AUGUST 2010 WEATHER SUMMARY
FOR THE CENTRAL CALIFORNIA INTERIOR

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The month started with mainly slightly above-normal temperatures throughout the region due to an upper level ridge. Dry weather has prevailed over the area, as a southwest flow in the mid and upper levels resulted in little or no cloud cover, even over the crest of the Southern Sierra Nevada.

An upper-level trough began pushing its way southward into the area on August 5th, bringing a push of marine air into the central and southern San Joaquin Valley. Temperatures cooled by several degrees—albeit to near normal—as far south as northern Kern County, although Bakersfield remained near persistence. Temperatures remained near normal the next couple of days with dry weather continuing until the next trough arrived on the 8th.

This trough had moved into the Pacific Northwest on the 7th, and it dug into central California the next day. The trough brought enough instability to trigger a few thunderstorms over the Southern Sierra Nevada as far south as Sequoia National Park. One thunderstorm near the Buck Rock Fire Lookout in Tulare County brought pea-size hail and wind gusts to 37 mph.

A persistent trough lingered over California the next several days. Pushes of marine air kept temperatures on the San Joaquin Valley floor below normal through August 12th, and Fresno only reached a high of 90 degrees on the 11th.

An upper-level short-wave ridge warmed temperatures back to near normal on the 13th, but a short-wave trough that moved through northern California on the 14th-15th kept triple-digit heat at bay, except for the normally warmer spots such as Coalinga, which did hit 100 degrees on August 14th.

Another upper-level ridge reached the California coast on August 16th. Coalinga warmed to 102 degrees, and the Kern County deserts saw highs from 101 to 108 degrees. Monsoonal moisture triggered a few thunderstorms as far north as central San Bernardino County, but strong southwest winds aloft kept any thunderstorms east of Kern County.

Bakersfield and Fresno warmed back into triple digits on August 17th, as an upper-level ridge moved over the state. An upper-level trough weakened the ridge and brought a weak push of marine air into the central San Joaquin Valley the next day. The high at the Merced Municipal Airport for the 18th was only 91 degrees, and Fresno fell short of the century mark with a high of 99.

The trough lifted northeast on August 20th, allowing the ridge to rebuild into California. Fresno warmed to 100 degrees, as did Bakersfield. Some mid-level moisture moved into California, which resulted in clouds along the Southern Sierra Nevada crest, but with no reports of rain. The

ridge was short-lived, as a stronger trough dropped into northern California on the 21st. A few thunderstorms formed along the cold front, but a strong southwesterly flow along the leading edge of the trough kept the storms north of Yosemite National Park. The trough did bring cooler weather to the central California interior, with some mountain sites reaching their highs during the morning of the 21st before cooling through the afternoon. On the San Joaquin Valley floor, the influx of marine air kept the temperature at the Merced Municipal Airport from reaching 90, and brought gusts to 20-25 mph to parts of the central and southern San Joaquin Valley during the early evening.

The main weather story for August proved to be the sharp temperature changes that occurred beginning August 23rd. A strong upper-level ridge rapidly built into California beginning that day, with temperatures warming to their highest values of the year on the 25th. Bakersfield had a high of 111 degrees that day, while Fresno was only a degree cooler at 110. Both cities tied their record highs for that date, both last set in 1931.

As the ridge pushed westward into southern California, monsoonal moisture wrapping around the periphery of the ridge triggered isolated afternoon and evening thunderstorms over the desert areas in Kern County as well as the mountains in both Kern and Tulare Counties on August 25th and again the next day. The 26th also saw a few thunderstorms develop over the Southern Sierra Nevada from Yosemite National Park south through Kings Canyon.

The ridge began to weaken on the 26th, as a strong, cold upper-level trough approached the California coast. As the trough moved inland on August 27th-29th, it brought a push of marine air into the San Joaquin Valley. Marine air spilling through Pacheco Pass generated gusts of 35-40 mph in western Merced County from the pass to Los Banos.

The cold air associated with the trough brought dramatic temperature plunges. Both Bakersfield and Fresno saw temperature drops of 31 degrees from August 25th to the 29th, and Fresno tied its record low maximum temperature of 79 degrees (set in 1957) on the 29th. The cold front also triggered isolated showers and thunderstorms over the Southern Sierra Nevada. There was a public report of light snow at Huntington Lake in the morning, and snow fell late in the day at Tuolumne Meadows.

The trough began to lift northeast on August 30th, but temperatures remained below normal through the end of the month.

Despite the unusual swings in temperatures during the last seven days of the month, the August ended up near normal for both Bakersfield and Fresno. The average monthly temperature for Bakersfield was 81.3 degrees, down 0.6 degrees from the 30-year mean temperature of 81.9 degrees. The average monthly temperature for Fresno was 79.9 degrees, which was the 30-year mean temperature.