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: **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: May 9, 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).

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

April, 2017 ended up slightly drier than normal across most of the HSA. Only the higher elevations of the Sierra Nevada from Fresno county northward were wetter than normal thanks to healthy orographic lift from the few storm systems that tracked through central California. In those areas, April precipitation totaled 4 to 6 inches. Rainfall was considerably less elsewhere and ranged from less than a half inch in Kern county and along the west side of the San Joaquin Valley to as much as 3 or 4 inches in the Sierra foothills. In the broader picture, California was divided with regard to April precipitation. Much of the northern half of the Golden state was wetter than normal while southern California averaged much drier than normal. A map that shows the percentage of normal precipitation across the state has been included at the end of this summary. Despite below normal precipitation this month across much of central California, this was a banner rainfall season, the wettest since 2011. Additionally, precipitation indices for the San Joaquin and Tulare Lake basins as of May 1st remained in the Top 10 list for wettest season and wettest 6 month period on record. (See charts at the end of this summary.)

One of the hydrologic highlights of the month was a fluke, nearly stationary thunderstorm in the Fresno area on the 13th that deluged the airport with nearly two inches of rain in just 90 minutes! This thunderstorm produced substantial urban and street flooding during the early evening commute period. The 2.04 inches that fell at the airport on the 13th shattered the 24-hour rainfall record for the date and also established a new record for the wettest day ever in the month of April in Fresno. Otherwise, the isolated thunderstorms were part of a larger storm system centered off the California coast that generated less than two tenths of an inch of rain elsewhere in the San Joaquin Valley and as much as six tenths of an inch of rain in the foothills and higher elevations of the Sierra. Ironically, while the Fresno area was getting drenched with torrential rain, blowing dust was occurring on the west side of the San Joaquin Valley on the 13th. The dust reduced visibility to less than an eighth of a mile in the vicinity of Lemoore and caused numerous vehicular accidents.

Wet weather occurred on two other occasions during the month; April 6th through the 8th and again from the 16th into the 19th. The storm systems that brought precipitation into the HSA during these periods originated in the Gulf of Alaska and brought unseasonably cool and unstable air masses into central California along with scattered showers and thunderstorms. Both storm systems brought wintry weather to elevations above 7,000 feet with several inches of snow falling over the high Sierra.

High flows continued on all of the mainstem rivers through the end of the month as reservoirs made large water releases to accommodate the volume of melting snow over the higher elevations of the Sierra. The Merced River at Stevinson remained above monitor stage all month. The San Joaquin River at Newman stayed about its respective monitor stage for most of the month, specifically during the first few days of April and again between the 13th and 19th and during the last 5 days of the month. Otherwise, melting snow over the high Sierra caused an increase water levels at most reservoirs during the month. By the end of April, reservoir water capacity ranged from 54 percent of normal at Terminus Dam and Isabella Dam to 98 percent

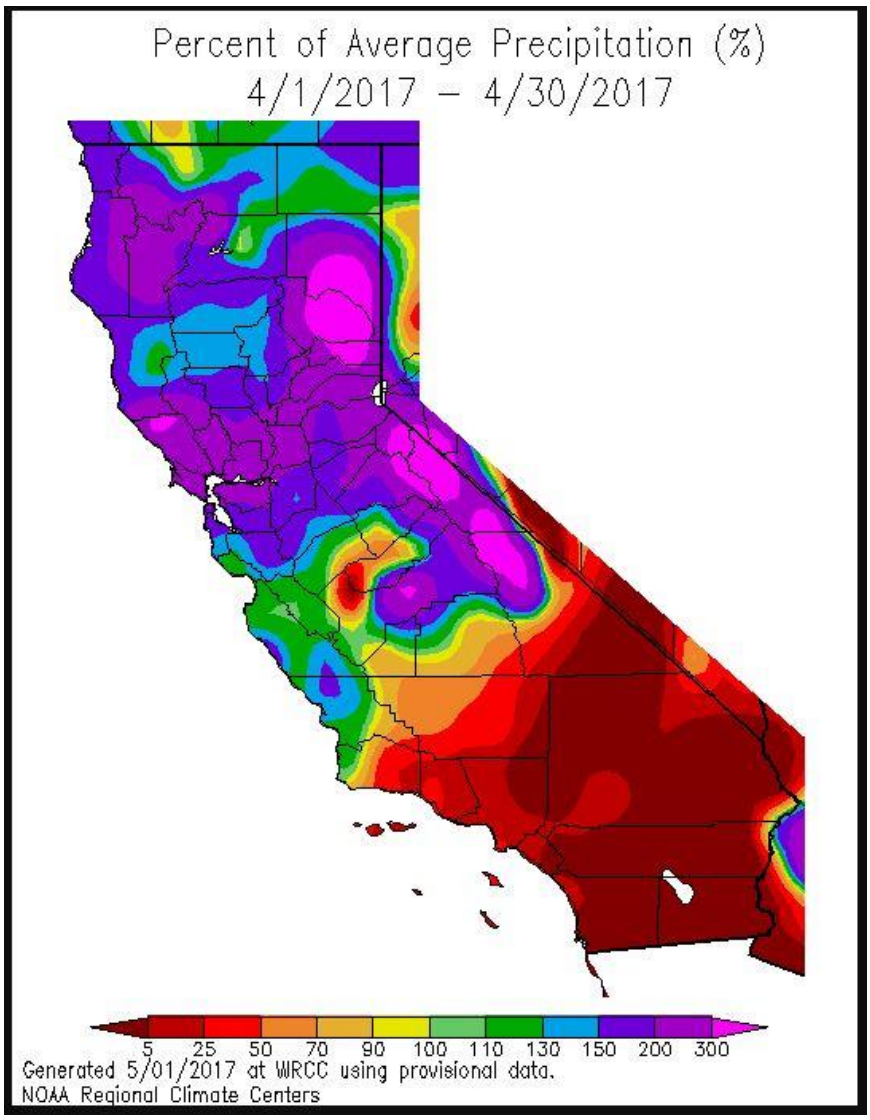
of normal at San Luis Reservoir for an average of about 72 percent of normal. Additional snowfall over the highest elevations of the southern Sierra raised the snowpack to 173 percent of normal by the end of April. Temperature-wise, April, 2017 ended up slightly warmer than normal in most locations. Bakersfield recorded its first 90 degree day of the year on April 5th which was a day earlier than the previous year.

HYDROLOGIC PRODUCTS ISSUED THIS MONTH

Hydrologic Statements

San Joaquin R @Newman, Merced R @Stevinson	1608Z	1-APR
San Joaquin R @Newman, Merced R @Stevinson	1627Z	2-APR
San Joaquin R @Newman, Merced R @Stevinson,	1528Z	2-APR
San Joaquin R @Newman, Merced R @Stevinson,	2047Z	3-APR
San Joaquin R @Newman, Merced R @Stevinson,	1531Z	4-APR
San Joaquin R @Newman, Merced R @Stevinson,	2102Z	4-APR
San Joaquin R @Newman, Merced R @Stevinson,	2054Z	5-APR
San Joaquin R @Newman, Merced R @Stevinson,	1552Z	6-APR
San Joaquin R @Newman, Merced R @Stevinson,	2130Z	6-APR
San Joaquin R @Newman, Merced R @Stevinson,	2130Z	6-APR
San Joaquin R @Newman, Merced R @Stevinson,	1557Z	7-APR
San Joaquin R @Newman, Merced R @Stevinson,	2108Z	7-APR
San Joaquin R @Newman, Merced R @Stevinson,	1450Z	8-APR
San Joaquin R @Newman, Merced R @Stevinson,	2150Z	8-APR
San Joaquin R @Newman, Merced R @Stevinson,	1416Z	9-APR
San Joaquin R @Newman, Merced R @Stevinson	1440Z	10-APR
San Joaquin R @Newman, Merced R @Stevinson,	2212Z	10-APR
San Joaquin R @Newman, Merced R @Stevinson,	1700Z	11-APR
San Joaquin R @Newman, Merced R @Stevinson,	2101Z	11-APR
San Joaquin R @Newman, Merced R @Stevinson,	1511Z	12-APR
San Joaquin R @Newman, Merced R @Stevinson	2056Z	12-APR
San Joaquin R @Newman, Merced R @Stevinson,	1451Z	13-APR
San Joaquin R @Newman, Merced R @Stevinson,	2051Z	13-APR
San Joaquin R @Newman, Merced R @Stevinson,	1515Z	14-APR
San Joaquin R @Newman, Merced R @Stevinson	2121Z	14-APR
San Joaquin R @Newman, Merced R @Stevinson	1717Z	15-APR
San Joaquin R @Newman, Merced R @Stevinson	1635Z	16-APR
San Joaquin R @Newman, Merced R @Stevinson	1535Z	17-APR
San Joaquin R @Newman, Merced R @Stevinson	1927Z	17-APR
San Joaquin R @Newman, Merced R @Stevinson	1637Z	18-APR
San Joaquin R @Newman, Merced R @Stevinson	2010Z	18-APR
San Joaquin R @Newman, Merced R @Stevinson	2129Z	18-APR
San Joaquin R @Newman, Merced R @Stevinson	1539Z	19-APR
San Joaquin R @Newman, Merced R @Stevinson	1945Z	19-APR
San Joaquin R @Newman, Merced R @Stevinson	1625Z	20-APR
San Joaquin R @Newman, Merced R @Stevinson	2015Z	20-APR
San Joaquin R @Newman, Merced R @Stevinson	1516Z	21-APR
San Joaquin R @Newman, Merced R @Stevinson	1933Z	21-APR
San Joaquin R @Newman, Merced R @Stevinson	1744Z	22-APR
San Joaquin R @Newman, Merced R @Stevinson	1519Z	23-APR
San Joaquin R @Newman, Merced R @Stevinson	1518Z	24-APR
San Joaquin R @Newman, Merced R @Stevinson	2011Z	24-APR
San Joaquin R @Newman, Merced R @Stevinson	1444Z	25-APR
San Joaquin R @Newman, Merced R @Stevinson	2133Z	25-APR
San Joaquin R @Newman, Merced R @Stevinson	1433Z	26-APR
San Joaquin R @Newman, Merced R @Stevinson	2048Z	26-APR
San Joaquin R @Newman, Merced R @Stevinson	1453Z	27-APR
San Joaquin R @Newman, Merced R @Stevinson	1545Z	28-APR
San Joaquin R @Newman, Merced R @Stevinson	2032Z	28-APR
San Joaquin R @Newman, Merced R @Stevinson	1638Z	29-APR
San Joaquin R @Newman, Merced R @Stevinson	1655Z	30-APR

Note…Numerous follow up Flood Advisories were issued for the San Joaquin River below Friant Dam until water releases dropped low enough to end the threat of downstream flooding.



San Joaquin 5 station Precipitation Index

HISTORICAL CLIMATE RECORDS FOR THE SJ5SI							
Top 12 Driest Rainfall Season		Driest 6 Months; Nov-Apr		Wettest 6 Months; Nov-Apr		Top 12 Wettest Rainfall Season	
17.03	1923-1924	9.22	1976-1977	66.26	1982-1983	78.71	1982-1983
18.67	1976-1977	12.71	1923-1924	**64.65**	**2016-2017**	**71.02**	**2016-2017**
18.86	2014-2015	13.67	1975-1976	62.86	1968-1969	70.90	1994-1995
19.52	2013-2014	15.90	2014-2015	60.65	1977-1978	68.16	1968-1969
22.80	1975-1976	17.35	2013-2014	60.36	1994-1995	64.37	2010-2011
23.09	1993-1994	17.57	1930-1931	56.35	1937-1938	64.07	1997-1998
23.10	1930-1931	18.31	1938-1939	56.25	1981-1982	63.55	1981-1982
23.37	1986-1987	18.45	1986-1987	53.15	1966-1967	61.62	1977-1978
23.43	1960-1961	18.59	1989-1990	53.05	1997-1998	59.03	1937-1938
24.44	1967-1968	19.29	1933-1934	53.03	2005-2006	57.75	1985-1986
24.55	1933-1934	19.54	1993-1994	52.32	1955-1956	56.63	1955-1956
24.63	2006-2007	20.31	1960-1961	51.83	1985-1986	56.38	2005-2006

Tulare Lake 6 station Precipitation Index

HISTORICAL CLIMATE RECORDS FOR THE TL6SI							
Top 12 Driest Rainfall Season		Driest 6 Months; Nov-Apr		Wettest 6 Months; Nov-Apr		Top 12 Wettest Rainfall Season	
13.04	2014-2015	5.97	1976-1977	51.54	1968-1969	58.31	1982-1983
13.65	1923-1924	10.40	2014-2015	48.82	1982-1983	55.86	1968-1969
14.31	1958-1959	10.44	1923-1924	47.83	1966-1967	53.59	1997-1998
14.70	2013-2014	11.20	1975-1976	45.52	1937-1938	49.04	1966-1967
15.15	1960-1961	11.78	1958-1959	45.19	1977-1978	47.11	1937-1938
15.45	2012-2013	12.26	2013-2014	44.17	2016-2017	46.59	1977-1978
15.87	1933-1934	12.48	1933-1934	42.59	1951-1952	45.84	2016-2017
16.10	1976-1977	13.12	1960-1961	42.48	1997-1998	45.83	1994-1995
16.24	1975-1976	13.65	2012-2013	41.57	1942-1943	44.72	2010-2011
16.30	1971-1972	13.69	1971-1972	39.87	1985-1986	44.30	1951-1952
16.77	2006-2007	13.94	1989-1990	38.57	1936-1937	42.69	1985-1986
18.06	1967-1968	14.92	1986-1987	38.55	2010-2011	42.49	1942-1943

CC:

W/OH12x1
W/WR2
CNRFC
WFO HNX
WFO STO