

= Typhoon Judy (1982) =

Typhoon Judy , known in the Philippines as Typhoon Susang , was the third tropical cyclone to affect Japan during the 1982 Pacific typhoon season . Forming east of the Philippines in tandem with another system on September 4 , the disturbance continued to intensify , and was upgraded into a tropical storm early on September 6 and a typhoon on September 8 while tracking northwestward . On September 9 , Judy attained its peak intensity , with winds of 150 km / h (90 mph) . Thereafter , increased wind shear took a toll on the typhoon , as it turned northward on September 11 in the general direction of Japan under the influence of a mid @-@ latitude cyclone . Judy passed over southeastern Japan on September 12 ; by this time , the typhoon had weakened considerably . Judy became an extratropical cyclone almost immediately thereafter .

Across Japan , a total of 26 people were killed , eight others were rendered as missing , and 86 were injured . A total of 61 @,@ 000 homes were flooded . Three boats sank and highways were cut in 956 locations . It is estimated that 1 @,@ 100 landslides occurred during the passage of the cyclone . Downtown Tokyo sustained the worst of the damage , where 8 @,@ 000 homes were flooded . Approximately 200 @,@ 000 travelers were stuck after 25 train lines were flooded , including 17 @,@ 000 individuals who were stranded on 40 stalled trains .

= = Meteorological history = =

The origins of Typhoon Judy can be traced back from a highly active monsoon trough along the low @-@ latitudes of the Western Pacific basin in the first week of September . Two tropical disturbances soon developed , the first of which later spawned Typhoon Irving . By September 4 , the systems developed a surface circulation . Later that day , the Joint Typhoon Warning Center (JTWC) issued a Tropical Cyclone Formation Alert (TCFA) on the second system . This system rapidly became better organized , and on September 5 , the Japan Meteorological Agency (JMA) starting watching the second system . Following an increase in organized thunderstorm activity near the center , the JTWC started issuing warnings on Tropical Depression 19 at 1600 UTC that day . At 2200 UTC on September 6 , Hurricane Hunters reported winds of 80 km / h (50 mph) and a pressure of 994 mbar (30 inHg) . Based on this , both the JTWC and the JMA upgraded the depression into Tropical Storm Judy early the next day .

Tropical Storm Judy was initially expected by the JTWC to move west @-@ northwest because a subtropical ridge was expected to build north of the system . However , the ridge did not build , which enabled Judy to track northeastward under the influence of a tropical upper @-@ tropospheric trough (TUTT) located to north of the cyclone . Meanwhile , the storm held its intensity of about 36 hours , but on September 7 , the JMA upgraded the low into a severe tropical storm . Due to the lack of wind shear , Judy continued to intensify . Meanwhile , the Philippine Atmospheric , Geophysical and Astronomical Services Administration also briefly monitored the storm and assigned it with the local name Sausang . At 0600 UTC on September 8 , the JMA upgraded the system to typhoon status . The storm intensified slightly thereafter , and early the next day , the JMA estimated that Judy attained peak intensity of 150 km / h (90 mph) and a pressure of 950 mbar (28 inHg) . Later on September 9 , the JTWC reported that Judy reached peak intensity of 165 km / h (105 mph) , equivalent to a mid @-@ level Category 2 hurricane on the United States @-@ based Saffir @-@ Simpson Hurricane Wind Scale .

Shortly after its peak , cool air began to take a toll on the system as it ingested the remnants of the TUTT . By late on September 9 , virtually all deep convection associated with Judy was removed from the center . Based on this , the JMA lowered the intensity of the system to 130 km / h (80 mph) . Moving slower than expected due the strong northwesterly flow over the Sea of Japan , the system became better organized due to a brief decrease in wind shear . However , Typhoon Judy failed to intensify further . On September 11 , Judy began to accelerate in the general direction of Japan as interaction with the TUTT ceased . The next day , wind shear once again increased significantly ; consequently , thunderstorm activity decreased along the southwest portion of Judy . Despite this , no change in intensity occurred . At 0800 UTC on September 12 , Judy moved

onshore at Omezaki Point on Honshu , despite still producing hurricane @-@ force winds . Four hours later , however , the JMA demoted Judy to a severe tropical storm . Midday on September 12 , the JTWC downgraded Judy to a tropical storm . Several hours later , the agency noted that Judy had transitioned into an extratropical cyclone , with the JMA following suit the next day . On September 15 , the JMA ceased monitoring the system .

= = Impact = =

Upon making landfall in Japan , 730 mm (29 in) of rain fell in Oshima , including 713 mm (28 @. @ 1 in) of precipitation within 24 hours . Additionally , Kikugawamakinohara sustained a peak total of 91 mm (3 @. @ 6 in) in an hour . Furthermore , a wind gust of 115 km / h (71 mph) was measured in Tsukubasan . A total of 34 people were killed and 86 were hurt . A total of 61 @, @ 000 homes were flooded . Three boats sank . Downtown Tokyo sustained the worst of the damage . Nearby , the Kanda River overflowed their banks , flooding 8 @, @ 000 dwellings , including 2 @, @ 000 in the Shinjuku entertainment district . Throughout Tokyo , 590 @, @ 100 homes lost power ; however , power service was quickly restored to all but 20 @, @ 000 . In Shizuoka and Kanagawa , eight people perished because of mudslides . Offshore , one person died due to 3 to 4 m (9 @. @ 8 to 13 @. @ 1 ft) waves . One person died and three others were lost when a boat with 10 anglers was capsized due to rough seas off the coast of Kobe . Throughout Tokyo , 12 people perished and three were reportedly missing . Elsewhere , in Iiyama , a river overflowed their banks , flooding 631 residencies . Approximately 300 km (185 mi) north of Tokyo , in Sendai , a three @-@ story apart complex was turned upside @-@ down . All the residents living in the complex were rescued .

About 50 @, @ 000 police men and soldiers were mobilized to help with rescue work . A total of 105 homes were destroyed . In addition , 1 @, @ 100 landslides were reported while river banks broke in 20 places . According to officials , highways were cut in 956 spots and bridges were damaged in 43 locations . Around 200 @, @ 000 passengers were stranded after railroad lines near Tokyo were inundated in 25 places . Moreover , around 17 @, @ 000 persons on 40 stalled trains were stranded for the night . Air travel in Tokyo and Handa were halted due to strong winds .

Typhoon Judy was the second storm to affect Japan within a month , as well as the third to system affect the nation during the 1982 Pacific typhoon season . From all three systems combined , the death toll exceeded 100 . A few weeks later , Typhoon Ken became the fourth storm of the year to rake the islands of Japan .