

## = Effects of Hurricane Dennis in Florida =

The effects of Hurricane Dennis in Florida included 14 deaths and \$ 1 @. @ 5 billion ( 2005 US \$ ) in damage . The tropical wave that became Hurricane Dennis formed on June 29 , 2005 , and proceeded westward across the Atlantic Ocean . It became a tropical depression on July 4 , a tropical storm on July 5 , and a hurricane on July 7 . Dennis rapidly intensified to attain Category 4 status on the Saffir @-@ Simpson Hurricane Scale , and made landfall in Cuba where it weakened to Category 1 status , before re @-@ emerging in the Gulf of Mexico and re ? intensifying . The storm made landfall as a Category 3 hurricane on Santa Rosa Island on July 10 .

As Dennis was impacting Cuba , the outer rainbands affected the Florida Keys causing moderate wind gusts peaking at 87 mph ( 140 km / h ) on Sombrero Key . In central Florida , Dennis produced numerous tornadoes , one severely damaging a house . In Punta Gorda , three people were found dead in a car submerged in a ditch flooded by heavy rain . Dennis made landfall in the Florida Panhandle , causing moderate damage , although not as severe as previously predicted . Wind gusts peaked at 121 mph ( 195 km / h ) , and maximum rainfall reached 7 @. @ 08 inches ( 180 mm ) . Storm surge of 6 ? 9 ft ( 1 @. @ 8 ? 2 @. @ 7 m ) inundated parts of St. Marks and nearby locations . During the height of the storm , approximately 236 @, @ 000 customers in the Florida Panhandle were without electric power .

## = Preparations =

On July 7 , a tropical storm watch was issued for Florida 's Gulf coast from Bonita Beach southward , and for Florida 's Atlantic coast from Golden Beach to Ocean Reef . Later that day , a hurricane watch was issued for the Florida Keys and Florida Bay . By 2100 UTC , the hurricane watch was upgraded to a hurricane warning for the Florida Keys . Subsequently , a tropical storm watch was issued for Florida 's west coast north of Bonita Beach to Longboat Key which was discontinued at 2100 UTC . At the same time , a hurricane watch was issued for Steinhatchee River , Florida to the mouth of the Pearl River . By 0900 UTC on July 9 , the hurricane watch was upgraded to a hurricane warning just prior to the discontinuing of the hurricane watch for the Florida Keys . At 2100 UTC on July 9 , the tropical storm warning was lifted for Florida 's coast from Golden Beach to Flamingo , and for the Florida Keys from the Seven Mile Bridge eastward . By July 10 , all advisories for the Keys were discontinued and the hurricane warning was downgraded to a tropical storm warning for Florida 's coast east of the Ochlockonee River to the Steinhatchee River . By July 11 , all advisories were discontinued .

About 50 @, @ 000 tourists in the Keys were forced to evacuate by July 8 . Governor Jeb Bush declared a statewide emergency , and evacuations started in the Florida Keys , a highly exposed chain of islands connected to the mainland by a single road and a series of bridges , stating that people " should have enough water , enough food , non @-@ perishable food , batteries of course for 72 hours so people could safely weather the storm " . Residents of the Florida Keys who did not evacuate were advised to remain indoors due to dangerous weather conditions that were predicted .

At Cape Canaveral , the space shuttle Discovery was considered to be safe on its launching pad after concerns of unfavorable weather , and NASA re @-@ scheduled a liftoff the following week ; however , shuttle managers eventually decided to begin moving Discovery from the launching pad to ride out the storm . In Miami , the Booker T. Washington Senior High School opened as a voluntary evacuation shelter for all pre @-@ registered special needs residents . Also , the MacDill Air Force Base in Tampa evacuated its aircraft to McConnell Air Force Base near Wichita .

In the Florida Panhandle , Governor Jeb Bush warned " This is serious . This is a very dangerous storm . " As Bush announced that hundreds of tractor @-@ trailers would be carrying ice , water and generators to staging areas in north central Florida , he stated " Here we go again " , referring to the large number of storms which had threatened Florida in the years prior to Dennis . 700 @, @ 000 people in the Florida panhandle were evacuated in the days prior to Dennis , 100 @, @ 000 of them in Escambia County alone . As a result of the large evacuations , more than 200 truckloads provided

about 1 @. @ 8 million US gallons ( 6 @, @ 800 m3 ) of gasoline . The Red Cross put dozens of volunteers on standby to go into regions affected by the storm , and open shelters . The Red Cross also moved 60 mobile canteens , each capable of serving 30 @, @ 000 hot meals a day , to the staging points of Hattiesburg and Jackson . National guardsmen were mobilized , and four emergency medical teams , each capable of setting up a small field hospital , were on standby . Also , at Eglin Air Force Base , about 20 @, @ 000 military personnel were evacuated , and at Hurlburt Field , home to Air Force 's 16th Special Operations Wing , a mandatory evacuation was ordered for all 15 @, @ 000 airmen and their families .

= = Impact = =

= = = South Florida and Florida Keys = = =

In southern Florida , damage was mostly limited to moderate wind gusts ; in Miami @-@ Dade County , gusty winds knocked out several traffic lights along U.S. 1 , the only route to and from the Florida Keys . A man died in Ft . Lauderdale when he stepped on a downed electrical wire and was electrocuted . Also , 100 @, @ 000 homes in Miami Dade County were without electric power .

In the Florida Keys , Dennis passed to the west as a Category 2 hurricane producing winds of 59 miles per hour ( 95 km / h ) on Carysfort Reef Light . Rainfall peaked at 1 @. @ 5 inches ( 38 mm ) in the Monroe County Upper Keys . Damage in the Keys totaled \$ 100 @, @ 000 ( 2005 USD ) , mostly to landscape and electric utility equipment . During the height of the storm , 211 @, @ 000 customers were without electric power in South Florida and the Keys .

Sand Key reported sustained winds of 62 miles per hour ( 100 km / h ) with a gust to 78 miles per hour ( 126 km / h ) at 0820 UTC on July 9 , while the " C @-@ MAN " station at Sombrero Key reported sustained winds of 74 miles per hour ( 119 km / h ) with a gust of 87 miles per hour ( 140 km / h ) at 0800 UTC on July 9 . These strong winds pushed a vintage DC @-@ 3 plane about 300 yards ( 1000 ft ) down the tarmac at the Key West airport , which was closed during the storm . Maximum storm surge topped out at 5 feet ( 1 @. @ 5 m ) . In addition , a man drowned in a rip current off of Hollywood Beach .

One beneficial effect of Hurricane Dennis was the rolling of the former USS Spiegel Grove . Spiegel Grove was sunk in Florida Keys National Marine Sanctuary in an attempt to create an artificial reef . However , the ship turned over and landed on the bottom upside down . Efforts to roll the ship were partially successful , bringing it onto its starboard side , but Hurricane Dennis completed the roll , bringing Spiegel Grove into its intended upright position .

= = = Central Florida = = =

Damage was mostly minor and limited to outer rainbands and tornadoes in Central Florida . In the Tampa Bay area , several tornadoes were reported to have touched down causing minor damage such as downed trees and power lines . On July 8 , five tornadoes were officially reported , three of which caused damage . The most notable one left a path of damage one @-@ half mile wide , severely damaging a house . That same day , a wind gust of 60 miles per hour ( 97 km / h ) was reported at Pinellas . On July 9 , four tornadoes officially touched down , with the most notable one downing numerous trees and some powerlines . In Punta Gorda , three people were found dead in a car submerged in a ditch flooded by heavy rain . The road was covered with 6 inches ( 150 mm ) of water and caused the vehicle to hydroplane into a ditch where it flipped upside down . The victims were still wearing their seat belts when found .

= = = Florida Panhandle = = =

Hurricane Dennis made landfall as a Category 3 hurricane on Santa Rosa Island on July 10 . At Navarre Beach , sustained winds of 98 miles per hour ( 158 km / h ) were reported with a peak gust

of 121 miles per hour ( 195 km / h ) , while a tower at the Pensacola Airport reported sustained winds of 82 miles per hour ( 132 km / h ) and a peak gust of 96 miles per hour ( 154 km / h ) . At the Pensacola Airport , a minimum pressure reading of 956 @. @ 3 mb was recorded and at Navarre , a pressure reading of 965 @. @ 2 mb was seen . Additionally , an unofficial storm chaser reported a minimum pressure of 942 mb at Pace , Florida . The most severe property damage occurred from Walton County to Wakulla County , where 1 @, @ 000 homes were destroyed . Numerous boats were ripped from the dock and either floated out to sea , or were washed ashore . In McDavid , the tin roof of the recreation center for Ray 's Chapel was ripped off as about 12 people stood in the hallway . Also , several historic sites were damaged or destroyed by Dennis ; Angelo 's on Ochlockonee Bay , a landmark restaurant , was completely washed away . Beach front cottages on St. Teresa were either damaged or destroyed and several beach dunes on St. George Island were washed away by the pounding surf . On Holiday Island , several houses and apartment buildings were severely damaged .

On Santa Rosa Island , the hurricane produced a storm surge of 7 feet ( 2 @. @ 1 m ) , over washing parts of the low @- @ lying island on the eastern and western shores . In Apalachee Bay , storm surge of 15 feet ( 4 @. @ 6 m ) inundated parts of St. Marks and nearby locations , which was higher than previously anticipated and was thought to be enhanced by an oceanic trapped shelf wave that propagated northward along Florida 's west coast . As a result , sea water washed ashore up to eight blocks inland . The surge , in combination with the high surf , caused moderate beach erosion and wiped out 80 percent of the sea turtle 's nests . Along the coast , severe beach erosion occurred as a result of the storm , mostly in Walton , Bay , Gulf , Franklin and Wakulla counties . As a result of the pounding surf , the Navarre pier was ripped apart in two places .

Milton received 7 @. @ 08 inches ( 180 mm ) of rain , which is the highest reported rainfall total in Florida caused by Dennis . Rainfall across the Florida Panhandle ranged from 3 inches ( 76 mm ) to 7 inches ( 180 mm ) , while rainfall across the central and southern portions of the state ranged from 1 inch ( 25 mm ) to 5 inches ( 130 mm ) near Tampa . In southern Leon County , flooding was reported with several areas under 7 feet ( 2 @. @ 1 m ) of water . At St. George Island , 5 miles ( 8 @. @ 0 km ) of road and numerous buildings were damaged or destroyed . Parts of U.S. Route 98 were washed out by flood waters .

As a result of the storm , over 236 @, @ 000 customers in the Florida Panhandle were without electric power . An indirect death occurred when a three @- @ year @- @ old boy was accidentally crushed to death when his father ran him over with a car as the family was evacuating . Two more people died from carbon monoxide poisoning in Escambia county . In all , two people were directly killed while several others were killed indirectly , and total damage amounted to \$ 1 @. @ 5 billion ( 2005 USD ) . Directly after the storm , Bay , Dixie , Franklin , Gulf , Taylor , Wakulla and Walton counties were declared federal disaster areas .

= = Aftermath = =

In the aftermath of the hurricane , president George W. Bush declared 13 counties ? Bay , Calhoun , Escambia , Franklin , Gulf , Holmes , Jackson , Monroe , Okaloosa , Santa Rosa , Wakulla , Walton and Washington ? in Florida as federal disaster areas . Applicants , including units of local government , in 19 counties became eligible for Public Assistance funds for emergency services and debris removal and to help restore or rebuild essential public facilities . On July 10 , President Bush ordered the release of federal disaster funds and emergency resources for Florida to aid people effected by Dennis . One day after the storm made landfall , four disaster recovery centers were opened by disaster officials , two in Escambia County , and two in Santa Rosa County . Supplies of food , water and ice were supplied from staging areas to distribution centers throughout the Florida Panhandle . The American Red Cross and other voluntary agencies assisted with food and water distribution as well as emergency needs and housing . Subsequently , an additional disaster relief center was opened in Santa Rosa County . Just days after the storm , six additional counties became eligible for federal disaster aid .

Voluntary agencies such as AmeriCorps , the Christian Contractors Association and the United Way

provided assistance to residents who have temporary roofing and repair needs . Shortly after , three additional disaster relief centers opened on July 16 , with one being in Franklin County , one in Okaloosa County , and another in Wakulla County . Within a week , over 2 @, @ 100 individuals visited the Disaster Recovery Centers in Escambia and Santa Rosa counties . Another disaster recovery center opened in Franklin County on July 7 , and by July 18 , over \$ 3 million ( 2005 USD ) in individual assistance applications for rental , housing and other needs assistance were approved . On July 23 , Dixie and Levy counties became eligible federal funds under its Public Assistance program for damages . By July 28 , all disaster recovery centers ceased operations on Sundays , although on August 4 , Gadsden County became eligible for Public Assistance funding . Two more disaster recovery centers opened on August 4 , one in Dixie County and one in Taylor County . By August 18 , over \$ 24 million ( 2005 USD ) in individual assistance funds were collected for victims of Hurricane Dennis . On October 13 , the last disaster recovery centers ceased operations , although individual assistance funds were still being collected .