

## **FEBRUARY 2007 WEATHER SUMMARY**

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After a colder and drier than normal January, February 2007 was remarkable for its being unremarkable. Fresno's average temperature for the month matched the 30-year average, and the rainfall at the Fresno Air Terminal was 0.17 inch above the normal for February.

February began with a weak short-wave trough moving out of California. In its wake, low clouds filled much of the central and southern San Joaquin Valley, and pushed into the Sierra Nevada foothills, where the clouds caused patchy drizzle and fog.

Behind the trough, an upper-level ridge built into California. This high pressure brought warming to the central California interior, and warmed Bakersfield to a high of 77 degrees on February 5<sup>th</sup>, just one degree shy of its record for that date (78 degrees, set in 1963). The warming was short-lived, as the first of 3 major upper-level Pacific storms approached the state.

The first storm consisted of a pair of upper-level troughs. The first trough moved into central California on the 6<sup>th</sup>, producing mostly virga initially. Measurable rain ultimately spread as far south as Fresno County before the trough moved east, with the second trough close behind. As with its predecessor, precipitation was mainly over the northern half of the Hanford warning/forecast area. Then, an upper-level vorticity rounded the trough during the late afternoon of February 13<sup>th</sup>, bringing moderate showers to the south end of the San Joaquin Valley and the adjacent mountains. The storms brought locally heavy snow to the high country of the Southern Sierra Nevada, with snowfall estimates of 1-½ to 2 feet, based on SNOTEL reports and observed snow/water ratios.

Strong high pressure aloft brought warm, dry weather to the region behind the troughs, and some patchy late night and morning fog to the central and southern San Joaquin Valley. High temperatures in the central and south Valley warmed into the mid 70s on the 17<sup>th</sup>, giving Fresno its first 70-degree day of the year. A blocking pattern kept the high pressure along the coast through the middle part of the month. The pattern broke down quickly as an upper-level trough moved into California. The main energy from this system moved through Kern County on the 18<sup>th</sup>-19<sup>th</sup>, with 0.29 inch of rain falling at Meadows Field, Bakersfield. Runoff from the Tehachapi Mountains caused some road flooding in the far south end of the San Joaquin Valley.

The second major storm reached central California on the 22<sup>nd</sup>-23<sup>rd</sup>, and brought the first severe weather of the season to the central and southern San Joaquin Valley. This was a very cold system, and snow fell as low as the Sierra Nevada foothills, with up to 6 inches of snow falling in the Mariposa County foothills. Snow amounts in the foothills tapered off sharply to the south, with less than 2 inches being reported in the Tulare County foothills.

Strong thunderstorms developed over the central and southern San Joaquin Valley during the afternoon of the 22<sup>nd</sup>, and persisted into the early evening hours. At least two funnel clouds were observed over southern Madera County; luckily, neither touched down. Further south, a thunderstorm that developed southwest of Hanford intensified rapidly as it moved east, becoming severe as it reached the Kings/ Tulare County line. A spotter reported hail in excess of ¾-inch in diameter from the storm.

Behind the storm, high pressure again moved over California, bringing clear skies to the central California interior. At the same time, cold air remained pooled over the San Joaquin Valley floor. This allowed low temperatures to cool into the upper 20s in the normally coldest, wind-sheltered Valley locations during the morning of February 24<sup>th</sup>.

The final storm of the month reached central California on the 25<sup>th</sup>. This storm brought more cold air into the region, and again snow fell into the Sierra Nevada foothills, down to as low as 1600 feet at Coarsegold. There was a break in the precipitation on the 26<sup>th</sup>, but showers resumed on the 27<sup>th</sup> and continued into the last day of the month. The first short-wave trough brought around a foot of new snow to the Southern Sierra Nevada, and triggered wind gusts of 55-65 mph over the Kern County mountains and deserts. The second short-wave trough had a stronger moisture tap, and dropped 2-3 feet of new snow above 6000 feet, and a foot of snow as low as Ponderosa Basin (at 3500 feet in Mariposa County). Over 4 inches of snow fell in the Kern County mountains above 5000 feet, and icy conditions closed Interstate 5 over the Grapevine.