**FEBRUARY 2014 WEATHER SUMMARY**
**FOR THE CENTRAL CALIFORNIA INTERIOR**

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The storm that reached the central California interior at the end of January heralded a week of unsettled weather for the region. February 1st saw low-level clouds banked against the San Joaquin Valley-facing slopes of the mountains in Kern and Tulare Counties, with clouds pushing into the Tehachapi Pass. The next day, a low-pressure system dropped south along the northern California coast, bringing precipitation to the region during the afternoon. This was a cold system, with the snow level down to around 3000 feet (and even lower in stronger snow showers). Yet despite the cold, unstable airmass, cloud cover inhibited thunderstorm development.

Despite the generally light rainfall amounts on the San Joaquin Valley floor, there was enough boundary-layer moisture to trigger patchy dense fog development in eastern Kings and western Tulare Counties (where the heaviest rain had fallen) around sunrise on February 3rd. Over the mountains, clouds rimmed the San Joaquin Valley and isolated showers were reported over the Southern Sierra Nevada.

Low temperatures in the central and southern San Joaquin Valley dropped below freezing during the morning of February 4th, with patchy frost reported in the coldest rural areas. These cold low temperatures continued the next morning, then clouds associated with the first major winter storm of the season arrived during the afternoon of the 5th.

The storm brought moderate to heavy rain to the central and southern San Joaquin Valley on February 6th, except for the strongly rain-shadowed south end of the Valley. Fresno received 0.80 inch of rain on the 6th, nearly two thirds of the total for November through January of 1.26 inch. In sharp contrast, Bakersfield only recorded 0.04 inch, one twentieth of Fresno's amount. Heavy snow fell in the Southern Sierra Nevada, with the snotel at Big Meadows receiving an estimated two feet of new snow, with Dana Meadows getting only a few inches less.

Unsettled weather continued through February 10th. As upper-level impulses moved over the area, periods of light showers continued across the central California interior. However, rainfall amounts, even when totaled from February 7th through the 10th, were considerably less than on the 6th. In the Southern Sierra Nevada, an estimated 4 to 7 inches of additional snow fell above 9000 feet. Further south, a mix of rain and snow was reported on February 7th near Bear Valley Springs in the Tehachapi Mountains

Moisture from the rains saturated the airmass near the San Joaquin Valley floor, bringing the first episodes of Tule Fog of the winter. Of the four days (February 12th-15th) with locally dense fog, the 13th saw the most fog. Even so, the fog was mostly patchy and formed mainly in the Madera-Atwater and Selma-Hanford/Visalia areas. Dense fog also formed near daybreak along the Highway 41 corridor in western Fresno County and the Highway 198 corridor from Lemoore to Hanford.

In addition to the low-level moisture, fog development was aided by a stable airmass due to an upper-level ridge over the central California interior. This high pressure aloft also brought a warming trend, with above-normal temperatures from February 12th through the 17th.

A dry storm system moved through the central California interior on February 18th, bringing a push of cold air that lowered temperatures briefly to near normal. Behind the cold front, gusty winds developed over the mountains and deserts on the 19th. The winds began during the early morning hours, with a gust to 60 mph at Bear Peak in Tulare County, and a gust to 53 mph at Mojave, during the pre-dawn hours. Winds gusted over 45 mph in the eastern Kern County desert during the morning and early afternoon of the 19th, and gusts to 50 mph were recorded in the Piutes.

An upper-level ridge of high pressure returned to California on the 19th behind the departing low-pressure system. High temperatures warmed to above normal for the next several days before the next storm arrived during the afternoon of February 26th. This warming trend peaked with Bakersfield hitting 81 degrees on the 25th, and Fresno reaching 80 degrees. This was the first time either city had seen 80 degrees since November 10th, 2013.

The storm that reached the central California interior on February 26th was the first of two closely-spaced systems. Together, the two storms brought as much as 4 inches of rain to the Southern Sierra Nevada foothills, and over an inch of rain to the Kern County deserts. Fresno had a three-day storm total of 1.11 inch, bringing the total rainfall for February to 2.11 inch. This was 0.08 inch greater than the normal of 2.03 inches and was the first time since December 2012 that Fresno had above-normal rainfall for a month.

The south end of the San Joaquin Valley was rain-shadowed, with Bakersfield receiving only 0.28 inch of rain, almost all of which fell from the second storm on February 28th. The second storm was located off the central California coast, and was impressive on satellite pictures with a tightly-wound structure and a clear center much like the eye of a tropical system. The circulation around the storm produced a southerly wind over the Tehachapi Mountains which funneled through Tejon Pass and down the Grapevine into the south end of the San Joaquin Valley. Winds gusted as high as 89 mph at Grapevine Peak, and to 50 mph at Sunflower Valley on the west side of the Valley. At Buck Rock, in the Sierra Nevada in Tulare County, winds gusted to 66 mph.

Several thunderstorms were spawned by the storms, with the second system being the most potent. Numerous trees were toppled in both the San Joaquin Valley and the Sierra foothills by winds, in many cases pulling down power lines. One thunderstorm at Squaw Valley in the foothills produced a gust estimated at 65 mph, which toppled trees and damaged the roof of a garage. On the Valley floor, there were reports of houses and parked vehicles damaged by falling trees or large limbs. Near Fresno, a tree 3 feet in diameter was toppled.

Street flooding was reported at several locations, not only in the San Joaquin Valley but also in eastern Kern County where the Garlock Road flooded. (Garlock Road is prone to flooding from runoff from the El Paso Mountains.). In Dinuba, water covering the road was estimated at 8 to 12 inches deep.

In the Southern Sierra Nevada, estimates of new snowfalls were as high as four feet. (These were Snotel observations; a post-storm snow survey had not been conducted at the time of this summary.)

February 2014 was much warmer than normal, and was Fresno's warmest February on record. Bakersfield tied for its 6th warmest February on record.

THE 10 WARMEST FEBRUARIES ON RECORD
/AVERAGE TEMPERATURE IN DEGREES FAHRENHEIT/

| | BAKERSFIELD | FRESNO |
|---|---|---|
| 1. | 59.0...1907 | *56.8...2014* |
| 2. | 58.4...1963 | 56.4...1963 |
| 3. | 57.4...1973 | 55.8...1991 |
| 4. | 57.2...1991 | 55.8...1930 |
| 5. | 57.0...1895 | 55.6...1986 |
| 6. | *56.9...2014* | 55.2...1906 |
| 7. | 56.9...1977 | 54.5...1925 |
| 8. | 56.8...1958 | 54.4...2005 |
| 9. | 56.2...1970 | 54.4...1934 |
| 10. | 56.2...1925 | 54.3...1931 |