**SEPTEMBER 2010 WEATHER SUMMARY**
**FOR THE CENTRAL CALIFORNIA INTERIOR**

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The upper-level trough that brought the unseasonably cool weather to the region in late August lifted northeast at the start of September. This allowed an upper-level ridge to build into California, bringing a return to above-normal temperatures. Fresno warmed from a high of 79 degrees on August 29th to a high of 103 degrees on September 3rd, and Bakersfield went from a high of 80 on August 29th to a high of 103 on the 3rd. And this was after the record-tying heat of August 25th.

The above-normal temperatures were short-lived, as another strong upper-level trough approached the coast on September 7th, and moved inland the next day. The marine layer deepened through the day on the 7th, spilling through Pacheco Pass as well as pushing into the Sacramento River Delta. This brought another surge of cold marine air into the San Joaquin Valley, plunging temperatures as much as 20 degrees from the 7th to the 8th; Fresno had a high of 97 on the 7th, and a high of only 77 on the 8th.

Temperatures fell a few degrees more on the 9th as the trough moved through interior central California. Scattered showers formed over the Southern Sierra Nevada beginning during the evening of September 8th, but rainfall amounts were mostly only a few hundredths with a light dusting of snow over the high country. However, a few showers did drift westward into the Southern Sierra Nevada foothills, and even into the east side of the San Joaquin Valley. Sprinkles were reported as far west as Visalia late in the evening of the 8th.

An upper-level ridge built into the state on the 9th behind the trough, warming temperatures to near normal the next day, and a few degrees above normal on the 12th. A series of upper-level short-wave troughs moved through the Pacific Northwest beginning on the 12th. These waves flattened the ridge and deepened the marine layer along the coast. Marine air pushed as far south as Merced County on September 13th, with high temperatures in the County mainly in the mid 80s. Temperatures over much of Merced County remained in the mid to upper 80s through the 18th as the upper-level short-waves brushed the County.

Further south, the upper-level ridge remained in place, keeping the short-waves north of Fresno. As a result, temperatures in Fresno were in the lower to mid 90s from September 12th through the 18th. The ridge subsequently weakened as a strong upper-level trough approached California. The trough moved inland on the 22nd, bringing a very cold airmass to the central California interior. The high temperature for Fresno on September 21st was 87 degrees; the next day, the high was only 76. Bakersfield also saw an 11-degree drop in high temperatures, from 86 on the 21st to 75 on the 22nd.

The trough moved rapidly inland, allowing temperatures to rebound. Both Bakersfield and Fresno had warmed to above normal by September 24th, and reached the mid 90s by the 26th. The

airmass that moved into California was very dry as well as warm, and relative humidities in the Kern County Mountains plummeted into the teens and single digits; some of the latter sites only recovered into the teens at night. A Red Flag Warning was issued for the Kern County Mountains for September 27th-28th.

As a strong ridge of high pressure built over the area, temperatures continued to rise and reached around 10-15 degrees above the 30-year average. Triple digits were reached in Fresno and quite a few other locations in the San Joaquin Valley from the 27th through the 30th. In addition, a moist tropical airmass began moving into the area from the southeast, bringing mid and high clouds to the southern half of the state. With a cloud cover to inhibit overnight radiative cooling, new record high minimum temperatures were reached in both Bakersfield and Fresno on the 29th; both locations only dropped to 72 degrees that morning. The next night was equally as warm, with record high minimum temperatures again being recorded at both cities.

With a warm, moist unstable airmass over the region, thunderstorms developed over the mountains and deserts. A couple of thunderstorms drifted over the far south end of the San Joaquin Valley, with 0.03 inch of rain falling in southwest Bakersfield during the afternoon of the 30th, and small hail was reported near Arvin. In the Tehachapi Mountains, 0.53 inch of rain fell near the city of Tehachapi in only an hour in the late afternoon.