

= Hurricane Frank (2010) =

Hurricane Frank was the last of three hurricanes in the 2010 Pacific hurricane season , which set a record low within modern day records for the basin . It formed from an area of thunderstorms from the Caribbean Sea , and became Tropical Depression Nine @-@ E on August 21 while located just south of the Mexican Coast . It moved northwest , and became Tropical Storm Frank only 12 hours after it was declared a depression . It strengthened to its initial peak as a moderate tropical storm , and weakened due to increasing wind shear late on the August 23 . It later recovered , and became a hurricane on August 25 . After peaking as a strong Category 1 hurricane , it rapidly weakened , and dissipated on August 28 . Although Frank never made landfall , it did impact western Mexico . A total of six people were killed with over 800 @,@ 000 people affected .

= = Meteorological history = =

Frank origins were difficult to track from a tropical wave from the west coast of Africa . A large area of thunderstorms formed near the Windward Islands . Atmosphere convection fluctuated as its associated tropical wave moved across the Caribbean Sea and a mid @-@ level circulation developed . Shower and thunderstorm activity increased as it crossed Central America , and a broad area of low pressure formed about 115 mi (185 km) south of the Mexican coast on August 19 . The system was in a favorable environment , thus gradual development was anticipated . On August 21 , the atmospheric convection had become better organized , and it develop curved rainbands . On 1800 UTC August 21 , advisories were initiated on Tropical Depression Nine @-@ E while located roughly 205 mi (330 km) southeast of Salina Cruz , Mexico .

Upon becoming a tropical cyclone , the storm was located in a favorable environment with sea surface temperatures near 30 ° C (86 ° F) and fairly weak wind shear . As such , the National Hurricane Center (NHC) anticipated the storm to reach minimal hurricane intensity . Due to weak steering currents , the depression drifted westbound . Initially there was no change in organization , but on August 22 , the cloud patterns improved . Based on estimates from the Tropical Analysis and Forecast Branch (TAFB) , the depression was upgraded into Tropical Storm Frank on 1200 UTC August 22 . Although deep convection had weakened , the NHC re @-@ assessed the intensity at 60 mph (95 km / h) later that day . However , high levels of northeasterly wind shear caused the system to weaken slightly the next day , and by early August 24 , the NHC was no longer forecasting the storm to become a hurricane . Despite the shear , there was a burst of deep convection later that day and a gradual increase in organization . Microwave imagery at 0834 and 1714 UTC showed a closed ring of thunderstorm activity that resembled an eye and by early August 25 , the cyclone was just below hurricane intensity .

During the next six hours , Frank became much better organized with a large area of very deep convection near the center . Based on this , the NHC upgraded the system into a hurricane . Gradually intensifying , an eye became intermediately visible on infrared imagery and a persistent eye was visible via microwave imagery . On 1800 UTC , Frank reached its peak intensity of 90 mph (150 km / h) and 978 mbar (hPa ; 28 @.@ 88 inHg) while located 350 mi (560 km) south of the southern tip of the Baja California Peninsula . While at peak intensity , satellite imagery showed a small but distinct eye surrounded by a central dense overcast , or a large area of thunderstorm activity . Moving west @-@ northwest , Frank began a weakening trend overnight as the eye became less defined . Continuing to weaken , Frank became less organized and its eye collapsed . On August 27 , the NHC downgraded Frank into a tropical storm , with poorly organized convection located west of the center due to strong wind shear . As such , the agency predicted the storm to weaken into a tropical depression within the next 36 hours . Frank rapidly lost all thunderstorm activity because of cooler water , and the storms intensity was reduced to a swirl of clouds while it turned towards the north due to a mid @-@ level trough . The cyclone weakened back into a tropical depression early on August 28 . Frank degenerated into a remnant low while located 230 mi (370 km) southwest of the southern tip of Baja California . The remnant low dissipated early on August 29 .

= = Preparations , impact , and aftermath = =

Although Frank never made landfall , it did come very close to the Mexican Riviera , and upon development , a tropical storm watch was issued for parts of the Mexican coast by the local government . On 1800 UTC August 22 , a tropical storm warning was issued . These watches and warnings were dropped on August 24 as the system moved away from the coast . The National Hurricane Center noted the possibility of up to 10 in (250 mm) in the high terrain of Mexico . These rains had the potential to produce life @-@ threatening flash floods and mudslides . Officials gave Frank a hazard rating of intense for the Mexican Pacific , and strong for Baja California Sur . In Guerrero , Michoacán , and Jalisco , alerts were issued due to the threat of torrential rainfall . Forecasters also noted the possibility of the storm affecting Sinaloa , with high waves being the main threat .

The maximum 24 ? hour rainfall total was 14 in (360 mm) in Miguel de la Madrid , Oaxaca . In addition , seven other sites received more than 4 in (100 mm) of rain in a 24 @-@ hour period . The storm also produced gusty conditions along the Mexican coast . In addition , a total of six deaths were reported . A total 30 homes were destroyed with 26 others damaged due to flooding . Two major roads were damaged with another road blocked due to a landslides . Several rivers overflowed their banks , thus causing 171 rural communities to be flooded in seven municipalities . In the state of Tabasco over 800 @,@ 000 people were affected . The city of Villahermosa received the worst flood since 2007 , and a total of 8 @,@ 500 people were victims of the storm . To prevent the situation from getting worse , residents piled up sandbags . In Oaxaca , four people were killed . A mudslide in the municipality of Totontepec Villa de Morelos caused two farmers to die . Another mudslide in Oaxaca caused six vehicles to drive off Federal Highway 182 , causing two more deaths . A total of 60 @,@ 000 people were homeless . Many communities were isolated as several bridges and roads were destroyed due to the heavy rainfall .

In the aftermath of the storm , the Mexican Army provided aid for the people affected . A total of 110 communities requested assistance from the government . By September 14 , an estimated 200 @,@ 000 food packages were distributed to the region . Damage repairs from Hurricane Frank totaled to 100 million pesos (\$ 8 @.@ 3 million USD) .