

= Hurricane Paula (2010) =

Hurricane Paula was a small hurricane that struck Honduras and Cuba in October 2010 . The eighteenth tropical cyclone , sixteenth named storm , and ninth hurricane of the season , Paula developed from a low pressure area over the southwestern Caribbean Sea on October 11 . Moving northwestward , it slowly organized and was upgraded to a tropical storm shortly thereafter . Around midday on October 11 , Paula made landfall near Cabo Gracias a Dios at the border of Honduras and Nicaragua . In northeastern Honduras , strong winds destroyed several homes , while rainfall destroyed a few roads and dozens of buildings , include a school and a police station . Favorable conditions such as low wind shear and warm sea surface temperatures allowed Paula to reach hurricane status early on October 12 . Further intensification occurred , and the storm peaked with winds of 105 mph (165 km / h) while curving northward on October 13 .

Due to Paula 's small size , impact in Mexico was minor , mainly limited to light rainfall and winds . However , an American tourist drowned offshore Cozumel . After Paula attained its peak intensity on October 13 , wind shear began to increase , causing the storm to weaken . The storm turned north @-@ northeastward and fell to tropical storm intensity on October 14 . Shortly thereafter , Paula made landfall in the Cuban province of Pinar del Río . Early on October 15 , Paula weakened to a tropical depression while moving eastward over Cuba , before degenerating into a remnant low pressure area about six hours later . In Cuba , rainfall was mostly beneficial . Strong winds , with gusts reaching 68 mph (109 km / h) , left power outages in Pinar del Río and Artemisa provinces . In the Havana area , a few homes were deroofed , while falling trees blocked many roads . Impact in the Florida Keys was minimal , limited to light rainfall and increased tides .

= = Meteorological history = =

Tropical Storm Nicole exited the Caribbean Sea and dissipated on September 29 , leaving behind a broad area of cyclonic circulation at the lower levels of the atmosphere . A southeasterly @-@ moving cold front drifted from the Gulf of Mexico on October 5 , and developed into a stationary north @-@ south trough axis the following day . When a tropical wave that was associated with the previous development of Hurricane Otto traced into the Caribbean on October 7 , there was an escalation in the convection associated with the system . Another tropical wave traveled from the Lesser Antilles to the western Caribbean between October 9 and 10 . A large low @-@ pressure area formed as the wave interacted with the trough ; however , convection decreased on October 10 .

After convection increased again , the eighteenth tropical depression of the season developed at 0000 UTC on October 11 , while situated about 120 miles (190 km) southeast of Cabo Gracias a Dios , which is on the Honduras @-@ Nicaragua border . About six hours later , the depression strengthened into Tropical Storm Paula . Steered northwestward around the southwestern periphery of a subtropical ridge , the storm made landfall near Cabo Gracias a Dios with winds of 50 mph (85 km / h) at 1200 UTC . Shortly thereafter , the storm began to significantly intensify , due to sea surface temperatures of 84 @.@ 2 ° F (29 @.@ 0 ° C) , as well as light to moderate wind shear . Operationally , the National Hurricane Center did not initiate advisories until late on October 11 , after satellite imagery , surface observations , and reconnaissance aircraft flight data confirmed the existence of a tropical cyclone ; by this time , Paula was already a strong tropical storm .

At 0000 UTC on October 12 , Paula strengthened into a Category 1 hurricane on the Saffir ? Simpson hurricane wind scale . Satellite imagery during the afternoon of October 12 indicated that Paul was a small hurricane , consisting of a round area of deep convection , with an eye feature developing . However , at 1800 UTC on October 12 , the storm strengthened into a Category 2 hurricane while curving northward . Simultaneously , Paula attained its peak intensity with maximum sustained winds of 105 mph (165 km / h) and a minimum barometric pressure of 981 mbar (29 @.@ 0 inHg) . After peak intensity late on October 12 , strong upper @-@ level west @-@ southwesterly winds interacted with the system . Hurricane @-@ force winds extended only 25 miles (40 km) from the center of Paula , while tropical storm @-@ force winds extended 70 miles (

110 km) from the same point . Paula moved north @-@ northwest as the storm was impacted by a middle @-@ latitude trough over the Gulf of Mexico .

Increasing wind shear caused Paula to weaken to a Category 1 hurricane late on October 13 . Satellite imagery and reconnaissance aircraft flights indicated that cloud pattern was disrupted and the mid- and low @-@ level centers were becoming detached . Shortly thereafter , the National Hurricane Center remarked about the size of Paula , stating that , " a hurricane is crossing between the western tip of Cuba and eastern Yucatan ... but without modern technology no one would know it was there " . Drifting north @-@ northeastward ahead of a mid @-@ latitude trough , Paula weakened to a tropical storm at 1200 UTC on October 14 . Three hours later , the storm made landfall between Santa Lucía and Puerto Esperanza , in the Pinar del Río Province of Cuba , with winds of 65 mph (105 km / h) . By 0600 UTC on October 15 , Paula weakened to a tropical depression , while moving eastward over Cuba . Six hours later , the storm degenerated into a remnant low pressure area , before completely dissipating early on October 16 .

= = Preparations and impact = =

= = = Honduras and Nicaragua = = =

When the National Hurricane Center initiated advisories on Paula at 2100 UTC on October 11 , a tropical storm warning was issued from Limón eastward to the Honduras @-@ Nicaragua . The tropical storm warning was discontinued at 1200 UTC on the following day . The Comisión Permanente de Contingencias (COPECO) issued a red alert for Bay Islands late on October 11 . Additionally , a yellow alert was issued for five departments , including Atlántida , Colón , Cortés , Olancho , and Yoro . A state of emergency was also declared for the Bay Islands Department on October 12 and was to remain in place for 48 hours .

Along the northeastern coast of Honduras , several homes were destroyed by the storm . Dangerous conditions produced by Paula also forced officials to evacuate low @-@ lying areas and shut down schools . Gale @-@ force winds onshore resulted in the closure of the Puerto Lempira Airport . Throughout coastal districts , rainfall from the storm ranged from 5 @-@ 9 to 7 @-@ 9 in (150 to 200 mm) , resulting in widespread flooding . Winds from the storm were also estimated up to 60 mph (97 km / h) , and locals in La Mosquitia stated that the winds were stronger than those produced by Hurricane Mitch in 1998 . In Puerto Lempira , four homes and two roads were destroyed by high winds and flooding . In the city , a total of 3 @-@ 31 in (84 mm) of rain fell during Paula 's passage on October 11 . More than a dozen structures in Cauquira , including a school and police station were also damaged by flood waters . Along the coast , waves up to 7 ft (2 @-@ 1 m) pounded beaches .

In Nicaragua , the storm produced heavy rainfall in some areas , though otherwise , impact is unknown .

= = = Mexico and Belize = = =

In Mexico , a tropical storm warning was issued from Chetumal to Punta Gruesa at 2100 UTC on October 11 . Simultaneously , a hurricane warning was posted from Punta Gruesa to Cancún , including Cozumel . Early on October 12 , another tropical storm warning was issued from Cabo Catoche to San Felipe . Around that time , the hurricane warning was modified to include Punta Gruesa to Cabo Catoche . Later on October 12 , the tropical storm warning Chetumal to Punta Gruesa was discontinued , as was the hurricane warning from Punta Gruesa to Punta Allen early on the following day . At 1500 UTC on October 13 , the tropical storm warning was revised to include Cancún to San Felipe . Simultaneously , the hurricane warning from Punta Allen to Cabo Catoche was canceled . Late on October 13 , the tropical storm warning from Cancún to San Felipe . Officials assured tourists their safety and did not issue evacuations ; however , about 1 @-@ 560 locals were evacuated from Isla Holbox and Isla Contoy . Roughly 28 @-@ 800 people were estimated to be

visiting the region , most of whom were in Cancún . Between October 12 and 13 , transportation officials canceled 22 international flights to and from Cancún .

Off the coast of Cozumel , an American citizen drowned after being overcome by rough seas produced by the storm . Only light to moderate rain fell along the northeastern coast of the Yucatán Peninsula ; throughout October 13 , 0 @. @ 91 in (23 mm) of rain had fallen in Cancún and winds gusted up to 27 mph (43 km / h) . Despite the storm 's close passage to the Yucatán Peninsula , Paula 's small size resulted in very little impact on land . According to Quintana Roo Governor Félix González Canto , the storm left no structural or vegetative damage . Following the hurricane 's passage , the red alerts issued for four Mexican states were discontinued and ports were re @-@ opened .

In Belize , a tropical storm watch was issued for the entire country at 0000 UTC on October 12 . It was discontinued about nine hours later . The Government of Belize suspended school classes , as the buildings were being used as storm shelters . Voluntary evacuations were recommended for residents of the coastal cayes . A small craft warning was declared along the coast and advised marines to take precautions . At Punta Negra , the National Guard of Belize evacuated residents on October 13 . However , no impact was reported in Belize .

= = = Cuba and Florida = = =

In Cuba , a hurricane warning was issued for Pinar del Río Province ? the westernmost province ? at 2100 UTC on October 12 . After Paula weakened to a tropical storm on October 14 , the hurricane warning was downgraded to a tropical storm warning . Early on October 15 , the tropical storm warning was discontinued . Officials recommended that those residing in low @-@ lying to evacuate for higher ground . The tobacco plants in Pinar del Río , which are used to make Cuban cigars , were protected .

In Cuba , the outer bands of Paula brought heavy localized rains , especially to the Isla de la Juventud where 2 @. @ 8 in (71 mm) of precipitation was recorded on October 12 . Heavy rain fell across much of Pinar del Río Province . In Cape San Antonio , 4 @. @ 85 in (123 mm) of rain fell by the morning of October 14 . In some areas of western Cuba , the heavy precipitation was beneficial to reservoirs , grain crops , tubers and vegetables . The highest winds recorded during the storm 's passage were measured in Puerto Esperanza at 68 mph (109 km / h) . Strong winds left power outages in Viñales , La Palma , Bahía Honda , and San Cristóbal . Near Havana , a few homes lost their roofs and power was lost to many homes , mostly as a result of a precautionary power shutdown . High winds also downed numerous trees , blocking many roads . Along the coast , rough seas damaged parts of the capital city 's seawall . Some streets near the shore were left under 1 to 2 ft (0 @. @ 30 to 0 @. @ 61 m) of water at the height of the storm . By the afternoon of October 15 , emergency crews began clearing debris left behind by the storm . A small portion of banana crops in the Havana area suffered losses . Throughout the country , Paula resulted in relatively little damage .

In Florida , a tropical storm watch was issued from Dry Tortugas to Craig Key at 1500 UTC on October 13 . The tropical storm watch was discontinued early on October 15 . In the Florida Keys , the outer bands of Paula brought moderate rainfall and increased surf . A total of 1 @. @ 51 in (38 mm) of rain in Key West had fallen between October 13 and 15 . Two waterspouts were reported offshore the Upper Florida Keys on October 14 . Following the threat of a landfalling storm in Florida , orange juice futures dropped by 8 @. @ 9 % , reaching their lowest value since September 9 . Values for delivery fell to \$ 1 @. @ 409 a pound (453 grams) at the worst of the downturn .