

= Tropical Storm Charley (1998) =

Tropical Storm Charley was the third named storm of the 1998 Atlantic hurricane season . Charley was the first of two tropical storms to make landfall in Texas during that season (Frances being the other) . The storm originated with a tropical wave that moved off the West African coast on August 9 . The wave moved generally west @-@ northwestward , producing occasional bursts of convection , finally arriving in the southeastern Gulf of Mexico by August 19 , when animated satellite images began to indicate it had possibly developed a low pressure center . Hurricane Hunter investigations into the system the next day revealed that this was not the case . The system lingered for two days , lacking an organized low level center of circulation until early on the morning of August 21 , when advisories were initiated on the tropical depression , 185 miles (298 km) east of Brownsville , Texas . The depression became a tropical storm later that day , as it moved steadily west @-@ northwestward , strengthening , and then weakening again before making landfall the next morning around Port Aransas , Texas . The storm moved slowly inland and finally dissipated on the morning of the August 24 near the town of Del Rio , Texas .

Charley 's impacts in Texas and Mexico were locally severe . In Texas , over 2000 homes were destroyed by the locally severe flooding , and 13 people died . In Mexico , over 12 inches (300 mm) of rain fell in northern areas near the Texas @-@ Mexico border , and seven people were killed .

= = Meteorological history = =

Charley originated with a large swirl of clouds which parted off of the west coast of Africa on August 9 . Lacking deep convection or a well defined center , the wave continued west @-@ northwestward without developing . Ten days later , on August 19 , satellite images indicated the disturbance was beginning to rotate cyclonically over the southeastern Gulf of Mexico . A reconnaissance aircraft flew into the system the next day . While strong winds were recorded , no circulation center was present . The following morning , a second flight reported that a center had formed , and the disturbance was designated a tropical depression . Initially , the center was disorganized . However , convection over the depression blossomed , mostly concentrated over the northern semicircle . During the evening of August 21 , the system was named Tropical Storm Charley .

As the system continued west @-@ northwestward , more organized banding features developed , and the storm began to intensify . On August 22 , it reached its peak intensity of 70 miles per hour (110 km / h) . Subsequent reconnaissance reports indicated that winds had decreased , and the storm made landfall near Corpus Christi , Texas early on August 23 , with maximum sustained winds of 45 miles per hour (72 km / h) . Within hours , Charley was downgraded to tropical depression status as it continued to weaken . By August 24 , Charley had dissipated over the Rio Grande near Del Rio , Texas . Although surface winds had diminished and a closed surface circulation no longer existed , a slow @-@ moving remnant circulation aloft persisted in the Del Rio area and generated flooding rains that were most devastating in that area on August 23 and the 24 .

= = Preparations = =

Tropical storm warnings were issued by the National Hurricane Center coincidentally with the first advisory on the depression , from High Island , Texas to Brownsville . Six hours later , these were extended eastward to Cameron , Louisiana . At landfall on August 22 , the warnings north of Sabine Pass , Texas were expired , and the rest were dropped later that day .

In advance of the storm , thousands of oil workers were evacuated from Gulf of Mexico oil rigs . In Del Rio , some highways and roads were closed after the initial flooding , in anticipation of more flooding as the system stalled over the area . Of the 2000 Laredo , Texas residents ordered to leave their homes in anticipation of the Rio Grande overflowing its banks , only 600 actually did so .

= = Impact = =

Being relatively weak , the storm 's main impact was its heavy rainfall . Prolific , sometimes record amounts fell over much of south central Texas and northern Mexico . Few areas received sustained tropical storm force winds , and the storm surge was insignificant . There were no confirmed tornadoes . Twenty people died , all from drowning , and the storm caused \$ 50 million (1998 USD ; \$ 64 million USD in 2007) in damage .

= = = Texas = = =

The storm 's major impact was its very heavy rain . A 90 mile (140 km) wide swath of over 3 inches (76 mm) of rainfall extended from the Middle Texas Coast west to the Texas @-@ Mexico border . Charley produced 17 inches (430 mm) of rain in Del Rio in a 24 @-@ hour period , a new record daily rainfall for the city . Refugio , Texas received 7 @.@ 2 inches (180 mm) of rain , and Woodsboro , Texas recorded 5 inches (130 mm) . The storm surge on areas of the Texas coast was small . Port O 'Connor recorded a storm surge of 2 @.@ 3 feet (.7 m) , while Pleasure Pier was subjected to a 4 @.@ 5 feet (1 @.@ 5 m) surge . There were two reports of sustained tropical storm force winds , 41 miles per hour (66 km / h) and 39 miles per hour (63 km / h) from Rockport , Texas and Galveston , Texas respectively . The maximum wind gust was 63 miles per hour (101 km / h) at Port O 'Connor , Texas . No tornadoes were confirmed by any NWS offices , although one suspected tornado did prompt a tornado warning .

Damage from the storm , while generally light , was severe locally . In Val Verde County , Texas , which took the vast majority of the damage , roughly 2000 houses , mobile homes , and apartments combined were destroyed by flooding . At one point , two @-@ thirds of Del Rio was underwater after a natural dam broke in the San Felipe Creek , flooding the city with a sudden surge of water . The coastal storm surge destroyed several of the dunes on San Jose and Mustang Islands . There was also slight damage on Matagorda Island , where two shelters were destroyed by the surge flooding . Four people , including two toddlers , died when their truck was swept away by floodwaters and nine more drowned in flooding along the San Felipe Creek . Thirteen people died in Texas , all drownings . Charley left \$ 50 million (1998 USD ; \$ 64 million USD in 2007) in flood damage across southern Texas . Eight counties in Texas were declared disaster areas .

= = = Mexico = = =

While Mexico was not severely impacted by winds from the storm , heavy rain caused serious flooding in places . Augusto received maximum sustained winds of 52 miles per hour (84 km / h) and recorded a minimum pressure of 1 @,@ 003 millibars (29 @.@ 6 inHg) . Jimenez received 14 @.@ 53 inches (369 mm) of rainfall . In Ciudad Acuña , Coahuila , 6 feet (1 @.@ 8 m) of flooding occurred as a result of the heavy rains . 450 houses were damaged in the city , and over 2000 people were injured . In Nuevo Laredo , Tamaulipas , heavy rains swelled the Rio Grande and caused significant flooding . 350 families were evacuated , and the city lost power and phone service .

Seven people died in Ciudad Acuña while they were trying to cross a flooded gully .

= = = Louisiana = = =

Several inches of rain fell in parts of Louisiana . Lake Charles , Louisiana received the most , with 1 @.@ 2 inches (30 mm) . Isolated wind gusts reached tropical storm force , and Lake Charles recorded a 43 miles per hour (69 km / h) gust . Charley did not cause any significant damage in Louisiana .