

= Hurricane Alex ( 2004 ) =

Hurricane Alex was the first named storm , the first hurricane , and the first major hurricane of the 2004 Atlantic hurricane season . The first storm of the season , Alex formed unusually late in the season ; the fifth latest since 1954 . It developed from the interaction between an upper @-@ level low and a weak surface trough on July 31 to the east of Jacksonville , Florida . It moved northeastward , and strengthened to attain winds of 100 mph ( 160 km / h ) before passing within 10 miles ( 16 km ) of the Outer Banks coast . Alex strengthened further and reached a peak of 120 mph ( 190 km / h ) winds while off the coast of New England , one of only two hurricanes to reach Category 3 status north of 38 ° N. Alex caused a scare of a hurricane @-@ force direct hit in the Outer Banks of North Carolina , which had been devastated by Hurricane Isabel less than a year earlier .

The hurricane produced light damage in the Outer Banks , primarily from flooding and high winds . Over 100 houses were damaged , while numerous cars were disabled from the flooding . Damage totaled about \$ 7 @. @ 5 million ( 2004 USD ) . Alex produced strong waves and rip tides along the East Coast of the United States , causing one death and several injuries .

= = Meteorological history = =

A weak surface trough , located to the west of an upper @-@ level low , developed convection to the east of the Bahamas on July 26 . A tropical wave entered the area two days later , resulting in an increase of convective organization and area . Although conditions were not favorable for tropical cyclone formation , it sped to the northwest and steadily organized , developing a surface area of low pressure on the 30th . On July 31 , the system continued to organize , and developed into Tropical Depression One while located 200 miles ( 320 km ) to the east of Jacksonville , Florida .

As the depression drifted erratically , the system remained weak due to its large circulation and lack of deep convection near the center . The center relocated to the south , closer to the center . An approaching upper @-@ level trough lessened the shear over the system , allowing the depression to intensify into Tropical Storm Alex on August 1 . The trough also caused Alex to increase its forward motion to the northeast . Deep convection continued to build over the center due to low shear and warm waters from the Gulf Stream , and Alex intensified into a hurricane on August 3 while located 75 miles ( 120 km ) southeast of Cape Fear , North Carolina . The cyclone continued to strengthen , and attained Category 2 status just hours after becoming a hurricane . The hurricane approached the Outer Banks of North Carolina , coming within 10 miles ( 16 km ) of Cape Hatteras later on the 3rd . The western portion of the eyewall passed over the Outer Banks , though the center remained offshore .

Alex turned to the east @-@ northeast after passing the Outer Banks in response to becoming embedded within the west @-@ southwesterly flow . The hurricane briefly weakened to a Category 1 , but restrengthened due to warm waters of the Gulf Stream . Water temperatures remained 3 @. @ 6 ° F ( 2 ° C ) above normal , resulting in Alex intensifying into a 120 mph ( 195 km / h ) major hurricane on August 5 while located 450 miles ( 710 km ) south of Halifax , Nova Scotia . Due to low vertical shear and favorable conditions , Alex remained a Category 3 hurricane until passing over cooler waters late on the 5th while 290 miles ( 465 km ) south of Newfoundland . Alex rapidly weakened , degrading into tropical storm status on August 6 . Later on the 6th , Alex became extratropical while 950 miles ( 1530 km ) east of Cape Race , Newfoundland , and lost its identity shortly thereafter .

= = Preparations = =

Initially , forecasters believed Alex would remain weak , and on the first advisory the storm was predicted to make landfall as a minimal tropical storm . However , when strengthening became evident , the National Hurricane Center issued a hurricane warning from Cape Lookout to Oregon Inlet about 20 hours before hurricane conditions were experienced . In addition , a tropical storm

warning existed for much of the North Carolina coastline as Alex paralleled the state .

Despite Tropical Storm Warnings , 3 @, @ 500 tourists remained on the Outer Banks , though many planned to leave if Alex were to track closer or become stronger . No evacuations were ordered . Officials recommended residents to take precautions for the approaching hurricane . The National Weather Service in Morehead City issued a flash flood watch a day before the hurricane moved past the Outer Banks . The service also issued flash flooding warnings for Craven and Carteret Counties on the day of the hurricane 's closest approach . In preparation for the hurricane , the Cape Lookout National Seashore was closed and evacuated . The National Park Service also closed Cape Point Campground .

= = Impact = =

While drifting off the coast of Florida , Alex produced rip currents and strong waves along the North Carolina coast resulting in nine lifeguard rescues from the surf . Upon moving by the Outer Banks , a storm surge of up to 6 feet ( 1 @. @ 8 m ) occurred on the Pamlico Sound side of Buxton and Ocracoke Village . The flooding on Ocracoke Island was the worst since Hurricane Gloria nineteen years earlier . Elsewhere on the Outer Banks , waters rose 2 ? 4 feet ( 0 @. @ 6 ? 1 @. @ 2 m ) above normal . Rainfall directly along the coast amounted to over 5 inches ( 127 mm ) , while Ocracoke experienced 7 @. @ 55 inches ( 192 mm ) . Maximum sustained winds peaked at 88 mph ( 124 km / h ) , and gusts peaked at 115 mph ( 169 km / h ) in Morehead City . Beach erosion was minor along much of North Carolina 's coastline , with the exception of Ocracoke Island where erosion was significant .

Cape Fear experienced minor beach erosion . The erosion , combined with high waves , washed out a portion of a roadway . The heavy rainfall in the Outer Banks disabled over 200 cars and flooded nearly 500 . Strong wind gusts left around 10 @, @ 000 buildings without power . Many places were not restored for two to three days after the storm . Wind and storm surge damaged over 100 houses and buildings . Damage amounted to about \$ 7 @. @ 5 million ( 2004 USD ) . Two days after the storm passed , a man drowned off of Nags Head from strong rip currents and waves . This was the only direct casualty from the storm .

Alex 's outer rainbands produced heavy rainfall across Virginia , peaking at over 7 inches ( 178 mm ) in the center of the state . The rainfall caused localized flooding , but there was no reported damage in the state . In Rehoboth Beach , Delaware , rip currents produced by the storm injured three people . A few young children had to be rescued when they were trapped by a jetty . In New Jersey , the strong surf and rip currents hospitalized at least five swimmers .

Alex 's extratropical remnants sank the Pink Lady , a rowboat carrying four British rowers attempting to break the record for fastest crossing from St. John 's , Newfoundland to Falmouth , Cornwall . They were rescued by a Danish cargo ship , and injuries were limited to a mild concussion and a case of hypothermia . The rowers were roughly two weeks and 370 miles ( 595 km ) from their destination . The group had been on track to break the 1896 record of 54 days by 10 days .

= = Aftermath and records = =

On Ocracoke Island , officials ordered for the evacuation of the thousands of tourists who stayed , believing that keeping tourists on the island would hinder cleanup efforts . The tourists were evacuated in school buses to Hatteras Island , where they could rent a car if needed . Tourists were also evacuated by ferry to Swan Quarter , in Hyde County , where they boarded school buses and were taken to nearby Washington NC to rent available cars or find accommodations . The island was re @- @ opened to visitors on August 6 , three days after the storm passed through . Evacuation was ordered again on Friday of the following week when another storm threatened to hit the Outer Banks , but did not do so . Dare County officials requested aid from the National Guard for the cleanup process . The North Carolina Department of Transportation was ready to clear the roads once the storm exited the area .

Alex marked the fifth @-@ latest start to a hurricane season since 1954 . The latest start to a hurricane season since 1954 was Hurricane Anita of the 1977 season , forming on August 29 . Alex is only the second hurricane on record to have reached Category 3 strength north of 38 ° N latitude . The other storm was Hurricane Ellen in the 1973 Atlantic hurricane season ; Alex was the stronger of the two . It is also one of only five hurricanes to be at major hurricane ( Category 3 or higher ) status within Canadian waters since 1950 .