FEBRUARY 2015 WEATHER SUMMARY
FOR THE CENTRAL CALIFORNIA INTERIOR

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The month began with dry and relatively warm weather in the central California interior. Patchy fog in the San Joaquin Valley remained prevalent during the nighttime and morning hours during the first few days of the month. Visibility measured ¼ mile or less in the areas of fog that developed each night and morning until the 5th. High temperatures were generally reaching well above average during this period as fog and low stratus clouds were dissipating during the afternoon over much of the San Joaquin Valley.

Strong high pressure brought much above average temperatures to the region, including the San Joaquin Valley. Temperatures reached well into the 70s in Bakersfield and Fresno. By the 6th, temperatures were reaching the mid-80s in the southern part of the San Joaquin Valley ahead of a low pressure system that brought rain to the northern part of NWS Hanford's county warning and forecast area by the late afternoon hours. On the 6th, the high temperature was 85 degrees in Bakersfield as southerly winds brought warming air down the nearby mountains; this broke the record high of 77 degrees that was previously set for the date back in 1930.

The low pressure system that arrived on the 6th was the first of two systems to impact the region over the next couple of days. Some scattered showers with embedded thunderstorms began by the late afternoon hours in the northern part of the forecast area. Rain spread southward during the overnight hours and into the daytime hours of the 7th. This system brought mainly rain to the region as there was a lot of warm air associated with this system. Snow levels were above 10,000 for this event. Almost three inches fell in the Sierra Nevada and foothills in and near Yosemite National Park. Locations in the San Joaquin Valley received 0.5 to 1.0 inch, mainly from Hanford and north. To the south, rain generally fell in the 0.25 to 0.50 inch range, such as over Kern County, in the San Joaquin Valley and mountain areas. Much lesser amounts of rain, if any, fell in the desert areas.

During the late night of the 7th and early morning of the 8th, fog developed in the San Joaquin Valley due to moisture from the previous day's rainfall. Visibility was generally around a quarter mile, although it was locally lower at times through the night and early morning. Temperatures remained quite mild, mainly in the mid-50s.

The second system arrived on the 8th. This system brought gusty winds to the west side of the San Joaquin Valley and reached advisory level, or gusts above 35 miles per hour. Winds gusted above 40 mph through Pacheco Pass during the afternoon and evening hours, and another station located to the south (along Panoche Road, to the west of Interstate 5) reported over 50 mph. This

system also reinforced warm air over the region. Once again, Bakersfield reached a record high temperature of 82 degrees and broke the previous record high for the date of 77 degrees, set in 1917. Minimum temperatures were also very warm and set record highs at the airports in Fresno, Hanford, Madera, and Merced. There were scattered showers and thunderstorms that moved over parts of the San Joaquin Valley during the afternoon and evening hours. During the evening, the focus shifted to mainly the east side of the San Joaquin Valley from Tulare County and northward, as well as the adjacent foothills and Sierra Nevada at times during the evening.

On the 9th, the system moved out of the area and brought cooler daytime temperatures. However, temperatures were still above average over much of the region. Temperatures briefly cooled to around average on the 10th as low stratus clouds developed and persisted over the region during much of the day. Nighttime lows began to cool as the airmass became much drier.

On the night of the 10th, Tule fog returned to the San Joaquin Valley as high pressure began to redevelop along the West Coast. Temperatures were overall warming during the next few days throughout the region. High temperatures once again returned to the 70s in much of the San Joaquin Valley, adjacent foothills, and the Kern County desert areas by the 12th. The warmest locations reached the mid to upper 70s by the 13th. Fog continued to develop during the nighttime and early morning hours in the middle of the San Joaquin Valley through at least the 14th.

On the 14th, high temperatures cooled slightly compared to the previous day as a weak upper-level disturbance moved over the central California interior. However, high temperatures warmed to well above average for the middle of February. Many locations again reached the upper 70s throughout the San Joaquin Valley, as well as the Sierra Nevada foothills and the Kern County mountain and desert areas. This weather pattern continued for the next few days.

During the night of the 17th and into the 18th, marine air filtered into the San Joaquin Valley due to onshore flow; this is a pattern that normally occurs during the summer months. Dense fog developed during the early morning hours of the 18th; however, low stratus clouds persisted into the afternoon and allowed high temperatures to drop as much as 20 degrees compared to the previous day. In addition, there were high clouds above the stratus deck. For example, Fresno had a high of 75 degrees on the 17th, but it only reached 58 degrees on the 18th due to the persistent cloud cover. As for the 19th, high temperatures rose back into the lower 70s as fog and low clouds dissipated earlier in the day; the onshore flow became weaker by that day.

No rain had fallen in the region since the 8th until the early morning hours of the 22nd when an upper-level low pressure system finally arrived over the region. On the 22nd, there were scattered showers and thunderstorms throughout the San Joaquin Valley from mainly Fresno County and southward for much of the day. During the afternoon and evening, the showers and

thunderstorms developed to the south over Kern County and produced heavy rainfall where flood advisories were issued due to ponding of water on roadways. These advisories included the south end of the San Joaquin Valley as well as the Kern County mountain and desert areas. The upper level-low persisted until the 23rd, and wrap-around moisture flowed from the northeast into the east side of the San Joaquin Valley. Snow fell as low as 4600 feet on the 22nd near Shaver Lake as there were heavier showers in this area. Snow levels were fairly constant around 5000 feet over Kern and Tulare Counties during the 22nd-23rd. Around 5 to 10 inches of snow fell over Kern and Tulare Counties mainly during the afternoon of the 22nd and into the morning of the 23rd, mainly above 6000 feet. A few snow showers persisted over the Tulare County of the Sierra Nevada into the afternoon of the 23rd. In addition, some instability showers and isolated thunderstorms developed in western Kern County around midday on the 23rd; one of the cells produced a brief weak tornado to the southwest of Belridge, or northwest of Taft, in hills of the Temblor Range facing the southwestern San Joaquin Valley. Storm total rainfall amounts during the 22nd-23rd were around 0.5 to one inch fell over the San Joaquin Valley from Fresno and southward, up to one inch of rain fell in the desert areas, and around 1 to 1.5 inches (with some locally higher amounts) fell over the southern Sierra Nevada and adjacent foothills mainly below 5000 feet. The Tehachapi Mountains received around one quarter to one-half inch, including a few inches of snow above 5000 feet.

During the 24th-26th, high pressure returned to the district, and there was a brief return of benign weather. Patchy nighttime and morning fog returned to some locales in the San Joaquin Valley, mainly around Hanford, Lemoore, and Merced. High temperatures rose to at least several degrees above average.

Another series of low pressure systems with a cold, unstable airmass aloft impacted the central California interior during the last two days of the month. Thunderstorms developed during the afternoon of the 27th over the southern Sierra Nevada; these storms mainly produced briefly heavy snow showers. In addition there were gusty winds in the Kern County mountains and desert, especially near the passes and canyons, during the afternoon and evening. Wind gusts reached nearly 70 mph at Indian Wells Canyon, or about one mile west of the split of State Route 14 and U.S. Highway 395. Gusts were around 45-50 mph in quite a few locations in eastern Kern County, including at China Lake NAWS, Mojave and Rosamond. On the 28th, afternoon thunderstorms developed over the San Joaquin Valley and brought locally heavy rainfall; these storms persisted into the early evening hours. Some heavy showers and thunderstorms developed over the Sierra Nevada and foothills, and a few of these storms produced ice pellets and pea-sized hail. Snow levels dropped to around 4000 feet by the night of the 28th over much of the region as the cold air had become well established. While the month ended with cool, unsettled weather throughout the central California interior, the month was overall well above average in terms of temperatures, especially during the first half of the month, and below average for precipitation (see Fig 1 & 2).

Fig 1 - Departure from average temperature for February 2015:

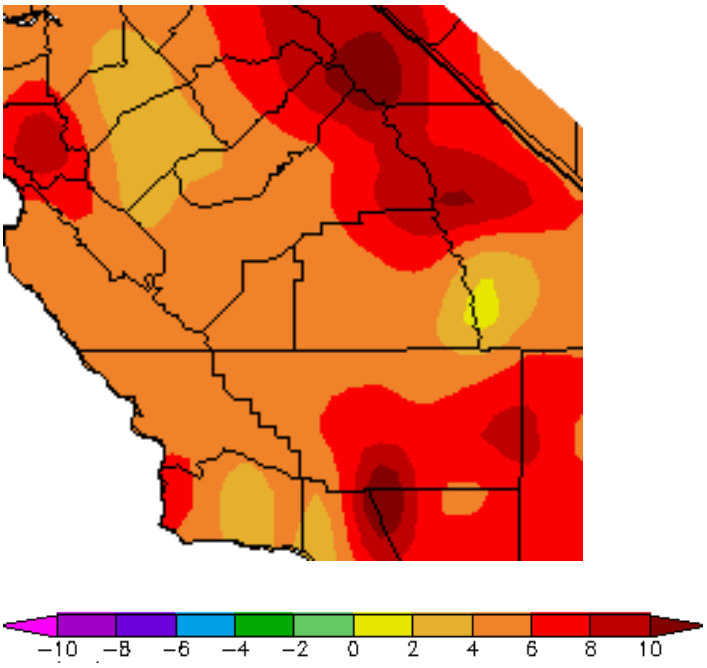

Fig 2 - Percent of normal precipitation for February 2015: