NOVEMBER 2013 WEATHER SUMMARY
FOR THE CENTRAL CALIFORNIA INTERIOR

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November began with the central California interior under an upper-level ridge that warmed temperatures well above normal. The high at Fresno on November 1st was 79 degrees, seven degrees above normal. Bakersfield reached 77 degrees, five degrees above normal. The warming trend was short lived, though, as a cold front moved through the region on the night of November 2nd-3rd, bringing gusty winds to the mountains of Kern County and much cooler temperatures. Winds gusted to 45-55 mph through and below the passes and canyons of the Kern County mountains during the early morning of the 3rd. The high at Fresno on November 3rd was 67 degrees, eleven degrees cooler than the previous day, and Bakersfield only reached 65 degrees, down 14 degrees from the previous day.

High pressure subsequently built back into California, with temperatures warming back above normal. An upper-level low dropped out of the Gulf of Alaska on November 6th, and was west of Vancouver Island the following morning. Ahead of this low, high pressure again warmed afternoon high temperatures to above normal. The low moved east across the Pacific Northwest, but another low following it turned southward and dropped along the coast. As the low drifted along the coast, it spun south winds through the passes and canyons of the Tehachapi Mountains. These south winds downsloped off the Tehachapi Mountains and brought a sharp jump in temperatures to the south end of the San Joaquin Valley. Bakersfield reached a high of 85 degrees on the 10th, seven degrees warmer than the previous day and 17 degrees above the normal high for the date. Bakersfield also was only 3 degrees off the record high for the date (88 degrees in 1973). Fresno had a high of 81 on November 10th, just two degrees shy of its record (81 in 1956) and 13 degrees above normal.

The storm moved into California on November 11th-12th. The system was moisture-starved, and brought only light precipitation to the central California interior. In the San Joaquin Valley, only a few sprinkles were reported. Despite the cooler airmass that moved into the region, high temperatures in the central and southern San Joaquin Valley remained slightly above normal on the 12th.

An upper-level ridge moved over California on November 14th, easily located by a narrow band of cirrus that wrapped around the periphery of the ridge. With the ridge overhead, the airmass

over the central and southern San Joaquin Valley and the lower foothills was stagnant, and haze reduced visibilities to 5 miles or less at many locations.

An upper-level trough dropped south through the central California interior on November 16th, bringing gusty winds to the mountains and desert. The system had negligible impact at the lower elevations, however, and temperatures were a few degrees above normal. A zonal flow developed over the east Pacific, causing only minor fluctuations in temperatures through November 19th.

A stronger Pacific storm moved into northern California on the 19th, with precipitation spreading southward into the central California interior that evening. This was the first storm to bring significant precipitation to the central California interior and reached the region during the afternoon of November 20th, with the heaviest rain falling on the central and southern San Joaquin Valley during the early evening. Several Valley and foothill stations reported rainfall amounts in excess of a half inch from the storm and a few sites had an inch or more of rain. Flooding was reported in Atwater (Merced County) near the Castle Air Museum and Airpark. The rain gauge at the nearby Merced Regional Airport recorded 0.58 inch of rain.

Rain continued overnight and into the 21st. Runoff accumulated in low-lying roadways, and leaves clogging storm drains exacerbated the problem. Flooding was reported on southbound Highway 99 near Pixley (in Tulare County) during the morning commute.

In the Southern Sierra Nevada, estimates of new snow ranged as high as nine inches. Precipitation fell over the entire central California interior, including the desert of Kern County where Edwards AFB reported 0.35 inch of rain

The storm packed a 1-2 punch, as a second cold front intensified as it moved into central California on the 21st. This time, the heaviest precipitation was over the south end of the San Joaquin Valley. Heavy rains caused street flooding north of Bakersfield during the late afternoon. At Meadows Field, 0.45 inch of rain fell in a two-hour period (from 6 to 8 PM). Hail up to a half-inch in diameter fell on Rosamond shortly after sunset.

The upper-level low moved into southern California on November 22nd, and the easterly flow north of the low kept upslope precipitation continuing over parts of Kern and Tulare Counties. A spotter in Frazier Park reported around an inch of snow through the late evening of the 22nd, with light snow still falling. Bakersfield had a three day—November 20th-22nd—storm total of 0.94 inch of rain, 0.30 inch above the normal for the entire month of November.

Ground moisture meant the start of the 2013-2014 fog season. Patchy dense fog developed during the morning of November 23rd near Merced/Atwater and along the Highway 198 corridor between N.A.S. Lemoore and Visalia. These are favored locations for fog development, along with Highway 43 from Reedley to Corcoran, and fog occurred in these locations each day through the 27th around sunrise.

A low pressure system developed in the eastern Pacific and moved south, parallel to the California coast. The clockwise circulation around the low created a southerly flow over California. These winds funneled through Tejon Pass and downsloped into the southern San Joaquin Valley, warming temperatures to well above normal. Bakersfield had a high of 77 degrees on November 27th, 16 degrees above normal. Fresno also was 16 degrees above normal, with a high of 76 degrees.

Moisture entrained in the flow around the low triggered showers over the Tehachapi Mountains from the evening of November 28th into the 29th. Some of these showers moved northward off the mountains and into the south end of the San Joaquin Valley, including Bakersfield where a trace of rain fell on the 29th.

Both Bakersfield and Fresno had above normal mean temperatures for the month of November. Fresno had an average temperature of 58.5 degrees, 4.2 degrees above normal. November 2013 was the sixth warmest November on record for Fresno and was 0.2 degree warmer than November 2012. Bakersfield had an average temperature of 58.2 degrees, 3.1 degrees above normal. November 2013 tied with November 1907 for the 14th warmest November on record. November 2013 was 0.1 degree cooler than November 2012.

Bakersfield's rainfall for the month of 0.94 inch was 149.6 percent of the normal value of 0.64 inch. Fresno only received 0.54 inch, just over half (50.5 percent) of the normal of 1.07 inch. For the season through November 30th, Bakersfield had 0.97 inch (91.5 percent of normal), while Fresno had 0.58 inch (30.7 percent of normal). Since January 1s through the end of November, Bakersfield had 3.35 inches of rain (61.5 percent of normal), while Fresno had 2.86 inches (29.4 percent of normal).