DECEMBER 2014 WEATHER SUMMARY
FOR THE CENTRAL CALIFORNIA INTERIOR

By Gary Sanger, Climate Services Focal Point
And Brian Ochs, Assistant Climate Services Focal Point
WFO San Joaquin Valley-Hanford

The first day of the month was generally partly cloudy with warmer than average temperatures, although a low pressure system was approaching California. On the 2nd, widespread rain fell over much of the region, including over the Sierra Nevada up to around 8,000 feet. This was a warm system with a tap of abundant subtropical moisture that allowed temperatures to remain mild on this day, as well as the following day.

Fog developed by the morning of the 3rd over the San Joaquin Valley and continued over the next several days. Temperatures were mild during this period, and plenty of surface moisture lingered over the San Joaquin Valley due to the previous rain that fell. High pressure returned for a few days until a weak low pressure system moved over northern California on the 6th-7th. However, this was not enough to prevent at least patchy dense fog development in the San Joaquin Valley during these days. After the weak low passed over the region, widespread dense fog developed over the San Joaquin Valley during the evening and morning hours again on the 8th as high pressure began to take control over the region; low stratus clouds lingered over the San Joaquin Valley for most of the afternoon. On the 9th, dense fog was forming as early as 6:30 PM, and it redeveloped early in the evening on the 10th, especially in locations, such as Hanford, Corcoran, and Lemoore, where the low clouds (due to the lifting of the fog) only partially cleared out during the afternoon.

A strong low pressure system, similar to the one in January 2008, impacted the region on Dec 11th-12th and brought widespread amounts of an inch or greater to the area, including the San Joaquin Valley. On the 11th, there were strong winds measured along Interstate 5 through the Grapevine; gusts nearly reached 90 mph. Even Bakersfield reported 55 mph gusts from the southeast late in the evening on the 11th. Strong and gusty winds also blew through the passes along the west side of the San Joaquin Valley during the afternoon and evening hours, and gusts reached over 50 mph in some locations. As the cold front passed over the area during the late night hours of the 11th, wind gusts over 40 mph were also recorded in San Joaquin Valley locations such as Merced and Los Banos. Snow fell at around elevation 5000 feet with this system, with a few locales at 4500 feet.

By the 13th, the storm had moved east of the region; however, a few showers developed with colder air over the Sierra Nevada and Kern County mountains. A few showers also fell over the Sierra Nevada on the afternoon of the 14th, ahead of another low pressure system. Patchy dense

fog developed in the San Joaquin Valley on the 14th during the morning, and again during the nighttime hours, as skies were generally clear during these favorable fog development hours.

A couple of low pressure systems moved over the region on the 15th-16th. With the first storm, moderate to locally heavy rainfall occurred briefly during the evening of the 15th, and around 1-4 inches of snow fell over the Sierra Nevada at around 5000 feet. Rainfall during this time was around ¼ to ½ inch in most locations. Another low pressure system brought brief locally heavy rain during the evening of the 16th and the early morning hours of the 17th to the San Joaquin Valley and adjacent Sierra Nevada foothills. Another ¼ to ½ inch fell in most locations, although some locations such as Visalia, Friant Dam (Lake Millerton), Mariposa, and Oakhurst received higher amounts. However, the weather remained unsettled as yet another weak upper-level disturbance passed through the central California interior on the evening of the 17th and brought around ¼ inch or less of rain to most locations.

Another low pressure system brought light rain and higher elevation snow on the 19th; however, most locations received less than one tenth of an inch of precipitation. Fog development in the San Joaquin Valley was kept at bay until the 20th as low clouds lingered over this area.

High pressure was generally the rule from the 20th until the day of Christmas Eve. Nighttime and morning fog and low clouds developed over the San Joaquin Valley each night from the 20th until the daytime of Christmas Eve. There were a couple of days during this period when only low stratus clouds lingered over the San Joaquin Valley during the entire day and prevented dense fog development.

On Christmas Eve, a fast-moving cold front brought mainly light rain and higher elevation snow. A few locations in the Kern County mountains to the west of Lake Isabella received around 1/3 inch and locally higher amounts from this system. In addition, strong and gusty winds blew through Mojave as well as the passes and canyons in the Kern County mountain and desert areas. Gusts to over 80 mph occurred at Mojave and Indian Wells Canyon (west of Inyokern and Ridgecrest). Inyokern even reported a wind gust at just over 60 mph.

On Christmas Day, breezy conditions developed over the west side of the San Joaquin Valley. Gusts were around 30-40 mph during the late morning and into the afternoon hours. By the following evening, the winds slackened and allow temperatures to fall quickly overnight. Low temperatures were in the lower 30s in the San Joaquin Valley and the mid to upper 20s in the Kern County desert on the morning of the 26th.

A dry northwesterly flow prevailed over the region from the 26th until the 29th, and relatively tranquil weather prevailed. Temperatures were generally around average to a few degrees below, although during this period, overnight lows remained near or just below freezing in the San

Joaquin Valley. However, there was a brief period of gusty southerly winds at the Grapevine CHP station along Interstate 5 in Kern County during the morning hours of the 27th; winds gusted as high as 57 mph.

A dry low pressure system passed over the region during the night of the 30th and continued into the daytime hours of the 31st. Precipitation fell mainly over Kern County and locations over southern California; precipitation over Kern County was generally light except some locations over the mountains received several inches of snow, including near Frazier Park and Pine Mountain Club. Cold air behind the low pressure system began to infiltrate into central California by the nighttime hours of the 30th. Windy conditions were prevalent over much of the central California interior, including over the west side of the San Joaquin Valley and Sierra Nevada, mainly Fresno County and northward. Trees were reported down in Yosemite along Highway 41 on the morning of the 31st. Power lines were also down in Bass Lake due to strong, gusty winds. About 40 people were stranded on a ski lift at China Peak Ski Resort for about two hours due to strong winds. There were reports of wind gusts in excess of 50 mph in the Sierra Nevada.

The cold airmass impacted the region on the nights of the 30th and 31st; the colder night was on New Year's Eve. Overnight low temperatures were below freezing in many locations in the San Joaquin Valley; the coldest locations reached as low as the upper 20s. Some locations, including Fresno, on the morning of the 31st reported dense fog with visibility around 300 feet, despite the cold, relatively dry airmass. However, the airmass was much drier during New Year's Eve in the nighttime hours, so temperatures were able to cool even more in time for New Year's Day.

For the month of December 2014, temperatures and precipitation were generally near average to above average. Temperatures were much above average for at least the first half of the month. During the first week, minimum temperatures were as much as 10-15 degrees above average, and overall temperatures were above average for the first two weeks of the month. The last week of the month was the exception to the rule, as it was much cooler than average during this period. Departures from average for both temperature (Fig 1) and precipitation (Fig 2) are shown on the last page. Last but certainly not least, Bakersfield and Fresno both had their warmest years on record in 2014 (in terms of annual average temperature).

10 WARMEST DECEMBERS ON RECORD (AVERAGE TEMPERATURE IN DEGREES FAHRENHEIT):

	BAKERSFIELD	FRESNO
1.	57.1....1977	*51.9....2014*
2.	55.7....1893	51.2....1977
3.	54.2....1979	51.1....1983
4.	53.9....1940	51.0....2005
5.	*53.7....2014*	51.0....1940
6.	53.3....1907	50.9....1950
7.	52.6....1950	50.9....2010
8.	52.5....2010	50.8....2012
9.	52.5....1955	50.8....1937
10.	52.4....1958	50.5....1995

10 Wettest Decembers on Record; amounts are in inches (note Fresno had 34th wettest December, while Bakersfield had 5th):

	BAKERSFIELD	FRESNO
1.	5.82....2010	6.72....1955
2.	2.98....1931	5.92....2010
3.	2.10....1936	5.24....1940
4.	2.03....1995	4.50....1909
5.	*2.02....2014*	4.27....1996
6.	1.81....1993	4.16....1941
7.	1.80....1977	4.09....1894
8.	1.80....1952	4.05....1952
9.	1.76....1951	3.99....1891
10.	1.73....1996	3.93....1884
34.	1.11....2005	*2.29....2014*

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

	BAKERSFIELD	FRESNO
1.	*69.5....2014*	*69.1....2014*
2.	67.9....1978	66.9....2013
3.	67.9....1977	66.8....2012
4.	67.8....1981	66.0....1986
5.	67.8....1979	65.5....2003
6.	67.8....1974	65.5....1992
7.	67.5....1970	65.5....1936
8.	67.1....2012	65.5....1934
9.	67.0....1976	65.5....1926
10.	66.9....1973	65.4....1984

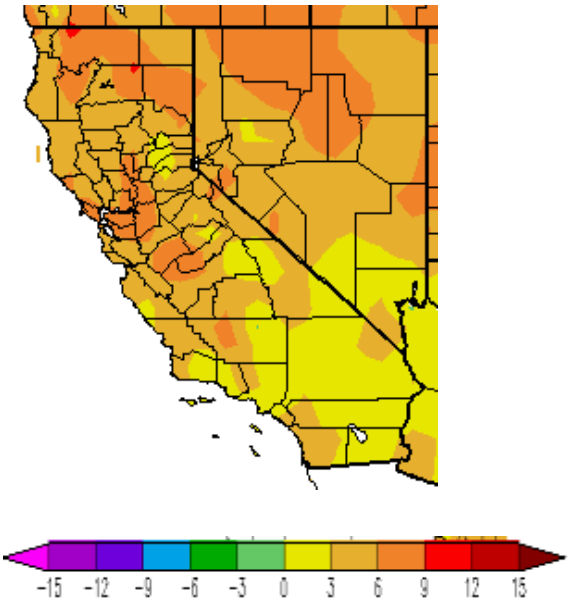

Fig 1 – Temeprature Departure from Average (deg F)

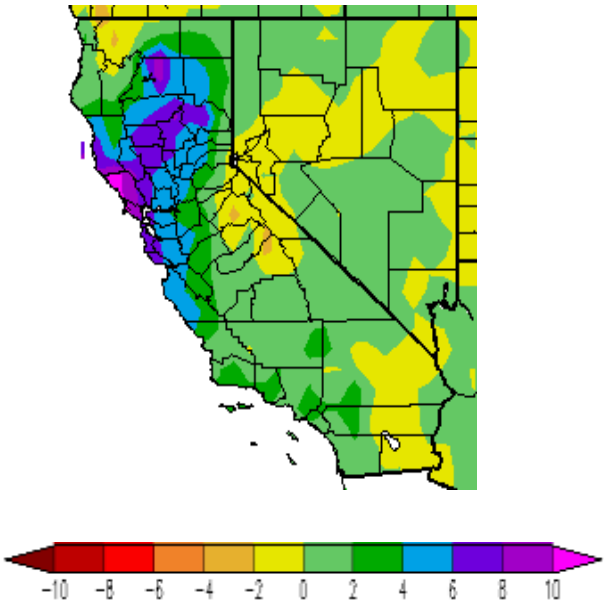

Fig 2 – Precipitation Departure from Average (in)