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: **DECEMBER** YEAR: **2012**

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: January 7, 2013

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.

For much of December, the primary storm track resided across northern California. As a result, the northern half of the HSA, generally from Fresno county northward, ended up much wetter than normal while precipitation averaged slightly below normal elsewhere. In spite of an overabundance of precipitation over the northern half of the district, the water capacity at many of the major reservoirs only averaged about 42 percent of normal at the end of the month.

To recap, December began much like November ended with storm systems trekking in succession across northern California. Despite a brief respite from wet weather from the afternoon of the 3rd through the evening of the 4th , the first 6 days of the month brought beneficial precipitation to the central California interior. Rainfall totals of an inch or more were common in the San Joaquin Valley from Fresno county north. During this period, up to 6 inches of rain drenched the Sierra foothills while the higher elevations of the Sierra north of Kings Canyon received up to 5 feet of new snow. A building upper level ridge of high pressure pushed the storm track northward into the Pacific Northwest on the 7th where it remained until the 11th. Afterward, a storm that originated in the Gulf of Alaska moved southward across the HSA. The storm left a light dusting of snow in its wake at 3500 feet with 5 to 15 inches of snow over the higher elevations of the Sierra. Rain in the lower elevations ranged from about a quarter to a half inch in the San Joaquin Valley to three quarters of an inch in the lower foothills. Considerably milder air accompanied the next storm system into the central California on the 17th with resultantly higher snow levels. Although strong southwesterly winds aloft left much of the San Joaquin Valley rain shadowed, particularly along the west side, the storm produced generous orographic precipitation in the foothills and higher elevations of the Sierra. Total rainfall from this storm ranged from just a couple of hundredths to fifteen hundredths in the San Joaquin Valley to nearly 2 inches in the Sierra foothills. Meanwhile, up to 9 inches of snow fell in the Sierra above 6500 feet. As winds abruptly shifted to the north behind this storm, a dry and unseasonably cold air mass infiltrated the HSA. On the morning of the 20th, temperatures plummeted into the teens in the Kern county desert and in the 20s throughout much of the San Joaquin Valley, making It the valley's first freeze of the season.

The pattern turned stormy again by the 21st. At least three storm systems impacted central California from the 22nd through the 26th. The first storm was the wettest of the three and drenched the northern half of the San Joaquin Valley with a little more than an inch of rain while the surrounding foothills received up to 5 inches of rain. Nearly 4 feet of snow fell in the Sierra above 7000 feet. The last storm in this series of storms was the coldest and brought snow to elevations as low as 3000 feet. Enough snow fell at pass level in the Kern county mountains to disrupt travel from the 26th into the 27th and forced a portion of highway 58 through Tehachapi pass to shut down for a short time. The last and final storm of the month rolled into the HSA on the 28th and 29th but did not finally exit into the Great Basin until the 31st. Despite its slow movement, the storm produced relatively light precipitation with at most a few inches of new snow over the higher elevations of the Sierra. . Rain showers in the lower elevations ranged from just a few hundredths in the San Joaquin Valley to as much as a quarter of an inch in the Sierra foothills.

A marked increase in snowpack occurred over the higher elevations of the southern Sierra Nevada this month, thanks to the strong orographic lift produced by most storms. As of January 1st, 2013, the snowpack over the southern Sierra Nevada averaged 130 percent of normal. Temperature-wise, the month ended up much warmer than normal. In fact, December, 2012 tied the record for the 7th warmest December in Fresno.

HYDROLOGIC PRODUCTS ISSUED THIS MONTH

Flood Watch……	foothills/ higher elevations of the Sierra from Fresno county northward	2040Z	29-NOV
Urban/Small stream flood advisory…	eastern San Joaquin Valley and foothills/higher elevations of the Sierra from Fresno county northward	2325Z	30-NOV

cc:

W/OH12x1
W/WR2
CNRFC
WFO HNX
WFO STO