

## Storm Data and Unusual Weather Phenomena - December 2008

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
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### CALIFORNIA, South Central

(CA-Z089) W CENTRAL S.J. VALLEY, (CA-Z090) E CENTRAL S.J. VALLEY, (CA-Z091) SW S.J. VALLEY, (CA-Z092) SE S.J. VALLEY

12/01/08 00:00 PST	0	Dense Fog
12/05/08 12:00 PST	0	

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 overnight and morning dense fog were a daily occurrence during the first few days of the month. Visibilities near zero occurred in many parts of the San Joaquin Valley. 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.

(CA-Z089) W CENTRAL S.J. VALLEY, (CA-Z090) E CENTRAL S.J. VALLEY, (CA-Z091) SW S.J. VALLEY, (CA-Z092) SE S.J. VALLEY

12/10/08 02:00 PST	0	Dense Fog
12/13/08 05:00 PST	0	

Behind a departing low, an upper-level ridge over the eastern Pacific built into California, bringing more stratus and patchy dense 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 worst dense fog conditions were prevalent during much of the overnight and morning hours on December 9, 10, 11, and 12, when visibilities were lowered to near zero in some areas due to very dense fog.

(CA-Z095) KERN CTY MTNS, (CA-Z098) INDIAN WELLS VLY, (CA-Z099) SE KERN CTY DESERT

12/13/08 04:00 PST	1.50K	Strong Wind (MAX 46 kt)
12/14/08 03:00 PST	0	

(CA-Z089) W CENTRAL S.J. VALLEY, (CA-Z090) E CENTRAL S.J. VALLEY

12/14/08 04:00 PST	0	Frost/Freeze
12/14/08 08:00 PST	0	

(CA-Z095) KERN CTY MTNS, (CA-Z096) S SIERRA MTNS, (CA-Z097) TULARE CTY MTNS

12/14/08 20:24 PST	0	Winter Storm
12/16/08 04:00 PST	0	

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. 1648 PST: Ponderosa Basin 18 inches of snow so far. Locations in the higher terrain saw very high snowfall totals with this storm. Between 2 to 4 feet of snow fell at locations such as Tenaya Lake, Poison Ridge, Lower Kibbie Ridge, Pascoes, Wet Meadows, and Casa Vieja Meadows. Despite the low snow levels, little snow fell in the Sierra Nevada foothills. This storm also brought strong winds to the Kern Mountains and the Deserts with peak wind gusts reported between 50 to 55 mph.

(CA-Z095) KERN CTY MTNS, (CA-Z099) SE KERN CTY DESERT

12/17/08 04:00 PST	0	Winter Storm
12/17/08 20:00 PST	0	

(CA-Z089) W CENTRAL S.J. VALLEY, (CA-Z090) E CENTRAL S.J. VALLEY, (CA-Z091) SW S.J. VALLEY

12/18/08 03:00 PST	0	Frost/Freeze
12/18/08 09:00 PST	0	

Another major winter 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.

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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.

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(CA-Z089) W CENTRAL S.J. VALLEY, (CA-Z090) E CENTRAL S.J. VALLEY, (CA-Z091) SW S.J. VALLEY, (CA-Z092) SE S.J. VALLEY, (CA-Z098) INDIAN WELLS VLY, (CA-Z099) SE KERN CTY DESERT

	12/21/08 02:55 PST		0.13M	Strong Wind (MAX 43 kt)
	12/25/08 22:00 PST		0	

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(CA-Z095) KERN CTY MTNS, (CA-Z096) S SIERRA MTNS, (CA-Z097) TULARE CTY MTNS

	12/21/08 16:00 PST		0	Winter Storm
	12/25/08 20:00 PST		0	

Another winter storm arrived in Central California 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. Winds across the valley caused isolated reports of downed powerlines and small trees with peak wind gusts near 50 mph with the cold front.

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.

Strong winds also occurred with this storm across the Kern deserts with gusts to near 50 mph common, especially near and below canyons and passes.

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(CA-Z089) W CENTRAL S.J. VALLEY, (CA-Z090) E CENTRAL S.J. VALLEY, (CA-Z091) SW S.J. VALLEY, (CA-Z092) SE S.J. VALLEY

	12/26/08 03:00 PST		0	Frost/Freeze
	12/28/08 08:00 PST		0	

After the last major winter storm of December finally passed to the east of central California, 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 sub-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. The dense fog caused visibilities to fall to between one-half to one-quarter miles at times across many sections of the San Joaquin Valley. 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.