

= Hurricane Irene (2005) =

Hurricane Irene was a long @-@ lived Cape Verde @-@ type Atlantic hurricane during the 2005 Atlantic hurricane season . The storm formed near Cape Verde on August 4 and crossed the Atlantic , turning northward around Bermuda before being absorbed by an extratropical while situated southeast of Newfoundland . Irene persisted for 14 days as a tropical system , the longest duration of any storm of the 2005 season . It was the ninth named storm and fourth hurricane of the record @-@ breaking season .

Irene proved to be a difficult storm to forecast due to oscillations in strength . After almost dissipating on August 10 , Irene peaked as a Category 2 hurricane on August 16 before being absorbed by a larger extratropical system late on August 18 . Although there were initial fears of a landfall in the United States due to uncertainty in predicting the storm 's track , Hurricane Irene never approached land and caused no recorded damage ; however , swells up to 8 ft (2 @.@ 4 m) and strong rip currents resulted in one fatality in Long Beach , New York .

= = Meteorological history = =

A vigorous tropical wave moved off the west coast of Africa on August 1 , initially weakening due to cooler sea surface temperatures . It moved westward and passed near Cape Verde , where convection started to increase . The system became more organized and developed into Tropical Depression Nine on the afternoon of August 4 , 690 miles (1100 km) southwest of the Cape Verde Islands . Early on August 5 , the depression abruptly turned to the northwest into an area of higher wind shear , causing some computer models to predict that the depression would dissipate , while others predicted steady strengthening . The sudden threat to the storm 's existence prompted National Hurricane Center (NHC) forecaster Dr Lixion Avila to comment , " How little we know about the genesis of tropical cyclones . " Despite the unfavorable conditions in its vicinity and its poor organization , Tropical Depression Nine continued to strengthen , becoming Tropical Storm Irene on August 7 .

Because Irene was in an environment laden with dry air and high shear , it soon weakened to a tropical depression , on August 8 . On the morning of August 10 , as it was passing north of the Lesser Antilles , Irene nearly dissipated into a remnant low , but forecasters predicted with " very low confidence " that the storm would survive . Contrary to these expectations , warmer waters and less wind shear allowed Irene to become gradually more organized while south of Bermuda , and it became a tropical storm once again early on August 11 .

Due to uncertainties about how the region 's subtropical ridge would interact with Irene , the models continued to give unclear signals of the storm 's future . Some of the models predicted that Irene would make landfall in North Carolina , while others continued to anticipate that Irene would dissipate . The uncertainty ended when a weakness in the subtropical ridge allowed Irene to turn sharply northward , which caused the storm to pass midway between the Outer Banks of North Carolina and Bermuda on August 15 . Soon after , upper @-@ level shear weakened greatly , and Irene rapidly intensified , first to a hurricane , then to its peak strength as a 105 mph (170 km / h) Category 2 hurricane on the afternoon of August 16 , while located 350 miles (560 km) northeast of Bermuda ; at the same time it also attained minimum pressure of 970 mbar . Though NHC meteorologists thought it was likely that Irene would become a hurricane , they were not expecting an intensification of such a magnitude .

Irene entered a region of increased wind shear and began to weaken , and as a result it was downgraded to a tropical storm early on August 18 , when it was 520 miles (830 km) south of Cape Race , Newfoundland . All convection within 230 mi (370 km) of the cyclone dissipated on August 18 . Irene was subsequently absorbed by an extratropical cyclone later that day . Irene lasted for 14 days as a tropical system , the longest duration of any storm of the 2005 season .

= = Impact , records and naming = =

As Hurricane Irene stayed well away from land , no coastal warnings or watches were issued for it . Despite Irene 's long life there were no reports of tropical storm force winds affecting ships . There were no damage or fatalities as a result of Irene . However , the hurricane generated strong waves and increased the risk of rip currents along the East Coast of the United States . Many beaches in New Jersey restricted swimming activities , and lifeguards at one beach performed more than a hundred rescues over a three @-@ day period . Waves along the coastline of New York reached 4 to 8 ft (1 @.@ 2 to 2 @.@ 4 m) . On August 14 , a 16 @-@ year @-@ old boy drowned after being caught in a rip current near Long Beach , New York on August 14 . His body was recovered on August 16 after washing ashore .

When Tropical Storm Irene formed on August 7 , it was the earliest date for the formation of the ninth tropical storm in an Atlantic hurricane season , beating the previous record held by a storm in the 1936 season by 13 days . This storm also marked the fifth occasion the name Irene had been used to name a tropical cyclone in the Atlantic . Due to the lack of effects on land from Hurricane Irene , the name was not retired by the World Meteorological Organization and was reused in the 2011 Atlantic season ; however , due to the extreme damage caused by the storm , it was retired in 2012 and was replaced with the name Irma .