= Tropical Storm Ana (2009) =

Tropical Storm Ana was the first named storm of the 2009 Atlantic hurricane season and the first tropical cyclone to impact the Caribbean islands during 2009 . Forming out of an area of low pressure associated with a tropical wave on August 11 , Ana briefly attained tropical storm intensity on August 12 before weakening back to a depression . The following day , the system degenerated into a non @-@ convective remnant low as it tracked westward . On August 14 , the depression regenerated roughly 1 @,@ 075 mi (1 @,@ 735 km) east of the Leeward Islands . Early on August 15 , the storm re @-@ attained tropical storm status , at which time it was named Ana . After reaching a peak intensity with winds of 40 mph (65 km / h) and a barometric pressure of 1003 mbar (hPa ; 29 @.@ 65 inHg) , the storm began to weaken again due to increasing levels of wind shear and the unusually fast movement of Ana . In post @-@ storm analysis , it was discovered that Ana had degenerated into a tropical wave once more on August 16 , before reaching any landmasses .

Numerous tropical storm watches were issued for the Lesser Antilles , Puerto Rico , Dominican Republic between August 15 and 17 . Several islands took minor precautions for the storm , including St. Croix which evacuated 40 residents from flood @-@ prone areas ahead of the storm . In the Dominican Republic , officials took preparations by setting up relief agencies and setting up shelters . Impact from Ana was minimal , mainly consisting of light to moderate rainfall . In Puerto Rico , up to 2 @.@ 76 in (70 mm) of rain was reported , causing street flooding and forcing the evacuation of three schools .

= = Meteorological history = =

On August 9 , the National Hurricane Center (NHC) began monitoring a tropical wave associated with a small area of convective activity between the Cape Verde Islands and the western coast of Africa . The system eventually spawned an area of low pressure as it tracked towards the west . After slowly organising for a few days , the NHC reported early on August 11 , that the system had developed into a tropical depression . The system at this time was located about 280 mi (455 km) , west of the Cape Verde Islands . The depression developed deep convection around the center of circulation and continued to track generally towards the west in response to a mid @-@ level subtropical ridge to the north . The depression was expected to gradually intensify as it moved over marginally warm sea surface temperatures and into an area of low wind shear ; however it was anticipated that dry air would hamper the depressions chances of intensifying further .

By August 12 , the NHC reported that Tropical Depression Two was near tropical storm intensity after a burst of deep convection over the center . At this point , the system was not upgraded to a tropical storm ; however , in a post @-@ storm analysis , it was determined that the system had attained tropical storm @-@ force winds , peaking at 40 mph (65 km / h) for 12 hours on August 12 . Several hours later , the system became disorganized due to increased wind shear . By the afternoon of August 13 , the system had weakened to a tropical depression and shortly thereafter , degenerated into a non @-@ convective remnant low @-@ pressure area as it failed to maintain convection around the center for 24 hours . At this time , the NHC issued their final advisory on the system but noted that there was the possibility of regeneration .

On August 14 , roughly 24 hours after degenerating into a remnant low , convection began to redevelop over the system . Later that day , a Hurricane Hunter reconnaissance plane deployed dropsondes into the system . They found that the system was regenerating and shortly after , the NHC began re @-@ issuing advisories on the depression when it was located roughly 1 @,@ 075 mi (1 @,@ 735 km) east of the Leeward Islands . The depression continued to track westward in response to an upper @-@ level high over the north Atlantic . Early on August 15 , the NHC upgraded the depression to a tropical storm , giving it the name Ana as deep convection developed around the center of circulation . Later that day , wind shear caused convection to become displaced from the circulation , exposing the center of Ana again .

By August 16 , the forward motion of Ana began to increase , and the storm quickly entered a region of dry , stable air . By the afternoon , a Hurricane Hunter reconnaissance mission did not find

any evidence of tropical storm @-@ force winds , resulting in Ana being downgraded to a tropical depression . It was determined in post @-@ storm analysis , that Ana had degenerated into a tropical wave shortly afterwards , and was no longer a tropical cyclone . Several hours later , the system redeveloped convection as it raced towards the west @-@ northwest at 26 mph (42 km / h) . Early on August 17 , radar imagery from Guadeloupe and San Juan , Puerto Rico depicted a system without a closed , low @-@ level circulation . Despite this , the NHC continued operational advisories until confirmation could be made with visible satellite imagery . Later that day , a final reconnaissance plane flew into the storm and did not find a low @-@ level circulation . Following this , the NHC stated that Ana had dissipated off the coast of Puerto Rico , despite having already degenerated into a tropical wave the previous day . The remnants of Ana were once more monitored for signs of regeneration , but land interaction with Hispaniola and Cuba spoiled the system 's chances of redevelopment .

= = Preparations and impact = =

On August 15 , a tropical storm watch was issued for much of the Leeward Islands . Two days later , the watch was expanded to include Puerto Rico and areas in the eastern Dominican Republic between Cabo Engaño and Cabo Beata . As Ana weakened and dissipated , the watches were discontinued .

In San Maarten , cruise agencies redirected ships to avoid the storm and secured vessels docked at port . Several ships were moved to Simpson Bay Lagoon where waves are generally small . In St. Kitts , officials evacuated 40 families in flood @-@ prone areas to shelters ahead of the storm . On August 17 , the National Weather Service in San Juan , Puerto Rico issued an Urban and Small Stream Flood Advisory for all of the eastern municipalities on the island . Flights in the area were delayed by several hours to avoid the depression . In the Dominican Republic , officials posted flood alerts for 12 provinces as the remnants of Ana were forecast to produce up to 6 in (150 mm) of rain in the country . General Luna Paulino of the civil army activated relief agencies ahead of the storm and notified residents of possible mandatory evacuations . Officials inspected the dams threatened by the storm to protect several towns and villages . Emergency officials stated that roughly 35 @,@ 000 personnel were on standby in case of a disaster . Shelters were also prepped throughout the country ; however , these were not opened and the residents who had voluntarily evacuated had returned home by the afternoon of August 17 . In nearby Haiti , officials placed the country under yellow alert as the remnants of Ana could produce heavy rainfall over mountainous areas .

In St. Thomas , sustained winds reached 28 mph (45 km / h) and gusts peaked at 40 mph (65 km / h) . In Puerto Rico , rainfall was limited due to the storms ' fast motion , triggering minor flooding but little damage . A maximum of 2 @.@ 76 in (70 mm) of rain fell in Río Grande . The rains caused the Río Fajardo to rise , resulting in the issuance of an alert as officials warned it could overflow its banks . Several streets were temporarily shut down due to flooding , including one tunnel , and three schools had to be evacuated . Throughout the island , roughly 6 @,@ 000 people were left without power as numerous branches were snapped off trees and knocked down power lines . There were also reports of waterspouts and tornadoes associated with Ana in Puerto Rico . Winds on the island gusted up to 42 mph (67 km / h) . The remnants of Ana produced widespread rainfall across Hispaniola ; however , there were no reports of damage from the system .