## Storm Data and Unusual Weather Phenomena - November 2018

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
CALIFORNIA, South Central				
CA-Z098) INDIAN WELLS VLY, (CA-Z	(099) SE KERN CTY DESERT			
,	11/10/18 02:00 PST		0	Frost/Freeze
	11/10/18 09:00 PST		0	
the front and as winds diminished ov	nrough California during the evening or ernight across the Kern County Desert of the season in the Kern County Deser	s temperatures p	-	
CA-Z096) S SIERRA MTNS, (CA-Z097	) TULARE CTY MTNS			
	11/21/18 16:00 PST		0	Heavy Snow
	11/22/18 08:00 PST		0	
	S [37.31, -119.57], 0.5 S THE PINES [37	.31, -119.57], 0.5 \$	THE PINES [37.3	31, -119.57], 0.5 S THE PINES [37.31,
.119.57]	11/21/18 19:17 PST		0	Flood (due to Heavy Rain)
	11/21/18 20:47 PST		0	Source: Law Enforcement
California Highway Patrol reported four	rtrees fell onto Road 222 near Road 426	south of Bass La	ke, likely due to rai	infall.
	FORKS [37.30, -119.61], 2.0 WSW THE F	FORKS [37.30, -11	9.61], 2.0 WSW TH	HE FORKS [37.30, -119.61], 2.0 WSW
	FORKS [37.30, -119.61], 2.0 WSW THE F	FORKS [37.30, -11	9.61], 2.0 WSW TH	HE FORKS [37.30, -119.61], 2.0 WSW Flood (due to Heavy Rain)
THE FORKS [37.30, -119.61] Public report of a tree blocking the enti		-	0	Flood (due to Heavy Rain) Source: Public
Public report of a tree blocking the enticalinfall.  FRESNO COUNTY 1.7 NE (FCH) CH	11/21/18 19:32 PST 11/21/18 21:02 PST re roadway of Mountain Lakes Road just	north of the inters	0 0 section of Road 42	Flood (due to Heavy Rain) Source: Public  3. The fallen tree likely occurred due to
Public report of a tree blocking the entialinfall.  FRESNO COUNTY 1.7 NE (FCH) CH	11/21/18 19:32 PST 11/21/18 21:02 PST re roadway of Mountain Lakes Road just	north of the inters	0 0 section of Road 42	Flood (due to Heavy Rain) Source: Public  3. The fallen tree likely occurred due to
Public report of a tree blocking the enticalinfall.  FRESNO COUNTY 1.7 NE (FCH) CH	11/21/18 19:32 PST 11/21/18 21:02 PST re roadway of Mountain Lakes Road just HANDLER AF [36.75, -119.80], 1.7 NE (F	north of the inters	0 0 section of Road 42 AF [36.75, -119.80]	Flood (due to Heavy Rain) Source: Public  3. The fallen tree likely occurred due to  1, 1.8 SW HAMMOND [36.75, -119.80],
THE FORKS [37.30, -119.61]  Public report of a tree blocking the enticainfall.  FRESNO COUNTY 1.7 NE (FCH) CH. 7 NE (FCH) CH. 7 NE (FCH) CHANDLER AF [36.75, -	11/21/18 19:32 PST 11/21/18 21:02 PST re roadway of Mountain Lakes Road just HANDLER AF [36.75, -119.80], 1.7 NE (F 119.80]	north of the inters	0 0 section of Road 42: AF [36.75, -119.80] 0 0	Flood (due to Heavy Rain) Source: Public  3. The fallen tree likely occurred due to  1, 1.8 SW HAMMOND [36.75, -119.80], Flood (due to Heavy Rain)
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Public report of a tree blocking the entiainfall.  FRESNO COUNTY 1.7 NE (FCH) CH. 7 NE (FCH) CHANDLER AF [36.75,	11/21/18 19:32 PST 11/21/18 21:02 PST re roadway of Mountain Lakes Road just HANDLER AF [36.75, -119.80], 1.7 NE (F 119.80] 11/21/18 20:19 PST 11/21/18 21:49 PST	c north of the intersection of the intersectio	0 0 0 section of Road 42: AF [36.75, -119.80] 0 0 0	Flood (due to Heavy Rain) Source: Public  3. The fallen tree likely occurred due to  1, 1.8 SW HAMMOND [36.75, -119.80], Flood (due to Heavy Rain) Source: Law Enforcement
Public report of a tree blocking the entiainfall.  FRESNO COUNTY 1.7 NE (FCH) CH.7 NE (FCH) CHANDLER AF [36.75,	11/21/18 19:32 PST 11/21/18 21:02 PST re roadway of Mountain Lakes Road just HANDLER AF [36.75, -119.80], 1.7 NE (F 119.80] 11/21/18 20:19 PST 11/21/18 21:49 PST left lane flooded on State Route 180 near	c north of the intersection of the intersectio	0 0 0 section of Road 42: AF [36.75, -119.80] 0 0 t off-ramp.	Flood (due to Heavy Rain) Source: Public  3. The fallen tree likely occurred due to  1, 1.8 SW HAMMOND [36.75, -119.80], Flood (due to Heavy Rain) Source: Law Enforcement
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Public report of a tree blocking the entirainfall.  FRESNO COUNTY 1.7 NE (FCH) CH. 1.7 NE (FCH) CHANDLER AF [36.75, California Highway Patrol reported the MARIPOSA COUNTY 4.2 S USONA California Highway Patrol reported a fa After a significant dry period of 45 strover northern California on November of November 21 through the morning precipitation fell mainly in the form of season for the higher elevations of the	11/21/18 19:32 PST 11/21/18 21:02 PST  re roadway of Mountain Lakes Road just  HANDLER AF [36.75, -119.80], 1.7 NE (F 119.80]  11/21/18 20:19 PST 11/21/18 21:49 PST  left lane flooded on State Route 180 near  [37.39, -119.83], 4.1 S USONA [37.39, - 11/21/18 21:51 PST 11/21/18 23:21 PST  lillen tree blocking both lanes on Usona F raight dry days across most of the cent of 21 and brought a period of generally of November 22 as an associated cold of snow above 7000 feet resulting in this tee Southern Sierra Nevada where 8 to 1 res of an inch of an inch of rainfall after ters	ar the Fulton Stree  119.83], 4.0 S USC  Road near Indian F  tral California intel light to moderate I front pushed sols s system being th 6 inches of snow	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Flood (due to Heavy Rain) Source: Public  3. The fallen tree likely occurred due to  1, 1.8 SW HAMMOND [36.75, -119.80], Flood (due to Heavy Rain) Source: Law Enforcement  13], 4.0 S USONA [37.39, -119.83] Flood (due to Heavy Rain) Source: Law Enforcement  Iden tree was likely due to rainfall.  1. The winter storm of the San Joaquin Valley picked
Public report of a tree blocking the enti- rainfall.  FRESNO COUNTY 1.7 NE (FCH) CH 1.7 NE (FCH) CHANDLER AF [36.75, California Highway Patrol reported the MARIPOSA COUNTY 4.2 S USONA  California Highway Patrol reported a fa  After a significant dry period of 45 str over northern California on November of November 21 through the morning precipitation fell mainly in the form of season for the higher elevations of th up between a quarter to three quarter reports of nuisance flooding although	11/21/18 19:32 PST 11/21/18 21:02 PST  re roadway of Mountain Lakes Road just  HANDLER AF [36.75, -119.80], 1.7 NE (F 119.80]  11/21/18 20:19 PST 11/21/18 21:49 PST  left lane flooded on State Route 180 near 1/21/18 21:51 PST 11/21/18 23:21 PST  lillen tree blocking both lanes on Usona F raight dry days across most of the cent of 21 and brought a period of generally of November 22 as an associated cold of snow above 7000 feet resulting in this ne Southern Sierra Nevada where 8 to 1 re of an inch of an inch of rainfall after the damage was minimal.	ar the Fulton Stree  119.83], 4.0 S USC  Road near Indian F  tral California intel light to moderate I front pushed sols s system being th 6 inches of snow	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Flood (due to Heavy Rain) Source: Public  3. The fallen tree likely occurred due to  1, 1.8 SW HAMMOND [36.75, -119.80], Flood (due to Heavy Rain) Source: Law Enforcement  13], 4.0 S USONA [37.39, -119.83] Flood (due to Heavy Rain) Source: Law Enforcement  Iden tree was likely due to rainfall.  1. The winter storm of the San Joaquin Valley picked
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rainfall to the area which continued through the early morning of November 24. Although this storm did not produce as much precipitation as the previous system, it still produced another half inch to locally two inches of additional rainfall to the Southern Sierra Nevada and adjacent foothills, and up to foot of new snow fell above 8000 feet. Much of the San Joaquin Valley was rain shadowed, but several stations measures between one and two tenths of an inch of additional rainfall. Meanwhile, strong winds impacted the Kern County Mountains from the afternoon of November 23 through the early morning of November 24. Several stations reported wind gusts

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Location Date/Time Deaths & **Event Type and Details** Property & Injuries Crop Dmg exceeding 40 mph while a few low impact indicator sites measured gusts around 60 mph. By the afternoon of November 24, decreased winds and drying took place across the area as the storm moved to the east of the area with high pressure building in behind it. (CA-Z090) E CENTRAL S.J. VALLEY, (CA-Z091) SW S.J. VALLEY, (CA-Z092) SE S.J. VALLEY 11/25/18 04:30 PST 0 Dense Fog 11/25/18 10:05 PST 0 Skies cleared out over much of the San Joaquin Valley between during the evening of November 24 and the early morning hours of November 25 as high pressure build inland into central California. With recent rainfall and diminished winds fog formed toward daybreak over the San Joaquin Valley except for the far south end where upslope clouds persisted. Areas of dense fog with visibility between an eighth and a quarter mile were prevalent for a few hours in the morning across much of the valley between 700 am and 930 am. By 1000 am most of the fog had lifted into stratus and later burned off. (CA-Z090) E CENTRAL S.J. VALLEY, (CA-Z091) SW S.J. VALLEY, (CA-Z092) SE S.J. VALLEY 11/26/18 01:20 PST 0 Dense Fog 11/26/18 11:15 PST 0 As high pressure strengthened over the area on November 25, stronger radiational cooling took place on the morning for November 26 allowing for widespread dense fog to form in the San Joaquin Valley and prompted the first Dense Fog Advisory issuance of the season as travel on State Route 99 was adversely impacted by the fog. Fog reducing visibility from 1/16 to 1/8 of a mile was widespread by sunrise. The fog slowly burned off during the late morning hours and had completely dissipated by noon. (CA-Z089) W CENTRAL S.J. VALLEY, (CA-Z090) E CENTRAL S.J. VALLEY, (CA-Z091) SW S.J. VALLEY, (CA-Z092) SE S.J. VALLEY 11/27/18 06:30 PST 0 11/27/18 09:00 PST 0 Although not as prevalent as the day before, patches of dense fog formed in the San Joaquin Valley toward daybreak. The fog impacted travel along State Route 99 between Turlock and Atwater and along State Route 198 between Visalia and Hanford. The fog also prompted several school districts in western Fresno County to delay morning bus service. (CA-Z096) S SIERRA MTNS, (CA-Z097) TULARE CTY MTNS 11/28/18 04:00 PST 0 Heavy Snow 11/30/18 04:00 PST 0 MARIPOSA COUNTY --- 1.0 WSW EL PORTAL [37.67, -119.80], 1.3 SW EL PORTAL [37.67, -119.80], 0.7 SSW EL PORTAL [37.67, -119.79], 0.6 SW EL PORTAL [37.67, -119.79] 11/28/18 08:00 PST 0 Debris Flow 11/28/18 12:00 PST 0 Source: Law Enforcement California Highway Patrol reported water and rocks covering State Route 140 near El Portal in the Ferguson Fire burn area. (CA-Z089) W CENTRAL S.J. VALLEY, (CA-Z091) SW S.J. VALLEY, (CA-Z095) KERN CTY MTNS, (CA-Z098) INDIAN WELLS VLY, (CA-Z099) SE KERN CTY DESERT 11/29/18 03:20 PST High Wind (MAX 63 kt) 0 11/30/18 02:27 PST n TULARE COUNTY --- 0.9 NW GOSHEN [36.36, -119.43], 0.7 WNW GOSHEN [36.35, -119.43], 0.4 NW GOSHEN [36.35, -119.43], 0.7 NW GOSHEN [36.36, -119.43] 11/29/18 13:22 PST 0 Flood (due to Heavy Rain) 11/29/18 14:22 PST 0 Source: Law Enforcement California highway Patrol reported roadway flooding on southbound State Route 99 just north of Goshen. MADERA COUNTY --- 3.3 E TRIGO [36.92, -119.89] Thunderstorm Wind (EG 43 kt) 11/29/18 17:00 PST 10K 11/29/18 17:00 PST 0 Source: Public Public report of a large pepper tree falling onto a guest house in a backyard in Madera Ranchos.

the area which continued into the afternoon. The rainfall resulted in debris flows and mudslides near recently burned areas in the

A deep upper trough approached the California coast on November 28 spreading moisture into central California. A subtropical jet brought a deep moisture fetch into central California by the morning of November 28 producing moderate to heavy precipitation over

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Location Date/Time Deaths & Property & Event Type and Details Injuries Crop Dmg

southern Sierra foothills including over the Ferguson Burn area which resulted in the closure of State Highway 140 near El Portal. The trough moved inland on November 29 producing another round of moderate to heavy precipitation with several stations in the Southern Sierra Nevada and adjacent foothills measuring between 2 and 5 inches of rainfall while much of the San Joaquin Valley and Kern County Mountains received half and inch to an inch and a half of rain during the two day period. Snow levels lowered to 5500 feet on November 29, and several reports of a foot and a half to 3 feet of new snowfall estimated by SNOTELs. Strong winds also impacted the area on November 29 and several stations measured winds gusts exceeding 55 mph while a few low impact indicator sites measured gusts around 70 mph. As a colder, unstable post-frontal airmass pushed into the area during the afternoon of November 29, isolated thunderstorms moved through the San Joaquin Valley producing brief downpours, small hail and gusty winds. The precipitation tapered off by the early morning of November 30 as the trough moved out of the area.

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