Climatology

41 Hurricanes and Tropical Storms have passed within 120 NM of Eglin AFB between 1870 and 2016

Number of storms by category passing within 120 NM:
- Category 1 hurricanes (74-95 mph): 23
- Category 2 hurricanes (96-110 mph): 6
- Category 3 hurricanes (111-129 mph): 12
- All Categories: 41

Frequency of Tropical Cyclones in Atlantic Basin

Definitions:
- **Tropical Disturbance**: A discrete tropical weather system of apparently organized convection -- originating in the tropics/subtropics, & maintaining its identity for 24 hrs or more.
- **Tropical Depression (T.D.)**: A tropical cyclone in which the maximum sustained surface wind is 33 kts (38 mph) or less.
- **Tropical Storm (T.S.)**: A tropical cyclone in which the maximum sustained surface wind speed ranges from 34 – 63 kts (39 –73 mph).
- **Hurricane (H.)**: A tropical cyclone in which the maximum sustained surface wind is 64 kts (74 mph) or more.

Hurricane Season

1 Jun – 30 Nov

Peak Season: 20 Aug – 20 Oct

Regions of Development

Real Time Storm Info/Data

96 WS Sharepoint:
https://eglinweather.eglin.af.mil/sharepoint

IWDS:
https://eglinweather.eglin.af.mil/Iwds/

National Hurricane Center (NHC):
http://www.nhc.noaa.gov/

96th Weather Squadron

CC: Lt Col Paul Homan 882-6803
DO: Maj James Hughes 882-6805
Duty Wx Technician: 882-4800

20 APRIL 2018
Hurricane Response Summary

<table>
<thead>
<tr>
<th>TIME (HOURS) BEFORE STORM</th>
<th>HURCON</th>
<th>MAJOR ACTIVITIES</th>
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</table>
| 96                        | 5      | • Activate CAT, DEC and UCCs  
• Submit requests for CATs, deployed CAT, Role-Out teams, and 
 Hurricane Recovery Teams' rosters to DEC  
• Ready assemble CATs and deployed CAT |
| 72                        | 4      | • Deploy CATs to Fort Benning and Robbins AFB  
• Dispatch deployed CAT to Maxwell AFB  
• Ready assemble UCCs  
• Evacuation order given |
| 48                        | 3      | • Evacuate coastal dwellers and 
• Evacuate all coastal communities  
• Evacuation order given  
• Dispatch UCCs to Fort Benning  
• Dispatch CATs to their home stations |
| 24                        | 2      | • Treats 30% (at least 100,000 people)  
• Evacuate all coastal communities  
• Evacuate UCCs to their home stations  
• Evacuate CATs to their home stations  
• Dispatch UCCs to their home stations  
• Storm warnings issued for most of coastal zone |
| 12                        | 1      | • Dispatch CATs to coalitions  
• Evacuate all coastal communities  
• Prepare for all coastal communities  
• Evacuate CATs to their home stations  
• Dispatch UCCs to their home stations  
• Storm warnings issued for most of coastal zone |

STORM OCCURRING 1C & 1E

<table>
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<tr>
<th>POST-STORM</th>
<th>1R</th>
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| • Dispatch CATs to coalitions  
• Evacuation order is prohibited |

Typical Damage by Storm Category

CAT 1: No real damage to buildings. Damage to unanchored mobile homes with some damage to poorly constructed signs, some coastal flooding and minor pier damage. (e.g. Erin 1995)

CAT 2: Some damage to building roofs, doors and windows with considerable damage to mobile homes. Pier damage and small craft in unprotected moorings may break their moorings. Some trees down. (e.g. Georges 1998)

CAT 3: Some structural damage to small residences and utility buildings with large trees blown down. Mobile homes and poorly built signs destroyed. Flooding near the coast destroys small structures with larger structures damaged by floating debris. Flooding well inland. (e.g. Ivan 2004)

CAT 4: More extensive wall failures with some complete roof structure failure on small residences. Major beach erosion with flooding well inland. (e.g. Charley 2004)

CAT 5: Complete roof failure on many residences and industrial buildings. Some complete building failures with small utility buildings blown over or away. Flooding causes major damage to lower floors of all structures near the shoreline. Massive evacuation of residential areas may be required. (e.g. Andrew 1992)

Hurricane Condition (HURCON) and Storm Category

HURCON 5 - Destructive winds are possible within 96 Hours.
HURCON 4 - Destructive winds are possible within 72 Hours.
HURCON 3 - Destructive winds are possible within 48 Hours.
HURCON 2 - Destructive winds are possible within 24 Hours.
HURCON 1 - Destructive winds are possible within 12 Hours.

HURCON 1C - CAUTION: Winds of 40-57mph (35-49kts) sustained are occurring.
HURCON 1E – EMERGENCY: Winds of 58 mph/50 kts sustained and/or gusts of 69 mph/60 kts or greater are occurring. All outside activity is strictly prohibited.

HURCON 1R – RECOVERY: Destructive winds have subsided and are no longer forecast to occur; survey and work crews are permitted to determine the extent of the damage and to establish safe zones around hazards (e.g., downed power lines, unstable structures). Non-essential personnel are asked to remain indoors. *Destructive Winds = >50kt sustained and/or >60kt gusts*

Typical Damage by Storm Category

CAT 1: Minimal Damage
Winds 74 - 95 mph (64 - 82 kts)
CAT 2: Extensive Damage
Winds 96 - 110 mph (83-95 kts)
CAT 3: Devastating Winds
Winds 111-129 mph (96-112 kts)
CAT 4: Catastrophic Winds
Winds 130-156 mph (114-136 kts)
CAT 5: Catastrophic Winds
Above 157 mph (Above 137 kts)

Storm Category

• Measure of Storm Intensity • Uses Saffir-Simpson Scale • Based on sustained wind speeds

Hurricanes and Tropical Storm Hazards

HIGH WINDS: The strongest winds usually occur in the right side of the hurricane eyewall. Wind speeds typically decrease significantly within 12 hrs after landfall. Nonetheless, winds can stay above hurricane strength well inland. High winds create a number of dangers, including blowing debris becoming projectiles, structural failure due to wind pressure, and reduced visibility due to spray.

HEAVY RAIN/FLOODING: During landfall, a hurricane/tropical storm can produce 10 –15” of rain. Heavy rainfall is not directly related to the wind speed of the storm. In fact, some of the greatest rainfall amounts occur from weaker storms (i.e. tropical storms) that drift slowly or stall over an area (e.g. T.S. Claudette (1979) brought 45” of rain near Alvin, Tx). In the last 30 yrs most hurricane/ tropical storm deaths (~ 60% of deaths) have been due to flooding. An average person can be swept off their feet in as little as 6” of moving water.

TORNADOES/WATERSPOUTS: Some hurricanes/ tropical storms seem to produce no tornadoes, while others develop many (e.g. H. Ivan (2004) spawned 117 tornadoes). Studies have shown that more than half of the landfalling storms produce at least one tornado. Tornadoes are most likely to occur in the right-front quadrant of the storm, about 30 miles from the center. However, they are also can occur in the outer rainbands, sometimes 100-150 miles from the center. 10% of hurricane deaths are due to tornadoes.

STORM SURGE: Storm surge is simply water that is pushed toward the shore by the force of the winds swirling around the storm. This advancing surge combines with the normal tides to create the storm tide, which can increase the mean water level 15’ or more (e.g. H. Katrina (2005) produced a 32’ surge on the Mississippi coast). Wave action combined with surge and tide can create additional damage.