DECEMBER 2009 WEATHER SUMMARY
FOR THE CENTRAL CALIFORNIA INTERIOR

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December began with a flat upper-level ridge over California, keeping high temperatures as much as 5 degrees above normal. However, clear skies over interior central California allowed overnight lows to fall into the upper 20s to mid 30s, mostly offsetting the effects of the above-normal highs. As a result, the mean temperatures at both Bakersfield and Fresno were near to only slightly above normal.

This pattern persisted through December 5th. An upper-level trough approached the California coast during the 5th and moved into the San Joaquin Valley that night. Initially, the trough brought a push of cold Arctic air, which dropped temperatures around 5 degrees from the 5th to the 6th; although highs on the 6th were only slightly below normal.

The precipitation arrived during the early morning hours of December 7th. Up to a half inch of rain fell on the San Joaquin Valley floor; a few flurries were mixed with the rain, but did not stick to the ground. Due to the very cold nature of the airmass behind the cold front, snow levels plummeted. Snow was reported in Oakhurst and Springville, at elevations between 2200 and 2400 feet. Yosemite Valley received 8 inches of new snow, and a foot of snow fell on the Grapevine, closing Interstate 5 through Tejon Pass. Highway 58, through the Tehachapi Pass at a similar elevation, also was closed by the snow. Strong wind gusts developed over the Kern County desert portion of the Mojave Desert behind the cold front, and gusts approaching 80 mph were recorded during the evening of the 7th.

A short-wave ridge moved over the state on December 8th, bringing clear skies and light winds. Moring low temperatures in the central and southern San Joaquin Valley fell into the lower to mid 20s at the coldest locations during the early morning hours of the 8th, and only a few places had lows near 32 degrees. Similar lows were reported the following morning, and central and south Valley highs struggled to reach 50 on both December 8th and 9th.

Another trough approached the California coast during the night of December 9th-10th. High clouds ahead of the trough helped moderate overnight lows, preventing a third night of a widespread freeze. Then rain came to the San Joaquin Valley with snow in the mountains. The greatest snow accumulations were above the 7000 feet elevation on Dec 11th through the 13th, due to a series of low pressure systems associated with the general trough pattern. Snowfall amounts from the 12th through the morning of the 13th averaged around 3 feet above 7000 feet with locally higher amounts to nearly 5 feet. Temperatures warmed on the 11th as a subtropical feed that moved over the area, bringing plenty of moisture. The warm, moist airmass also triggered isolated thunderstorms over the central

and southern San Joaquin Valley. There was heavy rain in the mountains up to around the 7000-foot elevation on the 11th and 12th, prior to changing to snow during the night of the 12th. The snow continued through the day on the 13th, with snow levels dropping to around 5000 feet as cooler air filtered into the region.

Tule fog returned to the central and southern San Joaquin Valley on December 14th, and increased in coverage each day through the 17th. The fog lifted into a stratus deck during the afternoon of the 17th and persisted through the afternoon of the 19th, as a ridge of high pressure became established over the area. The stratus started eroding from the southern San Joaquin during the late morning of the 19th, then kept clearing toward the central part of the valley by the afternoon. Some patchy fog was observed on the night on the 19th-20th, and again on the night of the 20th-21st. Rain returned to the valley with snow in the higher elevations of the Sierra Nevada (started at around 9000 feet) on the 21st as another trough of low pressure that over the area. By the morning of the 22nd, the cold air behind the low pressure center moved over the area, causing gusty winds even over the San Joaquin Valley, and snow levels lowered dramatically (below 2500 feet by the late morning). Interstate 5 over the Grapevine was closed during the morning of the 22nd due to snow. Winds gusted to 40 mph at Fresno Yosemite International Airport on the 22nd and to 46 mph at the Madera Municipal Airport. Winds gusted as high as 78 mph in the Kern County deserts, and a few dead trees were toppled near Tehachapi by gusts in the 40-45 mph range.

The cold air remained trapped in the San Joaquin Valley after the storm moved east of the region. Freezing temperatures were reported on the morning of December 24th, with lows in the rural areas dropping into the mid 20s. Clouds ahead of the next storm moved into the region Christmas Day, limiting the extent of the freezing temperatures and heralding the arrival of more precipitation to the region.

Precipitation began over the central San Joaquin Valley on December 26th, but winds gusting as high as 56 mph over the far south end of the Valley kept Bakersfield dry that day. The storm track shifted north the next couple of days, with only light rain falling on the Valley floor on the 27th-29th, but staying north of Meadows Field. Heavier precipitation moved into central California on December 30th, bringing Bakersfield a near-record rainfall of 0.39 inch (the record for the 30th is 0.40 inch, set in 1952). This time, the storm track was more southerly, as Fresno only had 0.05 inch of rain on the 30th. In the Southern Sierra Nevada, up to a foot of snow fell in the high country.

The heavy rain at Bakersfield helped push the month's total precipitation to over 200 percent of normal, as Meadows Field recorded a total of 1.66 inch. The normal rainfall for December at Bakersfield is 0.76 inch. Fresno also had an above normal rainfall of 2.41 inches; the December normal is 1.34 inch. For the calendar year 2009, both Fresno and Bakersfield had about 80 percent of their normal rainfalls; Fresno was at 80.9 percent of normal, and Bakersfield at 78.7 percent of normal.