

= Hurricane Ella ( 1978 ) =

Hurricane Ella was the strongest hurricane on record in Canadian waters . It formed on August 30 , 1978 to the south of Bermuda , and quickly intensified as it tracked west @-@ northwestward . By September 1 , Ella reached winds of 125 mph ( 205 km / h ) , and it was expected to pass close to the Outer Banks of North Carolina during the busy Labor Day Weekend . The hurricane became stationary for about 24 hours , and later turned to the northeast away from the coast . On September 4 , Ella reached Category 4 status on the Saffir @-@ Simpson Hurricane Scale off the coast of Nova Scotia . It subsequently weakened , passing southeast of Newfoundland before being absorbed by a large extratropical cyclone .

In North Carolina , the National Hurricane Center issued a hurricane watch due to the large influx of people expected during the holiday weekend . As such , there was a significant drop in tourism , although no significantly adverse weather occurred along the Outer Banks . High waves and some minor beach erosion was reported , but there were no deaths , injuries , or damage from Ella . By the time the hurricane passed Newfoundland , the strongest winds were to the southeast of the center , and as a result , no significant impact was reported on Canada .

= = Meteorological history = =

Towards the end of August 1978 , a cold front stalled and dissipated across the western Atlantic Ocean , which spawned a tropical disturbance southeast of Bermuda on August 28 . A circulation was present , and it developed into a tropical depression on August 30 , about 520 miles ( 840 km ) south @-@ southeast of Bermuda . Located to the south of a subtropical ridge , the depression tracked steadily west @-@ northwestward , and it attained tropical storm status 18 hours after forming , based on a nearby ship observation . At 2200 UTC on August 30 , the National Hurricane Center ( NHC ) initiated advisories on the system , but three hours later , as its rapid strengthening became evident , it was upgraded to Tropical Storm Ella .

Tropical Storm Ella intensified quickly and reached hurricane status late on August 31 , based on confirmation from nearby ship reports and a Hurricane Hunters flight . At the time , the hurricane was forecast to avoid making landfall on North Carolina and ultimately turn northeastward , although it was expected to pass within 50 miles ( 85 km ) of land during the busy Labor Day Weekend . On September 1 , Ella reached a preliminary peak intensity of 125 mph ( 205 km / h ) , a major hurricane and a Category 3 on the Saffir @-@ Simpson Hurricane Scale . At the same time a short @-@ wave trough reached the East Coast of the United States . The trough caused the hurricane to decelerate and turn slightly to the north , and a ridge behind the trough caused Ella to become nearly stationary for 24 hours . During that time , the threat toward the North Carolina coast diminished , and concurrently , the winds decreased as the convection diminished .

On September 3 , another trough exited the coast of the United States , allowing the hurricane to accelerate toward the northeast through the diminished ridge . By that time , the winds had decreased to 80 mph ( 130 km / h ) , although forecasters expected baroclinic instability to maintain much of the cyclone 's remaining force . Instead of continued weakening , the hurricane began to significantly re @-@ intensify . Early on September 4 , Ella again reached major hurricane status , and later that day it peaked with winds of 140 mph ( 220 km / h ) ; at the time it was about 335 miles ( 540 km ) south of Halifax , Nova Scotia , and its peak winds were measured by Hurricane Hunters . This made it the strongest hurricane ever recorded in Canadian waters . Weakening began immediately after peak intensity due to cooler water temperatures . Early on September 5 , Ella passed very near Cape Race , although the strongest winds were south and east of the center . Associated convection became completely removed from the center , and the hurricane became extratropical as it was absorbed by a larger mid @-@ latitude system .

= = Preparations and impact = =

On September 1 , as Hurricane Ella was strengthening to its first peak in strength , the National

Hurricane Center anticipated a track near the North Carolina coast during the busy Labor Day Weekend ; as a result , the agency issued a hurricane watch for the Outer Banks . The Cape Hatteras National Weather Service office requested radio and television stations in the threatened area to continue broadcasting beyond normal hours , so to convey storm updates to people in the region . Additionally , the Cape Hatteras agency issued an advisory for small craft to remain at port , and also for affected people to " keep alert [ and ] ignore rumors . " Due to the threat , campgrounds on Ocracoke Island and Cape Lookout , each only accessible by ferry , were closed to reduce their populations .

The hurricane ultimately stayed far away from the coast , and the heavy rainfall and thunderstorms remained at least 50 miles ( 85 km ) offshore . While nearly stationary , Hurricane Ella produced waves of 5 to 9 feet ( 2 to 3 metres ) in height , as well as rip currents along the coast . The highest wind gust from the storm over land was 31 mph ( 50 km / h ) at Diamond Shoal Light . The waves reached the dunes along most beaches , causing some minor beach erosion ; the depleted sand returned within a few days . Further north , along the coast of Virginia , no large waves were reported , which was considered unusual for how close the hurricane was to the state .

Ultimately , the most significant effect from the hurricane was the significant drop in tourism . The Labor Day Weekend is typically the last significant week of the summer tourist season , and normally , many people vacation along the Outer Banks . Due to the hurricane watch , traffic was light , and many businesses and hotels reported much less business than usual . A forecaster with the National Weather Service said the hurricane watch was put into effect because of " thousands of people streaming in and only one road off the Outer Banks , [ and they ] couldn 't wait until the last minute . " The same forecaster noted that a " alert " less than a hurricane watch " would have been used [ during Ella ] .

No significant impact was reported in Canada , as the strongest winds were south and east of the center . Prior to the storm 's arrival , the Newfoundland Weather Forecast Office issued a hurricane warning for southeastern Newfoundland . The ferry between Nova Scotia and Newfoundland was disrupted , and boats across the region were sent back to harbor . Rainfall was fairly light , peaking at 2 @. @ 39 inches ( 60 @. @ 8 mm ) in southeastern Newfoundland , and sustained winds reached 71 mph ( 115 km / h ) at Cape Race .