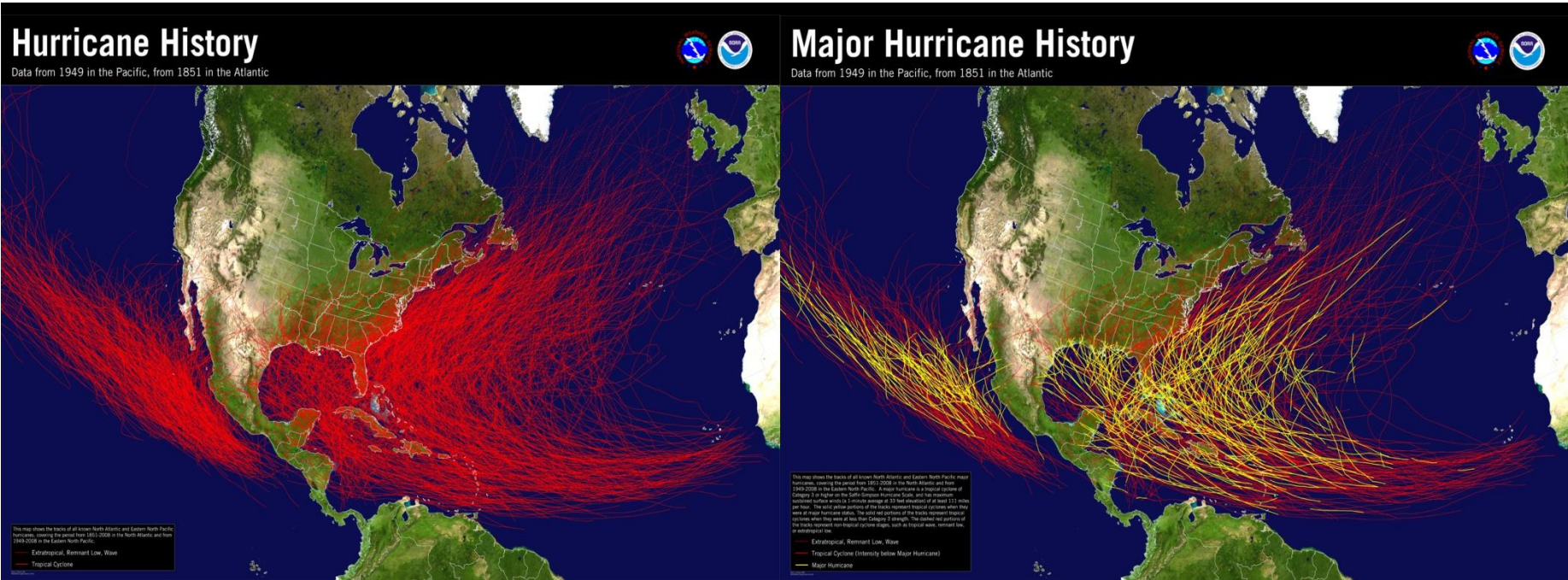




# 2019

## *Hurricane Season BE Ready Brief*



**HOMESTEAD ARB OFFICE OF EMERGENCY MANAGEMENT**

*Prevent – Prepare – Respond - Recover*



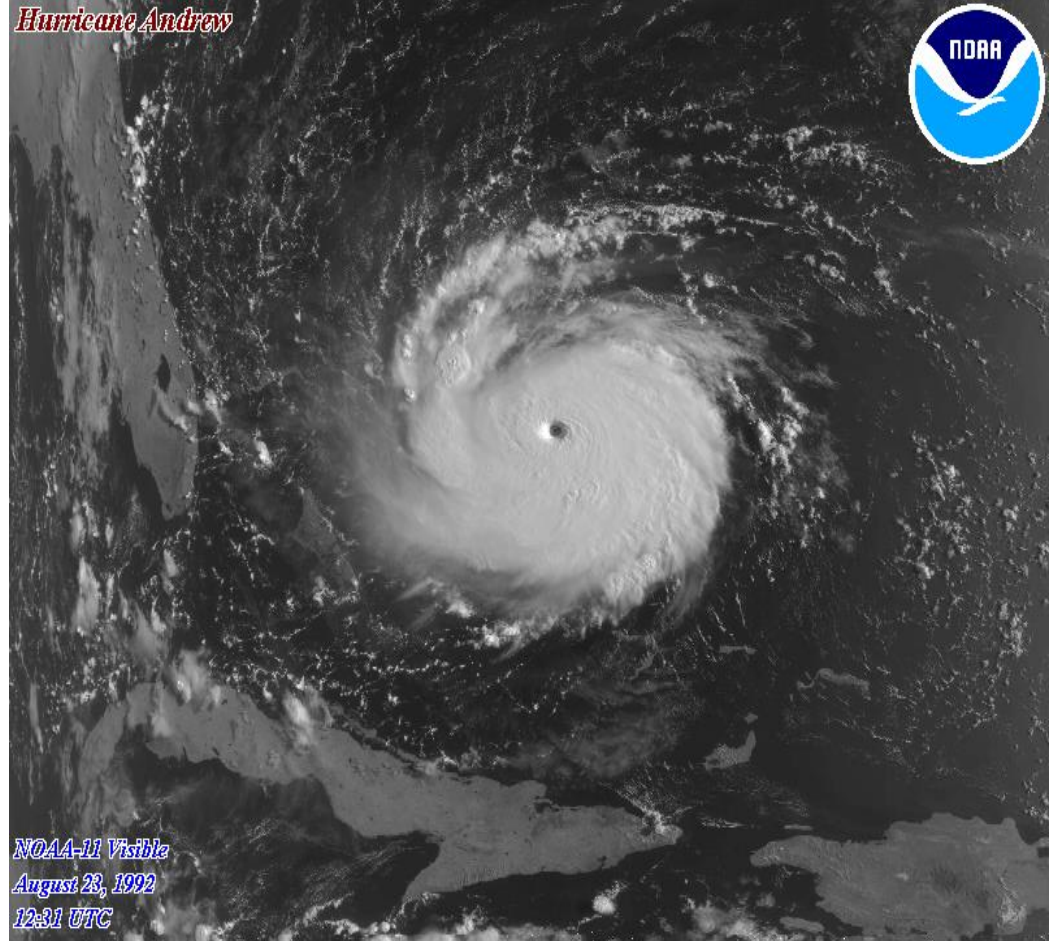
2019

# Hurricane Season Outlook

**Hurricane Season:**  
**Atlantic Coast**  
**1 June- 30 November**

Peak Months are  
**August** and **September**

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



*Prevent – Prepare – Respond - Recover*



# 2019 *Hurricane Outlook*

- The NOAA forecasts a Slightly Below Average Hurricane Season with approximately:

- 13 Named Storms
- 5 Hurricanes
- 2 Major Hurricanes

ATLANTIC HURRICANE FORECAST		2019	
	AVG	CSU	2018
TOTAL NAMED STORMS	12	13	15
HURRICANES	6	5	8
CATEGORY 3 OR HIGHER	3	2	2

- Note: An average hurricane season features approximately:

- 12 named storms
  - with 6 of those Cat 1 thru Cat 3 hurricanes
  - With 3 of those becoming major hurricanes

*Information provided by National Oceanic and Atmospheric Administration (NOAA)*

*& Colorado State University <http://hurricane.atmos.colostate.edu/forecasts/>*



# 2019 Hurricane Season Names

## 2019 STORM NAMES

## ATLANTIC

Andrea  
Barry  
Chantal  
Dorian  
Erin  
Fernand  
Gabrielle

Humberto  
Imelda  
Jerry  
Karen  
Lorenzo  
Melissa  
Nestor

Olga  
Pablo  
Rebekah  
Sebastien  
Tanya  
Van  
Wendy



***BE READY***

**WHAT DO YOU  
DO?**

*Prevent – Prepare – Respond - Recover*



# Hurricane Preparations

## Recommendations For Actions To Take BEFORE The Hurricane Season

- ✓ Determine safe evacuation routes inland.
- ✓ Learn locations of official shelters.
- ✓ Check emergency equipment, such as flashlights, and battery-powered equipment such as cell phones and your Weather Radio All Hazards receiver.
- ✓ Buy plywood or other material to protect your home if you don't already have it.
- ✓ Trim trees and shrubbery so branches don't fly into your home.
- ✓ Clear clogged rain gutters and downspouts.
- ✓ Find pet-friendly hotels on your evacuation route.
- ✓ Stock extra drinking water
  - at least 1-2 gallons daily per person for 3 days*
- ✓ Get a First Aid Kit for the house
- ✓ Stock Non-Perishable Foods
- ✓ Have cash saved and available
- ✓ Highly Recommended to:
  - Get a Land Line Telephone
  - Get a generator
  - Get a grill or a small propane burner



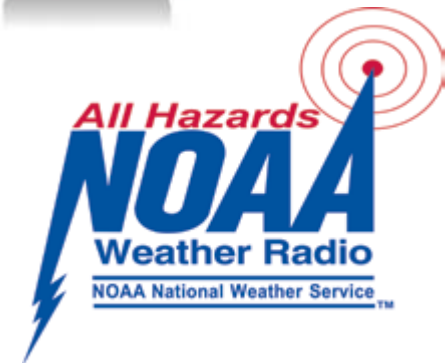


# Ways to Stay Informed

## NOAA Weather Radio All Hazards

The National Weather Service (NWS) continuously broadcasts warning, watches, forecasts and non-weather related hazard information on NOAA Weather Radio All Hazards (NWR). The average range of the 1000+ NWR transmitters is 40 miles, depending on topography. For the best performing NWR receivers, NWS suggests you look at devices certified to Public Alert™ standards.

These radios meet specific technical standards and come with many features such as Specific Area Message Encoding (SAME), a battery backup, both audio and visual alarms, selective programming for the types of hazards you want to be warned for, and the ability to activate external alarm devices for people with disabilities. Similar to a smoke detector, an NWR can wake you up in the middle of the night to alert you of a dangerous situation.





# Ways to Stay Informed Online

## Current Storm Information

•National Weather Service:  
[www.weather.gov](http://www.weather.gov)

•National Hurricane Center:  
[www.nhc.noaa.gov](http://www.nhc.noaa.gov)

## Historical Storm Information

•National Climatic Data Center:  
[www.ncdc.noaa.gov](http://www.ncdc.noaa.gov)

•NOAA Coastal Services Center:  
[www.coast.noaa.gov](http://www.coast.noaa.gov)

## Mobile NHC and NWS Information

•Mobile NHC website in basic HTML:  
[www.nhc.noaa.gov/mobile](http://www.nhc.noaa.gov/mobile)

•Mobile NWS website in basic HTML:  
<http://mobile.weather.gov>

•Mobile NWS website in WAP format:  
<http://cell.weather.gov>

## Other Information

•NHC advisory emails:  
[www.nhc.noaa.gov/signup.shtml](http://www.nhc.noaa.gov/signup.shtml)

•National Weather Service advisory emails:  
[www.weather.gov/subscribe](http://www.weather.gov/subscribe)

•Audio Podcasts:  
[www.nhc.noaa.gov/audio/index.shtml](http://www.nhc.noaa.gov/audio/index.shtml)

•Geographic Information System Data:  
[www.nhc.noaa.gov/gis/](http://www.nhc.noaa.gov/gis/)

•NOAA Weather Radio All Hazards:  
[www.weather.gov/nwr](http://www.weather.gov/nwr)

•Hurricane Tracking Charts & Safety:  
[www.weather.gov/os/hurricane/](http://www.weather.gov/os/hurricane/)



#HURRICANESTRONG™

## Emergency/Preparedness Information

•Miami-Dade County Emergency Management:  
[www.miamidade.gov/fire/emergency-management.asp](http://www.miamidade.gov/fire/emergency-management.asp)

•American Red Cross:  
[www.redcross.org](http://www.redcross.org)

•FEMA:  
[www.fema.gov](http://www.fema.gov) [www.ready.gov](http://www.ready.gov)

•Air Force Emergency Management:  
[www.beready.af.mil](http://www.beready.af.mil)

•AFPAAS:  
[afpaas.af.mil](http://afpaas.af.mil)



Homestead ARB  
[www.homestead.afrc.af.mil](http://www.homestead.afrc.af.mil)

[www.facebook.com/HomesteadARB](http://www.facebook.com/HomesteadARB)





# *Important Numbers*



- **Fire Department / Security Desk (installation 911):**  
**(786)415-7777**
- **Command Post:**  
**(786)415-7023**
- **Installation Status Line:**  
**(786)415-4000**

**The installation status line will provide you with the current status of the base and instructions on what to do (i.e. base evacuations, base closure, when to return back to base, and etc.)**





# AFPAAS

<https://afpaas.af.mil>

Open to USAF military, civilians, **AND** family members

- Reports Accountability
- Provides Location information

■ Call **1-800-435-9941**

If your family needs **IMMEDIATE** help with basic necessities such as:

- Food
- Shelter
- Medical Care



# ***PLAN NOW!!!***

## ***Find your Evacuation Sites***

*& call ahead to verify availability  
before you leave*

- **Relatives/Friends**
- **Hotel/Motel**
- **Local County Shelters**

<http://www.miamidade.gov/fire/evacuations.asp>

HURRICANE  
EVACUATION  
ROUTE





# Hurricane Preparations

## Prior to the Storm

### When in a Watch Area...

- ✓ Frequently listen to Radio, TV or NOAA Weather Radio
- ✓ Monitor *NOAA Weather Radio All Hazards* (NWR) for official bulletins of the storm's progress.
- ✓ Fuel and service family vehicles.
- ✓ Ensure you have extra cash on hand (ATMs may not work).
- ✓ Prepare to cover all windows and doors with shutters or other shielding materials.
- ✓ Check batteries and stock up on canned food, first aid supplies, drinking water and medications.
- ✓ Bring in light-weight objects such as garbage cans, garden tools, toys and lawn furniture.

### Plan to Leave if You...

- ✓ Live in a mobile home. They are unsafe in high winds no matter how well fastened to the ground.
- ✓ Live in a high rise building. Hurricane winds are stronger at higher elevations.
- ✓ Live on the coastline, an offshore island or near a river or a flood plain.

<http://www.miamidade.gov/fire/library/OEM/evacuation-zone-map-2013.pdf>

### When in a Warning Area...

- ✓ Closely monitor radio, TV or *NOAA Weather Radio All Hazards* (NWR) for official bulletins.
- ✓ Close storm shutters.
- ✓ Follow instructions issued by local officials. *Leave immediately if ordered!*
- ✓ DO NOT stay in a mobile or manufactured home.
- ✓ Notify neighbors and a family member outside of the warned area of your evacuation plans.
- ✓ Take pets with you if possible. **NOTE:** Most public shelters do not allow pets other than certified Service Animals.

[http://www.ada.gov/service\\_animals\\_2010.htm](http://www.ada.gov/service_animals_2010.htm)



Hurricane  
Preparedness

Are YOU Ready?



# Hurricane Preparations

## What to Bring to a Shelter

- ✓ Personal First-aid kit
- ✓ Medication (Prescription)
- ✓ Baby food and diapers
- ✓ Games, books, music players with headphones
- ✓ Toiletries (toothbrush, feminine items, razor, etc.)
- ✓ Battery-powered radio
- ✓ Cell Phone (with charger)
- ✓ Flashlight(s)
- ✓ Extra batteries
- ✓ A blanket or sleeping bag for each person
- ✓ Identification
- ✓ Copies of key papers such as insurance policies
- ✓ Cash, credit card

**REMINDER: If you are told to leave your home, do so immediately!**





# Hurricane Preparations

## During the Storm

### If Staying in a Home...

- ✓ Turn refrigerator to maximum cold and keep it closed. (Turns Fridge into a cooler in case of power outage)
- ✓ Turn off utilities if told to do so by authorities.
- ✓ Turn off propane tanks.
- ✓ Unplug small appliances.
- ✓ Fill bathtub and large (CLEAN) containers with water in case clean tap water is unavailable. Use water in bathtubs for cleaning and flushing only. Do NOT drink it.

### Be Alert For...

- ✓ Tornadoes— they are often spawned by hurricanes.
- ✓ The calm “eye” of the storm—it may seem like the storm is over, but after the eye passes, the winds will change direction and quickly return to hurricane force.

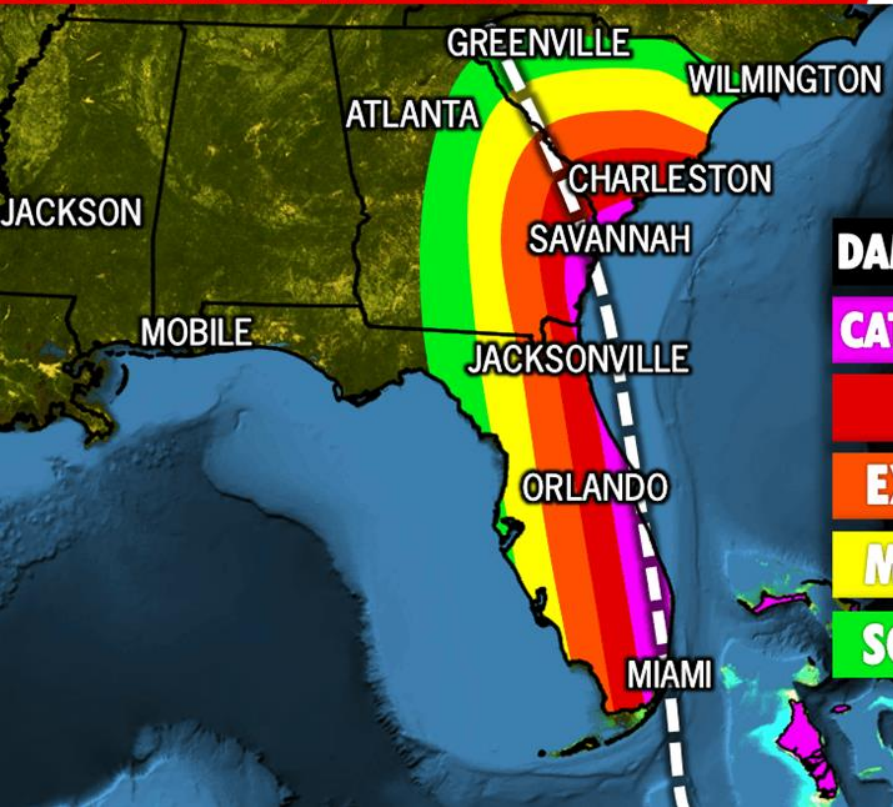
### If Winds Become Strong...

- ✓ Stay away from windows and doors, even if they are covered. Take refuge in a small interior room, closet or hallway.
- ✓ Close all interior doors. Secure and brace external doors.
- ✓ If you are in a two-story house, go to an interior first floor room.
- ✓ If you are in a multi-story building and away from water, go to the 1st or 2nd floor and stay in the halls or other interior rooms away from windows.
- ✓ Lie on the floor under a table or other sturdy object. (To protect from debris)



# HURRICANE IRMA SCENARIO #1 - 50% CHANCE

# CATASTROPHIC COASTAL IMPACTS



# AFTER THE STORM

# WHAT DO YOU DO?





# AFTER THE STORM

## After the Storm

- ✓ Call your supervisor and subordinates and let them know of your status
- ✓ Keep listening to radio, TV or NOAA *Weather Radio All Hazards (NWR)*.
- ✓ Wait until an area is declared safe before entering.
- ✓ Watch for closed roads. If you come upon a barricade or a flooded road, **TURN AROUND**
- ✓ Stay on firm, dry ground. Moving water only 6 inches deep can sweep you off your feet (it can take less than an inch to drown if unconscious)
- ✓ If using a generator, avoid carbon monoxide poisoning by following the manufacturer's instructions.
- ✓ Avoid weakened bridges and washed out roads.
- ✓ Once home, check gas, water and electrical and appliances for damage/leaks.
- ✓ Use a flashlight to inspect damage. Never use candles and other open flames indoors.
- ✓ Wear proper shoes to prevent cutting feet on sharp debris.
- ✓ Do not drink or prepare food with tap water until officials say it is safe.
- ✓ Avoid electrocution by not walking in areas with *downed power lines*.







# *After the Storm*

- More people get injured and die after the storm than during the storm

**WHY???**



- Flood related hazards
- Wreckage related hazards
- Downed power-lines
  - *They can be hidden under water and debris*



# Hurricane Terminology

## STORM NOTIFICATIONS

Storm and hurricane forecasts and warnings are issued by NOAA's

**Advisory:** Weather advisory messages are issued for tropical storms and hurricanes. An advisory states the location, intensity, direction of travel, and speed of a tropical storm or hurricane.

**Tropical Storm Watch:** An announcement that tropical storm conditions (sustained winds of 39 to 73 mph) are *possible* within the specified coastal area within **48** hours

**Tropical Storm Warning:** An announcement that tropical storm conditions (sustained winds of 39 to 73 mph) are *expected* somewhere within the specified coastal area within **36** hours.

**Hurricane Watch:** An announcement that hurricane conditions (sustained winds of 74 mph or higher) are possible somewhere within the specified coastal area. Because hurricane preparedness activities become difficult once winds reach tropical storm force, the hurricane watch is issued **48** hours in advance of the anticipated onset of tropical-storm-force winds.

**Hurricane Warning:** An announcement that hurricane conditions (sustained winds of 74 mph or higher) are expected somewhere within the specified coastal area. Because hurricane preparedness activities become difficult once winds reach tropical storm force, the hurricane warning issued **36** hours in advance of the anticipated onset of tropical-storm-force winds



# *Hurricane Conditions*

## **HURCON**

**5** – Indicates surface winds in excess of 58 mph (50 knots) possible **within 96 hours**

**4** – Indicates surface winds in excess of 58 mph possible **within 72 hours.**

**Possible evacuation at this time.**

**3** – Indicates surface winds in excess of 58 mph possible **within 48 hours.**

**Evacuation is likely.**

**2** – Indicates surface winds in excess of 58 mph possible **within 24 hours.**

**Mandatory installation evacuation at this time / Installation may be closed.**

**1** – Indicates surface winds in excess of 58 mph possible **within 12 hours.**

**Mandatory installation evacuation at this time / Installation will be closed.**

**1C** – Indicates surface winds of 40-57 mph **are occurring** and other dangerous conditions associated with the storm are present.

**Outside activity is discouraged. Installation will be closed.**

**1E** – Indicates surface winds in excess of 58 mph **are occurring** and other dangerous conditions associated with the storm are present.

**All outside activity is strictly prohibited. Installation will be closed.**

**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.*



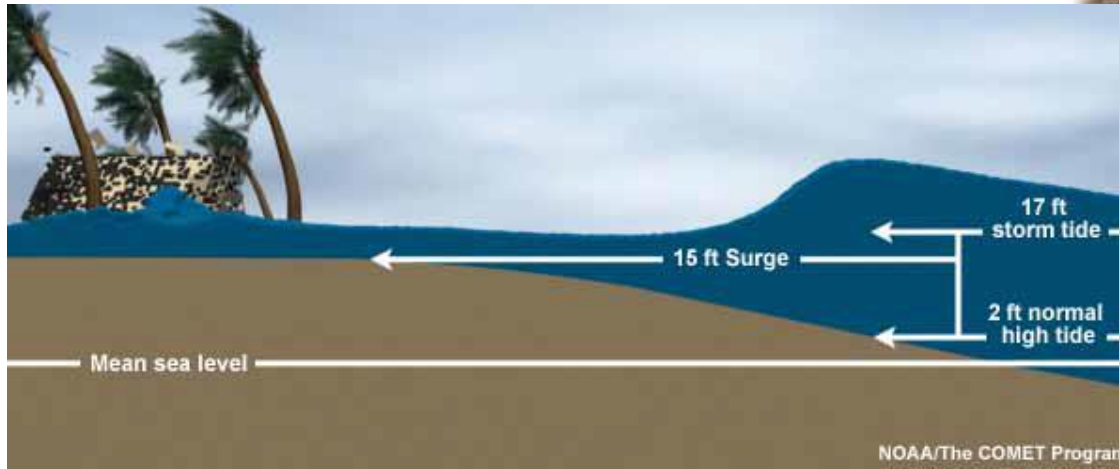
# Hurricane Hazards

## Storm Surge/Tide

Storm surge and large waves produced by hurricanes pose the greatest threat to life and property along the coast.

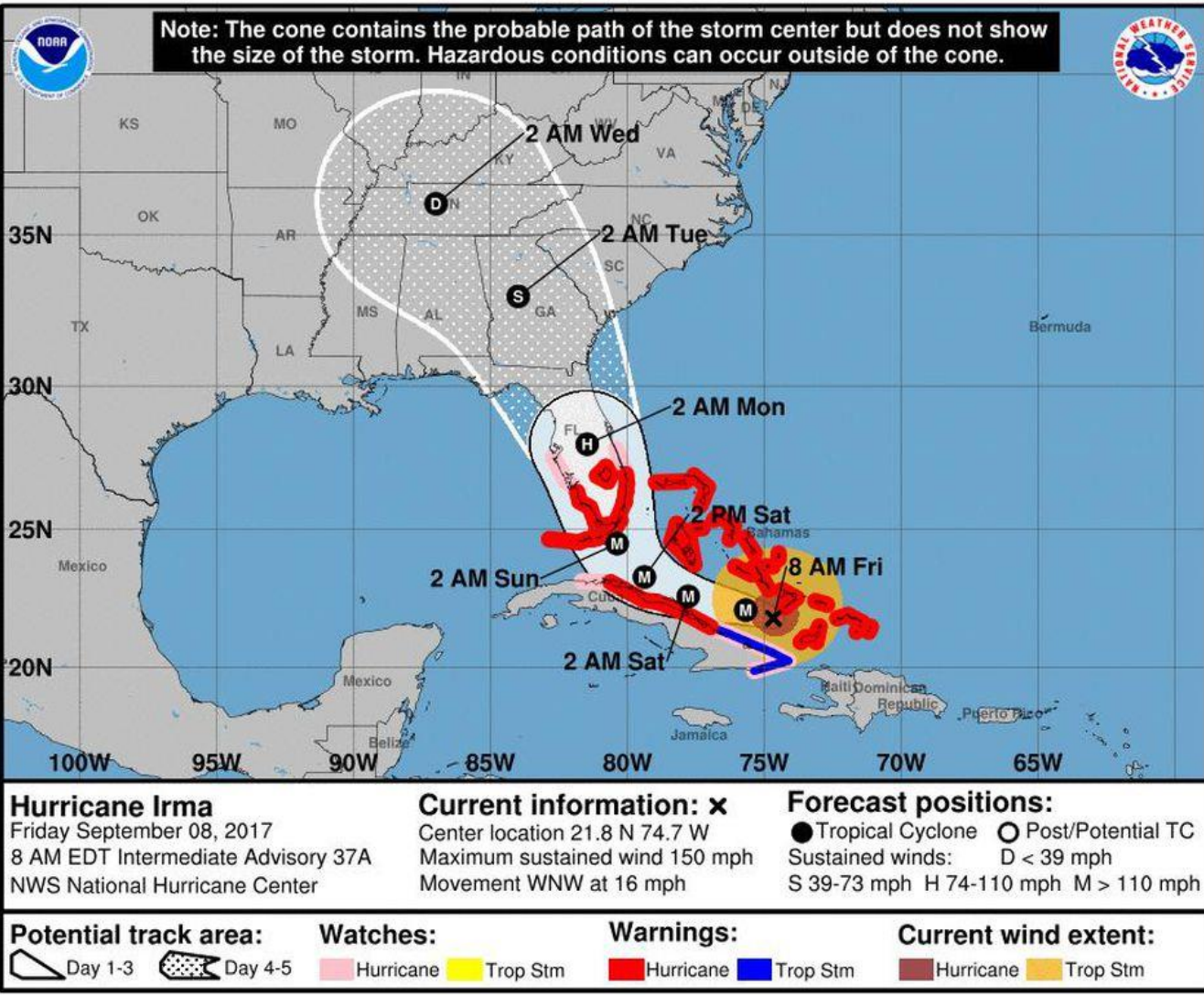
**STORM SURGE** is an abnormal rise of water generated by a storm's winds. Storm surge can reach heights well over 20 feet and can span hundreds of miles of coastline. In the northern hemisphere, the highest surge values typically occur in the right front quadrant of a hurricane coincident with onshore flow; in the southern hemisphere, the left front quadrant. More intense and larger hurricanes produce higher surge. In addition, shallower offshore waters contribute to higher storm surge inundation. Storm surge is by far the greatest threat to life and property along the immediate coast.

**STORM TIDE** is the water level rise during a storm due to the combination of storm surge and the astronomical tide. For example, if a hurricane moves ashore at a high tide of 2 feet, a 15 foot surge would be added to the high tide, creating a storm tide of 17 feet. The combination of high winds and storm tide topped with battering waves can be deadly and cause tremendous property damage along an area of coastline hundreds of miles wide.





# Tropical Cyclone Graphical Products



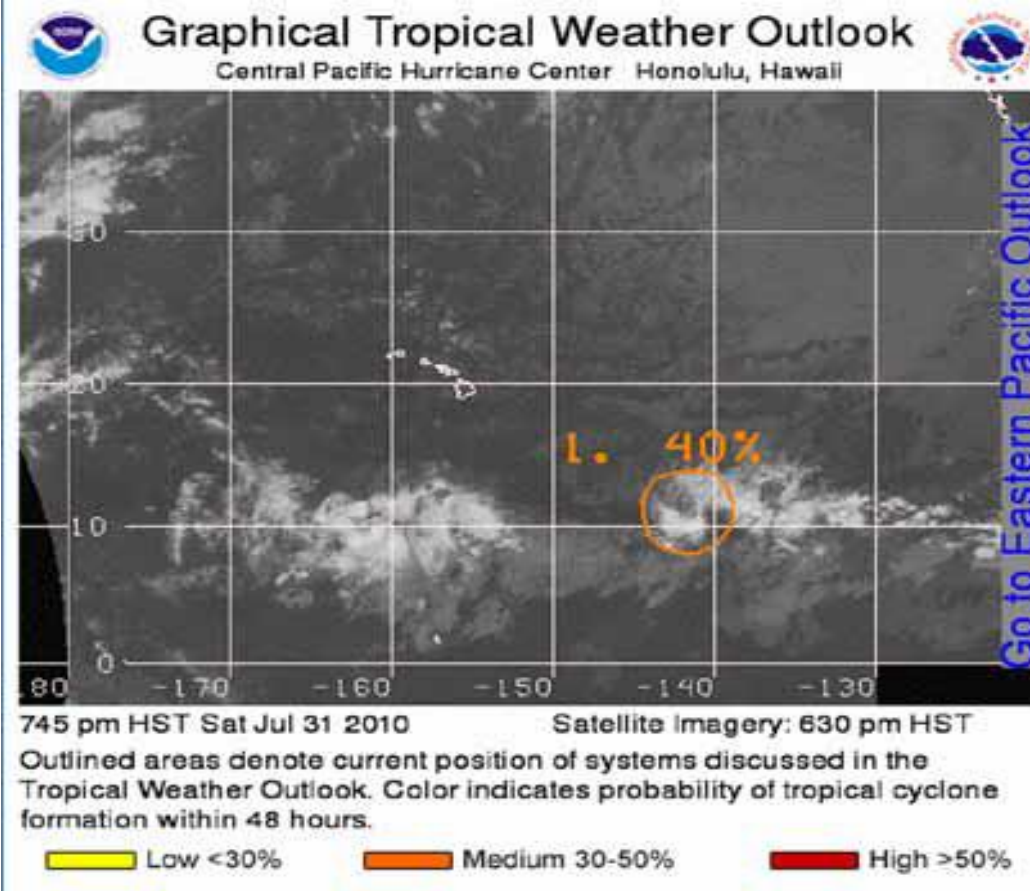
## Track Forecast Cone and Watches/Warning

This graphic shows coastal areas under a hurricane warning (red), hurricane watch (pink), tropical storm warning (blue), and a tropical storm watch (yellow). The orange circle denotes the current position of the tropical cyclone. The black dots indicate the forecast positions and cyclone classification over the next 5 days.

Forecast errors and uncertainty of the future tropical cyclone center location are accounted for by the track forecast cone. The solid white area denotes the uncertainty for days 1-3. The white stippled area shows the uncertainty for days 4 and 5. On average, the center of the tropical cyclone will remain inside the cone 60%–70% of the time. It is important to remember that a tropical cyclone is not a point and that the associated hazards can extend well outside of the track forecast cone.



# Tropical Cyclone Graphical Products



*Graphical Tropical Weather Outlook*

## Graphical Tropical Weather Outlook

This graphic highlights areas of disturbed weather in the tropics and subtropics and assesses the potential for these systems to become tropical cyclones over the next 48 hours. Each disturbance is circled and numbered with an accompanying text description. You also can view the text description by moving your mouse over the circled area. The color of the circles reflect the probability that the system will become a tropical cyclone over the next 48 hours:

- Yellow: low chance, <30%
- Orange: medium chance, 30%–50%
- Red: high chance, >50%

Active tropical cyclones are depicted on the graphic as an “L” for tropical depressions, a tropical storm symbol, or a hurricane symbol.

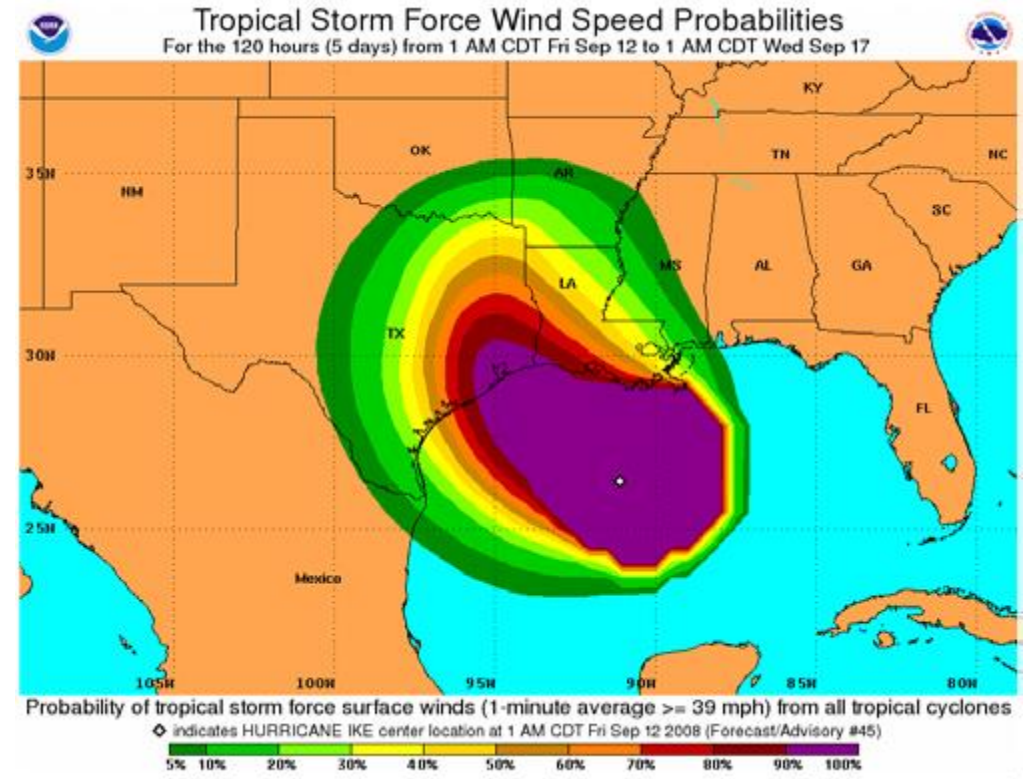


# Tropical Cyclone Graphical Products

## Tropical Cyclone Surface Wind Speed Probabilities

This graphic indicates the chance of locations experiencing at least tropical storm (39 mph or greater) sustained winds over the following 5 days. The graphic is also available at thresholds of 58 mph and 74 mph (hurricane force) sustained winds. The product is unique in that it takes into account uncertainty in the track, peak winds and size of the storm.

This graphic also highlights the fact that tropical cyclone winds can extend well away from the storm's center. It is important to realize that probabilities that seem relatively low may still be quite significant. For example, if a location has a 10% chance of experiencing hurricane force sustained winds, you should prepare for an extreme event. A 1 in 10 chance is too high to ignore.



*Tropical Cyclone Surface Wind Speed Probabilities*



# Are You Ready?

- Choose an evacuation site
- Assemble a supply kit (<http://www.ready.gov/build-a-kit>)
- Have a battery powered commercial radio
- Pack non-perishables and drinking water
- First aid kit, medication
- Don't go outside when the eye passes over
- Stay away from downed powerlines



**For More information**  
**Contact us at:**

482 MSG/CEX  
29350 Westover St  
Homestead ARB, FL 33039-1299

Commercial: (786)415-7824  
DSN: 535-7824  
[482ces.em@us.af.mil](mailto:482ces.em@us.af.mil)