

Hurricane Dorian Advisory 20

Valid: 04:00 AM EDT Thursday August 29, 2019



Hurricane Dorian Advisory # 20
Valid: 08/29/19 04:00 EDT

Current Location: 20.4N, 66.5W

Geographic Reference: 140 miles north-northwest of San Juan, Puerto Rico

Movement: Northwest at 12 mph

Max Winds: 85 mph gusting to 105 mph

Current Hurricane Severity Index: 9 out of a possible 50 points (3 size, 6 intensity)

Max Predicted Hurricane Severity Index: 18 out of a possible 50 points (6 size, 12 intensity)

Current Radius of Tropical Storm-Force Winds: 80 miles

Max Predicted Radius of Tropical Storm-Force Winds: 100 miles

Organizational Trend: Steadily Strengthening

Forecast Confidence: Average

Key Points

1. We are indicating a slower moving storm, as compared to our last advisory, by the time it reaches Florida
2. Dorian's long-range track and intensity forecast remain quite uncertain.
3. Landfall is predicted for early Monday morning near Vero Beach, FL with 120 mph winds.

Our Forecast

Other than widely scattered showers and thunderstorms associated with a few weak outer rainbands, no additional impacts are expected for Puerto Rico and the British Virgin Islands. Hurricane recon aircraft data has not shown significant strengthening overnight. The system is being impacted by high upper-level wind shear located not far to the east of the hurricane. The shear has been enough to slow strengthening. However, it has not been sufficient to weaken the system. The forecast through Saturday is largely unchanged. We think a general northwest track is likely through Friday. By Friday, a ridge of high pressure to the north will shift the track to a more west-northwesterly course. By late Saturday and into Sunday, Dorian may be near the northern Bahamas as a strong hurricane.

Beyond then, the forecast becomes increasingly uncertain. Though the overnight model data continues to vary significantly regarding the track forecast, there has been some consistency in the model trend regarding a deceleration in the forward speed. Because the decelerating trend has been near universal in the model guidance, we have decided to decrease the predicted forward speed somewhat during the Sunday-Tuesday time frame. We continue to predict a most likely landfall area between the Treasure Coast and Space Coast of Florida. The predicted landfall intensity remains 120 mph. However, the timing of landfall has been pushed back to early Monday morning. It is worth mentioning that much of the guidance is indicating a more drastic deceleration. We were more conservative with our deceleration since one round of new data is not sufficient to warrant a large change in the forecast 4-7 days into the future.

The forecast continues to predict an intense hurricane moving into Florida. However, the forecast is also indicating an increasing chance of a slower moving hurricane. A slower moving storm will result in a longer period of heavy rain and a higher risk of significant flooding. It would also mean a longer period of hurricane force winds near the landfall location which increases the wind damage potential for that location. Whether or not the system tracks into the Gulf will depend on the strength of the ridge to the north. A stronger ridge would push the storm into the Gulf of Mexico. A weaker ridge could result in the system taking a northward turn while near or over Florida. The overnight guidance is indicating weaker ridging leading to a better chance of a northward turn near or over Florida. A northward turn would increase the chance of impacts in Georgia and the Carolinas. That being said, the model guidance has been quite inconsistent with the forecast beyond Sunday. Therefore, a track farther west into the Gulf remains on the table. Our current forecast still brings the center over the extreme northeast Gulf of Mexico before moving it ashore into the Florida Panhandle. However, the timing has been pushed back to Tuesday as opposed to the system entering the Gulf on Monday.

Expected Impacts Onshore

Northern Bahamas: Power outages could occur this weekend across Grand Bahama Island. Localized flooding is also likely.

East Florida Coast: Strong tropical storm-force winds or greater within 45 miles of Dorian's track may result in widespread and long-lasting power outages. Very heavy rain will likely produce significant flooding-related travel issues.

Our next advisory will be issued by 10 AM AST / EDT

Meteorologists: Cameron Self / George Harvey

StormGeo

Forecast Confidence: Average							Hurricane Severity Index		
Fcst Hour	Valid	Lat.	Lon.	Max Sustained Winds	Max Gusts	Category	Size	Intensity	Total
0	4AM EDT Thu Aug 29	20.40N	66.50W	85 mph	105 mph	Category 1	3	6	9
12	4PM EDT Thu Aug 29	21.90N	67.60W	100 mph	115 mph	Category 2	4	8	12
24	4AM EDT Fri Aug 30	23.60N	69.10W	105 mph	120 mph	Category 2	6	9	15
36	4PM EDT Fri Aug 30	25.10N	70.90W	110 mph	130 mph	Category 2	4	10	14
48	4AM EDT Sat Aug 31	26.10N	73.00W	115 mph	130 mph	Category 3	4	11	15
60	4PM EDT Sat Aug 31	26.70N	75.30W	120 mph	140 mph	Category 3	6	12	18
72	4AM EDT Sun Sep 01	27.00N	77.00W	120 mph	145 mph	Category 3	6	12	18
84	4PM EDT Sun Sep 01	27.30N	78.80W	120 mph	145 mph	Category 3	5	12	17
96	4AM EDT Mon Sep 02	27.70N	80.50W	120 mph	145 mph	Category 3	6	12	18
108	4PM EDT Mon Sep 02	28.00N	81.80W	80 mph	100 mph	Category 1	3	5	8
120	4AM EDT Tue Sep 03	28.40N	82.90W	70 mph	85 mph	Tropical Storm	2	4	6
132	4PM EDT Tue Sep 03	29.50N	84.30W	70 mph	85 mph	Tropical Storm	2	4	6
144	4AM EDT Wed Sep 04	31.00N	85.10W	45 mph	60 mph	Tropical Storm	1	2	3
156	4PM EDT Wed Sep 04	32.40N	84.90W	30 mph	40 mph	Remnant Low	0	0	0
168	4AM EDT Thu Sep 05	33.90N	84.20W	25 mph	35 mph	Remnant Low	0	0	0

The yellow cone represents track error from the previous five years. Over the past five tropical cyclone seasons, the center of the storm tracked within the yellow cone 75% of the time. The cone does not represent the forecast uncertainty in the current advisory for this storm. In addition, strong winds, very high tides, large waves, and heavy rainfall can often extend well outside the yellow cone.