

= Hurricane Dot ( 1959 ) =

Hurricane Dot of August 1959 was at its time the costliest tropical cyclone in Hawaiian history . Dot was first identified as a strong tropical storm southeast of Hawai'i on August 1 . The storm was potentially a continuation of a previously unnamed tropical cyclone that was monitored west of the Baja California Peninsula from July 24 @-@ 27 , but was never confirmed due to a lack of ship reports . Dot was quick to intensify , reaching hurricane intensity six hours after naming . By August 3 , Dot reached its peak intensity , with maximum sustained winds reaching 150 mph ( 240 km / h ) . Intensity leveled off afterwards as Dot tracked westward before making a curve towards the northwest on August 5 , after which the hurricane weakened at a faster clip . Dot made landfall the next day on Kauai as a minimal hurricane before dissipating west of the Hawaiian Islands on August 8 .

Dot produced heavy rainfall and gusty winds as it passed south of the Big Island , Lanai , Maui , Molokai , and Oahu , resulting in minor damage . In Oahu , some homes along the coast were unroofed , and damage from wave action was also reported . Damage from these four islands totaled US \$ 150 @, @ 000 , and two indirect deaths occurred in Lanai . Extensive damage occurred on Kauai as Dot made landfall , producing wind gusts as high as 103 mph ( 166 km / h ) and toppling trees and power lines . Widespread power outages affected the island , causing telecommunications and water systems to fail . Although infrastructure was damaged to an extent by floodwater and strong winds , crops suffered the most losses . Cane sugar crops sustained US \$ 2 @. @ 7 million in losses . Overall , damage from Dot across Hawaii totaled US \$ 6 million , and a disaster area declaration and state of emergency took effect for the archipelago after the hurricane 's passage .

= = Meteorological history = =

On July 24 , the SS Pacificus encountered a storm with maximum sustained winds meeting the threshold of tropical storm status roughly 1 @, @ 000 mi ( 1 @, @ 600 km ) west of the Baja California Peninsula . Despite reports that the location of the system remained vague , the Joint Typhoon Warning Center ( JTWC ) began issuing tropical cyclone advisories and warnings on the unnamed disturbance . Tracking west @-@ northwestward , the tropical storm peaked with winds reported at 65 mph ( 105 km / h ) shortly after its discovery ; however , the JTWC discontinued its monitoring of the cyclone on July 27 due to a lack of ship reports confirming the location of the tropical storm .

At 1800 UTC on August 1 , an unidentified ship roughly 950 mi ( 1 @, @ 550 km ) southeast of Hilo , Hawaii reported 70 mph ( 110 km / h ) winds within a storm , prompting the JTWC to initiate advisories on Tropical Storm Dot . Despite an apparent correlation between Dot and the preceding unnamed tropical cyclone , the lack of ship reports between July 27 and August 1 prevented the agency from confirming that the two systems were the same . Nonetheless , development upon designation was rapid as the system tracked westward , with reports from the SS Sonoma indicating that Dot had intensified to hurricane strength by August 2 . Rapid intensification continued , and at 0000 UTC on August 3 , reconnaissance aircraft found winds of 150 mph ( 240 km / h ) and a minimum barometric pressure of 952 mbar ( hPa ; 28 @. @ 11 inHg ) , making Dot a Category 4 hurricane on the modern @-@ day Saffir ? Simpson hurricane wind scale . Later analysis indicated that these figures constituted the hurricane 's peak intensity .

After peaking , Dot slightly weakened , but maintained its Category 4 status for more than two days ; during that time it boasted an unusually large eye spanning as much as 40 mi ( 65 km ) in diameter . Late on August 4 , a fourth reconnaissance flight into the storm found surface winds of 160 mph ( 260 km / h ) , but this reading was discounted on the basis that pressures were unusually high for a storm of that intensity . On August 5 , Dot passed 90 mi ( 145 km ) south of Ka Lae before the storm curved sharply towards the northwest late that day . A more definite weakening phase began after this point , and during the night of August 6 , Dot made landfall on Kauai with winds estimated at 85 mph ( 140 km / h ) , making the storm a Category 1 @-@ equivalent at the time of landfall . After

traversing the island , Dot was downgraded to tropical storm intensity and curved back to the west before eventually dissipating on August 8 .

= = Preparations , impact , and aftermath = =

On August 3 , the United States Weather Bureau issued a hurricane watch for coastal areas of the Big Island in Kau and Puna districts . As Dot swept by the Hawaiian islands , various gale warnings and small craft warnings shifted westward to reflect the hurricane 's predicted path . Due to the storm 's sudden northward shift in movement , hurricane warnings were issued for portions of Oahu and the Kauai channel before being issued for only the island of Kauai . All watches and warnings were discontinued on August 7 after Dot weakened below hurricane intensity . Disaster workers in Oahu and Kauai were warned by civil defense agencies and the American Red Cross to prepare for emergency . Roughly 400 people fled from the beaches of Kauai due to the threat of storm surge , with an additional 500 people being evacuated by authorities as the storm neared the island . After the storm caused flooding in Kauai , nearly 1 @, @ 000 people evacuated out of submerged areas into schools , armories , and public facilities repurposed as emergency shelters .

Passing well to the south of the Big Island , Lanai , Maui , Molokai , and Oahu , damage from Dot on these islands was minor . Rainfall on the Big Island peaking at 4 in ( 100 mm ) caused localized flooding in some areas , while wave damage occurred at Ka Lae and along the island 's Kona coast . Winds at a station on Ka Lae reached 85 mph ( 140 km / h ) . Flooding also occurred on Oahu , and along the coast homes were unroofed and cars were damaged by flying projectiles after being subjected to winds estimated at 60 mph ( 95 km / h ) . Off of Lanai , a tugboat captain was indirectly killed after he slipped between two boats in rough seas while attempting to board another ship , crushing him . Another indirect death occurred on Lanai in a traffic incident resulting from Dot 's rainfall . Damage on the Hawaiian islands outside of Kauai was estimated at \$ 150 @, @ 000 .

Rough surf along the coasts of Kauai combined with torrential rainfall to produce widespread coastal flooding . Waves at Port Allen peaked at 35 ft ( 10 @. @ 7 m ) . Pineapple plantations were inundated , with losses exceeding US \$ 200 @, @ 000 . Infrastructure damage as a result of wave action was spotty but nonetheless amounted to US \$ 100 @, @ 000 . The August 1959 rainfall total in Lihue , largely attributed to Dot , measured 8 @. @ 13 in ( 207 mm ) , 6 in ( 150 mm ) in excess of normal . The heavy rainfall caused rivers and streams to swell and inundate adjacent areas . Despite making landfall as a weak Category 1 hurricane , Dot brought damaging winds inland , with a maximum wind gust of 103 mph ( 166 km / h ) reported at Kilauea Light . However , gusts as high as 125 mph ( 200 km / h ) were estimated given the snapping of palm trees . Strong winds damaged hundreds of buildings in the areas of Kilauea , Lihue , and Lawai , Hawaii . Extensive losses resulted from the damaging and toppling of macadamia trees . However , of the crops on Kauai , cane suffered the greatest impact with damage figures reaching US \$ 2 @. @ 7 million . The toppling of power lines caused power outages across the island ; fallen lines also blocked roads . Water supply to some communities failed due to the lack of electricity . With the exception of emergency radio transmitters , telecommunications on Kauai failed . The damage toll from Dot for the entirety of Hawai'i totaled US \$ 6 million , making the hurricane the costliest in Hawaiian history before it was surpassed by hurricanes Iwa , Iniki and Iselle in 1982 , 1992 and 2014 , respectively . Adjusted for inflation , Dot 's damage figure nears US \$ 50 million .

Due to the damage wrought by Dot on Kauai , the island was declared a major disaster area . Stepping in for governor William F. Quinn , Hawaiian secretary Edward E. Johnston declared a state of emergency for Hawaii and allocated funds towards the repairing of roads and public property . The United States Weather Bureau awarded the SS Sonoma a public service award on October 7 , 1959 for serving as reconnaissance for Hurricane Dot throughout its existence .