

= Hurricane Belle =

Hurricane Belle was a strong tropical cyclone that caused moderate damage across the East Coast of the United States in August 1976 . In late July , a tropical wave emerged off the west coast of Africa . Traversing the Atlantic Ocean for more than a week , the system eventually consolidated into a tropical depression near the Bahamas on August 6 . Remaining nearly stationary for a day , the depression strengthened into a tropical storm on August 7 and a hurricane later that day as it acquired a northwest motion . Formation of an eye accompanied quick intensification and Belle reached its peak the following day with winds of 120 mph (195 km / h) . The hurricane subsequently turned north and accelerated , skirting the Outer Banks of North Carolina . Early on August 10 , Belle made landfall on Long Island , New York , as a minimal hurricane crossing Long Island Sound and hitting the central coast of Connecticut as strong tropical storm . Thereafter , Belle transitioned into an extratropical cyclone over New England before moving over Atlantic Canada . The system turned east while over the north Atlantic and ultimately dissipated on August 15 to the south of Iceland .

Threatening much of the East Coast of the United States , hurricane warnings were issued from Georgia to Maine . An estimated 500 @, @ 000 people evacuated coastal areas accordingly . Overall , impacts from Belle were less than expected and mainly attributed to flooding across New England . Hundreds of thousands of residents lost power due to high winds . A total of 12 people lost their lives , mostly incidents indirectly related to the hurricane , and damage reached an estimated \$ 100 million . Portions of New Jersey , New York , and Vermont were later declared major disaster areas by then @- @ President Gerald Ford . Some damage also took place in New Brunswick , Canada , from heavy rain .

= = Meteorological history = =

On July 28 , 1976 , a tropical wave emerged off the west coast of Africa . An unusually well @- @ organized system for the time of year and location , considerable deep convection accompanied it . A possible low @- @ level circulation consolidated within the system by July 31 as it raced west across the Atlantic Ocean . As it approached the Lesser Antilles in early August , convection separated from the system and moved north of the islands while the wave itself continued into the Caribbean Sea . The northern portion of the system eventually reached a point north of the Bahamas on August 5 and grew increasingly organized . Well @- @ defined upper @- @ level outflow became established that evening . A low @- @ level center formed early on August 6 and became a tropical depression by 06 : 00 UTC while situated roughly 290 mi (465 km) east @- @ northeast of Nassau , Bahamas . Over the next 24 hours , the system remained almost stationary and executed a small counter @- @ clockwise loop . Early on August 7 , the depression acquired gale @- @ force winds and became a tropical storm . Accordingly , it was assigned the name Belle . Acquiring a slow northwest trajectory , Belle steadily intensified on August 7 . Reconnaissance aircraft investigating the storm revealed the system to have achieved hurricane strength by 18 : 00 UTC as its pressure fell to 985 mbar (hPa ; 29 @. @ 09 inHg) . Additionally , a well @- @ defined eye was present by this time .

The cyclone turned northward and accelerated on August 8 while reaching major hurricane status that evening . Early on August 9 , Belle achieved its peak intensity with maximum estimated surface winds of 120 mph (195 km / h) and a minimum pressure of 957 mb (hPa ; 28 @. @ 26 inHg) . At higher altitudes within the storm , recon reported winds up to 150 mph (240 km / h) . Turning to just east of due north , Belle began weakening shortly thereafter with its eye becoming obscured . Late on August 9 , the hurricane passed within 60 mi (95 km) of Hatteras Island , North Carolina . Contrary to most storms which threaten the northeastern states , Belle did not accelerate tremendously as it neared land . Accordingly , it weakened quickly in response to cooler waters in the region . Around 05 : 00 UTC on August 10 , Belle made landfall as a minimal hurricane with 75 mph (120 km / h) winds along Jones Beach , Long Island , New York . Briefly crossing the Long Island Sound , Belle made a second landfall as a strong tropical storm near Bridgeport , Connecticut

. Once inland over New England , the system transitioned into an extratropical cyclone while traversing New Hampshire . The remnants accelerated northeast and later due east across Atlantic Canada before emerging over the Labrador Sea on August 12 . While situated between the Azores and Greenland , ex @-@ Belle turned north @-@ northeast and ultimately dissipated south of Iceland on August 15 .

= = Preparations = =

Owing to Hurricane Belle 's proximity to many states along the Eastern Seaboard , hurricane watches and warnings were issued for the entire coast from Georgia to Maine . Accordingly , evacuations took place in numerous states with an estimated 500 @,@ 000 people evacuating overall .

Officials advised residents near the coastline to evacuate to safer areas further inland . Approximately 40 @,@ 000 vacationing in the Outer Banks evacuated ; however , roughly 2 @,@ 500 residents decided to ride out the storm in their homes . In Kitty Hawk and Nags Head , volunteer firefighters traveled door @-@ to @-@ door urging residents to leave . Schools and hotels across the areas were utilized as shelters for tourists . National Parks across the Outer Banks closed for the duration of the storm . Aircraft at the Marine Corps Camp Lejeune were relocated inland and helicopters were moved to hangars ; some helicopters remained available for emergency rescue operations . An estimated 6 @,@ 200 residents evacuated to Red Cross shelters in the state .

The majority of evacuations in the country were in New Jersey , with 250 @,@ 000 residents and tourists relocating . Of this total , 65 @,@ 000 were from the Long Beach Island and 12 @,@ 000 on the Barnegat Peninsula . With Hurricane Belle expected to make landfall around high tide and a full moon , the forecast storm tide rivaled that of Hurricane Donna in 1960 . This placed roughly 500 @,@ 000 people in danger and officials in New York immediately began preparations . Police officers handed out sandbags to residents in low @-@ lying areas and National Guard armories and some public schools were used as evacuation centers . Approximately 30 @,@ 000 evacuated in New York City and Suffolk County , 11 @,@ 000 of whom utilized the aforementioned shelters . In Staten Island , 225 patients in a local hospital were relocated to a second facility . A flood watch was issued for the Hudson Valley in southern New York ahead of the hurricane on August 8 . Advisories from the National Hurricane Center emphasized the flood risk as well . Numerous flights in and out of New York were cancelled , Wall Street was closed , and the United Nations postponed a meeting . Summer tourists evacuated from most beaches but many residents decided to stay . In Connecticut , 52 helicopters and 100 pilots from the National Guard were placed on standby for possible relief missions following the storm .

Farther north in Rhode Island , 10 @,@ 000 people fled from the coast . Despite evacuation orders , nearly half of the residents in Narragansett , Rhode Island , refused to leave their homes and as a result martial law was implemented to get people to leave . The Red Cross reported that about 2 @,@ 300 people evacuated Cape Cod , Massachusetts , and thousands of tourists left the area . About 70 flights to and from Boston 's Logan International Airport were canceled . Flood warnings were raised across western portions of the state .

= = Impact = =

Across the Eastern United States , the effects of Belle were less than anticipated . A total of 12 people lost their lives , mostly due to traffic accidents , and damage amounted to \$ 100 million .

Hurricane Belle produced a swath of light to moderate , and locally heavy , rain extending from North Carolina into New England . The highest totals were confined to areas closer to the storm 's center , with accumulations of 3 to 5 in (76 to 127 mm) common along its track . Notable state maximums included 6 @.@ 8 in (170 mm) in Massachusetts , 6 @.@ 68 in (170 mm) in Maryland , 5 @.@ 85 in (149 mm) in Maine , 5 @.@ 77 in (147 mm) in New York , 5 @.@ 66 in (144 mm) in New Jersey , 5 @.@ 37 in (136 mm) in Connecticut , and 5 @.@ 3 in (130 mm) in Virginia . Although on the weaker side of the storm , New Jersey saw the highest winds from Belle , with an

estimated peak gust of 90 mph (150 km / h) in Ship Bottom . A similar gust was estimated to have occurred in Jones Beach , New York , where Belle made landfall . Hurricane @-@ force gusts also affected portions of Connecticut , New York , and North Carolina . LaGuardia Airport , near New York City , saw sustained winds of 52 mph (84 km / h) with gusts to 63 mph (101 km / h) . Tropical storm @-@ force conditions occurred in every New England state alongside coastal Mid @-@ Atlantic states . Tides of 3 ? 4 ft (0 @. @ 91 ? 1 @. @ 22 m) above normal were common from North Carolina to Rhode Island . Atlantic City , New Jersey saw the greatest tides at 8 @. @ 85 ft (2 @. @ 70 m) above mean low @-@ tide , while Battery Park in lower Manhattan saw a peak value of 7 @. @ 2 ft (2 @. @ 2 m) above mean low tide .

North Carolina escaped relatively unscathed from the hurricane , with only a few reports of wind damage in the Outer Banks . Windows at a hotel in Nags Head were blown out . Along the North Carolina ? Virginia border , five people lost their lives in a car accident on a rain @-@ slicked highway . Minor damage took place in Maryland . Although on the weaker side of the storm , gusty winds knocked down numerous power lines in New Jersey , leaving 10 @, @ 000 people in the dark and setting off 75 fire alarms , one of which was a relatively large fire forcing the evacuation of a nursing home . Roughly 500 ft (150 m) of the Atlantic City boardwalk was damaged or destroyed , with repairs estimated to reach \$ 5 million . Damage to properties in Monmouth and Ocean counties amounted to \$ 3 @. @ 6 million and \$ 1 million , respectively . On August 21 , then @-@ President Gerald Ford issued a major disaster declaration for Atlantic , Cape May , Monmouth , and Ocean counties , allowing them to receive federal funding .

The high winds knocked down trees and power lines across Long Island , New York , leaving roughly 170 @, @ 000 residents without electricity . Power crews from Pennsylvania were called in to assist in restoring electricity . Damage across the island reached \$ 8 million , of which \$ 3 million stemmed from erosion at Rockaway Beach . One person was killed in New York when a branch snapped off a tree due to high winds and fell on her . An estimated 36 @, @ 000 residents in the lower Hudson Valley lost power . President Ford later declared Nassau , Suffolk , and Rensselaer counties major disaster areas . Effects were similar in Connecticut where approximately 247 @, @ 000 people lost electricity . Commuter train service along Conrail 's New York ? New Haven line was canceled due to power outages . A portion of the Merritt Parkway was closed due to downed trees . High winds in Bridgeport toppled many trees and power lines , shattered windows , and sparked two house fires . Five boats in the city 's harbor sustained damage . Flooding in and around Danbury prompted evacuations of an apartment complex and motel . One fatality took place in Barkhamsted due to slippery roads . Overall damage in Connecticut was far less than expected , according to state police , with losses reaching \$ 7 @. @ 1 million and mostly stemming from Fairfield and New Haven counties . Power companies brought in additional personnel to expedite the restoration process , though many remained in the dark days after the storm . A couple and their two dogs in Vernon died from carbon monoxide poisoning from a generator on August 14 .

Owing to heavy rains that preceded the hurricane , widespread small stream flooding took place in New England , particularly in Vermont where then @-@ governor Thomas P. Salmon declared a state of emergency . Flooding in the state was reported as the worst in 30 years , with southern areas of the state seeing the greatest damage . Hardest hit was the town of Chester where 35 of its 85 roads flooded and 5 bridges were washed out . Otter Creek crested at 5 ft (1 @. @ 5 m) above flood stage . Significant damage also took place in Jamaica , Ludlow , and Londonderry . Two people died in Huntington after the footbridge they were crossing collapsed into the Huntington River . Portions of Route 100 were washed out . Property damage in the state reached \$ 5 ? 10 million . The overall scale of flooding was regarded as a 1 @-@ in @-@ 10 to 1 @-@ in @-@ 25 year event . Immediately following the hurricane , a statewide ban on drinking water was imposed with an order to boil it first . This was later lifted on August 23 . Salt accumulation along power lines in Rhode Island cut electricity to 8 @, @ 000 residents on Aquidneck Island . Along the Saint John River in Aroostook County , Maine , flooding caused \$ 2 @. @ 5 million worth of damage to crops and buildings .

Heavy rains across New Brunswick , Canada , amounting to 7 in (180 mm) in Edundston , triggered flooding that damaged crops , homes , and roads . Losses from the event were estimated

to be at least \$ 1 million .