

= Tropical Storm Marco ( 2008 ) =

Tropical Storm Marco is the smallest tropical cyclone on record . The thirteenth named storm of the 2008 Atlantic hurricane season , Marco developed out of a broad area of low pressure over the northwestern Caribbean during late September 2008 . Influenced by a tropical wave on October 4 , a small low @-@ level circulation center developed over Belize . After crossing the southern end of the Yucatán Peninsula and emerging into the Bay of Campeche , the low was declared Tropical Depression Thirteen early on October 6 . The depression quickly intensified into a tropical storm and was given the name Marco later that day . Marco reached its peak intensity with winds of 65 mph ( 100 km / h ) early on October 7 . Around this time , tropical storm force winds extended 11 @.@ 5 miles ( 18 @.@ 5 km ) from the center of the storm , making Marco the smallest tropical cyclone on record . Around 1200 UTC , Marco made landfall near Misantla , Veracruz . The storm rapidly weakened after landfall , dissipating later that day . Due to its small size , Marco caused minimal damage ; however , the storm 's heavy rains led to floods up to 10 feet ( 3 @.@ 05 m ) deep that covered highways and damaged homes .

= = Meteorological history = =

Tropical Storm Marco originated in a broad area of low pressure that persisted over the northwestern Caribbean in late September 2008 . On October 4 , a tropical wave reached the same area , and the system spawned a circulation center over Belize . Development of the low was initially inhibited by its proximity to land . As the system neared the Bay of Campeche , convection quickly developed around the low . At 0000 UTC on October 6 , the low was designated as Tropical Depression Thirteen while located over Laguna de Términos . A mid @-@ level ridge located to the north of the depression led to movement in a general west @-@ northwest direction . Forecasters anticipated intensification up until landfall because of the storm 's well @-@ developed outflow and the low wind shear and high sea surface temperatures in its path . By 1200 UTC , the small cyclone , with a cloud shield no more than 85 miles ( 137 kilometers ) across , was upgraded to Tropical Storm Marco .

Favorable conditions for development allowed Marco to quickly intensify throughout the day on October 6 . Early on October 7 , Marco reached its peak intensity with winds of 65 mph ( 105 kilometers per hour ) and a minimum pressure of 998 millibar ( hPa ; 29 @.@ 47 inHg ) . This was based on a reconnaissance mission into Marco which recorded flight @-@ level winds of 70 mph ( 110 km / h ) , corresponding to a surface wind speed of 61 mph ( 98 km / h ) . Following the quick increase in intensity , forecasters noted the possibility of Marco intensifying into a hurricane before making landfall . The storm maintained a small area of deep convection , averaging 9 @.@ 2 miles ( 14 @.@ 8 km ) in diameter , as it continued moving towards the west @-@ northwest . Shortly after reaching peak intensity , tropical storm force winds extended 11 @.@ 5 miles ( 18 @.@ 5 km ) from the center of Marco . At 1200 UTC , the center of Marco made landfall near Misantla , Veracruz , with winds of 65 mph ( 105 km / h ) . Once inland , Marco rapidly weakened , being downgraded to a tropical depression six hours after landfall . The small depression dissipated later that day over the mountains of Mexico .

= = Preparations , impact and records = =

Upon the storm 's formation , the Government of Mexico issued a tropical storm warning for the Gulf of Mexico from Tuxpan to Punta El Lagarto . That afternoon the government issued a hurricane watch between Cabo Rojo and Veracruz , and extended the tropical storm warning northward to Cabo Rojo . Officials closed schools ahead of the storm and opened 200 shelters . An estimated 3 @.@ 000 people were evacuated from low @-@ lying areas along the coast . Soldiers used school buses to transport evacuees to the shelters . Marco formed in the area of Mexico 's main oil @-@ facilities , leading to the evacuation of 33 workers from four platforms . Six oil wells and a natural gas processing plant were also shut down in Veracruz . The Mexican Secretariat of Communications

and Transportation also closed the ports of Nautla and Alvarado to small vessels as a precautionary measure .

Upon landfall , heavy rains peaking at 7 @. @ 9 inches ( 201 millimeters ) in El Pujal , San Luis Potosí and falling at rates up to 1 inch per hour ( 25 @. @ 4 mm / h ) , caused some flooding in coastal towns near Veracruz as people evacuated to higher ground . The rains from Marco worsened flood situations in areas of Mexico already suffering from severe flooding . Officials in Veracruz , in their post @-@ storm damage survey , reported that two rivers , the Quilate and Tenoch , overflowed their banks due to rains produced by Marco . One of these rivers left the towns of Minatitlan and Hidalgotitlan under 10 ft ( 3 m ) of water . Highways along the coast of Veracruz were also flooded . Another 250 homes were flooded when a lake and a river overflowed their banks . Thirteen municipalities within Veracruz were affected by Marco . In Vega de Alatorre , 77 people were evacuated to nearby shelters after their homes were inundated with water . Three landslides were also reported in Misantla Colipa ; none of them caused damage . In all , Marco 's impact was light ; minimal damage was recorded , and none of the estimated 400 @, @ 000 people affected by the storm sustained injury .

In the wake of Marco , the General Coordination of Civil Protection of the Ministry of the Interior declared a state of emergency for 48 municipalities in Veracruz . Relief goods were distributed to the affected areas by October 9 . The Government of Mexico reported that 4 @, @ 700 blankets , 2 @, @ 900 mattresses , 5 @, @ 554 bottles of water ( each containing 500 milliliters ) , 260 @, @ 000 boxes of milk , 250 @, @ 000 packages of biscuits , and 12 @, @ 400 boxes of school supplies had been distributed .

At 0052 UTC on October 7 , tropical storm force winds extended 11 @. @ 5 miles ( 18 @. @ 5 km ) from the center of Marco . This made Marco the smallest tropical cyclone ever recorded , surpassing the previous record set on December 24 , 1974 by Cyclone Tracy , whose tropical storm @-@ force winds extended 30 miles ( 48 km ) .