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: **2015**

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 3, 2016

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.

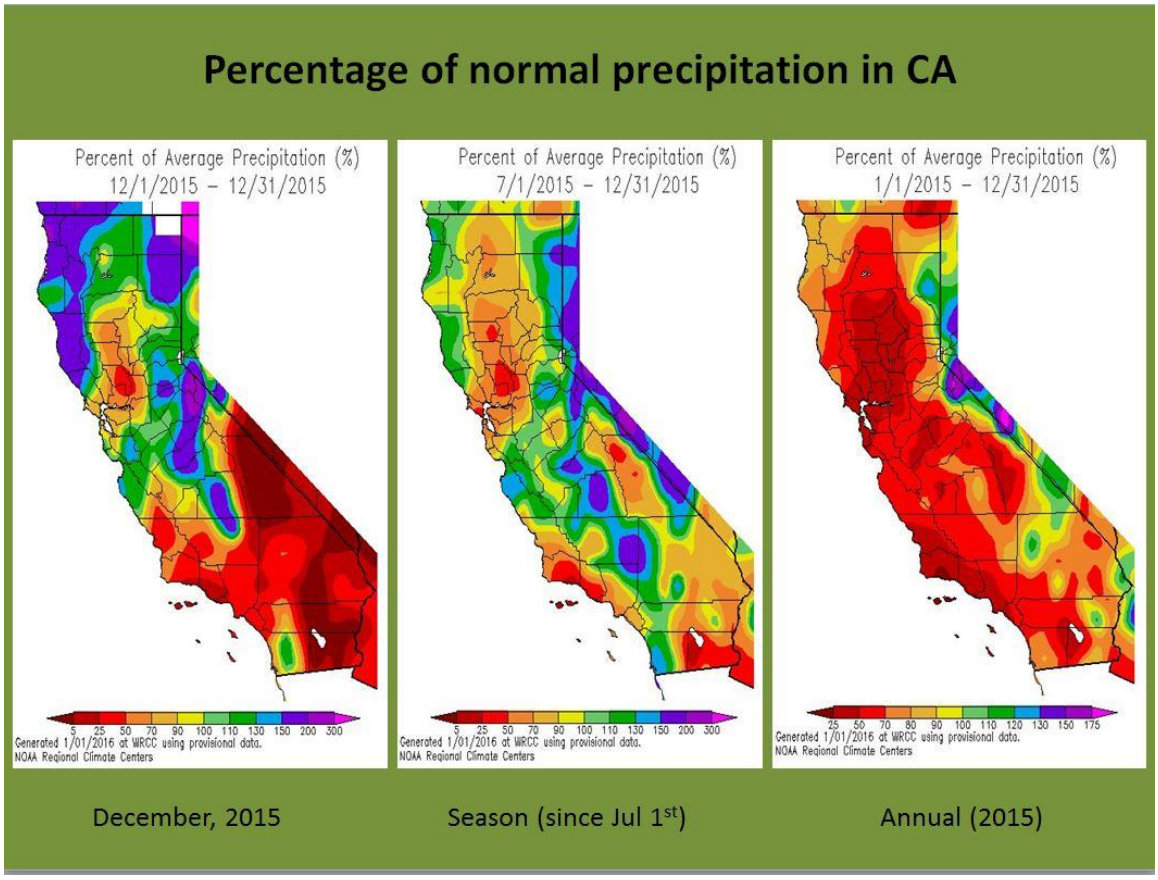
December, 2015 was a bountiful month for orographically enhanced precipitation along the west slopes of the Sierra. A total of five Gulf Of Alaska storms produced generous snow over the high Sierra and brought beneficial rain to mainly the east side of the San Joaquin Valley and adjacent foothills. By the end of the month, the snowpack over the southern Sierra increased to about 86 percent of normal. Precipitation throughout the HSA, with respect to normal, was highly varied. A more detailed look at how precipitation varied throughout California has been provided on the following page. Downslope westerly winds associated with each storm system that traversed central California this month helped minimize precipitation on the west side of the San Joaquin Valley and the Kern County desert. Naturally, precipitation in these rain shadowed areas ended up below normal this December while the foothills and higher elevations of the Sierra fared much wetter than normal. Unfortunately all of the major reservoirs in the HSA continued to suffer from extremely low water levels through the month. As 2015 came to a close, the water capacity in the reservoirs averaged only about 14 percent of normal. That's just a slight increase over last month.

Here is a chronological account of hydrologic events that occurred this December:

A cold frontal passage on the 3rd brought light precipitation to the HSA north of Kern County. The highest elevations of the Sierra received up to a few inches of snow while rain amounts in the lower elevations were generally less than a tenth of an inch. Two back to back storms that originated in the Gulf of Alaska barreled southeastward across the HSA between the 10th and 13th of December. Precipitation totals during this 3 day period amounted to a quarter to half inch in the San Joaquin Valley. One to three inches of rain drenched the Sierra foothills while 1 to 2 feet of snow accumulated in the Sierra above 7,000 feet. The second storm brought snow levels down to 3,500 feet on the 13th where a dusting to as much as two inches of snow were reported along with black ice on some roads. The storm cycle started up again on the 19th and continued through the 24th. During this period, at least 3 cold storm systems tracked across the HSA. The storm system on the 21st and 22nd was the wettest and most powerful and triggered mud slides and road closures along I-5 near Lebec and Highway 178 through Kern Canyon. Very strong winds accompanying this storm gusted to 90 mph in the vicinity of Mojave where an estimated 15 to 20 tractor trailers were blown over along Highway 58. By the time the last storm in this train of storms exited into the Great Basin on the night of the 24th, residents in the foothills awoke to a fresh blanket of snow Christmas morning. Elsewhere, snow piled to a depth of 2 feet or more over the highest elevations of the Sierra while rain drenched the lower elevations (except in the Kern County desert). Rain amounts of a half inch to two inches fell in the San Joaquin Valley while 2 to 4 inch rain totals were common in the Sierra foothills. Rain amounts in the Kern County desert totaled less than a tenth of an inch during this period. A relatively moisture-starved cold front swept southward across the HSA during the early morning hours of the 28th and brought very light precipitation to Merced County and to the foothills and higher elevations from Tulare County northward.

Temperature-wise, December, 2015 will best be remembered for its Arctic invasions, each of which occurred in the wake of storm systems on the 14th and Christmas Eve and resulted in several nights of frost and sub-

freezing temperatures in the Kern County Desert and the San Joaquin Valley. Thermometer readings in these regions bottomed out in the teens and 20s respectively. Practically every morning between the 14th and 19th and again from the 25th until the end of the month dawned well below freezing in these areas. Despite the many cold nights that December brought, the monthly average temperature ended up very close to normal throughout the HSA. As for the calendar year, 2015 ended up being the 2nd warmest on record in Bakersfield and the 4th warmest on record in Fresno.



HYDROLOGIC PRODUCTS ISSUED THIS MONTH

Flash Flood Watch……Foothills and higher elevations of the Sierra	1659Z	21-DEC
Flash Flood Warning…Kern Co mountains/Tulare Co mountains	2035Z	22-DEC

cc:

W/OH12x1
W/WR2
CNRFC
WFO HNX
WFO STO