

= Tropical Storm Katrina (1999) =

Tropical Storm Katrina was a short @-@ lived , weak tropical cyclone that produced minor damage across areas previously devastated by Hurricane Mitch in 1998 . Forming out of a broad area of low pressure in the southwestern Caribbean Sea on October 28 , 1999 , the disorganized tropical storm made landfall near Puerto Cabezas , Nicaragua with winds of 40 mph (65 km / h) on October 30 before weakening to a tropical depression . The remnants of the storm persisted until November 1 , at which time it was absorbed by a cold front on the northern end of the Yucatán Peninsula .

Throughout Central America , Katrina produced heavy rains , estimated up to 15 in (380 mm) in mountainous areas , triggering mudslides and flash flooding . Unlike Mitch , little damage resulted from Katrina and no fatalities were reported . Due to the lack of damage caused by the storm , the name was not retired and was re @-@ used during 2005 at which time it was retired due to catastrophic damage in the United States .

= = Meteorological history = =

Tropical Storm Katrina originated out of the remnants of a cold front tracking southward through the Caribbean Sea on October 22 . By October 26 , a broad area of low pressure , associated with disorganized shower and thunderstorm activity , developed over the southwestern Caribbean Sea . The following day , a surface low pressure became apparent after the system showed signs of rotation near the northern Panama coastline . On October 28 , a hurricane hunter flight into the circulation revealed a well @-@ defined low pressure system and resulting in the system being declared Tropical Depression Fifteen while situated roughly 175 mi (280 km) east of Bluefields , Nicaragua . The center of the newly classified depression was situated on the western edge of deep convection . The depression tracked slowly towards the northeast in response to the mid @-@ level flow it was embedded within .

By the morning of October 29 , a tropical wave , tracking towards the west , began to interact with the depression and leading to forecasters discussing a possible merger of the two systems . An upper @-@ level anticyclone over the eastern Caribbean produced significant wind shear over the depression , preventing the center from moving under the deep convection . However , a large convective banding feature developed to the north of the system . Several hours later , hurricane hunters flew through the storm and recorded surface winds of 40 mph (65 km / h) and a barometric pressure of 999 mbar (hPa ; 29 @. @ 5 inHg) , leading to the upgrade of the depression to a tropical storm . At this time , the storm received the name Katrina and peaked in intensity . By 0000 UTC on October 30 , the center of Katrina made landfall near Puerto Cabezas , Nicaragua at peak intensity . Within three hours , the storm weakened to a depression due to interaction with the mountains of Nicaragua and convection was limited to a small area on the western side of the center of circulation .

Katrina continued to track over Central America for most of October 30 and began to accelerate . Roughly 24 hours after landfall , the depression moved back over water , in the Gulf of Honduras ; however , by this time , there was no convection remaining around the system . The acceleration of the storm was due to a regeneration of the low @-@ level circulation northward . Due to unfavorable conditions , the weakened system failed to regenerate convection before moving back over land near the northern Belize @-@ Mexico border . Around this time , forecasters reported that the depression would re @-@ intensify once in the Gulf of Mexico before transitioning into an extratropical cyclone . Although situated over land , the depression began to regenerate convection , leading to increased rainfall over the Yucatan Peninsula . By the evening of November 1 , the depression weakened again and moved into the Gulf of Mexico ; however , unlike previous forecasts , the circulation was absorbed by a cold front hours later .

= = Preparations and Impact = =

Despite being a very weak storm , forecasters were wary about Katrina , as Central America was

devastated by Hurricane Mitch exactly one year earlier . There was considerable fear of additional flash flooding and mudslides across the mountainous region . Immediately after being declared a tropical depression , a tropical storm warning was issued for Nicaragua , and it was extended to the San Andrés islands of Colombia shortly afterward . Officials in Honduras evacuated 71 families from the district of Colón and another 17 families from other at @-@ risk areas . Along the coastline of Honduras , a red alert was declared as torrential rains were anticipated to produce deadly mudslides in areas still recovering from Mitch nearly one year ago .

Overall , damage was minimal as a result of Katrina . Only a few small mudslides were reported , along with some minor flooding , as the storm tracked across Central America . It was estimated that between 10 and 15 inches (250 to 375 mm) of rain fell across parts of the region as a result of Katrina , with one report of 3 @. @ 58 inches (91 mm) in six hours from the island of San Andrés east of Nicaragua . Roughly 1 @, @ 200 people were evacuated to emergency shelters in Honduras due to flooding . At least five bridges sustained damage and the cities of Tocoa and Trujillo were isolated as the Aguán and Silene rivers overflowed their banks . The water pipes recently constructed after being destroyed by Hurricane Mitch , worth HNL 170 @, @ 000 (US \$ 9 @, @ 000) were once again destroyed by Katrina . The most severely affected area in Honduras was the Valle del Aguán .

Between October 30 and November 1 , the remnants of Katrina produced widespread moderate rainfall across the Yucatan Peninsula , peaking at 6 @. @ 32 in (161 mm) in Cunduacán . Moisture from the remnants of the storm enhanced rainfall across southern Florida in association with the cold front that absorbed the system . Already saturated by previous rains , the National Weather Service issued flood watches for the region as torrential rains were expected to fall in relation to the system .

Following the storm , the United Nations deployed field assessment teams to survey the damage caused by Katrina . The International Organization for Migration helped relocate affected families and construct at least 300 new residences for victims of Katrina and Hurricane Mitch the year prior . The Pan American Health Organization also deployed assessment teams to survey the area for the possibility of post @-@ storm diseases . Due to the lack of any significant damage , the name Katrina was not retired and was re @-@ used in the 2005 season ; however , due to the catastrophic damage caused by the storm , it was retired in 2006 and was replaced with the name Katia .