SEPTEMBER 2008 WEATHER SUMMARY

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September began with an upper-level trough over California, which cooled temperatures to several degrees below normal. The trough moved eastward on the 2nd, and the marine air over the San Joaquin Valley mixed out rapidly, resulting in strong warming. The high temperature at Fresno on September 1st was 86 degrees; the high the next day was 96, a 10-degree warming.

High pressure aloft moved into California behind the trough, and pushed temperatures well above normal. The high temperature at Fresno peaked at 106 degrees on September 7th, some 13 degrees above normal. Fresno had its last 100-degree day of the year on the next day, which was Fresno's 44th day of 100 or higher for 2008. Only 2003 had more days in triple digits—49—since the start of the current century in 2001. Bakersfield had four 100-degree days in September, for a total of 25 days in triple digits for the year. (See below for 2008 100-degree day statistics.)

The strong heat also caused lifting of the moisture-starved air over the Southern Sierra Nevada crest, resulting in cumulus development on September 7th and 8th, and even an isolated thunderstorm or two.

An upper-level trough moved into northern California on the 7th, then slowly dropped south through the state. This trough brought a cooling trend to the region, with temperatures falling to near normal on the 7th, and a few more degrees cooler the next day. As the trough dropped south, a closed low developed within the trough. This low brought mid- and upper-level instability to the Southern Sierra Nevada on September 10th, resulting in the development of isolated afternoon and evening thunderstorms.

An upper-level ridge built west into California from the Great Basin on the 11th, bringing a dry and stable airmass. Temperatures warmed to above normal on the 12th and stayed near or above normal through September 16th. Even a push of marine air into the San Joaquin Valley on the 13th could only cool temperatures to normal or a degree or two below.

An upper-level low moved through northern California on September 17th, bringing a few showers to the Kern County mountains and strong cooling to the central California interior. The marine layer spilled into the San Joaquin Valley, where the Chowchilla wind profiler reported a depth of 2000 feet for the marine air. Fresno saw 9 degrees cooling from the 16th to the 17th, representative of most of the San Joaquin Valley, and temperatures continued to cool the next several days before bottoming out in the lower 80s on September 20th.

An upper-level ridge began building into California on September 22nd, and temperatures began quickly warming. Bakersfield warmed 7 degrees from the 22nd to the 23rd, and

warmed another 7 degrees from the 23rd to the 24th. Fresno warmed 6 degrees each of these days, as central and southern San Joaquin Valley high temperatures reached the mid 90s by the 24th, and the upper 90s by the 28th. A weak trough that moved through California on the 25th brought only a degree or two of cooling, with temperatures quickly recovering the next day.

By September 27th, a southeast flow aloft over California was drawing moisture into the state. A few clouds developed over the Southern Sierra Nevada, heralding an increase in instability over the region that culminated in the development of showers and thunderstorms on the 29th over the Southern Sierra Nevada, Tehachapi Mountains and the Kern County deserts. A few showers even spread into the south end of the San Joaquin Valley, with Bakersfield seeing a trace of rain fall at Meadows Field. Clouds over the region cooled temperatures a couple of degrees, but the San Joaquin Valley only dropped into the mid 90s, nearly 15 degrees above normal.

Bakersfield ended September with an average temperature of 78.9 degrees, tying with September 1977 for the 13th warmest September in over a century of temperature records. Although Fresno's average temperature for September 2008 was a degree cooler, the average of 77.9 degrees gave Fresno its 8th warmest September in 120 years of records.

100-DEGREE STATISTICS FOR 2008

	BAKERSFIELD			FRESNO		
	2008	2007	2006	2008	2007	2006
MAY	2	0	0	4	0	1
JUNE	4	3	8	8	4	12
JULY	6	12	20	11	14	20
AUGUST	9	10	3	16	14	4
SEPTEMBER	4	3	4	5	3	4
TOTAL	25	28	35	44	35	41