

APRIL 2011 WEATHER SUMMARY FOR THE CENTRAL CALIFORNIA INTERIOR

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The first day of April saw temperatures in parts of the central and southern San Joaquin Valley approach record values as an upper-level ridge of high pressure was firmly in place over the central California interior. Bakersfield had a high temperature of 88 degrees, tying the record high for April 1st, previously set in 2002. Fresno's high of 86 fell short of its April 1st record high of 90 (set in 1966), but the low for the day at the Fresno-Yosemite International Airport was 55 degrees, tying the 122-year old record high minimum temperature, set in 1889. The above-normal warmth continued overnight, with Fresno tying its record high minimum temperature again the next day, with a low of 57 degrees; the record previously had been set in 1939. The Merced Regional Airport also had a record high on April 1st, and both the Merced Regional and Madera Municipal Airports had consecutive record high minimum temperatures on the 1st and 2nd. April 1st turned out to be the warmest day of the month for the central and southern San Joaquin Valley.

One consequence of the ridge was the development of patchy dense fog during the morning of the 1st. The combination of above-normal temperatures on March 31st, a stable airmass in place, and lingering standing water set the stage for evaporation of some of the standing water into the lowest levels of the atmosphere. The airmass cooled to near saturation by daybreak on the 1st, and patchy dense fog formed from Hanford to Selma with visibilities down to only a few hundred feet in places.

The ridge gave way, temporarily, to a short-wave trough that moved through the northern half of California on April 2nd. This upper-level disturbance brought cooler temperatures to the region and breezy conditions, and even a few sprinkles during the evening. The short-wave moved east of California on the 3rd, allowing the ridge to rebound. Temperatures warmed back above normal on April 4th and 5th, before the next storm brought cooler weather.

An upper-level trough dropped out of the Gulf of Alaska and approached the California coast on April 6th. This feature brought cooler temperatures, with Fresno down 6 degrees from the 5th, and Bakersfield down 4 degrees. The trough moved over interior central California the next day, bringing gusty winds, scattered mainly afternoon and evening thunderstorms, and much colder temperatures. The high at Fresno on April 7th was only 55 degrees, down 20 degrees from the previous day. Bakersfield had a high of 59 degrees, down 18 degrees from the 6th. There were several reports of ¼-½ inch hail on the San Joaquin Valley floor, and snow in the Southern Sierra Nevada foothills fell as low as Bootjack, Oakhurst and Granite Station. Nineteen inches of snow fell at Lodgepole; this was the highest amount reported from either the Southern Sierra Nevada or the Tehachapi Mountains. In the Kern County deserts, winds gusted to 45-55 mph on April 7th behind the cold front.

The upper-level low associated with the trough moved to near Point Conception during the afternoon of April 8th. This shifted the focus of precipitation westward, to over the west side of the San Joaquin Valley. Even so, precipitation was mostly light. A deep, cold airmass filled the San Joaquin Valley, and the high temperatures at Bakersfield and Fresno on the 8th were the same as the previous day.

Temperatures began to recover somewhat from the 9th through the 12th, after the trough shifted east. The winds aloft generally prevailed from the west (an onshore flow), but a dry weather pattern remained over the area. Although temperatures in the central and southern San Joaquin Valley warmed to the mid 60s to around 70 on April 10th-12th, temperatures remained below normal throughout interior central California. Temperatures briefly cooled again on the 13th as another upper-level trough passed over the area, but rebounded on the 14th. The trough also brought gusty winds to the Kern County mountains and deserts on the 13th, with gusts between 45-50 mph reported.

Temperatures warmed to above normal on the 15th, as a weak ridge of high pressure began to set up over the area for the next couple of days. Temperatures in the central and southern San Joaquin Valley warmed to around 80 degrees on April 17th and 18th, then began cooling as an upper-level short-wave trough reached central California. This trough brought wind gusts to around 45 mph to the Kern County desert and mountain areas on the 18th; a Wind Advisory was issued for these areas for most of the day and until the evening. A trough brought the next round of precipitation, including rain and higher elevation snowfall, to the region on the 20th and 21st, although locations received little, if any, measureable rainfall in the San Joaquin Valley. However, the far eastern side of the San Joaquin Valley did receive up to 0.18 inch of rain. The Southern Sierra Nevada foothills and the Tehachapi Mountains reported up to a half inch of rain, and the higher elevations of the Southern Sierra Nevada had amounts up to three-quarters of an inch.

Temperatures across the central California interior remained near to slightly below normal through April 26th, with generally weak ridging dominating the area. Skies were mainly clear with no precipitation over the area. Upper-level disturbances moving across central California brought repeated periods of gusty winds to the Kern County mountains and deserts.

A weak upper-level ridge moved over California on April 27th-28th, warming temperatures back to near normal, but temperatures cooled again the last two days of the month as a final trough reached the central California interior.

The last storm of April brought gusty winds to the WFO Hanford warning/forecast area, but no precipitation. Gusts up to 45 mph were reported in the San Joaquin Valley on the 29th; and winds approached High Wind Warning criteria in the Kern County mountains and deserts, with occasional gusts of 70 mph or higher. A Wind Advisory was issued for the Kern County mountains and deserts for the late afternoon of April 28th through the day on the 29th, and for much of the central and southern San Joaquin Valley for the 29th.

Behind the cold front, the upper-level jet remained over the San Joaquin Valley on the 29th; and winds picked back up in the afternoon and into the late night hours, especially in the San Joaquin

Valley. Therefore, the Wind Advisory for the Valley was continued through the early morning hours of April 30th. The month ended with a recovery in temperatures and a decrease in winds after the upper-level jet moved out of the area.

In summary, the NWS Hanford warning and forecast area experienced near normal to slightly below normal values for overall monthly temperature for April 2011, with Fresno a half degree below normal and Bakersfield 1.6 degrees below normal. Precipitation for the region was below normal for the month, with the central and southern San Joaquin Valley between 40 and 50 percent of normal. For Bakersfield and Fresno, the only measurable precipitation occurred with the storm of April 7th-8th.