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: **OCTOBER** YEAR: **2020**

TO: Hydrometeorological Information Center, W/OH12x1
National Weather Service/Office of Hydrology
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Silver Spring, MD 20910

SIGNATURE: Kevin Durfee
(In Charge of Hydrologic Service Area)

DATE: November 3, 2020

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 no flooding occurred for the month within this hydrologic service area.
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October, 2020 was exceptionally dry throughout the central California interior. Although not a rare occurrence for October, no measurable rain fell in the San Joaquin Valley and the Kern county desert. What was extraordinary about this October was the considerable lack of precipitation in the mountains of the HSA, particularly over the Sierra. In a normal October, at least one storm system brings plentiful rain and high elevation snow to the Sierra by the 2nd week of the month. The only precipitation that fell this October came from a cold frontal passage on the night of the 25th. As the front swept southward through the district, it brought a few showers and higher elevation snow flurries to the Sierra with at most a tenth of an inch of precipitation in some locations. Isolated sprinkles fell in the Sierra foothills and in the southern San Joaquin Valley in the wake of this cold front during the early morning hours of the 26th. Low clouds and drizzle occurred along the north facing slopes of the Tehachapi mountains that morning as well. Otherwise, the entire month was bone dry, no thanks to a strong upper level ridge of high pressure that remained in control for much of the month. In the maps below this summary, we can see just how much drier than normal October, 2020 was throughout the Golden State and what the total precipitation deficit has been so far, in inches, since the beginning of 2020. The precipitation deficit was quite profound over the Sierra which ended up nearly three inches below normal for the month and had a calendar year total through October 31st that was 10 to 20 inches below normal. In contrast, the only region of the central California interior that has had 100 percent or more of its annual precipitation to date is in northeastern Kern County.

In addition to the dry and dusty conditions that prevailed over the HSA, temperatures averaged well above normal for the month. According to historical records that date as far back as the late 1800's, October 2020 ranked as one of the top ten warmest Octobers in the San Joaquin Valley. It was the second warmest October on record in Fresno and the fifth warmest October in Bakersfield, tied with 1991. Merced, Hanford and Madera ranked as the 6th, 7th and 9th warmest Octobers on record, respectively. A majority of days brought unseasonably warm afternoons to the valley, lower foothills and the desert. Thermometer readings topped the 90-degree mark in the aforementioned regions on at least ten of the first twenty days of the month. October 25th and 26th were the only two days out of the 31 days of the month that temperatures averaged below normal. An onshore flow that preceded the southward moving cold front referenced earlier in this summary brought marine stratus into the San Joaquin Valley on the 25th. These low clouds limited sunshine and kept high temperatures below 70 degrees in the valley on the 25th. Even though sunny skies returned on the 26th, much of the San Joaquin Valley remained below 70 degrees. A very dry Canadian air mass swept into the central California interior during this period and brought the coldest overnight

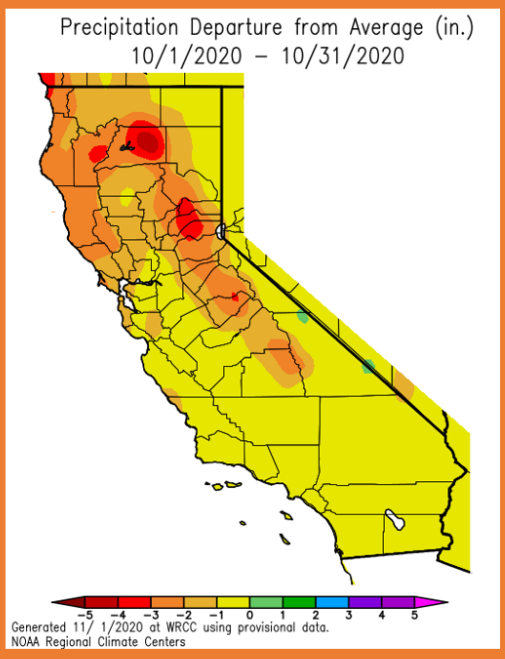
temperatures since early April to the HSA. Thermometer readings bottomed out in the upper 20s in the coldest spots of the desert and as low as the mid 30s in the San Joaquin Valley during the predawn hours of the 27th and 28th. This post frontal Canadian air mass was driven into the HSA by strong north to northeast winds that locally gusted up to 45 mph in the Sierra foothills and as high as 60 mph along the Sierra crest and over the higher ridges of the Kern county desert during the morning hours of the 26th. The combination of strong, gusty winds and very low humidities produced Red Flag conditions over the mountains from the 26th.into the 27th.

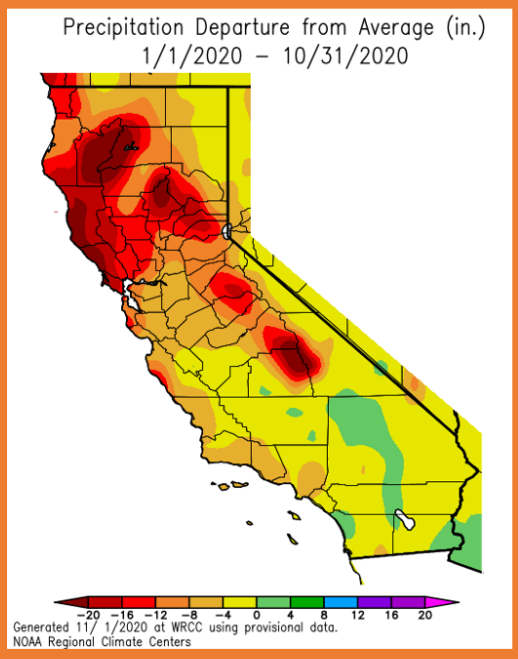
The most prolific hazards of the month were two major wildfires burning in the Sierra. The Creek fire, which started the Friday evening before Labor Day near the town of Big Creek northeast of Shaver Lake, grew to nearly 380,000 acres by the end of October and became the largest single wildfire in California history. As of November 1st, the Creek fire had destroyed 856 structures and was 70 percent contained. The SQF Complex, which was a merger of several smaller fires ignited by lightning a few miles east of Giant Sequoia National Monument in the middle of August, grew to 170,000 acres and destroyed 228 structures. By the beginning of November, the SQF Complex was 80 percent contained. Although many residents and livestock in the Sierra were displaced by these fires, fortunately no lives were lost. Smoke from these fires, however, plagued much of the central California interior throughout the month and significantly reduced air quality over much of the HSA.

Water levels in the reservoirs dropped slightly during the month. As of November 1st, the water capacity in the dams averaged 21 percent of normal.

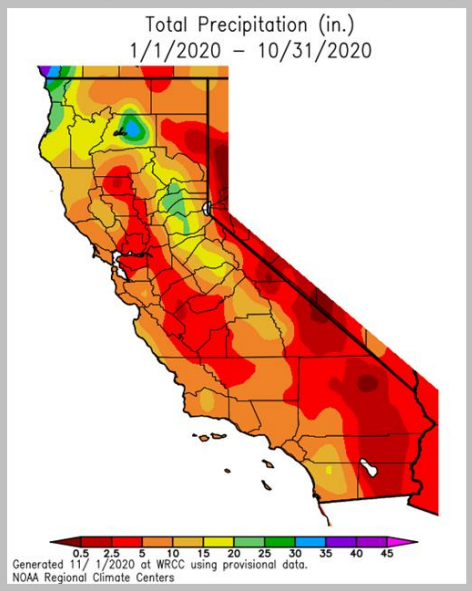
NO HYDROLOGIC PRODUCTS WERE ISSUED THIS MONTH.

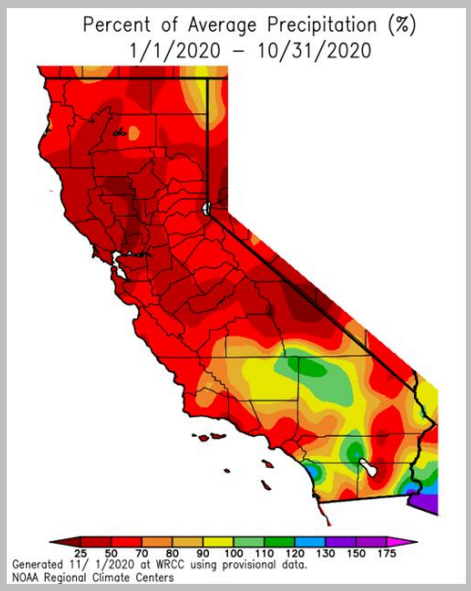
CA PRECIP DEPARTURE - OCTOBER VERSUS CALENDAR YEAR





CA PRECIPITATION - JANUARY THROUGH OCTOBER 2020





CC:
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