= Hurricane Dalilia (1989) =

Hurricane Dalilia was the only tropical cyclone during 1989 to affect the Hawaiian Islands . A tropical disturbance developed into a tropical depression on July 11 and into Hurricane Dalilia on July 13 . Dalilia crossed 140 ° W shortly after reaching its maximum intensity and entered the Central Pacific Hurricane Center 's area of responsibility . The storm accelerated , and headed directly towards the Hawaiian Islands . Hurricane Dalilia passed just south of the Hawaiian Islands as a tropical storm before dissipating July 21 as it interacted with a trough . It then interacted with the remains of Tropical Storm Erick and reformed into a depression on July 24 . A trough then accelerated the remnants towards the Aleutian Islands on July 28 . The cyclone 's effects were minimal . There was high surf , and some gusty winds . Damage was minor , and mainly limited to downed power lines . However , many areas throughout the island chain received more than 5 in (130 mm) of precipitation .

= = Meteorological history = =

Hurricane Dalilia originated out of a tropical disturbance embedded in the Intertropical Convergence Zone (ITCZ) during early July 1989 off the west coast of Africa . As the system became increasingly organized , the disturbance 's outflow suppressed the ITCZ . By July 9 , the disturbance had entered the eastern Pacific ocean and sufficient convective development to prompt Dvorak Technique intensity estimates . Continued development took place in the following days ; on July 11 , the National Hurricane Center determined that the disturbance spawned a tropical depression 792 mi (1 @,@ 275 km) southwest of Cabo San Lucas . Upon being designated a depression , it was still partially embedded within the ITCZ , inhibiting rapid development . In fact , the National Hurricane Center did not operationally begin advisories on the depression until almost 24 hours later . After the National Hurricane Center began issuing advisories , the depression quickly became more well @-@ defined , as it began separating from the ITCZ on July 12 . In addition , significant further intensification was expected , as sea surface temperatures (SST 's) were greater than 78 @.@ 8 ° F (26 ° C) . Only a few hours later , satellite imagery showed a significant increase in convection . Tracking in a general west @-@ northwest direction , the depression intensified into a tropical storm late on July 12 , at which time it was given the name Dalilia by the NHC .

Dalilia rapidly intensified after becoming a tropical storm , and several computer models predicted it to reach winds of 100 mph (155 km / h) by July 15 . Six hours later , the National Hurricane Center upgraded Dalilia to a hurricane , after winds were estimated at 75 mph (120 km / h) , and satellite imagery suggested that the hurricane was continuing to organize . However , post @-@ storm analysis show this upgrade as several hours premature . While Dalilia developed well @-@ defined spiral convective bands , it had remained a minimal hurricane , since no eye had formed . Despite earlier forecasts for low wind shear values , upper @-@ level winds appeared less favorable for further intensification , after water vapor imagery showed several upper @-@ level low pressure areas to the north and northeast of Dalilia . Although the National Hurricane Center operationally held the intensity of Dalilia at minimal hurricane status for a while ; post @-@ analysis data show that Dalilia was slowly intensifying . By July 16 , the storm developed a central dense overcast , leading to further intensification . Although the storm tracked near cool waters , a well @-@ developed outflow allowed it to maintain hurricane @-@ intensity .

Shortly before crossing into the Central Pacific Hurricane Center 's area of responsibility , the storm reached its peak intensity with winds of 90 mph (150 km / h) and a central pressure of 977 mbar (hPa ; 28 @.@ 85 inHg) . After crossing 140 ° W , Dalilia weakened to a minimal hurricane . The storm maintained this intensity until July 19 , at which time the system slowed and turned northwest . The following day , the weakening tropical storm brushed the Hawaiian Islands to the south , eventually curving away from the island chain on July 21 . Later that day , Dalilia further weakened to a tropical depression , with the Central Pacific Hurricane Center issuing their final advisory at that time . The remnants of the former hurricane continued to track northwest . On July 24 , the system interacted with the remnants of Tropical Storm Erick and may have briefly re @-@ attained tropical

storm intensity ; however , by July 28 , the storm was rapidly tracking north through the Aleutian Islands . The remnants of Dalilia dissipated shortly thereafter .

= = Preparations and impact = =

In preparation of the storm , a high surf advisory and a tropical storm watch were issued for the Hawaiian Islands . Officials urged residents to stock up on supplies and they closed beaches . Even though the Central Pacific Hurricane Center remarked that that watch will likely be upgraded into a hurricane warning , this failed to occur ; instead , the watch was discontinued on July 20 because meteorologists were now expecting the storm to pass south of the island chain .

While tracking near the Hawaiian Islands , Dalilia produced waves up to 20 ft (6 @.@ 1 m) along south @-@ facing coastlines . Along the coasts of Ka 'u and South Kona , winds gusted up to 45 mph (75 km / h) ; the winds caused minor damage , mainly downed power lines . Most areas on Oahu received up to 3 in (76 mm) of rain with localized areas reporting up to 8 in (200 mm) . Hurricane Dalilia contributed to a record rainfall total for the month of July in Honolulu with 2 @.@ 33 in (59 mm) falling during the storm 's passage . The heaviest rainfall was recorded on the north side of Kauai , with localized areas receiving rainfall in excess of 10 in (250 mm) . Along the southeast slopes of Mauna Loa , upwards of 9 in (230 mm) of rain fell . The remnants of the storm continued to produce unseasonable rains in the Northwestern Hawaiian Islands through July 28 . Heavy rains caused minor flooding which forced transit officials to shut down several roads . Many power lines were down , which produced minor wind damage . Despite causing power outages , there were no reports of injuries or major property damage . Overall , impact from Tropical Storm Dalilia was less than anticipated .