

Storm Data and Unusual Weather Phenomena - November 2020

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
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CALIFORNIA, South Central

(CA-Z194) SEQUOIA KINGS

11/01/20 00:00 PST	0	Wildfire
11/30/20 23:59 PST	0	

The lightning caused Castle fire was discovered on the morning of August 19, 2020. It was located 25 miles north of Kernville on the Sequoia National Forest and just a few miles east of the Giant Sequoia National Monument. It grew slowly at first, reaching 2000 acres on August 23rd. It grew rapidly to 15,000 acres by August 25th and to 35,674 acres by August 31st. The rapid growth resulted in evacuations of several small mountain communities and the closure of Highway 190 and several other mountain roads. On August 29, the Castle fire was combined with the smaller Shot Gun fire to become the SQF Complex. The fire grew to 151,436 acres by the end of September and to 170,165 acres by the end of October. The fire continued a slow growth in November and ended the month at 174,178 acres and 90 percent contained.

(CA-Z190) CENTRAL SIERRA FOOTHILLS, (CA-Z192) CENTRAL SIERRA, (CA-Z193) NORTH KINGS RIVER

11/01/20 00:00 PST	0	Wildfire
11/30/20 23:59 PST	0	

The Creek fire started at 633 pm PDT on September 4th (Labor Day Weekend) in the vicinity of Big Creek, California near the town of Shaver Lake. The fire was in an area of very heavy tree mortality in the Sierra National Forest. The fire had explosive grown on September 5th and 6th under excessive heat and low humidity, but not much wind. The fire became plume dominated on the 5th and column collapses were noted by AlertFire Cameras late on the 5th within the extremely unstable environment. Damaging fire whirls occurred just north of Mammoth Pool with ground survey estimated winds at 115-125 mph, and near Huntington Lake with patterns indicating winds of 90-107 mph. By the evening of September 6th, the fire had grown to 73,278 acres. Extensive smoke allowed the fire to slow some by Monday and Tuesday September 7th-8th, however the fire continued to grow, reaching nearly 153,000 acres by September 9th. Around this time, the complexity of the incident necessitated management of the fire to be split into a north zone and a south zone with 2 overhead teams assigned. The fire closed Highway 168 and many local roads and there were evacuations of as many as 45,000 people. Hundreds of people were rescued by California National Guard helicopters from the Mammoth Pool area and also from the China Peak ski resort. Hot and dry conditions under strong high pressure continued throughout the remainder of September with extensive smoke often hampering air operations. By the end of September the fire had burned 307,051 acres and had destroyed 853 structures and damaged 64 others. Cost of containment was \$106 Million. The fire continued to grow by an average of 2000 acres a day throughout October under warmer than normal conditions and low humidities and a couple of offshore wind events. The fire reached 379,571 acres by the end of November.

(CA-Z196) TEHACHAPI AREA

11/06/20 21:14 PST	0	High Wind (MAX 55 kt)
11/06/20 21:14 PST	0	

A strong upper low pressure system pushed into the Pacific Northwest while a cold front associated with this system crossed central California on November 6. A period of gusty winds accompanied the frontal passage. Some areas of blowing dust were reported in the San Joaquin Valley briefly lowering visibility to a half mile to a mile in a few locations. Several locations in the western San Joaquin Valley and West Side Hills measured wind gusts exceeding 30 mph while several stations in the Kern County Mountains and Deserts measured gusts above 40 mph while a few low impact indicator sites had brief gusts exceeding 55 mph.

(CA-Z192) CENTRAL SIERRA, (CA-Z193) NORTH KINGS RIVER, (CA-Z194) SEQUOIA KINGS

11/07/20 07:00 PST	0	Heavy Snow
11/08/20 19:00 PST	0	

(CA-Z195) LAKE ISABELLA, (CA-Z196) TEHACHAPI AREA, (CA-Z198) INDIAN WELLS VALLEY

11/07/20 15:14 PST	0	High Wind (MAX 66 kt)
11/08/20 07:26 PST	0	

The low pressure system which had moved into the Pacific Northwest on November 6 dropped southward into central California on November 7 which resulted in the first winter storm of the season for the area. Besides bringing much colder temperatures to the area, this storm produced widespread precipitation and gusty winds on November 7 and 8. Most of the Sierra Nevada picked up between half an inch and an inch of liquid precipitation between the morning of November 7 and the afternoon of November 8. The precipitation was mainly in the form of snow above 6000 feet, and several stations in the higher Sierra picked up between 6 and 12 inches of new snowfall. The snow level lowered to 3000 to 3500 feet on November 8, and several higher foothill locations measured 2 to 4 inches of new snowfall. Much of the Kern County Mountains picked up between a quarter and a half inch of liquid precipitation, but the main impact in Kern County were strong winds where gusts exceeded 45 mph at several locations and a few low impact indicator sites had gusts exceeding 55 mph. Much of the the San Joaquin Valley and Kern County Desert areas picked up between a tenth and a quarter inch

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of rainfall which amounted to the first significant precipitation event in almost six months in these areas. In addition, a few post-frontal thunderstorms produced small hail and ice pellets during the afternoon of November 8 in the eastern portion of the San Joaquin Valley and Sierra foothills.

(CA-Z180) SAN JOAQUIN CONFLUENCE, (CA-Z181) MERCED AND MADERA, (CA-Z182) WESTERN SAN JOAQUIN VALLEY, (CA-Z183) FOGGY BOTTOM, (CA-Z184) FRESNO, (CA-Z185) TULARE COUNTY, (CA-Z186) SOUTHERN KINGS COUNTY, (CA-Z187) WESTERN SAN JOAQUIN VALLEY IN KERN COUNTY, (CA-Z198) INDIAN WELLS VALLEY, (CA-Z199) KERN COUNTY DESERT

11/09/20 02:00 PST	0	Frost/Freeze
11/09/20 08:00 PST	0	

As the first winter storm of the season moved out of the area during the evening of November 8, a cold airmass of Arctic origin pushed into central California behind the departing storm. As skies cleared out and winds diminished overnight, temperatures plunged below the freezing mark for 3 to 5 hours across much of the San Joaquin Valley where many stations reported minimum temperatures between 29 and 32 degrees on the morning of November 9 resulting in the first freeze of the season. In addition, temperatures dropped to 24 to 28 degrees across much of the Kern County Deserts which experienced its first hard freeze of the season.

(CA-Z180) SAN JOAQUIN CONFLUENCE, (CA-Z181) MERCED AND MADERA, (CA-Z182) WESTERN SAN JOAQUIN VALLEY, (CA-Z183) FOGGY BOTTOM, (CA-Z184) FRESNO, (CA-Z185) TULARE COUNTY, (CA-Z186) SOUTHERN KINGS COUNTY, (CA-Z187) WESTERN SAN JOAQUIN VALLEY IN KERN COUNTY

11/10/20 02:00 PST	0	Frost/Freeze
11/10/20 08:00 PST	0	

The cold airmass that brought the first freeze of the season to the San Joaquin Valley on November 9 did not moderate as a northerly flow prevailed over the area for another night along with clear skies and light winds. Once again, temperatures plunged below the freezing mark for 3 to 5 hours across much of the San Joaquin Valley on November 10; and many stations again reported minimum temperatures between 29 and 32 degrees. The airmass did moderate some after the morning of November 10, and lows on November 11 were a few degrees warmer and only a few locations had sub-freezing minimum temperatures on November 11.

(CA-Z196) TEHACHAPI AREA, (CA-Z199) KERN COUNTY DESERT

11/13/20 17:27 PST	0	High Wind (MAX 76 kt)
11/13/20 21:40 PST	0	

A low pressure system moved through the Pacific Northwest and northern California on November 13. This system brought some light precipitation to the Sierra Nevada north of Fresno County as several stations in Mariposa County picked up between a tenth and a quarter inch of liquid precipitation and up to two inches of new snowfall was reported over higher elevations in Yosemite National Park. Several stations in the Sierra Nevada and adjacent foothills of Madera County picked up a few hundredths of an inch to a tenth of an inch. Further south and in the San Joaquin Valley, most stations observed only trace amounts of precipitation as the system fizzled out upon reaching central California. However, it did produce strong winds across the mountains and deserts of Kern County between the early afternoon of November 13 and the early morning of November 14 as an area of strong subsidence moved over the area. Several stations in the Kern County Mountains and Deserts measured wind gusts above 45 mph while a few low impact indicator sites measured gusts exceeding 70 mph.

(CA-Z181) MERCED AND MADERA

11/14/20 07:20 PST	0	Dense Fog
11/14/20 09:45 PST	0	

High pressure built back into central California during the morning of November 14 as the system which brushed the area the previous day moved out of the region. Skies cleared out and winds became light during the overnight and morning hours of November 14 allowing for patchy dense fog to form in Merced County around sunrise. Merced and Atwater had visibility below a quarter mile for a short time after sunrise. Visibility improved later in the morning and the fog dissipated before 1000 am.

(CA-Z181) MERCED AND MADERA, (CA-Z183) FOGGY BOTTOM, (CA-Z185) TULARE COUNTY, (CA-Z188) EASTERN SAN JOAQUIN VALLEY IN KERN COUNTY

11/14/20 23:35 PST	0	Dense Fog
11/15/20 10:53 PST	0	

High pressure strengthened over central California on November 14. This allowed for a stronger near surface inversion during the morning of November 15 in the San Joaquin Valley. With clear skies and light winds prevailing, areas of dense fog formed overnight near the center of the San Joaquin Valley reducing visibility to between 500 and 1000 feet in several locations and impacting travel on State Route 99. The fog lifted into a stratus deck by late morning and dissipated by midday.

(CA-Z183) FOGGY BOTTOM

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Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
	11/16/20 06:53 PST		0	Dense Fog
	11/16/20 08:08 PST		0	

High pressure remained over central California on November 15 and 16. However, better mixing kept fog limited to eastern portion of Kings County and the far western portion of Tulare County for a few hours during the morning of November 16.

(CA-Z195) LAKE ISABELLA, (CA-Z196) TEHACHAPI AREA

	11/18/20 00:32 PST		0	High Wind (MAX 57 kt)
	11/18/20 17:27 PST		0	

A Pacific low pressure system moved through northern California on November 18. Downslope winds ahead of this system resulted in an unseasonably warm day in the San Joaquin Valley on November 17 with Bakersfield setting a new record high temperature for the day and several other locations coming with a few degrees of setting new records. As the system moved through on the 18th widespread precipitation fell north of Kern County. Several stations in the Sierra Nevada and adjacent foothills around Yosemite Park picked between a half inch and an inch of liquid precipitation with snow generally falling above 7000 feet where several stations measured between 5 and 10 inches of new snowfall. Further south in Fresno County many station picked up between a quarter and a half inch of liquid precipitation while only light precipitation fell in Tulare County. In the San Joaquin Valley, some stations near Merced picked up half an inch of rainfall while further south amounts generally ranged from a few hundredths of an inch to a quarter inch of rain. In Kern County, gusty winds accompanied this system with several stations in the Kern County Mountains recording peak wind gusts between 40 and 55 mph with a few stations measuring gusts above 55 mph. The winds decreased by the morning of November 19 as the system moved to the east of the region.

(CA-Z181) MERCED AND MADERA, (CA-Z183) FOGGY BOTTOM, (CA-Z184) FRESNO

	11/21/20 03:35 PST		0	Dense Fog
	11/21/20 10:09 PST		0	

High pressure built into central California on November 20. Clearing skies and light winds aided in the development of dense fog along the center of the San Joaquin Valley from eastern Merced County southward to just north of Delano overnight. Further south, high clouds streaming through Kern County inhibited fog formation in Kern County. The fog dissipated by late morning.

(CA-Z181) MERCED AND MADERA, (CA-Z183) FOGGY BOTTOM, (CA-Z185) TULARE COUNTY

	11/22/20 04:11 PST		0	Dense Fog
	11/22/20 09:31 PST		0	

Clear skies and light winds prevailed over the San Joaquin Valley with high pressure remaining over the region. A strip of dense fog formed overnight along the center portion of the valley once again during the morning of November 22. This time travel was disrupted for a few hours along State Route 99 and traffic was paced by law enforcement due to the fog. The fog dissipated by mid morning with skies becoming mainly clear by late morning.

(CA-Z195) LAKE ISABELLA, (CA-Z198) INDIAN WELLS VALLEY, (CA-Z199) KERN COUNTY DESERT

	11/25/20 22:20 PST		0	High Wind (MAX 54 kt)
	11/26/20 19:26 PST		0	

A cold front dropped southward through California on November 25. The passage of the cold front produced a period of gusty winds across the Kern County Mountains and Deserts between the evening of November 25 through the afternoon of November 26 as the colder air behind the front moved in. Several stations measured gusts between 35 and 50 mph while a few low impact indicator sites had gusts exceeding 60 mph. In addition, as a strong short wave dropped through the Great Basin on November 26, a few stations in the Sierra Nevada briefly measured gusts exceeding 45 mph.

(CA-Z180) SAN JOAQUIN CONFLUENCE, (CA-Z181) MERCED AND MADERA, (CA-Z182) WESTERN SAN JOAQUIN VALLEY, (CA-Z183) FOGGY BOTTOM, (CA-Z184) FRESNO, (CA-Z185) TULARE COUNTY, (CA-Z186) SOUTHERN KINGS COUNTY, (CA-Z187) WESTERN SAN JOAQUIN VALLEY IN KERN COUNTY, (CA-Z188) EASTERN SAN JOAQUIN VALLEY IN KERN COUNTY

	11/27/20 02:00 PST		0	Frost/Freeze
	11/27/20 08:00 PST		0	

A cold and dry airmass pushed into the area on November 25. On November 26, winds diminished and with clear skies prevailing; temperatures dropped below the freezing mark for 2 to 4 hours across much of the San Joaquin Valley on the morning of November 27 with lows ranging between 28 and 32 degrees at most stations.

(CA-Z180) SAN JOAQUIN CONFLUENCE, (CA-Z181) MERCED AND MADERA, (CA-Z182) WESTERN SAN JOAQUIN VALLEY, (CA-Z183) FOGGY BOTTOM, (CA-Z184) FRESNO, (CA-Z185) TULARE COUNTY, (CA-Z186) SOUTHERN KINGS COUNTY, (CA-Z187) WESTERN SAN JOAQUIN VALLEY IN KERN COUNTY, (CA-Z188) EASTERN SAN JOAQUIN VALLEY IN KERN COUNTY

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	11/28/20 02:00 PST		0	Frost/Freeze
	11/28/20 08:00 PST		0	

The cold and dry airmass which pushed into the San Joaquin Valley on November 25 remained in place for several days, and with clear skies and light winds prevailing; temperatures dropped below the freezing mark for 3 to 6 hours on the morning of November 28 with lows ranging between 27 and 31 degrees at most stations.

(CA-Z180) SAN JOAQUIN CONFLUENCE, (CA-Z181) MERCED AND MADERA, (CA-Z182) WESTERN SAN JOAQUIN VALLEY, (CA-Z183) FOGGY BOTTOM, (CA-Z184) FRESNO, (CA-Z185) TULARE COUNTY, (CA-Z186) SOUTHERN KINGS COUNTY, (CA-Z187) WESTERN SAN JOAQUIN VALLEY IN KERN COUNTY, (CA-Z188) EASTERN SAN JOAQUIN VALLEY IN KERN COUNTY

11/29/20 02:00 PST	0	Frost/Freeze
11/29/20 08:00 PST	0	

The cold and dry airmass which pushed into the San Joaquin Valley on November 25 remained in place for several days, and with clear skies and light winds prevailing; temperatures dropped below the freezing mark for 3 to 6 hours on the morning of November 29 with lows ranging between 27 and 31 degrees at most stations.

(CA-Z180) SAN JOAQUIN CONFLUENCE, (CA-Z181) MERCED AND MADERA, (CA-Z182) WESTERN SAN JOAQUIN VALLEY, (CA-Z183) FOGGY BOTTOM, (CA-Z184) FRESNO, (CA-Z185) TULARE COUNTY, (CA-Z186) SOUTHERN KINGS COUNTY, (CA-Z187) WESTERN SAN JOAQUIN VALLEY IN KERN COUNTY, (CA-Z188) EASTERN SAN JOAQUIN VALLEY IN KERN COUNTY

11/30/20 02:00 PST	0	Frost/Freeze
11/30/20 08:00 PST	0	

The cold and dry airmass which pushed into the San Joaquin Valley on November 25 remained in place for several days, and with clear skies and light winds prevailing; temperatures dropped below the freezing mark for 2 to 4 hours on the morning of November 30 with lows ranging between 28 and 32 degrees at most stations.