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: **May** 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: June 11th, 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, May was a cooler than average month for the HNX HSA with drier than normal conditions south of Fresno County and wetter than normal conditions north of Fresno County. After a late April heat wave May started off quite cool with a few episodes of scattered showers and thunderstorms that mainly impacted the northern portion of the San Joaquin Valley, especially Merced and Madera County, as well as snow showers in the Sierra Nevada. This cool spell lasted through about the 12th of may as a couple more troughs of low pressure impacted the region. This cool pattern allowed for the snowmelt that was occurring in late April to slow down quite a bit for the first couple weeks of May. The Merced River through Yosemite National Park remained below flood stage during this period due to reduced snowmelt. Additionally, water managers at Pine Flat, Friant, and other major dams were able to take advantage of the lack of snowmelt and lowered reservoir levels significantly. It was well advertised that mid to late May would be warmer than early May, so releases increased in early May to compensate for upcoming snowmelt. This led to higher flows along many of the rivers across the region, including the San Joaquin, Kings, and Kern River.

High pressure eventually built back over the region by the end of the 2nd week of May. Afternoon highs soared across the San Joaquin Valley, with afternoon highs in the upper 90s to low 100s occurring by May 14th. Overnight lows also increased, which was significant for the Merced River as snow was able to melt 24 hours a day. The snowpack through YNP had previously melted during the daytime, only to re-freeze at night, but this was not quite the case with the ridge of high pressure overhead. The Merced River at Pohono Bridge and Happy Isles both reached flood stage as the snowpack melt during the heat wave which lasted for about 10 days. Pohono Bridge peaked at 12.08 feet on the morning of May 22nd after several days of snowmelt. The Merced River at Happy Isles peaked at 8.42 feet on the 23rd, also in the early morning hours. Both forecast points eventually trended downward, as the heatwave had also peaked, and trended downward. During this heatwave, releases from Isabella Dam increased quite a bit. Around 7,500 CFS ended up flowing into the Kern River downstream of the dam. This created some flooding concerns due to the high flows going through the channel. Other areas of controlled flows such as the King's River below Pine Flat and the San Joaquin River downstream of Friant Dam continued to run high and swift due to the snowmelt and subsequent releases to keep reservoirs at manageable levels. Weather-wise, the end of the month ended on a somewhat cool note due to low pressure disturbances passing though Central California. This did lead to additional precipitation over the Sierra Nevada at the

end of the month of May.

In terms of the drought monitor, conditions remained unchanged as some rainfall across the region as well as snowmelt continued. Groundwater recharge efforts across the San Joaquin Valley also continued, with farmers getting most, if not all their water from surface water and not wells due to high flows along area rivers. Due to a somewhat cooler than normal month of May, the snowpack remained extremely large by month's end compared to normal. The Southern Sierra Nevada snowpack was assessed at 437% of normal by the morning of June 1st. This will allow for a higher flows to continue across area rivers as snowmelt will continue well into the summer.

Key Hydrologic/Flood Products Issued for May 2023

Flood Watches

352 PM PDT Sat May 13 2023 (Pohono Bridge)

Flash Flood Warnings

438 PM PDT Sat May 20 2023
358 PM PDT Sun May 21 2023
543 PM PDT Sun May 21 2023
648 PM PDT Sun May 21 2023
704 PM PDT Sun May 21 2023

Hydrologic Statements

Continuous RVS for the San Joaquin River at Newman
Continuous RVS for the Merced River at Stevinson

Flood Warnings

435 PM PDT Sun May 14 2023 (Pohono Bridge)
850 AM PDT Sat May 27 2023 (Pohono Bridge)
924 AM PDT Sat May 20 2023 (Happy Isles)

Rain totals at our 5 ASOS Stations for May:

Bakersfield – 0.15
Fresno – 0.35
Hanford – .08
Madera – 0.79
Merced – 0.77

Fig 1 – Percent of Average Precipitation for May 2023

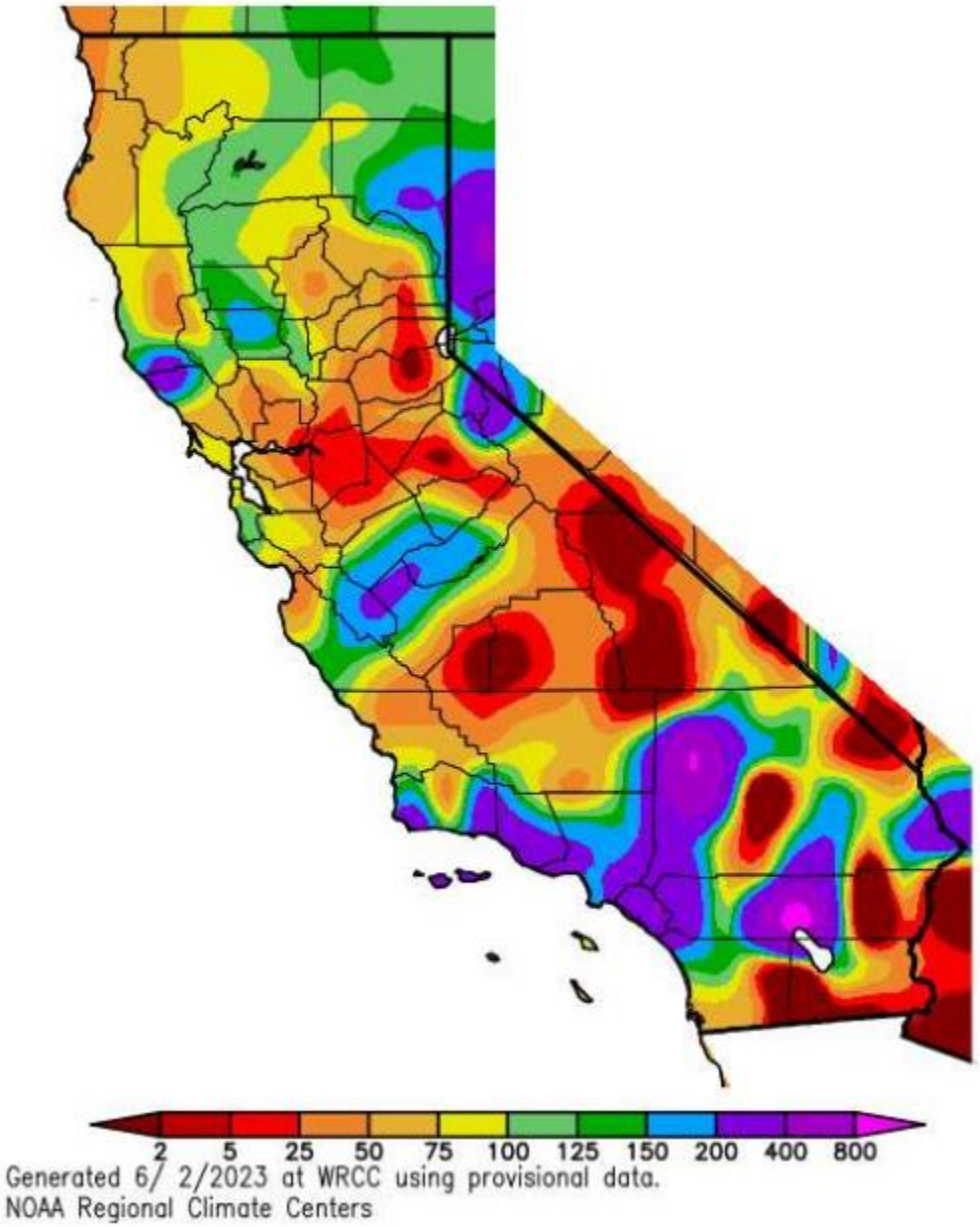


Fig 2 – Drought Status for the state of California

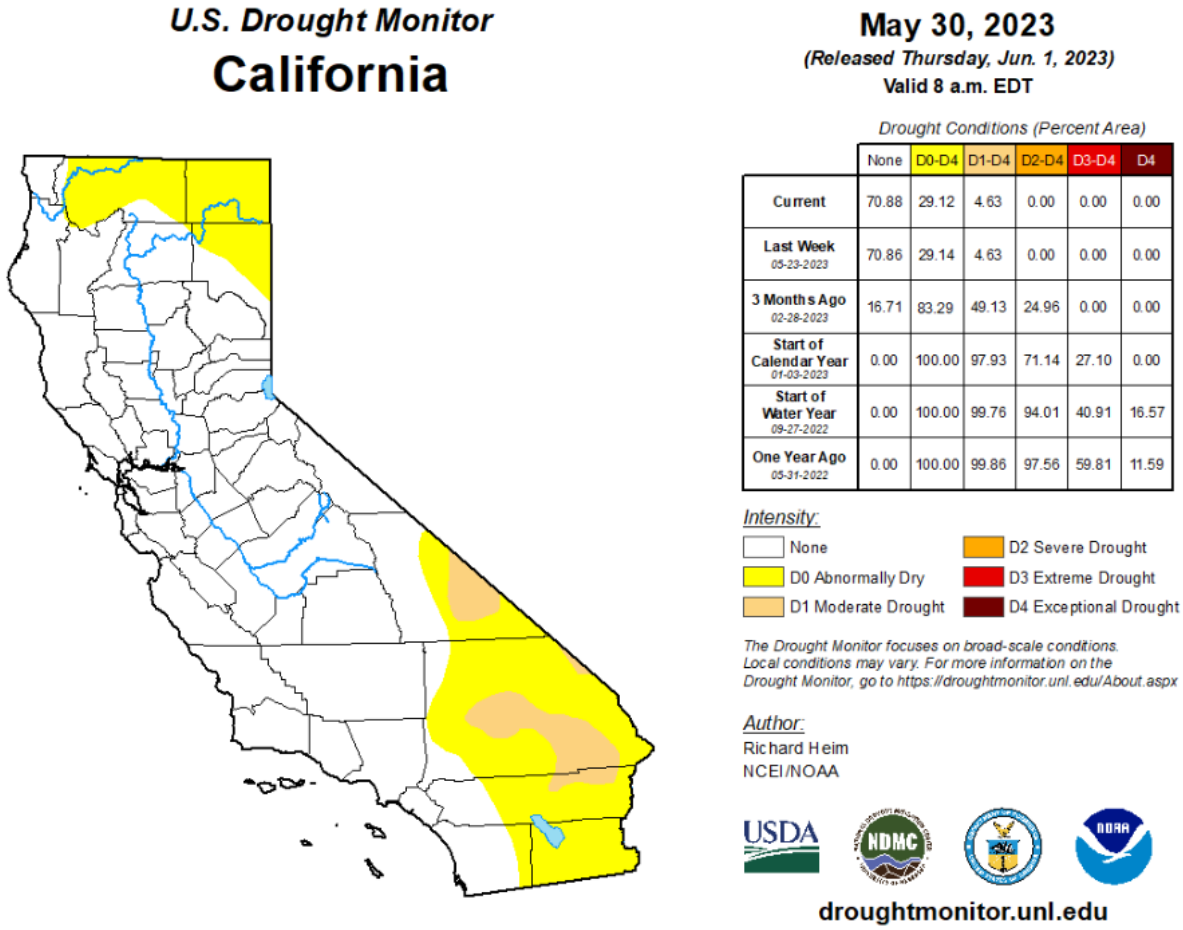


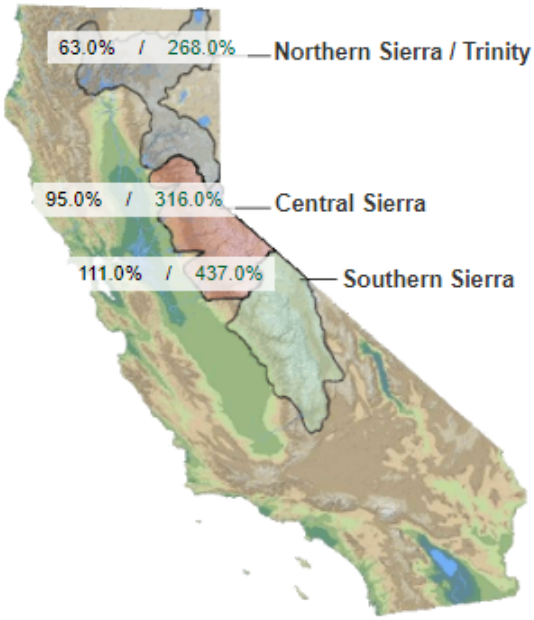
Fig 3 - Snowpack as of June 1st 2023

Snow Water Equivalents (inches)

Provided by the California Cooperative Snow Surveys

Data For: **01-Jun-2023**

% Apr 1 Avg. / % Normal for this Date



Change Date : 01-Jun-2023

NORTH	
Data For: 01-Jun-2023	
Number of Stations Reporting	24
Average snow water equivalent	18.8"
Percent of April 1 Average	63%
Percent of normal for this date	268%

CENTRAL	
Data For: 01-Jun-2023	
Number of Stations Reporting	40
Average snow water equivalent	22.9"
Percent of April 1 Average	95%
Percent of normal for this date	316%

SOUTH	
Data For: 01-Jun-2023	
Number of Stations Reporting	24
Average snow water equivalent	22.0"
Percent of April 1 Average	111%
Percent of normal for this date	437%

STATEWIDE SUMMARY	
Data For: 01-Jun-2023	
Number of Stations Reporting	88
Average snow water equivalent	21.5"
Percent of April 1 Average	88%
Percent of normal for this date	314%

Fig 4 – Major Reservoir Levels on June 1st 2023