

= Hurricane Marty (2015) =

Hurricane Marty was a tropical cyclone that produced heavy rains and flooding in several states in Southwestern and Western Mexico . The twentieth named storm and twelfth hurricane of the annual hurricane season , Marty developed from a tropical wave on September 26 , 2015 to the southwest of Acapulco , Guerrero , in Mexico . Initially a tropical depression , the system strengthened into a tropical storm early on the following day . Due to favorable atmospheric conditions , Marty continued to intensify , but wind shear sharply increased as the storm approached a large mid- to upper @-@ level trough . Despite this , the cyclone deepened further , becoming a hurricane on September 28 and peaking with sustained winds of 80 mph (130 km / h) shortly thereafter . Wind shear quickly took its toll on the hurricane , weakening it to a tropical storm early on September 29 . About 24 hours later , Marty degenerated into a post @-@ tropical low pressure area offshore Guerrero . The low further degenerated into a trough later on September 30 , and eventually dissipated on October 4 .

In anticipation of the storm , tropical cyclone warnings and watches were issued in the states of Guerrero and Michoacán . Flooding occurred , particularly in Guerrero , where areas near Acapulco observed 5 to 6 in (130 to 150 mm) of rainfall . There were several landslides and over 300 homes in the municipality of Coyuca de Benítez were flooded . The remnants also caused severe flooding in Sonora . About 800 homes and 400 vehicles were damaged in the city of Guaymas alone . Total damage in the state reached 500 million pesos (US \$ 30 million) .

= = Meteorological history = =

A tropical wave emerged into the Atlantic Ocean from the west coast of Africa on September 10 . Tracking westward , the wave split into two portions , with the slower @-@ moving northern portion ultimately developing into Atlantic Tropical Depression Nine on September 16 . The southern portion crossed Venezuela and Colombia and emerged into the Pacific , where a large area of deep convection began to form . A well @-@ defined low pressure area developed on September 26 , and organized into a tropical depression by 18 : 00 UTC (1 p.m. CDT) the same day while situated about 335 mi (540 km) southwest of Acapulco , Guerrero . Six hours later , after banding features became more defined and intensity estimates using the Dvorak technique showed a slight increase in intensity , the depression was classified as a tropical storm and was accordingly named Marty by the National Hurricane Center (NHC) . At the time , the storm was moving slowly northward due to the influence of a large mid- to upper @-@ level trough .

Located in a favorable environment of sea surface temperatures around 86 ° F (30 ° C) and low vertical wind shear , Marty strengthened steadily . Early on September 27 , the NHC noted that rapid intensification was possible . However , as Marty neared the base of the trough , westerly vertical wind shear increased rapidly , causing the low @-@ level circulation center to be partially exposed . Despite the hostile wind shear , the cyclone reformed a central dense overcast and intensified into a hurricane by 12 : 00 UTC (7 a.m. CDT) on September 28 , as a mid @-@ level eye feature was seen in microwave satellite imagery . Operationally , the NHC upgraded Marty to a hurricane nine hours later , after a reconnaissance aircraft flight observed hurricane @-@ force winds . At 18 : 00 UTC , Marty attained its peak intensity with maximum sustained winds of 80 mph (130 km / h) and a minimum barometric pressure of 987 mbar (hPa ; 29 @.@ 15 inHg) . Computer forecast models indicated that the storm would pass within just 25 mi (40 km) of the Southwestern Mexican coast on September 29 or September 30 .

Turning north and northeast while under the influence of the aforementioned trough , Marty began to weaken soon after peak intensity as deep convection was displaced to the east due to the strong westerly shear ; the low @-@ level circulation center became fully exposed in a span of three hours late on September 28 . Upwelling of cooler waters further decayed the deep convection , prompting the NHC to downgrade Marty to a tropical storm at 06 : 00 UTC (1 a.m. CDT) on September 29 . Continuing to steadily weaken , Marty degenerated into a post @-@ tropical low a day later about 140 mi (225 km) west @-@ southwest of Acapulco , while still producing gale @-@ force winds .

The shallow system turned westwards in the low @-@ level flow and eventually opened up into a trough twelve hours later about 195 mi (315 km) west of Acapulco . The low became closed once again on October 1 , however , it failed to produce sufficient organized deep convection to re @-@ qualify as a tropical cyclone . It turned north @-@ northeastwards towards the southern Gulf of California , however it dissipated before reaching the coast of Western Mexico . The remnant moisture continued into Northwestern Mexico and caused flooding in Sonora .

= = Preparations and impact = =

In preparation for the arrival of Marty , classes were suspended in Acapulco and the Costa Grande region . The Mexican Navy was put on standby to deal with incidents occurring within the zones of Chiapas , Guerrero , Michoacan and Jalisco . The Government of Mexico issued multiple watches and warnings for coastal communities across Guerrero ; by 21 : 00 UTC (4 p.m. CDT) on September 28 , a tropical storm watch was in effect for west of Lázaro Cárdenas to Punta San Telmo , a tropical storm warning for Acapulco to east of Tecpán de Galeana , and a hurricane warning for Tecpán de Galeana to Lázaro Cárdenas . These were discontinued as Marty weakened and moved away from the region ; all had been cancelled by early on September 30 .

Stalling south of Mexico , Marty produced heavy rains , mainly in the state of Guerrero . Many areas reported at least 2 in (50 mm) of rain between September 26 and October 1 ; coastal areas near and west of Acapulco received up to 6 in (150 mm) . As river levels rose , a state of emergency was declared for eight municipalities , which was only concluded on September 30 . Two landslides occurred in Chilpancingo ; several others occurred in Coyuca de Benitez and Sierra de Atoyac . More than 300 homes were flooded with up to 6 in (15 cm) of water in Coyuca de Benitez . Three temporary shelters were opened in Barra de Coyuca , however , they were closed as no one moved in .

As the remnants of Marty moved into northwestern Mexico , heavy rains and flooding rendered 35 @, @ 000 people homeless in Sonora . A state of emergency was declared in 16 municipalities . Flooding in Guaymas , which was hit hardest , damaged 800 homes and 400 vehicles ; three people sustained injuries when a wall collapsed . The Mexico @-@ Nogales Highway between Guaymas and Ciudad Obregón had to be closed due to the floods . Total estimated damage in the state amounted to 500 million pesos (US \$ 30 million) .