

## **AUGUST 2009 WEATHER SUMMARY FOR THE CENTRAL CALIFORNIA INTERIOR**

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August opened with an east-Pacific low-pressure system west of the northern California coast. Cyclonic circulation around this low spun marine air through the Sacramento Delta. As a result, temperatures were near to slightly below normal for the first few days of the month. The low moved into northern California during the night of August 5<sup>th</sup>-6<sup>th</sup>. This brought a strong push of marine air through the Delta into the San Joaquin Valley. The deep layer of cool marine air, combined with synoptic cooling, dropped temperatures sharply on the 5<sup>th</sup>. Central and southern San Joaquin Valley highs that day were only in the lower to mid 80s, some 10-15 degrees below normal.

The cold front associated with the low triggered showers and thunderstorms across the northern half of the state. However, a light dusting of snow did fall as far south as Tuolumne Meadow overnight.

The below normal temperatures continued through August 6<sup>th</sup> and 7<sup>th</sup> before the marine air finally mixed out. High pressure rebuilt into California, and temperatures warmed to near normal by August 9<sup>th</sup>, and to triple digits in the warmest Valley spots the next day. Hot weather continued on the 11<sup>th</sup>, with both Bakersfield and Fresno reaching 102 degrees.

A weak trough moved through California during the middle of the month, bringing a couple of days with below-normal temperatures. The trough only temporarily weakened the ridge, with above-normal warmth returning to the region.

By August 21<sup>st</sup>, an upper-level low developed over the Pacific west of Baja California. The low spun some subtropical moisture into southern California, with rainfall reaching the Kern County mountains and deserts. Around four-tenths of an inch of rain fell near Bodfish and Dinkey, and a tenth of an inch of rain fell in two hours at Edwards Air Force Base. The next day, an upper-level trough over the northern Pacific moved into northern California. This created a convergence zone that enhanced the rain over Madera County. A persistent band stretched southwest to northeast over the foothills and mountains, lasting for almost 4 hours. Locally heavy rain was reported, with an estimated 1.50 inch of rain at Nelder Grove. Further north, another area of thunderstorms lingered over the Sierra Nevada high country, with 1.23 inch of rain falling at Tenaya Lake.

The trough moved east of California on the 23<sup>rd</sup>, allowing high pressure to again build over the state. Temperatures warmed back to around 100 degrees in the central and southern San Joaquin Valley, and remained above normal through the end of the month. Despite a weakening of the ridge aloft over central California on August 30<sup>th</sup>, a southeast to east surface wind developed, downsloping off the Southern Sierra Nevada and

Tehachapi Mountains into the San Joaquin Valley. The airmass warmed adiabatically as it descended onto the Valley floor, resulting in highs at both Bakersfield and Fresno of 105 degrees. This was the warmest day of the month for both cities.

In the mountains and deserts, drifting smoke plumes from wildfires played havoc with temperatures and visibilities. Yosemite National Park was affected by smoke from the Big Meadow Fire, and the high temperature at Yosemite Valley fell from 99 on August 27<sup>th</sup> to 88 the next day, then rose to 97 on the 29<sup>th</sup> before cooling to 92 on the 30<sup>th</sup>. The visibility at Edwards Air Force Base fell to 2.5 miles on August 29<sup>th</sup> as the smoke plume from the Station Fire near La Canada moved north into the Kern County desert.

Bakersfield only had 5 days in August with temperatures of 100 degrees or higher. Fresno saw triple-digit heat on 11 days in August, including the last 6 days of the month. Bakersfield did not receive any rain during August. Fresno's trace of rain during the night of August 22<sup>nd</sup>-23<sup>rd</sup> was that city's only rain for the month. The rain that began falling shortly before midnight tied the record rainfall for August 22<sup>nd</sup> at Fresno—a trace in 1949.