OCTOBER 2013 WEATHER SUMMARY
FOR THE CENTRAL CALIFORNIA INTERIOR

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October began with the central California interior between two low-pressure troughs. The first trough had moved through California at the end of September, while the second system arrived on October 3rd. The trough was mostly dry, but it did bring gusty winds to the region. Gusts to 56 mph were recorded on the exit of Tehachapi Pass into the Mojave Desert during the morning of the 3rd, and to 60 mph at Bear Valley Ridge in the Tehachapi Mountains during the afternoon of October 4th.

The cold airmass moving into the San Joaquin Valley on October 3rd kept highs in the 70s, but temperatures rebounded, beginning on October 4th, as an upper-level ridge built into California behind the exiting system. Central and southern San Joaquin Valley highs warmed into the lower 90s at both Bakersfield and Fresno on October 6th, the last time highs at these cities reached 90 for the year. Relative humidities dropped into the single digits in the mountains of Kern and southern Tulare Counties, raising the risk of wildfires in these mountains.

The first major storm of the winter season (October 2013-April 2014) reached the central California interior during the afternoon and evening of October 8th. This storm brought a very cold airmass to the region, with snow levels falling as low as 5000 feet in the heaviest showers. Central and southern San Joaquin Valley highs on October 9th did not get out of the 60s; Fresno tied its record low maximum temperature for the date (65 degrees), and Bakersfield came within a degree of its record.

Precipitation was mostly spotty, but there were isolated heavy showers over the high country of the Southern Sierra Nevada and central San Joaquin Valley. Local snowfall of up to 8 inches fell above 10,000 feet in the Tulare County mountains, with lesser amounts northward. Less than an inch of snow was reported in the Tehachapi Mountains. Minarets (at 5313 feet) reported 0.71 inch of rain and a gage near Tehachapi had 0.40 inch. On the Valley floor, Merced received 0.10 inch, the most of any site in the central and southern San Joaquin Valley.

The center of the low moved south over the San Joaquin Valley during the afternoon of October 9th and passed directly over Hanford. As the mid-level jet swung around the low and passed over the Tehachapi Mountains late in the afternoon, it triggered a short-duration burst of

thunderstorms over the length of the range. The low continued moving south, ending the upper-level support for the convection, which ended by sunset.

As the storm moved east of central California, a ridge of high pressure strengthened over the eastern Pacific. Temperatures warmed to near normal by October 12th and cooled by several degrees the next day as a dry cold front dropped through the state. Warming returned on the 14th, and temperatures in the central and southern San Joaquin Valley were mostly near normal from October 15th through the 20th.

A surface high pressure system dropped into the Great Basin on the 15th, creating an offshore flow over the central California interior. Northeast winds developed over the mountain and desert areas of Kern County, with gusts to around 30 mph. These winds brought drier air to the region, with single-digit humidities returning to the southern Sierra Nevada, including the Piutes.

There was little change in the weather pattern for the next two weeks, as the upper-level ridge remained just off the Pacific coast. Daytime temperatures were well above normal. The increasing length of nighttime brought longer periods of radiational cooling, and overnight lows were near normal.

An upper-level low moved over the Sierra Nevada on October 28th and pushed eastward into the Great Basin by the 29th. This system produced several inches of new snow at or above 5000 feet in the Southern Sierra Nevada, including reports of and 8 inches at Ponderosa, in the high country east of Springville in the Tulare County mountains, 7 inches at Fish Camp just south of the south entrance of Yosemite National Park, 6.5 inches of new snow at Lodgepole in Sequoia National Park, and 2 inches of snow at Shaver Lake. SNOTEL estimates included 10 inches at Ostrander Lake in Mariposa County and 7 inches at Devil's Postpile in Madera County. Most locations in the Kern County mountains, as well as the Sierra Nevada and adjacent foothills, received around ½ inch of rain, with local amounts to around an inch. Locales in the San Joaquin Valley generally received light amounts of rain, mainly below a tenth of an inch. Both Bakersfield and Fresno received 0.03 inch of rain, the only measurable rain at either city for the month of October. Isolated thunderstorms developed during the afternoon of October 28th. One storm produced a funnel cloud photographed near Clovis, and another thunderstorm dropped small hail near Mariposa.

The storm also brought strong winds to the region. Gusts in excess of 70 mph were recorded in the high country of the southern Sierra Nevada in Kern and Tulare Counties. A gust to 71 mph also was recorded by the Panoche Road RAWS in the Diablo Range on the west side of the San Joaquin Valley, and gusts over 50 mph were recorded on the west side of the San Joaquin Valley as far south as Sunflower Valley in Kern County.

Temperatures cooled to below normal on October 28th, with central and southern San Joaquin Valley highs only reaching the 60s. Temperatures remained below normal through October 30th, albeit slowly warming each day as the pool of cold air slowly mixed out. Above the cold air pool, a cool northerly flow over the region kept temperatures below normal. Temperatures finally recovered to near normal for the last day of the month.

The month ended with overall below average amounts for precipitation in most locations throughout the central California interior. Rainfall was especially sparse in the central and southern San Joaquin Valley. Bakersfield received only 10 percent of its normal rainfall for the month (0.03 inch vs. 0.30 inch). Fresno fared even lower, recording a mere 4.8 percent of its normal October rainfall (0.03 inch vs. 0.63 inch).

October temperatures were near to slightly below normal. The mean temperature at Fresno (66.6 degrees) was 0.4 degree above normal, while Bakersfield (65.8 degrees) was 1.4 degrees below normal.