

## Current Watches and Warnings

A **Tropical Storm Warning** is in effect for the Dry Tortugas

A **Tropical Storm Watch** is in effect for the Cuban provinces of La Habana, Artemisa, Mayabeque, Pinar del Rio, and the Isle of Youth

## Current Details from the National Hurricane Center (NHC)

**COORDINATES:** 24.6° north, 83.4° west

**LOCATION:** 30 miles (50 kilometers) west-southwest of the Dry Tortugas, Florida

**MOVEMENT:** southwest at 14 mph (22 kph)

**WINDS:** 60 mph (95 kph) with gusts to 70 mph (110 kph)

**RADIUS OF TROPICAL STORM-FORCE WINDS:** 150 miles (240 kilometers)

**MINIMUM CENTRAL PRESSURE:** 994 millibars

**SAFFIR-SIMPSON SCALE RANKING\*:** Tropical Storm

**24-HOUR LANDFALL POTENTIAL:** NONE

**1<sup>st</sup> U.S. LANDFALL LOCATION:** Lower Matecumbe Key, Florida (United States)

**1<sup>st</sup> U.S. LANDFALL TIMEFRAME:** approximately 11:00 PM local time Nov. 8 (04:00 UTC Nov. 9)

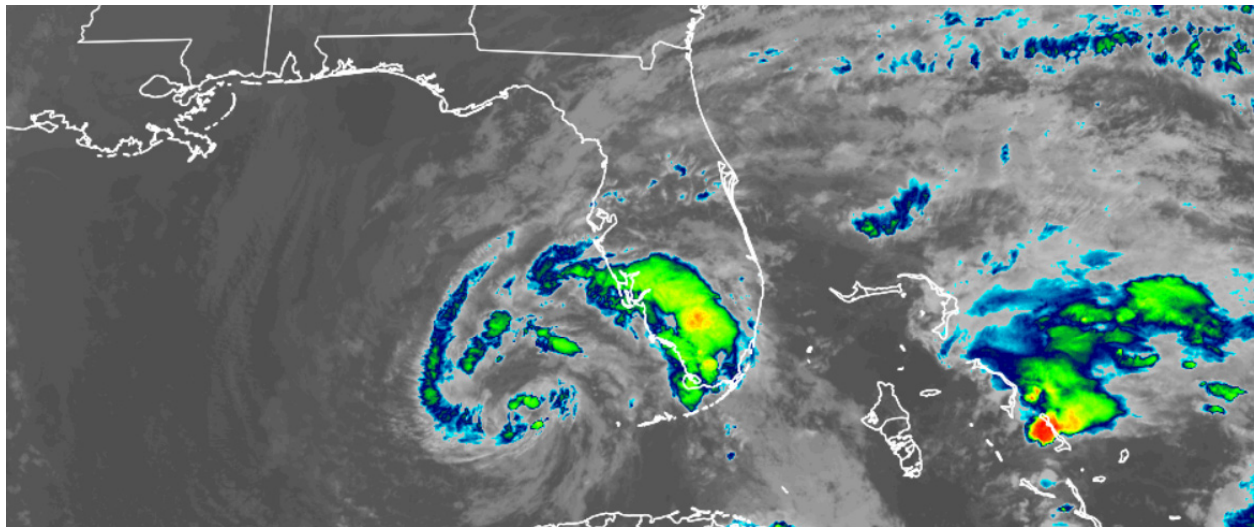
**1<sup>st</sup> U.S. LANDFALL INTENSITY:** 65 mph (100 kph) – Tropical Storm

**CUBA LANDFALL LOCATION:** Sancti Spiritus Province, Cuba

**CUBA LANDFALL TIMEFRAME:** approximately 4:00 AM local time Nov. 8 (09:00 UTC)

**CUBA LANDFALL INTENSITY:** 65 mph (100 kph) – Tropical Storm

## Latest Satellite Picture



Source: NOAA / NASA / Colorado State University (RAAMB)

## Discussion

Tropical Storm Eta, located approximately 30 miles (50 kilometers) west-southwest of the Dry Tortugas, Florida, is currently tracking southwest at 14 mph (22 kph). Eta's overall appearance in satellite imagery has become quite fragmented today, with a lack of convection near the center and little deep cloud cover due to continued mid-level dry air entrainment. Some of the recent Air Force Reserve reconnaissance flight-level data indicate that dry air has worked way down to areas near the surface. In the northeastern quadrant, a large curved convective band persists that has produced widespread rainfall amounts exceeding 10 inches along with strong gusty winds across portions of the southern Florida peninsula. However, even that band of thunderstorms has become less pronounced in radar imagery over the past few hours. Given these Doppler and aircraft data, plus the rise in minimum central pressure to 994 millibars, the NHC has reduced the initial intensity to 60 mph (95 kph).

Eta has finally made the expected southwestward turn as ridge of high pressure across the Gulf of Mexico, Florida, and near the U.S. east coast is expected to keep Eta moving southwestward for the next 24-36 hours. This will be accompanied by a steady decrease in forward speed. Steering currents are forecast to collapse by 36-48 hours, causing Eta to possibly stall and/or make a small loop just northwest of western Cuba. By 60 hours and beyond, a broad trough currently located over the Rocky Mountains is forecast to move eastward and gradually erode the portion of the ridge over the Gulf of Mexico, allowing Eta to slowly move northward to north-northeastward through 20 hours. However, there remains considerable divergence between the forecast models on days 4 and 5 with regards to how far north Eta will move. The ECMWF (European) shows a more northward progression while the GFS (U.S.) and UKMET models show the trough lifting out and not eroding the ridge as much. For now, the official NHC forecast track remains a compromise of these two extremes, and shows a slow northward progression on days 3-5.

Eta could still re-strengthen a bit during the 24-48 hour period when the cyclone will be moving over the warm waters of the Gulf of Mexico Loop Current and the wind shear gradually decreases. However, occasional intrusions of very dry air will likely continue to plague the system, which would prevent any rapid intensification from occurring and could keep Eta from regaining hurricane status. By 48 hours and beyond, increasing vertical wind shear and dry air should cause a gradual weakening of the cyclone through end of the forecast period. The new NHC intensity forecast is a little lower than the previous one.

### Key Messages from the National Hurricane Center

1. Heavy rainfall from Eta will continue across portions of Cuba, the Bahamas, and southern and central Florida. Life-threatening flash flooding will be possible across urban areas of southeast Florida today. Flash and urban flooding will also be possible for Cuba, the Bahamas and the remainder of southern Florida, along with potential minor river flooding in central Florida.
2. Eta could approach the Florida Gulf Coast later this week as a tropical storm, and possibly bring impacts from rain, wind, and storm surge. Interests in this area should monitor the progress of Eta and updates to the forecast this week.

### Additional Information

RAINFALL: Eta is expected to produce the following rainfall amounts through Saturday morning:

*The Bahamas:* An additional 1 to 3 inches (25 to 75 mm), with isolated maximum storm totals of 15 inches (380 mm)

*Portions of Cuba:* an additional 3 to 5 inches (75 to 125 mm), isolated maximum storm total accumulations of 25 inches (635 mm)

*Portions of the central and southern Florida peninsula, including the Keys:* an additional 2 to 4 inches (50 to 100 mm)), with isolated maximum storm totals of 18 inches (450 mm) in South Florida

Flash flooding and river flooding will be possible in Cuba, along with landslides in areas of higher terrain. Life-threatening flash flooding will be possible across saturated urban areas of southeast Florida. Flash and urban flooding will also be possible for the Bahamas and the remainder of southern and eastern Florida over the next several days. Minor river flooding is also possible for central Florida.

WIND: Gusty conditions will continue across the Florida Keys, south and central Florida, and the northwestern Bahamas today. Tropical storm conditions are possible in the Tropical Storm Watch area in Cuba tonight and Tuesday.

TORNADOES: A tornado or two is possible today over parts of south Florida and the Keys.

SURF: Swells generated by Eta are expected to affect the north coast of Cuba, the northwestern Bahamas, southern Florida and the Florida Keys during the next couple of days. These swells are likely to cause life-threatening surf and rip current conditions.

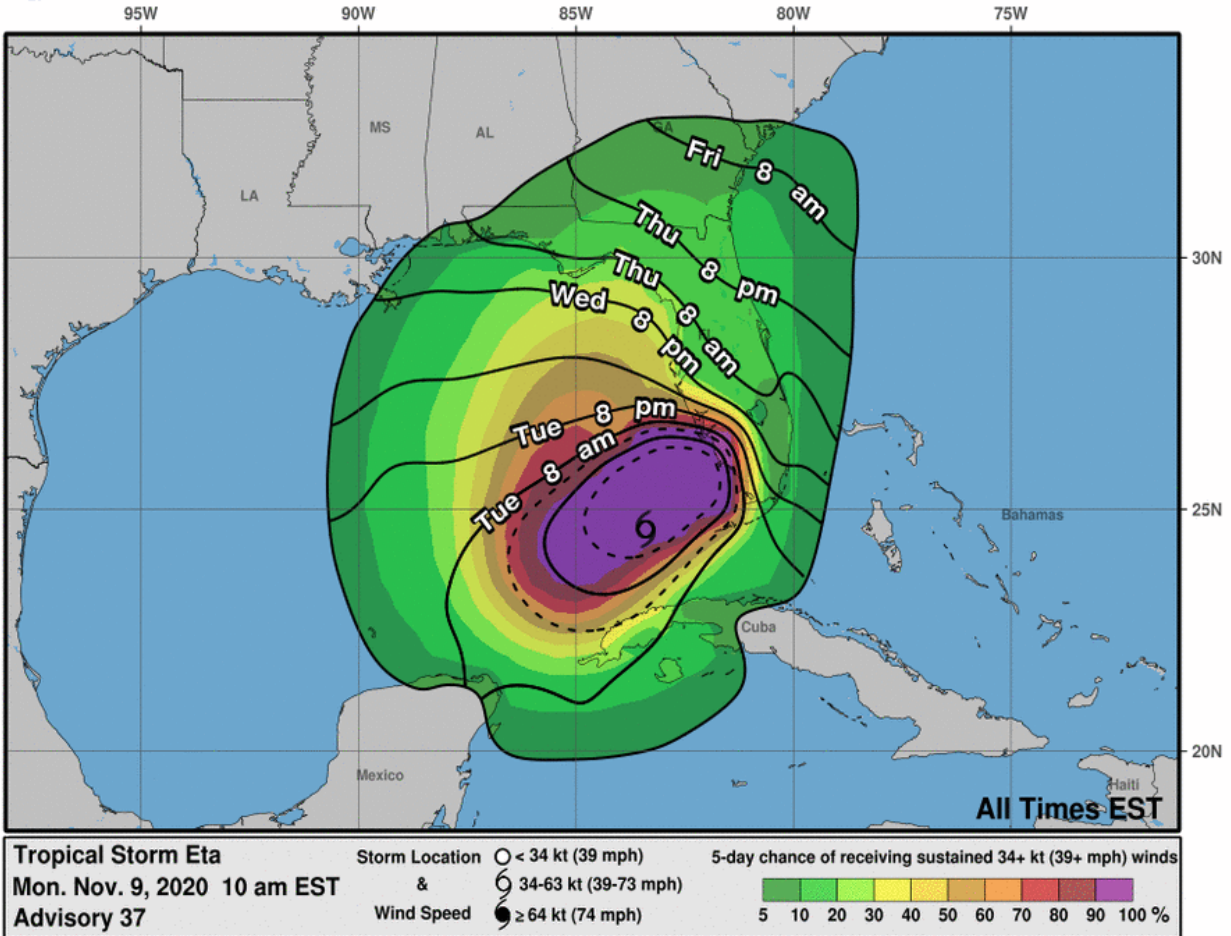
# National Hurricane Center (NHC) Forecast



# Most Likely Arrival Time of Tropical Storm-Force Winds



## Most Likely Arrival Time of Tropical-Storm-Force Winds



# National Hurricane Center: Wind Speed Probabilities

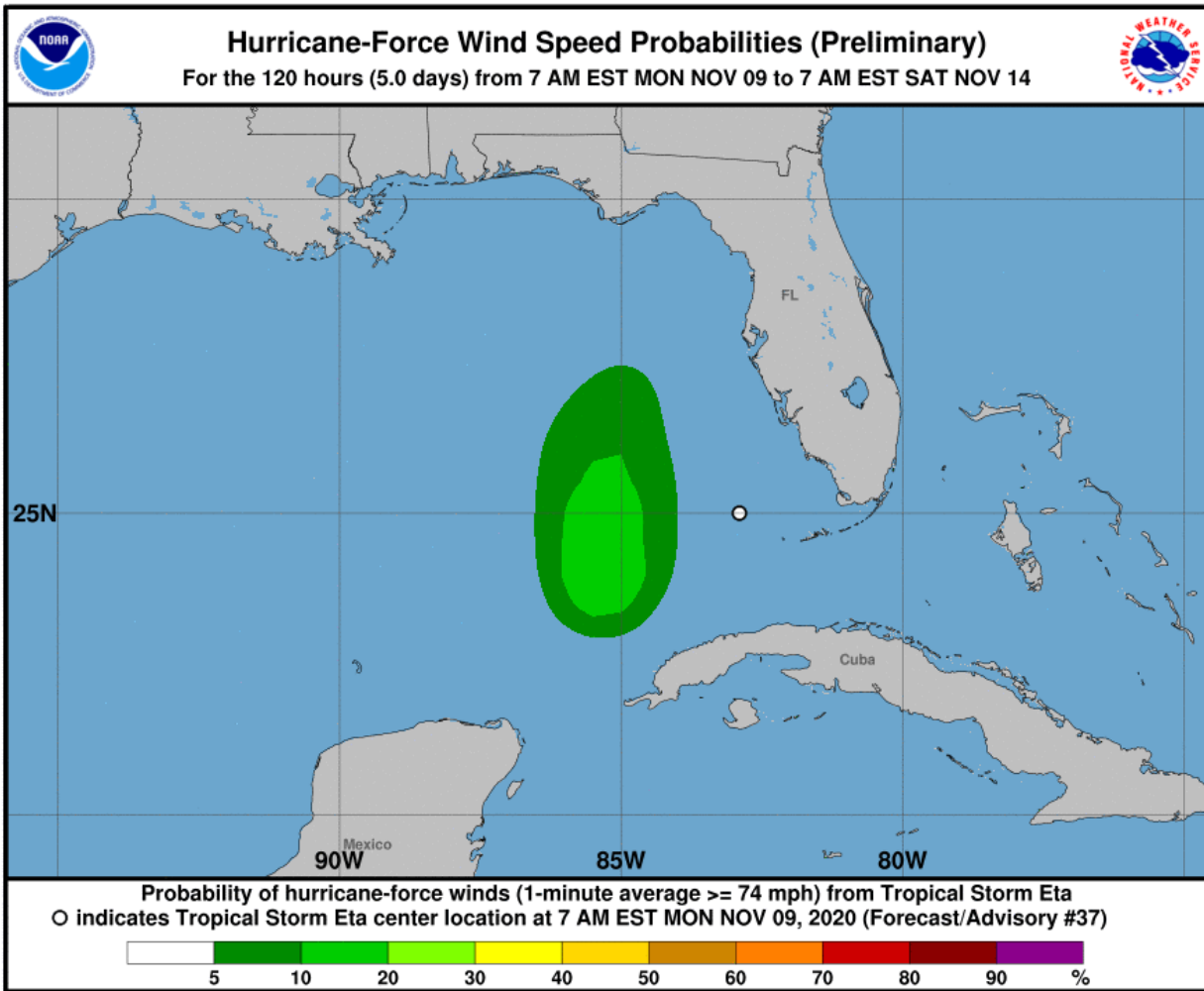
## Tropical Storm-Force Wind Probabilities ( $\geq 40$ mph (65 kph))



# Wind Probabilities ( $\geq 60$ mph (95 kph))

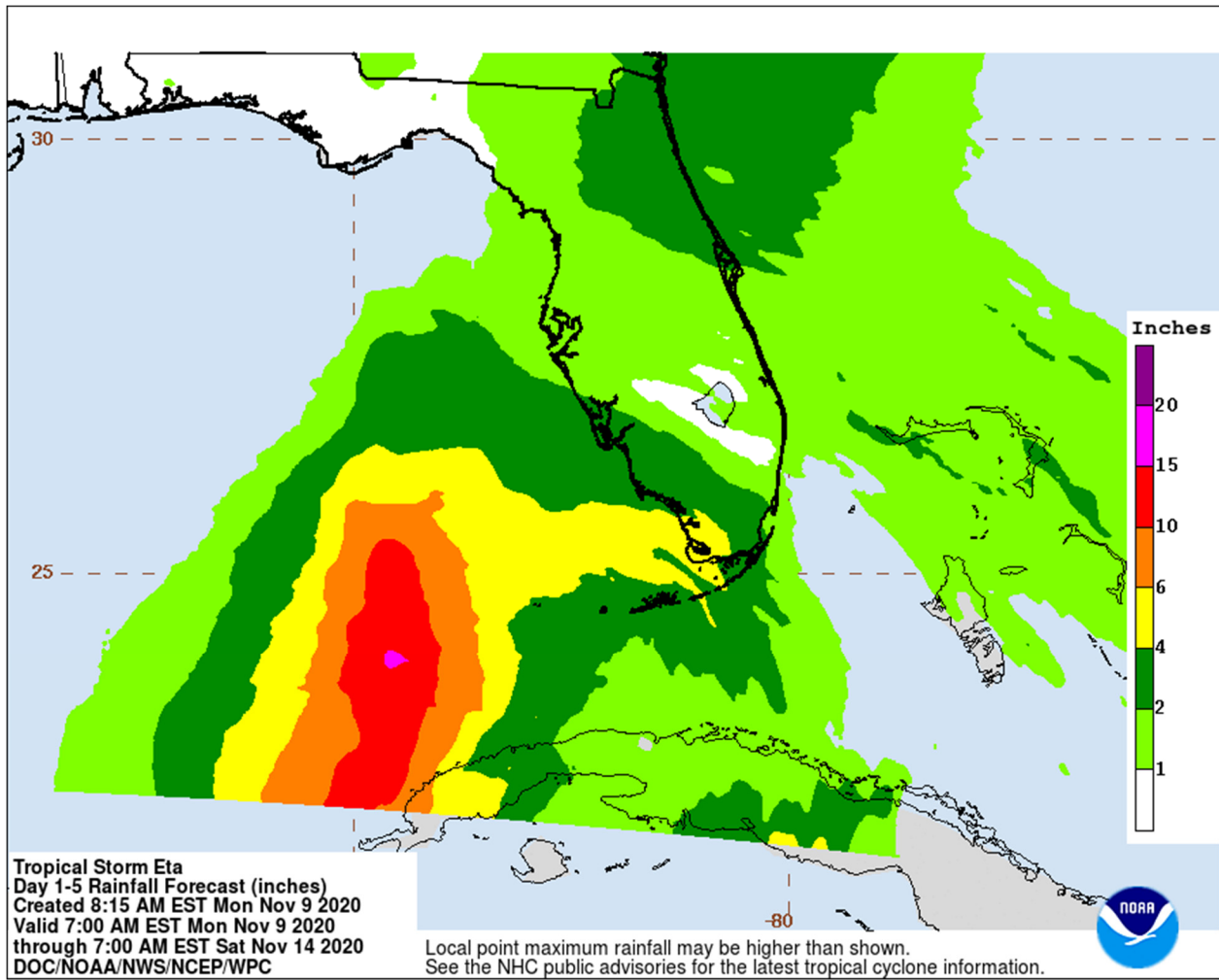


# Hurricane-Force Wind Probabilities ( $\geq 75$ mph (120 kph))

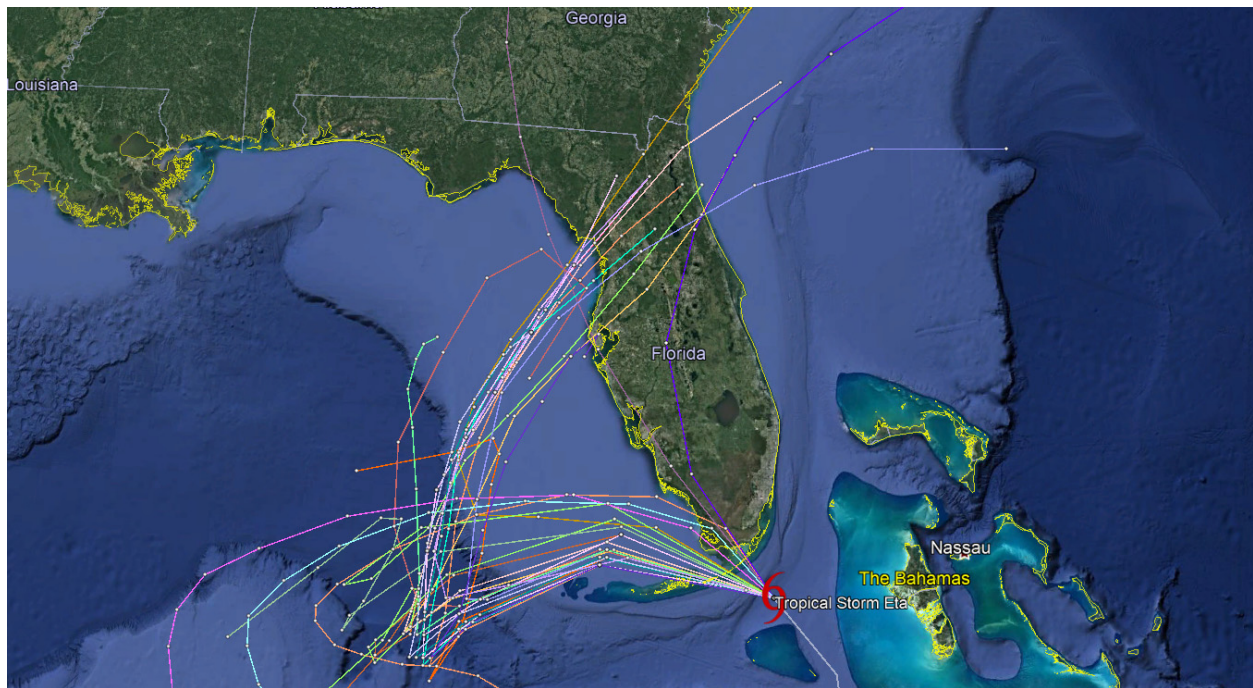




# Weather Prediction Center: Rainfall Potential



## Current 'Spaghetti' Model Output Data



Source: NHC

## Additional Information and Update Schedule

Wind intensity forecasts and forecast track information can be found via the National Hurricane Center at [www.nhc.noaa.gov](http://www.nhc.noaa.gov)

**NEXT CAT ALERT:** Tuesday morning after 9:00 AM Central Time (15:00 UTC).

# \*Tropical Cyclone Intensity Classifications for Global Basins

WIND SPEED			BASINS AND MONITORING BUREAU						
KTS <sup>1</sup>	MPH <sup>1</sup>	KPH <sup>1</sup>	NE Pacific, Atlantic	NW Pacific	NW Pacific	SW Pacific	Australia	SW Indian	North Indian
			National Hurricane Center (NHC)	Joint Typhoon Warning Center (JTWC)	Japan Meteorological Agency (JMA)	Fiji Meteorological Service (FMS)	Bureau Of Meteorology (BOM)	Meteo-France (MF)	India Meteorological Department (IMD)
30	35	55	Tropical Depression	Tropical Depression	Tropical Depression	Tropical Depression	Tropical Low	Tropical Depression	Deep Depression
35	40	65	Tropical Storm	Tropical Storm	Tropical Storm	Cat. 1 Tropical Cyclone	Cat. 1 Tropical Cyclone	Moderate Tropical Storm	Cyclonic Storm
40	45	75							
45	50	85							
50	60	95							
55	65	100							
60	70	110	Cat. 1 Hurricane	Typhoon	Typhoon	Cat. 3 Severe Tropical Cyclone	Cat. 3 Severe Tropical Cyclone	Tropical Cyclone	Very Severe Cyclonic Storm
65	75	120							
70	80	130							
75	85	140							
80	90	150							
85	100	160	Cat. 2 Hurricane	Typhoon	Typhoon	Cat. 4 Severe Tropical Cyclone	Cat. 4 Severe Tropical Cyclone	Intense Tropical Cyclone	Very Severe Cyclonic Storm
90	105	170							
95	110	175							
100	115	185	Cat. 3 Major Hurricane	Typhoon	Typhoon	Cat. 4 Severe Tropical Cyclone	Cat. 4 Severe Tropical Cyclone	Intense Tropical Cyclone	Very Severe Cyclonic Storm
105	120	195							
110	125	205							
115	130	210	Cat. 4 Major Hurricane	Super Typhoon	Super Typhoon	Cat. 5 Severe Tropical Cyclone	Cat. 5 Severe Tropical Cyclone	Very Intense Tropical Cyclone	Super Cyclonic Storm
120	140	220							
125	145	230							
130	150	240	Cat. 5 Major Hurricane	Super Typhoon	Super Typhoon	Cat. 5 Severe Tropical Cyclone	Cat. 5 Severe Tropical Cyclone	Very Intense Tropical Cyclone	Super Cyclonic Storm
135	155	250							
140	160	260							
>140	>160	>260	Cat. 5 Major Hurricane	Super Typhoon	Super Typhoon	Cat. 5 Severe Tropical Cyclone	Cat. 5 Severe Tropical Cyclone	Very Intense Tropical Cyclone	Super Cyclonic Storm

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