

## Storm Data and Unusual Weather Phenomena - June 2011

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
<b>CALIFORNIA, South Central</b>				
<b>FRESNO COUNTY --- 1.9 SE (FCH) CHANDLER AF [36.71, -119.79], 1.8 E (FCH) CHANDLER AF [36.73, -119.79], 2.4 ESE (FCH) CHANDLER AF [36.72, -119.78], 2.6 ESE (FCH) CHANDLER AF [36.71, -119.78]</b>				
	06/05/11 19:46 PST		1K	Flood (due to Heavy Rain)
	06/05/11 21:46 PST		0	Source: Law Enforcement
Highway Patrol reported the Highway 41 on ramp at Highway 99 was flooded.				
<b>FRESNO COUNTY --- CLOVIS [36.82, -119.70], 1.8 E FIG GARDEN VLG [36.82, -119.77], 1.6 N FRESNO [36.80, -119.77], 1.1 SSE CLOVIS [36.81, -119.69]</b>				
	06/05/11 21:15 PST		10K	Flood (due to Heavy Rain)
	06/05/11 23:15 PST		0	Source: Trained Spotter
Several reports of city street flooding were reported in North Fresno and Clovis by a trained spotter.				
<b>KINGS COUNTY --- HANFORD [36.33, -119.65]</b>				
	06/05/11 21:30 PST		0.50K	Thunderstorm Wind (EG 45 kt)
	06/05/11 21:35 PST		0	Source: NWS Employee
Off duty NWS employee reported a tree down in center divider of North 11th Avenue just north of West Lacey Blvd.				
<b>KINGS COUNTY --- HANFORD [36.33, -119.65], 0.7 NW HANFORD [36.34, -119.66], 0.6 WSW SHORT ACRES [36.35, -119.66], 0.2 S SHORT ACRES [36.35, -119.65]</b>				
	06/05/11 21:30 PST		1K	Flood (due to Heavy Rain)
	06/05/11 23:30 PST		0	Source: NWS Employee
Off duty National Weather Service employee reported street flooding at North 11th Avenue and West Elm Street in Hanford.				
<b>FRESNO COUNTY --- 2.0 E (FCH) CHANDLER AF [36.73, -119.78], 2.3 E (FCH) CHANDLER AF [36.73, -119.78], 2.5 E (FCH) CHANDLER AF [36.73, -119.78], 2.3 E (FCH) CHANDLER AF [36.74, -119.78]</b>				
	06/05/11 21:59 PST		2K	Flood (due to Heavy Rain)
	06/05/11 23:59 PST		0	Source: Law Enforcement
California Highway Patrol reported flooding on South Highway 41 at O Street.				
<b>(CA-Z096) S SIERRA MTNS, (CA-Z097) TULARE CTY MTNS</b>				
	06/05/11 22:00 PST		0	Winter Storm
	06/06/11 10:00 PST		0	
<b>FRESNO COUNTY --- 2.1 S HAMMOND [36.74, -119.78], 2.4 S HAMMOND [36.74, -119.77], 1.8 SSE HAMMOND [36.74, -119.77], 1.7 S HAMMOND [36.74, -119.78]</b>				
	06/05/11 22:11 PST		2K	Flood (due to Heavy Rain)
	06/06/11 00:11 PST		0	Source: Law Enforcement
California Highway Patrol reported flooding on the Tulare Avenue on ramp at CA Highway 41.				
<b>TULARE COUNTY --- 2.4 NNW TRAVER [36.48, -119.50], 2.2 N TRAVER [36.48, -119.47], 2.4 SSW DELFT COLONY [36.49, -119.47], 3.1 NNW TRAVER [36.49, -119.50]</b>				
	06/05/11 22:14 PST		1K	Flood (due to Heavy Rain)
	06/06/11 00:14 PST		0	Source: Law Enforcement
The Highway patrol reported flooding on Road 40 at Highway 384.				
<b>FRESNO COUNTY --- 2.9 WSW INDIAN MISSION [36.97, -119.55], 2.8 S MARSHALL STATION [36.98, -119.56], 2.0 W INDIAN MISSION [36.98, -119.54], 2.0 WSW INDIAN MISSION [36.97, -119.53]</b>				
	06/05/11 22:58 PST		5K	Flood (due to Heavy Rain)
	06/06/11 00:58 PST		0	Source: Law Enforcement
The highway patrol reported flooding on Millerton Road at Mono Avenue.				

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<b>KINGS COUNTY --- 6.0 NE SHIRLEY [36.45, -119.56]</b>				
	06/06/11 00:14 PST		1K	Thunderstorm Wind (EG 40 kt)
	06/06/11 00:20 PST		0	Source: Law Enforcement

The California Highway patrol reported two trees down across 6th Avenue at Clinton Avenue north of Hanford.

A developing Pacific storm approached California on June 4th. Cold air pushed into the San Joaquin Valley, plunging temperatures to well below normal. The high at Fresno on the 4th was only 66 degrees, six degrees colder than the previous record low maximum temperature for the date of 72 degrees, set in 1954. As the push of cold air funneled through the passes of the Kern County mountains.

The upper-level trough reached the California coast during the evening of June 4th, with the associated low dropping to west of Monterey Bay overnight. Ahead of the low, the warm front moved into the central California interior, bringing mostly light rain. Because the airmass was warm, snow levels were high, around 9000 feet. Also ahead of the front, downsloping winds developed over the Tehachapi Mountains, as well as in the Kern River Canyon. Gusts to around 50 mph were recorded at the base of the Grapevine during the morning of the 4th, but then subsided as the front arrived before increasing again the next day. The downsloping winds also brought several degrees of warming to the south end of the San Joaquin Valley. Bakersfield had a high of 83 degrees on June 5th, with the Porterville Municipal Airport only 2 degrees cooler. The California Highway Patrol weigh station at the base of the Grapevine had a high of 78 degrees on the 5th, 6 degrees warmer than the previous day.

A pronounced dry slot developed behind the warm front, and much of the central and southern San Joaquin Valley saw dry weather for the morning of June 5th.

An upper-level disturbance rotating around the low moved over the San Joaquin Valley during the afternoon of June 5th. This disturbance triggered showers and thunderstorms that produced heavy rain and lightning, but little hail. Fresno recorded 1.16 inch of rain on the 5th, all but 0.06 inch falling after 5 PM. Rain continued in to the morning hours of June 6th, bringing the 48-hour total to 1.64 inch at Fresno-Yosemite International Airport. This made June 2011 the third wettest June on record, and only 0.02 inch behind the second place amount of 1.66 inch (June 1939). The wettest June on record for Fresno was June 1998, with 1.93 inch.

There were some reports of road flooding from the heavy rains, as well as a few trees that were toppled as the soil became saturated. In the Southern Sierra Nevada, the snow level began falling as the cold front arrived, with late-season accumulating snow prompting a (rare for June) Winter Storm Warning. Up to 9 inches of new snow fell on the high country of the Southern Sierra Nevada on June 5th-6th.

As the upper-level low came onshore over southern Monterey/northern San Luis Obispo Counties, a strong vorticity maximum was rotating around the low center. This vorticity dropped south off the coast, then deepened into an upper-level low and swung in land over the San Joaquin Valley, triggering thunderstorms over the Southern Sierra Nevada during the evening of June 7th. As the low moved into southern Nevada, a northeasterly flow developed over the Southern Sierra Nevada. This flow pushed debris clouds from the thunderstorms over the east side of the San Joaquin Valley, resulting in a few sprinkles falling as far west as Dinuba, Fresno and Visalia. This flow also caused clouds to pool over the south end of the San Joaquin Valley during the early morning of June 8th, but these clouds dissipated shortly after sunrise.

<b>MARIPOSA COUNTY --- 1.3 SW YOSEMITE VLG [37.74, -119.60], 1.2 WSW YOSEMITE VLG [37.74, -119.60], 0.3 WSW YOSEMITE VLG [37.75, -119.58], 0.6 S YOSEMITE VLG [37.74, -119.58]</b>				
	06/22/11 01:30 PST		25K	Flood (due to Heavy Rain / Snow Melt)
	06/23/11 08:00 PST		0	Source: Park/Forest Service

From about mid June on, the Merced river in Yosemite National Park peaked very close to flood stage, and on a few occasions rose above flood stage, and forced several campgrounds to close because of minor flooding problems.

<b>FRESNO COUNTY --- 0.7 N CEDAR GROVE [36.79, -118.67], 0.6 N CEDAR GROVE [36.79, -118.67], 0.7 NNE CEDAR GROVE [36.79, -118.67], 0.8 NNE CEDAR GROVE [36.79, -118.66]</b>				
	06/22/11 08:00 PST		2K	Flood (due to Heavy Rain / Snow Melt)
	06/22/11 18:00 PST		0	Source: Park/Forest Service

Park Service officials reported Lewis Creek near Cedar Grove had flooded and overflowed its banks. This flooding was in response to rapid snowmelt in the Southern Sierra Nevada.

<b>FRESNO COUNTY --- REEDLEY [36.60, -119.45], 0.8 SW LACJAC [36.61, -119.48], 0.8 NNW LACJAC [36.63, -119.48], 1.1 NNE LACJAC [36.63, -119.46]</b>				
	06/23/11 03:30 PST		25K	Flood (due to Heavy Rain / Snow Melt)
	06/23/11 18:30 PST		0	Source: Broadcast Media

Local TV broadcasters reported a property was flooded near the Kings River near Reedley.

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<b>FRESNO COUNTY --- 3.0 SW REEDLEY [36.57, -119.49], 3.9 SW REEDLEY [36.56, -119.49], 3.1 SSW REEDLEY [36.56, -119.48], 2.0 SSW REEDLEY [36.57, -119.47]</b>				
	06/24/11 11:00 PST		25K	Flood (due to Heavy Rain / Snow Melt)
	06/25/11 11:00 PST		0	Source: Newspaper

A mobile home was damaged by snowmelt floodwaters at Lindy's Landing along the Kings River.

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 just above flood stage and forced several campgrounds to close because of minor flooding.

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.



*Photos around the time of minor flooding on the Merced River in Yosemite NP. Photos courtesy of NWS Hanford, CA.*