Hurricane Season is Here

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Prepare for every hurricane season regardless of the outlook
The Atlantic hurricane season runs from June 1\textsuperscript{st} through November 30\textsuperscript{th}. 

Main Development Region (MDR)
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Outlooks are for the overall seasonal activity. They are not a hurricane landfall forecast.

NOAA’s 2020 Atlantic Hurricane Season Outlook

Above-Normal Season Likely (60% chance)

13-19 Named Storms (39+ mph)
6-10 Hurricanes (74+ mph)
3-6 Major Hurricanes (111+ mph)

Averages are 12 NS, 6 H, 3 MH

A fifth consecutive above-normal season would set a record.

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The 2020 Atlantic Outlook in a Historical Perspective

ACE index measures overall season activity by accounting for the combined intensity and duration of tropical storms and hurricanes.

NOAA’s predicts another above-normal season (ACE ≥ 120%), possibly extremely active (ACE ≥ 165%). Possible record 5th consecutive above-normal season.

We remain in a high-activity era for Atlantic hurricanes that began in 1995.
Since 1995, 17 of 25 (68%) above normal seasons and only 4 (16%) below normal seasons.

The previous low-activity era (1971-1994) had only two above-normal seasons in 24 years.

High- and low activity eras historically last about 25-40 years.
Double the number of major hurricanes during high activity eras.
The U.S. Sees More Landfalling Hurricanes During High-Activity Eras

During high activity eras, largest increase in hurricane landfalls is along Atlantic coast.

U.S. sees almost a doubling of seasons with multiple landfalling hurricanes: Occur about every other year compared to about every fourth year.
Global climate patterns strongly influence hurricane conditions for months/ seasons/ decades at a time.

By predicting key climate patterns, we can often predict the hurricane-influencing conditions, and therefore predict the strength of the upcoming hurricane season.
Hurricanes Require Weak Vertical Wind Shear

Vertical wind shear refers to the change in wind speed and direction going up through the atmosphere.

Hurricanes need weak shear—little change in winds.

Hurricanes destroyed by strong shear—large change in winds.

Looking sideways through storm clouds

Looking down on storm clouds

Lower clouds and circulation

Upper clouds
Possibly Reinforcing Factors for the 2020 Atlantic Hurricane Season

Atlantic Multi-Decadal Oscillation (AMO): Multi-Decadal Variations in Atlantic Hurricane Activity

Climate Pattern for High-Activity Era

- Warmer Ocean
- Warm Phase of AMO
- Warmer Ocean
- Weaker Shear
- Stronger, wetter West African Monsoon
- Main Development Region

El Niño/ La Niña: Year-to-Year Changes in Atlantic hurricane Activity

La Niña: More Hurricanes

- Weaker Shear
- Cool, Dry

Expect above-normal activity because of ongoing high-activity era and warm AMO.

Two scenarios:

1. Continued neutral conditions (no El Niño or La Niña)—do not suppress activity
2. La Niña develops-- Reinforces the warm AMO, produces activity near upper end of predicted ranges
80+ million people are Atlantic or Gulf Coast residents and can be impacted by a tropical storm or hurricane.

Did you know?

The current high-activity era follows decades of exponential growth in coastal regions.

2018 Hurricane Michael (160 mph winds)

Florida Population

- High Activity Era
- Low Activity Era
- Variable

- High Activity Era
- Low Activity Era
- Variable

Millions of Residents

Major Hurricane Dorian Stalled over Grand Bahama Island

Dorian was a slow-moving Major Hurricane, reaching 185 mph winds.

Slow-moving or stalled storms wreak havoc.
Major Hurricane Dorian Devastation in the Bahamas
Prepare for every hurricane season regardless of seasonal outlook

You are your first line of defense if a hurricane strikes

Ready.gov
Hurricanes.gov
Example Predicted Storm Surge Map
Produced by National Hurricane Center

Map shows predicted ocean water heights above ground level

22 million people in the U.S. are vulnerable to storm surge
Reflect your personal situation and vulnerabilities and storm conditions you might expect.

Your Hurricane Preparedness Plans

- Storm Surge
- Inland Flooding
- Devastating Winds
- Tornadoes
- Rip Currents
- Downed Trees and Power Lines
Your Hurricane Preparedness Plans

Know if you are in an Evacuation Zone/ Flood Zone

Internet has Evacuation/ Flood Zone Maps for Your Area

Key Documents

Key Documents

Flood Insurance

Where will I go?

Cash on Hand

Family Friend Hotel Shelter

How will I get there?

Filled with Gas

https://www.ready.gov/evacuation
Your Hurricane Preparedness Plans, cont.

Don’t forget about the Kids

Games, Treats

Other Special Needs

Prescriptions/medications

Remember the pets

Toiletries
Your Hurricane Preparedness Plans, cont.
Staying at Home

- **Kids and Pets**
- **Weather Radio**
- **Hygiene Products**
- **Light**
- **Rain Gear**
- **Tub full of Water**
- **Battery**
- **First Aid Kit**
- **Tape**
Your Hurricane Preparedness Plans, cont.

Staying at Home: Food (5+ days)

Paper plates, plastic utensils

Canned Goods

- Baked beans
- Green beans
- Soup
- Fruit cocktail
- 100% whole wheat bread
- Nuts and seeds
- Granola bars
- Cheese
- Cereal
- Fruits and vegetables

WATER
2020 Atlantic Outlook
An above-normal season is likely.
13-19 Named Storms
6-10 Hurricanes
3-6 Major Hurricanes

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Remember…
*It Only Takes One!*

*Be Ready! Take Action!*