



45TH SPACE WING TROPICAL CYCLONE QUICK REFERENCE GUIDE



45TH WEATHER SQUADRON

Multi-Domain Operations Center:

COM: (321) 853-8484 DSN: 467-8484

E-mail: 45 WS/WXR AirfieldRangeWxOPS@us.af.mil

http://www.patrick.af.mil/About-Us/Weather

Additional Links:

National Hurricane Center (NHC)

<http://www.nhc.noaa.gov>

National Weather Service - Melbourne

<http://www.weather.gov/mlb/>

STAGES OF TROPICAL CYCLONE DEVELOPMENT

**TROPICAL
DISTURBANCE**

(
TROPICAL WAVE
OR

L

LOW PRESSURE CENTER



**TROPICAL
DEPRESSION**

**< 34 KTS
(< 39 MPH)**

**NUMBERED
WARNINGS
BEGIN**



**TROPICAL
STORM**

**SUSTAINED
WINDS
34 - 63 KTS
(39 - 73 MPH)**

**NAMING
BEGINS**



HURRICANE

**SUSTAINED
WINDS
≥ 64 KTS
(74 MPH)**

HURRICANE CONDITIONS (HURCON)

HURCONs are based upon forecast on-set of destructive winds (50 knots/58 mph) at a specific location. The timelines are defined in AFMAN 10-2504, *Air Force Incident Management Guidance for Major Accidents and Natural Disasters*, and 45th Space Wing Installation Emergency Management Plan 10-2. The 45th Space Wing Commander or designated representative will declare HURCONs when appropriate.

96 HRS

HURCON 5

Indicates sustained surface winds in excess of 50 knots (58 mph) could arrive within 96 hours.

72 HRS

HURCON 4

Indicates sustained surface winds in excess of 50 knots (58 mph) could arrive within 72 hours.

48 HRS

HURCON3

Indicates sustained surface winds in excess of 50 knots (58 mph) could arrive within 48 hours.

24 HRS

HURCON 2

Indicates sustained surface winds in excess of 50 knots (58 mph) could arrive within 24 hours.

12 HRS

HURCON 1

Indicates surface winds in excess of 50 knots (58 mph) could arrive within 12 hours.

HURCON 1C

Caution: Winds of 35-49 knots (40-57 mph) sustained are occurring.

HURCON 1E

Emergency: Winds of 50 knots (58 mph) sustained and/or gusts of 60 knots (69 mph) or greater are occurring and other dangerous condition associated with the storm are present. All outside activity is strictly prohibited.

HURCON 1R

Indicates life-threatening storm hazards have passed but damage may persist and only emergency responders and damage assessment personnel are released to move about. In the 45 SW this requires a "Weather Safe" declaration (a joint decision with NASA-KSC Director). Weather Safe (Hurcon 1R) can only be declared when winds in excess of 35 knots (40 mph) have subsided for a sustained period of two hours or more.

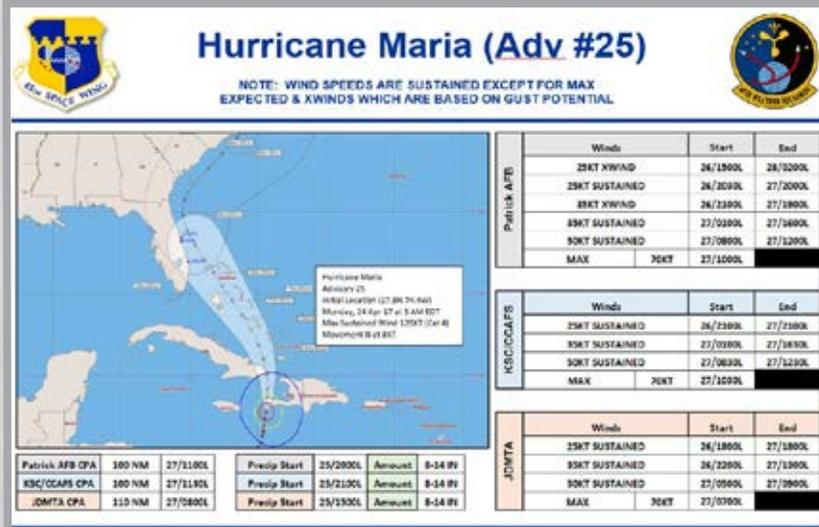
SAFFIR-SIMPSON SCALE HURRICANE DESTRUCTION POTENTIAL

CATEGORY	SUSTAINED WIND SPEED		DAMAGE
	KNOTS	MPH	
1	64 - 82	74 - 95	MINIMAL
2	83 - 95	96 - 110	MODERATE
3	96 - 112	111 - 129	EXTENSIVE
4	113 - 136	130 - 156	EXTREME
5	≥ 137	≥ 157	CATASTROPHIC

**NOTE: CATEGORIES 3, 4, & 5 ARE CONSIDERED
MAJOR HURRICANES**



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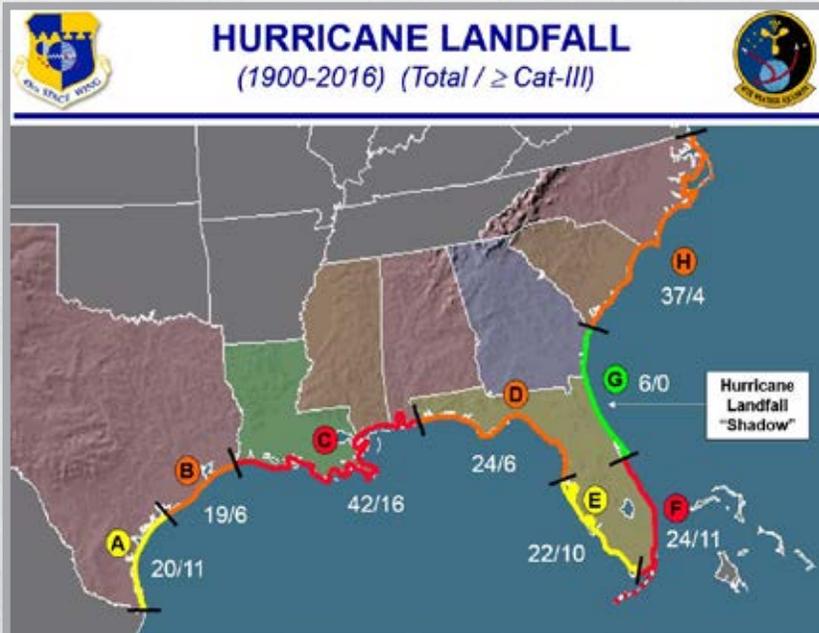


45 WS TROPICAL CYCLONE ADVISORIES:

This product will be e-mailed to 45th Space Wing leadership, units and mission partners when a tropical cyclone is in the AOR. The body of the e-mail will highlight specifics about the current storm location, intensity and movement. The image will show the projected storm track, forecast uncertainty, and projected extent of wind fields.

Tropical cyclone forecasts have varying levels of uncertainty. This forecast uncertainty is conveyed by the forecast "cone", the white, shaded area extending and widening progressively along the anticipated storm track. The entire 5-day path of the center of the cyclone will remain within the cone approximately 60-70% of the time.

Tables surrounding the map indicate forecast information for PAFB, CCAFS/KSC and JDMTA. This includes beginning/ending times for specific wind speed thresholds, storm closest point of approach (CPA), precipitation start time and amount expected, as well as, PAFB 35kt runway crosswinds.



HURRICANE LANDFALL MAP:

- First number in each region indicates the number of hurricanes which made landfall
- Second number in each region indicates the number of hurricanes which made landfall as a Category 3 hurricane or greater
- Landfall threat spectrum per mile: Red (high risk), Orange, Yellow, Green (low risk)

Hurricane Shadow - An area defined by relatively low occurrence of hurricanes making landfall due to the specific orientation of the shoreline relative to storm origination and general storm motion. The hurricane shadow along the east coast of Florida and Georgia is due to the two main tracks of hurricanes in the eastern Atlantic Ocean as they approach the U.S. One typical storm track shows hurricanes tend to move westward from the Atlantic and make landfall in southern Florida or pass into the Gulf of Mexico. The other main track shows hurricanes often approach the Florida Space Coast, but recurve away before making landfall. NOTE: These numbers do not include tropical depressions, tropical storms or hurricanes which failed to make landfall. Storms which do not make landfall can still cause damage and threaten lives due to inland flooding, severe thunderstorms and tornadoes.