SEPTEMBER 2015 WEATHER SUMMARY
FOR THE CENTRAL CALIFORNIA INTERIOR

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Below average to average temperatures with dry conditions was the general rule for the first five days of the month. Relatively cool morning temperatures prevailed during this period. Due to the passage of a trough of low pressure over northern California on the 2nd, winds were breezy and locally gusty in the Kern County mountains/desert and along the west side of the San Joaquin Valley; however, gust speeds generally remained below advisory and warning criteria.

Daytime high temperatures warmed by several degrees on the 6th. Generally light winds with a warming trend continued for the next several days as a ridge of high pressure set up over the much of the western United States. Smoke from the Rough Fire in the Sierra Nevada, located about 5 miles north of Hume Lake, moved into the San Joaquin Valley and caused issues with visibility and air quality, especially during the nighttime and morning hours. Much warmer than average temperatures prevailed throughout the region during the 8th through the 13th, while the high pressure strengthened and remained over the West. There were a few showers and sprinkles on the morning and afternoon of the 13th, and some isolated thunderstorms developed over far southeastern Kern County that afternoon. Air quality was noticeable better in much of the San Joaquin Valley as the wind flow became more southerly rather than easterly during the previous few days.

On the 14th, temperatures began to fall as the high pressure weakened and was replaced by an upper-level low that drew in tropical moisture from the remains of former Hurricane Linda that had developed off the coast of Baja California and moved over cooler the surface waters of the eastern Pacific Ocean. The air quality continue to improve as the flow turned more from the southwest and blew the smoke produced by the Rough Fire away from the San Joaquin Valley. Temperatures fell even much more on the following day as more tropical moisture brought more numerous showers and increased cloud cover. Showers produced as much as a tenth of an inch of rain in the San Joaquin Valley and around one-quarter to three-quarters of an inch in the Kern County desert, as well as the Sierra Nevada and adjacent foothills. Around 0.50 to 0.65 inch of rain fell at Edwards AFB alone during the night of the 14th and early morning hours of the 15th. Snow even fell just above 10,000 feet in the high country of Yosemite National Park, including on Mt. Dana and Budd Lake, or just above Tuolumne Meadows. Also, some wetting rain fell on the Rough Fire, which measured around a tenth of an inch or more and was able to slow down the fire's growth.

The 15th began the day much like the previous days with plenty of mid-level cloud cover; however, by late in the morning, this cloud cover began to clear. Showers had mainly tapered off by the early afternoon hours. High temperatures actually warmed several degrees warmer compared to the previous day, as there were fewer clouds. The main cooler airmass was gradually moving into northern California during that day. By the evening, there were plenty of areas of gusty winds, including over the San Joaquin Valley and along the west side. Wind gusts by the late afternoon and early evening hours had already reached as high as 36 mph through Pacheco Pass in Merced County, and 41 mph at Sunflower Valley in far southern Kings County just north of Cottonwood Pass along Highway 41. Fresno and Hanford reported gusts around 30 mph during the evening hours. The following day was much cooler, and below average daytime high temperatures prevailed due to the arrival of the trough of low pressure that was earlier over northern California.

The below average temperatures continued until the 17th; afterward, high pressure began to rebuild over the region. Well above average temperatures prevailed once again on the 20th and 21st; high temperatures reached the triple digits in both the San Joaquin Valley and the Kern County desert. On the 21st and 22nd, there were a few isolated afternoon thunderstorms that developed over the highest elevations of the Sierra Nevada crest, including over Mt Whitney. High temperatures remained well above normal on the 22nd, although slightly lower. During the afternoon hours of the 22nd, there were gusts to around 36 mph through Pacheco Pass as marine air began to spill over the pass into the San Joaquin Valley.

For the first day of autumn, temperatures cooled by several degrees, although remained around average to slightly above. The warming quickly returned, and temperatures were once again several degrees above average for the next few days as high pressure returned over the region. A trough of low pressure over the Pacific Northwest brought a dry southwest flow aloft with occasional high clouds.

The ridge of high pressure began to break down and shifted slightly eastward during the 27th through the 30th. Mid and high level clouds moved over much of central California during most of this period, mainly north of Kern County. Basically, southwest flow aloft continued; however, it brought in moisture associated with a tropical storm (Tropical Storm Niala) that developed just to the southeast of Hawaii. There were even some sprinkles reported at Tuolumne Meadows in Yosemite National Park on the 28th. Daytime high temperatures gradually lowered each day during this period, although nighttime low temperatures fluctuated a little due to variable cloudiness at times during the day. There were some locations, mainly from Fresno County and northward, that struggled to reach above the lower 80s on the 29th and 30th due to persistent cloud cover, although low temperatures were generally mild, or warmer than average, in locations underneath the cloud cover.

The month ended up with below average precipitation, except above average rain occurred in southeastern Kern County (Fig 1). There were above average temperatures over much of central California (Fig 2). In fact, Bakersfield tied its ninth warmest September on record with an average temperature of 80.4 degrees (the 30-year average is 77.0 degrees). Table 1 (see below) also shows temperature and precipitation statistics for the five ASOS (Automated Surface Observing Station) locations.

Table 1 - Sep 2015 Summary Statistics for ASOS locations

Location	Monthly Avg Temp	Departure From Normal	Total Monthly Precipitation	Departure From Normal
Bakersfield	80.4	3.4	T	-0.08
Fresno	78.7	2.5	0.12	-0.05
Hanford	76.2	2.9	T	-0.17
Madera	75.8	3.1	0.17	-0.08
Merced	74.5	2.6	T	-0.29

*ASOS = Automated Surface Observing Station
** Temperatures are degrees Fahrenheit (to nearest tenth of a degree).
*** Trace precipitation amounts are noted as "T"

Fig 1 - Percent of normal precipitation for September 2015 (graphics below provided by Western Regional Climate Center):

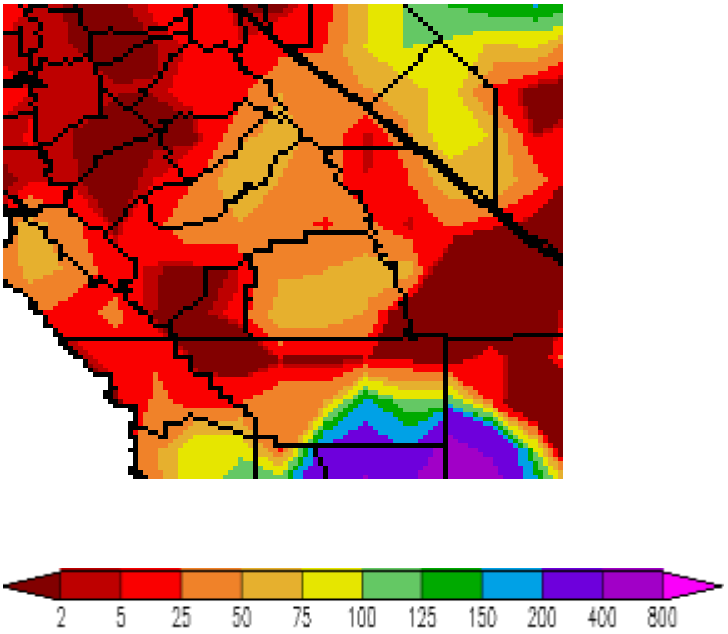

Fig 2 - Departure from average temperature for September 2015 (graphics below provided by Western Regional Climate Center):