

Current Watches and Warnings

A *Hurricane Warning* is in effect from Little River Inlet to the North Carolina/Virginia border; Pamlico and Albemarle Sounds (NC)

A *Storm Surge Warning* is in effect from Surf City, NC to Poquoson, VA; Pamlico and Albemarle Sounds (NC); Neuse and Pamlico Rivers (NC); Hampton Roads (VA)

A *Hurricane Watch* is in effect for Nova Scotia (Canada)

A *Tropical Storm Warning* is in effect from South Santee River, SC to Little River Inlet (SC); North Carolina/Virginia border to Fenwick Island, DE; Chesapeake Bay from Drum Point southward; Tidal Potomac south of Cobb Island; Woods Hole to Sagamore Beach, MA; Nantucket & Martha's Vineyard, MA

A *Tropical Storm Watch* is in effect for Prince Edward Island (Canada); Magdalen Islands (Canada); Fundy National Park to Shediac (Canada); Francois to Boat Harbour (Canada)

Current Details from the National Hurricane Center (NHC)

COORDINATES: 34.8° north, 76.2° west

LOCATION: 20 miles (30 kilometers) northeast of Cape Lookout, North Carolina

MOVEMENT: northeast at 14 mph (22 kph)

WINDS: 90 mph (150 kph) with gusts to 115 mph (185 kph)

RADIUS OF TROPICAL STORM-FORCE WINDS: 220 miles (350 kilometers)

RADIUS OF HURRICANE-FORCE WINDS: 45 miles (75 kilometers)

MINIMUM CENTRAL PRESSURE: 956 millibars

SAFFIR-SIMPSON SCALE RANKING*: Category 1

1st LANDFALL LOCATION: Elbow Cay, Great Abaco Island, Bahamas

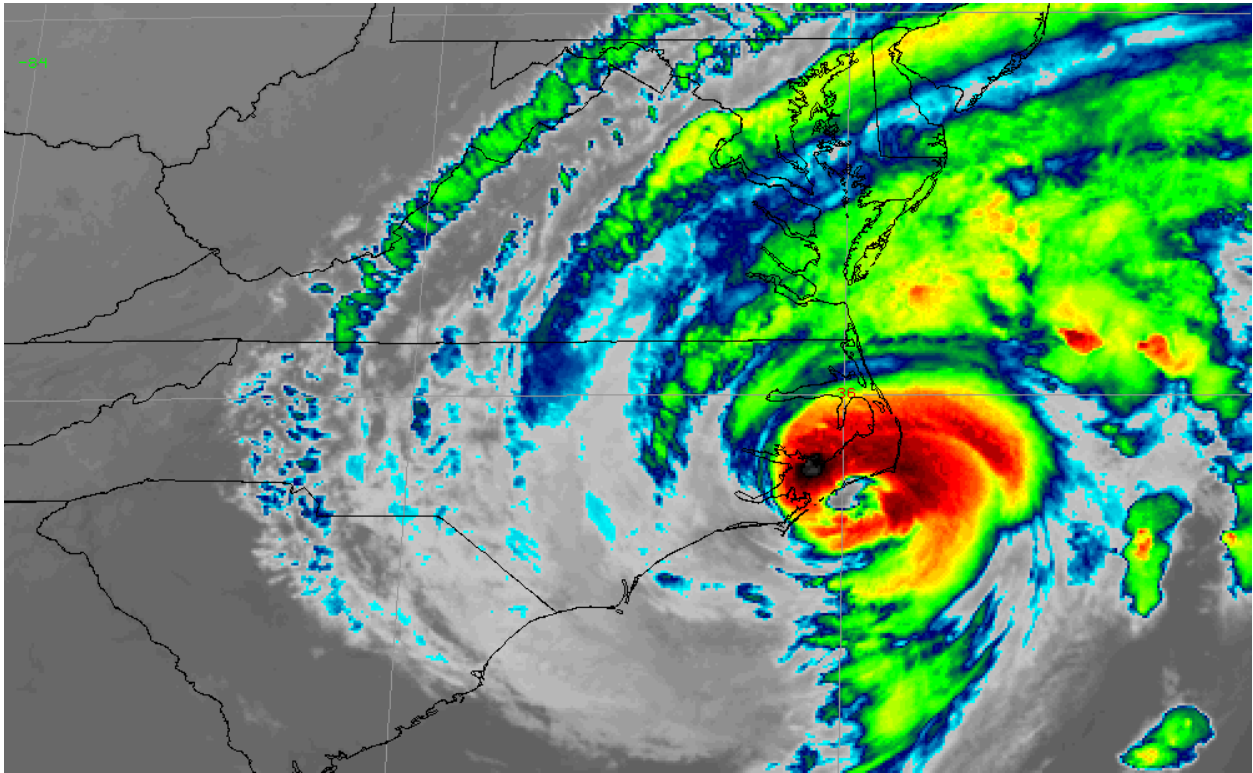
1st LANDFALL TIMEFRAME: approximately 12:40 PM local time (16:40 UTC) September 1

1st LANDFALL INTENSITY: 185 mph (295 kph) – Category 5*

*Tied the 1935 Labor Day Hurricane as the strongest hurricane on record to make landfall in the Atlantic Ocean

24-HOUR LANDFALL POTENTIAL: HIGH (North Carolina coastline)

Latest Satellite Picture



Source: NASA/NOAA

Discussion

Hurricane Dorian, located approximately 20 miles (30 kilometers) northeast of Cape Lookout, North Carolina and is currently tracking northeast at 14 mph (22 kph). The center of the eye of Hurricane Dorian is located just off the coast of North Carolina, and very near Cape Lookout. Based on data from the Air Force Hurricane Hunters and Doppler radar velocities, the NHC has set an initial intensity at 90 mph (150 kph) – a Category 1 hurricane. Despite the lower wind speeds, the minimum pressure remains quite low at 956 millibars based on surface observations and aircraft data. There have been several reports in eastern North Carolina of sustained tropical-storm-force winds and hurricane-force gusts, with the strongest winds being reported in the northern eyewall.

Dorian is moving towards the northeast at a faster motion at this time, and an increased motion is expected during the next few days as a mid/upper-level dip in the jet stream approaches the system and accelerates the steering flow. This track will take the hurricane along the coast of North Carolina during the next several hours and near or over Atlantic Canada this weekend.

The hurricane is expected to gradually weaken during the next couple of days due to an increase in vertical wind shear and drier air. Dorian is expected to cross the north portion of the Gulf Stream current in about 36 hours, and head over much colder waters after that. These atmospheric and oceanic conditions should cause the cyclone to become a powerful hurricane-force extratropical cyclone in about two days. As the system gains latitude, the tropical-storm-force winds are expected to expand significantly.

Key Messages from the National Hurricane Center

1. Life-threatening storm surge and dangerous winds are expected to continue along portions of the North Carolina coast, portions of southeast Virginia and the southern Chesapeake Bay. Water levels could rise well in advance of the arrival of strong winds. Residents in these areas should follow advice given by local emergency officials.
2. Flash flooding is occurring, and will continue to become more widespread across the eastern Carolinas and far southeast Virginia this morning. There is a high risk of flash flooding over these areas, where significant, life-threatening flash flooding is expected.

Additional Information

WIND: Hurricane conditions are spreading northward along portions of the North Carolina coast. Tropical storm conditions are still affecting the northern portion of the South Carolina coast.

Tropical storm conditions are expected in the Tropical Storm Warning area in the Mid-Atlantic States later today and over portions of extreme southeastern Massachusetts tonight or early Saturday.

STORM SURGE: The combination of a dangerous storm surge and the tide will cause normally dry areas near the coast to be flooded by rising waters moving inland from the shoreline. The water could reach the following heights above ground somewhere in the indicated areas if the peak surge occurs at the time of high tide:

Surf City to Duck, NC, including Pamlico and Albemarle Sounds and the Neuse and Pamlico Rivers: 4 to 7 feet

Duck, NC to Poquoson, VA, including Hampton Roads: 2 to 4 feet

Water levels could begin to rise well in advance of the arrival of strong winds. The surge will be accompanied by large and destructive waves. Surge-related flooding depends on how close the center of Dorian comes to the coast, and can vary greatly over short distances.

RAINFALL: Dorian is expected to produce the following rainfall totals through Saturday.

Northeastern North Carolina: additional 3 to 8 inches, isolated storm totals 15 inches

Far southeast Virginia: 3 to 8 inches.

Extreme Southeastern New England: 2 to 4 inches

Nova Scotia and Prince Edward Island: 3 to 5 inches

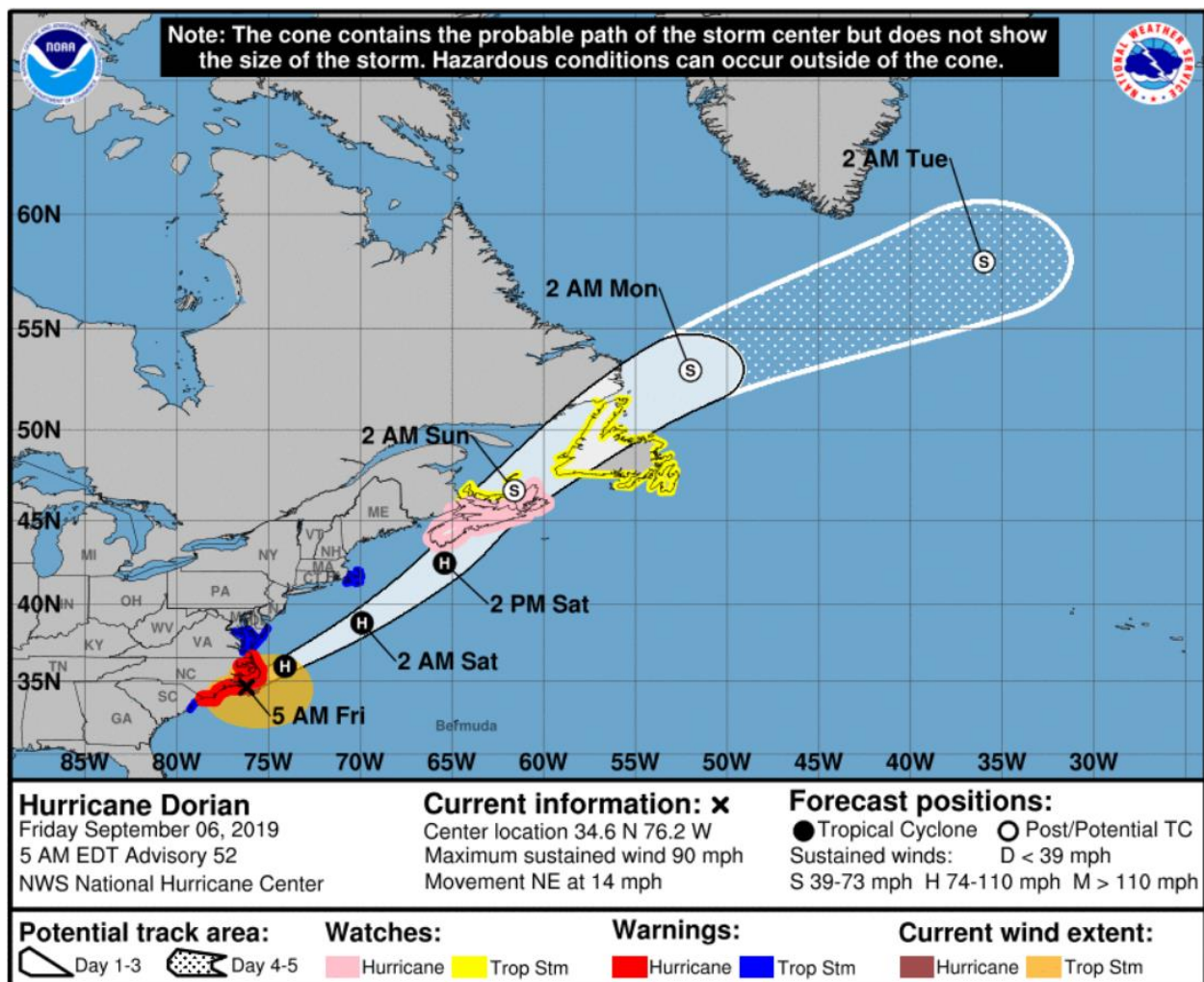
New Newfoundland: 1 to 2 inches

This rainfall may cause life-threatening flash floods.

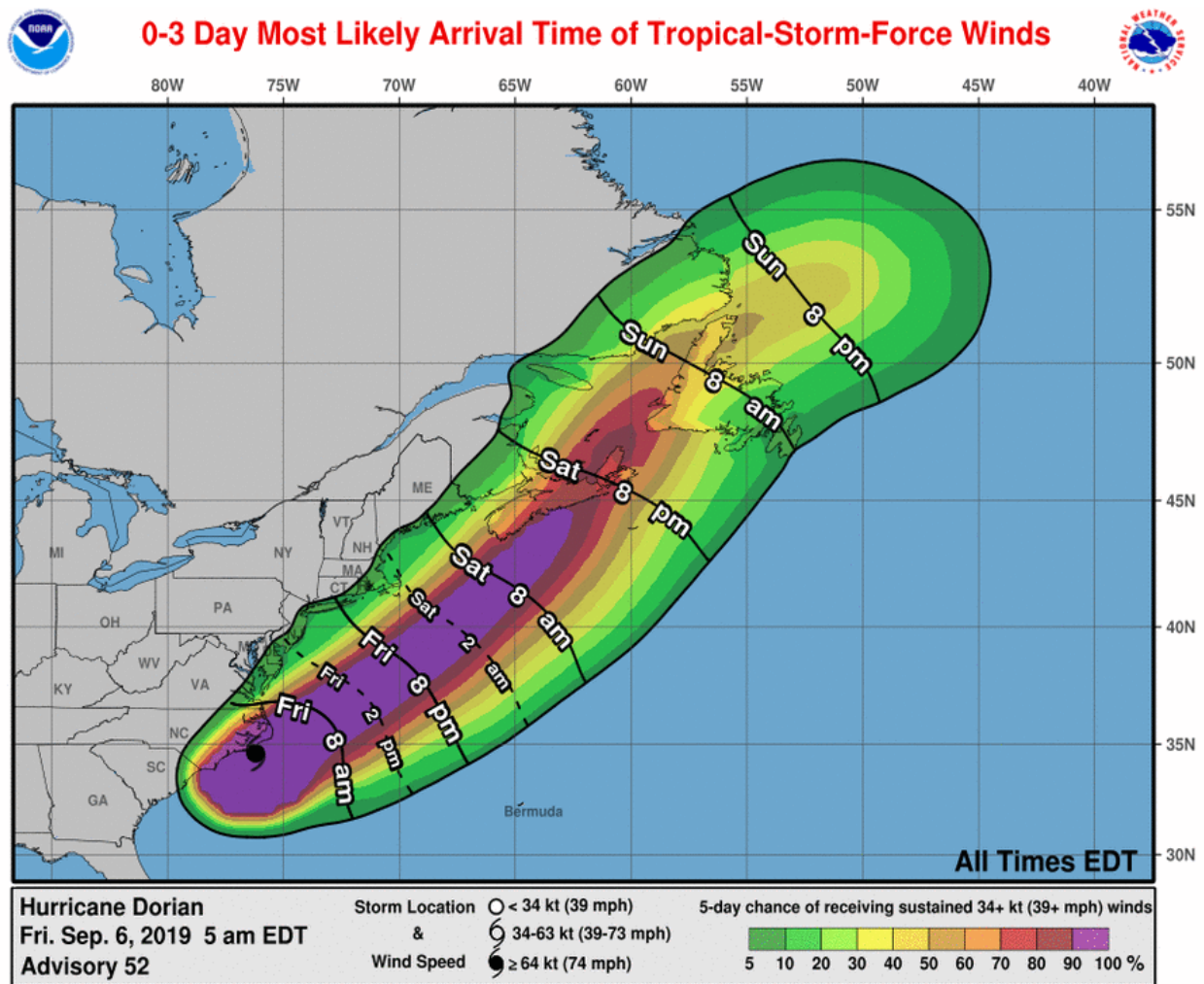
SURF: Large swells will affect much of the southeastern United States coast from northern Florida through North Carolina during the next couple of days. These swells are likely to cause life-threatening surf and rip current conditions.

TORNADOES: A few tornadoes are possible this morning across eastern North Carolina into southeastern Virginia.

National Hurricane Center Forecast

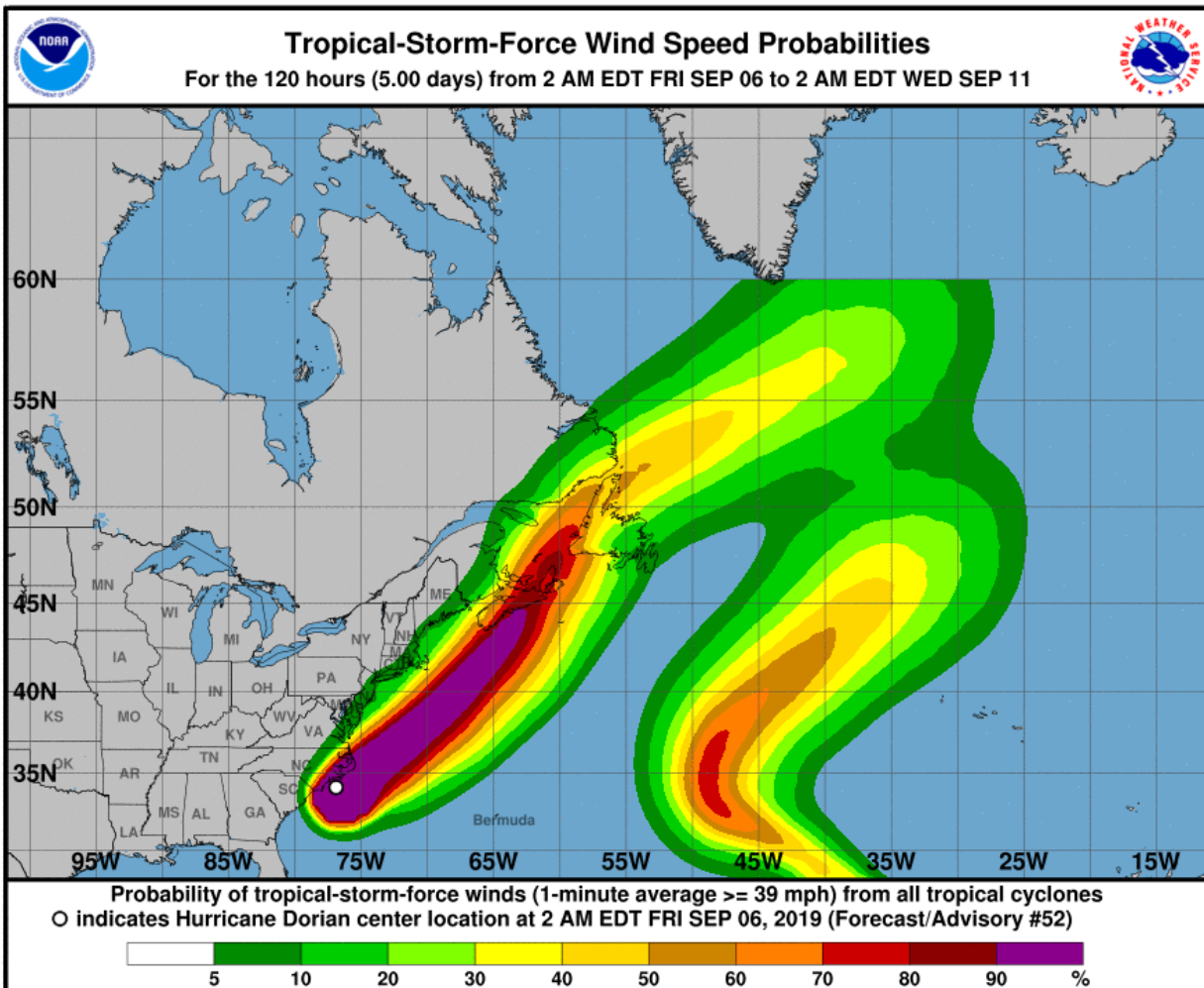


Most Likely Arrival Time of Tropical Storm-Force Winds

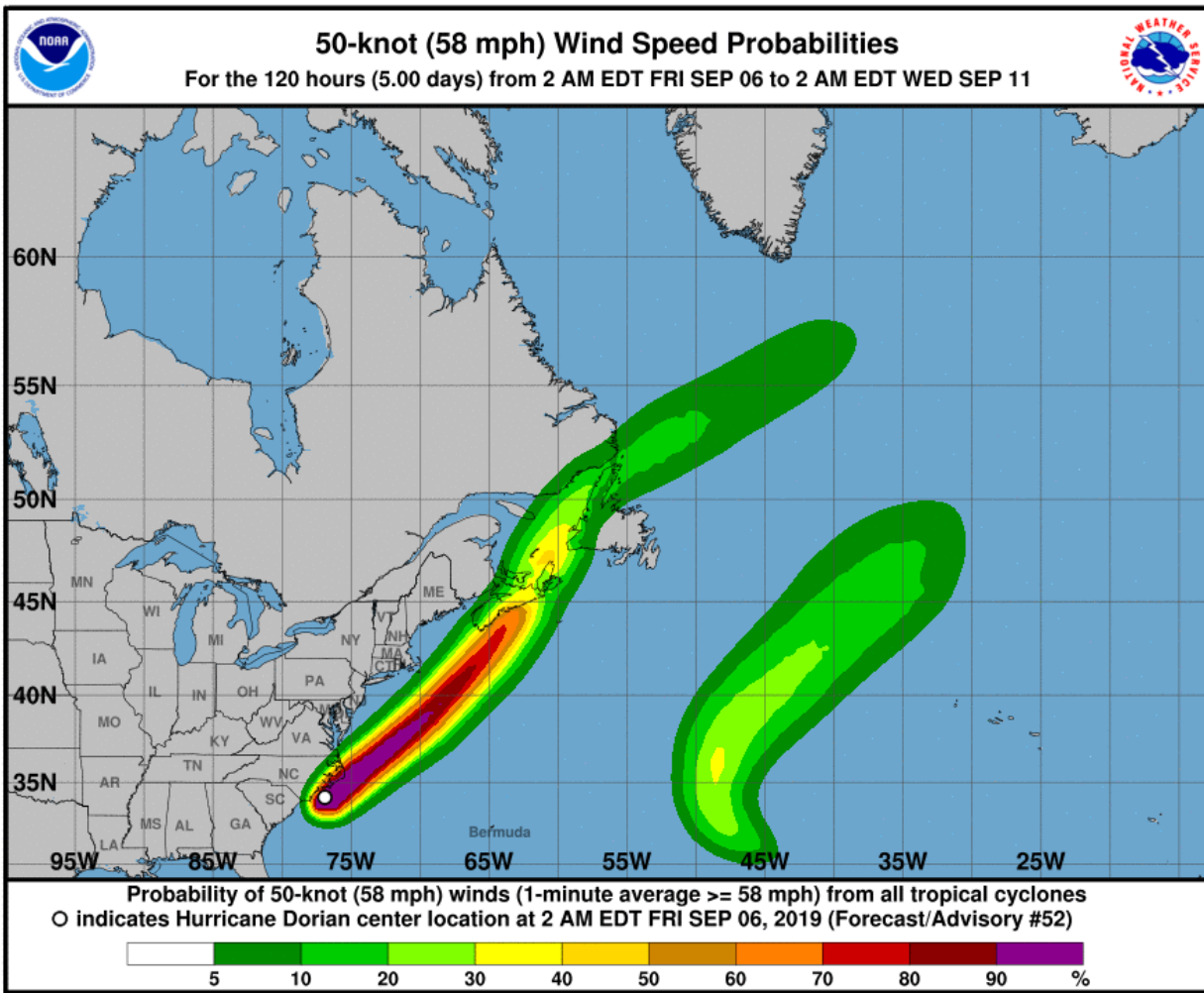


National Hurricane Center: Wind Speed Probabilities

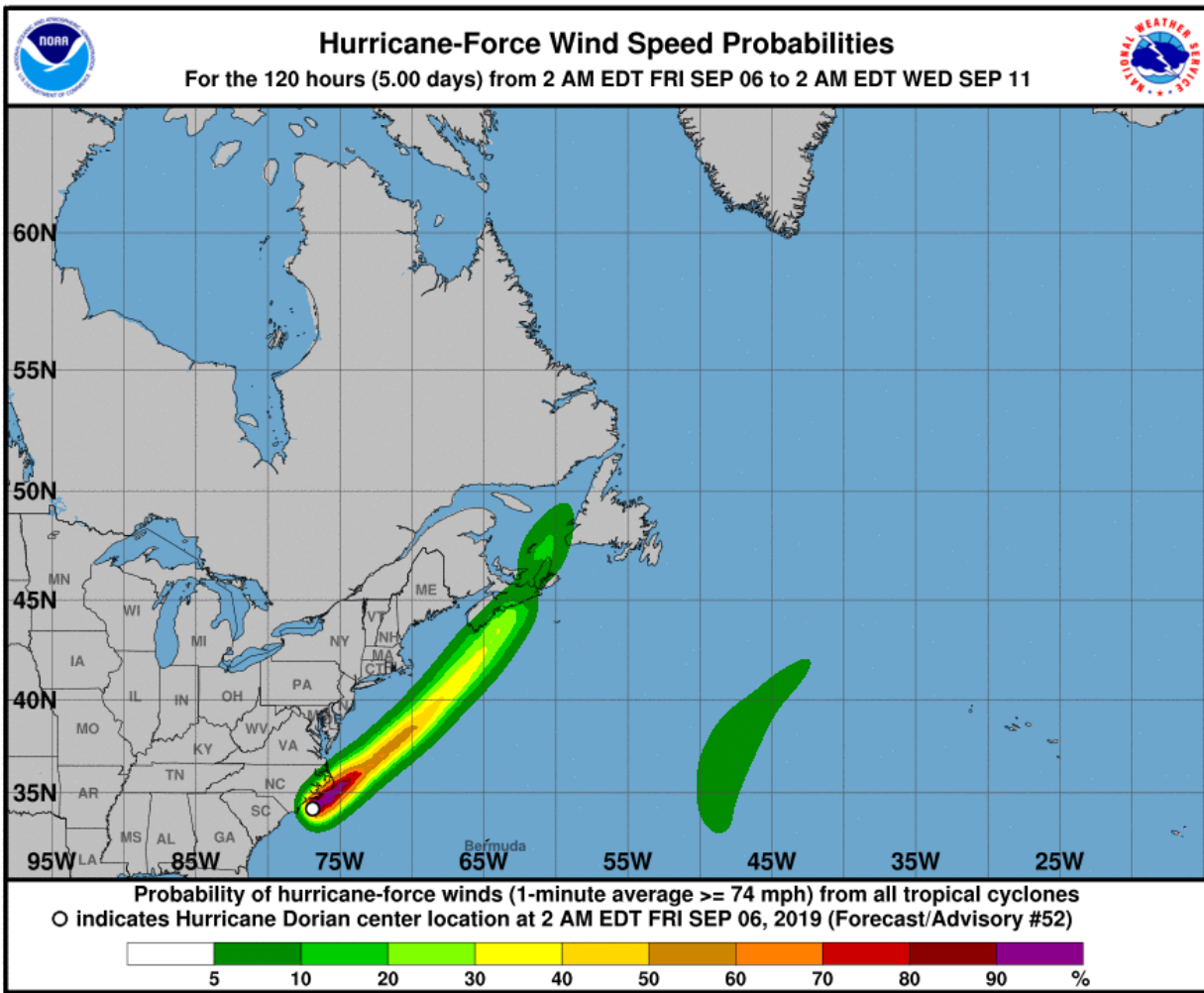
Tropical Storm-Force Wind Probabilities (≥ 40 mph (65 kph))



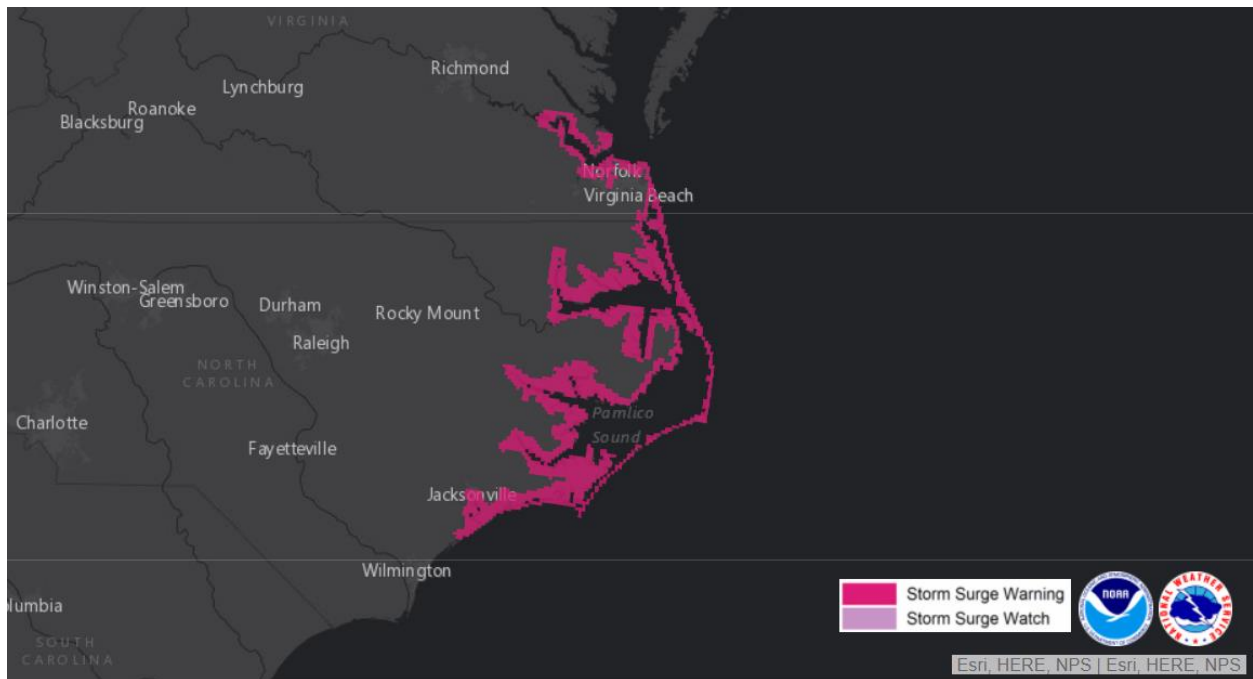
Wind Probabilities (≥ 60 mph (95 kph))



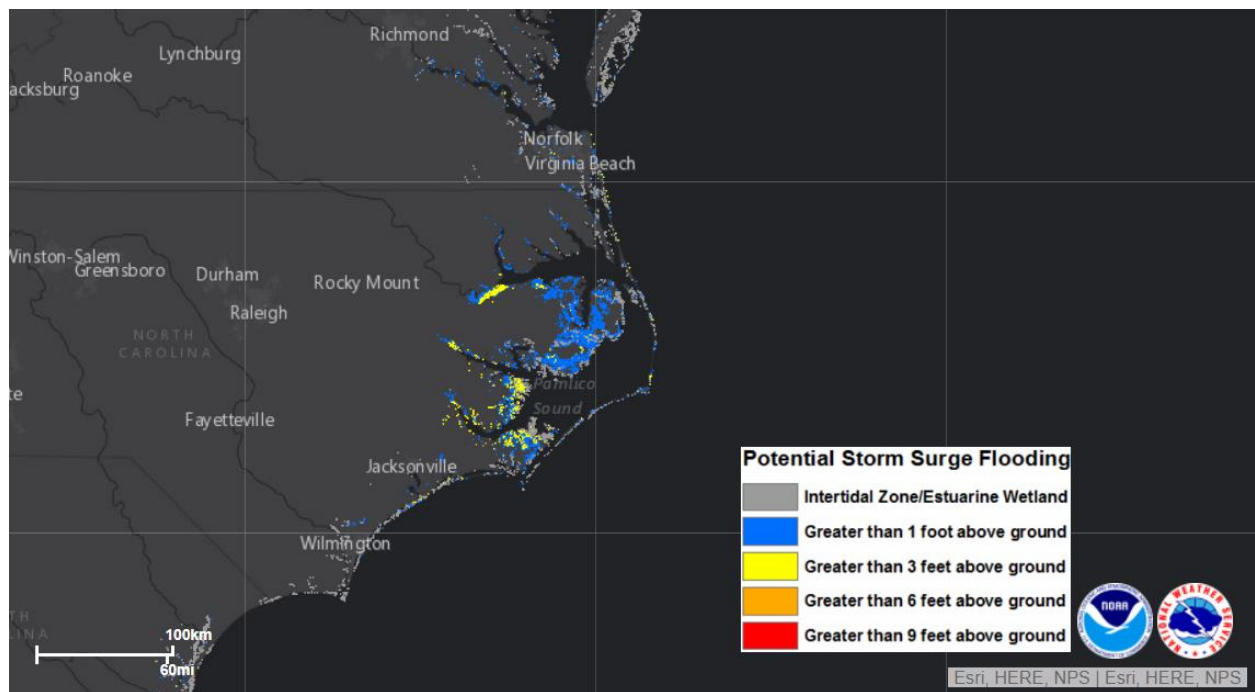
Hurricane-Force Wind Probabilities (≥ 75 mph (120 kph))



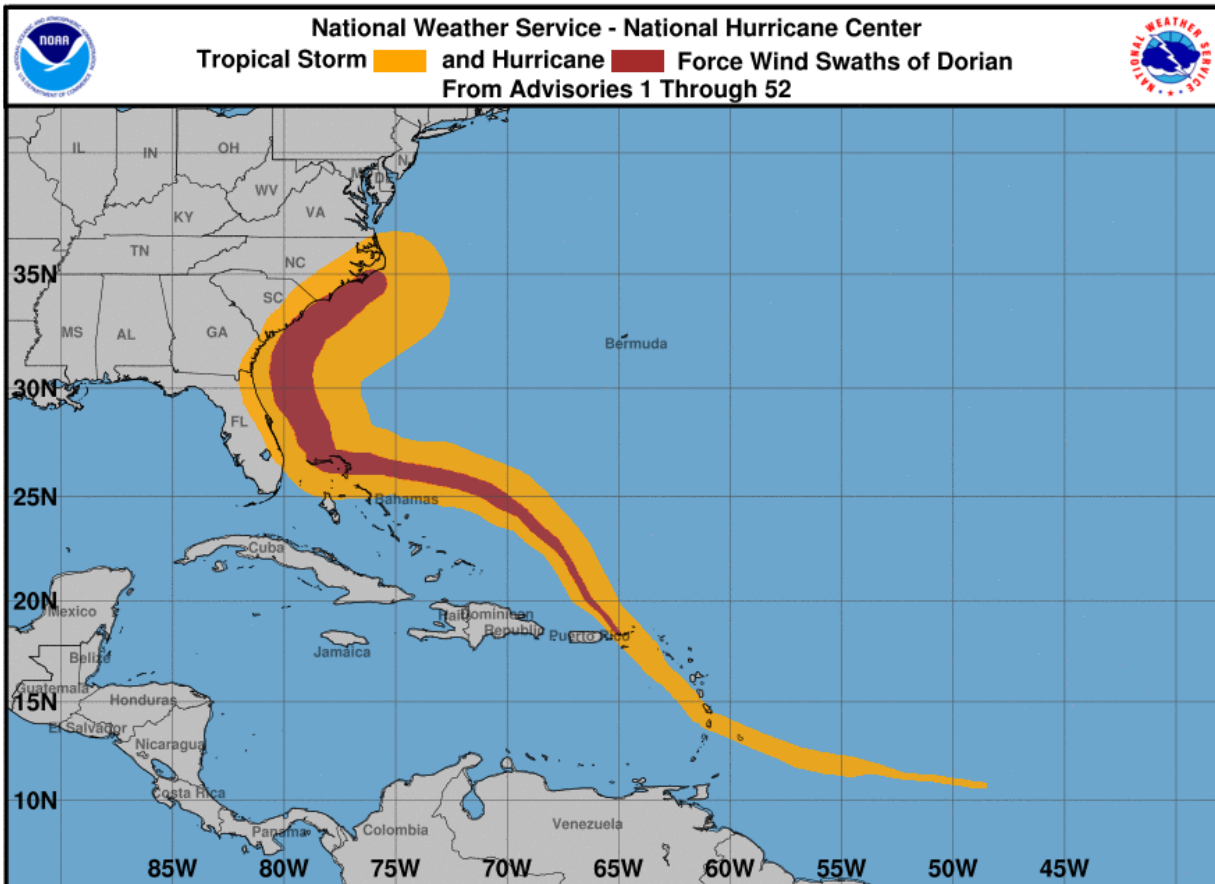
United States: Storm Surge Watches & Warnings



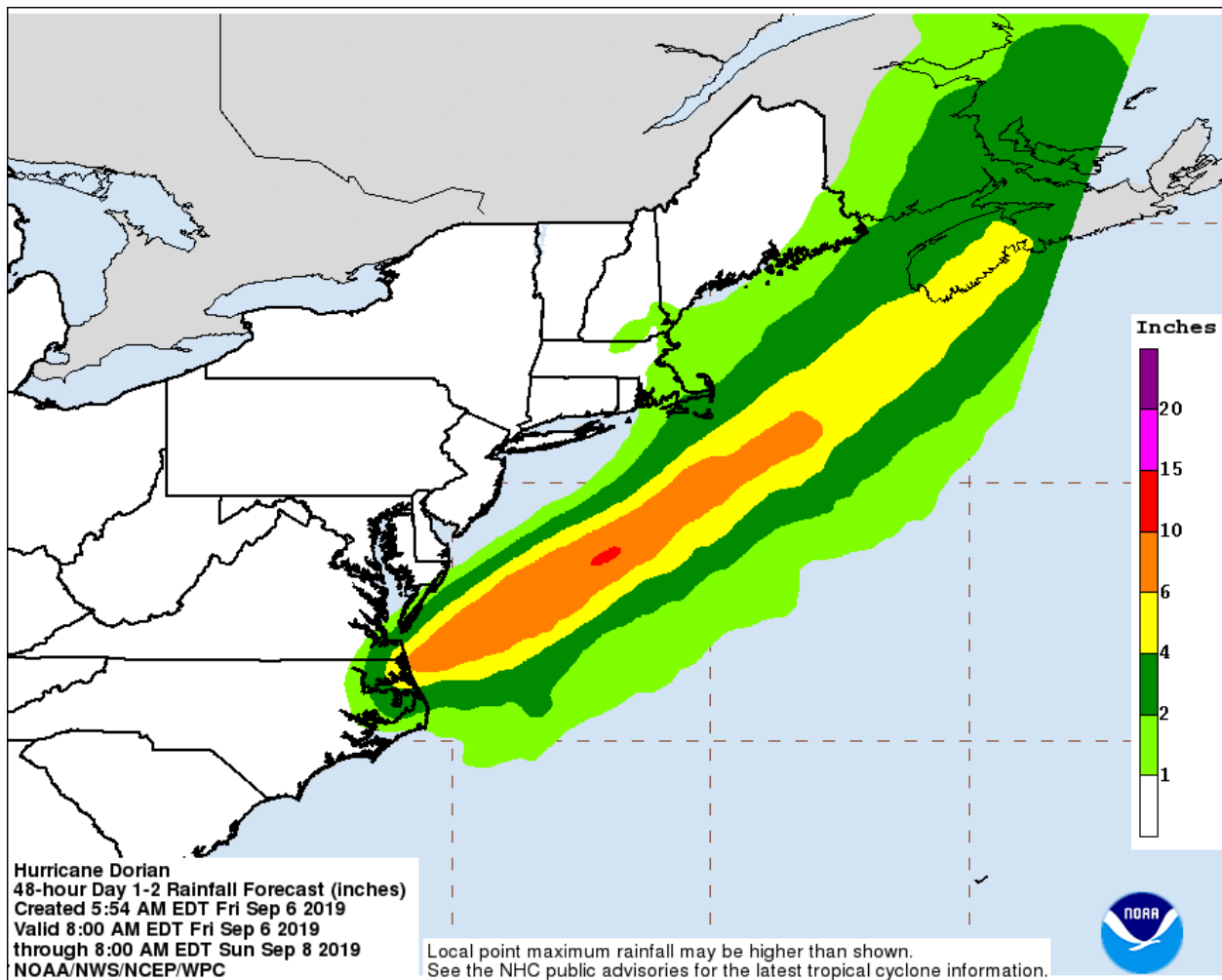
United States: Storm Surge Inundation



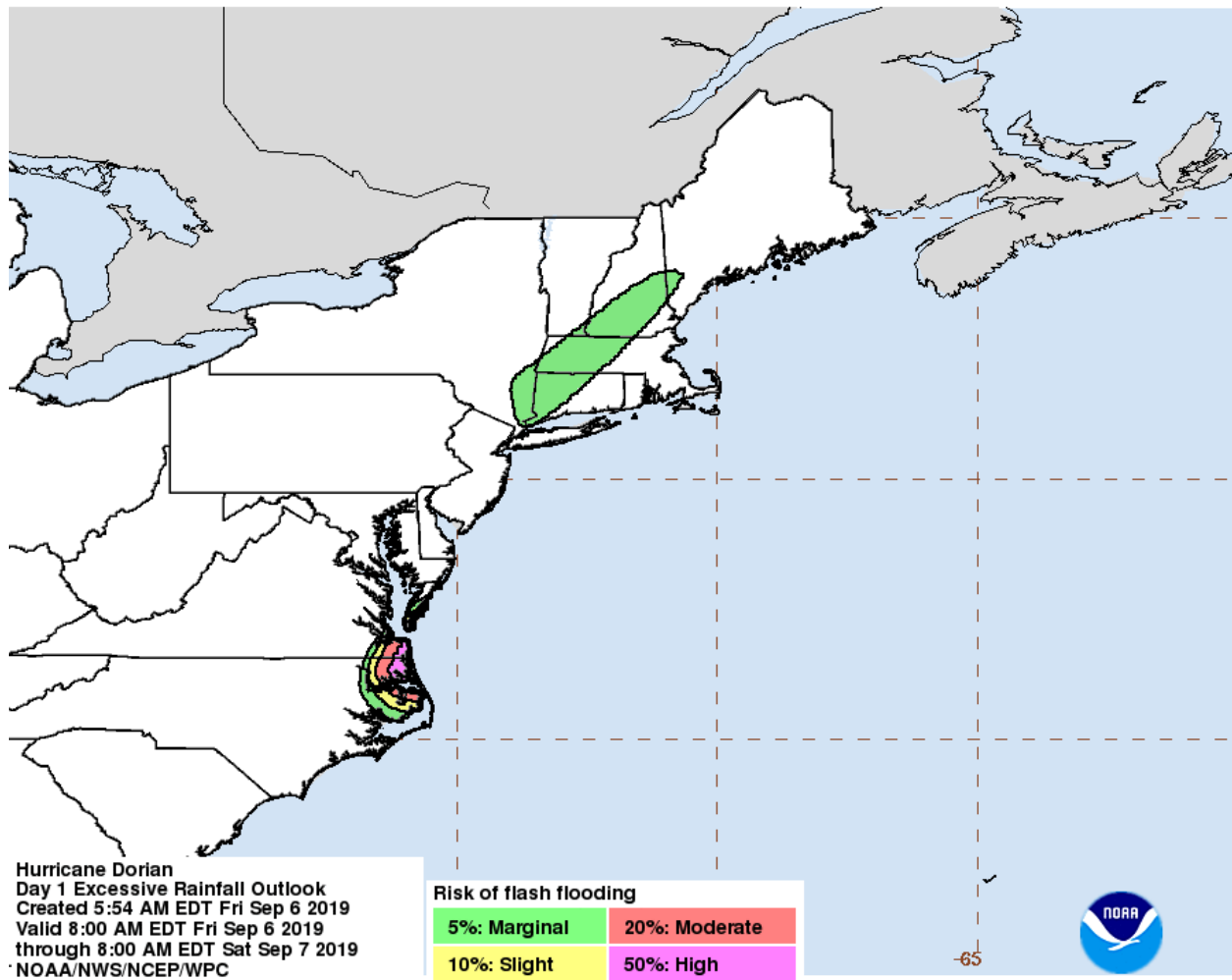
Wind Swath History



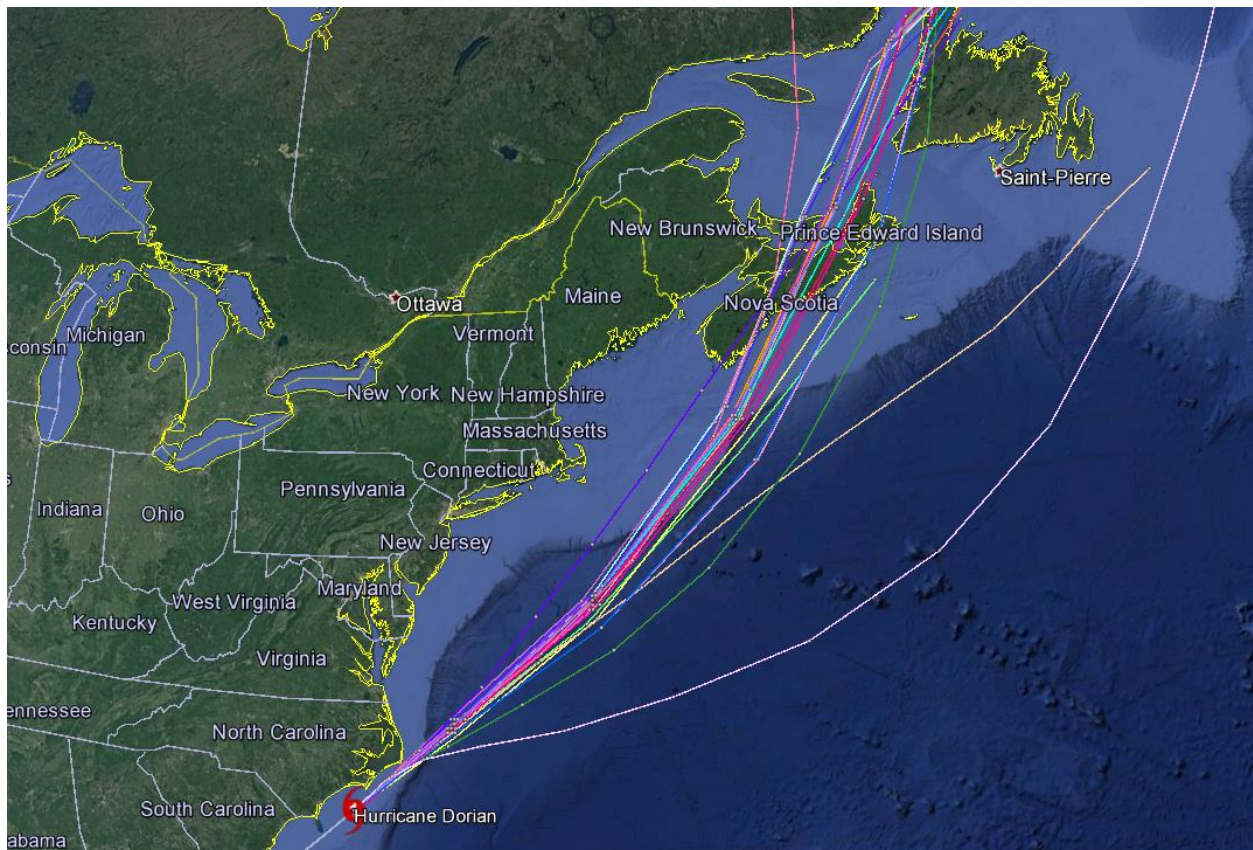
Weather Prediction Center: U.S. Rainfall Forecast



United States: Flash Flood 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

NEXT CAT ALERT: Friday afternoon after 4:00 PM Central Time (21:00 UTC).

*Tropical Cyclone Intensity Classifications for Global Basins

WIND SPEED			BASINS AND MONITORING BUREAU								
KTS ¹	MPH ¹	KPH ¹	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			Severe Tropical Storm	Cat. 2 Tropical Cyclone	Cat. 2 Tropical Cyclone	Severe Tropical Storm	Severe Cyclonic Storm		
50	60	95									
55	65	100									
60	70	110									
65	75	120	Cat. 1 Hurricane	Typhoon	Typhoon	Cat. 3 Severe Tropical Cyclone	Cat. 3 Severe Tropical Cyclone	Tropical Cyclone	Very Severe Cyclonic Storm		
70	80	130									
75	85	140									
80	90	150	Cat. 2 Hurricane			Intense Tropical Cyclone					
85	100	160									
90	105	170									
95	110	175	Cat. 3 Major Hurricane			Very Intense Tropical Cyclone		Super Cyclonic Storm			
100	115	185									
105	120	195									
110	125	205	Cat. 4 Major Hurricane		Super Typhoon						
115	130	210									
120	140	220									
125	145	230									
130	150	240	Cat. 5 Major Hurricane		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									

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