

## **JANUARY WEATHER SUMMARY**

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High pressure built over California at the beginning of January, in the wake of a trough that moved through the region in late December. The ridge brought a stable airmass to the central California interior, with areas of dense fog developing in the central and southern San Joaquin Valley the night of the 1<sup>st</sup>.

A Pacific storm reached California the night of January 3<sup>rd</sup>-4<sup>th</sup>, bringing as much as two feet of new snow to the high country of the Southern Sierra Nevada. The storm also brought strong winds to the Kern county mountains and deserts, with gusts to 72 mph over the crest of the El Paso Mountains early in the morning of the 5<sup>th</sup>.

The storm brought cold air to the San Joaquin Valley, and behind it, an upper-level ridge built over California. As skies cleared, low temperatures fell below freezing. This cold pool lingered over the central and southern San Joaquin Valley for several days, as the ridge kept a table pattern in place with no mechanism to scour out the cold air.

The upper-air pattern changed as an upper-level trough dropped into the Great Basin on the 10<sup>th</sup> and 11<sup>th</sup>, deepening southwestward into southern California. This set up a northeast flow aloft over central California, and brought an Arctic airmass into the state for unseasonably cold weather. A deep freeze developed over the central and southern San Joaquin Valley, with low temperatures on the morning of January 12<sup>th</sup> falling into the mid to upper teens in the rural areas of the west side of the San Joaquin Valley, and into the lower 20s even in the urban areas.

The coldest temperatures were on the mornings of January 12<sup>th</sup>-16<sup>th</sup>, but sub-freezing temperatures continued through the morning of the 22<sup>nd</sup>. Fresno had 19 consecutive days with lows of 32 degrees or colder (January 6<sup>th</sup>-24<sup>th</sup>), just 2 days shy of the record of 21 days, set from January 3<sup>rd</sup>-23<sup>rd</sup>, 1947. Bakersfield had a string of 14 consecutive days with lows of 32 degrees or colder (January 11<sup>th</sup>-24<sup>th</sup>), also just two days shy of its record of 16 consecutive freezing days (January 5<sup>th</sup>-20<sup>th</sup>), also in 1947.

The northeast flow aloft worked down to the mountains at times, bringing periods of gusty winds to the higher elevations of the Southern Sierra Nevada and Tehachapi Mountains at times, as well as to the peaks in the Kern county deserts. Northeast winds gusted to 45 mph over the El Paso Mountains and into east-facing canyons of the Southern Sierra Nevada on January 21<sup>st</sup>, but did not lower to the desert floor.

An upper-level low dropped out of the Gulf of Alaska during late January, and became nearly stationary off the central California coast. The cyclonic flow around the low brought south winds to central California on the 25<sup>th</sup>, with downslope winds warming

Bakersfield to a high of 71, the first time temperatures climbed into the 70's at Meadows Field since December 9<sup>th</sup>.

The low also brought a narrow fetch of mid-level moisture into the region. Snow developed over the Tehachapi Mountains and the Southern Sierra Nevada late on January 27<sup>th</sup>, and continued through the morning of the 28<sup>th</sup>. Although the snow was sporadic, a few locations received up to 8 inches of new snow. Moderate rain spread into the central and southern San Joaquin Valley, with both Fresno and the Hanford airport receiving 0.50 inch of rain on January 27<sup>th</sup>-28<sup>th</sup>, although Bakersfield reported only 0.09 inch of rain from the storm.

The low pressure system moved southeast on the 30<sup>th</sup>, coming inland over northern Baja California. An elongated upper-level ridge built along the coast, with a wide trough over much of the United States and Canada. This set up a northerly flow aloft over California, bringing a drier airmass to the region. As a result, fog in the central and southern San Joaquin Valley was patchy in nature for the last few nights of the month.

Because of the dry, cold airmass over California much of January, Bakersfield had its 12<sup>th</sup> driest January on record, while Fresno had its 26<sup>th</sup> driest January. Bakersfield tied for its 17<sup>th</sup> coldest January on record (with January 1999), while Fresno tied for its 26<sup>th</sup> coldest January (with January 1897).