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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: **JUNE** YEAR: **2011**

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

SIGNATURE:
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(In Charge of Hydrologic Service Area)

DATE: July 2, 2011

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.

June was certainly a month of extremes that produced near record heat in the San Joaquin Valley, many days of unseasonably cool weather, and even a day of record shattering rainfall. But probably the most profound aspect of the month was an over abundance of precipitation and late season snow in the southern Sierra. In fact, June ended up being the second wettest on record in Fresno where records date back to the late 1800's. Also, a very deep snowpack over the southern Sierra Nevada yielded substantial snowmelt through the end of June and produced high flows along all of the rivers in the HSA. From about mid June on, the Merced river in Yosemite National Park peaked very close to flood stage, and on a few occasions rose briefly just above flood stage and forced several campgrounds to close because of minor flooding. Specific details for the Merced river at Pohono Bridge are included in the supplemental NWS Form E-3 (attached). Otherwise, peak flows on all of the mainstem rivers in the HSA remained below their respective monitor stages during the month.

Synoptically, June started much like May ended, at least during the first week. The weather was much cooler than normal through the 7th. An unusually deep and cold storm system that originated in the Gulf of Alaska barreled its way southward across the state during the first weekend of the month. By the time this system exited into the Great Basin on the 7th, it dumped up to 9 inches of snow over the highest elevations of the Sierra and brought a soaking rain to the San Joaquin Valley and the higher elevations north of Kern County. Nearly two inches of rain fell in the wettest portions of the San Joaquin Valley and Sierra foothills. The cold air aloft associated with this storm produced a very unstable atmospheric environment over the HSA on the 7th with isolated hail producing thunderstorms in the San Joaquin Valley, adjacent foothills and even the west slopes of the Sierra. Although the weather warmed up a bit thereafter, temperatures still averaged cooler than normal through the second weekend of June as a dry onshore flow prevailed across central California. A weak ridge of high pressure pushed temperatures several degrees above normal for the first time of the month on the 14th but the return of an onshore flow cooled temperatures back to normal again by the 16th. The onshore flow persisted through the 3rd weekend of June and kept temperatures near seasonable levels.

A strong ridge of high pressure aloft moved over California on the 20th and brought dramatically warmer weather to the HSA, but only for a few days. However, from the 21st through the 23rd, high temperatures peaked at or above the century mark for the first time this year in the San Joaquin Valley and the Kern county desert. The maximum temperature of 107 degrees in Fresno on the 22nd fell one degree shy of the record for that date and the high of 107 degrees in Bakersfield that day missed the high temperature record by only two degrees. The high pressure ridge that brought the short spell of hot weather was pushed eastward by a deepening upper level trough along the Pacific Northwest coast . The proximity of this trough pushed shallow intrusions of marine air into the San Joaquin Valley through the 26th and brought a slightly cooler airmass into the higher terrain. The high pressure ridge over New Mexico flexed its muscle and brought a brief return of triple digit heat to the Kern County desert and a few localities at the south end of the San Joaquin Valley on the 27th. The warm air was chased eastward by an unusually deep upper level trough off the northern California coast on the 28th. As this system moved inland, it tapped into a rich supply of tropical moisture and brought measureable precipitation to much of the HSA north of Kern county from the

evening of the 28th into the 29th. Up to an inch and a third of rain fell in the Sierra foothills from Fresno county northward from this storm system. In Fresno, 0.27 inches of rain fell at the Fresno-Yosemite International airport on the 29th and established a new 24-hour rainfall record for the date. The combination of rain and snowmelt over the higher elevations of the Sierra caused a significant rise on the upper Merced river during this time. The stage at Pohono Bridge rose nearly 2 feet and peaked only a few tenths of an inch below flood stage on the afternoon of the 29th. In the wake of this storm system, an unseasonably cool airmass invaded the central California interior. High temperatures remained below 80 degrees throughout much of the San Joaquin Valley on the 29th and did not rise any higher than the 40s above the 6000 foot elevation in the Sierra. Despite warming on the 30th, temperatures still remained a good 4 to 8 degrees below normal on the last day of the month. All in all, the month averaged slightly cooler than normal.
The 2010-2011 rainfall season across central California, which traditionally runs from July 1st through June 30th, averaged 157 percent of normal. In the rankings, it was the 5th wettest rainfall season on record in Bakersfield and the 7th wettest season on record in Fresno.

Increased snowmelt, especially from mid to late month, prompted large water releases from most of the major reservoirs which in turn produced higher than normal flows along all rivers downstream of the dams. At the end of the month, most of the reservoirs were holding about 95 percent of their normal water capacity.

HYDROLOGIC PRODUCTS ISSUED

Flood Advisory……...eastern half of the San Joaquin Valley and adjacent foothills	0523Z	06-JUN
Flood Advisory……...eastern half of the San Joaquin Valley and adjacent foothills	0909Z	06-JUN
Flood Warning……....Merced River at Pohono Bridge	1909Z	13-JUN
Flood Statement……..Merced River at Pohono Bridge	1631Z	14-JUN
Flood Statement……..Merced River at Pohono Bridge	2221Z	14-JUN
Flood Statement……..Merced River at Pohono Bridge	1635Z	15-JUN
Flood Statement……..Merced River at Pohono Bridge	1606Z	16-JUN
Flood Statement…..Merced River at Pohono Bridge	1645Z	17-JUN
Hydrologic Statement…….Merced River at Pohono Bridge	1852Z	17-JUN
Flood Advisory……..all rivers in the San Joaquin Valley north of Kern Co	2120Z	17-JUN
Hydrologic Statement…….Merced River at Pohono Bridge	1615Z	18-JUN
Flood Advisory……all rivers in the San Joaquin Valley north of Kern Co	2053Z	18-JUN
Hydrologic Statement…….Merced River at Pohono Bridge	1539Z	19-JUN
Flood Statement……..all rivers in the San Joaquin Valley north of Kern Co	2048Z	19-JUN
Flood Warning……..Merced River at Pohono Bridge	1519Z	20-JUN
Flood Advisory……..all rivers in the San Joaquin Valley north of Kern Co	2109Z	20-JUN
Flood Advisory……..all rivers in the San Joaquin Valley north of Kern Co	1113Z	21-JUN
Flood Statement……..Merced River at Pohono Bridge	1548Z	21-JUN
Flood Advisory……..all rivers in the San Joaquin Valley north of Kern Co	2045Z	21-JUN
Flood Statement……..Merced River at Pohono Bridge	1613Z	22-JUN
Flood Advisory……..all rivers in the San Joaquin Valley north of Kern Co	2129Z	22-JUN
Flood Statement……..Merced River at Pohono Bridge	1553Z	23-JUN
Flood Advisory……..all rivers in the San Joaquin Valley north of Kern Co	2117Z	23-JUN
Hydrologic Statement…….Merced River at Pohono Bridge	1636Z	24-JUN
Flood Advisory……..all rivers in the San Joaquin Valley north of Kern Co	2050Z	24-JUN
Hydrologic Statement…….Merced River at Pohono Bridge	1704Z	25-JUN
Flood Advisory……..all rivers in the San Joaquin Valley north of Kern Co	2055Z	25-JUN
Hydrologic Statement…….Merced River at Pohono Bridge	1526Z	26-JUN
Flood Advisory……..all rivers in the San Joaquin Valley north of Kern Co	2048Z	26-JUN
Hydrologic Statement…….Merced River at Pohono Bridge	1539Z	27-JUN
Flood Advisory……..all rivers in the San Joaquin Valley north of Kern Co	2050Z	27-JUN
Flood Advisory……..all rivers in the San Joaquin Valley north of Kern Co	2040Z	28-JUN
Hydrologic Statement…….Merced River at Pohono Bridge	1653Z	29-JUN
Hydrologic Statement…….Merced River at Pohono Bridge	2034Z	29-JUN
Flood Advisory……..all rivers in the San Joaquin Valley north of Kern Co	2040Z	29-JUN
Hydrologic Statement…….Merced River at Pohono Bridge	1646Z	30-JUN
Flood Advisory……..all rivers in the San Joaquin Valley north of Kern Co	2101Z	30-JUN

cc: W/OH12x1
W/WR2
CNRFC
WFO HNX
WFO STO