

= 1909 Velasco hurricane =

The 1909 Velasco hurricane was an intense tropical cyclone that devastated areas of the Texas coast in July of the 1909 Atlantic hurricane season . The fourth tropical storm , second hurricane , and first major hurricane of the season , it formed from an area of disturbed weather east of the Leeward Islands on July 13 , 1909 . Remaining weak for much of its early existence , the system began to intensify after nearing Jamaica . Curving towards the northwest , it reached hurricane strength on July 18 near the western tip of Cuba . Intensification stalled as it moved westwards across the Gulf of Mexico , but resumed as the hurricane approached the Texas coast . The storm intensified to a major hurricane on July 21 and subsequently reached its peak intensity with winds of 115 mph (185 km / h) prior to making landfall near Velasco , Texas . Once over land , the system began to quickly weaken , and dissipated near the Rio Grande on July 22 .

The hurricane caused 41 deaths and \$ 2 million in damages , all of which were in Texas . Strong waves caused several offshore shipping incidents , and storm surge inundated areas of the Texas coast , though damage in Galveston was mostly mitigated by the Galveston Seawall . In Velasco , only eight buildings remained intact after the hurricane . Strong winds forced train closures and destroyed and downed various infrastructure . Heavy rains further inland peaked at 8 @. @ 5 in (220 mm) in Hallettsville .

= Meteorological history =

A tropical depression was first noted at 1200 UTC on July 13 , northeast of Grenada in the Windward Islands , with winds of 35 mph (55 km / h) , though whether it had a closed circulation at the time remains unclear . Nonetheless , the system remained a weak tropical depression for much of its early existence as it moved to the west @- @ northwest through the eastern Caribbean Sea . Weather reports throughout the Caribbean during this time were sparse and according to José Partagás , a former meteorologist at the National Hurricane Center , the system still may have not formed a closed circulation . This meant that the low was not classifiable , though the lack of data also meant that there was no evidence to support this claim and the system was kept as a tropical depression in HURDAT , the Atlantic Hurricane Database . However , once the depression was located south of Jamaica , it began to slowly strengthen and curve more towards the northwest , reaching tropical storm intensity by 0000 UTC on July 17 . At the time , the system was expected to make landfall on the Yucatán Peninsula . Ships in the vicinity of the storm reported strong breezes associated with low barometric pressure . Despite predictions , the system curved from its initial west @- @ northwest movement and more towards the northwest , towards the central Gulf of Mexico . The tropical storm continued to intensify , attaining hurricane strength as a Category 1 hurricane on the Saffir ? Simpson Hurricane Scale at 1800 UTC on July 18 after skirting past the Guanahacabibes Peninsula .

Once in the Gulf of Mexico , intensification substantially lessened as the storm maintained its Category 1 intensity throughout July 19 and July 20 . The hurricane curved in the gulf back to a more westerly direction , while moving at about 10 mph (15 km / h) . A minimum pressure reading of 985 mbar (hPa ; 29 @. @ 09 inHg) was reported offshore south of Louisiana by the ship S.S. Paraguay at 1800 UTC on July 20 . Strengthening resumed on July 21 as the hurricane tracked almost parallel to the Louisiana coastline towards Texas . Later that day , the storm attained its peak intensity as a modern @- @ day Category 3 major hurricane , with sustained winds of 115 mph (175 km / h) and a barometric pressure of 959 mbar (hPa ; 28 @. @ 32 inHg) . The hurricane made landfall at this intensity almost directly over Velasco , Texas , with maximum wind speeds stretching 22 mi (35 km) from the hurricane 's center . Over the following 24 hours , the system rapidly weakened over land and lost tropical characteristics near the Rio Grande during the afternoon of July 22 .

= Preparations and impact =

As the hurricane approached Texas , the Weather Bureau issued hurricane warnings for potentially affected areas beginning on July 18 . Ships and ports were also continuously notified on the oncoming storm , which helped to keep offshore shipping accidents to a minimum . Inland , as a precautionary measure , rail operations along the coast were halted for a duration of the storm 's passage .

At its landfall in Velasco , the hurricane caused a wide swath of damage along the Texas coast and areas further inland . Despite previously issued warnings , rough seas produced by the hurricane still caused several ship accidents . Strong waves forced several ships near Galveston to either become grounded or sunk . The derrick barge Miller and other craft were grounded along Galveston 's West Bay . A large dredge was swept into the Galveston Causeway , snapping telegraph cables that ran along the length of the causeway . The Miriam was sunken by a submerged log , while the schooner Ed Gibbs was broken into pieces near La Porte . The steamboat El Siglo (The Century) remained stranded offshore for twelve hours in winds estimated at 90 mph (145 km / h) . Off of Mobile , Alabama , the high waves prevented ships from entering the Port of Mobile . Closer to the coast , the hurricane produced a storm surge of 10 ft (3 @. @ 0 m) in Galveston and Velasco . However , due to the Galveston Seawall , much of the potential storm surge @-@ related damage in Galveston was mitigated , though the seawall forced spray to rise 60 ft (18 m) in the air . Areas outside the seawall on the Galveston beach , including two fishing piers and pavilions were destroyed . On Galveston 's Tarpon Pier , ten members of a fishing party perished after the pier collapsed , though six were rescued by the yacht Mayflower . In western areas of Galveston , where there was no seawall , inland areas were inundated under 7 ft (2 @. @ 1 m) of water . However , Galveston 's primary streets were submerged to a lesser extent , under 2 ft (0 @. @ 61 m) of water . In Velasco , the tide was reported to have been 3 ft (0 @. @ 91 m) higher than during the 1900 Galveston hurricane , which inundated the city under 4 ft (1 @. @ 2 m) of water . Areas of Sabine Pass were also inundated by the high waves , and the Southern Pacific Railroad was submerged in water .

In Velasco , where the hurricane made landfall , only eight buildings remained intact after the storm 's passage . Quintana , Columbus , and Columbia were also heavily affected , with all houses experiencing some form of severe damage . In Austin , homes were unroofed , and the storm was considered as the worst hurricane to affect Austin at the time . Heavy rains caused large amounts of driftwood to float down the Colorado River . In Austin , the driftwood struck the newly constructed Congress Avenue Bridge , carrying away 200 ft (61 m) of trestle and resulting in \$ 10 @, @ 000 in damages . Other cities also reported severely damaged homes and businesses . Galveston suffered minor damage , with reports of chimney damage and broken windows . Three sections of the Galveston Causeway were blown down by the strong winds . As a result , tug boats were forced to carry people and cargo to and from Galveston along West Bay . The Western Union Telegraph Company reportedly lost all direct communication with Galveston for a temporary period of time . Other telegraph companies in Dallas and Chicago also lost communications with the city . Property damage in Galveston was estimated at \$ 100 @, @ 000 . Strong winds and gusts from the storm were reported as far inland as Eagle Pass . The winds uprooted trees and extensively damaged various crops , as well as downed power lines . In the Galveston Jetty , Rosenberg , and Brazoria , strong winds blew trains off of their tracks . Train stations and train depots along the coast also experienced considerable damage , with some depots being completely leveled . Maize fields which had been previously burned by wildfires caused by an ongoing drought in Kingsville were swept down , while cotton crops withstood the hurricane well . Oil dericks near Markham were blown down , and water wells were stripped of their machinery . In Alvin , barns and windmills were destroyed . Richmond also reported destroyed barns , as well as downed chimneys . Six prisoners escaped from the city 's local jail after windows were blown in . Rice mills were downed in Eagle Pass .

Damage was comparatively light in Louisiana . Heavy rains and storm surge inundated marshes , resulting in hundreds of reported cattle drownings . Cotton crops from Grand Chenier , Louisiana to Sabine Pass was destroyed by the rains and wind . Two deaths in Louisiana were reported in Cameron Parish , Louisiana .

Further inland , the hurricane produced heavy rainfall in many areas , peaking at 8 @. @ 5 in (220

mm) in Hallettsville , Texas , with rainfall totals of at least 3 in (76 mm) common in along the hurricane 's track . Boerne , Fredericksbrug , and Columbia all set monthly records for 24 ? hour rainfall totals on July 21 and 22 , with all three cities reporting totals of 5 in (130 mm) or greater . While the heavy rains caused damage in areas , it provided beneficial drought relief in other regions .