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: **APRIL** 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: May 2, 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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¦ ¦ An **X** inside this box indicates that no flooding occurred for the month
+---+ within this hydrologic service area.

The Golden State was very divided with regard to the month's precipitation. The southern half of the state had a much drier than normal April while the northern half of the state ended up wetter than normal. Within the San Joaquin Valley HSA, April, 2018 ended up slightly to much wetter than normal over much of Merced County and in the Sierra from Fresno county northward while the remainder of the HSA had a drier than normal month. In the longer term picture, the statewide seasonal and water year precipitation anomaly was much more profound with a general deficit of 1 to as much as 16 inches with respect to normal. The maps below this summary clearly show how California is doing with its drier than normal status. Luckily, reservoir managers are well aware of this as California enters its traditional dry months of the year. As of May 1st, most of the major reservoirs had plenty of water in them. April's snowmelt over the high Sierra brought a 15% increase in water levels at the reservoirs during the month. Of the 9 major reservoirs throughout the central California interior, 6 of them were at least 80 percent full by the end of April. The snowpack over the southern Sierra, which was only 50 percent of normal at the beginning of the month, dwindled to 24 percent of normal by the 1st of May.

April, 2018 brought two significant hydro events into the central California interior. The first one was an atmospheric river. This plume of rich tropical moisture moved into the northern part of the HSA on the night of the 6th and by the time it exited south and east of Kern County during the early morning hours of the 8th, it drenched the higher elevations of the Sierra with up to 4 inches of rain. Snow levels remained well above 9,000 feet during the event, so the combination of rain on top of rapidly melting snow produced quick water rises on many streams and rivers over the Sierra. This included the upper Merced River through Yosemite National Park which closed to all visitors and prompted campground evacuations on the 6th because of anticipated flooding. Indeed, the Merced River at Pohono Bridge crested nearly 4 feet above its respective flood stage during the early evening hours of the 7th and remained above flood stage into the early afternoon hours of the 8th. (For specific details, please refer to the supplemental Flood Stage Report for the Merced River at Pohono Bridge.) In addition to flooded campgrounds within Yosemite National Park during the first full weekend of April, there were reports of rock slides, not only in the park but also along Highway 168 above Shaver Lake. The lower Merced River also experienced moderately high flows in the days preceding and following this rain event. The forecast point at Stevinson along the Merced River fluctuated around its respective monitor stage from the 5th through the 13th of April. Rain shadowing on the west side and south end of the San Joaquin Valley kept precipitation totals generally under a tenth of an inch during this hydrologic event. Rainfall in the Kern County mountains ranged from four hundredths of an inch to four tenths of an inch. Most of this rain evaporated by the time it reached the Mojave Desert.

The second precipitation producer was from a much colder storm system that originated in the Gulf of Alaska. This system tracked right over the central California interior from the 16th into the 17th and produced scattered showers and isolated thunderstorms on the 16th. Precipitation fell as snow above 5,000 feet from this storm system with accumulations ranging from a light dusting to as much as 14 inches over the highest elevations of the Sierra. Elsewhere, rain totals ranged from a couple hundredths on the west side of the San

Joaquin Valley and in a few locations of the Mojave desert to around a quarter of an inch in the Kern County mountains and as much as eight tenths of an inch over the higher elevations of the Sierra. In the time interval between these two significant hydro events, a couple of weak cold fronts moved southward through the central California interior with little more than scanty light precipitation over the Sierra and gusty winds through and below the mountain passes. Another weak cold front moved southward through the HSA on the 19th and produced a few light showers and higher elevation snow flurries over the Sierra with a return of gusty winds through the normally windier mountain passes of Kern County.

Temperature-wise, April 2018 was one big rollercoaster ride. On the coolest days, afternoon temperatures were no higher than the mid 60s in the San Joaquin Valley while overnight lows briefly dipped into the mid to upper 30s in the chilliest locations of the San Joaquin Valley and the Kern county desert. On the warmest days, thermometer readings peaked in the 80s to lower 90s in these regions. The first and longest spell of 90-degree temperatures since late September occurred in the San Joaquin Valley from the 22nd through the 25th as a strong, high amplitude ridge of high pressure aloft parked itself over the Golden State. All in all, the month ended up averaging warmer than normal.

HYDROLOGIC PRODUCTS ISSUED THIS MONTH

Flash Flood Warnings*

Western Mariposa County/southern Tuolumne County/Detwiler Burn Scar	1525Z	7-APR

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

Flood Warnings

Merced River @Pohono Bridge	1557Z	6-APR

Flood/Flash Flood Watches

Foothills and higher elevations of the Sierra north of Tulare County	2023Z	4-APR
Flood Watch extended into the eastern San Joaquin Valley north of Tulare County	0156Z	6-APR

Flood Advisories

Urban/Small Stream…Mariposa County; eastern San Joaquin Valley and adjacent foothills in Merced County	1514Z	7-APR
Small Stream…Mariposa County; foothills and higher elevations of the Sierra in Madera County	1542Z	7-APR
Small Stream…higher elevations of Madera County & Fresno County	1657Z	7-APR
Small Stream…foothills and higher elevations of Tulare County which Included the Pier Burn Scar	1836Z	7-APR

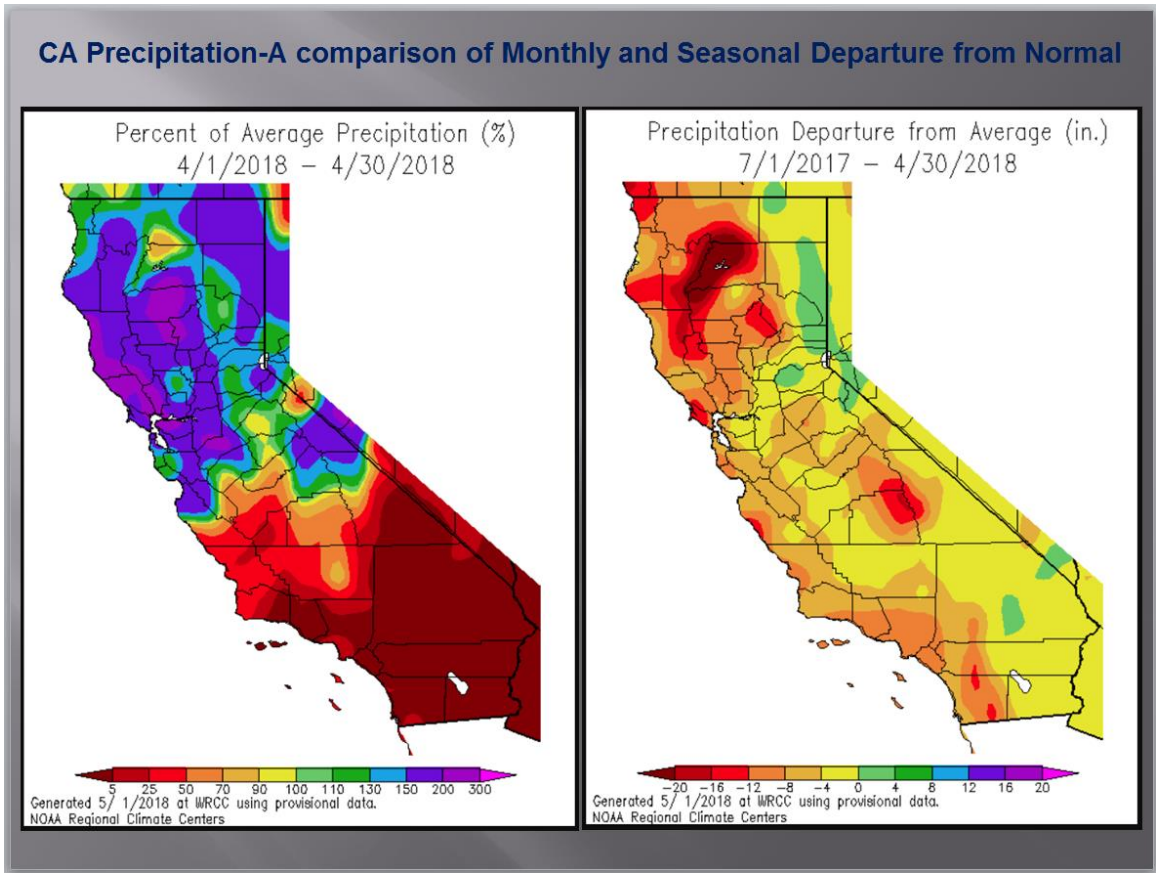
Hydrologic Outlooks

All zones except the Kern County Desert	0231Z	3-APR

Flood/Hydrologic Statements

Merced River @Stevinson	1627Z	3-APR
Merced River @Stevinson	2051Z	3-APR
Merced River @Stevinson	1545Z	4-APR
Merced River @Stevinson	2121Z	4-APR
Merced River @Stevinson	1536Z	5-APR
Merced River @Stevinson	1539Z	5-APR
Merced River @Stevinson	2104Z	5-APR
Merced River @Pohono Bridge	2126Z	6-APR
Merced River @Pohono Bridge	0417Z	7-APR
Merced River @Pohono Bridge	0945Z	7-APR

Merced River @Pohono Bridge	1538Z	7-APR
Merced River @Pohono Bridge	2043Z	7-APR
Merced River @Pohono Bridge	2111Z	7-APR
Merced River @Pohono Bridge	0305Z	8-APR
Merced River @Pohono Bridge	0737Z	8-APR
Merced River @Pohono Bridge	1605Z	8-APR
Merced River @Pohono Bridge	2158Z	8-APR
Merced River @Stevinson	1823Z	9-APR
Merced River @Stevinson	2059Z	9-APR
Merced River @Stevinson	1727Z	10-APR
Merced River @Stevinson	2103Z	10-APR
Merced River @Stevinson	1520Z	11-APR
Merced River @Stevinson	1532Z	12-APR
Merced River @Stevinson	2103Z	12-APR



CC:

W/OH12x1
W/WR2
CNRFC
WFO HNX
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