

SEPTEMBER 2016 WEATHER SUMMARY FOR THE CENTRAL CALIFORNIA INTERIOR

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The month began warm throughout central California, as is typical for early September, and temperatures were mainly near average for the first couple of days. Dry weather remained the rule for the next several days, as well as for the remainder of the month throughout most of the region.

On the 3rd, a fairly strong trough of low pressure moved over northern California and the Pacific Northwest, and the marine layer deepened along the coast. On the evening of the 3rd and early morning hours of the 4th, the marine layer was deep enough, to allow cool air push through the passes along the west side of the San Joaquin Valley. Winds were very gusty through Pacheco Pass, where a gust to 46 mph was reported, and winds were strong enough to stir up some dust in parts of Merced County and along the west side. The cool air was enough to lower high temperatures by around 10 to 15 degrees by the 4th. In other words, many San Joaquin Valley locations only reached the lower to mid-80s for high temperatures, or around 10-15 degrees below average. In addition, winds became gusty through the passes and canyons in eastern Kern County during the afternoon and evening of the 4th; a few locations reported gusts at 50 mph to near 60 mph. On that day, there was plenty of wind and cool air to allow high temperatures to reach well below average in these areas; for example, Mojave only reached 77 degrees for a high.

By Labor Day, or the 5th, temperatures began to trend back up and continued for the next several days as high pressure rebuilt over the region. By the 10th, a weak upper-level low moved over central California and brought enough moisture for shower and thunderstorm development over the Sierra Nevada. On the following day, the low slowly moved toward the northeast during the day, although there were better dynamics for more widespread coverage of Sierra Nevada thunderstorms. Otherwise, warmer than average temperatures prevailed over the area through the 11th.

On the 12th, another trough of low pressure brought cooler temperatures and breezy conditions through the wind-prone passes along the west side of the San Joaquin Valley and into the Kern County mountain and desert areas. Winds gusted to around 45 mph through Pacheco Pass at times during the night of the 11th and into the afternoon hours of the 12th, and gusts to around 50 mph were reported through the passes leading into the Kern County desert areas. High temperatures cooled by several degrees, or to near average readings on the 12th. More significant

cooling occurred due to the cold front that passed through the following evening. High temperatures only reached the 70s in the San Joaquin Valley on the 13th and were around 15 to 20 degrees below average for mid-September.

During the next few days, daily maximum temperatures recovered several degrees each day as the low pressure system that brought the cold front moved to the east. Daytime highs were back to above average by the 17th. Even more warming occurred for the next couple of days; high temperatures were well into the triple digits on the 19th throughout the desert areas as well as the San Joaquin Valley.

Another cold front passed over the region on the 21st and 22nd, and high temperatures once again dropped well below average. On the night of the 21st, winds picked up once again along the west side of the San Joaquin Valley and through the passes leading into the Kern County desert areas. Similar speeds to the previous week occurred; gusts to around 35 to 40 mph occurred along the west side of the Central Valley, with around 45 to 50 mph in eastern Kern County. Highs only reached the 70s on the 22nd throughout the San Joaquin Valley after the passage of the cold front. A few showers and isolated thunderstorms developed over the Sierra Nevada crest as the cold front passed over the area on the afternoon of the 21st, rainfall was generally light. The highest amount reported was two tenths of an inch at Tuolumne Meadows Ranger Station in Yosemite National Park. A few light showers occurred on the afternoon of the 22nd along the Sierra Nevada crest in Yosemite National Park once the cold air was established over the region. Snow fell at around 9000 feet on the afternoon of the 21st, although it was generally light and did not stick to the ground for very long. Temperatures trended back up by several degrees each day, and highs returned to above average by the 25th, as high pressure strengthened over central California.

During the 26th and 27th, high pressure with offshore flow continued along with above average temperatures. High temperatures reached triple digits in many San Joaquin Valley locations for both days. By the 28th, temperatures gradually trended down as a low pressure system moved from the south over the desert regions to the east of Kern County. This low brought some tropical moisture, and showers and thunderstorms developed over the mountain and desert areas, as well as over the southern end of the San Joaquin Valley during the afternoon. A thunderstorm moved to the east of Bakersfield and brought heavy rain, blowing dust, and strong gusty winds (0.40 inch of rain in 40 minutes with 53 mph gusts during the late afternoon) to the nearby community of Lamont. A weather spotter about 10 miles to the east of Bakersfield, or near the mouth of the Kern River Canyon, observed visibility below 200 feet briefly as the storm passed just to the east of the city.

The low pressure system moved northeastward into the Great Basin and brought the moisture mainly over Nevada and east of the Sierra Nevada on the 29th, although a few showers and

thunderstorms developed over the Sierra Nevada crest during the afternoon. Another low pressure system moved southward from the Pacific Northwest by the afternoon of the 30th, and high temperatures began to drop by a few degrees. This last day of the month was generally characterized as mostly clear with mainly average temperatures.

September 2016 was definitely a month of highly variable temperatures, although much of the region ended up around average for the month overall. This month also ended below average in terms of monthly precipitation for most of the region (although the average for locations in the San Joaquin Valley ranges from around a tenth of an inch to just above a quarter of an inch); except parts of the Sierra Nevada crest, including in Kings Canyon and Yosemite National Parks, ended above average.

Table 1 – Summary Statistics for ASOS Locations

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Location	Monthly Avg Temp	Departure From Normal	Total Monthly Precipitation	Departure From Normal
Bakersfield	78.5	+1.5	0.00	-0.08
Fresno	76.1	-0.1	0.00	-0.17
Hanford	73.5	+0.2	0.00	-0.17
Madera	73.8	+1.1	0.00	-0.25
Merced	72.1	+0.2	0.00	-0.29

Fig 1 - Percent of normal precipitation for September 2016:

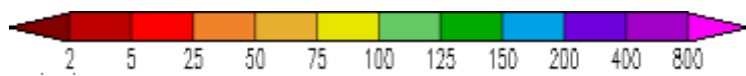
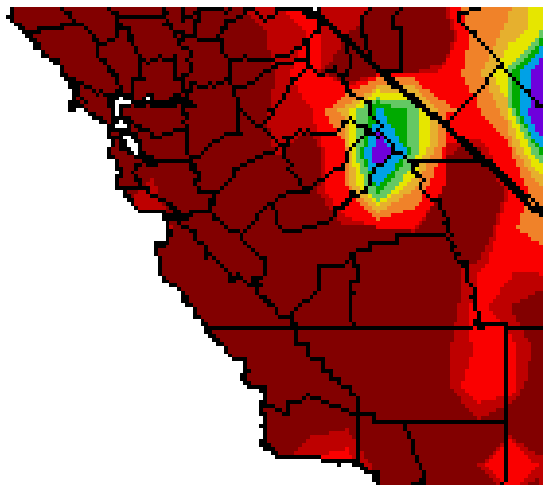
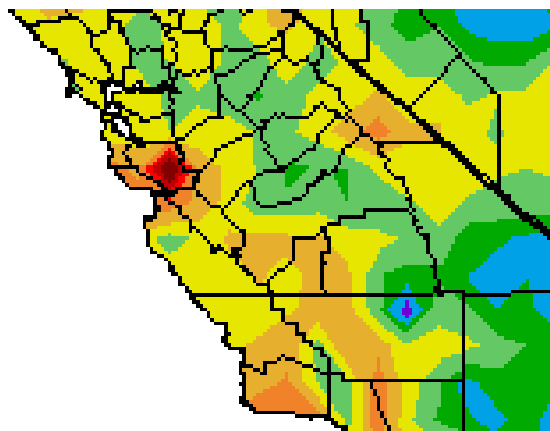


Fig 2 - Departure from average temperature for September 2016:



*Images in Figures 1-2 courtesy of Western Region Climate Center.