JUNE 2014 WEATHER SUMMARY
FOR THE CENTRAL CALIFORNIA INTERIOR

By Gary Sanger, Climate Services Focal Point
And Brian Ochs, Assistant Climate Focal Point
WFO San Joaquin Valley-Hanford

During the previous month and prior months this year, high pressure associated with dry conditions and above normal temperatures was the general rule. June began no differently; dry and warm air prevailed over the area for the first day of the month. A dry upper-level low moved over northern California and allowed the wind flow aloft to turn westerly on the 2nd; marine air even spilled through the passes into the San Joaquin Valley. Temperatures were seasonal on the 3rd due to this marine air influx.

This cool-down was short-lived, and temperatures rebounded several degrees on the 4th in much of interior central California. Further warming continued over the next several days as high pressure built over the region. Dry air prevailed over the region and prevented development of mountain showers and thunderstorms, except to the east of the Sierra Nevada, until the 5th. On the 6th there were a few showers and thunderstorms that developed over the Sierra Nevada crest; they dissipated by around 7:00 PM that evening due to loss of solar radiation and a lack of moisture and instability. In addition, a weak intrusion of marine air spilled into the San Joaquin Valley and prevented significant day to day change in daytime high temperatures until the 7th. Localized windy conditions prevailed below the favored passes and canyons such as Pacheco Pass (west of Los Banos) and from the base of the Tehachapi Pass to the Mojave area. Gusts to around 40-50 mph occurred at times during the evening hours in these areas during the 6th-7th.

On the 8th, strong high pressure began to move inland over the area, and temperatures rose several degrees throughout much of the central California interior. Highs in the San Joaquin Valley, southern Sierra Nevada foothills, and Kern County desert reached well into the triple digits. Further warming occurred on the 9th as high temperatures continued to rise, as well as morning low temperatures. High temperatures records were broken on the 9th, including at Fresno and Bakersfield, where the highs reached 110 degrees. The minimum temperatures even reached record highs at Fresno on the 9th and Bakersfield on both the 9th and the 10th where temperatures did not fall below the 70s. High temperatures cooled a few degrees each day on the 10th and 11th as the high pressure weakened.

Temperatures cooled to near normal values by the 12th, and reinforcing shots of marine air flowed into the San Joaquin Valley until at least the 16th. A low pressure trough prevailed along the West Coast and impacted the weather over central California. Gusty winds occurred at times in parts of the San Joaquin Valley, as well as the Kern County mountains and desert, from the

13th through the 16th. Blowing dust caused problems in the western and southern sides of the San Joaquin Valley during the 15th; visibility dropped below a quarter mile at times in some locales (including down to 30 feet or less near the base of the Grapevine and 300 feet or less along Highway 41 near the Cottonwood Pass south of Kettleman City). Winds gusted to above 40 mph in the southern and western San Joaquin Valley, and even stronger in the Kern County mountains and desert (up to 60 mph).

The 17th was another relatively cool but windy day as the trough remained over the area. Temperatures reached about 5-7 degrees below average (for example, mid-upper 80s occurred in the San Joaquin Valley). Another round of gusty winds developed in eastern Kern County, including near Mojave, where local gusts to around 45 mph were recorded. Temperatures began to warm a few degrees each day from the 18th through the 20th due to building high pressure. Above average temperatures (by around 3-6 degrees) prevailed over the region from June 19th through the 22nd.

Beginning on the 22nd and continuing through the 25th, the upper-level ridge weakened and allowed temperatures to lower to near or slightly above average. Weak impulses embedded in the jet stream passed over central California and allowed winds to pick up along the west side of the San Joaquin Valley and through the Tehachapi Mountain passes near Mojave. Gusts to around 45-50 mph occurred at Mojave each afternoon and evening through this period.

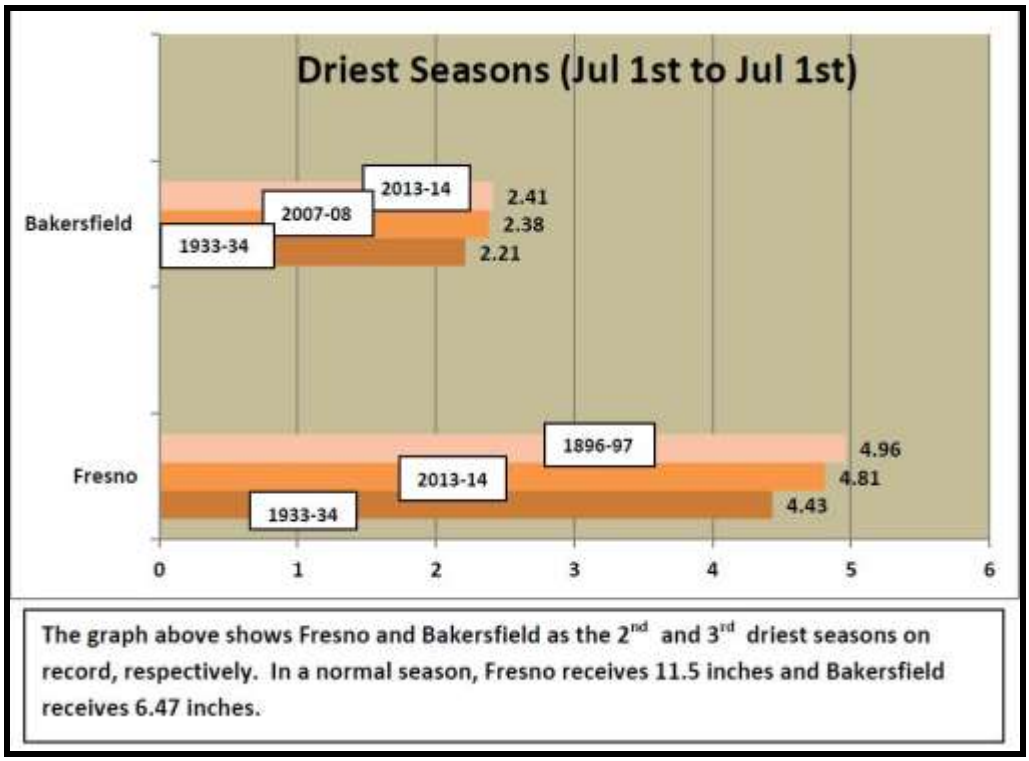
On the evening of the 25th and through the 26th, a vigorous low pressure system passed over the forecast area. As much as 0.41 inch of rain fell in Yosemite National Park, including at Tuolumne Meadows during the overnight and morning hours, and a tenth of an inch of rain fell at Yosemite Valley. Even a trace of rain was reported by a spotter in Clovis and at the automated airport stations in Madera and Merced. Highs were around 7-10 degrees below average on the 26th; Fresno and Bakersfield did not reach 90. During the evening of the 26th, strong, gusty winds occurred in the Kern County desert, including at Mojave where gusts reached as high as 69 mph. An even stronger gust (78 mph) was recorded just a few miles to the west along Highway 58 at the California Highway Patrol Station at Cache Creek that evening.

High pressure returned to California for the end of the month. Temperatures warmed to near normal on June 27th and 28th, and continued warming through the end of the month. The central and southern San Joaquin Valley saw widespread triple-digit heat on June 30th.

June ended with below average rainfall for most of the central California interior and warmer than average. More importantly, the water year ended well below average for the region, including at Bakersfield and Fresno. In fact, this water year was at least in the top 3 driest seasons on record for both Bakersfield and Fresno (see Figure 1 below). Interior central

California has reached the highest (extreme) drought category; the only exception is the Kern County desert.

Figure 1 – Water Year Comparisons: Top 3 Driest Water Years for Bakersfield and Fresno



THE 10 DRIEST RAIN SEASONS ON RECORD
(AVERAGE RAINFALL IN INCHES)

	BAKERSFIELD	FRESNO
1.	2.26....1933-34	4.43....1933-34
2.	2.38....2007-08	*4.81....2013-14*
3.	*2.41....2013-14*	4.96....1897-98
4.	2.45....1958-59	5.24....1923-24
5.	3.00....1971-72	5.34....1971-72
6.	3.06....2006-07	5.67....2012-13
7.	3.15....2012-13	5.82....1932-33
8.	3.30....1989-90	6.03....2006-07
9.	3.35....1969-70	6.14....1965-66
10.	3.59....2001-02	6.28....1912-13

THE 10 WARMEST JUNES ON RECORD
(AVERAGE TEMPERATURE IN DEGREES FAHRENHEIT)

	BAKERSFIELD	FRESNO
1.	84.4...1981	82.8...1981
2.	83.9...1977	82.5...1918
3.	83.7...1960	81.8...1985
4.	82.9...1940	*80.9...2014*
5.	82.4...1973	80.9...2013
6.	82.3...1918	80.7...2006
7.	82.0...1961	80.4...1940
8.	81.9...1926	80.4...1926
9.	81.6...1974	80.0...1960
10.	*81.5...2014*	79.8...2000