MARCH 2008 WEATHER SUMMARY

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High pressure aloft was over the southern half of California at the beginning of March, behind the storm complex exiting the state. Despite abundant ground moisture and a stable airmass, fog remained limited to a few patches across the central and southern San Joaquin Valley; the patchy fog formed shortly before sunrise and mostly burned off between 8 AM and 9 AM.

An upper-level trough moved through northern California during the afternoon of March 1st, riding over, and weakening, the upper-level ridge over the southern part of the state. The trough was mostly dry, but it did tighten surface pressure gradients across southern California. West to northwest winds gusted to 50-55 mph over the Kern County deserts and mountains during the afternoon and evening of the 1st.

Unseasonably cold air accompanied the trough, plunging temperatures to below-normal readings. Fresno dropped from a record-tying high of 76 on February 29th to a high of only 62 on March 1st, and again on the 2nd. Bakersfield likewise saw a 14-degree drop, from a high of 77 on Leap Year Day to a high of only 63 on March 1st (and again on the 2nd).

The central California interior has relatively tranquil weather beginning March 3rd, as weak high pressure aloft moved over California behind the trough. Fresno warmed to 70 on March 7th, and to 77 on the 10th, the warmest day of the month at Fresno-Yosemite International Airport. Bakersfield reached a high of 81 degrees on March 10th, the first 80-degree day at Meadows Field since November 7th, 2007.

A weak upper-level trough moved through California on March 13th, bringing gusty winds to the mountains and deserts, but only spotty light precipitation to the region. Numerous gusts of 45-60 mph were reported in the Kern County mountains and deserts on the 13th and 14th.

The trough was followed by a stronger system on the 15th, which brought colder air to the region. Gusty winds—to around 50mph—continued over the mountains and deserts, and gusts even developed over parts of the San Joaquin Valley (where gusts to 37 mph were reported). The main impact of the trough was precipitation, as measurable snow fell as low as 3500 feet on the Grapevine, and thunderstorms developed over the west side of the San Joaquin Valley during the afternoon of the 15th. One thunderstorm, near Mendota, reached severe levels and produced ¾-inch hail and damaging winds. Other thunderstorms generated hail that ranged from pea-size to ½-inch in diameter. These storms extended south along the Interstate 5 corridor to near Taft, and as far east as Visalia and Arvin (where the ½-inch hail fell and knocked out power to part of the town when a transformer insulator hub was shattered). A thunderstorm near Maricopa during

the late afternoon approached severe criteria, prompting the second Severe Thunderstorm Warning of the day, but the storm weakened before becoming severe.

Up to 4 inches of snow fell on the Frazier Park area, with 4-6 inches falling above 6500 feet in the western Tehachapi Mountains. In the Southern Sierra Nevada, snow amounts ranged from 5 inches at Ponderosa to one-inch accumulations at Lodgepole and Tuolumne Meadows. Other snow reports included 1.5 inches at Bear Valley Springs and Hume Lake, and 2 inches at Grant Grove.

A cold, dry airmass moved into the central California interior with the trough. A few Valley sites reached freezing the morning of the 16th, and again on the 17th, but the frost was not widespread.

Another upper-level trough moved into California on March 19th. Except for a couple of isolated showers over the high Sierra, moisture remained north of the central California interior. A ridge of high pressure aloft moved into California behind this trough, and temperatures warmed to several degrees above normal.

Fresno approached, but did not reach, the 80-degree mark under the upper-level ridge. The high at Fresno-Yosemite International Airport reached 79 degrees on both March 23rd and 24th, while Bakersfield had its second 80 degree day of the month on the 23rd. Fresno's 79-degree highs were the warmest days of the month for the city.

An upper-level trough moved into northern California on March 25th. This trough brought isolated showers to Yosemite National Park during the late afternoon of the 25th, but this was the only precipitation from the system. The trough did bring gusty west to northwest winds to the Kern County mountains and deserts, and the higher-elevations of the Southern Sierra Nevada.

A stronger, and wetter, system moved into California on March 28th, bringing interior central California gusty winds and precipitation that persisted through the 30th. In the central and southern San Joaquin Valley, only a few showers developed, with the heaviest rainfall—0.09 inch at Lemon Cove during the early morning of the 30th—near the Sierra foothills. Winds gusted as high as 38 mph on the Valley floor on the 28th, while gusts to around 50 mph continued over the mountains and deserts through March 30th. The storm brought a push of cold air to the region, with snow levels dropping to around 5000 feet by the morning of the 30th, and locally even lower as Tehachapi recorded a trace of new snow. Appreciable snow fell in the Southern Sierra Nevada during the morning of March 30th as the upper-level trough axis moved through the region, with Tuolumne Meadows in Yosemite National Park reporting 4 inches of new snow, and further south, Lodgepole had 5.5 inches and Grant Grove getting 4.7 inches of snow.

The storm moved east of the region on March 31st, for a dry end to the month. Bakersfield ended March with no measurable rain and its total of a trace tied with March 1956 for its second driest March on record; only March 1934, with no rain, was drier.

Fresno’s 0.02 inch of rain for March gave the city its fifth driest March on record, with only March 1972 (no rain), 1934 (a trace), and 1926 and 1966 (0.01 inch) drier.