JANUARY 2009 WEATHER SUMMARY

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January began with the central California interior under an upper-level high-pressure ridge. This ridge shifted inland as an upper-level trough approached the California coast on January 3rd, bringing the first rains of the year to the central California interior. This was a warm storm, with only light snow accumulations over the higher elevations of the Southern Sierra Nevada. Tuolumne Meadows reported a storm total of 3 inches, while to the south, Grant Grove reported only 1.3 inch of new snow. In so9uthwestern Kern County, low clouds pushed against the Temblors, creating areas of fog and light rain. The California Highway Patrol reported visibilities as low as 400 feet on Highway 166 through Grocer Grade, between Kern and San Luis Obispo Counties.

The next morning, patchy dense fog developed in the central and southern San Joaquin Valley, especially along the Highway 99 and 198 corridors in southern Fresno, northern Kings and northwestern Tulare Counties. Where skies were clear, or the fog was only light, patchy frost formed toward daybreak.

Weak systems moved through central California on January 5th and 8th, bringing only light precipitation to the region. In the wake of the last trough, patchy dense fog developed in the central and southern San Joaquin Valley, with the visibility at Lemoore falling to less than 300 feet during the morning of the 8th.

High pressure built back into California, bringing widespread dense fog to the central and southern San Joaquin Valley on January 10th. As the upper-level ridge strengthened, the fog was suppressed and temperatures warmed to well above normal. Although the fog was suppressed, patchy dense fog was an almost daily early morning occurrence, especially in the area bounded by Hanford, Visalia and Selma. At the south end of the San Joaquin Valley, strong southerly downslope winds developed late on the 15th, and continued through the next day before beginning to abate on the 17th. These winds brought sharp night-time warming to the south end of the San Joaquin Valley. At 2 AM on the 16th, an automated sensor at the base of the Grapevine was reporting temperatures in the mid 60s as winds gusted to 39 mph.

The upper-level ridge became highly amplified as it moved onto the Pacific Coast, with the ridge core pushing into British Columbia. High temperatures in the central and southern San Joaquin Valley warmed into the upper 60s to around 75 degrees by the 18th, with both Bakersfield and Fresno tying their record high temperatures on that date. The unseasonably warm weather continued through the 21st. The ridge was pushed inland on the 22nd, which saw a strong push of cold air move into the region. The high temperature at Bakersfield on the 22nd was 60 degrees, 14 degrees colder than the previous day. Clouds over California that night kept Valley temperatures warm into the morning of

January 23rd. Fresno tied its record high minimum temperature for that morning of 52 degrees.

The storm that arrived on January 22nd was the first, and warmer, of two storms that brought most of the precipitation for the month. Although snow levels with the first storm remained high, 11 inches of new snow fell at Tuolumne Meadows on the 23rd, while Lodgepole, at 6735 feet, reported only rain. Clouds over the San Joaquin Valley pushed into the slopes of the Southern Sierra Nevada, creating areas of dense fog, especially in the foothills.

The second storm took a more southerly track. The upper-level low associated with this storm dropped to off the central California coast on the 23rd. The circulation around this low spun showers northward into southwestern Kern County. A significant upper-level disturbance moved over interior central California during the afternoon of January 24th. As this disturbance passed over the San Joaquin Valley, it triggered a line of showers and thunderstorms that extended from Stratford northeast to Auberry. One of the thunderstorms, between Sanger and Reedley, spawned a funnel cloud that was observed from north Hanford by a National Weather Service employee.

The heaviest snow from this storm was over the Kern County mountains. Storm totals included 10 inches of new snow at Alta Sierra at the south end of the Sierra Nevada, and 4 inches at Bear Valley Springs in the Tehachapi Mountains. The snow level plummeted with the second storm, with snow falling as low as 3000 feet on the Grapevine, although snow did not stick below 4000 feet.

Another upper-level disturbance dropped south over the San Joaquin Valley during the late afternoon/early evening of January 25th. As on the previous day, this disturbance also triggered convective activity. A line of showers and thunderstorms initially stretched from Livingston to Coalinga. One thunderstorm near Livingston spawned the second funnel cloud of the weekend around sunset. Both funnel clouds remained well above the ground, and neither posed any risk of becoming tornadic.

As the line of showers and thunderstorms shifted south, following the upper-level disturbance, the showers became more numerous over the southern San Joaquin Valley. Although thunderstorm activity ended after sunset, some of the showers produced locally heavy rainfall.

Another upper-level ridge of high pressure moved into California in the wake of the storm, Daily patchy late night and morning dense fog developed by the 28th, and became widespread on the 30th and 31st, resulting in dense fog advisories being issued for both mornings.