AUGUST 2014 WEATHER SUMMARY
FOR THE CENTRAL CALIFORNIA INTERIOR

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A very warm first day of the month occurred due to strong high pressure over central California. Fresno reached as high as 109 degrees; other locations in the San Joaquin Valley and Kern County desert areas reached around 105-110 degrees. Temperatures were slightly cooler on the 2nd as the high pressure began to weaken. A southwesterly flow aloft set up over much of the state; however, moisture began to increase from the southwest due to remnants of Hurricane Hernan off the coast.

In fact, much cooler temperatures occurred on subsequent days as cloud cover increased. Marine air spilled into the San Joaquin Valley and allowed high temperatures to fall into the upper 80s to lower 90s on the 3rd and the 4th. Every ASOS site in the San Joaquin Valley reported a trace of rain on the 4th; Visalia received measurable rainfall (some locations were around 0.06 inch) due to showers and thunderstorms.

Temperatures were on the increase once again by the 5th and continued until the 9th as high pressure remained in control. However, a dry southwesterly flow occurred during this period and kept cumulus clouds and isolated showers/thunderstorms confined mainly over the crest of the southern Sierra Nevada.

On the 10th, an upper-level low pressure system was parked off the coast of far northern California and allowed drier air to flow into the central California interior. Mainly cumulus, or non-precipitating, clouds formed over the southern Sierra Nevada.

A much more active pattern occurred by the night of the 10th and into the 11th as the upper-level low moved south to a position about 150 miles west of the San Francisco Bay area. Due to this position of the low pressure center, monsoonal moisture flowed into the southern Sierra Nevada and allowed scattered thunderstorms to develop during much of the day. Storm development even developed early that morning as moisture had already arrived, and thunderstorms also formed over the Indian Wells Valley, including over Ridgecrest.

By the 12th, the moisture was confined to the east of NWS Hanford's forecast area with some lingering moisture over the higher elevations of the southern Sierra Nevada. A few isolated showers formed during the morning and afternoon hours. By the following evening, marine air

began to flow into the San Joaquin Valley as a trough dominated over northern California and the Pacific Northwest and brought onshore flow over central California.

On the 14th through the 17th, the weather remained relatively quiet with a dry southwest flow in place. However, temperatures warmed back up to above average as the western side of the ridge over the Four Corners region began to move westward into our forecast area. During the 16th and 17th, the marine layer was just deep enough (about 1600-1800 feet) to bring gusty winds through the passes along the west side of the San Joaquin Valley, such as Pacheco Pass along Highway 152 and Cottonwood Pass along Highway 41. However, the marine air had little influence on temperatures during this period. On the evening of the 17th, pressure gradients were sufficient to bring gusty winds through the Kern County mountain passes and into the desert areas, including Mojave.

A low pressure system developed over the eastern Pacific and moved toward the southern California coast on August 20th and 21st. Moisture spinning around the low brought strong thunderstorms as far north as the San Bernardino County-Inyo County line, with locally heavy rain causing flash flooding. Isolated thunderstorms developed along the Southern Sierra Nevada crest.

August 22nd saw the low move into Arizona, but still close enough to bring easterly winds to the Southern Sierra Nevada. At the surface, temperatures were near to a few degrees above normal, with Fresno reaching a high of 101 degrees. An upper-level trough moved through northern California into the Great Basin, bringing a low-level onshore flow. Marine air pushed into the San Joaquin Valley on August 23rd and lowered temperatures to slightly below normal. Fresno only had a high of 95 on the 23rd, or six degrees cooler than the previous day.

An upper-level trough dropped into northern California on August 24th, then moved across the state and into the Great Basin over the next two days. Marine air spilled through the passes and canyons of the Temblors and Diablo Range, with gusts to around 30 mph on the west side of the San Joaquin Valley. The cool air dropped temperatures several degrees below normal. Fresno only had a high of 91 degrees on the 25th, and record low maximum temperature records were set at both the Merced Regional Airport and the Madera Municipal Airport. Temperatures were a couple of degrees warmer on August 26th, but remained below normal.

High pressure built back into California from the Desert Southwest on the 27th, bringing a return of above-normal temperatures to the region for the next few days. Fresno closed the month with three consecutive days with highs just over 100 degrees, on August 28th-30th, while Bakersfield hit 103 on the 28th, followed by upper 90s the next two days.

An upper-level trough dropped into northern California on the 29th. This trough entrained remnant moisture from former Hurricane Marie, bringing mid and high clouds to central California. As a low-level jet rounded the base of the trough, it passed over the mountains of Kern County, triggering strong wind gusts. A mountain wave developed over the Indian Wells Canyon, producing a gust to 72 mph during the evening of August 30th, and a gust to 64 mph at Bird Spring Pass. Winds gusted to 59 mph near Mojave, and to 56 mph at Cache Creek. The winds at the desert locations continued well into the morning of the 31st.

The trough cooled temperatures a few degrees on August 31st, with highs in much of the central and southern San Joaquin Valley reaching the mid 90s. Temperatures still were above normal, and Fresno ended up with its second warmest August on record. The average temperature at Bakersfield was 0.6 degree warmer than Fresno, but only tied for the eighth warmest August on record.

THE 12 WARMEST AUGUSTS ON RECORD

	BAKERSFIELD	FRESNO
1.	87.7...1967	86.5...2012
2.	87.0...2012	*84.4...2014*
3.	86.2...1969	84.3...1931
4.	86.0...1971	84.2...1986
5.	85.7...1958	84.1...2008
6.	85.6...1931	84.0...2005
7.	85.2...1977	84.0...1998
8.	*85.0...2014*	83.6...1967
9.	85.0...2008	83.5...1984
10.	85.0...1981	83.5...1891
11.	85.0...1978	83.4...1996
12.	85.0...1929	83.3...1958