

## = Hurricane Klaus ( 1984 ) =

This article is about the Hurricane Klaus of 1984 ; there was also a Hurricane Klaus that was retired in the 1990 Atlantic hurricane season .

Hurricane Klaus was a North Atlantic hurricane that hit the Leeward Islands from the west in November of the 1984 Atlantic hurricane season . Forming from a broad area of low pressure on November 5 , Klaus maintained a northeast movement throughout much of its path . After making landfall on extreme eastern Puerto Rico , it passed to the north of the Leeward Islands , resulting in strong southwesterly winds and rough seas . Klaus attained hurricane status and reached peak winds of 90 mph ( 145 km / h ) before becoming extratropical over cooler waters on November 13 . The storm dropped heavy rainfall in Puerto Rico , causing minor flooding and light damage . Klaus caused heavy marine damage in the Leeward Islands , including wrecking at least three ships . The Virgin Islands experienced heavy damage as well .

## = Meteorological history =

A broad area of low pressure gradually developed over the extreme southeastern Caribbean Sea on November 1 . It moved slowly westward and steadily organized . By November 4 , the system stalled to the north of Curaçao , which was followed by a turn to the northeast . Convection slowly organized as a surface circulation formed , and on November 5 the system developed into Tropical Depression Fifteen . Initially weak with only 20 mph ( 32 km / h ) winds , the depression steadily organized as it moved northeastward , and a Reconnaissance Aircraft mission confirmed the existence of the cyclone on November 6 as it was located midway between Puerto Rico and the Netherlands Antilles . Late on the 6th , the depression strengthened into Tropical Storm Klaus while located a short distance south of Puerto Rico .

Tropical Storm Klaus continued northeastward , and made landfall on extreme eastern Puerto Rico early on November 7 . The storm passed a short distance north of the Lesser Antilles , and became the first tropical cyclone in recorded history to affect the islands from the west . Favorable conditions allowed the storm to continue strengthening , and Klaus attained hurricane status early on November 8 . The hurricane accelerated to the northeast , and reached its peak intensity of 90 mph ( 145 km / h ) late on November 8 . After maintaining its peak strength for 30 hours , Klaus weakened slightly . Interaction with an upper @-@ level low turned the hurricane westward on November 11 , though an approaching trough of low pressure turned Hurricane Klaus to the northeast . Cold air and cooler waters weakened the convection around the center on November 12 , and Klaus degenerated to a subtropical storm . It accelerated to the northeast and degenerated to an extratropical storm on November 13 while located about 440 miles ( 700 km ) south @-@ southeast of Cape Race , Newfoundland . Six hours later , it was absorbed by another extratropical system .

## = Preparations =

Shortly after forming , gale warnings were issued for Puerto Rico , the Virgin Islands , the Netherlands Antilles of the Leeward Islands , Saint Kitts and Nevis , and Anguilla . Klaus was the first tropical cyclone on record to hit the Leeward Islands from the west , and as a result many were unprepared for the strong winds and rough seas from the southwest .

## = Impact =

While moving past Puerto Rico , Tropical Storm Klaus dropped heavy rainfall peaking at 25 @.@ 69 inches ( 653 mm ) in Guavate Camp in the southeastern part of the island . Much of the southern half of Puerto Rico reported over 7 inches ( 178 mm ) . Vieques received around 7 inches ( 178 mm ) of precipitation , while Culebra experienced over 10 inches ( 250 mm ) . The heavy rainfall resulted in freshwater flooding . The strongest winds of the storm remained offshore , and wind gusts peaked

at 37 mph ( 60 km / h ) in Roosevelt Roads Naval Station . Winds and rainfall on the island resulted in downed trees and power lines , though damage was minimal . Klaus struck the island on election day , causing slight disruptions to the process .

Saint John in the United States Virgin Islands reported over 15 inches ( 380 mm ) of rainfall in association with Tropical Storm Klaus . Both Saint Thomas and Saint Croix received around 10 inches ( 250 mm ) , while rainfall in the British Virgin Islands remained below 10 inches ( 250 mm ) . Tropical Storm Klaus caused severe flooding and extensive damage throughout the U.S. Virgin Islands . Strong southwesterly winds resulted in gale force winds and rough seas along the southwestern portions of the Leeward Islands . The rough waves caused considerable damage to marine interests in the area . In Anguilla , three ships were wrecked . 1 mile ( 1 @. @ 6 km ) off of Saint Martin , the rough seas wrecked a cruise ship . The 60 passengers and 23 crew members swam safely to shore , though one person was hospitalized . Rough seas also damaged local coral reefs . 10 @, @ 000 people were affected on the island of Dominica . There , the storm caused \$ 2 million ( 1984 USD , \$ 3 @. @ 9 million 2006 USD ) in damage and resulted in two fatalities . In Antigua , strong waves from the hurricane produced severe beach erosion , which endangered a highway behind an eroded beach . Beach erosion was reported in nearby Barbuda , as well . The British Virgin Islands sustained moderate damage totaling to \$ 152 million ( 1984 USD , \$ 315 million 2008 USD ) . St. Kitts and Nevis also saw much Leeward coastal damage resulting from the storm , the worst impact being the destruction of the Sandy Point town port in Saint Kitts .

= = Aftermath = =

In Anguilla , nine ships , including three that were wrecked from the hurricane , were intentionally sunk in 1990 to create an artificial reef . About a month after the storm passed , President Ronald Reagan declared the U.S. Virgin Islands a major disaster area . The declaration permitted use of federal funds for recovery . The Federal Emergency Management Agency provided an average relief fund of \$ 2 @, @ 128 ( 1984 USD , \$ 4 @, @ 147 2006 USD ) per affected person , the smallest return rate for a declared disaster in the Virgin Islands .

Because damage was not significant , the name Klaus was not retired after this year , but a different Hurricane Klaus in 1990 was retired , and was replaced by Kyle in 1996 .