= Hurricane Olga (2001) =

Hurricane Olga was a late season Category 1 North Atlantic hurricane that formed during the 2001 Atlantic hurricane season . The fifteenth named storm , ninth and final hurricane of the 2001 season , Olga formed as a subtropical cyclone on November 24 . After acquiring tropical characteristics later that day , Olga meandered westward , and eventually reached hurricane status on November 26 . Olga ? s winds peaked at 90 mph (150 km / h) before the storm turned southwestward and weakening back into a tropical storm . On November 30 it deteriorated further to a tropical depression , although it re @-@ intensified two days later to tropical storm intensity . Olga then dissipated as a tropical cyclone on December 4 east of the Bahamas . Its damaging effects were limited to ships at sea . The cyclone 's remnants produced heavy rainfall across the Bahamas and Florida . It was a relatively rare storm to exist in December , which is outside of the normal Atlantic hurricane season .

= = Meteorological history = =

The origins of Hurricane Olga were from the interaction of a cold front and a small weather disturbance in the north Atlantic Ocean , producing an extratropical low east of Bermuda on November 22 ; five other tropical cyclones and gales formed earlier in the season in the same manner . The low gradually intensified , developing an area of convection east of the center and producing a large area of gale force winds . By 0000 UTC on November 24 , the system organized enough to be classified as Subtropical Storm Two , while located about 900 mi (1450 km) east @-@ southeast of Bermuda . Subsequently , the convection markedly increased and became more concentrated , with hints of an eye feature . Within 12 hours of becoming a subtropical , it is estimated the cyclone transitioned into Tropical Storm Olga ; however , it was not purely tropical , due to being positioned beneath an upper @-@ level low . Operationally , the National Hurricane Center (NHC) did not initiate advisories until nine hours later , referring it as Subtropical Storm Two for two more days .

When advisories first began on Olga , forecasters were uncertain how long the storm would persist , due to the storm 's presence within a much larger storm ; one hurricane model anticipated an increase in wind shear within 24 hours , which would likely cause quick dissipation . However , the NHC accurately forecast the storm to remain a cyclone for several days . Olga initially tracked northeastward , followed by a turn to the west due to a building ridge to its north . On November 25 , the storm began acquiring more characteristics of a tropical storm , such as detaching from the larger storm and developing more distinct convective rainbands . This was due to decreasing wind shear and continued atmospheric instability , although only marginally warm sea surface temperatures . After turning to the southwest , Olga resumed a northwest motion , and at 1200 UTC on November 26 intensified into a hurricane . By that time , an eye had developed in the center , and the previously large wind field had contracted . Upon attaining hurricane status , Olga was tracking northwestward due to an approaching trough . The eye steadily became better defined as outflow increased , and on November 27 Olga attained peak winds of 90 mph (150 km / h) , along with a minimum pressure of 973 mbar (28 @.@ 73 inHg) . While at peak intensity , the hurricane executed a double loop about 455 mi (730 km) east of Bermuda , due to interaction with a larger cyclonic circulation that was isolated from the westerlies .

On November 28 after finishing the second loop , Olga turned to the southwest due to a building ridge to its northwest . Around the same time , it began a steady weakening trend , due to strong wind shear displacing the convection . The eye became poorly defined as the center became exposed , and on November 29 Olga weakened to tropical storm status . With the thunderstorms rapidly diminishing , the storm weakened quickly , and Olga deteriorated further to a tropical depression on November 30 . Forecasters anticipated continued weakening until dissipation , although the cyclone was expected to move over an area of more favorable conditions , including warmer waters and lighter shear . Still existing as a tropical cyclone on December 1 , Olga extended the hurricane season beyond its typical boundaries . It continued producing a small area of deep

convection , prompting one forecaster to note that " Olga is stubbornly holding on to tropical cyclone status ... for now . " After reaching a position about 240 mi (385 km) northeast of the Turks and Caicos Islands , the depression turned toward the north after a trough created a weakness in the ridge . After a decrease in wind shear , deep convection redeveloped over the center , and Olga re @-@ intensified into a tropical storm on December 2 .

After becoming a tropical storm again , the thunderstorms organized into a rainband about 100 mi (160 km) away from the center , characteristics more typical of a subtropical cyclone . By late on December 2 , the structure resembled that of a hurricane with an eye in the center , and although convection was weak , Olga was able to intensify further to winds of 45 mph (72 km / h) . At the time , there was uncertainty whether the storm would strengthen further , possibly to near hurricane status , or rapidly weaken . Ultimately , an approaching trough caused weakening by increasing wind shear , while also forcing the storm eastward . On December 4 , Olga again weakened to a tropical depression as it lost most of its convection . Later that day , the circulation turned to the southeast as a ridge built to its north , and Olga degenerated into a remnant low pressure area , about 690 mi (1 @,@ 110 km) east of Nassau , Bahamas . The remnant circulation turned to the south and west , completing a loop and later moving through the Bahamas before dissipating along the north coast of Cuba on December 7 .

= = Preparations and impact = =

Forecasters at the National Hurricane Center began issuing advisories on Olga on November 24 anticipating that the storm would threaten shipping lanes in the Atlantic . Several ships and boats in the path of Olga reported seas of 12 ft (3 @.@ 7 m) or higher . One boat , the Manana Tres , reported a barometric pressure of 989 millibars (29 @.@ 2 inHg) and sustained structural damage .

In Bermuda , the Bermuda Weather Service issued gale warnings and local marine warnings for boats and other small water craft . The approach of Olga also forced cancellation of the World Yacht regatta , but there was little damage on the island . Olga brought winds of 35 ? 45 mph (56 ? 72 km / h) and waves 15 ? 22 ft (3 @.@ 7 ? 6 @.@ 7 m) to the island for several days , but there were no reports of any damage . The hurricane also brought rough seas to the East Coast of the United States , the Bahamas , and as far south and east as the Lesser Antilles . A buoy near Guadeloupe reported 12 ft (3 @.@ 7 m) waves . High waves in Florida eroded beaches , threatening the foundations of two homes in Flagler County . The remnants of Olga later produced heavy rainfall across the Bahamas , Cuba and south Florida .