SEPTEMBER 2019 WEATHER SUMMARY
FOR THE CENTRAL CALIFORNIA INTERIOR

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Like much of the previous month, warm temperatures with dry conditions continued for the first day of the month. However, the dry pattern did not last very long, while temperatures remained quite warm for several days, as highs reached into the triple digits in the warmest locations (including in the San Joaquin Valley). Moisture from the southeast moved into the region by the early morning hours of the 2nd and brought showers and sprinkles to much of the region. A daily threat of afternoon showers and thunderstorms ensued over the mountains, although mainly the Sierra Nevada crest and Kern County desert on the 2nd through the 4th. Generally little rain fell during the period, as the moisture was fairly shallow. However, a low pressure system over Northern California interacted with the moisture so that more thunderstorms developed in the morning through the early evening hours of the 5th over the Sierra Nevada and foothills, as well as the Kern County mountains and desert. During this day, the heaviest rain fell along the Sierra Nevada crest, and as much as 0.50 to 1.00 inch accumulated. Some locations in the San Joaquin Valley even reported rain during that morning. Two one-hundredths of an inch fell at Bakersfield, while a trace fell at Madera. On the 6th, a few thunderstorms developed along the Sierra Nevada crest, but coverage was even more isolated. Otherwise, warm and muggy days prevailed during the 2nd-6th.

On the 7th, a dry cold front brought gusty winds and blowing dust to the San Joaquin Valley. Gusts reached around 25 to 30 mph in quite a few areas during that afternoon and evening with even stronger gusts along the west side of the valley (around 35 to near 50 miles per hour, or mph). Gusts in the Kern county desert reached around 50 mph in a few spots that evening, and Pacheco Pass reported a gust of 49 mph. Much cooler air flowed into the region, as highs lowered to several degrees below average by the 8th. Below average temperatures continued for the next few days, as another low pressure trough arrived on the 10th. Winds picked up again in the Kern County desert, and a gust of 60 mph was reported at Mojave on the evening of the 10th, while a gust of near 40 mph occurred at Pacheco Pass.

On the 11th, temperatures remained below average, but a warming trend began due to a building ridge of high pressure over much of California. Daytime highs returned to a few degrees above average on the following day. A weak easterly flow over the region also aided in the warming and allowed humidity to decrease. Further warming continued until the 14th, although a slight decrease in temperatures occurred on the 15th.

Another significant cooling trend began on the 16th, as temperatures fell back to several degrees below average. Similarly cool temperatures continued until the 20th, as low pressure systems passed over the Pacific Northwest and Northern California. Breezy (generally 25 to 35 mph at most locations) to locally gusty (mainly in the Kern County mountains and below the passes in the desert areas with gusts around 45 to 55 mph) conditions were reported at times during this period.

Temperatures rose considerably by the 22nd, as another ridge of high pressure approached from the Pacific Ocean. Daytime highs were about 3-5 degrees above average during the 22nd-24th and were even warmer on the 25th, or around 7-10 degrees above typical values for the date. Highs reached into the triple digits in the warmest locations, such as at Bakersfield (high of 101 degrees) and quite a few nearby southern San Joaquin Valley locations.

A cooling trend began on the 26th, as the high pressure began to weaken. Winds began to increase by the evening of the 27th, due to an approaching low pressure system. This system was strong enough to bring well below average temperatures to the region by the 28th and gusty winds to the usual prone areas, or below the passes along the west side of the San Joaquin Valley (gusts around 35 to 40 mph), as well as the mountains and below the passes leading into the Kern County desert areas (gusts around 45 to 50 mph, except a few isolated locations reported 55 to 60 mph gusts). A few rain showers (mainly a quarter inch or less) mixed with light snow (a dusting to about an inch) also fell in the higher elevations of the Sierra Nevada on the afternoon and evening of the 28th.

Temperatures reached around 15 below average on the 29th and 30th in the wake of the upper-level low. For example, highs were only in the lower 70s in the San Joaquin Valley, while nighttime lows bottomed out mainly in the 40s. Even cooler temperatures (including lows in the teens to around freezing) were reported in the mountains and foothills.

Overall, the month was above average in terms of temperatures, although a portion of the Sierra Nevada ended up near to below average (Fig 1). Otherwise, below average precipitation accumulated this month (Fig 2).

Tables 1-3 Monthly Seasonal Temperature/Precipitation Summaries for ASOS locations served by the NWS office in Hanford, CA (ending as of September 30th, 2019)

Table 1 – September 2019 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	77.6	+0.6	0.02	-0.06
Fresno	77.2	+1.0	0.00	-0.17
Hanford	75.0	+1.7	0.00	-0.17
Madera	73.2	+0.5	T	-0.25
Merced	72.4	+0.5	T	-0.29

Table 2 – Seasonal Precipitation for ASOS locations

Location	Since Jan 1st (inches)	Departure From Average (inches)	Since Jul 1st (inches)	Departure From Average (inches)	Since Oct 1st (inches)	Departure From Normal (inches)
Bakersfield	6.52	+2.01	0.02	-0.10	7.82	+1.35
Fresno	9.52	+1.49	Trace	-0.19	11.85	+0.35
Hanford	7.63	+0.66	0.00	-0.21	9.50	-0.60
Madera	8.43	+0.14	0.00	-0.29	11.42	-0.60
Merced	9.40	+0.41	Trace	-0.31	13.27	+0.77

Table 3 – Warmest High Temperatures and Coolest Low Temperatures of the Month for ASOS locations

Location	High	Date(s)	Low	Date(s)
Bakersfield	102	2nd	48	30th
Fresno	104	2nd	50	30th
Hanford	104	1st, 2nd	45	29th
Madera	102	2nd, 4th	46	29th, 30th
Merced	101	2nd	45	30th

Temperature/Precipitation Rankings for September 2019

Bakersfield – 35th September on record (tied with 1997 and 1957); tied for 78th lowest precipitation on record for September (September 1984, 1972, 1971, and 1962).

Fresno – 21st warmest September on record (tied with 2017 and 1899); tied for lowest precipitation on record (with 45 other Septembers).

100 Degree Day Statistics

Bakersfield – 7 days in September (average of 4 days for September); 42 days for May through September (average of 33 days for May through September, as well as the entire calendar year).

Fresno – 7 days in September (average of 4 days for September); 48 days for May through September (average of 37 days for May through September, as well as the entire calendar year).

Daily Records Set During September 2019

Bakersfield – Record high minimum temperature of 78 degrees on the 5th, which broke the old record of 77 degrees set in 2017.

Fresno – Record high minimum temperature of 77 degrees on the 5th, which broke the old record of 75 degrees set in 2017.

Record high minimum temperature of 68 degrees on the 26th, which broke the old record for the date of 67 degrees set in 2015.

Figure 1 – Departure from Average Temperature for September 2019

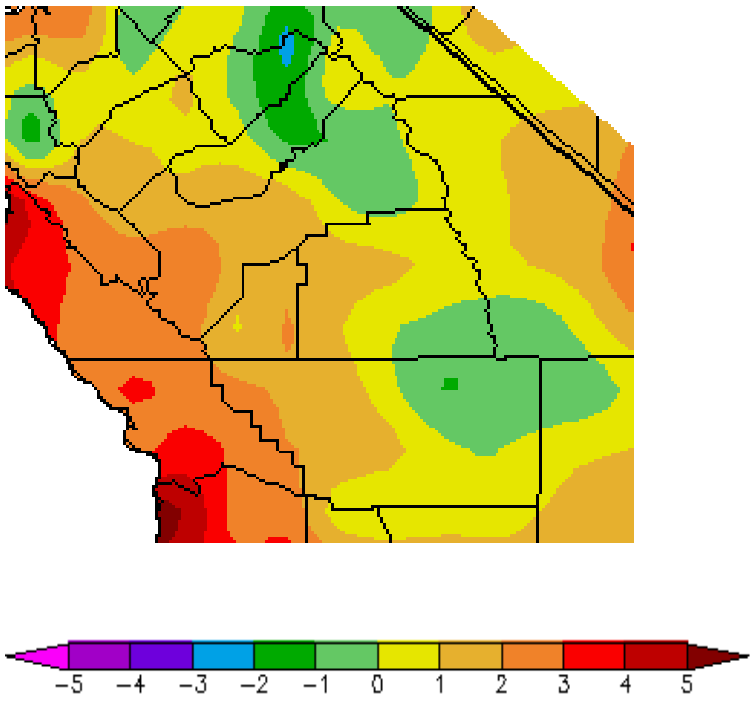
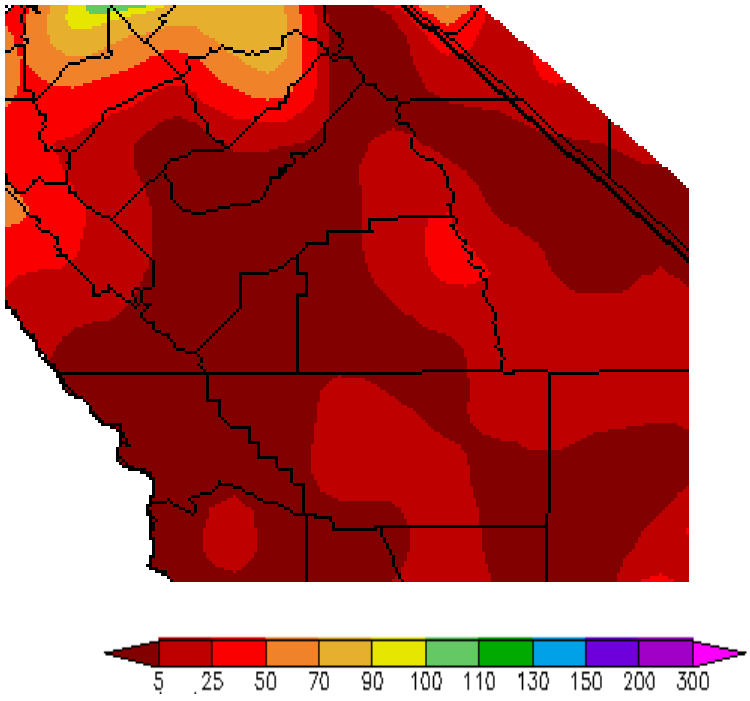


Figure 2 – Percent of Average Precipitation for September 2019



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