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: **2018**

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: March 4, 2018

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).

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

February, 2018 was another pathetically dry month with well below normal precipitation. The graphical maps below this summary attest to that with a precipitation deficit of 3 to as much as 7 inches over much of the HSA. As of February 27th, much of the central California interior was categorically in a moderate to severe drought. A map that depicts the areas most severely affected by drought across California has been provided below this summary.

During the first three weeks of the month, a very strong upper level ridge of high pressure remained anchored near the California coast and effectively blocked Pacific storms from bringing wet weather into the Golden State. Only twice during the first three weeks of February did the upper level ridge collapse and allow cold fronts to trek southward through the HSA, but even then, these fronts were limited on moisture. Little more than trace amounts of rain fell in the San Joaquin Valley from these cold fronts while isolated showers and higher elevation snow flurries fell in the mountains. This occurred on the 12th and the 19th. Nonetheless, these fronts were interruptions to an otherwise prolonged spell of balmy weather. High temperatures were in the 70s in the San Joaquin Valley, lower foothills and the Kern County desert practically every day during the first ten days of the month. February 7th was the warmest day with thermometer readings topping the 80 degree mark in the warmest locations. Blustery winds accompanying these fronts gusted to 40 mph in the San Joaquin Valley and as high as 80 mph in the Kern county mountain passes and were followed by unseasonably cold air masses with frost and below freezing temperatures in the San Joaquin Valley and the Kern county desert. In the wake of the cold frontal passage on the 12th, a very weak tornado touched down in the San Joaquin Valley a few miles southeast of Sanger. This landspout occurred in rural farmland and caused no damage. The second cold frontal passage on the 19th packed a sting and heralded the arrival of unseasonably cool weather that persisted through the end of the month. Temperatures fell below freezing in the San Joaquin Valley almost every night between the 19th and 25th. The coldest morning was on the 20th when predawn temperatures ranged from the single digits in the coldest locations of the Kern county desert to the upper teens and 20s in the San Joaquin Valley. The hard freeze brought a costly and damaging blow to a variety of crops in the San Joaquin Valley on the morning of the 20th, particularly after an agricultural bloom that was at least two weeks ahead of schedule.

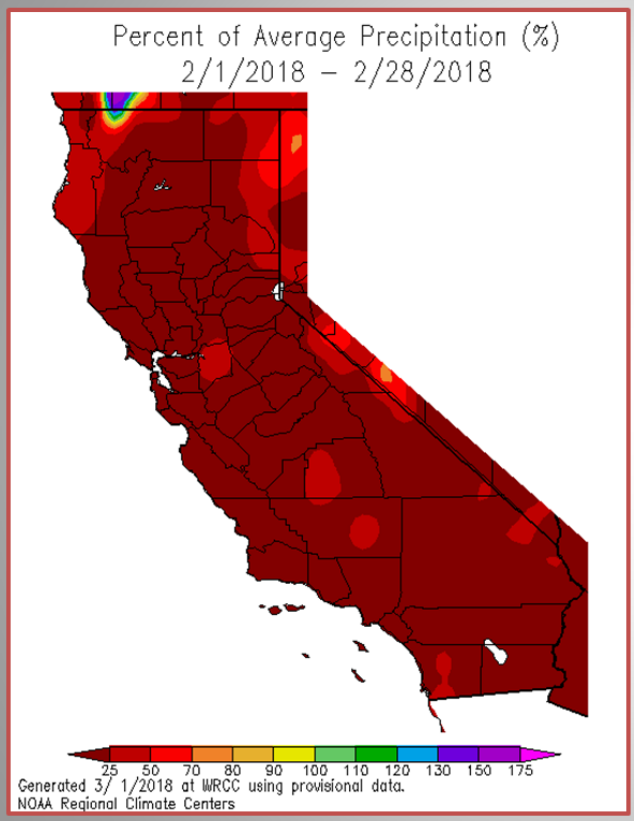
During the last week of February, the pattern finally began to change significantly. The upper level ridge of high pressure retrograded far enough over the Pacific to allow precipitation-bearing storm systems into California from the Gulf of Alaska. This was a very important change that would bring a beneficially wet start to the month of March. The first of these storms to open the door to wet weather moved into the HSA during the early morning hours of the 22nd and was followed by a second wetter storm during the 26th and 27th.
These were cold storms that brought accumulating snow and wintry travel to unusually low elevations. In general, each of these storms produced a dusting to as much as 4 inches of the white stuff in the Sierra foothills as low as 1500 feet while the higher elevations of the Sierra received a fresh 5 to 12 inches of snow. In the Kern county mountains, snowfall ranged from a dusting to a couple of inches with locally higher amounts of about 5 inches above 5,000 feet, and there was just enough snow from each of these storms to

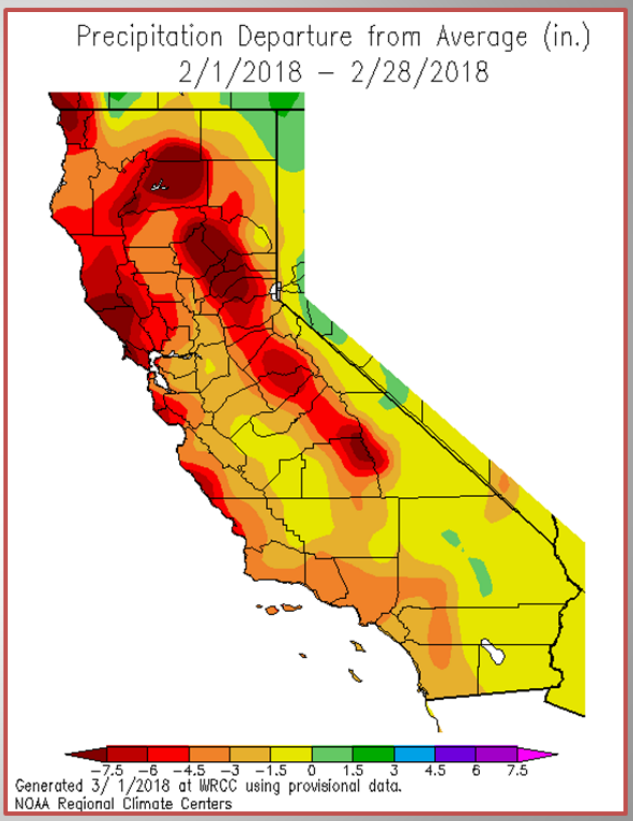
disrupt travel over the Grapevine. The storm on the 22nd produced scanty rainfall in the San Joaquin Valley while the storm that followed on the 26th and 27th was slightly wetter with valley rainfall of two tenths to six tenths of an inch.

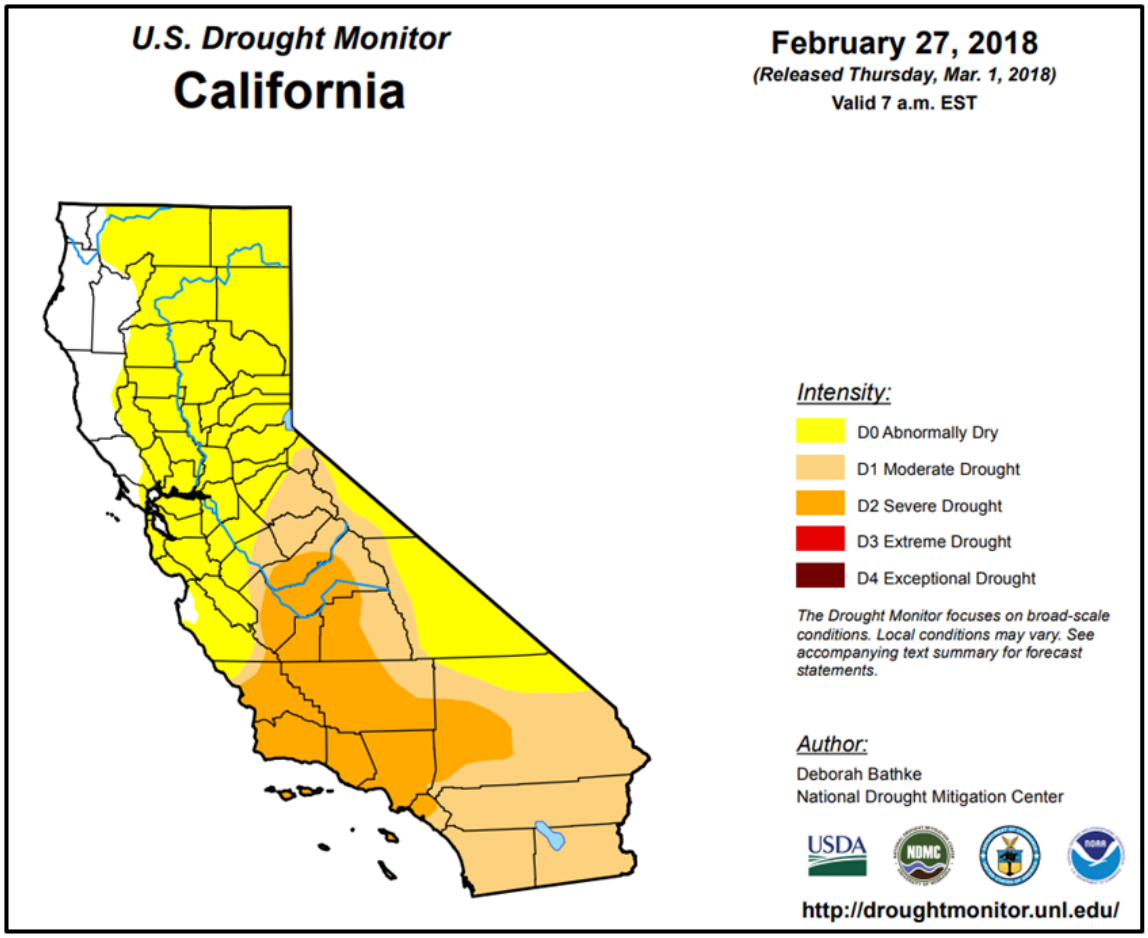
Although the overall pattern trended wetter during the last 6 days of the month, the precipitation that fell throughout the HSA, while beneficial, was just a proverbial drop in the seasonal bucket. The snowpack over the southern Sierra only averaged about 19 percent of normal by month's end. Reservoir owners maintained adequate water storage in the dams through the month and savored the precipitation that late month storms brought into the HSA with a resultant slight increase in water levels. As of March 2nd, the water capacity of the dams averaged about 52 percent of normal.

NO HYDROLOGIC PRODUCTS WERE ISSUED THIS MONTH.

CA Percentage of Normal and Departure from Normal Precipitation –February, 2018







CC:

W/OH12x1
W/WR2
CNRFC
WFO HNX
WFO STO