NWS FORM E-5 U.S. DEPARTMENT OF COMMERCE HYDROLOGIC SERVICE AREA:
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL WEATHER SERVICE **SAN JOAQUIN VALLEY - HANFORD , CA**

REPORT FOR:

MONTHLY REPORT OF RIVER AND FLOOD CONDITIONS

MONTH: **JANUARY** YEAR: **2014**

TO: Hydrometeorological Information Center, W/OH12x1
National Weather Service/Office of Hydrology
1325 East-West Highway #7116
Silver Spring, MD 20910

SIGNATURE:

Kevin Durfee
(In Charge of Hydrologic Service Area)

DATE: February 3, 2014

When no flooding occurs, include miscellaneous river conditions, such as significant rises, record low stages, ice conditions, snow cover, droughts and hydrologic products issued (WSOM E-41).

X	An **X** inside this box indicates that no flooding occurred for the month within this hydrologic service area.

If only one word could be used to describe January, 2014, that word would be “phenomenal”. Had it not been for a storm system that finally brought wet weather into the HSA on the 30th and 31st, January, 2014 would have ranked as the driest ever on record. It ended up as the 7th driest in Bakersfield, and in Fresno, only 25 January’s were drier than 2014. This caused impressionable notoriety for Fresno, nonetheless, in this historically dry rain season thus far. (See the map below for the statewide percentage of seasonal normal precipitation to date)

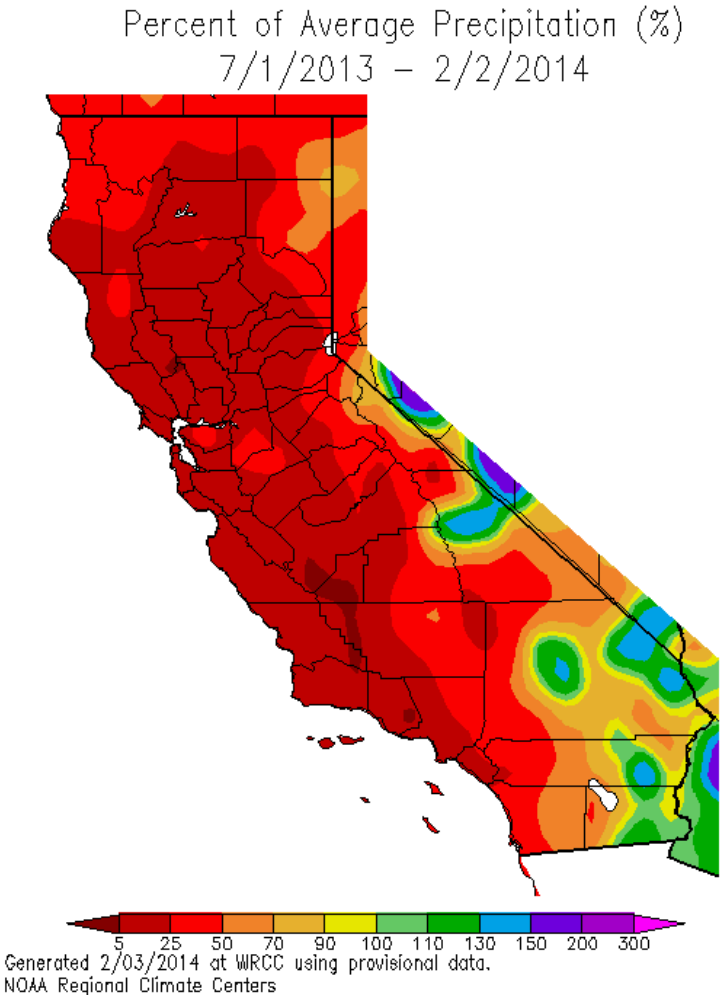
The storm on the 30th and 31st was the most significant storm to impact the HSA in months. Sure, there was a weak cold frontal passage on the 11th and a backdoor-type cold front that washed out over the southern Sierra on the 23rd. Each of these fronts produced little more than sprinkles or high elevation snow flurries over the Sierra and neither of them could bust down the ever persistent high amplitude upper level ridge of high pressure anchored along the west coast for much of the month. The pattern busting storm on the 30th and 31st ended a 53-day stretch of dry weather in the San Joaquin valley and adjacent foothills. By the time this system exited into the Great Basin on the afternoon of the 31st, it left a welcome rain and soaked all areas except the Kern county desert and the San Joaquin Valley west of Interstate 5. These were regions that were rain shadowed by gusty downslope winds that accompanied the storm. Rainfall totals from this storm ranged from a trace to only a few hundredths of an inch on the extreme west side of the San Joaquin Valley to as much as a half inch on the valley’s east side. The higher elevations fared much better with three-quarters of an inch to nearly 2.5 inches of rain. Precipitation fell as snow in the southern Sierra above 7,000 feet where accumulations of 12 to 19 inches were common.

Due to parched antecedent soil conditions, water that fell from the end of the month storm percolated fast and very efficiently into the ground. Sadly, however, the storm barely made a dent in the extremely large seasonal precipitation deficit throughout the HSA. In actuality, the state’s reservoirs remained at historically low levels in spite of the January 30th-31st storm. It was also the first time in decades that the governor proclaimed a drought emergency in California. Many climatologists speculate that the California drought might be the worst ever on record, quite possibly more severe than the drought of 1976-77. What was extremely unusual, if not unprecedented, was the absence of snow over the Sierra during January. As of February 1st, the snowpack averaged only 14 percent of normal. That’s lower than any statewide records dating back to 1960. Severely depleted soil moisture and exceptionally dry mid-summerlike fuels over the higher terrain led to the development of sporadic wildfires over the Sierra Nevada by the middle of the month. In fact, one particular wildfire (the Fish wildfire) in Tulare County that had been fully contained in the fall of 2013 came back to life by January 15th. Never before in January have wildfires occurred in central California and neither have issuances of Red Flag Warnings. A total of 13 of them were issued by the NWS San Joaquin Valley office this January. In the San Joaquin Valley, fog, which is normally common on many clear nights in January, was virtually non-existent. Additionally, extremely low flows were observed along all of the main stem rivers within the HSA. Some of the larger rivers that would normally have water in them in

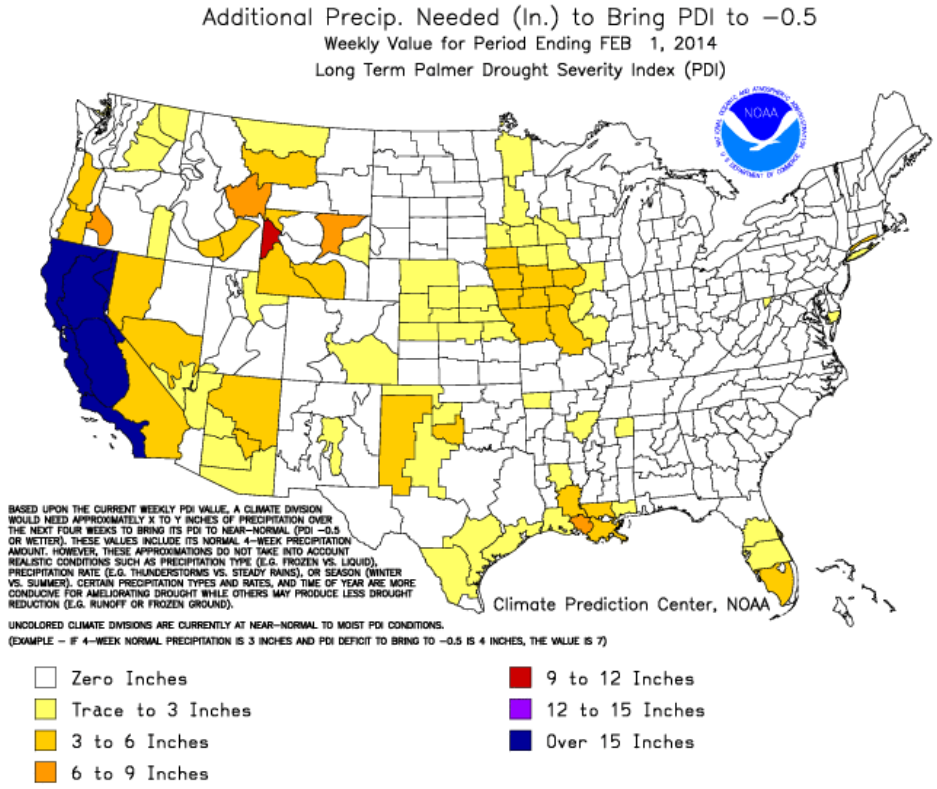
January were completely dry. Water levels at all of the major reservoirs remained critically low and averaged only 14 percent of their normal water capacity as of February 1st.

Temperature-wise, January, 2014 was well above average. In fact, it was the 2nd warmest January on record for both Fresno and Bakersfield. Not one day in the entire month had a maximum temperature at any climate station that was below normal. In the San Joaquin Valley and adjacent foothills, thermometers peaked in the 70s on several afternoons. Fresno reported 10 days of 70+ temperatures while Hanford and Bakersfield recorded 11 days and 12 days, respectively. The south end of the San Joaquin Valley was subjected to warming downslope winds at various times during the month where overnight temperatures did not fall below 60 degrees. The most profound example of this downslope warming at the south end of the San Joaquin Valley occurred from the 23rd through the 24th. During this period, high temperatures topped the 80 degree mark in a few localities and nighttime temperatures remained above 70 degrees! Bakersfield shattered the record for high minimum temperature on the 23rd with a low of 68 degrees, making it one of the warmest places in the lower 48 states that night...even warmer than Key West, Florida!

NO HYDROLOGIC PRODUCTS WERE ISSUED THIS MONTH.



The map on the next page, courtesy of the Climate Prediction Center, indicates how much precipitation (in inches) would be needed to bring the Palmer index of soil moisture back to normal.



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W/WR2
CNRFC
WFO HNX
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