

## Storm Data and Unusual Weather Phenomena - November 2022

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

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(CA-Z300) WEST SIDE MOUNTAINS NORTH OF HIGHWAY 198, (CA-Z301) LOS BANOS-DOS PALOS, (CA-Z302) MERCED-MADERA-MENDOTA, (CA-Z303) PLANADA-LEGRAND-SNELLING, (CA-Z304) COALINGA - AVENAL, (CA-Z305) WEST SIDE OF FRESNO AND KINGS COUNTIES, (CA-Z306) CARUTHERS - SAN JOAQUIN - SELMA, (CA-Z307) FRESNO - CLOVIS, (CA-Z308) WEST SIDE MOUNTAINS SOUTH OF HIGHWAY 198, (CA-Z309) BUTTONWILLOW- LOST HILLS - I5, (CA-Z310) DELANO - WASCO - SHAFTER, (CA-Z311) HANFORD - CORCORAN - LEMOORE, (CA-Z312) VISALIA - PORTERVILLE - REEDLEY, (CA-Z313) BUENA VISTA, (CA-Z314) BAKERSFIELD, (CA-Z315) SOUTHEAST SAN JOAQUIN VALLEY, (CA-Z316) SOUTH END SAN JOAQUIN VALLEY, (CA-Z317) MARIPOSA - MADERA FOOTHILLS, (CA-Z318) MARIPOSA - MADERA LOWER SIERRA, (CA-Z319) FRESNO - TULARE FOOTHILLS, (CA-Z320) FRESNO - TULARE LOWER SIERRA, (CA-Z321) SOUTH END SIERRA FOOTHILLS, (CA-Z322) SOUTH END OF THE LOWER SIERRA, (CA-Z323) YOSEMITE NP OUTSIDE OF THE VALLEY, (CA-Z324) YOSEMITE VALLEY, (CA-Z325) SAN JOAQUIN RIVER CANYON, (CA-Z326) UPPER SAN JOAQUIN RIVER, (CA-Z327) KAISER TO RODGERS RIDGE, (CA-Z328) KINGS CANYON NP, (CA-Z329) GRANT GROVE AREA, (CA-Z330) SEQUOIA NP, (CA-Z331) SOUTH END OF THE UPPER SIERRA, (CA-Z332) KERN RIVER VALLEY, (CA-Z333) PIUTE - WALKER PASS (BASIN?), (CA-Z334) TEHACHAPI, (CA-Z335) GRAPEVINE, (CA-Z336) FRAZIER MOUNTAIN COMMUNITIES, (CA-Z337) INDIAN WELLS VALLEY, (CA-Z338) MOJAVE DESERT SLOPE(S), (CA-Z339) MOJAVE DESERT				
	11/01/22 00:00 PST		0	Drought
	11/30/22 23:59 PST		0	

Although a significant winter storm impacted central California between November 7 and November 9, the interior remained abnormally dry in November 2022 as most of the area had slightly below normal precipitation totals for the month. By the end of the month, nearly all of our area remained in an extreme or exceptional drought as most of our area has received less than a third of normal precipitation since July 1, 2020.

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(CA-Z323) YOSEMITE NP OUTSIDE OF THE VALLEY, (CA-Z326) UPPER SAN JOAQUIN RIVER				
	11/01/22 07:00 PST		0	Heavy Snow
	11/02/22 07:00 PST		0	

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(CA-Z327) KAISER TO RODGERS RIDGE, (CA-Z328) KINGS CANYON NP, (CA-Z330) SEQUOIA NP				
	11/01/22 07:00 PST		0	Winter Weather
	11/02/22 07:00 PST		0	

A cold upper low pressure system dropping through the Great Basin region pushed a cold front through central California on November 1 producing widespread precipitation across the area and resulting in this being the first significant winter storm of the season. Much of the Sierra Nevada picked up between a quarter and a half inch of liquid precipitation with several stations above 6000 feet picking up an estimated 3 to 5 inches of new snowfall between the morning of November 1 and the morning of November 2 with a few stations picking up 6 inches of snow. Much of the San Joaquin Valley north of Fresno County picked up between a quarter and a half inch of rainfall, but amounts were much lower further southward with most stations only picking up a few hundredths of an inch.

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(CA-Z331) SOUTH END OF THE UPPER SIERRA, (CA-Z334) TEHACHAPI, (CA-Z338) MOJAVE DESERT SLOPE(S)				
	11/02/22 13:32 PST		0	High Wind (MAX 64 kt)
	11/03/22 06:50 PST		0	

A strong pressure gradient developed behind an upper low pressure system as it was moving slowly eastward out of the Great Basin and produced a period a gusty wind across the mountains of Kern County between the afternoon of November 2 and the morning of November 3. Several stations measured gusts between 45 and 55 mph while a few low impact indicator sites had gusts of 60 mph or higher.

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(CA-Z339) MOJAVE DESERT				
	11/04/22 02:00 PST		0	Frost/Freeze
	11/04/22 08:00 PST		0	

With skies clearing out and winds diminishing during the morning of November 4 across the Mojave Desert, temperatures dropped below the freezing mark resulting in the first freeze of the season.

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(CA-Z323) YOSEMITE NP OUTSIDE OF THE VALLEY, (CA-Z326) UPPER SAN JOAQUIN RIVER, (CA-Z327) KAISER TO RODGERS RIDGE, (CA-Z328) KINGS CANYON NP, (CA-Z330) SEQUOIA NP, (CA-Z331) SOUTH END OF THE UPPER SIERRA				
	11/07/22 07:00 PST		0	Heavy Snow
	11/09/22 07:00 PST		0	

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(CA-Z331) SOUTH END OF THE UPPER SIERRA				
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Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
	11/07/22 07:00 PST		0	Winter Storm
	11/07/22 09:00 PST		0	

(CA-Z308) WEST SIDE MOUNTAINS SOUTH OF HIGHWAY 198, (CA-Z323) YOSEMITE NP OUTSIDE OF THE VALLEY, (CA-Z331) SOUTH END OF THE UPPER SIERRA, (CA-Z334) TEHACHAPI, (CA-Z335) GRAPEVINE, (CA-Z336) FRAZIER MOUNTAIN COMMUNITIES, (CA-Z337) INDIAN WELLS VALLEY, (CA-Z338) MOJAVE DESERT SLOPE(S)

	11/08/22 09:40 PST		0	High Wind (MAX 72 kt)
	11/08/22 14:00 PST		0	

A deep upper low pressure system dropped out of the Gulf of Alaska to off the Pacific Northwest coast on November 6. This system remained near the Pacific Northwest coast on November 7 and 8 before moving inland across Oregon during the morning of November 9 and into the intermountain west region later that day. A large trough associated with this system pushed into central California on November 7 and spread widespread precipitation into the area which continued until the morning of November 9. Several stations in the Sierra Nevada picked up between 2 and 4 inches of liquid precipitation with several SNOTELs above 6000 feet picking up between 20 and 30 inches of new snowfall. The Sierra foothills picked up between 1.5 and 3 inches of rainfall while most of the San Joaquin Valley received a half inch to an inch of rain while the much of Kern County Deserts had a quarter to half an inch of rainfall. The system also brought strong southerly winds most noticeably to the higher elevations of Kern County on November 8. Several stations in the mountains and deserts area of Kern County reported wind gusts exceeding 50 mph during the late morning and early afternoon of November 8. A few stations above Tejon Pass measured gusts exceeding 75 mph. Scattered thunderstorms developed over the San Joaquin Valley during the afternoon and November 8 with a few of them moving into the Sierra foothills. Some of the thunderstorm produced locally heavy rainfall and strong outflow winds in addition to quarter to half inch diameter hail. Several thousand customers in the San Joaquin Valley and Sierra foothills lost power during the afternoon of November 8 either due to the strong winds, wet roadways causing accidents or thunderstorms.

(CA-Z302) MERCED-MADERA-MENDOTA

	11/10/22 06:30 PST		0	Dense Fog
	11/10/22 08:40 PST		0	

High pressure built into central California during the early morning of November 10 as the large upper trough which brought widespread precipitation to the area the previous three days moved east of the area. This allowed for skies to clear out and winds to diminish resulting in areas of dense fog forming in the San Joaquin Valley toward daybreak. The fog was most noticeable in Madera where traffic along SR 99 was impacted.

(CA-Z306) CARUTHERS - SAN JOAQUIN - SELMA, (CA-Z311) HANFORD - CORCORAN - LEMOORE, (CA-Z312) VISALIA - PORTERVILLE - REEDLEY

	11/12/22 06:00 PST		0	Dense Fog
	11/12/22 10:00 PST		0	

High clouds moving over the area during the morning of November 11 inhibited dense fog from forming in the San Joaquin Valley, but the clouds moved out of the area overnight and skies had cleared out by the morning of November 12. With light winds and inversion condition present, a narrow strip of dense fog formed by daybreak along SR 99 between Tulare and Selma where visibility was reduced to a few hundred feet and traffic was impacted along SR 99 for a few hours until the fog burned off.

(CA-Z302) MERCED-MADERA-MENDOTA, (CA-Z305) WEST SIDE OF FRESNO AND KINGS COUNTIES, (CA-Z306) CARUTHERS - SAN JOAQUIN - SELMA, (CA-Z310) DELANO - WASCO - SHAFER, (CA-Z311) HANFORD - CORCORAN - LEMOORE

	11/20/22 02:00 PST		0	Frost/Freeze
	11/20/22 08:00 PST		0	

A cold and dry airmass settled over the San Joaquin Valley on November 19. With clear skies and light winds prevalent, strong radiational cooling allowed for temperatures to drop below the freezing mark for three hours or more across portions of the San Joaquin Valley. This was the first freeze of the season for much of the central portion of the San Joaquin Valley.

(CA-Z302) MERCED-MADERA-MENDOTA, (CA-Z303) PLANADA-LEGRAND-SNELLING, (CA-Z305) WEST SIDE OF FRESNO AND KINGS COUNTIES, (CA-Z306) CARUTHERS - SAN JOAQUIN - SELMA, (CA-Z307) FRESNO - CLOVIS, (CA-Z309) BUTTONWILLOW- LOST HILLS - I5, (CA-Z310) DELANO - WASCO - SHAFER, (CA-Z311) HANFORD - CORCORAN - LEMOORE, (CA-Z312) VISALIA - PORTERVILLE - REEDLEY, (CA-Z315) SOUTHEAST SAN JOAQUIN VALLEY, (CA-Z317) MARIPOSA - MADERA FOOTHILLS, (CA-Z319) FRESNO - TULARE FOOTHILLS

	11/21/22 02:00 PST		0	Frost/Freeze
	11/21/22 08:00 PST		0	

The cold and dry airmass which had settled over the San Joaquin Valley on November 19 remained in place on November 20. With skies remaining mainly clear and winds remaining light, another night of strong radiational cooling took place as a result; and temperatures dropped below the freezing mark for three or more hours across most of the San Joaquin Valley during the morning of November 21.

(CA-Z302) MERCED-MADERA-MENDOTA, (CA-Z303) PLANADA-LEGRAND-SNELLING, (CA-Z305) WEST SIDE OF FRESNO AND KINGS COUNTIES,

## Storm Data and Unusual Weather Phenomena - November 2022

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<b>(CA-Z306) CARUTHERS - SAN JOAQUIN - SELMA, (CA-Z310) DELANO - WASCO - SHAFER, (CA-Z311) HANFORD - CORCORAN - LEMOORE, (CA-Z312) VISALIA - PORTERVILLE - REEDLEY, (CA-Z317) MARIPOSA - MADERA FOOTHILLS, (CA-Z319) FRESNO - TULARE FOOTHILLS</b>				
	11/22/22 02:00 PST	0	0	Frost/Freeze
	11/22/22 08:00 PST	0	0	

The cold and dry airmass which had settled over the San Joaquin Valley on November 19 continued to hold it's grip over the area on November 21. Although some high clouds moved over the area during the day, skies cleared out overnight and with winds remaining light, another night of strong radiational cooling took place. Once again temperatures dropped below the freezing mark for three or more hours across most of the San Joaquin Valley during the morning of November 22.

<b>(CA-Z302) MERCED-MADERA-MENDOTA, (CA-Z305) WEST SIDE OF FRESNO AND KINGS COUNTIES, (CA-Z306) CARUTHERS - SAN JOAQUIN - SELMA, (CA-Z310) DELANO - WASCO - SHAFER, (CA-Z311) HANFORD - CORCORAN - LEMOORE</b>				
	11/23/22 02:00 PST	0	0	Frost/Freeze
	11/23/22 08:00 PST	0	0	

The cold and dry airmass which had settled over the San Joaquin Valley on November 19 moderated slightly, but provided the area with another night of sub-freezing temperatures across portions of the San Joaquin valley as skies were mainly clear and winds remained light allowing for temperatures to drop below the freezing mark across the center portion of the San Joaquin Valley.

<b>(CA-Z331) SOUTH END OF THE UPPER SIERRA, (CA-Z334) TEHACHAPI, (CA-Z338) MOJAVE DESERT SLOPE(S)</b>				
	11/28/22 13:27 PST	0	0	High Wind (MAX 83 kt)
	11/28/22 19:00 PST	0	0	

A dry low pressure system dropped into the Great Basin during the morning of November 28 which resulted in an increased surface pressure gradient over central California which provided for a period of gusty winds over the ridge tops in Kern County as well as along the Mojave Desert slopes. Several stations measured gusts between 45 and 55 mph while some low impact indicator sites had gusts of 60 mph or higher.

<b>(CA-Z302) MERCED-MADERA-MENDOTA, (CA-Z303) PLANADA-LEGRAND-SNELLING, (CA-Z305) WEST SIDE OF FRESNO AND KINGS COUNTIES, (CA-Z306) CARUTHERS - SAN JOAQUIN - SELMA, (CA-Z309) BUTTONWILLOW- LOST HILLS - I5, (CA-Z310) DELANO - WASCO - SHAFER, (CA-Z311) HANFORD - CORCORAN - LEMOORE, (CA-Z312) VISALIA - PORTERVILLE - REEDLEY, (CA-Z315) SOUTHEAST SAN JOAQUIN VALLEY</b>				
	11/30/22 02:00 PST	0	0	Frost/Freeze
	11/30/22 08:00 PST	0	0	

A cold airmass settled into central California on November 29 following the passage of a dry cold front the previous day. With clear skies and light winds prevailing strong radiational cooling took place across the San Joaquin valley and as a result many locations dropped below the freezing mark for a few hours on November 30.