

= Hurricane Gustav (1990) =

Hurricane Gustav was the only major hurricane to form during the 1990 Atlantic hurricane season . Developing out of a tropical wave on August 24 , Gustav tracked westward across the Atlantic Ocean , steadily intensifying . The storm reached hurricane @-@ status on August 26 and reached its initial peak intensity as a strong Category 2 hurricane the following day . After turning towards the north and weakening due to increased wind shear , the storm encountered more favorable conditions and re @-@ intensified , attaining peak winds of 120 mph (195 km / h) around 0600 UTC on August 31 . Gradual weakening took place in the following days. on September 2 , the former hurricane underwent an extratropical transition and dissipated shortly after completing it . At that time , the system was located roughly 230 miles (370 km) south of Iceland .

Hurricane Gustav initially posed a significant threat to the Lesser Antilles which had already suffered severe damages from Hurricane Hugo in 1989 . Several watches and warnings were issued for the islands between August 26 and 27 ; however , due to the northward turn , Gustav did not directly impact the region . Only light rain and large swells were reported . Offshore , a ship encountered the storm and sustained hull damage .

= = Meteorological history = =

Hurricane Gustav originated out of a tropical wave that moved off the western coast of Africa on August 18 . Shortly after , the system became embedded within the Intertropical Convergence Zone and tracked westward across the Atlantic Ocean . By August 23 , the system began to intensify while convective activity become consolidated around the center of circulation . By 0600 UTC on August 24 , the National Hurricane Center (NHC) estimated that the wave spawned Tropical Depression Eight roughly 965 miles (1 @, @ 555 km) east of Barbados . A weak ridge of high pressure to the north of the depression led to a general westward movement of the system . Gradually strengthening , the depression was upgraded to a tropical storm early on August 25 , at which time it was given the name Gustav .

A cold @-@ core low pressure system near Gustav was forecast to have an effect on the development of the system ; however , the tropical storm continued to intensify , attaining hurricane status around 1200 UTC on August 26 . Not long after attaining hurricane @-@ status , the ridge steering Gustav to the west began to break down , causing the hurricane to slowly turn towards the north . By 0600 UTC on August 27 , the storm attained Category 2 intensity , with winds of 100 mph (155 km / h) . Later that day , the storm made its closest approach to the Lesser Antilles , passing 205 miles (330 km) to the east . By this time , hurricane and tropical storm @-@ force winds extended 35 miles (55 km) and 175 miles (280 km) from the center respectively .

Tracking towards the north , Hurricane Gustav slightly weakened due to increasing wind shear , with winds decreasing to 80 mph (130 km / h) early on August 29 . A trough located near Bermuda and the ridge located to the east of the hurricane kept Gustav on a northward track . The following day , the hurricane re @-@ intensified and again reached Category 2 status . Early on August 31 , Gustav further developed into a major hurricane , a storm with winds of 111 mph (178 km / h) or higher . Around this time , Gustav began to interact with the nearby Tropical Storm Hortense , located roughly 460 miles (740 km) from Gustav . This initiated a Fujiwhara interaction between the two storms , causing Hortense to track counterclockwise around the more intense Gustav . Around 0600 UTC on August 31 , Hurricane Gustav reached its peak intensity with winds of 120 mph (195 km / h) and a minimum pressure of 956 mbar (hPa ; 28 @. @ 23 inHg) , making it the strongest storm of the season . At this time , the storm was located about 450 miles (725 km) east of Bermuda .

Throughout September 1 , the storm weakened and the following day , it began to track towards the north @-@ northeast as the ridge located to the east of it strengthened . Additionally , nearby ship reports of sustained winds indicated that tropical storm @-@ force winds extended 230 miles (370 km) northwest of the center of circulation . The trough located west of Gustav began accelerating late on September 2 , causing the hurricane to track towards the northeast , away from

Newfoundland . Around 1800 UTC , Gustav weakened to a tropical storm , as winds decreased to 70 mph (110 km / h) . By this time , Gustav had entered the Canadian Hurricane Centres area of responsibility , leading to them initiating advisories on the weakening storm . Early the next day , the former hurricane underwent and completed an extratropical transition . The last notice on the remnants of Gustav were while the system was located roughly 230 miles (370 km) south of Iceland .

= = Preparations and impact = =

At around 1600 UTC on August 26 , the National Hurricane Center issued hurricane watches for Dominica , Martinique , St. Martin , Anguilla , Guadeloupe , Antigua , Barbuda , Montserrat , and St. Kitts and Nevis . Six hours later , the watch was upgraded to a hurricane warning for Guadeloupe , Antigua , Barbuda , Montserrat , and St. Kitts and Nevis . Local meteorological agencies on the islands also declared small craft advisories . The local government in Montserrat mobilized the 100 member police force and 50 off @-@ duty volunteer army members . Supermarkets , hardware stores , banks , and pharmacies were specially opened for residents to purchase plywood , canned food , bottled water , and other hurricane kit items . Around 1300 UTC on August 27 , the hurricane watch for Dominica and Martinique was discontinued as Gustav no longer posed a direct threat to the islands . Three hours later , all watches and warnings were discontinued except for Antigua and Barbuda where a tropical storm warning and St. Martin where a tropical storm watch were in place . By 1900 UTC , once Hurricane Gustav turned towards the north away from the Lesser Antilles , all watches and warnings were discontinued .

Gustav had only effects on the Lesser Antilles . Large swells , light rain , and gusty winds were reported along the outer fringes of the hurricane . On August 30 , the Egyptian motorship Raseltin encountered rough seas in relation to Gustav , and the hull of the ship was damaged . The remnants of Gustav severely impacted a seismic research operation off the coast of the United Kingdom which took place between August 25 and September 12 . The purpose of the operation was to collect seismic reflection profiles of the Rockfall Plateau . On September 3 , the members of the team had to quickly retrieve all buoys that were deployed to avoid damage to the sensors . However , some of the research tools were damaged before they were recovered . In all , the storm delayed the project by two days .