

## Storm Data and Unusual Weather Phenomena - December 2020

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

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(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

12/01/20 02:00 PST	0	Frost/Freeze
12/01/20 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 December 1 with lows ranging between 28 and 32 degrees at most stations. Lows were a few degrees warmer on December 2 as the airmass modified and only a handful of stations dropped below the freezing mark the following morning.

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#### (CA-Z196) TEHACHAPI AREA

12/02/20 23:00 PST	0	High Wind (MAX 63 kt)
12/03/20 00:40 PST	0	

Interaction between an upper ridge over the west coast and an upper low pressure system that dropped southward from the Great Basin into the Desert Southwest region produced a period of gusty easterly winds over the Kern County Mountains between the evening of December 2 and the late morning hours of December 3. Several stations in the Tehachapi and Fort Tejon areas measured gusts exceeding 40 mph, and a few utility company stations measured gusts exceeding 55 mph. Downslope effects also produced increased winds over the south end of the San Joaquin Valley where several stations measured gusts exceeding 35 mph.

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#### (CA-Z196) TEHACHAPI AREA

12/10/20 20:14 PST	0	High Wind (MAX 50 kt)
12/10/20 20:14 PST	0	

A dry cold front pushed through the area between the afternoon of December 10 and the morning of December 11. This system produced a period of gusty winds over the mountains and deserts of Kern County as it moved through. Several stations measured gusts exceeding 35 mph, and a few stations briefly measured gusts above 50 mph.

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#### (CA-Z195) LAKE ISABELLA, (CA-Z196) TEHACHAPI AREA, (CA-Z199) KERN COUNTY DESERT

12/12/20 06:27 PST	0	High Wind (MAX 81 kt)
12/12/20 10:59 PST	0	

A low pressure system pushed into the Pacific Northwest during the evening of December 11 then tracked southeast through the Great Basin during the morning of December 12. A band of precipitation pushed through the area between the late evening of December 11 and the morning of December 12. Several stations in the Central Sierra and adjacent foothills picked up between 0.50 and 0.80 inches of liquid precipitation with 6 to 9 inches of new snowfall above 7500 feet. Further south in the Sierra Nevada, most of the north Kings area picked up between a quarter to half an inch of liquid precipitation while most of higher elevation stations in Tulare County picked up between a tenth of an inch and a quarter inch of liquid precipitation. Most of the San Joaquin Valley from Fresno County northward picked up between a quarter and a half inch of rainfall while a tenth to a quarter inch of rainfall fell south of Fresno County. The main impact from this system; however, was that it produced a period of strong wind gusts across the mountains and deserts of Kern County during the morning of December 12. Several stations in the Kern County Mountains and Deserts measured gusts exceeding 60 mph with a few low impact indicator sites measuring gusts above 70 mph.

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#### (CA-Z195) LAKE ISABELLA, (CA-Z196) TEHACHAPI AREA, (CA-Z199) KERN COUNTY DESERT

12/13/20 01:27 PST	0	High Wind (MAX 63 kt)
12/13/20 04:32 PST	0	

A low pressure system moved through northern California during the morning of December 13 and pushed a cold front through the area between the afternoon of December 13 and the early morning of December 14. Precipitation accompanied the frontal passage with the snow level between 6000 and 6500 feet. Much of the Sierra Nevada and adjacent foothills from Kings Canyon northward picked up between a half inch to an inch of liquid precipitation and the higher elevations of the Sierra Nevada picked up between 5 and 9 inches of new snowfall. Much of the San Joaquin Valley from Fresno County northward picked up between a quarter and a half inch of rainfall while lesser amounts fell further south with most stations south of Fresno County picking up between a few hundredths and a quarter inch of liquid precipitation. Once again, the main impact from this system was post-frontal winds as several stations in the mountains and deserts of Kern County measured gusts above 45 mph during the early morning of December 14 while a few low impact indicator sites measured gusts above 60 mph. The winds diminished by late morning on December 14.

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#### (CA-Z183) FOGGY BOTTOM, (CA-Z185) TULARE COUNTY

## Storm Data and Unusual Weather Phenomena - December 2020

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
	12/13/20 06:40 PST		0	Dense Fog
	12/13/20 09:40 PST		0	

Following the passage of the storm on December 12 which brought precipitation and strong winds to the area, skies cleared out and winds diminished across the San Joaquin Valley during the morning of December 13. As a result of the recent precipitation and increase of low level moisture, some patchy dense fog formed along the center of the San Joaquin Valley along the SR 99 corridor in Tulare County extending westward into eastern Kings County. The fog dissipated by late morning as dynamics from an incoming system provided a strong mixing mechanism.

**(CA-Z181) MERCED AND MADERA**

12/14/20 00:10 PST	0	Dense Fog
12/14/20 01:47 PST	0	

Much of the central valley portions of Merced and Madera Counties picked up between a half and an inch of rainfall from the storms of December 12 and 13. Skies cleared out in the area following the passage of the second storm during the late evening of December 13, and an area of dense fog formed along the State Route 99 corridor between Chowchilla and Turlock during the early morning of December 14 although the fog lifted during the night as post frontal winds increased resulting in some low level mixing.

**(CA-Z181) MERCED AND MADERA, (CA-Z183) FOGGY BOTTOM, (CA-Z184) FRESNO, (CA-Z185) TULARE COUNTY**

12/15/20 01:35 PST	0	Dense Fog
12/15/20 10:50 PST	0	

High pressure strengthened over central California between the afternoon of December 14 and the early morning of December 15. This resulted in inversion conditions over the central San Joaquin Valley during the morning of December 15 and with clear skies and light winds prevailing, an area of dense fog formed along the State Route 99 corridor between Turlock and Tulare. The fog was most prevalent in Merced County where it persisted until late morning.

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

12/16/20 00:40 PST	0	Dense Fog
12/16/20 08:53 PST	0	

High pressure remained over central California during the morning of December 16. With clear skies and light winds prevailing overnight, areas of dense fog formed once again in the center of the San Joaquin Valley. However, the fog was not as prevalent as it was on December 15 and completely dissipated by late morning.

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

12/17/20 11:10 PST	0	High Wind (MAX 68 kt)
12/17/20 15:14 PST	0	

An upper level low pressure system moved eastward across northern California on December 17 which pushed a cold front through central California during the morning and early afternoon hours. This front provided for a brief period of light precipitation across much of the area. Yosemite Park was hit the hardest once again with several stations in the park measuring between half and inch and an inch of liquid precipitation. The precipitation fell as snow above 6000 feet and several high elevation stations picked up between 5 and 9 inches of new snowfall. Further south, much of the Sierra Nevada and adjacent foothills measured between a quarter inch to a half inch of liquid precipitation while the San Joaquin Valley measured between a tenth of an inch and a quarter inch of rainfall near Merced and Madera while the remainder of the valley and the mountains and deserts of Kern County received between trace amounts and a tenth of an inch of rainfall. Just as with the previous two systems, the main impact from this system was a period of increased winds across the mountains and deserts of Kern County. Several stations measured gusts between 40 and 50 mph during the early afternoon hours while a few low impact indicator sites measured gusts exceeding 60 mph. The winds diminished in the evening as the system moved further away for the area.

**(CA-Z181) MERCED AND MADERA, (CA-Z184) FRESNO, (CA-Z185) TULARE COUNTY**

12/18/20 00:30 PST	0	Dense Fog
12/18/20 09:56 PST	0	

High pressure built into California on the morning of December 18 which resulted in clearing skies and decreased winds across the area. With some residual low level moisture from the storm that moved through the area on the previous day, areas of dense fog formed overnight across portions of the eastern San Joaquin Valley as well as along the State Route 99 corridor from Madera to Visalia. The fog lifted into a low cloud deck by late morning.

**(CA-Z181) MERCED AND MADERA, (CA-Z184) FRESNO**

12/18/20 23:35 PST	0	Dense Fog
12/19/20 10:53 PST	0	

## Storm Data and Unusual Weather Phenomena - December 2020

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
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High pressure remained situated over California on December 19 which provided for another night with clear skies and light winds along with inversion conditions over the San Joaquin Valley. Areas of dense fog formed over the central San Joaquin Valley from the State Route 99 corridor eastward during the morning of December 19 and persisted until late morning when the fog dissipated.

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

12/19/20 17:12 PST	0	Dense Fog
12/20/20 12:53 PST	0	

Strengthening high pressure over central California resulted in areas of dense fog reforming during the evening of December 19, and by the morning of December 20 widespread dense fog was present across the San Joaquin Valley reducing visibility to a few hundred feet over a large area. The fog persisted across much of the valley through midday on December 20 then lifted into a stratus deck during the early afternoon.

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(CA-Z181) MERCED AND MADERA, (CA-Z182) WESTERN SAN JOAQUIN VALLEY, (CA-Z183) FOGGY BOTTOM, (CA-Z184) FRESNO, (CA-Z185) TULARE COUNTY

12/20/20 16:53 PST	0	Dense Fog
12/21/20 13:53 PST	0	

With high pressure remaining in place over central California, areas of dense fog formed once again during the evening of December 20 as the stratus deck dissipated during the late afternoon and with clearing skies and light winds fog quickly reformed. The dense fog persisted across much of the valley from the northern portion of Kern County northward through the early afternoon of December 21 when the fog slowly dissipated.

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(CA-Z181) MERCED AND MADERA, (CA-Z182) WESTERN SAN JOAQUIN VALLEY, (CA-Z184) FRESNO, (CA-Z185) TULARE COUNTY, (CA-Z188) EASTERN SAN JOAQUIN VALLEY IN KERN COUNTY, (CA-Z189) BAKERSFIELD

12/21/20 17:50 PST	0	Dense Fog
12/22/20 13:50 PST	0	

Areas of dense fog reformed in the San Joaquin Valley during the evening of December 21. The fog was responsible for a two vehicle accident near Porterville in which the driver of one of the vehicles was killed during the early morning of December 22. The fog lifted into a low cloud deck by late morning and dissipated by early afternoon as a low pressure system moving through the Pacific Northwest provided for some mixing.

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(CA-Z196) TEHACHAPI AREA

12/22/20 20:35 PST	0	Dense Fog
12/22/20 23:55 PST	0	

Low level upslope clouds which resulted from a passing trough over northern California banked up over the Tehachapi Valley during the evening of December 22 resulting in dense fog in the Tehachapi area and travel disruptions along State Route 58. The fog dissipated by late evening and skies cleared out during the morning of December 23.

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(CA-Z196) TEHACHAPI AREA, (CA-Z197) FORT TEJON

12/23/20 10:50 PST	0	High Wind (MAX 62 kt)
12/24/20 02:40 PST	0	

An upper level low pressure system undercut the persistent ridge over California and approached southern California on December 23. This resulted in a period of increased downslope winds in the Fort Tejon and Tehachapi areas between the morning of December 23 and midday December 24. Several stations in these areas measured wind gusts exceeding 45 mph while a few locations measured brief gusts exceeding 60 mph.

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

12/23/20 23:55 PST	0	Dense Fog
12/24/20 10:53 PST	0	

Although a low pressure system moved through southern California, high pressure remained in control over northern California during the morning of December 24. Clear skies and light winds over San Joaquin Valley from northern Kern County northward resulted in another morning of dense fog along the State Route 99 corridor from Delano northward. The fog dissipated by late morning as the low to the south of our area provided for some mixing to take place.

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(CA-Z181) MERCED AND MADERA

## Storm Data and Unusual Weather Phenomena - December 2020

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
	12/24/20 20:33 PST		0	Dense Fog
	12/25/20 00:53 PST		0	

Clear skies and light winds allowed for dense fog to reform in Merced and Madera Counties along the State Route 99 corridor on Christmas eve. However, an incoming system provided for enough mixing to dissipate the fog layer early Christmas morning. Visibilities were generally between 3 and 5 miles in most of the San Joaquin Valley on Christmas morning.

**(CA-Z179) WEST SIDE HILLS, (CA-Z195) LAKE ISABELLA, (CA-Z197) FORT TEJON**

	12/27/20 21:13 PST		0	High Wind (MAX 60 kt)
	12/28/20 03:10 PST		0	

A low pressure system dropped southward along the central California coast during the evening of December 27 through the afternoon of December 28. This system brought half an inch to three quarters of an inch of liquid precipitation to much of the Sierra Nevada with several stations above 5000 feet picking up between 4 and 9 inches of new snowfall. Much of the Tehachapi mountain range picked up between a quarter to a half of an inch of liquid precipitation with 2 to 4 inches of new snowfall above 4000 feet. Travel was paced by California Highway Patrol for a few hours along Interstate 5 in the Tejon Pass area and along State Route 58 in the Tehachapi area. Travel was restricted with chains being required along State Route 168 through Walker Pass and along State Route 33 south of Maricopa. Most of the eastern San Joaquin Valley and Kern County Desert areas measured between a quarter and a half inch of rain while the western San Joaquin Valley measured between a tenth and a quarter inch of rainfall. This storm also produced a period of gusty winds between the evening of December 27 and the early morning of December 28. Several stations in Kern County as well as over the Sierra foothills and West Side Hills measured gusts above 35 mph with some ridge top stations near the Tejon Pass and some low impact indicator sites measuring gusts exceeding 50 mph.

**(CA-Z184) FRESNO, (CA-Z185) TULARE COUNTY, (CA-Z199) KERN COUNTY DESERT**

	12/29/20 06:00 PST		0	Dense Fog
	12/29/20 11:10 PST		0	

The low pressure system which brought widespread rain and mountain snow along with gusty winds to the area on December 27 and 28; moved to the east of the area during the morning of December 29 with high pressure moving in behind the departing storm bringing clearing skies and decreased winds to much of the area. Areas of dense fog developed toward daybreak in the Kern County Deserts and along the State Route 99 corridor in Tulare County lowering visibility down to an eighth of a mile for a few hours. The fog completely dissipated by late morning.

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

	12/29/20 23:30 PST		0	Dense Fog
	12/30/20 09:15 PST		0	

High pressure remained over central California during the morning of December 30. High clouds streaming over the are limited the extent of dense fog. However, a strip of dense fog formed in the center portion of the San Joaquin Valley overnight and lowered visibility to below a quarter mile in spots along State Route 99 between Merced and Visalia and along State Route 198 between Lemoore and Visalia. The fog dissipated by late morning.

**(CA-Z196) TEHACHAPI AREA**

	12/31/20 03:27 PST		0	High Wind (MAX 56 kt)
	12/31/20 03:27 PST		0	

**(CA-Z196) TEHACHAPI AREA**

	12/31/20 05:30 PST		0	Ice Storm
	12/31/20 11:00 PST		0	

**(CA-Z196) TEHACHAPI AREA**

	12/31/20 20:15 PST		0	Freezing Fog
	12/31/20 23:15 PST		0	

A low pressure system dropped southward just east of the Sierra Nevada during the morning of December 31. This system pushed a cold front through the area during the morning during the morning of December 31 which brought some gusty winds to the Kern County Mountains and Deserts with several stations measuring gusts exceeding 40 mph. This system also produced a period of post frontal rain showers in which the rain froze as it came into contact with the surface over the elevated valleys. Freezing rain was reported in the Tehachapi area which resulted in California Highway Patrol pacing traffic along State Route 58 for a short period of time. In addition, light snow was reported along Interstate 5 over the Tejon Pass. Most of the area measured a tenth of an inch or less of precipitation from this system. However, some persistent upslope clouds banked up along the Tehachapi Mountain range during the evening resulting in freezing fog and black ice along State Route 58. Skies cleared out though as 2021 arrived.

## Storm Data and Unusual Weather Phenomena - December 2020

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