

AUGUST 2018 WEATHER SUMMARY FOR THE CENTRAL CALIFORNIA INTERIOR

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A long stretch of heat continued in the San Joaquin Valley and Sierra Nevada foothills for the first four days of the month due to a strong persistent ridge of high pressure. High temperatures at many locations in the Central California interior continued to reach into the triple digits since the early part of July. In Fresno, a 30-day stretch of triple digit highs ended on the 4th, while a 25-day stretch ended at Bakersfield. Interestingly, average highs for the first week of August (and much of the month) are in the upper 90s at both locations. There just were not any days when temperatures were around average or below since the 4th of July.

Afterward, the ridge weakened slightly so that temperatures lowered slightly afterward, or during the 5th-7th, when highs reached into the upper 90s. Meanwhile, highs remained in the triple digits in the Kern County desert, and there has been no such break in this area since much of July. The smoke from the Ferguson Fire around Yosemite National Park and from fires to the north continued to plague much of the region with poor air quality for the first week of August. There was one exception during the 5th, when smoke departed the San Joaquin Valley and blew eastward from the fires throughout the state.

Above average temperatures continued throughout Central California for the next week. Triple digit highs returned to the San Joaquin Valley during the 8th through at least the 10th. This was generally the warmest period in the month, as highs reached around 105 degrees. Some locations, such as Fresno dropped below 100 degrees on the 11th (with a high of 99 degrees) but warmed back to just above 100 degrees on the 12th and 13th. Bakersfield has reached at least 100 degrees from the 8th through the 14th before a high below 100 degrees was reached on the 15th, or 98 degrees. Dry conditions prevailed during this period, although some isolated thunderstorms developed in eastern Kern County during the early morning hours of the 12th due to outflow winds from decaying thunderstorms to the east in San Bernardino County. A few thunderstorms developed along the Sierra Nevada crest during the 12th through the 15th each afternoon; although rainfall was mainly light to moderate. Air quality gradually improved during the second week of the month as the firefighters have contained or at least made significant progress towards containment of some of the larger fires throughout the state, including the Ferguson Fire near Yosemite National Park.

Temperatures rose to around 5-10 degrees above average during the 16th-20th as high pressure returned to the region. Highs once again reached into the triple digits or around 102-108 degrees

in much of the San Joaquin Valley and Kern County desert areas during this period. Air quality due to wildfire smoke remained an issue in some areas, especially near the fires in the Sierra Nevada. The Ferguson Fire was 100 percent contained as of the 19th, so smoke from this fire was no longer a concern, including for Yosemite National Park and the Sierra Nevada and adjacent foothills in Mariposa County. However, heavy rain will definitely pose flash flood and debris flow threats at the burn scars for quite some time, according to the surveys that were conducted after the fire was extinguished.

Lowering temperatures towards average or slightly below finally occurred on the 21st through the 25th as wind flow aloft turned toward the west. Some marine air intrusions reached into the Central Valley at times so that high temperatures lowered to the upper 80s to lower 90s on most days in the period. High pressure shifted further inland, including over the Desert Southwest. Air quality unfortunately worsened by the 24th and the next couple of days as smoke from wildfires over northern California and the Pacific Northwest had moved offshore and returned inland due to the westerly flow aloft.

Temperatures rose back to slightly average on the 26th and 27th, as weak high pressure built over Central California. Afterward, another low pressure system brought lower temperatures and even some cooler marine air into the Central Valley by the 28th. Air quality in the San Joaquin Valley improved due to this pattern change. Temperatures lowered to several degrees below average during the 28th through the 31st. The last two days of this period were the coolest, as an upper-level low moved over northern California and the Great Basin. On these days, daytime highs only reached the 80s in many locations in the San Joaquin Valley. On the 30th and 31st, this upper-level low was strong enough to produce some locally gusty winds in eastern Kern County. Gusts to around 50 mph were reported during the afternoon and evening hours in the desert areas, including below the Tehachapi Pass that is located to the west of Mojave along Highway 58, or at the Cache Creek CHP (California Highway Patrol) weigh station.

Overall the month was warmer than average, though not extreme. However, a few locations towards the west side of the San Joaquin Valley were slightly cooler than average (Figure 1), due to more exposure to marine air. Precipitation was generally much below average (see also Figure 2), as any periods associated with subtropical moisture intrusions were brief with mainly little rainfall.

Table 1 – August 2018 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	84.6	+2.2	0.00	-0.04
Fresno	83.0	+1.3	0.00	-0.01
Hanford	80.7	+2.5	0.00	-0.02
Madera	79.4	+2.3	0.00	-0.02
Merced	76.9	+0.6	0.00	-0.01

Temperature/Precipitation Rankings for August

Bakersfield – 21st warmest August on record; tied for driest August on record (No measurable precipitation is often reported in August here).

Fresno – 17th warmest August on record; tied for driest August on record. (No measurable precipitation is often reported in August here).

100 Degree Statistics

This month – Bakersfield had 15 days with highs of 100 degrees or warmer, while Fresno had 14 days. The average number of days with highs at 100 degrees or above during August is 10 days for Bakersfield and 11 days for Fresno.

Calendar Year 2018 so far through August 31st: Bakersfield reported a total of 50 days, while Fresno had 54. The average total number of days with highs at 100 degrees or above for a calendar year is 33 days for Bakersfield and 36 days for Fresno.

Figure 1 – Departure from Average Temperature for August 2018

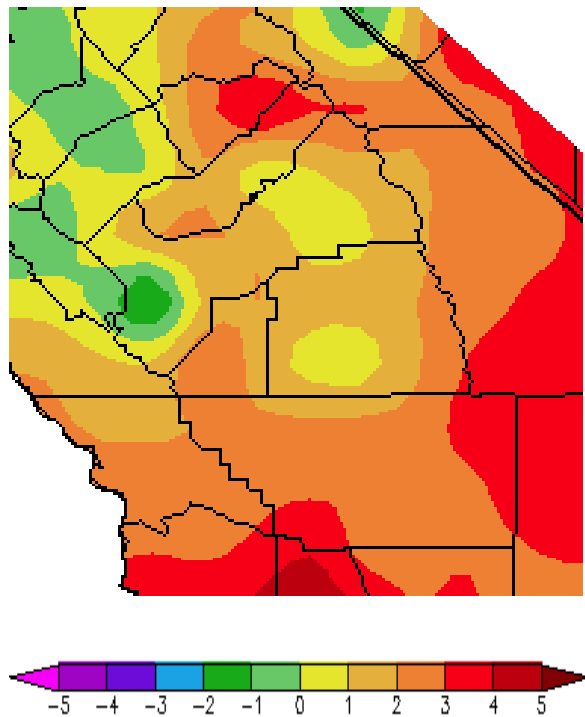
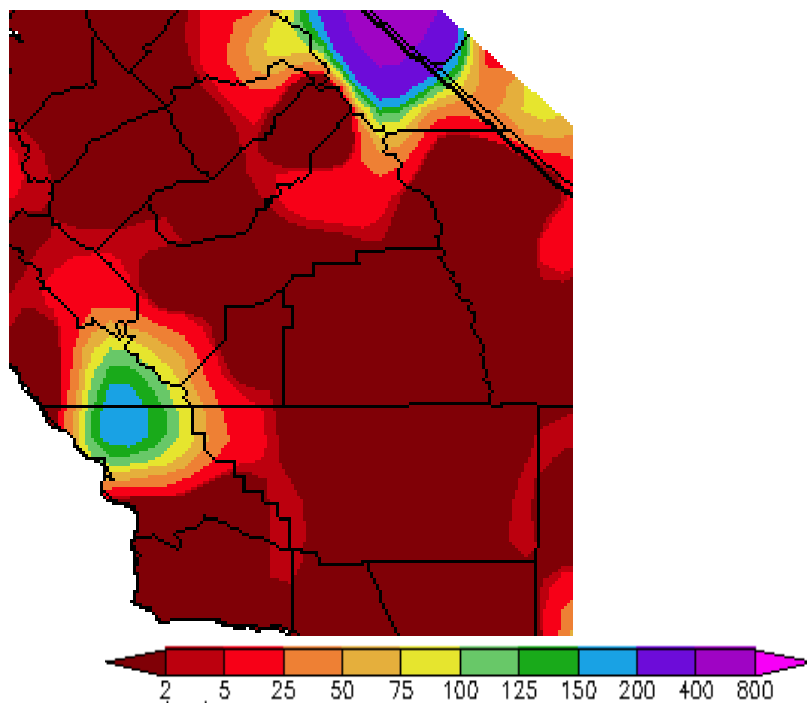


Figure 2 – Percent of Average Precipitation for August 2018



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