



Florida's Severe Weather Awareness Week takes place from February 7-11, 2022. Severe Weather Awareness Week is an opportunity for Floridians to learn about the various weather hazards that frequently impact the state and how families and businesses can prepare for these natural events.



Each day focuses on a specific weather event. **Thursday's focus is on hurricanes and flooding.**

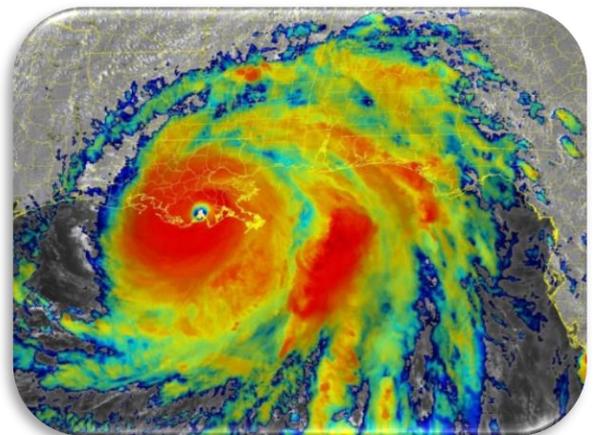
The most feared weather phenomenon throughout Florida during the summer and early fall is the tropical cyclone. Close to the tropics and surrounded on three sides by warm water, the unique location of Florida makes it particularly vulnerable to these systems as they develop across the Atlantic Ocean, Gulf of Mexico, and Caribbean Sea. The relatively flat terrain of Florida can also make it susceptible to flooding.

Florida has a long history of hurricanes. Records indicate that approximately 145 hurricanes and around 164 tropical storms have impacted the state since 1851, with many more cited in history books prior to that year and even before official records were kept.

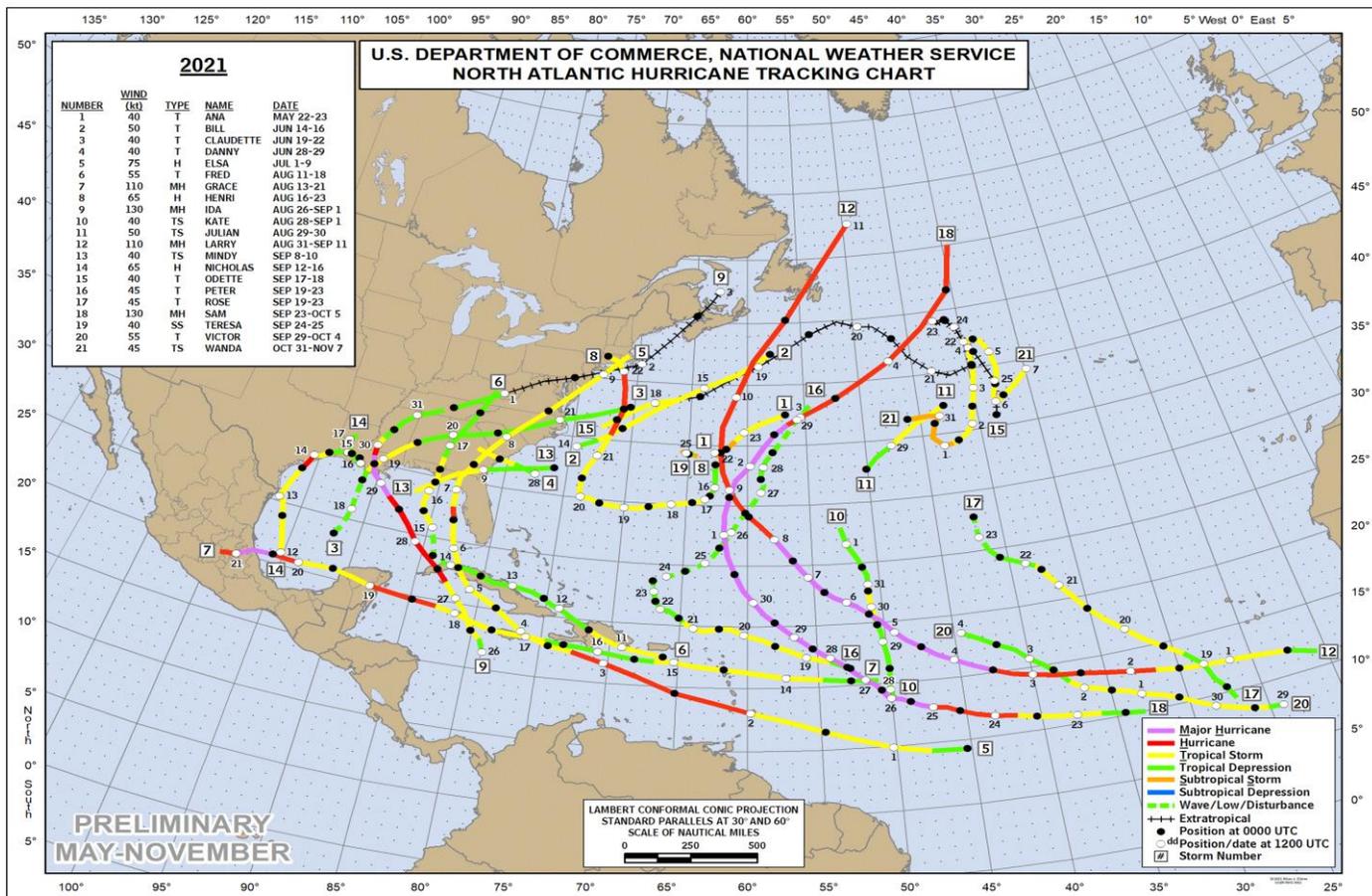
***DID YOU KNOW???** No other state in the country has more hurricane landfalls per year on average than Florida does. Nearly 40% of all hurricanes that strike the United States make landfall in Florida.*

The North Atlantic Ocean hurricane season officially begins on June 1 and continues through November 30. However, tropical systems can still form outside of hurricane season as early as May and as late as December. Although the number of tropical storms and hurricanes typically peaks during August and September, it is important to remember that Florida can be impacted by tropical weather systems any time during the season. Residents and visitors need to plan ahead and remain ready for possible hurricane impacts.

The 2021 hurricane season was the sixth in a consecutive series of above average and damaging Atlantic hurricane seasons. With a damage total of more than \$80 billion, it was the third-costliest season on record behind 2005 and 2017. Advisories were issued on **21 named storms – 10 tropical storms, 7 hurricanes, and 4 major hurricanes** by the National Hurricane Center. The first half of the season was much busier than the second half, with the pace running ahead of 2020 for a short time in August. By the end of September however, the season abruptly came to an end and there was a notable lack of activity in the Caribbean in October and November.



Ida will be the storm to remember from the season, and is very likely to be retired based on the damages and fatalities in both Louisiana and across the Mid-Atlantic and Northeast. **Florida had 3 landfalls**, all at tropical storm strength and in the eastern Panhandle/Big Bend region: Elsa, Fred, and Mindy. Claudette, Ida, and Nicholas also brought notable impacts to the state.



Tropical Storm Ana formed ten days before the official start of the 2021 Atlantic hurricane season, making 2021 the seventh consecutive year in which a tropical or subtropical cyclone formed before the season's official start on June 1. Ana formed in a location (near Bermuda) where no tropical storms within the month of May had been documented since before 1950. The season had the most active June on record (tied) with three named storms forming in the month (TS Bill, TS Claudette & TS Danny), one of which (Claudette) made landfall in Louisiana.



Hurricane Elsa formed at the beginning of July and became the first hurricane of the season on July 2, impacting the Caribbean and later the Eastern United States after making landfall in Taylor County Florida as a 65mph tropical storm on July 7. One person was killed by a falling tree in Florida and another seventeen were injured at a Georgia military base during an EF1 tornado. Afterwards, activity came to a halt due to unfavorable conditions across the basin.

On August 11, Fred formed in the eastern Caribbean just south of Puerto Rico, bringing impacts to Hispaniola and Cuba as a weak system. Fred dissipated into a tropical wave near the north coast of

Cuba on August 14, but the storm began re-organizing after emerging into the Gulf of Mexico several hours later. Fred became a tropical storm again over the eastern Gulf of Mexico the next day as it headed generally northward, and on August 16, Fred peaked with winds of 65 mph just over an hour before making landfall near Cape San Blas, Florida. Storm surge caused minor coastal flooding in Apalachee Bay and caused 1 indirect fatality in Bay County. Fred and its remnants later spawned 31 tornadoes from Georgia to Massachusetts and caused severe flooding over western North Carolina.



On August 13, Grace formed and strengthened to the second hurricane and first major hurricane of the season, and brought impacts to Hispaniola, the Yucatan Peninsula, and eastern Mexico. A third tropical system, Henri, developed on August 16, near Bermuda. Henri meandered for several days before becoming the third hurricane of the season on August 21 and impacted New England, causing record flooding in some places. Towards the end of the month, Hurricane Ida formed, causing major damage in Western Cuba before rapidly intensifying into a Category 4 hurricane and striking Southeastern Louisiana at near peak intensity, producing widespread, catastrophic damage. Its remnants then generated a deadly tornado outbreak and widespread flooding across the Northeastern United States. Two other tropical storms, Kate and Julian, also formed briefly during this time, but remained at sea. Larry initially formed on the last day of August and strengthened into a major hurricane early in September, but stayed out at sea until making landfall in Newfoundland.



Tropical Storm Mindy formed in the central Gulf of Mexico on September 8, and made landfall later that evening on St. Vincent Island, Florida, about 10 mi west-southwest of Apalachicola with maximum sustained winds of 45 mph. Hurricane Nicholas, which formed in the southwestern Gulf of Mexico on September 12, made landfall along the central Texas coast two days later. They were followed by three tropical storms—Odette, Peter, and Rose—which had no land interaction. The strongest and longest-lasting storm of the season, Hurricane Sam, began as a Cape Verde storm from Africa, and

proceeded to rapidly intensify from a tropical depression to a hurricane within 24 hours on September 23 and 24. Sam became a major hurricane on September 25th, and remained a major hurricane until October 3 before gradually weakening in the open Atlantic. Meanwhile, Subtropical Storm Teresa formed north of Bermuda on September 24 and lasted a day. Similarly short-lived, Tropical Storm Victor formed late in the month on September 29 in the eastern Atlantic and dissipated on October 4.

After a nearly four-week break, the last storm of the season, Subtropical Storm Wanda, formed in the central North Atlantic on October 31, and became fully tropical on November 1. However, impacts from this system in New England happened before it had a name, beginning as a potent nor'easter and then developing tropical characteristics while moving away from the coast.

DID YOU KNOW??? In the last 150 years, all of Florida's counties have been impacted by at least one hurricane.

The 2021 Hurricane Season resulted in another year of several Gulf Coast and Caribbean impacts, especially in Louisiana, a state ravaged by hurricanes in 2020, but also served a harsh reminder to northern states that even weakening systems that made landfall several hundred miles away can bring devastating impacts. Back-to-back years with major hurricane landfalls are a real possibility, and all Floridians should take this possibility into account when packing their supply kit and making their emergency plan.

Tropical Storm & Hurricanes

Watches Versus Warnings

WATCH	WARNING
Tropical storm and/or hurricane conditions are POSSIBLE in Watch area Issued up to 48 hours in advance of tropical storm force winds	Tropical storm and/or hurricane conditions are EXPECTED in Warning area Issued up to 36 hours in advance of onset of tropical storm force winds

Hurricane preparedness activities become difficult once winds reach tropical storm force. **Watches & Warnings are issued in advance of onset of tropical storm force winds, 39-73mph**

When a tropical system approaches the state, The National Hurricane Center will issue watches and warnings. **Do you know the difference between a watch and warning?** Watches are issued 48 hours in advance of the time dangerous winds or surge are *possible* within the specified area. Warnings are issued 36 hours prior to the time when damaging winds or storm surge are *expected*. A watch should trigger your family's disaster plan, and protective measures should be initiated. Once a warning has been issued, your family should be in the process of completing protective actions and deciding the safest location to be during the storm.

Your main protection against hurricanes is to be prepared and have a plan. Hurricane force winds can easily destroy poorly constructed buildings and mobile homes. A hurricane plan does not have to be anything extremely complicated, but should at least consist of the following two things. **First, determine whether you live in an evacuation zone.** This information can be obtained from your local emergency management office through links at <https://www.floridadisaster.org/knowyourzone/>. If you live in an evacuation zone, know when and where you will be going to pass the storm. **Second, have a disaster supply kit ready** with non-perishable food, batteries for electronic devices such as your NOAA Weather Radio, and enough supplies to last 7 days. Assess your property to ensure that landscaping and trees do not become a wind hazard.

SEVERE WEATHER AWARENESS WEEK 2022

HURRICANES & FLOODING

- 6 **Develop individualized disaster preparedness plans** for families, businesses & individuals with special needs
- 6 **Know evacuation routes & stock a disaster supply kit** for at least 7 days
- 6 **Review insurance policies** and ensure coverage is up-to-date





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Know Your Zone



While hurricanes are known and feared for their ferocious winds, historically it is the water that causes most of the deaths in hurricanes. About 90% of all hurricane fatalities occur from drowning in either storm surge or freshwater flooding. The widespread flooding caused by Tropical Storm Fay in 2008 and Hurricane Ida from 2021 serves as a reminder that tropical storms can cause as much or greater devastation than hurricanes with freshwater flooding.

Even outside of tropical systems, flooding is a serious concern in Florida since it can happen anywhere and at any time. Effects from flooding can be localized, impacting just a few streets in a neighborhood or community, or very large, affecting multiple cities, counties, and even whole states. Flooding is caused by the amount of rainfall and what happens to the rain after it hits the ground.

As our state's population increases, buildings and pavement replace the natural land. This creates more water runoff and can increase flood problems. Most deaths due to flooding in the United States are from people driving their cars into flooded areas. Once a vehicle begins to float, the situation becomes dangerous and often deadly. Residents should be aware of their location with respect to flood-prone areas and know evacuation routes. People are also urged to be extremely cautious when driving in heavy rains, especially when water covers the road. Because it is difficult to determine the depth of water or the condition of the road under the water, if you come to a flooded road, remember the phrase "Turn Around, Don't Drown".



Meteorologists at the National Weather Service watch the weather to try to warn people well in advance of the flooding so they can save lives and property. Flood Watches and Warnings, along with Flash Flood Watches and Warnings, are issued for a specific area when flooding conditions are likely or are already occurring. The National Hurricane Center will also issue [Storm Surge Watches and Warnings](#) for areas of the U.S. that have the potential for damaging storm surge from a tropical cyclone.

National Flood Safety Awareness Week is March 7-11, 2022 and National Hurricane Preparedness Week is May 8-14, 2022. More information about hurricanes and flooding and what you can do to protect yourself and others can be found at <https://www.ready.gov/hurricanes>, <https://www.weather.gov/safety/flood>, <https://www.floridadisaster.org/hazards/hurricanes/>, and <https://www.floridadisaster.org/hazards/floods/>.



Friday's topic will be on temperature extremes and wildfires.

Be Prepared. Be StormReady.

