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: **JANUARY** YEAR: **2017**

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: February 4, 2017

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).

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

January, 2017 ended up as one of the wettest Januarys on record. It was the 3rd wettest January ever in Fresno and the 5th wettest January ever in Bakersfield with records dating back to the late 19th century. Total precipitation for the month averaged 125-250 percent of normal, and although it followed an extremely wet December, the abundance of rain and mountain snow was not enough to get central California out of its drought. In fact, it would probably take several months of well above normal precipitation to completely erase the long term drought and get years of depleted water in the underground aquifers recharged to normal levels. Nonetheless, the water that fell over the HSA in January was certainly beneficial. The snowpack over the southern Sierra was proof of that, which peaked at about 228 percent of normal by the third week of January. Substantial rainfall in the San Joaquin Valley and adjacent foothills produced significant water rises along most small streams and rivers throughout the HSA and prompted sizeable water releases at many of the major reservoirs. Area weirs that had not been in operation since the Spring of 2011 were being used to divert excess water through the bypasses. Moderately high water levels and fast flows occurred on all of the mainstem rivers throughout the month. The Merced River at Stevinson fluctuated around its respective monitor stage between the 21st and 27th . The San Joaquin River at Newman also fluctuated around its respective monitor stage on two separate occasions, from the 13th through the 16th and again between the 21st and 29th. The river forecast point at Bear Creek in the city of Merced flirted with monitor stage between the 9th and 11th.

The downside of so much rain was flooding. During the period from January 3rd through January 12th, a succession of Pacific storm systems tracked through central California. The total precipitation that fell over the HSA during this period was absolutely phenomenal outside of the Kern county desert and ranged from 1.5 to 4 inches in the San Joaquin Valley and more than double that amount in the foothills and mountains. Some locations in the Sierra received up to 15 inches of rain during this period while snow accumulated by the yard over the highest elevations of the Sierra. The storm systems that moved through the HSA between the 7th and 10th packed the biggest punch and were accompanied by a rich supply of tropical moisture. Snow levels throughout much of this time interval were above 9,000 feet, so the combination of rain and snowmelt brought many small streams and rivers below the dams to bankfull or higher with consequential flooding. Shortly before midnight on January 9th, an unusually large amount of water was discharged from Crane Valley reservoir which was already 90 percent full. The overflow of Willow Creek below the dam prompted the evacuation of downstream residents during the early morning hours of January 9th. This included the Bass Lake mobile home park and homes adjacent to Willow Creek in the town of North Fork. Many roads below the dam flooded or became impassable because of mud flows. The Merced River at Pohono Bridge peaked nearly 3 feet above flood stage shortly before daybreak on the 9th and remained above flood stage for approximately 19 hours. (Specific details are provided for this river forecast point in the Flood Stage Report.) Fortunately, flooding within Yosemite caused minimal damage to the park infrastructure and all of the lower campgrounds were safely evacuated a few days prior to flooding. The park, however, was closed to visitors while the upper Merced River remained above flood stage. The primary road through Yosemite National Park was covered in many places by standing water, mud, sticks and small rocks. Highway 140

and Highway 120 temporarily closed because of rock slides.

The San Joaquin Valley was not exempt from flooding during this stormy period. In most areas that had excess runoff, nuisance flooding was the norm. Of noteworthiness, however, a portion of Highway 59 in Merced county flooded on the 9th and remained closed for several days after the waters from Mariposa Creek overtopped a bridge along that route. Tragically, heavy rain and flooding claimed two lives. An elderly woman in Kern County drowned when flood waters swept her car off the road in the vicinity of Lamont on the evening of January 5th. Two days later, a driver in an SUV drowned when his vehicle hydroplaned off Road 426 in the Oakhurst area, then rolled into a creek and sank.

The central California interior got a much needed break from wet weather from January 13th through the 17th. The pattern turned very wet again by the 18th as storm systems lined up over the Pacific and tracked on the heels of each other for a period of about 5 days. Fortunately, most of the storms during this period came into central California without a tropical moisture connection and were instead accompanied by colder air and consequently lower snow levels. Nonetheless, a renewed threat of urban, highway and small stream flooding existed during this period in the lower elevations. Between January 18th and 24th, precipitation totals averaged around a half inch in the Kern county desert, between three quarters of an inch to two inches in the San Joaquin Valley and 2 to 5 inches in the foothills and mountains. A dusting to an inch or two of snow fell as low as 3,000 feet in the Sierra and down to the 4,000 foot level in the Tehachapi mountains with each of these storms while the snowpack over the high Sierra deepened by another 1 to 3 feet. Isolated thunderstorms with small hail popped up in the San Joaquin Valley during the afternoons of the 19th, 20th and the 23rd .

The last 7 days of January were relatively benign and precipitation-free as an upper level ridge of High pressure gradually built in over the Golden State. This was the first and longest spell of dry weather across the HSA since Christmas week and a welcome one at that. Unfortunately before January came to a close, adverse weather would take another victim. Widespread dense fog in the San Joaquin Valley during the post dawn hours of the 31st produced hundreds of fender bender accidents and one disastrous multi vehicle pileup along Highway 198 between Hanford and Lemoore. Approximately 50 vehicles were involved in the wreckage and several people suffered minor injuries. In a separate incident in Fresno county earlier that morning, a fatal collision occurred between a pickup truck and a car which instantly killed the driver of the car. Visibility was near zero at the time in dense fog.

Temperatures for the month averaged warmer than normal in the San Joaquin Valley but ended up slightly cooler than normal in the mountains and desert. Several mornings dawned frosty in the San Joaquin Valley, particularly during the last week of the month. Water levels at most of the reservoirs remained fairly high throughout the month. As of February 3rd, the average water capacity at the dams was 55 percent of normal and the snowpack over the southern Sierra averaged 198 percent of normal.

HYDROLOGIC PRODUCTS ISSUED THIS MONTH

Flash Flood Warnings

Kern county mountains,Tulare county mountains (Cedar burn scar)	1510Z	5-JAN
Southern Sierra north of Kern county	2057Z	7-JAN
Southern Sierra north of Kern county	2315Z	7-JAN
Kern county mountains	2334Z	7-JAN
Tulare county mountains	0024Z	8-JAN
Tehachapi mountains	0037Z	8-JAN
Tulare county mountains	0327Z	8-JAN
Cedar burn scar	0806Z	9-JAN
Southern Sierra (Fresno county)	0901Z	9-JAN
Kern county mountains (Onyx, Weldon, Mountain Mesa)	0934Z	9-JAN
Kern county desert	1152Z	9-JAN
Sierra foothills (Madera county, Fresno county)	2114Z	12-JAN

Flood Warnings

Kern county mountains	0012Z	6-JAN
Merced River at Pohono Bridge	1703Z	7-JAN
Willow Creek below Crane Valley Dam downstream to North Fork	1708Z	9-JAN
Willow Creek below Crane Valley Dam downstream to North Fork	2254Z	9-JAN
Willow Creek below Crane Valley Dam downstream to North Fork	0500Z	10-JAN
Mariposa Creek (eastern Merced county)	2201Z	12-JAN

Flood Advisories

Urban/Small Stream (Sierra foothills)	2253Z	4-JAN
Kern county mountains, Tulare county mountains	0749Z	5-JAN
Kern county mountains, Tulare county mountains	1032Z	5-JAN
Kern county mountains, Tulare county mountains	1933Z	5-JAN
Urban/Small Stream (Kern county mountains, Tulare county mountains)	0024Z	6-JAN
Kern county mountains	1730Z	7-JAN
Kern county mountains	1829Z	7-JAN
Small Stream (foothills and higher elevations of the Sierra)	1957Z	7-JAN
Foothills and higher elevations of the Sierra	0220Z	8-JAN
Urban/Small Stream (Kern county mountains)	0306Z	8-JAN
Urban/Small Stream (Tulare county mountains)	0639Z	8-JAN
Urban/Small Stream (San Joaquin Valley, foothills-Fresno county northward)	0012Z	9-JAN
Urban/Small Stream (San Joaquin Valley, foothills)	0209Z	9-JAN
Kern county mountains, Tulare county mountains	0437Z	9-JAN
Urban/Small Stream (San Joaquin Valley, foothills)	0639Z	9-JAN
Small Stream (Willow Creek below Crane Valley Dam downstream to North Fork)	1109Z	9-JAN
Small Stream (foothills of Mariposa county and Madera county)	1424Z	9-JAN
Small Stream (San Joaquin Valley, foothills of Fresno county, Madera county)	1511Z	9-JAN
Small Stream (San Joaquin Valley, foothills of Fresno county, Madera county)	1551Z	9-JAN
San Joaquin Valley and adjacent foothills north of Kern county	0544Z	11-JAN
San Joaquin Valley	0721Z	11-JAN
Northwest Merced county	1650Z	11-JAN
Urban/Small Stream (San Joaquin Valley, foothills north of Kern county)	1045Z	12-JAN
Urban/Small Stream (San Joaquin Valley, foothills)	1405Z	12-JAN
Small Stream (San Joaquin Valley, foothills north of Kern county)	1427Z	12-JAN
East side of the San Joaquin Valley	2028Z	12-JAN
San Joaquin Valley-Fresno county	2145Z	12-JAN
San Joaquin Valley-Kings county, Fresno county	0419Z	13-JAN
San Joaquin Valley and adjacent foothills	1619Z	20-JAN
San Joaquin Valley and adjacent foothills	1643Z	20-JAN
Urban/Small Stream (Kern county mountains)	1911Z	20-JAN
Urban/Small Stream (Kern county desert)	1943Z	20-JAN
Small Stream (Tulare county foothills)	0156Z	21-JAN
Urban/Small Stream (San Joaquin Valley)	1755Z	22-JAN
Kern county desert	2001Z	22-JAN
Urban/Small Stream (San Joaquin Valley, foothills/mountains-Tulare & Kern counties)	2045Z	22-JAN
Urban/Small Stream (Kern county desert)	2313Z	22-JAN
Urban/Small Stream (San Joaquin Valley and adjacent foothills)	0147Z	23-JAN
Urban/Small Stream (San Joaquin Valley and adjacent foothills north of Kern county)	0425Z	23-JAN
Urban/Small Stream (San Joaquin Valley and adjacent foothills)	0729Z	23-JAN
Urban/Small Stream (Tulare county mountains)	2022Z	23-JAN

Flood/Flash Flood Watches

Foothills and higher elevations of the Sierra	2044Z	2-JAN
Foothills and higher elevations of the Sierra	1650Z	5-JAN
San Joaquin Valley, foothills and mountains	2036Z	6-JAN
Foothills and mountains	2100Z	21-JAN
Foothills and mountains	1913Z	23-JAN

Hydrologic Outlooks

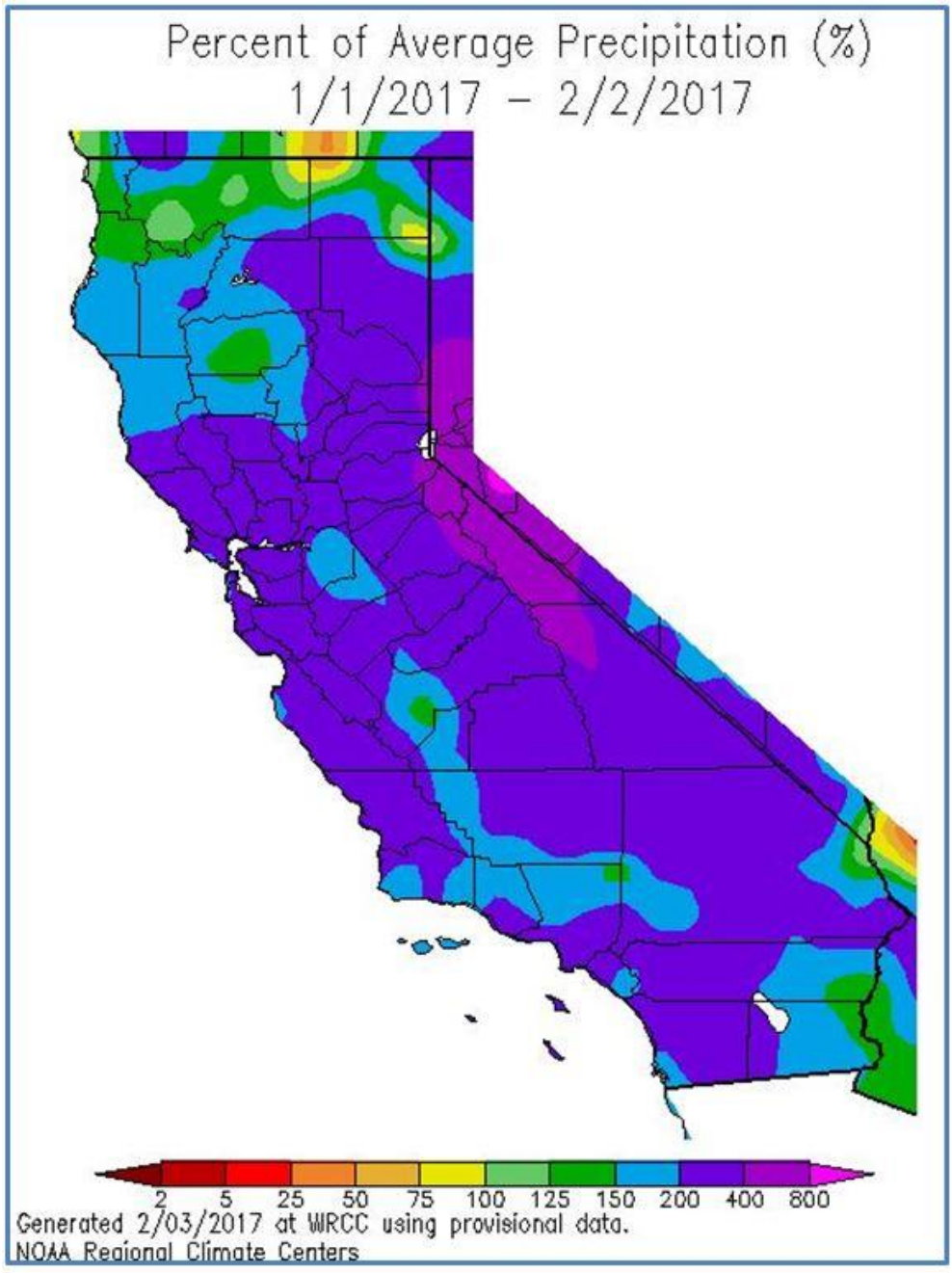
For the entire Hydrologic Service Area	2109Z	2-JAN
" "	1153Z	3-JAN
" "	2338Z	3-JAN
" "	0000Z	5-JAN
" "	1201Z	5-JAN
" "	2109Z	5-JAN
" "	1012Z	6-JAN

Hydrologic Statements

Bear Creek @McKee Road, Merced River @Stevinson	1023Z	8-JAN
Bear Creek @McKee Road, Merced River @Stevinson	0359Z	10-JAN
San Joaquin R @Newman, Bear Creek @McKee Rd, Merced R @Stevinson	1038Z	10-JAN
San Joaquin R @Newman, Bear Creek @McKee Rd, Merced R @Stevinson	1708Z	10-JAN
San Joaquin R @Newman, Bear Creek @McKee Rd, Merced R @Stevinson	2155Z	10-JAN
San Joaquin R @Newman, Bear Creek @McKee Rd, Merced R @Stevinson	0510Z	10-JAN
San Joaquin R @Newman, Bear Creek @McKee Rd, Merced R @Stevinson	1111Z	11-JAN
San Joaquin R @Newman, Bear Creek @McKee Rd, Merced R @Stevinson	2239Z	11-JAN
San Joaquin R @Newman, Bear Creek @McKee Rd, Merced R @Stevinson	0505Z	12-JAN
San Joaquin R @Newman	2246Z	13-JAN
San Joaquin R @Newman	1509Z	14-JAN
San Joaquin R @Newman	2221Z	14-JAN
San Joaquin R @Newman	1511Z	15-JAN
San Joaquin R @Newman	1706Z	16-JAN
San Joaquin R @Newman, Bear Creek @McKee Rd, Merced R @Stevinson	1730Z	18-JAN
San Joaquin R @Newman, Bear Creek @McKee Rd, Merced R @Stevinson	2222Z	18-JAN
San Joaquin R @Newman, Bear Creek @McKee Rd, Merced R @Stevinson	0408Z	19-JAN
San Joaquin R @Newman, Bear Creek @McKee Rd, Merced R @Stevinson	1020Z	19-JAN
San Joaquin R @Newman, Bear Creek @McKee Rd, Merced R @Stevinson	1757Z	19-JAN
San Joaquin R @Newman, Bear Creek @McKee Rd, Merced R @Stevinson	2226Z	19-JAN
San Joaquin R @Newman, Bear Creek @McKee Rd, Merced R @Stevinson	1735Z	20-JAN
San Joaquin R @Newman, Bear Creek @McKee Rd, Merced R @Stevinson	2209Z	20-JAN
San Joaquin R @Newman, Bear Creek @McKee Rd, Merced R @Stevinson	1822Z	21-JAN
San Joaquin R @Newman, Bear Creek @McKee Rd, Merced R @Stevinson	1801Z	22-JAN
San Joaquin R @Newman, Bear Creek @McKee Rd, Merced R @Stevinson	2305Z	22-JAN
San Joaquin R @Newman, Merced R @Stevinson	1809Z	23-JAN
San Joaquin R @Newman, Merced R @Stevinson	1630Z	24-JAN
San Joaquin R @Newman	1639Z	25-JAN
San Joaquin R @Newman	2159Z	25-JAN
San Joaquin R @Newman, Merced R @Stevinson	1701Z	26-JAN
San Joaquin R @Newman, Merced R @Stevinson	2259Z	26-JAN
San Joaquin R @Newman, Merced R @Stevinson	1526Z	27-JAN
San Joaquin R @Newman, Merced R @Stevinson	2202Z	27-JAN
San Joaquin R @Newman, Merced R @Stevinson	1524Z	28-JAN
San Joaquin R @Newman	1546Z	29-JAN
San Joaquin R @Newman	1745Z	30-JAN
San Joaquin R @Newman, Merced R @Stevinson	1937Z	31-JAN

Note…Numerous Flood/Flash Flood Statements were issued as follow up products to the Flood/Flash Flood Warnings

The map on the following page depicts the percentage of normal precipitation throughout California for January, 2017. It was a banner month with well above normal rain and mountain snow.



CC:

W/OH12x1
W/WR2
CNRFC
WFO HNX
WFO STO