JULY 2011 WEATHER SUMMARY
FOR THE CENTRAL CALIFORNIA INTERIOR

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July began with an upper-level ridge building into California in the wake of the storms that marked the last days of June. Temperatures warmed to near normal on the first day of the month, and continued to warm the next several days. Bakersfield recorded 9 consecutive days of triple digit heat from July 2nd-10th, and Fresno had 8 consecutive days. Both cities had highs of 106 degrees on July 4th, with Bakersfield repeating the next day.

An upper-level trough moved through the region on July 4th-6th. The trough interacted with a surge of monsoonal moisture, bringing thunderstorms to the Southern Sierra Nevada, Tehachapi Mountains and the Kern County deserts. The afternoon of July 4th saw gusts of 50-55 mph in the Kernville/Lake Isabella area, and hail up to a half-inch in diameter fell at Ponderosa in the Tulare County mountains. Heavy rain fell in Rosamond, with a spotter reporting 1.48 inch of rain that caused street flooding.

Thunderstorms redeveloped during the afternoon of July 5th. Strong winds knocked down trees and utility poles in Rosamond. The winds also caused blowing dust with zero visibility that closed Highway 58 between Mojave and California City. Flooding was reported in Rosamond and on Highway 14 at the Red Rock-Randsburg Road later in the afternoon as thunderstorms continued over the region. The storms continued the next day as the trough began moving east of the central California interior. Heavy rain was reported at Hume Lake on the 6th, with an inch of rain falling in 1 ½ hour. The trough brought cooling to the region, with Fresno having a high of "only" 100 on the 5th, although temperatures rebounded to 105 the next day as the ridge strengthened over the state behind the departing trough.

San Joaquin Valley temperatures continued in triple digits from the 7th through the 9th, with some locations—including Bakersfield—having triple-digit heat on the 10th.

Another trough reached California on July 10th. Fresno had a high of 98, ending its string of 100+ days, and marking the start of a significant cooling trend. Temperatures fell below normal on the 11th, and continued to fall as the trough lingered along the Pacific coast. Both Bakersfield and Fresno set record low maximum temperatures on July 14th, with most central and southern San Joaquin Valley stations only reaching the 80s. For Bakersfield, the record low maximum temperature of 88 on the 14th erased the only low maximum record in July of 90 degrees (set in 1966).

On July 15th-19th, temperatures rose slightly as the trough weakened and retreated toward the Pacific Northwest. Another trough set up over the region by the 20th, and allowed temperatures to once again drop below normal. Intrusions of marine air, and troughs over

the Pacific Northwest that have dug south into northern California, had been the rule for much of this month. However, on the 21st, temperatures had risen back to near normal as the trough moved over the northern Rockies. These troughs maintained a dry southwest flow over central California and kept the strong high pressure well to the south and east. This pattern continued to prevail for the next several days and allowed little change in temperatures, although temperatures warmed to around average for the latter half of July. This flow regime kept skies clear (except for a few cumulus clouds at times over the Southern Sierra Nevada crest) over interior central California for most of July, especially after the first week of the month. A few triple digits returned to the San Joaquin Valley during the 27th and 28th.

On the 28th, southeast winds aloft began to bring mid-level moisture from northern Mexico and the Desert Southwest. For the first time in approximately three weeks, isolated thunderstorms developed over the Sierra crest around Kings Canyon and points just to the north and east. The surge of monsoonal moisture continued through the end of the month, with the strongest thunderstorm activity on July 30th and the morning of the 31st. A few thunderstorms over the Southern Sierra Nevada had rain rates of an inch or more in an hour, and a severe thunderstorm moved over Edwards Air Force Base during the afternoon of the 30th. The warm nature of the monsoonal moisture kept central and southern San Joaquin Valley high temperatures around 100 degrees through July 30th.

A line of thunderstorms moved through the central and southern San Joaquin Valley during the morning of July 31st, bringing record-tying rain to both Bakersfield and Fresno. After the thunderstorms moved out of the San Joaquin Valley, skies began to clear and temperatures warmed rapidly. With the cloud cover, the temperature at Fresno was between 70-72 degrees for most of the morning of the 31st. But once the clouds began to clear, the temperature warmed at a rate of 8 degrees per hour from 11 AM to 1 PM (reaching 88 degrees), and topped out at 97 degrees at 5 PM.

Both Bakersfield and Fresno were 0.6 degrees warmer than normal for July. However, July was the last month to use the 1971-2000 30-year climatological normals. The new normals, for 1981-2010, were implemented of August 1st. The new average temperature for July is slightly warmer than the 1971-2000 average. Using the new normals, July 2011 was slightly cooler than normal, with Bakersfield down 0.1 degree, and Fresno down 1.0 degree. Both Bakersfield and Fresno had 11 days with highs of 100 or above in July.