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: 2023

TO: Hydrometeorological Information Center, W/OH12x1
National Weather Service/Office of Hydrology
1325 East-West Highway #7116
Silver Spring, MD 20910

SIGNATURE: Andy Bollenbacher
(In Charge of Hydrologic Service Area)

DATE: March 31st, 2023

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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¦ ¦ An **X** inside this box indicates no flooding occurred for the month within this hydrologic service area.
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Overall the month of February was not quite as active as January across the HSA. However, some periods of active weather were observed throughout the valley and foothills, with the first being on Feb 4-5. A trough of low pressure brought enough lift and instability through the region for some small hail in the valley and light snow in the mountain passes. For the most part, this event was not a real big rain-maker. Dry weather prevailed several days thereafter before a disturbance brought some snow again to the mountains, especially in Kern County. Adverse travel conditions in snow and black ice on Feb 14th led to a closure of the Grapevine/I-5 through the morning hours of Feb 15th. Another dry pattern emerged across the region for the next 5-6 days. The HSA/CWA had a dry and cold airmass overhead, which did little to impact the hydrologic conditions across the region.

However, a double-barrel storm system began to approach the Central California Interior on Feb 21 and 22. Light to moderate precip fell across the San Joaquin Valley, Sierra Nevada foothills, and Kern County mountains through the 22nd. Snow levels were very low with the first part of this system – less than 1,000 feet. Light snow was observed at Friant and Reedley which is very rare for those locations. The 2nd part of this storm system was more of an atmospheric river with higher snow levels. It stalled out across the area on the afternoon of the 24th, leading to extended periods of moderate to heavy rainfall across the valley and foothills – mainly south of Madera County. Rainfall totals near 2.5-3" were recorded in the valley where the AR stalled over. In fact, the all-time record for the most amount of rain to ever fall in one day occurred at Hanford Airport on Feb 24 – 2.7". Snowfall totals of 2-3 feet in the mountains with some places measuring up to 5' of snow during this event occurred as well. With this heavy rainfall, there were some flooding issues that occurred, especially in Tulare County where Highway 99 at Avenue 96 had to shut down on the 25th due to flooding. There was also some light snow that fell in the far south valley late on the night of the 24th due to dynamic cooling that occurred after the cold front/AR passed through. Multiple media sources confirmed light snow in Avenal and Arvin, with some slush also observed on the south side of Bakersfield.

After this event was finished impacting the region on the 26th, mostly dry weather resumed. Area Rivers and creeks did briefly run on higher due to the rainfall on the 24th, but were for the most part well behaved. The drought situation did improve with the record breaking rain across the valley. By the end of

the month, the drought monitor had massive improvements across the valley, as the valley got upgraded to abnormally dry. This was unsurprising as Kings and Tulare County had over 200% of normal precip for the month of February (Fig 1). Parts of the Sierra Nevada were taken out of the abnormally dry areas entirely (Fig 2).

Rain totals at our 5 ASOS Stations for Feb:

BFL – 2.44" (1.26" avg)
FAT – 4.26" (1.97" avg)
HJO – 3.73" (1.44" avg)
MAE – 2.86" (1.99" avg)
MCE – 2.77" (2.2" avg)

HIGH IMPACT EVENTS

Highway 99 at Avenue 96 shuts down due to flooding

Fig 1 – Percent of Average Precipitation for February 2023

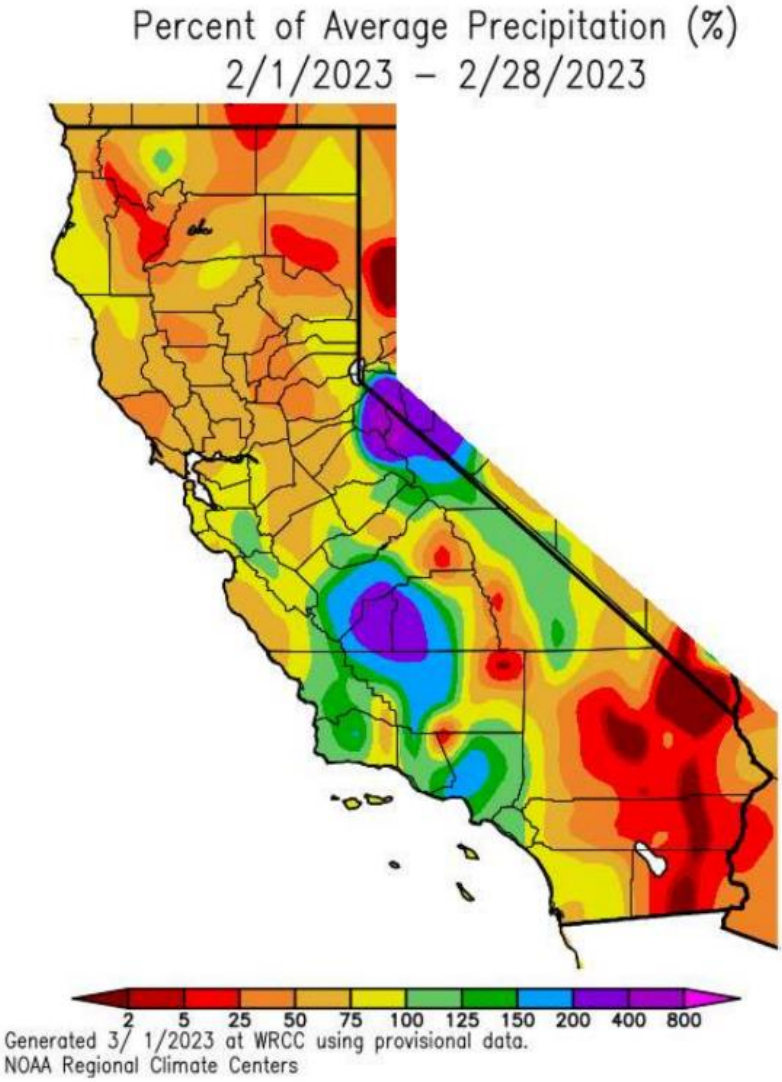


Fig 2 – Drought Status for the state of California

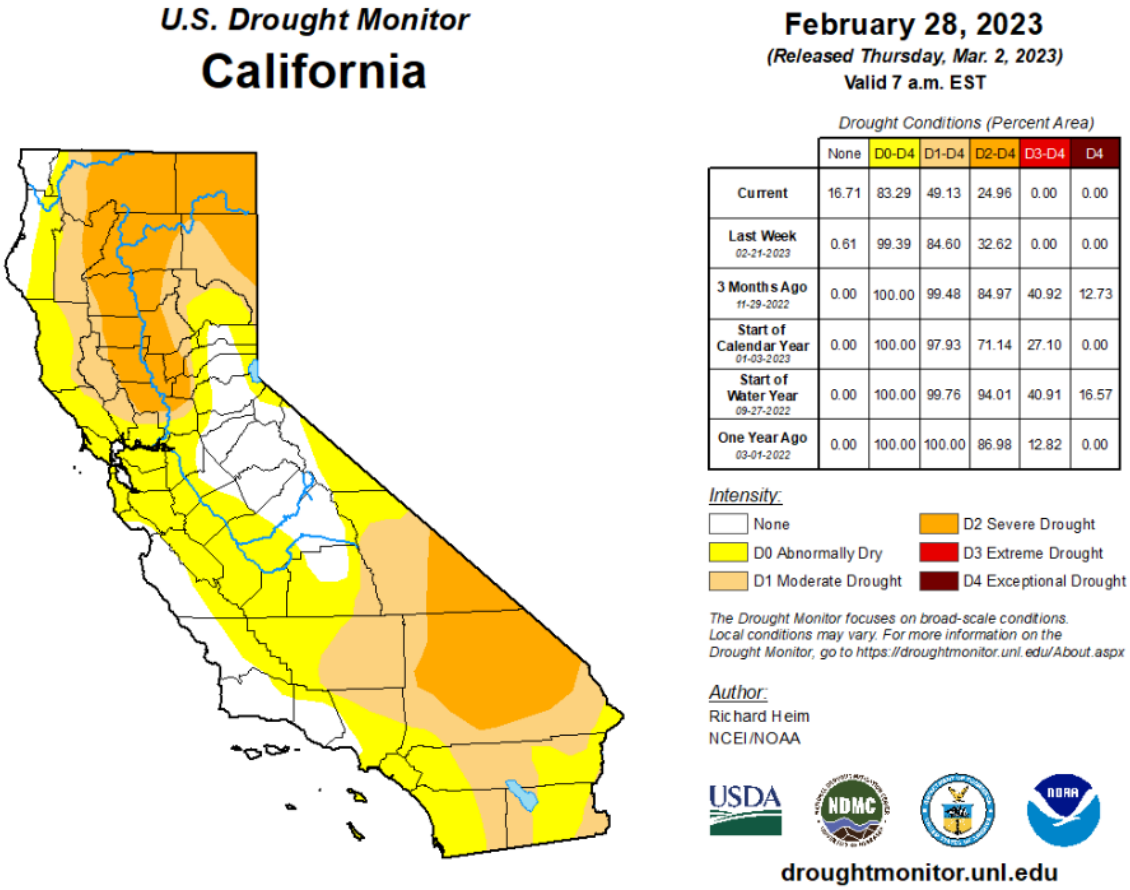


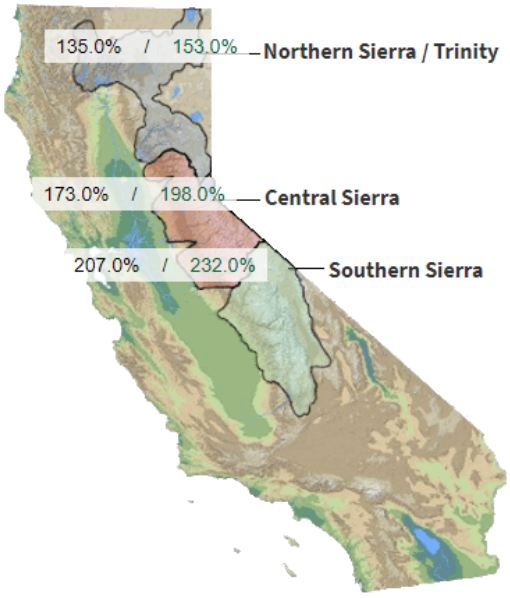
Fig 3 - Snowpack as of March 1st 2023

Snow Water Equivalents (inches)

Provided by the California Cooperative Snow Surveys

Data For: **01-Mar-2023**

% Apr 1 Avg. / % Normal for this Date



Change Date : 01-Mar-2023

NORTH	
Data For: 01-Mar-2023	
Number of Stations Reporting	29
Average snow water equivalent	39.3"
Percent of April 1 Average	135%
Percent of normal for this date	153%

CENTRAL	
Data For: 01-Mar-2023	
Number of Stations Reporting	49
Average snow water equivalent	46.4"
Percent of April 1 Average	173%
Percent of normal for this date	198%

SOUTH	
Data For: 01-Mar-2023	
Number of Stations Reporting	30
Average snow water equivalent	45.7"
Percent of April 1 Average	207%
Percent of normal for this date	232%

STATEWIDE SUMMARY	
Data For: 01-Mar-2023	
Number of Stations Reporting	108
Average snow water equivalent	44.3"
Percent of April 1 Average	170%
Percent of normal for this date	194%