AUGUST 2017 WEATHER SUMMARY
FOR THE CENTRAL CALIFORNIA INTERIOR

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The month began with above average high temperatures due to persistent strong high pressure over the region, similar to July. Showers and thunderstorms were prevalent over the southern San Joaquin Valley, as well as the mountain and desert areas during the 2nd. Shortly thereafter, some of this activity spilled northward into the central San Joaquin Valley on the night of the 3rd and into the morning of the 4th. On the afternoon and evening of the 3rd, some slow-moving thunderstorms produced heavy rain near Tehachapi that caused flash flooding. Locations in the Sierra Nevada also reported brief heavy rainfall, including in the National Parks (Yosemite, Kings Canyon, and Sequoia). Abundant snowpack remains at around 9,500 feet and above, as reported by a colleague hiking in Sequoia National Park during this first week of the month.

Dry southwest flow returned by the 5th, and shower/thunderstorm coverage gradually decreased over the Sierra Nevada during the next few days. Temperatures were generally near or slightly above average as high pressure continued, albeit weaker, over the region.

Drier, relatively warm air continued to filter into the area, and showers and thunderstorms were nonexistent over the Sierra by the 8th. The warm, dry airmass prevailed over the central California interior for several days, or until the 13th. Overall, the weather pattern was generally benign during this period. Overnight low temperatures were generally relatively cool, and even pleasant due to the dry airmass in place.

A low pressure system arrived by the 14th and brought cooler temperatures for the next couple of days. High temperatures were around 5-10 degrees below average during this period, especially in the San Joaquin Valley. High temperatures only reached into the mid to upper 80s in the Central Valley on the 15th. After the upper-level low shifted eastward, thunderstorms returned to the Sierra Nevada on the afternoon of the 16th. Some isolated strong thunderstorms developed over Yosemite National Park and produced frequent lightning and brief heavy rainfall. Some small hail likely fell with the strongest storms. By the early evening hours, the storm activity quickly dissipated.

On the 17th-23rd, afternoon and evening thunderstorms remained a daily occurrence in the Sierra Nevada, including in Yosemite and Sequoia/Kings Canyon National Parks due to a persistent offshore low pressure system. Thunderstorms produced heavy rain, especially on the 18th, when Yosemite Valley reported 1.27 inches of rainfall in just one hour (4:45 PM to 5:45 PM) with pea-

sized hail. Another strong thunderstorm produced very heavy rain to the south near Florence Lake around the same time the thunderstorm developed over Yosemite. On the 21st, a few thunderstorms developed over the Kern County desert areas, as the position of the upper-level low was favorable to turn the flow more easterly while tapping some of the monsoonal moisture from the Desert Southwest. Temperatures fell to below average as the center of the low was closest to central California on this day. By the night of the 23rd, the low moved inland over southern California and eventually weakened over the next couple of days. Mountain thunderstorms developed for one more day, or on the 24th, but were isolated in nature. Afterward, temperatures rose to several degrees above average by the 26th as strong high pressure began to build over much of the Western United States.

Temperatures continued to rise until the 29th, when record high maximum and minimum temperatures were reached, especially in the San Joaquin Valley. Temperatures on this day rose above 110 degrees in many locations and remained in the mid to upper-70s through the following morning hours. Thunderstorms mainly developed in the Sierra Nevada in Fresno and Tulare Counties on the 28th and 29th each afternoon, while a few developed in Kern County around Lake Isabella. However, an upper-level low pressure system brought unstable air and thunderstorm coverage over the Sierra Nevada and into the San Joaquin Valley during the morning hours of the 30th. Additional thunderstorms developed over the Sierra Nevada and shifted southward to the mountain areas over Tulare and Kern Counties during the afternoon. Thunderstorms also developed over the Kern County desert areas on the afternoon and persisted into the evening of the 30th; brief heavy rain, frequent lightning, and gusty winds were the primary weather concerns. Daytime high temperatures lowered by several degrees due to the low pressure system.

August 2017 was a generally much warmer than average month with average to above average precipitation. A few locations in the San Joaquin Valley even measured precipitation during both the early part of the month and near the end, although average precipitation in the San Joaquin Valley is generally near zero.

Table 1 – August 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	87.9	5.5	Trace	-0.04
Fresno	85.2	3.5	Trace	-0.01
Hanford	83.5	5.3	Trace	-0.02
Madera	82.3	5.2	Trace	-0.02
Merced	80.7	4.4	0.00	-0.01

Temperature/Precipitation Rankings for August

Bakersfield – 2nd warmest August on record; 21st driest August on record (Usually no rain falls in August here).
Fresno – 2nd warmest August on record; 19th driest August on record. (Usually no rain falls in August here).

Figure 1 – Departure from Average Temperature for August 2017

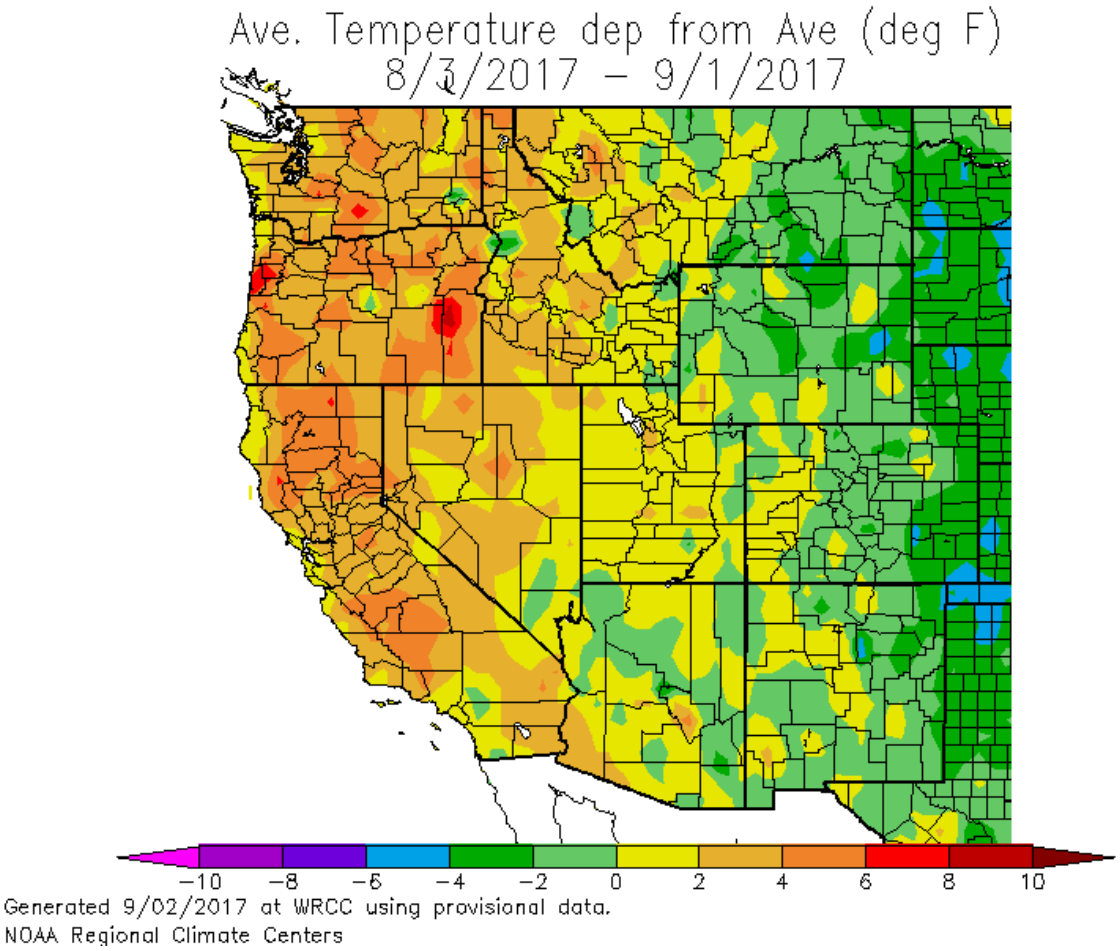
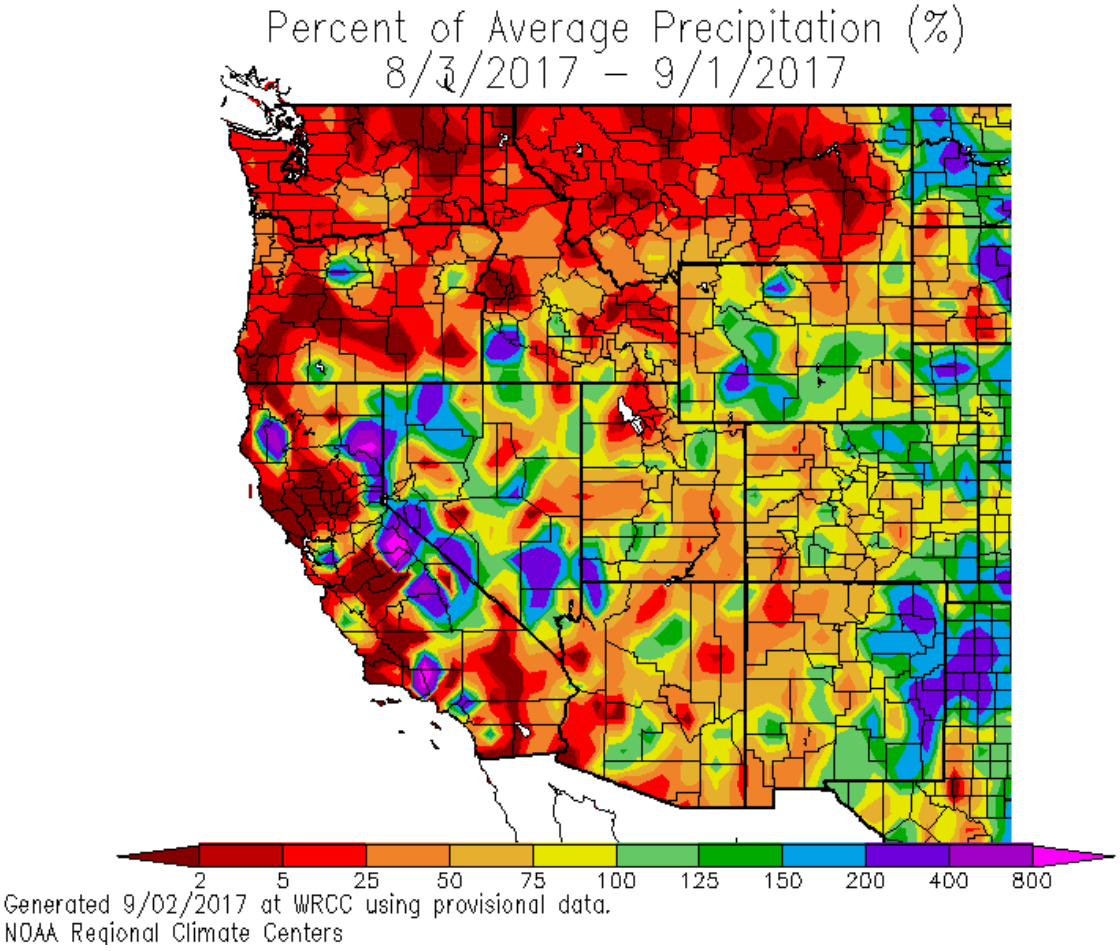


Figure 2 – Percent of Average Precipitation for August 2017



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