

= 1956 Atlantic hurricane season =

The 1956 Atlantic hurricane season featured a low number of tropical cyclones , although every tropical storm and hurricane affected land . There were twelve tropical storms , a third of which became hurricanes . One of the hurricanes strengthened to the equivalent of a major hurricane , which is a Category 3 or greater on the Saffir @-@ Simpson scale . The strongest hurricane of the season was Betsy , which was also the most damaging storm of the season : it destroyed 15 @,@ 000 houses and left \$ 40 million in damage in Puerto Rico . Betsy was also the deadliest of the season , having killed 18 people in the French West Indies , two from a shipwreck in the Caribbean Sea , and 16 in Puerto Rico . Tropical Storm Dora struck Mexico in September and killed 27 people .

The season officially started on June 15 , although an unnamed storm developed about a week prior over the western North Atlantic Ocean . A later storm that formed over the Gulf of Mexico on June 12 alleviated drought conditions in the south @-@ central United States . Hurricane Anna developed in late July and hit Mexico . Tropical storms Carla and Ethel both formed near the Bahamas and moved northeastward until dissipating . The lone hurricane that hit the contiguous United States was Hurricane Flossy . One of the final storms of the year , Greta , was an unusually large hurricane that produced high waves from Florida to the Lesser Antilles . It developed in the western Caribbean and moved across much of the southeastern United States , causing \$ 24 @.@ 8 million in damage and 15 deaths . There were also several tropical depressions , as well as one subtropical cyclone , in the season .

= = Season summary = =

The season officially began on June 15 , the date that the Weather Bureau office in Miami , Florida , under the direction of Gordon Dunn , began daily monitoring of all tropical disturbances and cyclones across the northern Atlantic Ocean . The agency had access to the Hurricane Hunters , a fleet of aircraft that obtain data by flying into storms . The Weather Bureau , in collaboration with other agencies , began a five ? year project in 1956 to obtain and analyze data on the structure of hurricanes . The season officially ended on November 15 .

There were a total of twelve tropical storms during the season , five of which were unnamed . Of all the storms , four were hurricanes . Compared to the average activity from the previous two decades , the season 's activity was below normal despite average sea surface temperatures and a normal number of tropical waves . Instead , the inactivity was the result of the subtropical ridge being located further south than normal , which decreased the atmospheric instability across much of the basin . Such a pattern was different from the more active 1954 and 1955 seasons . Several tropical depressions formed that did not attain tropical storm status , many of which formed beneath an unfavorable upper @-@ level trough .

The season 's activity was reflected with a cumulative accumulated cyclone energy ( ACE ) rating of 54 , which is categorized as being " below 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 . Subtropical cyclones are excluded from the total .

= = Storms = =

= = = Tropical Storm One = = =

= = = Tropical Storm Two = = =

In early June , a trough extended from the Gulf of Mexico to the western Atlantic Ocean . On June 12 , the interaction between the trough and a tropical wave spawned a tropical depression in the Bay of Campeche . The newly developed tropical cyclone tracked northward , quickly intensifying into a tropical storm . It attained peak winds of 60 mph ( 95 km / h ) on June 13 , although it never developed a well @-@ defined circulation . In addition , it had characteristics of both a tropical and extratropical cyclone , with cooler air aloft . Late on June 13 , the storm made landfall near Cocodrie , Louisiana , and its lowest pressure of 1 @, @ 001 millibars ( 29 @. @ 56 inHg ) was measured over land , suggesting it did not weaken substantially after landfall . After moving inland , it dissipated on June 15 over Arkansas .

As the storm moved ashore , it did not develop rainbands , unlike other tropical cyclones . The heaviest rainfall occurred in a 100 mi ( 160 km ) region east of where it moved ashore . Precipitation fell across the entire United States gulf coast , and the highest rainfall total was 8 @. @ 89 in ( 226 mm ) in Golden Meadow , Louisiana . The rains were beneficial to farmers , due to drought conditions persisting in the region . The storm produced higher than normal tides , peaking at 4 @. @ 7 ft ( 1 @. @ 4 m ) in Biloxi , Mississippi ; this was the highest since the 1947 Fort Lauderdale hurricane . The tides left damage to the Freeport Sulphur Company , as well as to boats , beaches , and piers . Three people died after their boat capsized , and there was another death after a driver skidded off the Lake Pontchartrain Causeway . A barge in the lake became disabled due to the storm and caused light damage to the causeway . Sustained winds during the storm 's passage peaked at 55 mph ( 89 km / h ) near Grand Isle , Louisiana , and a boat reported a gust of 60 mph ( 97 km / h ) near Pilottown , Louisiana . Damage was estimated at \$ 50 @, @ 000 .

= = = June tropical depression = = =

Shortly after the previous storm dissipated , another tropical depression developed on June 17 from a trough , about 500 mi ( 800 km ) east of the southern Florida coast . Although it briefly produced wind gusts of 40 mph ( 64 km / h ) , it never intensified beyond tropical depression status , and it dissipated on June 18 .

= = = July tropical depression = = =

A weak circulation developed late on July 4 beneath a cold mid @-@ level trough in the Gulf of Mexico . It moved north @-@ northwestward , and hit near Pensacola , Florida on July 6 . It dissipated on July 9 . Although it never intensified beyond tropical depression status , the system produced wind gusts of 47 mph ( 76 km / h ) in Panama City , Florida . As it moved ashore , the depression dropped heavy amounts of precipitation , with a total of 14 @. @ 22 in ( 361 mm ) reported in Whatley , Alabama . The rains washed away or eroded several highways and bridges , and also resulted in some agricultural damage . A train line from Mobile to Birmingham , Alabama , was washed out near Suggsville . Overall the damage was estimated at \$ 503 @, @ 000 , and there were no associated deaths .

= = = Hurricane Anna = = =

A westward @-@ moving tropical wave traversed the Lesser Antilles on July 20 . It moved across the Caribbean , and its thunderstorms increased on July 23 while passing south of Cuba and beneath a high pressure area . There is evidence that it could have developed a circulation on July 24 before it struck the Yucatán Peninsula . It is confirmed to have developed into a tropical depression on July 25 in the Bay of Campeche . As it continued west @-@ northwestward , it rapidly intensified into Tropical Storm Anna , and before moving ashore in Mexico near Ozuluama , Veracruz , on July 26 it attained hurricane status . Peak winds reached 85 mph ( 140 km / h ) , although Anna rapidly dissipated on July 27 as it moved further inland . The high winds wrecked several homes in poor regions of Tampico , Tamaulipas , while rainfall of 2 @. @ 5 in ( 64 mm ) resulted in flooding . The high winds severed telegraph lines from Tampico to San Luis Potosí . The

same area was affected by several hurricanes in the previous year . Damage totaled around \$ 50 @, @ 000 , and there were no deaths .

= = = Hurricane Betsy = = =

A tropical wave moved off the coast of Africa on August 4 . It developed into Tropical Storm Betsy developed on August 9 to the east of the Lesser Antilles . It rapidly developed into a 105 mph ( 165 km / h ) hurricane before striking Guadeloupe with a minimum central pressure of 979 mb ( 28 @. @ 91 inHg ) . There , Betsy heavily damaged 1 @, @ 000 houses and left severe crop destruction , and led to 18 deaths . As Betsy continued into the northeastern Caribbean , it capsized a ship , killing its crew of two . On August 12 , a slightly weakened Betsy struck southeastern Puerto Rico near Maunabo with winds of 100 mph ( 155 km / h ) and quickly crossed the island . Damage was heaviest where it moved ashore and in the territory 's central portion . 15 @, @ 023 houses were destroyed by Betsy , and multiple locations reported heavy crop damage , including Camuy , which reported a complete loss of the corn crop .

After exiting Puerto Rico , Betsy strengthened steadily as it headed generally northwestward , becoming a major hurricane on August 13 while centered north of the Turks and Caicos Islands . It attained peak winds of 120 mph ( 195 km / h ) the next day to the east of the Bahamas . Betsy later turned northeastward , attaining its lowest central pressure of 954 mbar ( 28 @. @ 17 inHg ) on August 17 . It later became extratropical early on August 18 . The remnants dissipated two days later to the north of the Azores . Hurricane Betsy was the first hurricane to be observed from the San Juan radar , and also resulted in the first hurricane warning on the island that was released on television . The hurricane left \$ 40 million in damage and 16 deaths , which prompted the declaration of a federal disaster area . Locally the hurricane was known as the Santa Clara Hurricane .

= = = August tropical depression = = =

A vigorous tropical wave spawned a tropical depression on August 28 near the Cape Verde islands . As it passed through the islands , the depression produced a minimum central pressure of 1 @, @ 004 mbar ( 29 @. @ 6 inHg ) on the island of Sal . Ships in the area reported winds as strong as 46 mph ( 74 km / h ) . The depression maintained a general westward track , eventually dissipating on September 6 to the northeast of the Lesser Antilles .

= = = Tropical Storm Carla = = =

The origins of Tropical Storm Carla were from a tropical wave that spawned a depression near the Bahamas on September 7 . It moved generally to the north , intensifying to a tropical storm the following day . An upper @-@ level low located to the northeast of Carla produced hostile conditions that prevented significant strengthening , and Carla had a structure which resembled a subtropical storm . An approaching cold front turned the storm to the northeast , and despite the unfavorable atmosphere , Carla intensified , reaching peak winds of 60 mph ( 95 km / h ) late on September 9 . The interaction between the storm and a high pressure system over the Great Lakes yielded a strong pressure gradient that produced gale force winds over New England . After Carla passed to the north of Bermuda , it became extratropical on September 10 , according to HURDAT ? the official hurricane database ? and the annual report in the Monthly Weather Review . As a post @-@ tropical cyclone , ex @-@ Carla strengthened to 70 mph ( 110 km / h ) before weakening and dissipating by September 16 .

= = = Tropical Storm Dora = = =

On September 10 , a tropical depression developed over the Bay of Campeche . Later that day , Hurricane Hunters observed winds of tropical storm force , indicating that the depression had

become Tropical Storm Dora , with winds of about 40 mph ( 65 km / h ) . Dora moved generally westward due to a ridge to its north . A reconnaissance flight on September 11 estimated hurricane @-@ force winds , but reanalysis assessed these as being unrepresentative of Dora 's true strength . Early on September 12 , Dora peaked at 60 mph ( 95 km / h ) shortly before striking land near Tuxpan with a minimum central pressure of 1 @,@ 000 mb ( 29 @.@ 53 inHg ) . It quickly dissipated early the next day , although the storm produced heavy rains across the region . The deluge caused a landslide as well as flooding , including along a river near San Andrés Tuxtla . In Puebla , there were 13 deaths and 20 injuries after a bus crashed into a washed out portion of the highway from Tuxpan to Mexico City . Overall , Dora caused 27 deaths in the country , but minor damage .

= = = Tropical Storm Ethel = = =

On September 11 , a tropical depression developed along the southern end of a quasi @-@ stationary cold front over Grand Exuma Island in the Bahamas . It moved to the northeast and encountered cold air from the north . This resulted in significant instability that allowed in quick strengthening . A Hurricane Hunters flight on September 12 reported winds of 76 mph ( 122 km / h ) in the storm 's northeast quadrant ; as a result , the depression was upgraded to Tropical Storm Ethel . The flight observed a well @-@ developed eye 20 mi ( 32 km ) in diameter , although they only observed hurricane @-@ force winds in one quadrant . Reassessment , however , discounted the observations of hurricane @-@ force winds from the aircraft as being unrepresentative of Ethel 's strength , and analyzed that Ethel peaked at 60 mph ( 95 km / h ) late on September 12 , with the lowest pressure reported being 999 mbar ( 29 @.@ 50 inHg ) . Shortly after reaching peak intensity , Ethel began weakening and dissipated on September 14 to the southwest of Bermuda .

= = = September tropical depression = = =

A vigorous tropical depression moved through the Cape Verde islands on September 13 , although the complete history of the cyclone is unknown . It dissipated before affecting the Lesser Antilles .

= = = Hurricane Flossy = = =

The origin of Flossy is uncertain ; one possibility is it developed from a system in the eastern Pacific , and the other is from a disturbance moving through the Caribbean . A tropical depression formed on September 20 just east of the Yucatán Peninsula and headed northwest across the landmass . Upon entering the Gulf of Mexico on September 22 , it quickly intensified into Tropical Storm Flossy . Continuing to intensify , the storm turned to the north and attained hurricane status on September 23 . Bearing winds of 85 mph ( 140 km / h ) , Flossy struck near Venice , Louisiana , on September 24 after turning to the northeast , crossing the Mississippi River Delta . The hurricane again moved into the Gulf of Mexico , continuing to the northeast and intensifying further until moving ashore near Miramar Beach , Florida , on September 25 as a strong Category 1 hurricane with winds of 90 mph ( 150 km / h ) and a minimum pressure of 974 mbar ( 28 @.@ 76 inHg ) . Later that day , Flossy became extratropical over Georgia after weakening into a tropical storm . The extratropical remnants moved through the southeast United States and emerged from North Carolina into the western Atlantic on September 27 . The storm was last observed on October 3 , near southernmost Newfoundland .

Flossy was the only hurricane of the season to strike the United States . Winds in Louisiana reached 84 mph ( 135 km / h ) , although an oil rig offshore Grand Isle reported a gust of 95 mph ( 153 km / h ) . The storm dropped heavy rainfall along its path , peaking at 16 @.@ 7 in ( 420 mm ) in Golden Meadow , Louisiana . The rainfall and the hurricane 's accompanying storm surge caused widespread flooding and beach erosion in southeast Louisiana . The flooding surmounted the eastern seawall in New Orleans , submerging an area of 2 @.@ 5 sq mi ( 6 @.@ 5 km<sup>2</sup> ) . Across the region , the resulting flooding drowned cattle and caused heavy crop damage . Hurricane Flossy

left about \$ 27 @. @ 8 million in damage ( 1956 USD ) , mostly from crop damage , as well as 15 deaths . The rainfall extended through the Mid @-@ Atlantic states , which alleviated drought conditions .

== = October South Atlantic depression == =

On October 9 , a tropical depression developed about 1 @, @ 300 mi ( 2 @, @ 100 km ) east of Puerto Rico . Ships in the area reported winds as strong as 45 mph ( 72 km / h ) , although the system dissipated within 24 hours .

== = October Mid @-@ Atlantic depression == =

On October 10 , another tropical depression formed further to the north of the previous storm . It possibly developed from the same tropical wave that spawned the previous depression , although they were not the same system . The depression maintained a general northward movement throughout its duration , dissipating on October 12 .

== = Tropical Storm Nine == =

== = Tropical Storm Ten == =

A low pressure area formed along a dissipating cold front to the north of Puerto Rico . The system moved westward , developing some tropical characteristics by October 13 . The next day , the system became a tropical storm over the Straits of Florida . On October 15 , it crossed over South Florida near Homestead with winds of 60 mph ( 95 km / h ) . The storm was never fully tropical , as its winds and precipitation extended far away from the center . The storm intensified further over the Florida peninsula , peaking at 65 mph ( 100 km / h ) early on October 16 . After affecting Florida , the storm crossed the western Atlantic and moved across the Outer Banks . The storm became extratropical on October 17 , and the next day it was absorbed by another extratropical storm .

The storm produced significant rainfall in a 50 mi ( 80 km ) region of Florida . The highest total in the state was 16 @. @ 28 in ( 414 mm ) in Kissimmee . There , the rains caused flash flooding that entered over 200 houses . The flooding flooded three state highways , and also left portions of Okeechobee inaccessible after reporting the heaviest rainfall in eight years . Large tomato fields were inundated , resulting in some crop damage . In portions of the state , the rains were beneficial due to previously dry conditions . The storm spawned a tornado in North Miami that injured one person . Damage throughout Florida was estimated at \$ 3 million , mostly in the Kissimmee area . In addition , two surfers drowned during the storm . Precipitation extended as far north as New Jersey , and coastal areas experienced high tides and gusty winds .

== = Hurricane Greta == =

The intertropical convergence zone spawned a tropical depression on October 31 a short distance to south of easternmost Cuba . The system tracked northward and crossed over eastern Cuba , and the system initially had characteristics of an extratropical cyclone . It eventually acquired tropical features and intensified into Tropical Storm Greta on November 1 . A high pressure area east of the Mid @-@ Atlantic states caused the depression to turn to the south on November 2 and loop to the southeast . Later that day the depression intensified into Tropical Storm Greta to the northeast of the Bahamas . It attained hurricane status on November 4 while maintaining a large size ( in fact , becoming one of the largest tropical cyclones known in the Atlantic basin ) ; such strengthening is unusual in storms moving in a southeast trajectory . Greta turned to the east and later northeast , reaching its peak of 100 mph ( 155 km / h ) late on November 4 due to the energy transfer between levels of the atmosphere . Cooler waters caused subsequent weakening and gradual loss of tropical

characteristics , and Greta transitioned into an extratropical storm on November 6 , dissipating the next day .

The extremely large size of Greta , in conjunction with the high pressure system to its north , produced strong winds and high waves across a large area of the western Atlantic . In Puerto Rico , waves of 20 ft ( 6 @. @ 1 m ) left heavy damage and killed one person who did not heed an evacuation order . Waves reached 25 ft ( 7 @. @ 6 m ) in the French West Indies , which destroyed 80 % of the structures at the port in Basse @-@ Terre , Guadeloupe . Further west , high waves left heavy damage in and around the beaches of Jacksonville , Florida . Overall damage was estimated at about \$ 3 @. @ 58 million .

= = = Tropical Storm Twelve = = =

= = Storm names = =

The following names were used for named storms ( tropical storms and hurricanes ) that formed in the North Atlantic in 1956 . Storms were named Anna , Betsy , Carla , Dora , Ethel , Flossy and Greta for the first time in 1956 .