= Cyclone Fay =

Cyclone Fay was an intense , late @-@ season tropical cyclone which struck Western Australia during the 2003 @-@ 04 Australian region cyclone season . Forming from an area of low pressure on 12 March , Fay was the only Category 5 cyclone during the season . The system had a minimum pressure of 910 mbar (hPa ; 26 @.@ 87 inHg) and maximum sustained winds of 210 km / h (130 mph) . Moving towards the southwest and eventually towards the south , Fay gradually strengthened as it paralleled the northwestern coast of Australia , and made landfall on the Pilbara coast on the morning of 27 March as a Category 4 cyclone .

While no fatalities were reported , the cyclone brought record @-@ breaking rainfall to Australia , which led to a sharp decrease in the country 's gold output . The cyclone also caused minor damage in the Pilbara region of Western Australia . In the spring of 2005 , the Australian Bureau of Meteorology retired the name Fay from use , and it will never be used again as a cyclone name .

= = Meteorological history = =

The low pressure system that later developed into Fay formed in the Gulf of Carpentaria on 12 March 2004 . Through 15 March satellite imagery indicated increasing convection and organisation of the system , as well as decreasing wind sheer aloft , adding to the favourable conditions for strengthening . On 16 March , the system was designated Tropical Cyclone 18S by the Joint Typhoon Warning Center , with winds of 30 km / h (20 mph) . The system then crossed Melville and Bathurst Islands and moved into the Timor Sea , where it intensified , and was given the name Fay by the Australian Bureau of Meteorology . Fay began to turn southward on 17 March ; simultaneously , the cyclone continued to intensify due to a weakening of vertical wind shear , and well @-@ defined outflow became apparent on satellite imagery . The following day , a steering ridge to the south of the system strengthened and pushed the cyclone away from the coast and to the northwest . At the same time , the system continued to intensify due to the favourable environment in the upper atmosphere . However , hot , dry air flowing into the system from the south , combined with vertical wind sheer , kept the storm from strengthening as much at its maximum potential rate .

By 19 March Fay 's track had turned to the west @-@ southwest , and over the next day it continued to strengthen in due to favourable upper level outflow and weak vertical sheer . On 21 March , Fay became a Category 5 cyclone on the Australian Region Tropical Cyclone Intensity Scale . A mid @-@ latitude trough caused the steering ridge to weaken , and subsequently , Fay to turn to the south . Over the next two days , the environmental shear around the cyclone decreased , which would normally have led to intensification ; however , as the shear decreased , the cyclone also moved over an area of dry air , weakening the system . By 23 March , Fay had moved in a loop , and the system weakened to a Category 2 . Over the next day , favourable outflow counteracted the dry air that had weakened the system , and a banding eye feature was observed on satellite imagery . Fay then encountered moister air as it moved southward , leading it to re @-@ intensify on 25 March . A weak eye of 10 nm was observed on 26 March which grew to 15 nm as the day went on . Strengthening into a Category 4 system early on 27 March , Fay made landfall on the Pilbara coast between 8 am and 9 am AWST (0000 and 0100 UTC) with winds of 170 km / h (105 mph) , weakening below cyclone strength somewhere between the towns of Nullagine and Telfer .

= = Preparations , Impact , and aftermath = =

Evacuation centres were set up in the Kimberley region of Western Australia . Schools and businesses were also closed , and flights in and out of the area were cancelled . Shelters were set up for people who could not take shelter in their own homes . Residents of the Bidyadanga Aboriginal community were warned of particularly dangerous storm tide as the centre of the cyclone passed to their west . The communities of Sandfire and Pardoo were also warned of dangerous storm tide . Cyclone warnings were issued for areas threatened by the system , and communities in

the path of the system were warned of expected high rainfall , as amounts greater than 200 mm (7 @.@ 9 in) were expected .

Minor damage to buildings and limited tree damage were reported in the vicinity of Port Hedland . In the town of Nullagine , 120 residents were evacuated to the town 's police station , as heavy rain caused flooding . Flooding of the De Grey and Oakover Rivers led to the town being segmented into 4 sections . As the system passed near the Yarrie mine 200 workers were forced to go under lockdown for 8 hours . The cyclone overturned accommodation units , " shredded " water tanks , cut power lines , and damaged the rail line connecting the mine to Port Hedland .

Heavy rainfall was reported along the track of the cyclone , with a two @-@ day total of 701 mm (27 @.@ 6 in) reported at the Nifty Copper Mine and 359 mm (14 @.@ 1 in) reported in Telfer . The rain from the cyclone delayed the construction of a gas pipeline at the mine for over 7 months , while the pipeline company waited for the floodwaters to dissipate . According to Newcrest Mining , the rainfall amounts at Telfer exceeded the records going back at least 100 years . The heavy rainfall from both Cyclone Monty in February and Cyclone Fay caused gold output in Australia for the quarter to be the lowest in 10 years .

A survey performed by the Australian Institute of Marine Science discovered that the Scott Reef suffered " severe damage , " and many coral colonies were uprooted or damaged . Because of the record @-@ breaking rainfall produced across northwestern Australia , the Bureau of Meteorology retired the name Fay after its usage .