

= Tropical Storm Barry ( 2001 ) =

Tropical Storm Barry was a strong tropical storm that made landfall on the Florida Panhandle during August 2001 . The third tropical cyclone and second named storm of the 2001 Atlantic hurricane season , Barry developed from a tropical wave that moved off the coast of Africa on July 24 . The wave entered the Caribbean on July 29 and spawned a low @-@ pressure area , which organized into Tropical Storm Barry on August 3 . After fluctuations in intensity and track , the storm attained peak winds of 70 mph ( 110 km / h ) over the Gulf of Mexico . Barry headed northward and moved ashore along the Gulf Coast before dissipating on August 7 .

Unlike the devastating Tropical Storm Allison earlier in the season , Barry 's effects were moderate . Nine deaths occurred : six in Cuba and three in Florida . As a tropical cyclone , Barry produced heavy rainfall that peaked at 8 @. @ 9 in ( 230 mm ) at Tallahassee . Gusts in the area reached 79 mph ( 127 km / h ) , which was the highest wind speed recording for the storm . The precursor tropical wave to Barry dropped large amounts of rain on southern Florida , leading to significant flooding and structural damage . Moderate flooding and wind damage occurred throughout the Florida Panhandle . As the storm 's remnants tracked inland , parts of the Mississippi Valley received light precipitation . Barry caused an estimated \$ 30 million ( 2001 USD ) in damage .

= = Meteorological history = =

On July 24 , 2001 , a tropical wave emerged off the west coast of Africa , and tracked westward across the Atlantic Ocean . Little cyclonic development occurred until July 28 , when convection began to increase along the wave . The wave moved into the eastern Caribbean on July 29 , and its convection continued to increase while it tracked west @-@ northwest over the subsequent few days . The disturbance emerged into the Gulf of Mexico on August 1 , with rainfall noted over southern Florida and the western tip of Cuba . That same day , a broad low @-@ pressure system developed along the wave near the Dry Tortugas at the end of the Florida Keys , which began to intensify as it moved northwestward . At around 1800 UTC on August 2 , an Air Force Reserve Hurricane Hunter aircraft investigating the system discovered that the low had organized into a tropical storm , which received the name Barry . Post @-@ hurricane season reanalysis , however , revealed that the low had become a tropical depression six hours earlier . There is uncertainty as to whether Barry actually held tropical characteristics at the time of designation , because of an upper @-@ level low that was situated over the cyclone 's surface center .

When Barry became a tropical cyclone , its convection wrapped around roughly half of the center . Outflow in the eastern semicircle was good , although due to upper @-@ level wind shear , it was restricted to southeast of the circulation . The cyclone became embedded within a mid- to @-@ upper @-@ level trough between the ridge over the central U.S. and the ridge over the northwestern Caribbean . A strong , upper @-@ level cyclonic shear axis extended from just south of Cape Hatteras to near Brownsville , Texas , which prevented Barry from accelerating in forward speed . The ridge over the United States weakened , thus collapsing the steering pattern ; this resulted in a west @-@ southwestward drifting motion of the tropical storm by around August 3 . Early on August 3 , strong westerly winds prevailed , and separated the center of circulation from what limited convection remained . The storm quickly regained some convection , although maximum sustained winds remained weak , at about 40 mph ( 60 km / h ) . Despite a slight drop in barometric pressure , post @-@ season analysis revealed Barry weakened into a tropical depression early on August 4 due to the persistent wind shear and falling external pressure .

At 1800 UTC on August 4 , the cyclone re @-@ intensified slightly , and was upgraded to a tropical storm as the shear decreased . Early on August 5 , a strengthening period began as deep convection ignited over and near the low @-@ level center . Prior to landfall , banding features developed on the eastern half of the circulation , despite some residual westerly shear . Within seven hours , the barometric pressure dropped from 1004 mb to 990 mb and overall satellite presentation had begun to improve . Barry reached its peak intensity at 1800 UTC on August 5 with winds of 70 mph ( 110 km / h ) , just shy of hurricane status . An eye formed at around the same

time . At 0500 UTC on August 6 , Barry increased in forward speed and made landfall at Santa Rosa Beach , Florida with winds of 70 mph ( 110 km / h ) . Moving inland , the system weakened rapidly to a tropical depression ; the National Hurricane Center issued its last advisory on the storm early on August 6 . By the evening hours , maximum sustained winds near the center were around 5 mph ( 8 @. @ 0 km / h ) to 10 mph ( 16 km / h ) as the system slowed significantly and drifted northwest at about 7 mph ( 11 km / h ) . The depression turned northwestward , and steadily weakened to a remnant low near Memphis , Tennessee on August 7 , and the low dissipated on August 8 over southeastern Missouri .

= = Preparations = =

In advance of the storm , the National Hurricane Center issued tropical storm watches and warnings for much of the U.S. Gulf Coast . They were upgraded to a hurricane warning when the storm was predicted to reach hurricane intensity . Because that strengthening failed to occur , the hurricane warning was downgraded to a tropical storm warning shortly before landfall . Westward , the warnings for Louisiana and Mississippi were discontinued . After Tropical Storm Barry made landfall , all tropical storm warnings for the Florida Panhandle were discontinued . Flood warnings were issued for parts of Leon and Wakulla counties , while a flash flood watch was in effect for parts of southern Georgia . A tornado watch was issued for the eastern Florida Panhandle , southern Georgia , as well as portions of central and eastern Alabama .

As Barry approached the Florida Panhandle , voluntary evacuations took place in eight counties . Shelters opened in six counties , though most were placed on standby . In parts of Franklin County , mandatory evacuations were ordered , and in Okaloosa County , tolls on the Mid @- @ Bay Bridge were suspended . Forty C @- @ 130 cargo aircraft and about 300 personnel from Hurlburt Field were moved to the Little Rock Air Force Base in Arkansas to flee the storm 's projected path . In Tallahassee , county officials filled sandbags in areas vulnerable to flooding . At Grand Isle State Park , Park Rangers moved picnic tables out of tidal range and closed the camping grounds for a period of time . Additionally , the storm forced NASA to delay a shuttle launch in southern Florida . Elsewhere , thousands of personnel were evacuated from several offshore oil platforms . The city of New Orleans closed 60 of its 72 floodgates to avoid possible flooding . Throughout southeastern Louisiana , including New Orleans , roughly 500 Red Cross volunteers and staff members were on standby . The threat of the storm forced the cancellation of an ' N Sync concert at Pro Player Stadium .

= = Impact = =

= = = Cuba and Florida = = =

The precursor tropical wave to Barry dropped widespread rainfall in western Cuba , but no damage was reported . Offshore , high seas sank a Cuban refugee boat , drowning 6 of its 28 passengers .

Three people in Florida were killed by the storm , and total damage is estimated at around 30 million ( 2001 USD ) . In southern Florida , the precursor to Barry produced 3 in ( 75 mm ) to 8 in ( 200 mm ) , with rainfall peaking at 13 in ( 330 mm ) . The rain helped relieve persistent drought conditions ; however , it caused significant flooding in Martin County on August 2 , where a total of 300 homes received water damage . About 63 structures and 6 mobile homes in the county sustained major damage . In the Treasure Coast , catfish reportedly swam through flooded streets . Winds downed a 60 ft ( 18 m ) radio tower , striking a house .

Due to the initial slow movement of the storm , outer rainbands began affecting the Florida Panhandle on August 4 , with the heaviest rainfall observed on August 5 ? 6 . The storm dropped 5 in ( 125 mm ) to 9 in ( 225 mm ) ; the highest official report was 8 @. @ 9 in ( 230 mm ) at Tallahassee , though unofficial reports ranged as high as 11 in ( 175 mm ) . The rainfall inundated several structures in Bay County due to roof damage . Flooding occurred in Leon County and parts

of Apalachicola National Forest , where torrential rains flowed into the Cascade Lakes , Lake Bradford and Munson Slough ; the Munson Slough rose to its highest level since 1994 . Numerous county and secondary roads were closed by floodwater in Walton , Washington , and Bay counties , as well as in the Tallahassee area . In and around Tallahassee , 100 vehicles were stalled by flood waters and towed , while four residents of an apartment complex on Allen Road were forced to evacuate due to rising waters . Sporadic flooding also occurred in Franklin County and Wakulla County . An indirect death occurred from a traffic accident due to heavy rain in Jackson County .

Wind gusts peaked at 79 mph ( 127 km / h ) at the Eglin Air Force Base Range Station C @-@ 72 . Light to moderate winds were widespread , causing damage throughout Walton , Washington , Bay , Calhoun , Gulf and Okaloosa counties . Trees were downed or damaged , and several structures suffered light wind damage . Window damage was reported at a high @-@ rise condominium building in Destin , while nearby , the Mid @-@ Bay Bridge was closed due to high winds . The Freeport Elementary School in Walton County sustained minor roof damage . Storm surge was generally light , ranging from 2 ft ( 0 @-@ 61 m ) to 3 ft ( 0 @-@ 91 m ) , with only minor beach erosion as a result . As a tropical system , Barry spawned a few weak tornadoes that caused minor damage . In an outer rain band , a lightning strike in Jacksonville killed one person . Another death is blamed on a rip current off of Sanibel Island . In total , the storm left 34 @-@ 000 customers in the state without power .

= = = Elsewhere = = =

Tropical Storm Barry dropped light to moderate rainfall across Alabama , peaking at 4 @-@ 57 in ( 116 mm ) near the town of Evergreen . About 2 in ( 50 mm ) fell over the state 's peanut @-@ growing region , helping to alleviate drought conditions . Heavy showers were also reported in the Birmingham area . Despite moderate rainfall totals inland , coastal locations received very little precipitation . Minor street flooding occurred in Geneva , Enterprise and New Brockton . Wind gusts peaked at 39 mph ( 63 km / h ) at Montgomery , although damage was light , mostly from downed trees . Damage to awnings and small structures was reported in Florala . Barry 's remnants produced light rainfall across Mississippi and Georgia , though no damage was reported . As the storm continued to track inland , it dropped up to 3 in ( 75 mm ) of rain throughout Arkansas , Missouri and western Tennessee .