

OCTOBER 2009 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*

Note: Information about the Dinkey Creek event has been updated.

October began with temperatures close to normal as a weak upper-level ridge moved over California. This spell of warm weather lasted only until the 3rd, when a strong upper-level trough and associated cold front moved into the state.

The cold front triggered showers and even a line of thunderstorms over northern California during the night of October 3rd-4th. The showers brought up to 0.32 inch of rain to the high country of the Southern Sierra Nevada, with measurable rain falling as low as North Fork and Oakhurst in the foothills. The snow level fell to around 6000 feet by the morning of the 4th. One Fresno television station showed a picture of light snow at Huntington Lake, and the few-inch accumulation on the Tioga Pass in Yosemite National Park was enough to temporarily halt traffic on Route 120 through the Pass.

Precipitation in the Southern Sierra Nevada stayed north of Kings Canyon, and on the San Joaquin Valley floor, rain only fell as far south as Stockton. A very cold airmass moved into interior central California behind the front. The high temperature at Bakersfield on October 4th was only 67 degrees. This was 16 degrees colder than the previous day's high (83), and set a new record low maximum temperature for the date. The old record low maximum temperature at Bakersfield for the 4th was 71 degrees, set in 1971. The high at Fresno on October 4th was 68 degrees, 12 degrees cooler than the previous day's high (80 degrees). Temperatures remained below normal for the next couple of days, and they then slowly began to warm back to near normal afterward as another ridge of high pressure moved over the area and remained until around the 11th.

Temperatures fell back below normal for Columbus Day (October 12th) and continued through the remainder of the week due to a strong trough of low pressure that came from the Gulf of Alaska. The trough tapped into quite a bit of moisture from the remnants of Super-Typhoon Melor, bringing as much as around 2 inches of rain to the central and southern San Joaquin Valley on the 13th-14th. Much higher amounts fell in the Southern Sierra Nevada. Dinkey Creek received the most precipitation from this storm, with a storm total was just over 13 inches (about 9 inches of this fell in 12 hours on the 13th). Wishon Dam recorded a storm total of around 10 inches by the 14th. At the onset of this storm during the morning of Oct 13th, quite a bit of snow fell over the crest of the Sierra Nevada. Once the precipitation began in earnest by the afternoon of the 13th, snow levels actually rose to over 10,000 feet, so most precipitation was falling as rain by the end of the event on the 14th. Rock and mud slides were reported on Highway 198 in Sequoia National Park. A Flash Flood Warning was issued for the Dinkey Creek area due to the heavy rain. Although a hydrograph showed a sharp rise in the stream flow due to runoff,

no flooding was reported either along the creek in the vicinity of the heavy rain, or downstream near Balch Camp.

In addition to the near-record (and in a few locations, record) rainfall, the storm brought high wind gusts that toppled trees, downed utility lines, and created areas of blowing dust with near-zero visibility. Wind gusts to 58 mph were recorded at both Castle Airport near Atwater (in Merced County) and Crane Flat in Yosemite National Park. Gusts to 60 mph developed at the south end of the San Joaquin Valley near the base of the Grapevine, and 77-mph gusts occurred over the Temblors in western Kern County.

On the 15th another high pressure ridge began to build over the area with light surface winds. The lower levels of the atmosphere had abundant moisture as a result of the recent rain, with high dewpoints for at least the next three mornings. Patchy dense fog developed over the southwestern portions of the San Joaquin Valley on the morning of the 15th, with more widespread dense fog, with visibilities below a quarter of a mile, throughout much of the valley on the mornings of the 16th and 17th.

The next upper-level trough moved into California on October 19th, bringing another push of cold air into the region. The high temperature at Fresno fell from 82 on the 18th to 69 the next day, and bottomed out at 63 on the 20th. The trough brought only light precipitation to the region. Rainfall on the San Joaquin Valley floor ranged from traces to only a few hundredths of an inch. In the Southern Sierra Nevada, rainfall amounts of up to two-tenths of an inch were reported, but there was a sharp tail-off over the south end of the range. While Glennville received 0.09 inch of rain, and a spotter in Mountain Mesa had 0.06 inch, no rain was reported to the south, including the Tehachapi Mountains.

Temperatures warmed to near normal by October 22nd as another upper-level ridge built into California. By the 26th, high temperatures in the central and southern San Joaquin Valley warmed into the lower to mid 80s in the warm sector ahead of a dry cold front. This front brought a combination of unseasonable cold air and gusty winds to the region. Bakersfield had a high temperature of 83 degrees on the 26th; the next day, the high only reached 63 degrees after a morning low of 55. High temperature falls of 14-21 degrees were common throughout the central and southern San Joaquin Valley.

In the Kern County deserts, wind gusts reached 75 mph in the Indian Wells Canyon, 72 mph at Rosamond, and 70 mph at Edwards AFB. In the central and southern San Joaquin Valley, gusts to 50 mph were reported in several locations. As with the previous high-wind event, trees and utility lines were downed, and areas of blowing dust formed, some with near-zero visibility.

As the cold airmass settled over the San Joaquin Valley, low temperatures in the coldest Valley locations fell to around 30-32 degrees during the morning of October 29th. Weak high pressure returned to California on the 30th, with temperatures warming to slightly below normal on the 30th, and to near to slightly above normal on the last day of the month.

The impact of the remnants of Super-Typhoon Melor, and the effects of rain shadowing on the south end of the San Joaquin Valley, are illustrated by the table below, which summarizes selected rainfall totals for October 2009.

OCTOBER RAINFALL REPORTS FOR SELECTED STATIONS
/DATA RECEIVED AS OF NOVEMBER 1ST/

/AMOUNTS IN INCHES/

STATION	OCTOBER RAINFALL	NRML OCT. RAINFALL	DEP FM NORMAL	PCT OF NORMAL
BAKERSFIELD	0.08	0.30	-0.22	26.7
FRESNO	1.39	0.65	0.74	213.8
GRANT GROVE	7.88	2.23	5.65	353.4
HANFORD	1.32	0.44	0.88	300.0
LEMON COVE	1.16	0.76	0.40	152.6
LODGEPOLE	8.05	2.02	6.03	398.5
LOS BANOS	1.30	0.56	0.74	232.1
MERCED	1.61	0.73	0.88	220.5
VISALIA	1.47	0.65	0.82	226.2
WASCO	0.20	0.34	-0.14	58.8