## = Cyclone Graham =

Cyclone Graham of the 2002 ? 03 Australian region cyclone season was a weak tropical storm that affected Australia during late February and early March 2003 . Graham originated from an area of convection that emerged onto water after sitting over Australia on 23 February . The interaction with a monsoon trough formed an area of low pressure that developed into Tropical Cyclone Graham on 27 February . The storm moved slowly to the east @-@ southeast , and after turning to the south it peaked as a tropical storm and made landfall on Western Australia the next day . The cyclone weakened as it moved inland , and dissipated on 1 March . The storm dropped heavy rainfall and caused high winds , which produced flooding and downed trees . One fatality occurred , though no significant damages were reported .

## = = Meteorological history = =

On 23 February 2003 , an area of convection that was situated over land for roughly a week emerged over open waters along the northern coast of Australia . The strengthening of a deep , persistent monsoon trough contributed to cyclogenesis , and a low pressure area formed . By 25 February , the low developed a banding feature in which the highest winds were located . Though the storm was located in an area of unfavorable wind shear , the Australian Bureau of Meteorology (BoM ) began to issue gale warnings on the system at 0100 UTC the next day , while the low was located several hundred miles north @-@ northeast of Port Hedland . The disturbance was initially nearly stationary as it showed signs of organization due to relaxed shear , and at 0700 UTC on 27 February , the Joint Typhoon Warning Center ( JTWC ) designated the storm as Tropical Cyclone Graham , as it had attained 80 km / h ( 50 mph ) 10 @-@ minute maximum sustained winds . The first warning was issued on Graham later that day .

Initially exhibiting characteristics of a monsoonal low , a mid @-@ level ridge to the south of Graham caused strong westerly winds that moved the storm slowly east @-@ southeastward . However , a deep trough eroded the ridge , allowing the cyclone to move more towards the south . According to the JTWC , the storm had intensified late on 28 February , though at the same time the BoM noted the slight weakening of the storm . Graham reached its peak intensity that day while nearing the coast .

The storm made landfall at Western Australia 's Eighty Mile Beach at 1400 UTC on 28 February , and began to weaken . The storm had dissipated on 1 March ; the BoM issued their last advisory on the cyclone at 0400 UTC that day , while similarly , the JTWC issued their last advisory just two hours later . The storm 's remnants died out in the country 's desert .

## = = Impact = =

In advance of the cyclone , the communities of Wallal , Sandfire , Punmu and Telfer were put on alert . A warning was issued for Bidyadanga , Pardoo and Cotton Creek . The storm 's landfall in Western Australia brought heavy rainfall and high winds . The storm dropped 163 mm (  $6\ @. @. 4\ in$  ) of rain at Telfer in one night , over half the town 's annual average ; total rainfall reached 175 mm (  $6\ @. @. 9\ in$  ) there . The heavy rain caused flooding and road closures , and swelled a river passing through Fitzroy Crossing , though the river only topped its banks slightly . Near that town , at Blue Bush Creek , while a group of people attempted to cross floodwaters , two men were swept away . Both men were rescued , though one died before emergency services arrived . In addition to the flooding , a number of trees were downed . No significant damages were reported .

Following the storm, the name Graham was retired from the Australian region basin.