

Severe Weather Advisory for the Caribbean - Hurricane Jose

Issued on Saturday, 9th September 2017 at 22:35 local time.

Headline

Hurricane Jose is an Extremely Dangerous Category 4 Hurricane and is passing just to the north of the Northern Leeward Islands. However there are no Hurricane watches across the Northern Leeward Islands at this time as Josie clears to the Northwest.

Discussion

Hurricane Jose changed little in intensity in the last 6 hours with maximum sustained winds currently of 125KT (145mph). This makes Jose a Category 4 hurricane. Jose was located around 85 miles NNE of the Northern Leeward Islands, Anguilla at 09/2100UTC (5pm local time). Jose is moving NW at 14 mph taking the core way from the northern Leeward Islands. Jose is then expected to slow down while moving northwesterly across the Western Atlantic, then turn more northerly in the next 3 days.

Imagery shows Jose has a well defined eye and passing to the north of the northernmost Leeward Islands. Aircraft data supports the current intensity. Some slight fluctuations in strength are likely, but Jose is expected to remain a Category 4 hurricane for the next 6 to 9 hours, when it is closest to the northern Leeward Islands. The global models remain in very good agreement on the track of Jose for the next 2 days, and there is a high degree of confidence in this part of the forecast. As with any hurricane we should not focus too much on the track of the eye, as hurricane-force winds extend outward up to 35 miles from the centre and tropical-storm-force winds extend outward up to 140 miles.

Satellite intensity estimates have been gradually increasing, especially as Hurricane Josie has become more symmetric once again in the last 6 hours. The "eye" if anything has become more distinct. The current wind estimate are thought to be conservative, and based on previous reconnaissance aircraft measurements. Another aircraft will be in to sample the wind field in the next 3 hours.

Josie is expected to turn more north of northwest in the next few days and across the western Atlantic as is steered around the western flank of a mid-level ridge and weaken somewhat. This as it moves into an environment of drier air and increased wind shear. By early next week, the flow around the trough will result in a northward, then eastward turn around 26N. Thereafter, Jose forward motion should slow down as it is left within an area of weak steering current behind the trough, the do a "slow loop" well to the east of the Bahamas towards mid-week.

The models continue increase the shear across Josie in the next 24-36 hours, and expecting to weaken the storm as it moves NW. However Josie may maintain its intensity in the short term, with gradual weakening expected thereafter. The latest National Hurricane forecast is not as quick to weaken Josie as previous guidance.

The greatest risk (20-30%) of hurricane force (>74 mph) winds affecting land is across Barbuda and Anguilla, with a <10% risk across Saint-Martin. However there is a greater risk (>40%) of tropical storm force (>39mph) winds affecting the northern Leeward Islands north of a line from Guadeloupe and Montserrat, to the British Virgin Islands.

Although the eye of the hurricane continues to look most likely to pass to the north of any land, clearly given that Hurricane Irma devastated this region recently, any further strong winds and heavy rain are likely to hamper recovery efforts, and further damage infrastructure already weakened by Irma.

This forecast may be amended at any time

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Latest information of track of Jose can be found here at http://www.nhc.noaa.gov/graphics_at2.shtml?cone#contents . The National Hurricane Centre is the official agency for issuing forecasts and warnings for tropical storms and hurricanes in the North Atlantic basin. Decision making should be based on these official forecasts.

Impacts: Tropical Storm Force winds are likely to further damage infrastructure already weakened by Irma. Populations will be living in temporary shelters which may be of poor quality and will be especially vulnerable. We must continue to be vigilant to any southward shift in the forecast track in the next few hours. However this looks very unlikely, but if this were the case impacts would be typical of a major hurricane and include potentially destructive winds, dangerous waves, storm surge, torrential rains and an enhanced risk of landslides. A combination of these hazards will lead to a risk of fatalities and significant impacts to local infrastructure and transport links. Total and extremely long-lived power outages and water losses are to be expected.

Winds: Winds within 30-40 miles of the centre of the hurricane will be strong enough to cause roof failure on some residences and industrial buildings, and a risk of some complete building failures with small buildings blown over or away. Tropical storm force winds extend some 120 to 140 miles from the centre of the storm.

Storm Surge & Flooding: Flooding, through a combination of heavy rainfall and storm surge (0 to 1ft) is possible, though unlikely now given the current track of Josie. The Northern Leeward Islands, from Guadeloupe to Anguilla remain most at risk, but again thought to be unlikely at this time. However, Jose is expected track to the northwest of the islands, with the heaviest rain away from the islands. The current track is also likely to limit the storm surge potential across the islands, with a northerly, then westerly flow, with the greatest risk of storm surge impact expected on the northern flank of the hurricane. Tidal levels over the northern Leeward Islands will gradually subside overnight. Any heavier rain may give a slight flood risk, especially as the ground pre-conditioned from Hurricane Irma.

Rainfall: Potentially 15 to 35mm of rain could fall from Hurricane Jose across the Northern Leeward Islands from Jose, with isolated small risk of event totals over 50mm. However these values are now thought to be excessive, given that Josie is expected to now move away from the Northern Leeward Islands in the next 6 to 12 hours.

Context

Hurricane Jose may impact islands severely affected by the Category 5 hurricane Irma a few days ago, hampering the recovery and humanitarian efforts.

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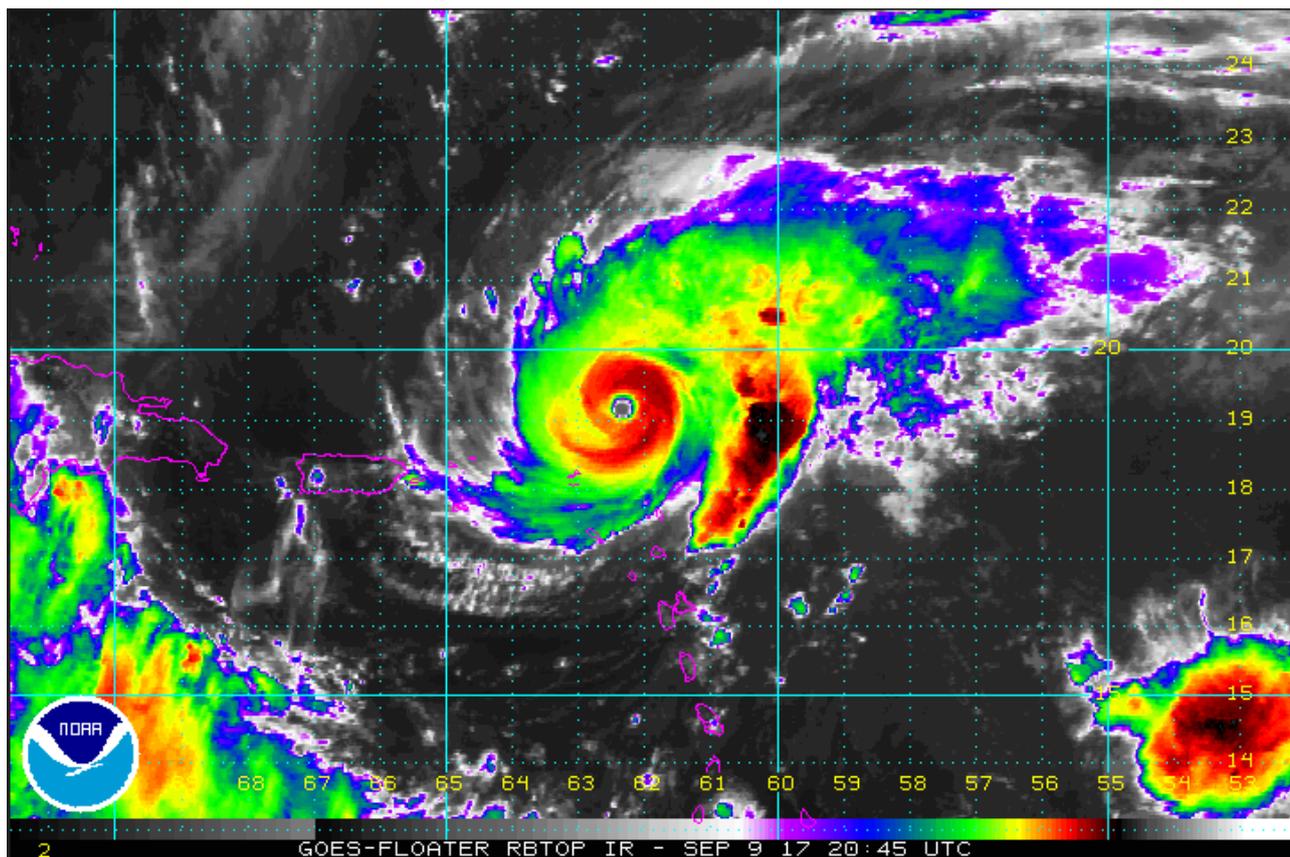


Figure 1: 09/2045 UTC IR satellite image.

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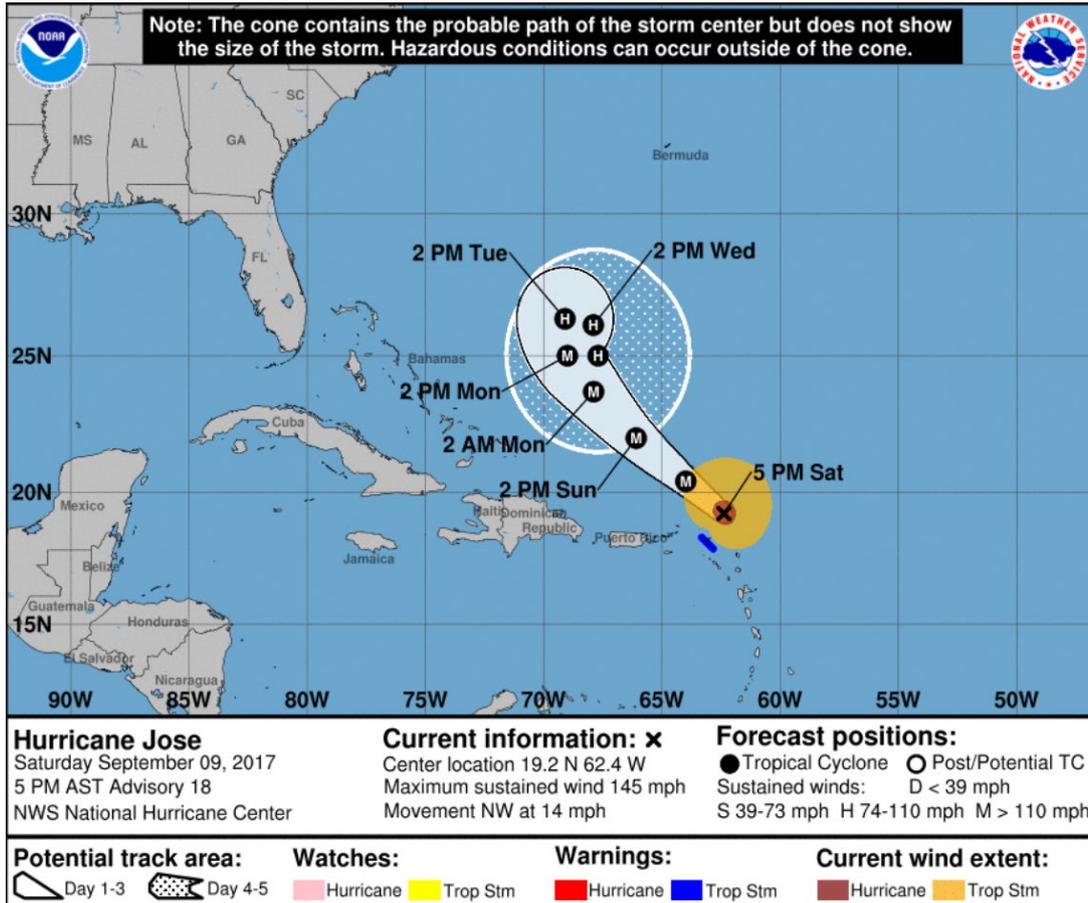


Figure 2: 09/2100 UTC official forecast track and cone of uncertainty for Hurricane Jose from the National Hurricane Centre. Times on the graphic are in AST (UTC-4). **Note there are no Hurricane watches across the Northern Leeward Islands.**

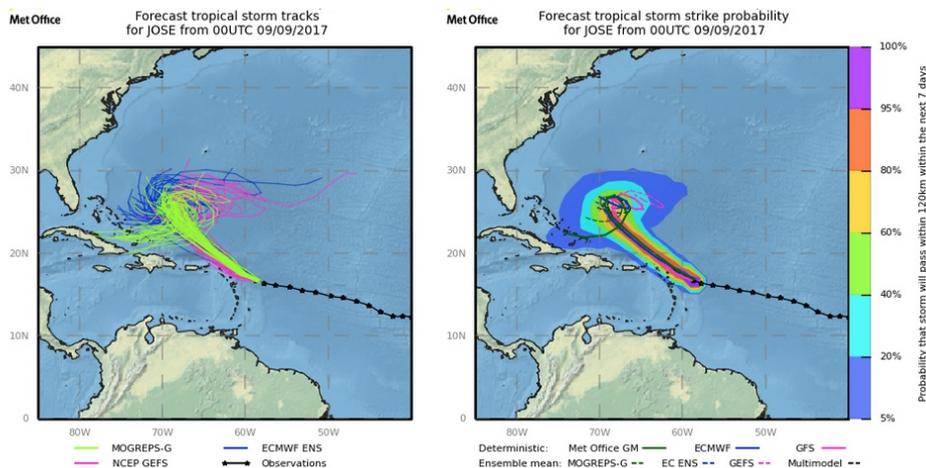


Figure 3: Latest (09/00UTC) ensemble spread of tracks from the Met Office, ECMWF and NCEP.

This shows the range of possibilities for the track of Jose during the next 7 days. This latest run is consistent with previous issues. Note the consistent tracks from the ensemble members for the next few days.

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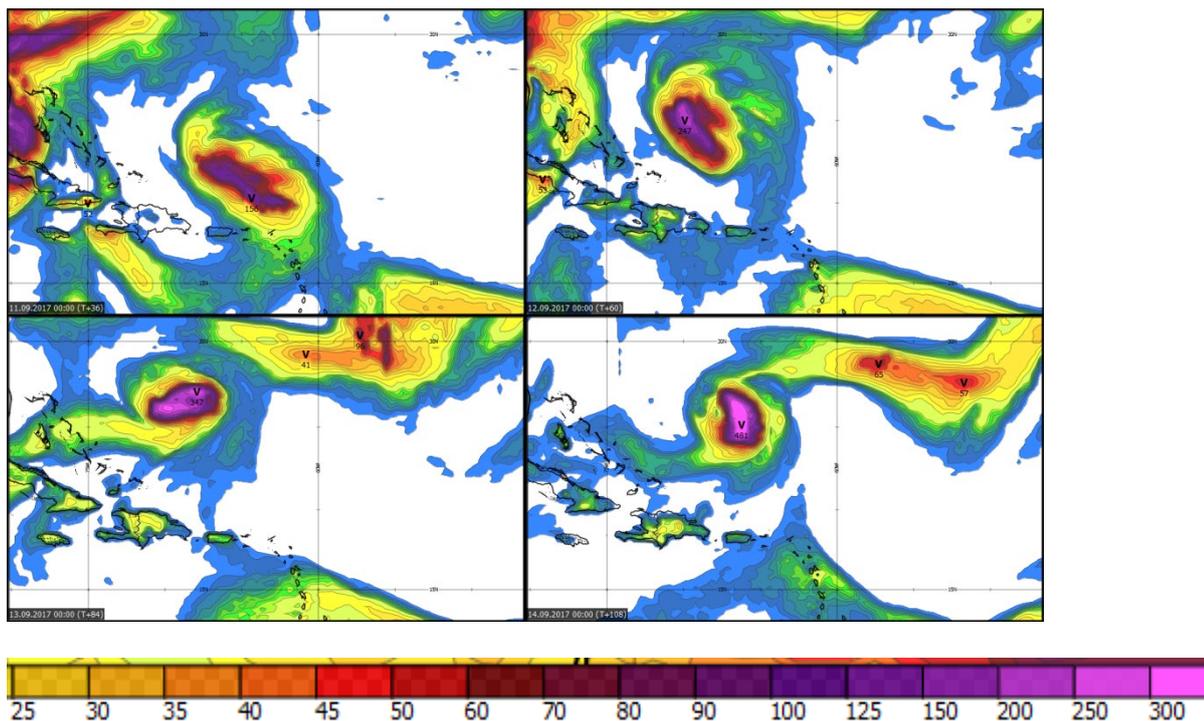


Figure 4: 09/12Z UKGM 24 hour rainfall totals for the next 4 days in millimetres. Saturday (top left), Sunday (top right), Monday (bottom left) and Tuesday (bottom right).

Note the risk of 150 to 250 millimetres along the track of Jose, but with significantly less to the southwest of the track.

Sources

NHC, UK Met Office, ECMWF, NCEP, and various media reports.

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