= Tropical Storm Olga (2007) =

Tropical Storm Olga was the fifteenth named storm of the 2007 Atlantic hurricane season . In the second week of December , after the official end of the hurricane season , a low developed east of the northernmost Lesser Antilles . It slowly acquired tropical characteristics , and late on December 10 , the NHC declared it Subtropical Storm Olga while just north of Puerto Rico . It is the first post @-@ season storm since Tropical Storm Zeta in the 2005 season , making the 2007 season one of the few with activity both before and after the official bounds of the hurricane season . Olga was only one of a few out of season tropical cyclones to make landfall . The storm made landfall on December 11 on the eastern tip of the Dominican Republic . Later that evening , Olga transitioned into a tropical storm just after making landfall . Olga tracked over Hispaniola and emerged in the Caribbean Sea . Strong wind shear and dry air caused Olga to weaken into a remnant low early on December 13 .

The storm impacted many areas affected by Tropical Storm Noel a month earlier. In Puerto Rico, moderate rainfall caused one death. 37 fatalities were confirmed in the Dominican Republic, including twenty deaths due to the release of floodgates at a dam in Santiago Province. Two deaths were also reported in Haiti. Olga killed a total of 40 people throughout its existence.

= = Meteorological history = =

In the first week of December , a westward @-@ moving upper @-@ level low led to the formation of a broad surface trough well to the east of the northern Lesser Antilles . With a strong ridge to its northeast , the trough tracked slowly westward , producing scattered convection and some cyclonic turning . On December 8 convection began to persist in association with the trough and an upper @-@ level low . Early on December 9 , officials at the Tropical Prediction Center began classifying the system using the Hebert @-@ Poteat technique , and several tropical cyclone forecast models anticipated its development of tropical characteristics . The system , which consisted of a sharp trough with an area of gale force winds to its north , continued westward through an area of moderately warm sea surface temperatures . On December 10 a low @-@ level circulation developed within the system , though its convection had become disorganized and well @-@ removed from the center . Southerly wind shear left the structure asymmetric , and convection steadily increased closer to the center . With an upper @-@ level low situated just south of the center , the National Hurricane Center classified it as Subtropical Storm Olga at 0300 UTC on December 11 while located about 55 miles (85 km) east of San Juan , Puerto Rico .

Upon being classified as a subtropical cyclone , Olga maintained well @-@ defined outflow , and located to the southeast of a strong ridge over the western Atlantic Ocean , the cyclone tracked west @-@ southwestward . The storm strengthened slightly while paralleling the north coast of Puerto Rico , and after an increase in convection near the center , Olga made landfall near Punta Cana , Dominican Republic at 1800 UTC on December 11 . A Hurricane Hunters flight into the storm reported a tighter wind gradient and peak winds of 60 mph (95 km / h) , and at 0000 UTC on December 12 the National Hurricane Center reclassified Olga as a tropical cyclone while it was still inland . Convection rapidly weakened as the storm crossed central Hispaniola , and upon reaching the Caribbean Sea the system lacked the convection required for the classification of a tropical cyclone ; rainbands well to its northeast maintained stronger winds , though the center became ill @-@ defined with dry air and strong wind shear . Late on December 12 , convection increased slightly over the center , though by that time the cyclone weakened to tropical depression status . As significant convection failed to persist , the National Hurricane Center discontinued advisories on Olga earlier on December 13 while located about 80 miles (130 km) northwest of Kingston .

Its remnants continued west @-@ northwestward with a clear low @-@ level circulation, producing scattered thunderstorms over Cuba and the Cayman Islands with its moisture extending northward into southern Florida. A small cluster of deep convection developed just east of the center, and the low @-@ level circulation remained well @-@ defined as it approached the coast of the Yucatán Peninsula. The remnants of Olga turned northward into the Gulf of Mexico as a cold front

approached the center from the northwest . Late on December 16 and early on December 17 , the low intensified as it approached the west coast of Florida , with sustained winds of tropical storm force , and gusts to hurricane force , being reported at Clearwater Beach . Ultimately , the approaching cold front absorbed the low as it moved across the Florida peninsula . The cold front was associated with a powerful winter storm that affected much of Eastern America during that weekend and killed at least 25 across six US states and three Canadian provinces tapped Olga 's moisture , drawing it northeastward mainly offshore the East Coast .

= = Preparations = =

On December 10 , the Tropical Prediction Center issued a gale warning for waters north of the Lesser Antilles , Puerto Rico , and the Dominican Republic , in association with the precursor disturbance to Olga . Upon it being classified as a subtropical cyclone , the government of the Dominican Republic issued a tropical storm warning from Cabo Engaño along the north coast to its border with Haiti ; a tropical storm watch was also issued along the southern coastline to near Santo Domingo . Because winds were well to the north of its center , a tropical storm warning was not issued for Puerto Rico . Prior to it moving ashore , the government of Haiti issued a tropical storm warning for its northern coastline , and later a tropical storm warning was issued for the Turks and Caicos Islands , as well as the southeastern Bahamas .

The San Juan National Weather Service office issued a flood watch for all of Puerto Rico , including the islands of Culebra and Vieques . Extended periods of heavy rainfall also resulted in flash flood warnings for portions across the island . Ferry service between Fajardo and the islands of Culebra and Vieques was temporarily suspended during the passage of the storm . In the Dominican Republic , officials opened shelters in 15 provinces , with citizens in low @-@ lying areas recommended to stay elsewhere during the passage of the storm ; citizens in 22 communities were evacuated .

= = Impact = =

The cyclone dropped light to moderate precipitation across Puerto Rico , peaking at 11 @.@ 13 inches (283~mm) near Ponce . The rainfall increased levels along several rivers across the island , including the Arecibo Big River which was reported at several feet above flood stage . Its passage left about 79 @,@ 000 people without power and 144 @,@ 000 without water . In the northern portion of the island , the rainfall caused a mudslides that buried an automobile , which killed its driver .

Heavy rainfall fell across the Dominican Republic , with isolated totals of 10 inches (250~mm) expected . The rainfall caused flooding along the Yaque del Norte River , and initially there appeared to be a threat that the Tavera Dam along the river would fail , potentially killing thousands in Santiago Province . Officials instead opted to open all six floodgates at 0400 UTC on December 12 , which released about 1 @.@ 6 million gallons (6 @.@ 1 million liters) of water into the river every second . The deluge created a 66 foot (20~m) wave of water that caught many off guard due to the time of night and only about 15 minutes to prepare , according to eyewitnesses who criticized the decision ; the flooding killed at least 35 people and left homes in seven towns flooded . Two other deaths were reported elsewhere in the country , and more than 34 @,@ 000 people fled their homes due to the storm ; more than 7 @,@ 500 houses were damaged . Damage in the country was estimated at \$ 1 @.@ 5 billion (2007~DOP , \$ 45 million 2007~USD) . In neighboring Haiti , two deaths were reported in the northern portion of the country . On December 11 , a station in the Turks and Caicos Islands recorded sustained winds of 36 mph (58~km / h) .

While still moving through the western Caribbean sea , heavy rains fell along a trough in its northeast quadrant beginning on December 14 , with a total of 7 @.@ 08 inches / 179 @.@ 8 mm falling at Nettles Island , Florida . The remnant low intensified due to occasional convection forming near and northeast of the center as it approached the Sunshine State . Clearwater Beach recorded a pressure as low as 1002 mb as well as sustained winds reaching 45 mph (72 km / h) , with gusts

to 78 mph (126 km / h) between 4 and 5 on the morning of December 16 . As a cold front approached , the low pressure area became ill @-@ defined and dissipated before reaching Florida 's Space Coast .