

= 1939 California tropical storm =

The 1939 California tropical storm , also called the 1939 Long Beach tropical storm , El Cordonazo , The Lash of St. Francis was a tropical cyclone that hit Southern California in September , 1939 . Formerly a hurricane , it was the only tropical storm to make landfall in California in the twentieth century . The only other known tropical cyclone to directly affect California is the 1858 San Diego Hurricane , and only three other eastern Pacific tropical cyclones have caused gale @-@ force winds in the continental United States . The tropical storm caused heavy flooding , leaving many dead , mostly at sea .

= = Meteorological history = =

On September 15 , a tropical depression formed off the coast of Central America . It moved west @-@ northwest , passing southwest of the Revillagigedo Islands . It then turned north and then north @-@ eastward . For some time , it was a hurricane , and it lost that intensity on or just before September 25 . The tropical storm made landfall near San Pedro , California early on September 25 with winds of severe gale strength . It dissipated later that day . The strongest reported wind was of Force 11 , reported by a ship , making this system a minimal hurricane . The lowest pressure was reported by the same ship and was 28 @.@ 67 inHg ( 971 mb ) .

Due to the rotation of the Earth , tropical cyclones in the Northern Hemisphere tend to move from east to west . This causes tropical cyclones to approach the West Coast of the United States infrequently . Another inhibiting factor for a California landfall is the water temperatures . Because of the water currents , the waters off California are rarely above 70 ° F ( 21 ° C ) , which is too cold for hurricanes to sustain themselves . This tropical cyclone was rare enough that only three other eastern Pacific tropical cyclones brought tropical storm @-@ force winds to the Continental United States during the twentieth century . The Long Beach Tropical Storm was the only one to make landfall ; the other three hit Mexico before moving north .

= = Impact = =

The storm dropped heavy rain on California , with 5 @.@ 66 inches ( 144 mm ) falling in Los Angeles ( 5 @.@ 24 inches in 24 hours ) and 11 @.@ 60 inches ( 295 mm ) recorded at Mount Wilson , both September records . Over three hours , one thunderstorm dropped nearly 7 inches ( 180 mm ) of rain on Indio . 9 @.@ 65 inches fell on Raywood Flat , and 1 @.@ 51 inches ( 38 mm ) on Palm Springs . 4 @.@ 83 inches fell on Pasadena , a September record at the time . At the Citrus Belt near Anaheim , at least 4 @.@ 63 inches of rain fell . The 11 @.@ 60 inches ( 295 mm ) at Mount Wilson is one of California 's highest rainfall amounts from a tropical cyclone , although at least one system has a higher point maximum . The rains caused a flood 2 to 4 feet ( 1 @.@ 2 m ) deep in the Coachella Valley , although some of this may be attributable to a rainstorm dropping 6 @.@ 45 inches ( 164 mm ) the day before the storm hit . The Los Angeles River , which was usually low during September , became a raging torrent .

The flooding killed 45 in Southern California , although some of these may be attributable to the rain immediately before the tropical storm . At sea , 48 were killed . The National Hurricane Center only attributes 45 deaths to this system . Six people caught on beaches drowned during the storm . Most other deaths were at sea . Twenty @-@ four died aboard a vessel called the Spray as it attempted to dock at Point Mugu . The two survivors , a man and a woman , swam ashore and then walked five miles ( 8 km ) to Oxnard . Fifteen people from Ventura drowned aboard a fishing boat called the Lur . Many other vessels were sunk , capsized , or blown ashore .

Many low @-@ lying areas were flooded . The Hamilton Bowl overflowed , flooding the Signal Hill area . Along the shore from Malibu to Huntington Beach houses were flooded . Throughout the area , thousands of people were stranded in their homes . Streets in Los Angeles proper were covered with water , flooding buildings and stalling cars . Flooding in Inglewood and Los Angeles reached a depth of 2 to 3 feet . Construction on a flood control project in the Los Angeles River 's channel by

the Army Corps of Engineers was stopped by the flooding . In Long Beach windows throughout that city were smashed by the wind . At Belmont Shore , waves undermined ten homes before washing them away . Debris was scattered throughout the coast . Agriculture was disrupted . Crop damage in the Coachella Valley reached 75 % .

Rains washed away a 150 @-@ foot ( 46 m ) section of the Southern Pacific Railroad near Indio , and a stretch of the Santa Fe main line near Needles . Waters backing up from a storm drain under construction in the Santa Monica Valley blocked U.S. Route 6 in California . The pier at Point Mugu was washed away . In Pasadena , 5000 people were left without electricity and 2000 telephones lost service . Communications throughout the affected area was disrupted or rendered impossible . The total amount of damage was \$ 2 million ( 1939 USD , \$ 26 @.@ 2 million 2005 USD ) .

The tropical storm was credited with at least one beneficial effect : it ended a vicious heat wave that had lasted for over a week and killed at least 90 people .

People were caught unprepared by the storm , which was described as " sudden " . Some people were still on the beach at Long Beach when the wind reached 40 miles per hour , at which time lifeguards closed the beach . Schools were closed there . At sea , the Coast Guard and Navy conducted rescue operations , saving dozens of people . In response to Californians ' unpreparedness , the Weather Bureau established a forecast office for southern California , which began operations in February 1940 .