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: **MARCH** 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: April 9, 2012

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.

Although it took until the mid to later part of the month, much of the central California interior received a healthy replenishment of water, at least enough to bring March precipitation to slightly above normal at a majority of climate stations in the HSA. In fact, March was the first month that ended up wetter than normal since October, 2011. The storms that delivered copious amounts of rain and mountain snow to the HSA occurred during the last three weekends of the month. The common denominator with two of these storms was the cold air associated with them as they left impressionable snowfall in their wake at elevations as low as 2500 feet.

Until the weather turned stormy and wet, the overall pattern remained relatively benign across the HSA. Storm systems tracked well north of our HSA during the first two weeks of the month. Cold fronts that trailed southward from these storms, one on the 1st and another on the 6th, brought no measurable rain to the San Joaquin Valley or the Kern county desert and little more than isolated showers over the higher terrain. However, a dry and unseasonably cold air mass that settled into the HSA behind the second cold front produced frosty early morning temperatures in the San Joaquin Valley from the 7th through the 10th. Otherwise, an upper level ridge of high pressure centered over southern California and Arizona dominated the weather pattern across the HSA during the first fifteen days of the month.

The first rather powerful storm originated in the Gulf of Alaska and left central Californians reeling from the heavy snow it produced in the mountains and foothills and drenching rain in the lower elevations during Saint Patrick's Day weekend. The storm even spawned a weak tornado in a rural part of the San Joaquin Valley just west of the town of Tranquility on the 17th. It was the first occurrence of a tornado in the San Joaquin Valley since February 27, 2010. Otherwise, the subtropical moisture that this storm tapped into produced rain totals of 1 to 3 inches in the northern and eastern part of the San Joaquin Valley with 2 to nearly 5 inches of rain in the foothills below 2000 feet. The rain that could not readily percolate into the soil resulted in mud and debris flows in the lower foothills of the Sierra. Above 2000 feet, precipitation fell in the form of snow with accumulations ranging from 3 to 6 inches at 2500 feet to as much as 3.5 feet over the highest elevations of the Sierra. In Kern county, a small, slushy accumulation of snow fell down to pass level (4100 feet) with up to 8 inches of the white stuff accumulating at and above 5000 feet. Although the storm produced long travel delays through the Grapevine, Interstate 5 did remain open while CHP escorted traffic over Tejon Pass.

The second storm of the month was a somewhat warmer storm that originated in the western Pacific. Although it did not pack the wallop of the St. Patrick's Day weekend storm, the system brought beneficial rain and mountain snow to the HSA during the weekend of the 24th and 25th. By the time this storm exited into the Great Basin on the 26th, it left a fresh 8-16 inches of snow in the Sierra above 6500 feet with up to a foot of new snow in the Kern county mountains above 5000 feet. In the lower elevations, rain amounts ranged from about a third of an inch in the San Joaquin Valley to as much as 1.5 inches in the Sierra foothills.

The third and final storm of the month was much colder and was spun out of a much larger storm system centered over the Gulf of Alaska. Although a few showers and higher elevation snow flurries from this

storm lingered into April 1st, the bulk of its precipitation occurred on the 31st. Up to 9 inches of snow fell in the Tulare county mountains above 7000 feet with up to a foot of new snow above 7000 feet in the Sierra Nevada north of Kings Canyon National Park. The arrival of cold air came too late to bring significant snowfall to the Kern county mountains. However, rain did end as snow showers down to pass level and slowed travel along Interstate 5 through the Grapevine on the night of March 31st. The combined effects of all of these storms raised the snowpack over the southern Sierra to 55 percent of normal by the first of April. In the San Joaquin Valley, rainfall for the season, which began July 1st, 2011, continued to average 40 to 50 percent below normal with an average deficit of about 4.25 inches. Temperature-wise, March, 2012 averaged slightly below normal.

HYDROLOGIC PRODUCTS ISSUED

Urban/Small Stream Flood Advisory…San Joaquin Valley, Sierra foothills	1842Z	17-MAR

cc:

W/OH12x1
W/WR2
CNRFC
WFO HNX
WFO STO