= Hurricane Gilma (1994) =

Hurricane Gilma was one of the most intense Pacific hurricanes on record and the second of three Category 5 hurricanes during the active 1994 Pacific hurricane season . Developing from a westward tracking tropical wave over the open waters of the eastern Pacific Ocean on July 21 , the pre @-@ Gilma tropical depression was initially large and disorganized . Gradual development took place over the following day before rapid intensification began . By July 23 , the storm intensified into a hurricane and later a Category 5 storm on July 24 . As Gilma reached this intensity , it crossed into the Central Pacific basin , the fourth consecutive storm to do so .

The storm peaked early on July 24 with winds of 160 mph (260 km / h) and a barometric pressure estimated at 920 mbar (hPa ; 27 @.@ 17 inHg) . The following day , unknown factors caused the storm to suddenly weaken before increasing wind shear took over . The storm gradually weakened for the duration of its existence , turning slowly to the northwest . Late on July 28 , the storm brushed Johnston Atoll , bringing gusty winds and light rainfall to the region . Gilma persisted until July 31 at which time it was downgraded to a tropical depression and dissipated over open waters .

= = Meteorological history = =

Hurricane Gilma originated from a tropical wave that moved off the coast of Africa and traversed the Atlantic Ocean during the second week of July 1994 . The wave was of little note until it crossed Central America and entered the Northeastern Pacific hurricane basin on July 15 @-@ 16 . Convection began to increase ; however , the system remained disorganized . Tracking westward , gradual development took place , leading to the Dvorak classification being initiated on July 20 . Several hours later , the National Hurricane Center (NHC) designated the system as Tropical Depression Seven @-@ E. A strong ridge situated north of the depression steered the system steadily westward . This movement would remain the same throughout most of the storm 's existence . The depression was initially hard to locate due to its large size .

Following an increase in organization , the depression intensified into a tropical storm early on July 22 , at which time it was named Gilma . Deep convection developed around the center of circulation throughout the day and banding features became apparent on the west and south sides of the storm . Only 24 hours after becoming a tropical storm , Gilma quickly intensified into a hurricane . Low wind shear and warm sea surface temperatures , recorded up to 29 ° C (84 ° F) by a ship near the hurricane , allowed the storm to undergo rapid intensification . This rate of intensification continued throughout most of July 23 , resulting in the system attaining Category 4 status on the Saffir ? Simpson Hurricane Scale . By this time , a small , well @-@ defined eye had developed within the center of the hurricane surrounded by very deep convection .

On July 24 , the storm crossed 140 ° W , entering the Central Pacific Hurricane Center 's (CPHC) area of responsibility . Upon entering the region , Gilma became the fourth consecutive cyclone to move into the CPHC region . Several hours later , Gilma attained its peak intensity as a Category 5 hurricane with winds of 160 mph (260 km / h) and a barometric pressure estimated at 920 mbar (hPa ; 27 @.@ 17 inHg) . After maintaining this intensity for roughly 12 hours , the storm abruptly weakened . Within a few hours , maximum winds decreased by 45 mph (75 km / h) to 115 mph (185 km / h) , a low @-@ end Category 3 hurricane . The reason for the sudden weakening is unknown ; although the tropical upper tropospheric trough originally located over the storm , providing it with a favorable anticyclonic flow , shifted westward to the International Date Line . Additionally , the storm 's eye became obscured by cirrus clouds .

After maintaining Category 3 intensity for 24 hours , the combination of increasing wind shear and degrading outflow , Gilma resumed its weakening trend . Late on July 27 , the hurricane weakened to a tropical storm as winds fell below the 74 mph (119 km / h) threshold . Although weakening , CPHC forecaster Sasaki noted that the storm may have re @-@ intensified slightly shortly after being downgraded . The following morning , the center of Gilma became devoid of convection , exposing the low @-@ level circulation . By this time , the weakening storm began a west @-@ northwesterly track , eventually taking the storm within 100 mi (160 km) of Johnston Atoll late on

July 28 . Gradual weakening continued to take place throughout the rest of the storm 's existence , leading to its downgrade to a tropical depression on July 30 . Several hours after being declared a tropical depression , the storm dissipated early on July 31 over open waters south of Midway Atoll .

= = Impact = =

The hurricane 's only impact was on Johnston Atoll . The island received light rain , wind gusts to near gale force , and some surf . No loss of life or damage was reported . Gilma 's name was not retired after the 1994 season , and it was used again in the 2000 and 2006 seasons . However , in 2007 , the Central Pacific Hurricane Center requested that the name Gilma , along with 14 other names , be retired as they have become memorable due to the threat of damage . That proposal was not accepted and the name " Gilma " remains on the list for 2012 .