DECEMBER 2008 WEATHER SUMMARY

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December began with the central California interior under an upper-level high-pressure ridge. This ridge brought a stable airmass to the region, and strengthened the inversion over the San Joaquin Valley. As a result, areas of low clouds and night/morning dense fog were a daily occurrence during the first few days of the month. Drizzle occurred during the morning of December 2nd, and enough moisture condensed out of the lowest levels of the airmass for a respite from widespread dense fog on the 3rd and 4th, although patchy dense fog did occur. Rather than widespread dense fog, a layer of low altitude stratus formed and persisted over the San Joaquin Valley. More widespread dense fog returned to the central and southern San Joaquin Valley on the 5th and 6th.

An upper-level low that developed southwest of Point Conception moved onshore into southern California during the night of December 6th-7th, then moved across the southern part of the state during the day. The low drew a fetch of subtropical moisture into the central California interior from the south, with up to a half inch of rain falling in the Kern County mountains and deserts, and two inches of new snow falling as far north as Ponderosa in the Sierra Nevada in southern Tulare County.

Behind the departing low, an upper-level ridge over the eastern Pacific built back into California, bringing more stratus and patchy fog during the morning of December 8th. A weak upper-level disturbance moved over the central California interior, bringing light rain to the central and southern San Joaquin Valley; a few hundredths of an inch fell at Fresno. High pressure rebuilt over the central California interior, bringing more dense fog to the central and southern San Joaquin Valley.

The weather pattern changed on December 12th, as a series of upper-level troughs began moving through the central California interior. These troughs brought several days of precipitation to the region, as well as a push of unseasonably cold air. The first storm brought up to an inch of rain to the central and southern San Joaquin Valley, and heavy snow to the Southern Sierra Nevada and Tehachapi Mountains. Wofford Heights, near the southern end of the Sierra Nevada received a foot of new snow on December 15th, as did Camp Nelson, further north in Tulare County. Despite the low snow levels, little snow fell in the Sierra Nevada foothills.

The next storm reached the central California Interior during the afternoon of December 16th. This storm dropped south along the coast, and as a result had a stronger impact on the Kern County mountains and desert than on the Sierra Nevada north of Kings Canyon. In the Kern desert, California City had 6 inches of new snow, and Rosamond received 2 inches. In the Kern County mountains, a foot of snow fell at Alpine Mountain. Rain that developed over San Luis Obispo and Monterey Counties during the afternoon of the 16th

moved into the west side of the San Joaquin Valley, and actually produced light snowfall at Harris Ranch.

As the storm crossed southern California and into Arizona, skies cleared over the central California interior. In the central and southern San Joaquin Valley, temperatures fell into the mid 20s during the morning of December 18th. The lowest temperatures were recorded in Merced and western Fresno Counties, where durations below 28 degrees were as much as 5 hours.

The next storm arrived on the 21st, bringing another round of rain and mountain snow to the region. SNOTEL observations in the Southern Sierra Nevada indicated that between one and two feet of snow fell over the higher elevations on the 21st and 22nd. Another storm reached California on Christmas Eve, but there was little (if any) break between the instability showers behind the exiting storm and the arrival of the new system. Snow levels fell below 3000 feet with this storm, with snow falling at Kernville. Gusty winds moved through the region on Christmas Day, with gusts to around 40 mph hitting Hanford around midday.

After this system passed, widespread dense fog did not return for several days. This lack of sky cover, combined with light winds, allowed for good radiational cooling. This resulted in three days of freezing temperatures in the central and southern San Joaquin Valley, although widespread critical temperatures were not reported.

High pressure returned to the region by the 30th, and widespread fog returned with patchy dense fog over the central and southern San Joaquin Valley just after sunset during that evening. The fog remained through the afternoon hours of the 31st. Cloud ceilings began to rise, and visibility began to improve over the central and south valley on New Year's Eve, just before the start of the New Year.

Bakersfield ended the 2008 calendar year with only 3.24 inches of rain (49.9 percent of normal), for its eighth driest calendar year on record. This was the second consecutive dry year for Bakersfield, as 2007 was the fifth driest year on record. Fresno fared better, with a calendar year total of 8.46 inches, or 75.3 percent of normal.

Both Fresno and Bakersfield had warmer than normal years. Bakersfield had an annual average temperature of 66.0 degrees, 1 degree above normal. Fresno had an annual average temperature of 65.1 degrees, or 1.9 degrees above normal. This was enough to give Fresno a tie for its ninth warmest year on record. (Bakersfield tied for its 30th warmest year.)