

# Carolina SkyWatcher



NWS Morehead City

Summer Edition, 2022



Hurricane Dorian making landfall over Cape Hatteras, NC on September 6th, 2019 | Credit: NOAA/NESDIS

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With summer upon us, we jump into the seasonal outlook to see what climate patterns will drive the 2022 summer season.

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### Hurricane Community Forums Return for the Fourth Year

Our annual Hurricane Community Forums are back! We welcome the public to join us, in-person and online, to discuss hurricane preparedness in your communities.

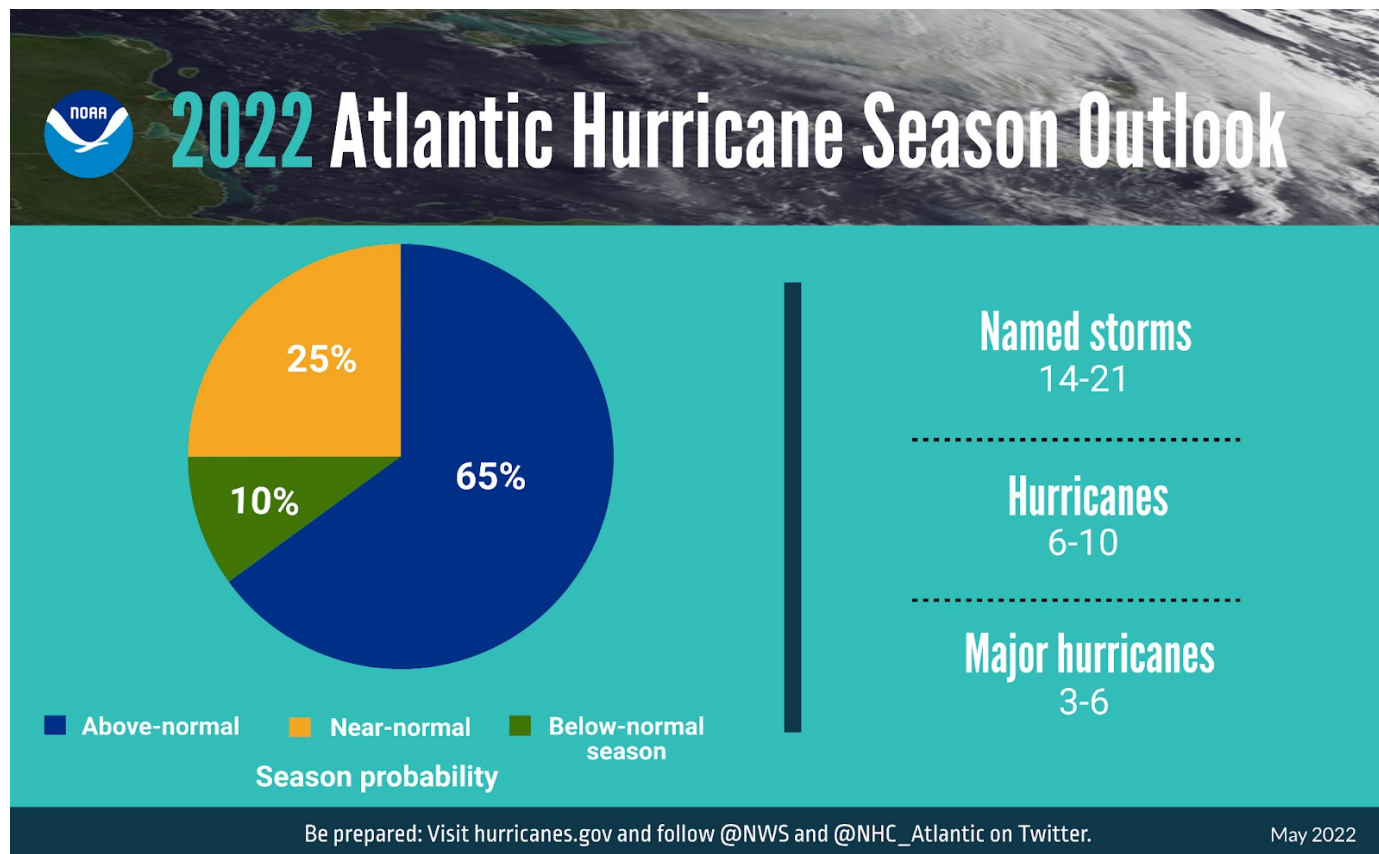
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# Another Above Average Hurricane Season in Store for 2022

By: Ryan Ellis, Science and Operations Officer

It seems cliché at this point, but for the seventh consecutive year, NOAA's Climate Prediction Center is once again forecasting an above average Atlantic Hurricane Season for 2022 with 14-21 named storms expected, 6-10 of those becoming hurricanes with 3-6 of those achieving major hurricane status.

"Early preparation and understanding your risk is key to being hurricane resilient and climate-ready," said Secretary of Commerce Gina M. Raimondo. "Throughout the hurricane season, NOAA experts will work around-the-clock to provide early and accurate forecasts and warnings that communities in the path of storms can depend on to stay informed."



The increased activity anticipated this hurricane season is attributed to several climate factors, including the ongoing La Niña that is likely to persist throughout the hurricane season, warmer-than-average sea surface temperatures in the Atlantic Ocean and Caribbean Sea, weaker tropical Atlantic trade winds and an enhanced west African monsoon. An enhanced west African monsoon supports stronger African Easterly Waves, which seed many of the strongest and longest lived hurricanes during most seasons. The way in which climate change impacts the strength and frequency of tropical cyclones is a continuous area of study for NOAA scientists.



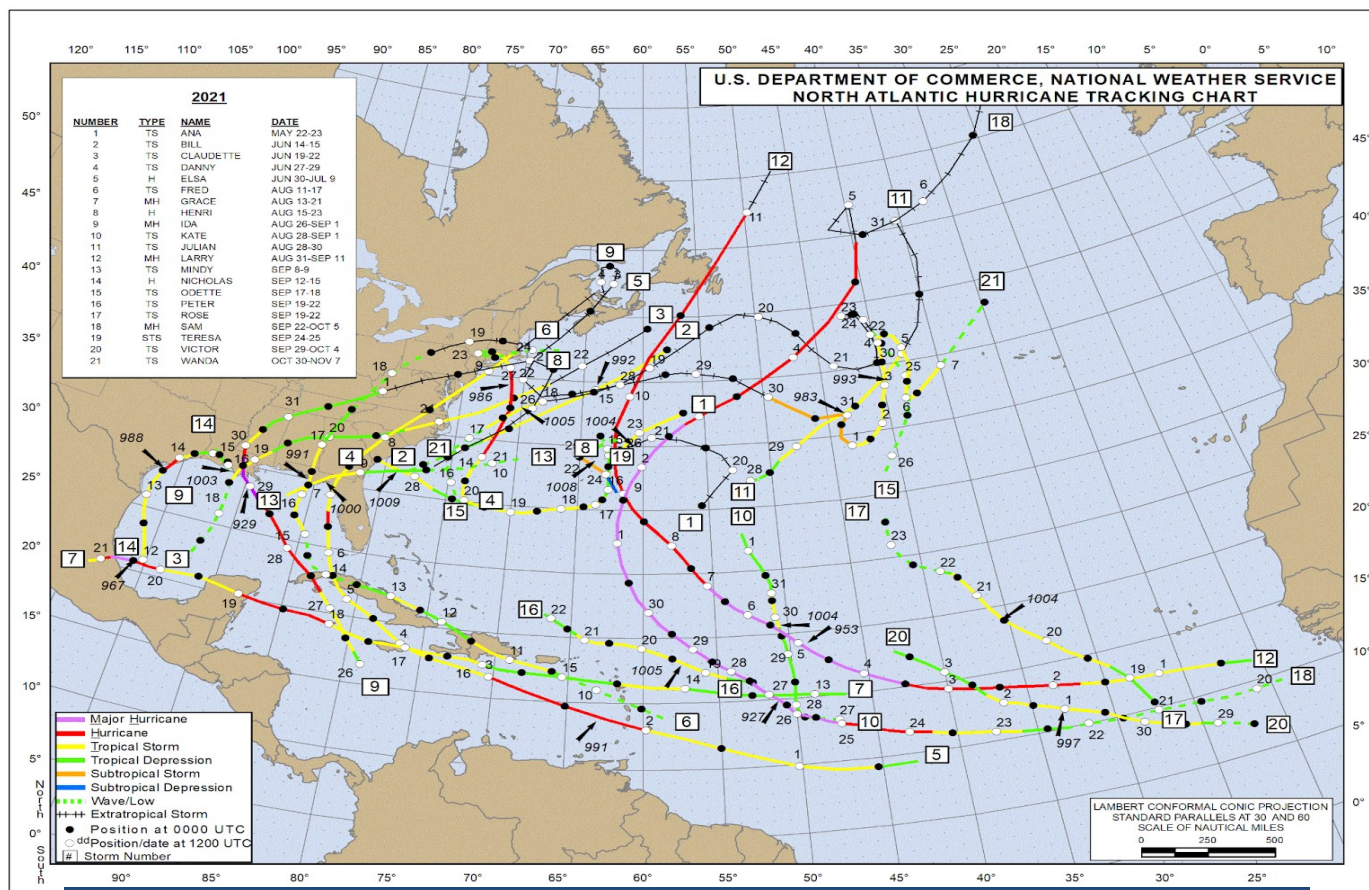
# Another Above Average Hurricane Season in Store for 2022

(continued)

## So what does this all mean for us in eastern NC?

As we all know from storms like Florence, Matthew, Hazel, Floyd or Fran, it only takes one storm to make a massive impact. At the same time, each of those storms had a profoundly different and unique impact on the area. Location, threat, duration, and many other variables make each storm different.

Last year, we had an above normal season predicted as well and it panned out as expected. There were 21 named storms, 7 hurricanes and 4 major hurricanes. Two of those, Tropical Storm Claudette and Hurricane Elsa, impacted eastern NC directly, luckily with limited impacts. Six of the storms were “in the neighborhood” and were within the margin of error for potentially impacting the eastern part of the state.



2021 Atlantic Tropical Cyclone Tracks | Credit: U.S. Department of Commerce - National Weather Service

Finally, it can't be understated that just about any storm in the Atlantic has the potential to send strong rip currents to our beaches, regardless of how far away it is. Hurricane Lorenzo, off the coast of Spain and Portugal in 2019 provided strong rip currents, unfortunately resulting in fatalities.

# Another Above Average Hurricane Season in Store for 2022

(continued)

The graphic features a satellite image of a hurricane at the top. Below it, the NOAA logo is on the left, followed by the title "2022 Atlantic Tropical Cyclone Names" in large, bold, white and teal text. The names are organized into three columns, separated by vertical teal bars. The first column lists: Alex, Bonnie, Colin, Danielle, Earl, Fiona, Gaston. The second column lists: Hermine, Ian, Julia, Karl, Lisa, Martin, Nicole. The third column lists: Owen, Paula, Richard, Shary, Tobias, Virginie, Walter. At the bottom, a teal bar contains the text "Names provided by the World Meteorological Organization" and "Be prepared: Visit hurricanes.gov and follow @NWS and @NHC\_Atlantic on Twitter." The date "May 2022" is in the bottom right corner.

Alex	Hermine	Owen
Bonnie	Ian	Paula
Colin	Julia	Richard
Danielle	Karl	Shary
Earl	Lisa	Tobias
Fiona	Martin	Virginie
Gaston	Nicole	Walter

Names provided by the World Meteorological Organization

Be prepared: Visit [hurricanes.gov](https://www.hurricanes.gov) and follow @NWS and @NHC\_Atlantic on Twitter.

May 2022

The bottom line is that we know that the ingredients and the potential is there to have significant impacts in eastern NC are there but at this point there is no way to tell exactly how the hurricane season will play out in regards to landfalling storms in the Carolinas. Knowing that potential still has tremendous value however, because it is a reminder and a signal to us to start gearing up now for Hurricane season. Here are a few things you can do.:

## Have a plan in place now

There is no worse time to try and make a plan than while a storm is about to make landfall. The best plans identify your own specific vulnerabilities, such as living in an area prone to flooding, and taking steps to mitigate that ahead of time. Maybe you have an elderly parent that will need help in case an evacuation is necessary. Identifying what you would do now will help make the situation easier if it were to occur later. Maybe you have pets and need to figure out what to do with them. Now is the time to figure all of that out, not later.

## Stock up the hurricane kit

Nobody wants to stand in line for hours at the grocery store when a storm is about to hit. If you can stock up your hurricane kit now, you will be better off later on. Batteries, non-perishable foods, a radio, pet supplies can all be taken care of now, again so you don't have to worry about it later.

## Another Above Average Hurricane Season in Store for 2022

(continued)



### Know Your Zone!

Through the NC Department of Public Safety and NC Emergency Management, twenty coastal counties have established predetermined evacuation zones to simplify the coastal evacuation process in the event of an emergency. Everyone living or vacationing in North Carolina's coastal areas should Know Your Zone. Visit the [Know Your Zone Page](#) to learn more about your zone.

### Know where to go for more information

Finally, it is important to have trustworthy and reliable sources of information. This could be the National Hurricane Center, your local NWS forecast office, a local broadcast meteorologist, or your local emergency management and first responders. It is important to recognize and remember that not every source of information is a good one. Here are some resources to get you started here in eastern NC.

**NWS Newport/  
Morehead City  
Tropical Page**

**National  
Hurricane  
Center**

**ReadyNC.gov**

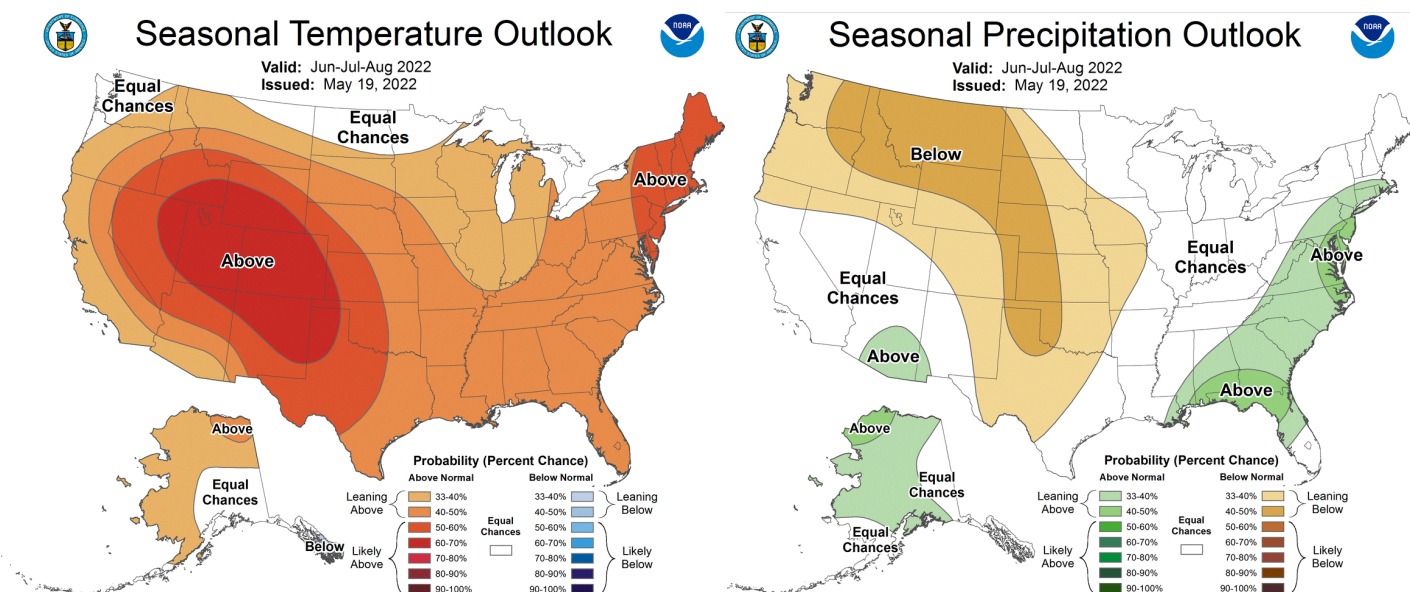
While our mission is always to protect life and property and provide timely and accurate forecast information to the people of eastern North Carolina, it is important to recognize the risks ahead of time and that ultimately it is the actions that we take now that will help to keep us and our families safe this hurricane season. The call for an active hurricane season now helps remind us to take stock and prepare for the season ahead, *because it only takes one.*



# Summer 2022 Seasonal Outlook For Eastern North Carolina

By: Morgan Simms, Meteorologist

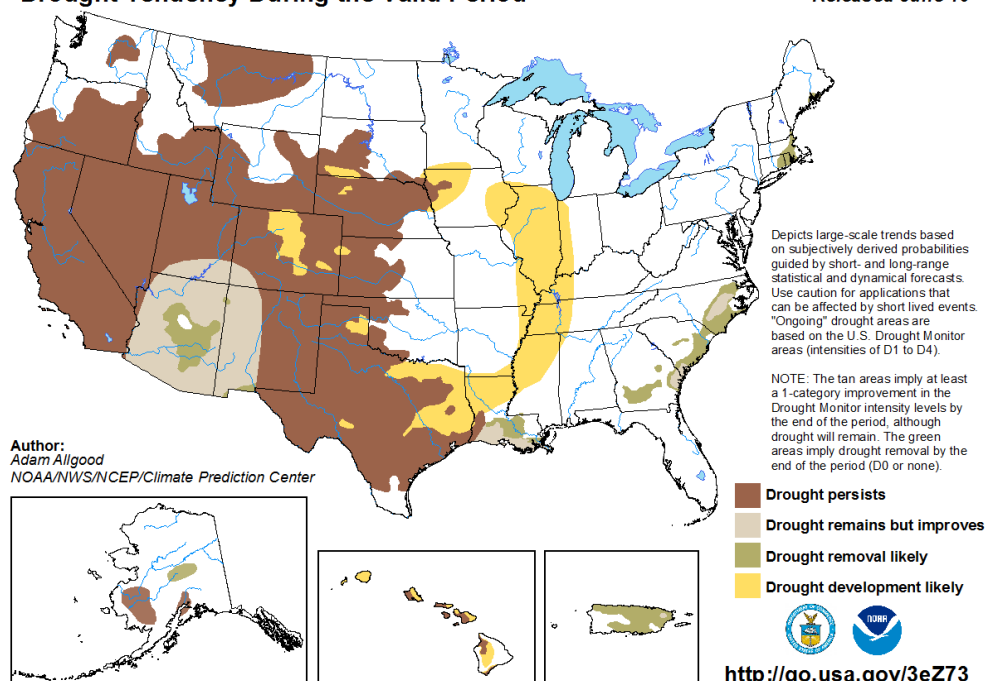
Warmer and wetter conditions are slightly favored across eastern North Carolina for meteorological summer of 2022. Seasonal outlooks from the NWS Climate Prediction Center (CPC) suggest above average temperatures are slightly favored (40-50% chance) across our area and all of the southeastern United States, a continuous trend observed throughout the calendar year.



Similarly, above average precipitation is slightly favored (33-50% chance) for much of the eastern seaboard. Ongoing drought conditions across much of the coastal plain are forecast to improve as we enter the climatological wet season, with removal likely for most by the start of meteorological fall.

## U.S. Seasonal Drought Outlook Drought Tendency During the Valid Period

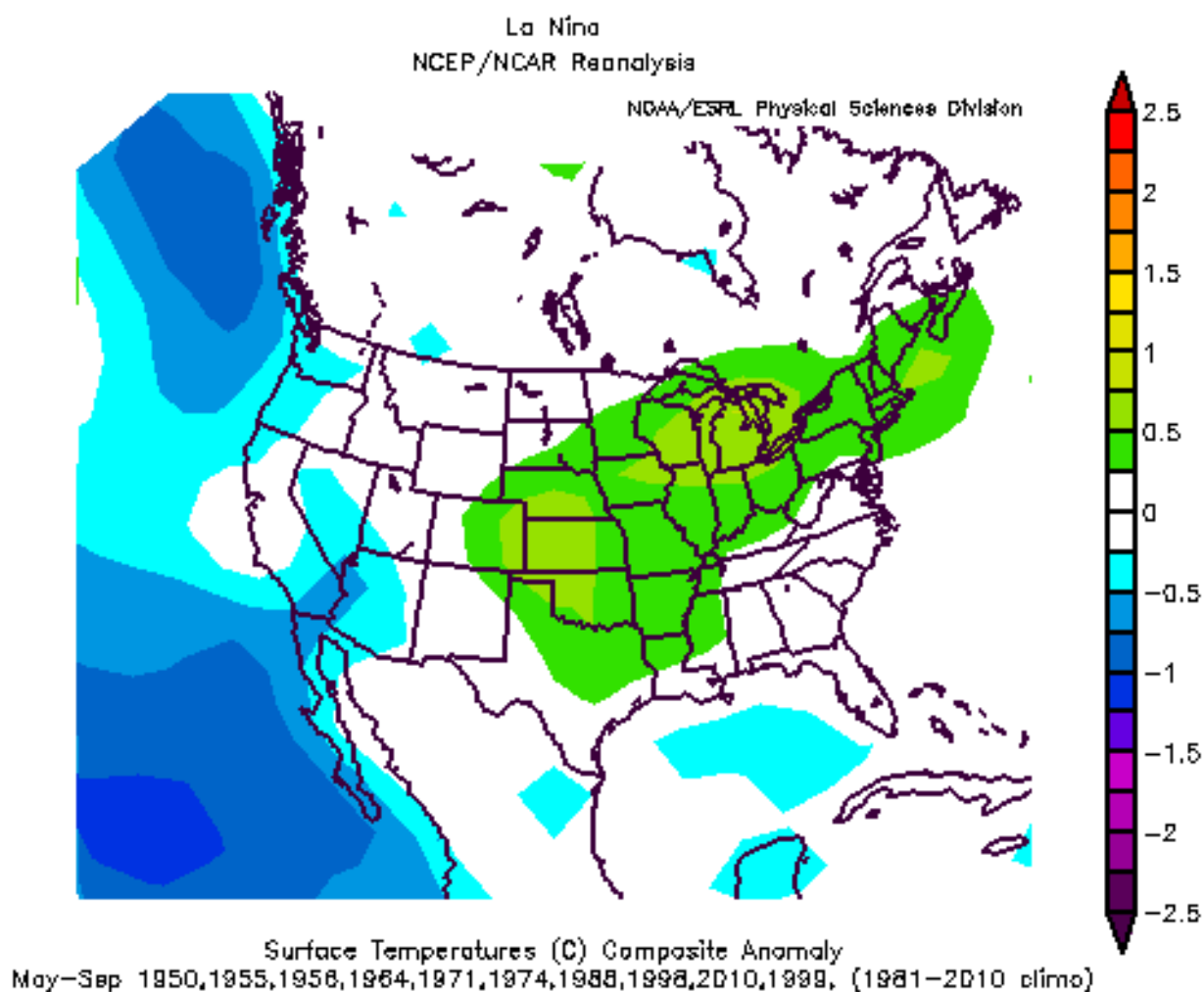
Valid for June 16 - September 30, 2022  
Released June 16



# Summer 2022 Seasonal Outlook For Eastern North Carolina

(continued)

Although there are multiple drivers of climate patterns across the United States, the El Niño-Southern Oscillation or ENSO is focused on most for climate outlooks because of its impacts on precipitation patterns across the tropics and its impact on weather patterns across the country and its predictability compared to other global circulations. Its correlation to temperature (and even less to precipitation) is weaker in the summer season compared to the warmer months, but a signal still exists.



*La Niña usually brings warmer summertime temperatures for the Central US and Northeast | Source: NCEP/NCAR*

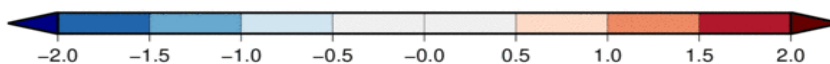
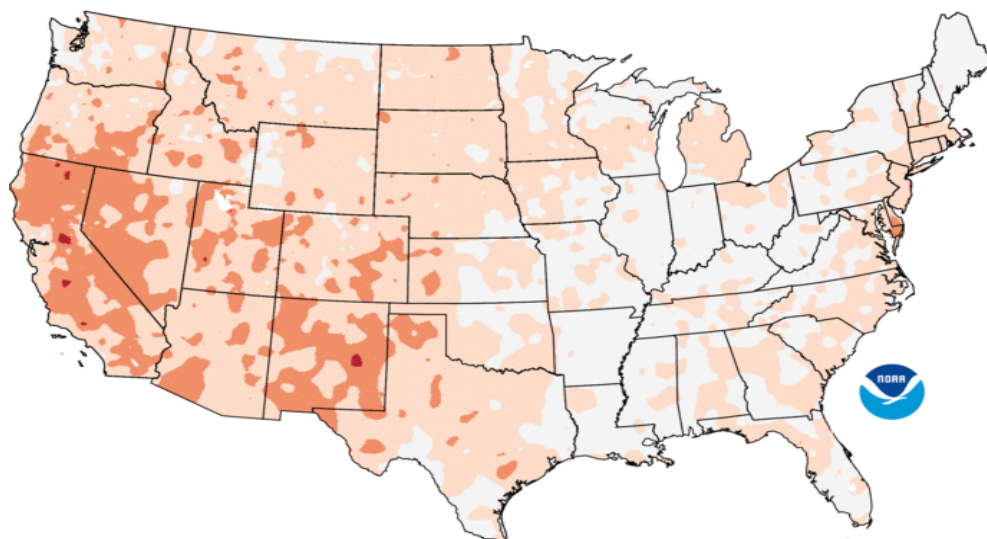
La Niña conditions currently exist across the central and eastern Pacific, meaning cooler than average sea surface temperatures. Model guidance suggests this will continue through the summer and potentially into the cool season. Historically, previous La Niña events have shown little to no correlation to summertime temperature and precipitation anomalies across the Carolinas (See figure above: warmer colors represent positive temperature anomalies, while cooler colors represent negative anomalies).

# Summer 2022 Seasonal Outlook For Eastern North Carolina

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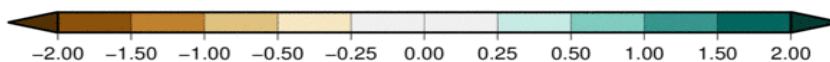
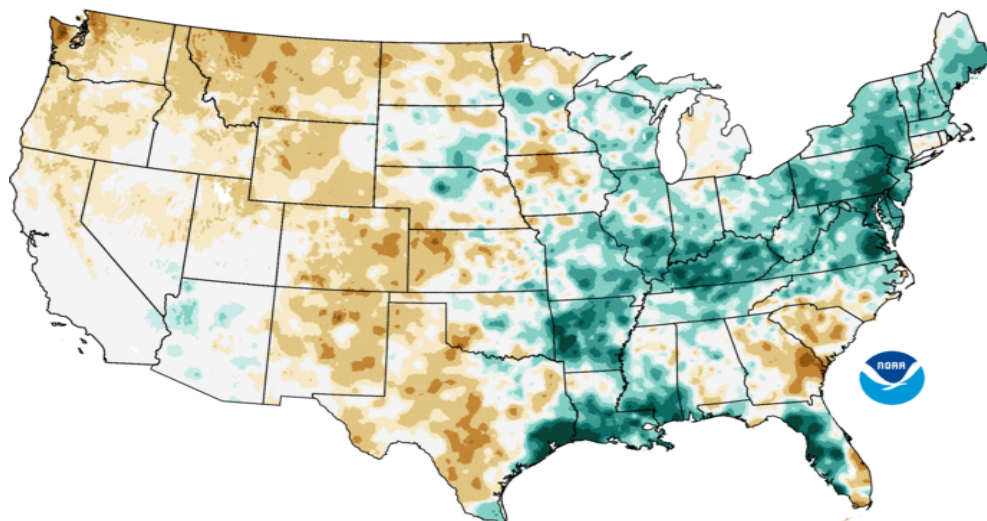
National trends across the past 30 years indicate a steady rise in average temperatures across the country during the summer season, including the Carolinas. Analysis from the National Centers for Environmental Information shows temperatures have risen between half a degree to a full degree across our area. Most of the Carolinas have also trended drier, while the mid-Atlantic has trended wetter.

Average Temperature Trends  
Summer 1991–2020 (30 years)



Degrees Fahrenheit per Decade

Precipitation Trends  
Summer 1991–2020 (30 years)



Inches per Decade

Data Source: 5km Gridded Dataset (nClimGrid)

National Centers for  
Environmental Information



# Hurricane Community Forums Return for the Fourth Year

By: Mike Lee, Meteorologist

The National Weather Service office of Newport/Morehead City is excited to announce the return of our Hurricane Community Forums for its fourth year. Folks across eastern North Carolina are invited to join us for a public discussion about hurricane preparedness, where you will hear from local NWS meteorologists talk about tropical systems and their impacts and get the chance to have your questions about hurricane preparedness answered.



*Lead Meteorologist Carl Barnes talks with members of the Cape Hatteras community about being Weather-Ready*

We will go over why you should never just focus on just the category of the storm, what the hurricane path track means, and the various impacts tropical cyclones can bring. We will also cover the hurricane outlook for the year while emphasizing that it only takes one storm to make an impact on your life! The Hurricane Community Forums are free and open to all. They are available in both virtual and in-person sessions this year across various locations in eastern North Carolina. Click on the link below to see upcoming forums and register!

**Register Today for a Hurricane Community Forum!**

# *Hurricanes* can escalate quickly.

Category 5 hurricanes that struck the United States were much weaker tropical storms just 72 hours prior. Be prepared — well ahead of the storm.



Know your potential evacuation routes



Have an emergency supply kit ready to go



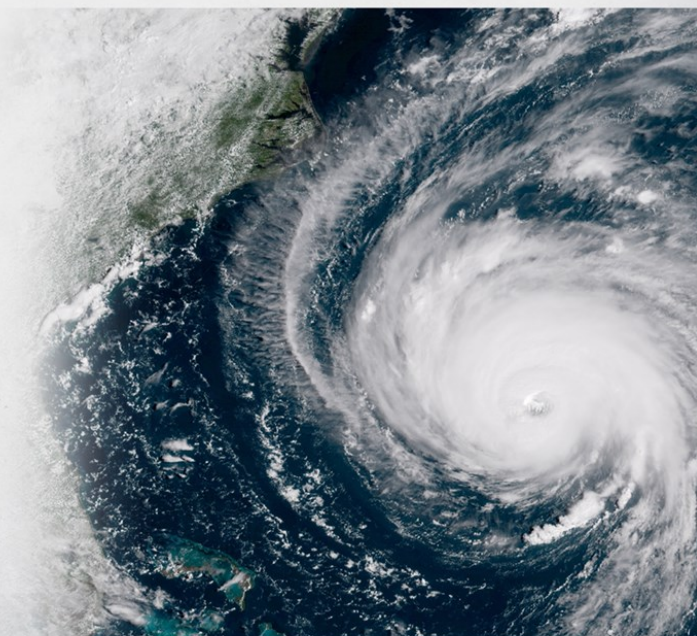
Get an insurance checkup and strengthen your home



Have a family communication plan



weather.gov



**Visit Our Hurricane Preparedness Webpage  
to be Weather-Ready for Hurricane Season!**

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