MAY 2016 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

The central California Interior began the month with above average temperatures with high pressure over much of the western United States. Temperatures were at least several degrees above average for the first few days of the month. However, a weak upper-level disturbance brought sufficient moisture for showers and thunderstorms over the Sierra Nevada and in the higher terrain along the west side of the San Joaquin Valley. On the 2nd and 3rd there was a brief dry period; however, temperatures warmed a little more each day.

A transition to cooler and more unsettled weather occurred on the 4th, and then a couple of low pressure systems prevailed over the region during the 5th-8th. Thunderstorms produced heavy rainfall in much of the higher terrain along the west side of the San Joaquin Valley during the 5th and 6th, as well as in parts of the valley. Showers and thunderstorms also brought abundant rainfall to the Sierra Nevada and into the adjacent foothills, as well as much of the Kern County mountain areas. The 6th was the most active weather day during the period, as heavy rain impacted some of the more flash-flood prone roadways, such as Interstate 5 through Lebec and Highway 198 west of Coalinga where roadway flooding was reported by the California Highway Patrol. Rain fell over much of the floor of the San Joaquin Valley during much of the 6th, with some isolated strong thunderstorms that brought ponding on numerous roadways, including in Fresno. Up to an inch and a half of rain fell on the higher terrain due to thunderstorms; otherwise, most locations received around a tenth to just above a quarter inch during the 5th and 6th. Afterward, showers and thunderstorms developed each day over much of the higher terrain during the 7th and 8th, although there was significantly less rainfall and thunderstorm coverage than on the previous two days due to increased cloud cover. Temperatures during the 5th through the 9th were generally below average.

On the 10th and through the 13th, high pressure began to build over the area and brought drier conditions and much warmer temperatures, or around 10-15 degrees above average for the middle of May. By the 12th, daytime highs peaked well into the 90s or near 100 degrees in the warmest locations, such as the San Joaquin Valley and Kern County desert areas. Temperatures decreased slightly on the 13th as the high pressure ridge began to weaken, and the prevailing winds turned to the west, with onshore flow prevailing over much of California. During the evening of the 13th, cooler marine air with gusty winds funneled into the San Joaquin Valley, so temperatures fell by around 10-15 degrees during the 14th and into the 15th, or back to around average. In addition, there were gusty winds through the passes and canyons in the Kern County

mountain and desert areas during the 14th and 15th. Gusts reached as high as around 55 mph just below the passes.

On the 16th, another low pressure system moved over the Great Basin, or in northern Nevada, and brought showers and thunderstorms over the higher elevations of the Sierra Nevada; a few isolated thunderstorms were able to move southward into the desert areas of northeastern Kern County, or around Ridgecrest. Rainfall amounts were relatively light and measured below a tenth of an inch in the desert and up to a quarter inch in the mountain areas.

On the 17th through the 19th, a ridge of high pressure once again brought above average temperatures back to the region with dry conditions. San Joaquin Valley locations reached into the 90s during this period. On the evening of the 19th, some gusty winds impacted the passes and canyons in eastern Kern County, as well as the higher terrain along the west side of the San Joaquin Valley as a strong low pressure system approached the region from the Gulf of Alaska.

By the 20th, much cooler air arrived with the low pressure system; temperatures were well below average for the next several days as a trough of low pressure persisted over much of the western United States. There were a few showers and thunderstorms that developed over the Sierra Nevada, and light snow fell down to around 7000 feet. The low pressure system moved back towards the northern Rocky Mountains over the next few days, some shower activity decreased briefly during this period.

The low pressure system returned to central California by the 23rd and 24th and had actually moved westward into the Pacific Northwest and even off the coast before heading south into California. Relatively cool temperatures also persisted during these two days. This time there was more coverage of showers and thunderstorms in the higher terrain of central California and even parts of the San Joaquin Valley. On the 23rd, there were a few showers and thunderstorms over the east side of the San Joaquin Valley and over the Sierra Nevada, as well as the higher terrain along the west side; rainfall was generally around a tenth to a quarter inch. As for the 24th, there were a few heavier showers and thunderstorms developed that mainly over higher terrain along the west side of the San Joaquin Valley on the 24th during the late afternoon and early evening. One location near the higher terrain in western Merced County, Gustine, received around a half an inch of rain in a period of about 30 minutes due to an isolated thunderstorm. On the 25th, the low pressure system moved east of the region into Arizona; however, plenty of moisture wrapped around the low pressure system and moved into the Sierra Nevada and foothills and brought locally heavy rain. Locations in the foothills such as Oakhurst and Coarsegold received around 1 to 1.5 inches of rain during the afternoon and evening of the 25th; these locations received multiple storm cells due to training over this area. A few eastern San Joaquin Valley locations such as Reedley, Exeter, and Woodlake experienced some showers

early that evening as the showers moved southward along the lower foothills of the Sierra Nevada.

On the 26th, the weather began to trend warmer and drier as high pressure began to approach the west coast. Temperatures were still near to slightly below average, as high temperatures reached into the lower to mid-80s in the lower elevations, including San Joaquin Valley and the Kern County desert areas. Only a few showers developed over the higher elevations of the Sierra Nevada, including in Yosemite National Park.

For the last five days of the month, temperatures continued to warm each day until they reached around 10 degrees above average on the last day of the month, and conditions were generally dry during this period, except over the higher terrain. On the afternoon and evening of the 28th, isolated thunderstorms developed over the Sierra Nevada, including as low as Shaver Lake, where small hail and heavy rain were reported. Thunderstorms also formed over the higher terrain along the west side of the San Joaquin Valley during the afternoon and evening 28th. This activity occurred because of a weak low pressure system that was off the coast of southern California. Afterward, thunderstorm activity was generally confined along the crest of the Sierra Nevada during the 29th through the 31st, due to residual moisture.

Overall the month was below average for precipitation, except some isolated locations, including Bakersfield, received above average precipitation due to the nature of thunderstorm activity (see Fig 1). Temperatures were overall above average (Fig 2), despite the significant lengthy periods of below average temperatures during the early part of the month and the week prior to the Memorial Day weekend.

Table 1 – Summary Statistics for ASOS Locations

Table 1 - May 2016 Summary Statistics for ASOS locations				
Location	**Monthly Avg Temp**	**Departure From Normal**	**Total Monthly Precipitation**	**Departure From Normal**
Bakersfield	72.8	+2.3	0.55	+0.37
Fresno	71.3	+1.2	0.29	-0.14
Hanford	70.5	+1.8	0.17	-0.25
Madera	69.3	+2.0	T	-0.48
Merced	68.3	+1.4	0.11	-0.47

Fig 1 - Percent of normal precipitation for May 2016:

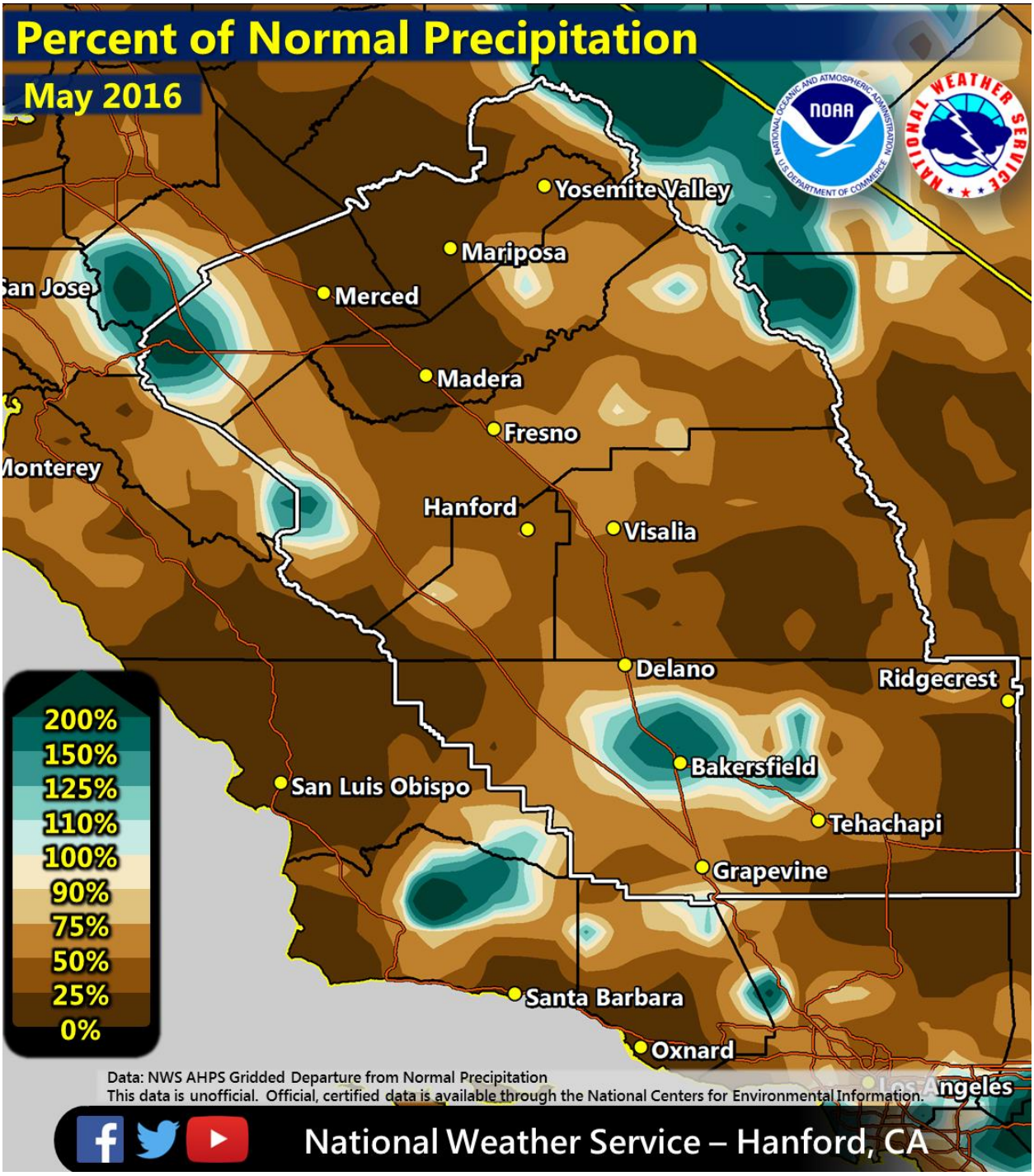

Fig 2 - Departure from normal temperature for May 2016: