

= 2003 Atlantic hurricane season =

The 2003 Atlantic hurricane season was an active Atlantic hurricane season with tropical activity before and after the official bounds of the season ? the first such occurrence in 50 years . The season produced 21 tropical cyclones , of which 16 developed into named storms ; seven cyclones attained hurricane status , of which three reached major hurricane status . With sixteen storms , the season was tied for the sixth most active Atlantic hurricane season on record . The strongest hurricane of the season was Hurricane Isabel , which reached Category 5 status on the Saffir @-@ Simpson Hurricane Scale northeast of the Lesser Antilles ; Isabel later struck North Carolina as a Category 2 hurricane , causing \$ 3 @.@ 6 billion in damage (2003 USD , \$ 4 @.@ 63 billion 2016 USD) and a total of 51 deaths across the Mid @-@ Atlantic region of the United States .

The season began with Subtropical Storm Ana on April 20 , prior to the official start of the season ; the bounds of the season are from June 1 to November 30 , which conventionally delimit the period of each year when most tropical cyclones form in the Atlantic basin . In early September , Hurricane Fabian struck Bermuda as a Category 3 hurricane , where it was the worst hurricane since 1926 ; on the island it caused four deaths and \$ 300 million in damage (2003 USD , \$ 386 million 2016 USD) . Hurricane Juan caused considerable destruction to Nova Scotia , particularly Halifax , as a Category 2 hurricane , the first hurricane of significant strength to hit the province since 1893 . Additionally , Hurricanes Claudette and Erika struck Texas and Mexico , respectively , as minimal hurricanes .

= = Seasonal forecasts = =

= = = Pre @-@ season outlook = = =

On May 19 , prior to the start of the season , NOAA forecasters issued a 55 % probability of above normal activity . The forecasters predicted 11 ? 15 tropical storms , 6 ? 9 of those becoming hurricanes , and 2 ? 4 of those hurricanes reaching at least Category 3 strength on the Saffir @-@ Simpson Hurricane Scale . The above normal activity predicted was due to the likelihood of La Niña developing in the season .

Noted hurricane expert Dr. William M. Gray on April 4 predicted twelve named storms , with eight reaching hurricane strength and three of the eight reaching Category 3 strength . The prediction issued on May 30 was similar , increasing the named storms to fourteen . The synoptic pattern of the season prior to June 1 resembled other previous seasons , with the 1952 , 1954 , 1964 , 1966 , and 1998 seasons considered the best analogs for the season . The prediction also included a 68 % probability for a hurricane landfall along the United States .

= = = Mid @-@ season outlook = = =

On August 6 , Dr. Gray announced he had maintained his previous prediction ; with an active start of the season , the rest of the season was forecast to have been only slightly above average , due to an anticipated overall less favorable environment across the Atlantic Ocean . A day later , NOAA released an updated prediction as well , with a 60 % probability of above normal activity , with 12 ? 15 named storms , 7 ? 9 hurricanes , and 3 ? 4 major hurricanes expected .

A normal season , as defined by NOAA , has 6 ? 14 tropical storms , 4 ? 8 of which reach hurricane strength , and 1 ? 3 of those reaching Category 3 strength .

= = Storms = =

= = = April through July = = =

The official beginning of the season was on June 1 , 2003 , though Subtropical Storm Ana formed on April 20 , well before the start to the season . When Ana transitioned into a tropical cyclone the next day , it became the first Atlantic tropical storm on record in the month of April . The storm caused two deaths in Florida from increased waves and rip currents .

Starting at the official start of the season , the National Hurricane Center began issuing five @-@ day forecasts , extending from the three @-@ day forecasts issued since 1964 . Officials conducted tests during the previous two seasons , indicating the new five @-@ day forecasts would be as accurate as the three @-@ day forecasts were 15 years earlier . The tropics were active and well ahead of climatology in the early portion of the season , with the seventh tropical depression forming by the end of July .

Within the first week of the official start of the season , a tropical wave moved off the coast of Africa , and on June 11 developed into Tropical Depression Two ; unfavorable conditions prevailed , and it dissipated within 24 hours of developing .

By the end of June , the third tropical depression of the season developed near the Yucatán Peninsula ; it tracked northward , strengthening into Tropical Storm Bill before striking the southern Louisiana coast on June 30 . The storm caused moderate rainfall and a tornado outbreak across the southern United States , resulting in four deaths and \$ 30 million in damage (2003 USD , \$ 38 @.@ 6 million 2016 USD) .

On July 8 , a well @-@ organized tropical wave in the Caribbean Sea organized into Tropical Storm Claudette . Its intensity fluctuated while crossing the basin , attaining hurricane status before weakening and striking the Yucatán Peninsula as a tropical storm . Claudette re @-@ intensified to hurricane status and struck southeastern Texas on July 15 , causing a total of three deaths , one of which directly , and \$ 180 million in damage (2003 USD , \$ 232 million 2016 USD) .

Hurricane Danny formed on July 16 from a tropical wave well to the east of Bermuda . It strengthened while tracking around an anticyclone , and attained hurricane status further north than any other Atlantic tropical cyclone in July . It turned to the east and dissipated without affecting land .

Tropical Depression Six developed on July 19 in the tropical Atlantic Ocean , and was initially forecast to attain hurricane status . However , it tracked quickly westward , and degenerated into an open tropical wave on July 21 near the Lesser Antilles .

The tropical wave that spawned the previous tropical depression developed an area of convection further to the north , which organized into Tropical Depression Seven on July 25 off the coast of Florida . It failed to develop , and made landfall on Georgia as a tropical depression before dissipating on July 27 .

= = = August = = =

After a short respite in activity , a westward @-@ moving tropical disturbance organized near Florida and developed into Tropical Storm Erika in the Gulf of Mexico on August 14 . It continued quickly across the body of water , and made landfall in the Mexican state of Tamaulipas as a hurricane on August 17 . The hurricane caused two deaths from floodwater drowning in Mexico , as well as minor damage in southern Texas .

Tropical Depression Nine formed on August 21 in the eastern Caribbean Sea from a tropical wave . Despite predictions of it intensifying to a strong tropical storm , it failed to strengthen due to strong wind shear , and on August 22 the depression dissipated .

Hurricane Fabian developed from a tropical wave on August 27 in the tropical Atlantic Ocean . Tracking west @-@ northwestward around the subtropical ridge , it encountered favorable conditions , and steadily intensified to reach peak winds of 145 mph (230 km / h) on September 1 . Fabian turned to the north and gradually weakened , passing just west of Bermuda on September 5 as a major hurricane . On September 8 , it became an extratropical cyclone after causing four deaths and \$ 300 million (2003 USD , \$ 386 million 2016 USD) in damage on Bermuda ; there , it was considered the worst hurricane in nearly 80 years . Elsewhere , rough waves from the hurricane killed a surfer in North Carolina and three fishermen off Newfoundland .

A tropical disturbance organized into Tropical Storm Grace in the Gulf of Mexico on August 30 ; with a nearby upper @-@ level low causing unfavorable wind shear , the storm failed to organize significantly , and it moved ashore along Texas . The storm dropped moderate rainfall across much of the southern United States .

= = = September = = =

Tropical Storm Henri formed in the Gulf of Mexico on September 3 , and it crossed central Florida without causing significant damage or flooding . On September 8 it degenerated into a remnant low pressure area , which dropped heavy rainfall in the Mid @-@ Atlantic States . Flooding from the storm 's remnants caused about \$ 19 @. @ 6 million in damage (2003 USD , \$ 25 @. @ 2 million 2016 USD) , which was compounded by the effects of Hurricane Isabel a week later .

A tropical wave spawned Hurricane Isabel on September 6 in the tropical Atlantic Ocean . Encountering favorable conditions , it gradually intensified while tracking generally west @-@ northwestward , and on September 11 Isabel attained peak winds of 165 mph (270 km / h) , the strongest storm of the season . After fluctuating in intensity for the subsequent four days , it weakened and struck North Carolina as a Category 2 hurricane on the Saffir @-@ Simpson hurricane scale . Across the East Coast of the United States , Isabel caused a total of 51 fatalities and \$ 3 @. @ 6 billion in damage (2003 USD , \$ 4 @. @ 63 billion 2016 USD) .

Brief Tropical Depression Fourteen formed on September 8 just off the coast of Africa . An upper @-@ level low hindered its development and changed its motion to the north @-@ northwest , and on September 10 the depression dissipated after passing near the Cape Verde islands .

On September 24 a tropical depression developed southeast of Bermuda , and while tracking northward it quickly intensified to become Hurricane Juan . Juan maintained its strength as it accelerated northward , and on September 29 it struck Halifax , Nova Scotia with winds of 100 mph (160 km / h) . The hurricane caused a total of 8 fatalities , as well as \$ 150 million in damage (2003 USD , \$ 193 million 2016 USD) . It was considered one of the worst hurricanes on modern record in Halifax .

A tropical wave spawned a tropical depression on September 25 , which tracked northwestward before turning to the northeast and becoming Hurricane Kate . The hurricane then turned sharply westward , reaching major hurricane status before turning northward and becoming extratropical on October 7 . It did not have a significant effect on land .

= = = October through December = = =

An extratropical storm formed in the Bay of Campeche on September 30 , and remaining nearly stationary it transitioned into Tropical Storm Larry by October 1 . The storm drifted southward , reaching peak winds of 65 mph (100 mph) before moving ashore along the Mexican state of Tabasco . Larry caused five deaths in Mexico , as well as heavy rainfall and mudslides .

On October 10 , a tropical disturbance organized into Tropical Storm Mindy just off the northeast coast of the Dominican Republic . After moving northwestward , it turned sharply eastward and dissipated on October 14 , after earlier dropping light to moderate rainfall across the Greater Antilles .

Tropical Storm Nicholas developed from a tropical wave on October 13 in the tropical Atlantic Ocean . The storm strengthened to near @-@ hurricane intensity before weakening while turning northward and later to the northwest . On October 24 , Nicholas transitioned into an extratropical low , which , after executing an anticyclonic loop , meandered erratically before being absorbed by a non @-@ tropical low to the southwest of Bermuda on November 1 .

Early in November , the system that absorbed Nicholas tracked westward across the Atlantic Ocean , nearly developing into a subtropical cyclone before crossing Florida and dissipating on November 5 . The season officially ended on November 30 , 2003 , although Tropical Storm Odette formed on December 4 to the northwest of Colombia from a tropical disturbance ; it became the second December tropical storm on record to form in the Caribbean Sea , after a hurricane in 1822 .

The final storm of the season , Tropical Storm Peter , formed on December 7 in the eastern Atlantic Ocean . It strengthened to near hurricane status , but rapidly weakened due to increased wind shear and dissipated on December 11 .

= = Impact and records = =

No cyclones in the season had a significant impact on South America or Central America . However , a total of eight tropical cyclones made landfall on Mexico from either the Atlantic or the Pacific Ocean , which was the greatest total since the record of nine in 1971 . A total of seven deaths occurred in Mexico from Atlantic hurricanes . Much of the Caribbean did not receive significant impact from tropical cyclones during the season . However , Tropical Storm Odette caused eight direct deaths , as well as two indirect deaths , when it crossed the Dominican Republic in December . The storm damaged or destroyed over 1 @, @ 000 homes , and heavy damage was reported to the banana crop .

Six tropical cyclones made landfall along the coast of the United States during the season , including two hurricanes . The first , Claudette , caused locally heavy damage in southeastern Texas in July ; two deaths were reported in the state , while earlier in its duration it caused an indirect death from rough waves in Florida . In September , Hurricane Isabel caused deaths and damage from North Carolina through southern Canada . The worst damage from the hurricane occurred in Virginia , where it was the costliest disaster in the history of the state ; there , damage totaled \$ 1 @. @ 85 billion (2003 USD , \$ 2 @. @ 38 billion 2016 USD) , and there were 32 fatalities , ten of which were caused directly by the hurricane . Hurricane Isabel caused deaths in seven states and one Canadian province , and about 6 million people were left without power as a result of the storm .

Several cyclones impacted Bermuda during the season , most significantly Hurricane Fabian . On the island , its passage proved to be the costliest and resulted in the first death since a hurricane in 1926 . The hurricane killed four on the island when its strong waves and storm surge washed two cars off the causeway between St. George 's Parish and St. David 's Island . Damage from the hurricane totaled \$ 300 million (2003 USD , \$ 386 million 2016 USD) . Elsewhere , Hurricane Juan was considered among the most damaging in the history of Halifax , Nova Scotia , where strong winds downed thousands of trees and left low @-@ lying areas flooded from a record storm surge to the city . The hurricane caused a total of eight deaths and damage estimated at \$ 200 million (2003 CAD , \$ 150 million 2003 USD , \$ 193 million 2016 USD) .

The season is one of only six with a storm before and after the official bounds of the season ; the others are 1887 , 1951 , 1953 , 1954 and 2007 . When Tropical Storm Peter formed on December 7 , the season became the second on record with two December storms . The 235 days between the development of the first storm , Tropical Storm Ana , and the dissipation of the last storm , Peter , made the 2003 season the longest season since 1952 . The season was the eighth most active on record , behind the 2005 , 1933 , 2012 , 2011 , 2010 , 1995 , 1887 , and 1969 seasons , and tied with the 1936 and 2008 seasons .

= = Season effects = =

= = Storm names = =

The following names were used for named storms that formed in the North Atlantic in 2003 . The names not retired from this list were used again in the 2009 season . This is the same list used for the 1997 season . Storms were named Larry , Mindy , Nicholas , Odette , and Peter for the first time in 2003 . Names that were not assigned are marked in gray . Ana became the first name in the six list rotation to be used five times . Both Ana and Claudette were used in 1979 , 1985 , 1991 , 1997 , 2003 , 2009 and 2015 .

=== Retirement ===

The World Meteorological Organization retired three names in the spring of 2004 : Fabian , Isabel , and Juan . They were replaced in the 2009 season by Fred , Ida , and Joaquin , respectively . However the name Joaquin wasn 't used during the course of 2009 and was used for the first time in the 2015 season instead .