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: 2021

TO: Hydrometeorological Information Center, W/OH12x1

National Weather Service/Office of Hydrology

1325 East-West Highway #7116 Silver Spring, MD 20910

SIGNATURE: Colin McKellar

(In Charge of Hydrologic Service Area)

DATE: January 8<sup>th</sup>, 2022

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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December precipitation was between 150% to over 300% above normal across the entire HSA (Fig.1). In addition, well above average to record setting snowfall occurred throughout the southern Sierra and Kern County mountains. Current snowpack in the southern Sierra currently at 147% of average for the date (Fig. 2). In fact, Tuolumne Meadows in Yosemite NP had a record 171 inches of snow in the month, breaking the old record of 143 inches set back in 1996.

There were minimal water rises for main stem rivers and no significant flooding issues for any local streams and creeks. There were also no issues of flash flooding for any burn scar as rainfall rates were not high enough to create debris flows. Minor areal flooding occurred in the Kern County desert during rainfall events on the 24<sup>th</sup> and 30<sup>th</sup>. Minor nuisance flooding occurred in the San Joaquin Valley during December.

The total precipitation in December was enough to put a significant dent into annual precipitation deficits across the HSA. December rain and snowfall also put a significant dent in the ongoing drought. There was a one to two category improvement in drought conditions across the state (Fig. 3). However, the area still remains under severe to extreme drought due to longer term precipitation deficits as well as a reflection of low reservoir levels.

## **HYDROLOGIC PRODUCTS ISSUED THIS MONTH**

## **FLASH FLOOD WARNINGS\***

No Flash Flood warnings were issued in November

\*Note: Flash Flood Statements were issued as follow-ups to the initial Flash Flood Warnings.

## **FLASH FLOOD WATCHES**

No Flash Flood Watches were issued in November

## **FLOOD ADVISORIES**

Flood Advisory... Kern County desert (Tehachapi, China Lake, Edwards AFB, ect.) 1309Z 24-Dec. Flood Advisory... Kern County desert (Tehachapi, China Lake, Edwards AFB, ect.) 1945Z 30-Dec.

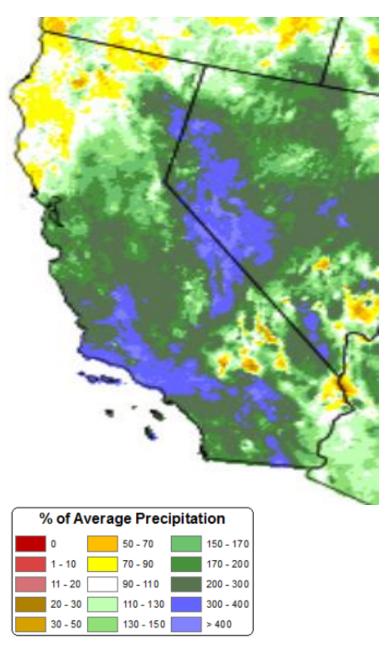


Fig 1. Departure from average monthly precipitation. Image courtesy of PRISM Climate Group at Oregon State University

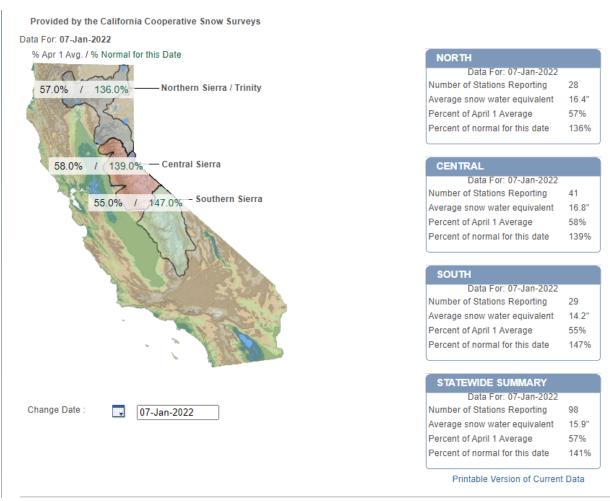


Fig 2. Current snowpack conditions across California. Image from California Nevada River Forecast Center.

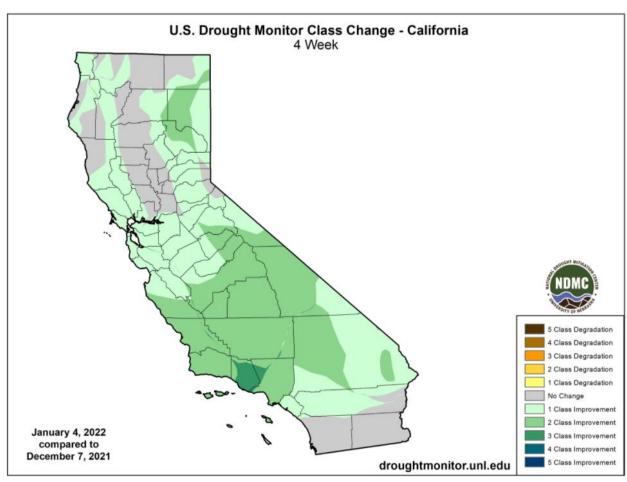


Fig 3. U.S. drought monitor class changes for December. Courtesy of the U.S. Drought Monitor.