JUNE 2012 WEATHER SUMMARY
FOR THE CENTRAL CALIFORNIA INTERIOR

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The upper-level ridge that brought Fresno a high of 99 on May 31st continued to strengthen on June 1st. As a result, temperatures finally broke the century mark over much of the central and southern San Joaquin Valley. Fresno had a high of 104 degrees, only one degree shy of the record for the date of 105 degrees, set in 1910. Fresno's low on the 1st, 70 degrees, was one degree off the record high minimum temperature for the date of 71, set in 2001.

A series of upper-level disturbances moved through the Pacific Northwest on June 2nd, flattening the ridge and setting the stage for a sharp change in the weather. A strong upper-level trough reached California on June 4th, bringing the only significant rainfall of the month to the central and southern San Joaquin Valley. In the central San Joaquin Valley, there was a sharp north-south rainfall gradient, with Merced receiving 0.37 inch, while Fresno only had a trace of rain. In the Southern Sierra Nevada, two inches of snow fell on Tuolumne Meadows in Yosemite National Park, and light snow fell at White Wolf.

The main impacts of the trough were strong, gusty winds that hit much of the region as the cold front dropped south on the 5th, and the unseasonably cold airmass that followed the front. Ahead of the cold front, winds increased during the afternoon of June 4th. Wind gusted up to 40 mph on the San Joaquin Valley floor, and to around 50 mph in the Kern County mountains and deserts. The strongest gust at Fresno-Yosemite International Airport—40 mph—tied the record for the strongest gust for the month of June, last set on June 10th, 2008. Blowing dust reduced visibilities to a quarter mile or less at times, and occasionally to near zero, on the Valley floor. The dust cloud that moved through the San Joaquin Valley was visible on satellite images taken during the afternoon hours.

San Joaquin Valley highs on June 5th were only in the lower to mid 70s, around 15 degrees below normal. This was in sharp contrast to the 1st, when Valley highs were around 15 degrees above normal.

The storm moved east of the central California interior on June 5th. Behind the upper-level trough, northwest winds aloft aligned with the passes and canyons of the Kern County mountain to generate strong wind gusts during the afternoon of June 5th. Winds gusted to 61 mph at the mouth of Jawbone Canyon and to 51 mph on the desert floor north of Mojave.

A series of upper-level short-wave troughs subsequently moved through the western states, keeping temperatures below normal. The last of these disturbances brought another round of gusty winds to the region. Winds gusted to 35-45 mph in Merced County and western Fresno and Kings Counties during the afternoon of June 9th, and to 45-55 mph in the Lake Isabella and Mojave areas during the evening hours.

An upper-level ridge began building into California on June 10th, bringing a warming trend to the region. Temperatures in the central and southern San Joaquin Valley topped the century mark on the 12th, but fell back the next day as an upper-level low moved over the region.

The low pressure system brought instability to the airmass over the Southern Sierra Nevada. Moisture from the remnant snowpack produced some clouds over the high country, a few of which developed into showers and isolated thunderstorms during the afternoons of June 14th through 16th. The westerly flow aloft kept most of the convection east of the Southern Sierra Nevada crest, and mainly over Mono County; however, 0.10 inch of rain fell at Lodgepole on June 16th, and 0.06 inch fell at Yosemite Valley.

High pressure then built back into California, bringing record heat to the central and southern San Joaquin Valley. Fresno set both a record high and a record high minimum on June 17th. The high at Fresno-Yosemite International Airport was 109 degrees, breaking the old record of 107, set in 1917. The low was 77 degrees; the previous record high minimum temperature for June 17th was 75, set in 1985. For Bakersfield, the high at Meadows Field—108 degrees—was one degree from the record of 109, set in 1917.

An upper-level short-wave moved through northern California on June 18th, while this disturbance deepened the marine layer along the coast, the push of marine air through the Sacramento Delta only got as far south as Modesto. To the south, the upper-level ridge was only slightly weakened. As a result, temperatures in the central and southern San Joaquin Valley mostly remained a few degrees above normal through the 21st. One consequence of the ridge remaining over the central California interior was that June 21st remained dry at Fresno. This is the only date it has never rained at an official rain gauge in Fresno since records began in 1878, a string of 135 years.

An upper-level trough reached the California coast on June 22nd, bringing much cooler temperatures to the region. Highs in the central and southern San Joaquin Valley were mainly in the 80s on the 22nd, and only in the lower to mid 80s the next day. A strong blocking ridge over the south-central United States kept the trough along the coast for much of the last week of June, and upper-level disturbances rotating around the associated low brought pushes of marine air that kept temperatures below normal. The ridge built into California from the east on the 28th,

warming temperatures to near normal, but the trough rebounded, cooling temperatures back to a few degrees below normal for the end of the month.

THE 2011-2012 RAIN SEASON FOR SELECTED VALLEY SITES

/AMOUNTS IN INCHES/

SITE	JUNE 2012	NRML JUNE*	DEP	PCT NRML	SEASON 6/30	NORMAL 6/30*	DEP NRML	PCT
MERCED AIRPORT	0.37	0.13	0.24	284.6	7.40	12.50	-5.10	59.2
MERCED CITY	0.50	0.08	0.42	625.0	8.05	13.04	-4.99	61.7
MADERA AIRPORT	0.09	0.19	-0.10	47.4	7.96	12.02	-4.06	66.2
FRESNO	TRACE	0.21	-0.21	0	8.15	11.50	-3.35	70.9
HANFORD AIRPORT	0	0.15	-0.15	0	5.82	10.10	-4.28	57.6
HANFORD CITY	0	0.09	-0.09	0	5.75	8.96	-3.21	64.2
BAKERSFIELD	0	0.08	-0.08	0	4.93	6.47	-1.54	76.2

* NORMALS FOR BAKERSFIELD...FRESNO...HANFORD CITY AND MERCED CITY ARE FOR 1981-2010.
NORMALS FOR HANFORD...MADERA AND MERCED AIRPORTS ARE FOR 2001-2010.