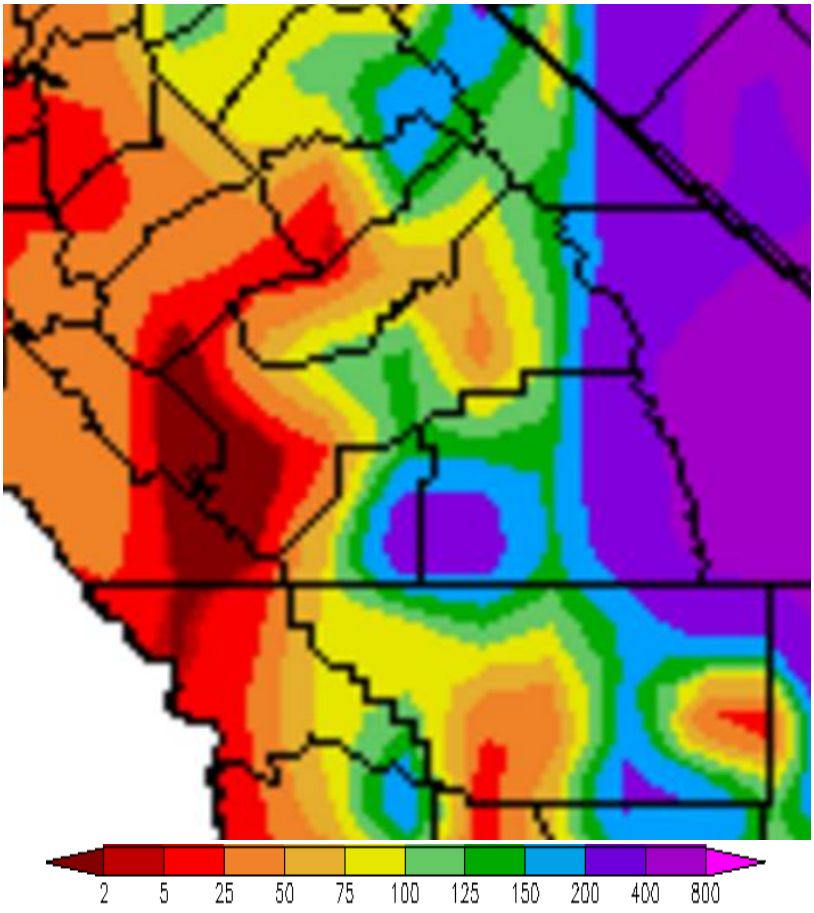

Fig 2 - Departure from average temperature (°F) for October 2015 (graphics below provided by Western Regional Climate Center):