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: **FEBRUARY** YEAR: **2014**

TO: Hydrometeorological Information Center, W/OH12x1
National Weather Service/Office of Hydrology
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SIGNATURE:
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(In Charge of Hydrologic Service Area)

DATE: March 5, 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.

February, 2014 brought water replenishment to the HSA, thanks to an occasional southward shift of the storm track. Three distinctive storm systems, one near the end of the first week of February and the other two during the final days of the month, produced plentiful snow over the high Sierra and beneficial rainfall in the lower elevations, which included much of the San Joaquin Valley and the Kern county desert. Nonetheless, precipitation still averaged below normal for the month in most areas. Fresno was the only exception with February, 2014 rainfall ending up slightly above normal. It was also the first time since December, 2012 that Fresno had a month of above normal rainfall. Despite some ground water recharge in the San Joaquin Valley by month's end, it was not nearly enough to bring central California out of its drought. State hydrologists agree that it will take at least a few more water loaded storms to restore California's severe and prolonged precipitation deficit. The maps on pages 3 and 4 of this summary show the statewide percentage of normal precipitation for the season as of March 3rd and how much precipitation, in inches, would be required to completely erase the precipitation deficit across the state.

February marked the beginning of a significant change in the pattern. The first ten days of the month were generally cloudy and unsettled. A cold storm with origins in the Gulf of Alaska moved through the HSA on the 1st and 2nd and brought measurable rain in the San Joaquin Valley north of Kern county of generally a quarter of an inch or less. The storm brought a dusting to a few inches of snow to elevations above 3000 feet in the Sierra. A stronger, warmer and much wetter storm barreled in from the eastern Pacific on the 6th and opened the door to a series of weaker storm systems that were carried into central California by strong westerly winds aloft from the 7th through the 10th. Unfortunately, the brisk westerly flow created some rain shadowing on the west side and south end of the San Joaquin Valley during this period and greatly minimized rainfall. On the other hand, orographically produced precipitation, and lots of it, occurred along the western slopes of the southern Sierra Nevada. The storm on the 6th dumped up to 2 feet of new snow in the Sierra. In the San Joaquin Valley, rainfall from this storm ranged from less than a tenth of an inch in Kern county to a quarter to a half inch elsewhere. Local rain amounts of just over an inch were reported in the Madera-Fresno/Clovis area. The weaker storms that followed produced a few hundredths to at most a third of an inch of rain in the San Joaquin Valley. Up to three quarters of an inch of rain fell in the foothills and higher elevations of the Sierra. Snow levels remained quite high during this period (above 8,000 feet) where an additional 4 to 7 inches of snow accumulated. Again, much of Kern county was robbed of significant precipitation during this period. In addition to the wet weather, the storms brought a very mild air mass into the HSA between the 7th and the 10th. February 7th turned into an unseasonably warm day with high temperatures peaking just above 80 degrees in some locales at the south end of the San Joaquin Valley and in the Kern county desert.

The storm track migrated northward into the Pacific Northwest after the 10th and remained there through the 15th before settling southward again. A weak storm moved across northern California on the 16th and brushed the northern half of the HSA with very light precipitation. Elevations above 7000 feet in the Sierra

north of Kings Canyon received a dusting to a couple of inches of snow from this system. A dry cold front associated with this storm system moved southward across the HSA on the evening of the 17th and was followed by blustery winds, particularly in the mountains and desert on the 18th and 19th. Dry weather with an appreciable day to day warming trend ensued by the 20th and continued through the 25th as an upper level ridge of high pressure built over the state. During this period, high temperatures in the 70s were common in the San Joaquin Valley, lower foothills and the Kern county desert. February 25th was the warmest day of the period and ended up being the warmest day of the month. Afternoon temperatures in many valley, foothill and desert locations that day reached 80 degrees or higher. As a result, February, 2014 ended up much warmer than normal throughout the central California interior. In Fresno, it was the warmest February ever since record keeping began in the late 1800's. Bakersfield tied for its 6th warmest February on record.

The bulk of the month's precipitation occurred during the last few days of February as two separate storm systems, each with subtropical moisture connections, impacted the central California interior. The first storm came in two waves, first as a band of very light precipitation that moved onshore during the midday hours of the 26th. The second wave moved into the central California interior during the early morning hours of the 27th with a band of heavier rain and higher elevation snow. A stronger, larger, and wetter storm moved into the HSA that night. Although showers associated with this storm lingered into the first weekend of March, the bulk of its precipitation occurred on the 28th. With the exception of the south end of the San Joaquin Valley which was rain shadowed throughout this period because of strong downslope winds, combined storm totals during the last 3 days of February were quite impressionable. Rain amounts in the San Joaquin Valley ranged from as little as two tenths of an inch at the south end to an inch or more north of Kern county. The higher terrain fared much better. Four tenths of an inch to 1.3 inches of rain fell in the Kern county desert while up to 4 inches soaked the Kern county mountains as well as the Sierra foothills. One to four feet of new snow accumulated over the high Sierra. Street flooding was reported in the San Joaquin Valley in the cities of Visalia, Dinuba and Porterville on the afternoon of the 28th while some mud and debris caused minor flooding in the Kern county desert along Garlock Road about five miles northwest of Randsburg.

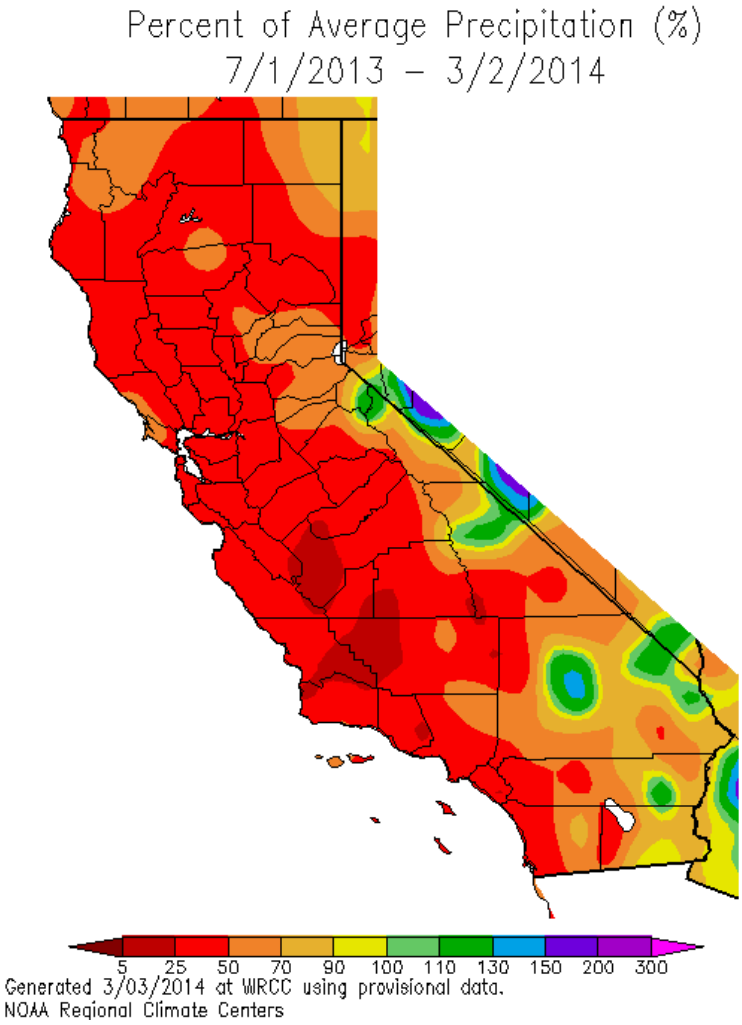
Most of the major reservoirs reported only a slight increase in water storage this month, up to 17% of normal capacity compared to 14% at the end of January. As of March 1st, more snow was observed over the southern Sierra than at any time so far this season, but it was still a meager 36% of normal.

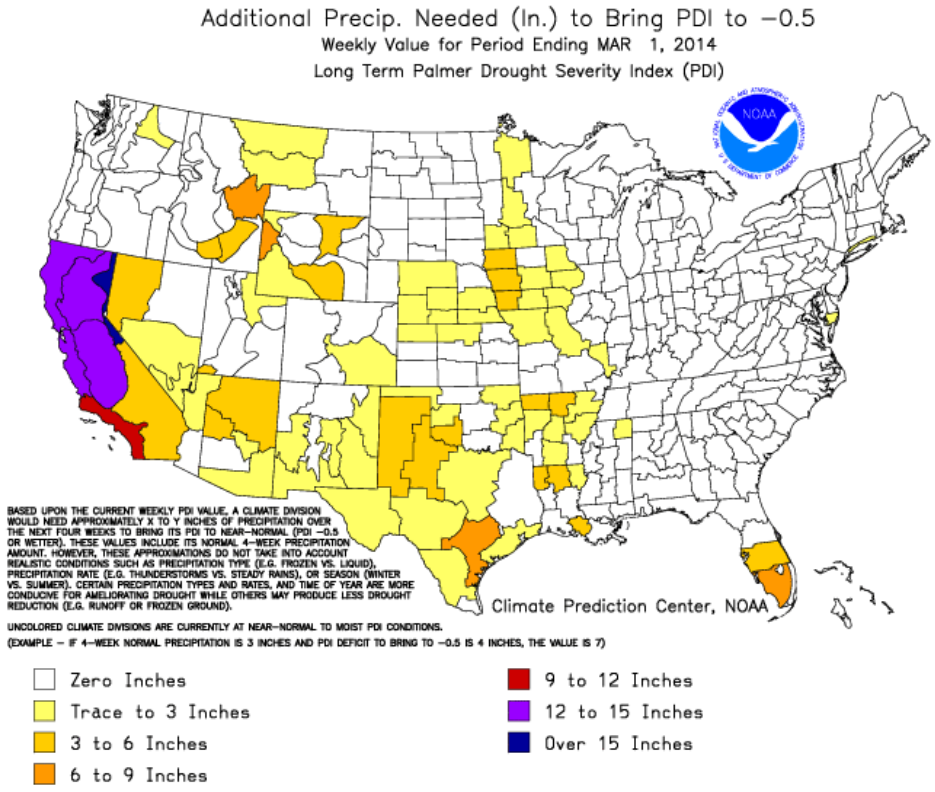
RAINFALL DEPARTURES

		BAKERSFIELD	FRESNO
THIS MONTH	ACTUAL	0.32 INCH	2.11 INCHES
	NORMAL	1.24 INCH	2.03 INCHES
	DEPARTURE	-0.92 INCH	0.08 INCH
	PCT OF NORMAL	23.8	103.9
LAST 3 MONTHS	ACTUAL	0.54 INCH	2.83 INCHES
	NORMAL	3.42 INCHES	5.99 INCHES
	DEPARTURE	-2.88 INCHES	-3.16 INCHES
	PCT OF NORMAL	15.8	47.2
LAST 6 MONTHS	ACTUAL	1.51 INCH	3.41 INCHES
	NORMAL	4.44 INCHES	7.86 INCHES
	DEPARTURE	-2.93 INCHES	-4.45 INCHES
	PCT OF NORMAL	34.0	43.4
LAST 12 MONTHS	ACTUAL	2.44 INCHES	4.22 INCHES
	NORMAL	6.47 INCHES	11.50 INCHES
	DEPARTURE	-4.03 INCHES	-7.28 INCHES
	PCT OF NORMAL	37.7	36.7
SINCE JAN 1ST	ACTUAL	0.44 INCH	2.68 INCHES
	NORMAL	2.40 INCHES	4.22 INCHES
	DEPARTURE	-1.96 INCH	-1.54 INCH
	PCT OF NORMAL	18.3	63.5

HYDROLOGIC PRODUCTS ISSUED THIS MONTH.

Urban/Small Stream Flood Advisory…San Joaquin Valley	2015Z	28-FEB
Urban/Small Stream Flood Advisory…valley portion of Tulare, Kern county	2131Z	28-FEB
Urban/Small Stream Flood Advisory…San Joaquin Valley, Sierra foothills	2327Z	28-FEB
Urban/Small Stream Flood Advisory…Kern county desert (Ridgecrest)	2357Z	28-FEB
Urban/Small Stream Flood Advisory…Southeast Kern county (desert)	0350Z	01-MAR





cc:

W/OH12x1
W/WR2
CNRFC
WFO HNX
WFO STO