NOVEMBER 2008 WEATHER SUMMARY

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November was overall a warm month with precipitation amounts that were generally around normal to above normal throughout the forecast area. High pressure dominated for most of the month, particularly the second and third weeks of the month. However, the first and last weeks of the month were cool and wet due to long-wave troughs of low pressure which allowed for generally normal precipitation. Were it not for these brief periods of rainfall, November would have been an even warmer month. This month was the 10th warmest for Fresno and the 19th warmest for Bakersfield since records began for these locations. The month basically began with above normal precipitation and below normal temperatures until Veteran's Day, when temperatures began to warm and remained above normal until the week before Thanksgiving. Temperatures generally fell back to below normal by the week of Thanksgiving when fog returned to the valley, except for the low pressure system that brought quite a bit of rainfall to the valley on the night of the 25th and the entire day of 26th. By Thanksgiving morning (the 27th), fog returned to the valley as soon as the rain ended; temperatures were below normal there for the remainder of the month. Temperatures began to rebound over the foothills, mountains, and desert for the last two days of the month. However, most precipitation fell as rain throughout the area, including the mountains.

The storm that arrived at the beginning of November brought locally heavy rain to the Kern County deserts and gusty winds to both the mountains and the deserts. Road flooding was reported near Randsburg and Rosamond, and rain falling on the El Paso Mountains produced runoff that flooded the Red Rock-Randsburg Road. West winds gusted to 45-50 mph over the Kern County mountains and deserts on the 4th as a dry cold front moved through central California in the wake of the storm.

The next storm arrived November 8th. Showers and thunderstorms developed over the San Joaquin Valley floor during the evening, with one thunderstorm dropping 0.37 inch of rain in only 10 minutes. Minor street flooding was reported from this storm, possibly due to debris-clogged storm drains.

The middle two weeks of the month proved much warmer than normal with several record high temperatures broken. A persistent upper-level ridge over California from November 10th through around the end of the third week of the month allowed temperatures to warm to well above normal; the warmest period during this time was from the 15th until the 17th when daily maximum temperatures reached the lower 80s. The high pressure ridge that brought these record and near-record temperatures to the central and southern San Joaquin Valley at mid-month also evaporated moisture from the soil. With moisture in the lowest levels of the airmass over the Valley floor, conditions were primed for Tule Fog development. The Valley fog began to develop during the early

morning of November 13th. This first fog episode was characterized by its patchy nature. It formed primarily in the lowest areas of the San Joaquin Valley and burned off by the late morning. As the high-pressure ridge continued to strengthen, fog development was mostly inhibited as the lowest levels of the airmass dried out. As the ridge began to weaken and temperatures cooled, humidities over the Valley floor began to increase again, and the airmass began cooling to near saturation overnight.

Dense fog developed near Visalia during the evening of November 21st and became widespread through much of the Valley by daybreak on the 22nd. Dense fog redeveloped during the night of the 22nd-23rd, and continued through late morning. This scenario was repeated the next night as well, before an approaching upper-level trough further weakened the ridge and brought enough mixing to inhibit fog development.

Southeast winds ahead of the approaching upper-level trough brought gusts to 45-50 mph over the Kern County mountains, but these winds did not work down to the San Joaquin Valley floor.

The trough brought significant rainfall amounts to the region on November 25th-26th, with Fresno and Bakersfield receiving around half of their monthly rain totals from this storm. Rainfall amounts in the Kern County mountains locally exceeded 1.5 inches, while sites in the central and southern San Joaquin Valley saw amounts up to three-quarters of an inch. A Flash Flood Watch was issued for the Piute burn area south of Lake Isabella, but fortunately the ground was able to absorb the rainfall.

There was little snow in the mountains, as the low pressure systems during the month each brought some influx of tropical, moist air, keeping snow levels initially at 9000 feet or higher. Snow levels began falling during the morning of the 26th, with light snow falling at Hume Lake. By mid-morning, the California Highway Patrol had chain restrictions on Highway 168, as there was enough snow on the road to impede travel. Also, just after Thanksgiving, there were some trace amounts of snow in the mountains in Kern County after the rain tapered off, since the air had cooled off sufficiently by that time.

With abundant ground moisture, dense fog developed over parts of the central and southern San Joaquin Valley during the early morning of the 27th. The fog lifted into a stratus layer during the afternoon and evening, keeping the Valley free on dense fog the night of the 27th-28th. Dense fog did redevelop just before daybreak on the 29th, lasting into the late morning. November ended on a foggy note in the central and south Valley, with dense fog developing shortly after midnight on the 30th and persisting through midday.

As far as the rainfall totals go, locations in the northwestern side of the valley reported from around a tenth of an inch to just over half inch for the month; this was the driest area of the San Joaquin Valley. The entire southern side of the San Joaquin Valley received most of its rainfall during the nighttime on the 25th and the early morning hours of the 26th, particularly along interstate 5 and the Kern county portion of highway 99.

Both Fresno and Bakersfield had above normal monthly rainfall totals; Fresno was 1.37 inches which was 0.27 inch above the normal. Bakersfield reported 1.06 inches for the month which was 0.47 inch above normal.

Bakersfield was 1.9 degrees above normal with a monthly average temperature of 67.2, and Fresno was 67.6 degrees, or 4.6 degrees above the normal of 63 degrees (10^{th} warmest November on record).