= Tropical Depression One (2009) =

Tropical Depression One was the first tropical cyclone to develop during the 2009 Atlantic hurricane season . Upon being declared a tropical depression on May 28 , it marked the third time that a pre @-@ season storm formed in three consecutive years . Originating from a disorganized area of low pressure off the coast of North Carolina , Tropical Depression One quickly developed over the Gulf stream . After attaining winds of 35 mph (55 km / h) along with a minimum pressure of 1006 mbar (hPa ; 29 @.@ 71 inHg) , the depression began to weaken due to increasing wind shear and cooling sea surface temperatures . During the afternoon of May 29 , convection associated with the system was significantly displaced from the center of circulation ; this led the National Hurricane Center to issue their final advisory on the depression as it had degenerated into a remnant @-@ low pressure area . As a tropical cyclone , Tropical Depression One had no effects on land ; however , the precursor to the depression brought minor rainfall and light winds to parts of coastal North Carolina . Its track , formation , and timing were relatively similar to Tropical Storm One of the 1940 Atlantic hurricane season .

= = Meteorological history = =

During mid @-@ May , a frontal boundary stalled near The Bahamas and slowly degenerated . On May 25 , a shortwave trough caused the northern portion of the system to move north of the Bahamas . The following day , an area of low pressure developed along the boundary about 290 miles (465 km) south @-@ southwest of Wilmington , North Carolina . Tracking towards the north , the system became increasingly organized . On May 27 , the National Hurricane Center (NHC) began issuing Tropical Weather Outlooks for the low while it was located about 120 miles (195 km) south of Cape Hatteras , North Carolina . An upper @-@ level ridge situated to the southeast of the system was steering it towards the northeast . The NHC issued their final outlook on the low around 0000 UTC on May 28 while the system was located about 90 mi (150 km) east of Cape Hatteras , North Carolina , as development of the low was not expected .

On May 28 , the NHC once again initiated outlooks on the system as convection quickly redeveloped . Around 1500 UTC , they designated the system as Tropical Depression One while it was located about 310 mi (500 km) south of Providence , Rhode Island . Upon being classified , the depression exhibited deep convective activity , with the center of circulation situated on the northwestern edge . The redevelopment of the system was the result of low wind shear and warm waters , up to 26 ° C (79 ° F) , from the Gulf Stream . Later that day , convection began to diminish as the depression tracked into an area of progressively higher shear and cooler waters . By this time , the system was embedded within the westerlies between a subtropical ridge to the southeast and a trough to the northwest . Around 2330 UTC , a QuickSCAT satellite pass over the depression found tropical storm @-@ force winds ; however , the winds were determined to have been affected by rain and therefore not representative of the depression 's actual intensity . Following the satellite pass , the center of circulation became partially exposed to the northwest and the area of convection associated with the depression diminished in area .

Early on May 29 , Tropical Depression One nearly attained tropical storm status , with intensity estimates using the Dvorak Technique reaching T2.5 , or 40 mph (65 km / h) ; however , the estimates were also as low as T1.5 , leading to the intensity of the depression remaining at 35 mph (55 km / h) . After a burst in convective activity overnight , shower and thunderstorm activity waned once more by 0700 UTC . Situated at the edge of the Gulf Stream , intensification into a tropical storm was no longer anticipated . Later that morning , the center of circulation became fully exposed by strong wind shear ; an approaching trough also began absorbing the small depression by this time . The remaining convection associated with the system was displaced to the southeast . With no convection developing around the depression , it degenerated into a remnant @-@ low pressure area during the afternoon of May 29 . At 2100 UTC , the NHC issued their final advisory on Tropical Depression One . The remnants of the depression persisted until 0600 UTC on May 30 , at which time it was absorbed by a warm front south of Nova Scotia .

= = Preparations , impact and records = =

The precursor to Tropical Depression One produced light showers over parts of North Carolina on May 27 . Rainfall in Hatteras amounted to 0 @.@ 1 in (2 @.@ 5 mm) on May 27 ; sustained wind reached 15 mph (24 km / h) and gusts were measured up to 23 mph (37 km / h) . The lowest sea level pressure recorded in relation to the system was 1009 mbar (hPa ; 29 @.@ 81 inHg) . Increased winds along coastal areas of the state was possible in relation to the outer edges of the depression . Tropical Depression One was the farthest north a May tropical cyclone is known to have formed , according to the NHC 's Tropical Cyclone Report .