

## Storm Data and Unusual Weather Phenomena - March 2021

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

### CALIFORNIA, South Central

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#### (CA-Z194) SEQUOIA KINGS, (CA-Z195) LAKE ISABELLA, (CA-Z196) TEHACHAPI AREA, (CA-Z198) INDIAN WELLS VALLEY

|  |                    |   |         |
|--|--------------------|---|---------|
|  | 03/01/21 00:00 PST | 0 | Drought |
|  | 03/31/21 23:59 PST | 0 |         |

Portions of Fresno, Tulare and Kern Counties were classified as being in an extreme drought for consecutive months due to a long term precipitation deficit. As of March 31, 2021, most of the impacted area has received less than 50% of normal precipitation since July 1, 2020.

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

|  |                    |   |                       |
|--|--------------------|---|-----------------------|
|  | 03/08/21 17:14 PST | 0 | High Wind (MAX 62 kt) |
|  | 03/09/21 01:32 PST | 0 |                       |

A dry cold front pushed through the area during the evening of March 7 and early morning of March 8 which brought a period of gusty winds across the Tehachapi and Lake Isabella areas as well as across the Kern County Deserts. Several stations measured gusts between 35 and 45 mph. A few low impact indicator sites briefly measured gusts above 60 mph.

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#### (CA-Z190) CENTRAL SIERRA FOOTHILLS, (CA-Z193) NORTH KINGS RIVER, (CA-Z194) SEQUOIA KINGS

|  |                    |   |            |
|--|--------------------|---|------------|
|  | 03/09/21 20:00 PST | 0 | Heavy Snow |
|  | 03/11/21 08:00 PST | 0 |            |

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#### KINGS COUNTY --- 2.0 S HANFORD [36.30, -119.65]

|  |                    |   |                         |
|--|--------------------|---|-------------------------|
|  | 03/10/21 15:30 PST | 0 | Funnel Cloud            |
|  | 03/10/21 15:45 PST | 0 | Source: Broadcast Media |

A Fresno television station observed a funnel cloud south of Hanford while a thunderstorm was in progress.

A slow moving cold upper low pressure system which had originated in the Gulf of Alaska that was off the Pacific Northwest coast during the morning of March 9 dropped southeast into northwest California on March 10 and dropped further southeast into central California on March 11. This system did produce a period of moderate to locally heavy snowfall between the evening of March 9 and the early morning of March 11 over the Sierra Nevada as well as the adjacent foothills where snow levels lowered to near 2500 feet. Much of the mountains and foothills received a half inch to an inch of liquid precipitation from this system. Most stations above 7000 feet picked up between 12 to 18 inches of new snowfall while 5 to 10 inches of snow fell at many locations in between 3000 and 7000 feet. Only a few inches of snow fell in the Tehachapi Mountains, but travel was briefly impacted on Interstate 5 over the Tejon Pass and State Route 58 in the Tehachapi area due to black ice during the morning of March 11. Much of the San Joaquin Valley picked up between a quarter inch and a half inch of rainfall while rain shadowing limited much of the Kern County Deserts to a tenth of an inch or less. Several strong thunderstorms developed in the San Joaquin Valley during the afternoon of March 10 producing heavy rainfall and pea sized hail. A funnel cloud was briefly observed near Hanford with one of the strong thunderstorms. The low finally moved east of the area on March 12 leaving a cool airmass over the area as it moved out.

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#### (CA-Z195) LAKE ISABELLA, (CA-Z196) TEHACHAPI AREA, (CA-Z198) INDIAN WELLS VALLEY, (CA-Z199) KERN COUNTY DESERT

|  |                    |   |                       |
|--|--------------------|---|-----------------------|
|  | 03/15/21 06:00 PST | 0 | High Wind (MAX 82 kt) |
|  | 03/15/21 23:00 PST | 0 |                       |

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#### (CA-Z189) BAKERSFIELD

|  |                    |    |                         |
|--|--------------------|----|-------------------------|
|  | 03/15/21 17:09 PST | 3K | Strong Wind (MAX 39 kt) |
|  | 03/15/21 18:00 PST | 0  |                         |

A Pacific low pressure system moved into northwest California during the morning of March 15 and dropped southeast into central California during the afternoon spreading widespread precipitation over the area. Much of the San Joaquin Valley picked up another quarter to half inch of rainfall while the Sierra Nevada and adjacent foothills received a half inch to an inch of liquid precipitation north of Kings Canyon and three to six tenths of an inch south of Kings Canyon. The snow level was close to 4000 feet and areas above 4000 feet picked up 5 to 10 inches of snow north of Kings Canyon and 3 to 6 inches of snow south of Kings Canyon. Between a tenth to a quarter inch of liquid precipitation fell in the Kern County Mountains with up to an inch of new snowfall being measured at pass levels. Black ice once again resulted in brief closures of the Tejon and Tehachapi passes. The Kern County Deserts generally received a tenth of an inch or less of rainfall, but strong downslope winds during the evening March 15 impacted Kern County as there were several reports of gusts exceeding 60 mph and a few low impact indicator sites measured gusts in excess of 75 mph. There were also some reports of wind damage in the Bakersfield area as there were several stations which picked up gusts between 35 and 45 mph. The low moved east of the area during the morning of March 16 resulting in decreased winds and precipitation tapering off.

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|--|--------------------|----------------------|------------------------|------------------------|
| <b>(CA-Z195) LAKE ISABELLA, (CA-Z196) TEHACHAPI AREA</b> |                    |                      |                        |                        |
|  | 03/20/21 13:10 PST | 0                    |                        | High Wind (MAX 56 kt)  |
|  | 03/20/21 16:14 PST | 0                    |                        |                        |

An upper trough moved into the Pacific Northwest and northern California on March 19 and deepened over the region on March 20. This resulted in a warm and moist airmass impacting central California producing widespread precipitation on March 19 and 20. Several stations in the Sierra Nevada picked up between 0.75 and 1.50 inches of liquid precipitation which was mainly in the form of rain below 8000 feet before snow levels lowered on March 20 before the precipitation ended. Much of the San Joaquin Valley picked up between 2 and 4 tenths of an inch of rainfall. The mountains and deserts in Kern County generally picked up less precipitation with most mountain locations picking up between a tenth and a quarter inch of rainfall and the deserts picking up a tenth of an inch or less. The main impact from this system; however, was post frontal winds in Kern County. Several stations in the Kern County Deserts and in the Tehachapi and Lake Isabella areas measured gusts between 40 and 50 mph. A few low impact indicator sites briefly measured gusts above 57 mph on March 20. The winds diminished during the morning of March 21 as the trough moved east of the area.

|                                      |                    |   |  |                       |
|--------------------------------------|--------------------|---|--|-----------------------|
| <b>(CA-Z198) INDIAN WELLS VALLEY</b> |                    |   |  |                       |
|                                      | 03/23/21 19:26 PST | 0 |  | High Wind (MAX 53 kt) |
|                                      | 03/23/21 19:26 PST | 0 |  |                       |

A strong upper level trough dropped from the Pacific Northwest into the Great Basin on March 23 which resulted in strong pressure gradients over the Sierra Nevada. This resulted in a period of strong northeast wind gusts over the Sierra Nevada and adjacent foothills where several stations measured gusts in between 45 and 55 mph between the late morning and the evening. In addition, strong northerly winds developed over the Kern County Deserts during the evening of March 23 and a few low impact indicator stations measured gusts above 55 mph. The winds diminished on March 24 as the trough moved east of the area and gradients relaxed.

|                                 |                    |   |  |                       |
|---------------------------------|--------------------|---|--|-----------------------|
| <b>(CA-Z196) TEHACHAPI AREA</b> |                    |   |  |                       |
|                                 | 03/29/21 16:27 PST | 0 |  | High Wind (MAX 59 kt) |
|                                 | 03/29/21 16:27 PST | 0 |  |                       |

A low pressure system dropped southward through the Great Basin on March 29 pushing a dry cold front through central California during the afternoon and evening hours. This produced a period of gusty winds across the Kern County Deserts as well as in the Tehachapi and Lake Isabella areas. Several stations briefly measured gusts exceeding 45 mph. The winds diminished by late evening as the low moved well to the east of our area.