

= Hurricane Karl ( 2004 ) =

Hurricane Karl was a powerful Cape Verde @-@ type hurricane during the 2004 Atlantic hurricane season . It was the eleventh named storm , eighth hurricane and sixth major hurricane of the 2004 season . Karl formed on September 16 , originating from a strong tropical wave that emerged off of Africa . It rapidly intensified , becoming a major hurricane on two occasions . Karl peaked as a strong Category 4 hurricane on the Saffir @-@ Simpson hurricane scale on September 21 with 145 mph ( 230 km / h ) winds . It weakened as it moved northward , becoming extratropical on September 24 in the north Atlantic and becoming absorbed by another system on September 28 . The extratropical storm affected the Faroe Islands , but no damage was reported there and no lives were lost .

= = Meteorological history = =

Karl originated in a strong tropical wave that moved off the coast of Africa on September 13 . The wave gradually became better organized , and it was declared Tropical Depression Twelve about 670 miles ( 1 @, @ 080 km ) west @-@ southwest of the Cape Verde islands on the morning of September 16 , as it headed westward in the open tropical Atlantic following the periphery of the subtropical ridge . That afternoon , the depression continued to rapidly organize and was upgraded to Tropical Storm Karl . Due to healthy outflow around an upper @-@ level anticyclone over Karl and a favorable environment with the warmest sea surface temperatures of the year , rapid deepening began on the evening of September 17 , with the storm developing a small eye and being upgraded to Hurricane Karl . With water around 28 ° C ( 83 ° F ) and low wind shear , the cyclone continued to rapidly intensify on the morning of September 18 . The intensity leveled off somewhat that afternoon as a strong Category 2 hurricane with winds of 110 mph ( 175 km / h ) .

Late in the evening of September 18 , Karl attained Category 3 status , becoming the sixth major hurricane of 2004 . On September 19 , Karl continued to strengthen , maintaining a well @-@ defined eye , and strengthening late that day into a Category 4 hurricane with winds of 135 mph ( 215 km / h ) and a minimum pressure of 948 mbar . Early on September 20 , the storm weakened slightly as a result of an eyewall replacement cycle , weakening back to a strong Category 3 hurricane . At this time Karl began to turn sharply northward into a weakness in the subtropical ridge .

After intensification stopped on September 20 due to the eyewall cycle and slightly increased wind shear , Karl quickly restrengthened that evening over very warm water , and early on September 21 reached its peak intensity as a powerful Category 4 hurricane with 145 mph ( 230 km / h ) winds and a minimum central pressure of 938 mbar . That morning , as Karl was moving northward , another eyewall replacement cycle began to take place and vertical shear increased , again weakening the storm temporarily . The trend continued into the evening , and the storm weakened to a Category 2 hurricane by early on September 22 . The weakening trend slowed down and eventually leveled off that afternoon with Karl remaining a Category 2 hurricane as the storm turned towards the north @-@ northeast . Late that evening , Karl began to restrengthen once again as wind shear diminished . The intensification continued into the morning of September 23 , as Karl became a major hurricane a second time , reaching a final peak of 125 mph ( 205 km / h ) winds . Cooler waters and increased shear soon prevailed , however , and the storm quickly weakened , dropping to a Category 1 hurricane by late that evening as the low @-@ level circulation became detached from the mid @-@ level circulation due to the strong southwesterly vertical wind shear .

Early on September 24 , Karl continued its north @-@ northeast track over the open north @-@ central Atlantic and continued to gradually weaken . It started to come in contact with the baroclinic zone and began to lose tropical characteristics , while still a Category 1 hurricane . Karl became extratropical shortly afterward over the northern Atlantic at about 47 ° N , with its winds dropping below hurricane strength shortly thereafter . The extratropical storm made landfall on the Faroe Islands with hurricane @-@ force wind gusts . As an extratropical low , the cyclone moved northeastward and eastward across the North Atlantic Ocean and the North Sea , eventually

reaching Norway before it was absorbed into another extratropical low late on September 28 .

= = Impact = =

Karl made landfall on Norway as an extratropical storm with sustained winds near 70 mph ( 110 km / h ) and with wind gusts up to 89 mph ( 144 km / h ) . No damages or deaths were reported , and no ships came directly into contact with Karl ; the strongest winds reported were from the ship Rotterdam , which reported 52 mph ( 83 km / h ) sustained winds in the north Atlantic while Karl was a Category 1 storm in extratropical transition .