

= 1980 Atlantic hurricane season =

The 1980 Atlantic hurricane season was tied with 1932 , 1969 , and 1994 for most named storms in Atlantic Ocean during the month of November ? only to be surpassed in 2001 and 2005 . The season officially began on June 1 , 1980 , and lasted until November 30 , 1980 . These dates conventionally delimit the period of each year when most tropical cyclones form in the Atlantic Ocean .

The season was fairly active , with fifteen tropical cyclones forming . It was the first time since the 1971 season that there were no active tropical cyclones in the Atlantic basin during the month of June . The season was neutral , having neither an El Niño nor a La Niña . Three tropical cyclones during in the Atlantic Ocean in 1980 were notable . Hurricane Allen was then the earliest Category 5 hurricane on record and also devastated portions of the Caribbean Sea , Mexico , and the United States . Tropical Storm Hermine caused significant flooding in Mexico , which resulted in at least 38 fatalities . Hurricane Jeanne was one of only four tropical cyclones at hurricane intensity to enter the Gulf of Mexico and not make landfall .

= = Season summary = =

The Atlantic hurricane season officially began on June 1 , though the first tropical depression did not develop until July 17 . During the season , 15 tropical depressions formed . Eight of the depressions attained tropical storm status , and eight of these attained hurricane status . Two of the hurricanes further strengthened to become major hurricanes . Only Allen made landfall at hurricane strength during the season , although Hurricane Charley and tropical storms Danielle and Hermine also caused damage and fatalities . Those three cyclones collectively caused 337 deaths and \$ 1 @. @ 5 billion (1980 USD) in damage . The last storm of the season , Hurricane Karl , dissipated on November 27 , only three days before the official end date of November 30 .

The 1980 Atlantic hurricane season had a rather slow beginning , with only one tropical depression developing prior to the month of August . In contrast , August was an active month , with five tropical cyclones forming , three of which became hurricanes . During that month , Hurricane Allen became the earliest known Category 5 hurricane on August 5 , a record later broken by only Hurricane Emily on July 16 , 2005 . September also had five tropical cyclones , all of which became named storms . Tropical cyclogenesis abruptly halted in October , with only Hurricane Ivan developing in that month . However , the month of November was considered to be very active , with three storms forming during that month . Two of the systems became named storms , a record that was tied with 1932 , 1969 , and 1994 , but later surpassed when three tropical storms existed in the Atlantic in November 2001 and November 2005 .

The season 's activity was reflected with an accumulated cyclone energy (ACE) rating of 149 , which is classified as " above normal " . ACE is , broadly speaking , a measure of the power of the hurricane multiplied by the length of time it existed , so storms that last a long time , as well as particularly strong hurricanes , have high ACEs . ACE is only calculated for full advisories on tropical systems at or exceeding 34 knots (39 mph , 63 km / h) or tropical storm strength . Although officially , subtropical cyclones are excluded from the total , the figure above includes periods when storms were in a subtropical phase .

= = Storms = =

= = Tropical Depression One = = =

A decaying cold front entered into Gulf of Mexico , and developed a low @-@ pressure area of July 17 . Later that day , the low @-@ pressure area developed into Tropical Depression One almost halfway between Louisiana and the Yucatan Peninsula . The depression moved northwestward , and minimal intensification occurred , as it approached the Gulf Coast of the United States . The

depression made landfall in Texas near the Galveston area , and dissipated by July 21 . Minimal impact was recorded from the depression , and light rainfall was reported in Texas and western Louisiana , peaking at 3 @. @ 77 in (96 mm) in Refugio , Texas .

= = = Hurricane Allen = = =

A tropical wave emerged off the west coast of Africa on July 30 and quickly developed into Tropical Depression Two about two days later . By August 2 , the depression had strengthened and was upgraded to Tropical Storm Allen . The storm steadily intensified and became a hurricane on August 3 . Thereafter , Allen rapidly deepened , and was a major hurricane only 24 hours later . While it was becoming a Category 3 hurricane , and a Category 4 hurricane , shortly after , Allen passed through the Windward Islands . Upon entering the Caribbean Sea , Allen continued to strengthen and became a Category 5 hurricane on August 5 , while about halfway between Puerto Rico and Venezuela . Allen briefly curved northwestward and approached the Tiburon Peninsula of Haiti . Shortly thereafter , Allen weakened significantly on August 6 , but was still a Category 4 when it bypassed Jamaica . While paralleling the south coast of Cuba , Allen re @-@ strengthened into a Category 5 hurricane . Later that day , the storm attained its peak intensity with winds of 190 mph (305 km / h) and a minimum barometric pressure of 899 mbar (26 @. @ 5 inHg) . Immediately following peak intensity , Allen entered the Gulf of Mexico and weakened back to a Category 4 hurricane on August 8 . On the day next , Allen re @-@ intensified into a Category 5 hurricane while approaching Texas . However , just offshore Allen abruptly weakened to a low @-@ end Category 3 hurricane prior to landfall near Brownsville , Texas on August 10 . The storm quickly weakened inland and dissipated about 36 hours after striking land .

Although 500 houses were either damaged or destroyed on Barbados , losses totaled to only \$ 1 @. @ 5 million (1980 USD) . Having passed only 8 miles (13 km) south of St. Lucia , Allen produced sustained winds as high as 104 mph (167 km / h) on the island . The storm caused 27 fatalities and \$ 88 million (1980 USD) in damage on that island . In addition , one death was reported in Guadeloupe . High winds and flooding in Haiti left 836 @, @ 200 people homeless . In addition , 220 deaths were reported and damage exceeded \$ 400 million (1980 USD) . To the east in Dominican Republic , effects were less severe , though seven deaths were reported and damage was estimated at \$ 47 million (1980 USD) . On the island of Cuba , three fatalities occurred and losses were unknown . In northeastern Mexico , heavy rainfall occurred , though damage was minimal and no fatalities were reported . Damage was most significant in the United States , especially in the state of Texas . In Corpus Christi , gravel blew off the roofs , which broke windows throughout the city . Several tornadoes were spawned in Texas , one of which caused \$ 100 million (1980 USD) in damage in Austin . Rainfall in the state of Texas exceeded 20 inches (510 mm) in some locations . 24 fatalities occurred in the United States ? seven in Texas and seventeen in Louisiana ? most resulting from the crash of a helicopter evacuating workers from an offshore platform . Damage in United States totaled to \$ 860 million (1980 USD) . Overall , Hurricane Allen caused \$ 1 @. @ 5 billion (1980 USD) in losses and caused 290 deaths .

= = = Tropical Depression Four = = =

The third tropical depression of the season developed east of Cape Verde on August 13 . However , the National Hurricane Center did not initiate advisories until August 16 . As a result , the system was classified as Tropical Depression Four . After forming on August 13 , the depression crossed through the Cape Verde Islands . The depression tracked northwestward and strengthened minimally , with winds never exceeding 35 mph (55 km / h) . Thereafter , the depression curved and approached the eastern portion of the Azores . Tropical Depression Four moved through the islands shortly later . By early on August 17 , the depression dissipated near Santa Maria Island in the Azores .

= = = Hurricane Bonnie = = =

Starting on August 13 , a tropical wave in the vicinity of the Cape Verde began organizing into a tropical cyclone . Early on the following day , the system had developed into Tropical Depression Four while nearly halfway between the west coast of Africa and the Windward Islands . However , in post @-@ analysis , it was revealed that the previous tropical depression had actually developed before Bonnie . Thus , those two depressions were operationally numbered incorrectly . Two reports of gale force winds were received from ships later that day . As a result , the depression was re @-@ classified as Tropical Storm Bonnie about twelve hours after developing . Bonnie turned in a general northward direction , possibly due to interaction with nearby Tropical Depression Three .

Based on satellite estimates , Bonnie was upgraded to a hurricane at 0000 UTC on August 16 . The storm strengthened slightly further and attained its peak intensity with winds of 100 mph (155 km / h) and a minimum pressure of 975 mbar (28 @. @ 8 inHg) . After attaining peak intensity on August 16 , Bonnie slowly weakened as it continued in an unusual northward direction . On the following day , Bonnie weakened slightly to a minimal Category 1 hurricane . The storm remained at that intensity for 72 hours as it accelerated northward across the open Atlantic . By 1800 UTC on August 19 , Bonnie transitioned into an extratropical cyclone while almost halfway between the southern tip of Greenland and the Azores .

= = = Hurricane Charley = = =

An extratropical low pressure system was centered over the Mid @-@ Atlantic United States , though it tracked southeastward and emerged into the Atlantic on August 20 . Later that day , satellite imagery indicated that a well @-@ defined low @-@ level circulation . As a result , it was determine that the system developed into a subtropical depression at 1200 UTC , while located about 150 miles (240 km) east @-@ northeast of Hatteras , North Carolina . Initially , the depression tracked east @-@ southeastward , though it curved east @-@ northeastward by August 21 . Shortly thereafter , the depression strengthened into a subtropical storm . By early on August 23 , the storm had intensified and acquired enough tropical characteristics to be re @-@ classified as Hurricane Charley .

At 1200 UTC on August 23 , Charley attained its peak intensity with winds of 80 mph (130 km / h) and a minimum pressure of 989 mbar (29 @. @ 2 inHg) . Following peak intensity , Charley completed a cyclonic loop and began weakening as it headed almost due @-@ east . Charley was downgraded to a tropical storm early on August 24 . The storm continued eastward and by August 26 , Charley became unidentifiable as it merged with an intense extratropical cyclone , while located about 790 miles (1 @, @ 270 km) southeast of Cape Race , Newfoundland . While a tropical cyclone , Charley produced rip currents along the Outer Banks of North Carolina , which drowned seven people .

= = = Tropical Depression Six = = =

A tropical wave exited the west coast of Africa and emerged into the Atlantic Ocean on August 22 . The system developed into Tropical Depression Six , while centered to the west of Cape Verde at 0000 UTC on August 25 . The depression tracked westward with minimal intensification . By 1800 UTC on August 26 , the depression reached 35 mph (55 km / h) and did not strengthen further . On the following day , the depression curved northwestward and slowly began to weaken . The depression degenerated into a tropical wave while well northeast of Puerto Rico on August 29 . The remnants of Tropical Depression Six continued westward and interacted with a low @-@ pressure system over Florida . Eventually , the system developed into Tropical Depression Eight on September 4 , which later became Tropical Storm Danielle .

= = = Hurricane Georges = = =

On August 28 , a tropical wave emerged into the Atlantic off the west coast of Africa . At 0000 UTC

on September 1 , the system developed into Tropical Depression Seven , while centered roughly midway between the Lesser Antilles and the west coast of Africa . Sixteen hours later , the National Hurricane Center initiated advisories on the depression . The depression tracked westward in the trade winds during the following three days , without any intensification . After curving northwestward an Air Force reconnaissance flight found little evidence of a closed circulation , while satellite imagery also showed a disorganized and elongated cloud pattern on September 4 . As a result , it was determined that the depression degenerated into a tropical disturbance at 0600 UTC on that day . However , the National Hurricane Center did not discontinue advisories until 2200 UTC .

On September 5 , satellite imagery suggested a surface circulation had developed , possibly due to interaction with a cold low . As a result , the system regenerated into a subtropical depression at 1200 UTC on that day , while centered about 360 miles (580 km) southwest of Bermuda . Ten hours later , the National Hurricane Center resumed advisories on the subtropical depression . While the subtropical depression was curved northeastward , it strengthened and acquired tropical characteristics . At 0000 UTC on September 7 , the subtropical depression became Tropical Storm Georges . The storm continued to intensify while tracking northeastward and was upgraded to a hurricane about 24 hours after becoming a tropical storm . Simultaneously , Georges attained its peak intensity with winds of 80 mph (130 km / h) and a minimum pressure of 993 mbar (29 @. @ 3 inHg) . However , later that day , Georges transitioned into an extratropical cyclone near Cape Race , Newfoundland . While bypassing Newfoundland , Georges dropped light rainfall , with amounts under 1 inch (25 mm) of precipitation .

= = = Tropical Storm Danielle = = =

A tropical wave emerged into the Atlantic Ocean from the west coast of Africa on August 22 . The system developed into Tropical Depression Six on August 25 . However , the depression did not strengthen further , and about four days later , it degenerated back into a tropical wave . Tracking westward , the system crossed Florida and entered into the Gulf of Mexico on September 2 . Two days later , the system developed into Tropical Depression Eight while offshore of Louisiana . The depression gradually strengthened and became Tropical Storm Danielle late on September 5 . After peaking with winds of 60 mph (95 km / h) , further intensification was halted , as Danielle soon made landfall in eastern Texas . Danielle steadily weakened inland and dissipated two days later .

A barge in the Gulf of Mexico capsized due to rough seas , sending 11 of the crewmen overboard ; one person drowned as a result . Danielle produced widespread rainfall in Louisiana , though few areas reported more than 5 inches (130 mm) of precipitation . Damage in that state was minimal . Rainfall was heavier in Texas , peaking at 18 @. @ 29 inches (465 mm) . Much of the damage caused by the storm was as a result of flooding . In Port Arthur , twelve homes were damaged , while Interstate 10 was inundated by flood waters . One fatality occurred in Texas due to an automobile accident in Beaumont . Danielle also spawned five tornadoes in Texas , three of which collectively caused \$ 277 @, @ 500 in damage (1980 USD) . Outside of Texas and Louisiana , the storm also dropped light rainfall in Oklahoma and Mississippi , though minimal damage occurred in either state . Overall , Danielle caused two fatalities and \$ 277 @, @ 500 (1980 USD) in losses .

= = = Hurricane Earl = = =

Between September 2 and September 3 , a tropical wave exited the west coast of Africa and entered the Atlantic Ocean . Satellite imagery indicated that the system had rapidly organized and was classified as a tropical depression on September 4 . The depression quickly strengthened and by early on September 2 , it was upgraded to Tropical Storm Earl . Because convection associated with the storm waxed and waned significantly , Earl was operationally considered a tropical depression until September 6 . On the following day , Earl curved north @- @ northwestward and accelerated due to an upper @- @ level low pressure trough in the central Atlantic Ocean .

After evidence of an eye feature appeared , Earl was upgraded to a hurricane on September 8 . Six hours later , the storm attained its peak intensity with winds of 75 mph (120 km / h) and a minimum

pressure of 985 mbar (29 @. @ 1 inHg) . Under the influence of an upper cold low , Earl began re @- @ curving and accelerated to the northeast . By 1200 UTC on September 10 , Earl weakened to a tropical storm . Six hours later , Earl transitioned into an extratropical cyclone , while centered about halfway between the Azores and Greenland .

= = = Hurricane Frances = = =

A strong low pressure system moved off the African coast on September 5 . By the following day , it developed into Tropical Depression Ten while a short distance off the west coast of Africa . About 18 hours later , the depression intensified into Tropical Storm Frances . The National Hurricane Center did not issue advisories until 1600 UTC on September 7 , at which time the system was already a tropical storm . By early on September 8 , Frances had reached hurricane status , though it was not operationally upgraded until about 16 hours later . After becoming a hurricane , Frances began to rapidly strengthen , and became a Category 2 hurricane later that day . Early on September 9 , the storm further intensified to a Category 3 hurricane . At 0600 UTC on that day , Frances attained its peak intensity with winds of 115 mph (185 km / h) and a minimum pressure of 958 mbar (28 @. @ 3 inHg) .

After peak intensity , Frances began to weaken and was downgraded to a Category 2 hurricane later on September 9 . Following day , the storm fluctuated between Category 2 and Category 1 hurricane strengthen . While curving northwestward on September 13 , Frances remained steady in intensity as a Category 2 hurricane . Eventually , Frances re @- @ curved northward , thereby avoiding any land . After minimal change in intensity , Frances weakened to a Category 1 hurricane while tracking northeastward on September 17 . After briefly heading northward , the storm re @- @ curved back to the northeast . Early on September 20 , Frances weakened to a tropical storm , before merging with a frontal low while centered about halfway between Greenland and Iceland . Reports of strong tropical storm force winds were received from ships , but no damage was reported except for minor squalls in Cape Verde .

= = = Tropical Storm Hermine = = =

A tropical wave exited the west coast of Africa on September 11 and tracked westward with minimal development until reaching the Caribbean Sea . By September 20 , a low @- @ level circulation had developed and the system was then classified as Tropical Depression Eleven , while located almost midway between Panama and Jamaica . While heading almost due westward , the depression steadily intensified , becoming Tropical Storm Hermine on September 21 , 18 hours after forming . Later on September 21 , the storm passed only 5 miles (8 @. @ 0 km) offshore of Honduras . Hermine curved west @- @ northwestward and nearly strengthened into a hurricane before landfall in northern British Honduras (present @- @ day Belize) on September 22 . After crossing the Yucatan Peninsula , Hermine emerged into the Bay of Campeche on the following day .

Once again , the storm intensified to near hurricane strength , though Hermine made landfall near Coatzacoalcas , Veracruz , Mexico on September 24 . After moving inland , the storm steadily weakened while tracking south @- @ southwestward toward the Pacific Ocean . However , by early on September 26 , Hermine dissipated near the southwestern coast of Mexico . In Mexico , many areas reported at least 10 inches (250 mm) of precipitation , while a few locations experienced more than 30 inches (760 mm) of rain . As a result of torrential rainfall , at least 30 fatalities occurred , with dozens more missing , and leaving 25 @, @ 000 homeless . Additionally , landslides triggered by Hermine in Guatemala killed at least eight people .

= = = Hurricane Ivan = = =

In late September , a cold @- @ core low persisted off the coast of Portugal , moving southwestward . The system gradually developed tropical characteristics as it turned northwestward and executed a loop near the Azores . Eventually , the system organized enough to be designated

as a tropical depression on October 4 , while just east of the Azores . Shortly thereafter , the depression intensified into Tropical Storm Ivan . However , the National Hurricane Center did not initiate advisories on Ivan until late on October 5 . Ivan moved largely in tandem with the upper @-@ level low above it , while its southwest movement was caused by a building ridge to its north . Late on October 5 , an eye developed , and Ivan was upgraded to a hurricane on the following day .

It de @-@ accelerated as the ridge to its north weakened , and 18 hours after becoming a hurricane , Ivan peaked with winds of 105 mph (165 km / h) . Between October 6 and October 7 , Ivan executed a tight loop , followed by a motion to the west @-@ northwest . Ultimately , the intensity did not change for about 90 hours . During that time , the eye fluctuated occasionally as the convection waxed and waned . On October 9 , Ivan turned to the north in advance of an approaching cold front and extratropical storm , while slowly weakening as it accelerated over cooler waters of the far northern Atlantic Ocean . By October 12 , the cold front absorbed Ivan , which was about 665 miles (1 @,@ 070 km) west of Ireland .

= = = Hurricane Jeanne = = =

An area of disturbed weather organized into a tropical depression late on November 8 . The depression slowly intensified as it tracked north @-@ northwestward into the northwestern Caribbean Sea . Shortly before entering the Yucatan Channel , the depression had strengthened enough to be upgraded to Tropical Storm Jeanne on November 9 . Further intensification was still gradual in the Gulf of Mexico , though the rate of deepening accelerated as the storm began to curve westward . By November 11 , Jeanne was upgraded to a hurricane while paralleling the northern coast of the Yucatan Peninsula . Early on the following day , Jeanne peaked as a 100 mph (155 km / h) Category 2 hurricane . Thereafter , Jeanne began to weaken due to dry air and was downgraded to a tropical storm 24 hours after peak intensity . The storm briefly tracked west @-@ northwestward and then westward , before becoming nearly stationary in the western Gulf of Mexico .

Moving slowly and erratically , Jeanne weakened further and was downgraded to a tropical depression on November 15 . The storm curved southward and completed a cyclonic loop , before being absorbed by a cold front on November 16 . Fringe effects of Hurricane Jeanne triggered a record @-@ breaking 23 @.@ 28 inches (591 mm) of rain at Key West , Florida within a 24 @-@ hour period . As a result of heavy precipitation , schools were and numerous businesses were closed , flights at Key West International Airport were grounded , and power outages and disruptions in telephone service occurred in Key West . In Texas , high tides caused flooding along much of the coast of the state , especially in Galveston . Offshore , several ships were caught off guard by the late season storm .

= = = Tropical Depression Fourteen = = =

While Jeanne meandered through the Gulf of Mexico , Tropical Depression Fourteen developed north of Panama on November 12 . Steered northward by deep southerly flow southeast of Jeanne , the depression oscillated in organization while tracking west @-@ northwestward . The cloud pattern between Jeanne and the depression briefly merged , with a line of thunderstorms moving across the Florida peninsula between the two systems . Westerly vertical wind shear increased on the depression in the process . By November 15 , the depression reorganized its convective organization while making landfall in western Cuba early on November 16 . Once again , vertical wind shear increased , causing convection to detach from the center of the depression .

Late on November 17 , the depression was absorbed by an intense " winter type storm " that was moving across the Southeastern United States . Shortly thereafter , the remnants of the depression crossed Central and North Florida . While crossing Cuba , the depression dumped heavy rainfall . No other impact is known to have occurred on the island . The depression impact from both while tropical and a remnant system . In Key West , sustained winds of 30 mph (45 km / h) and gusts to 40 mph (65 km / h) were reported . Across much of Florida , light rainfall was reported , peaking at

4 @. @ 81 inches (122 mm) in Brooksville .

= = = Hurricane Karl = = =

A low pressure area formed along a frontal boundary near the southeastern United States . The system slowly strengthened and developed into a separate vortex . Early on November 25 , it became a subtropical storm while centered about 825 miles (1 @, @ 328 km) southeast of Cape Race , Newfoundland . Shortly thereafter , the storm executing a tight counterclockwise loop as it rotated within the larger cyclone . About 18 hours later , the storm intensified and acquired enough tropical characteristics to be designated a hurricane . After being classified as a hurricane , Karl gradually strengthened while tracking eastward , eventually attaining its peak intensity with winds of 85 mph (140 km / h) and a minimum barometric pressure of 985 mbar (hPa ; 29 @. @ 09 inHg) .

Karl maintained winds of 85 mph (140 km / h) for approximately 18 hours and later weakened slightly while accelerating northeastward . On November 27 , the eye of Karl became ragged while passing within 230 miles (370 km) of the Azores and started to show signs of deterioration . A trough over the North Atlantic developed into the dominant low pressure area , causing Karl to turn northward around its periphery . By November 27 , Karl merged with another approaching system and was declared extratropical by November 28 , while it was centered roughly halfway between Cape Race , Newfoundland and Spain .

= = Storm names = =

The following names were used for named storms that formed in the north Atlantic in 1980 . The names not retired from this list were used again in the 1986 season . It was the first use for all of these names since the post @- @ 1978 naming change , except for Frances , which had been used in 1961 , 1968 , and 1976 . Names that were not assigned are marked in gray . The World Meteorological Organization retired one name in the spring of 1981 : Allen . It was replaced by Andrew in 1986 .

= = Season effects = =

This is a table of all of the storms that formed in the 1980 Atlantic hurricane season . It includes their duration , names , landfall (s) ? denoted by bold location names ? damages , and death totals . Damage and deaths include totals while the storm was extratropical or a wave or low , and all of the damage figures are in 1980 USD .