Carolina SkyWatcher

National Weather Service, Newport/Morehead City, NC

http://weather.gov/Newport —> Bookmark it!!

Spring 2020 Edition

Severe Weather Season Returns

By Chris Collins, Meteorologist

As we start our annual Spring warm up, residents of eastern North Carolina need to turn their attention to the threat of severe weather. March through June are our most active months for severe weather, with April and May being most active in terms of tornadoes. The two largest tornado outbreaks in recent history in eastern North Carolina occurred on March 28, 1984 and April 16, 2011. The 1984 outbreak produced 2 EF-4 tornadoes in eastern North Carolina, causing 9 deaths in Pitt County and 7 deaths in Greene County. East Carolina University sustained severe damage. While the 2011 outbreak did not produce any deaths in the Newport/Morehead City NWS County Warning Area, scores of injuries were reported. The outbreak produce 12 tornadoes, damaging hundred of homes, many businesses and some schools.

Events like these highlight the need to have a plan of action should tornadoes and severe weather impact your area. Most tornado deaths and injuries occur outdoors, in automobiles, and in mobile homes, and many fatalities occur at night. If a Tornado Warning is issued for your area, remember to "get in, get down and cover up". Seek shelter in a substantial building, in an interior bathroom or closet on the lowest floor.

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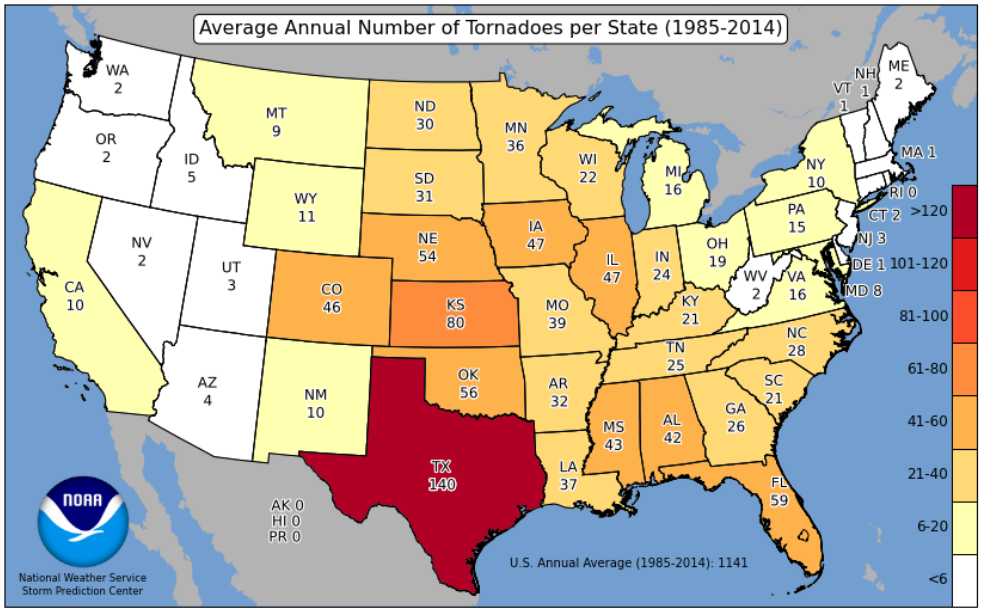


Tornadoes Per State (1985-2014)

Spring SKYWARN (Weather Spotter) Training

By Erik Heden, Warning Coordination Meteorologist

Spring is certainly in the air and that means that thunderstorms are just around the corner. We have begun to schedule new weather spotter classes for this season. These are open to all ages! For now all of our classes will be virtual, and you can take them from the comfort of your home. We just scheduled three classes through the end of March, with plans to add more soon! Visit https://www.weather.gov/mhx/MHXSkywarn to sign up for a class that works for you. For these online classes you will need internet access to view the presentation and a phone line (either a landline or mobile) to hear the audio of the presentation. In less than an hour you can become an official trained spotter without having to leave your house!

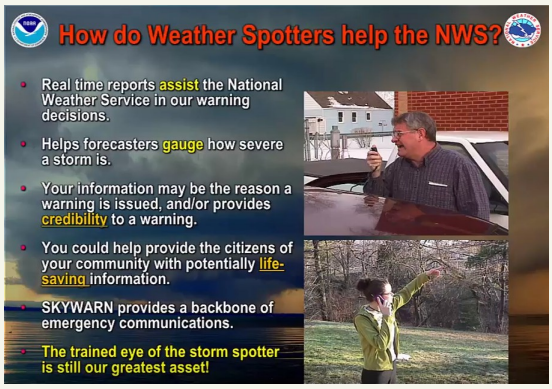
YouTube Training

Don't forget if you can't attend the current training we have planned or you want to start right now, you can always take our training via YouTube 24/7. Visit our SKYWARN page listed above and click on "YouTube Training".

After finishing all seven parts, email Erik at erik.heden@noaa.gov to receive your certificate of completion. These trainings are also great as a refresher if you haven't been to a class in a few years. Remember that this page is also a great resource as a reminder on when and what to report. We appreciate all you do for our spotter program!

Spring Skywarn (Weather Spotter) Training (Continued)

Basic Skywarn (Parts 1 through 7). Watch all 7 videos and instructions on how to receive your certificate. (Click on the image to watch the video)



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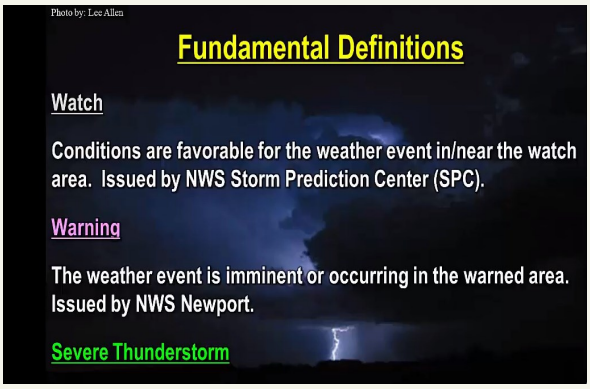

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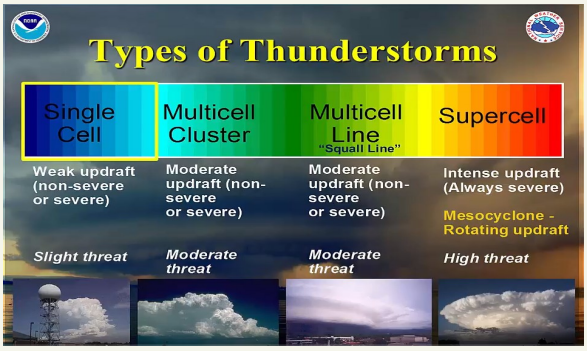

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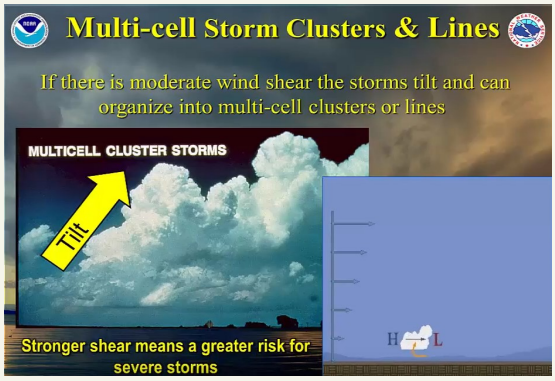

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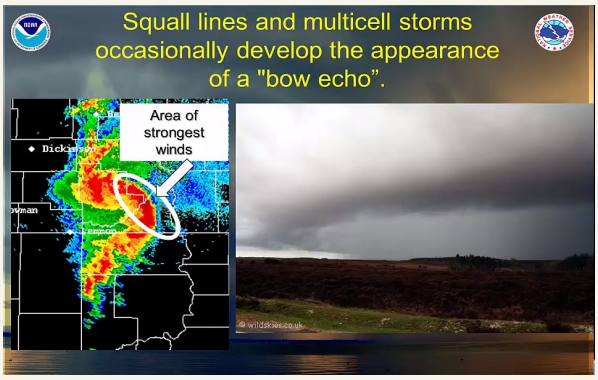

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Severe Weather Preparedness Week

By Erik Heden, Warning Coordination Meteorologist

Severe weather preparedness week took place March 1st through March 7th. On Wednesday March 4th, people all across North Carolina took part in the tornado drill, testing their NOAA Weather Radios as part of the preparedness week. Topics discussed during the week included tornadoes, severe thunderstorms, flash flooding, and ways to get warning information. While the week is behind us, you should continue to practice preparedness as we head into the spring severe weather season. To help with this we created a brand new website that you can use to help in your preparedness. Please visit www.weather.gov/newport/swpw for more information. Here are a few helpful things to remember this upcoming severe weather season.

Have a Plan/Know Where To Go

Having a safe place to shelter is something you need to plan well ahead of time, so that you know where to go when severe weather strikes.

Severe Weather Preparedness Week (Continued)

Having multiple ways to receive warnings

In order to be prepared for severe weather you must be able to receive weather alerts. When reviewing how you receive alerts, ensure you have at least two ways to receive warnings. A NOAA Weather Radio is an excellent way to receive alerts especially at night when you may be asleep. Remember you will not receive cell phone alerts if you leave your phone on do not disturb at night.

Citizen Science Program Needs Your Help Observing the Weather

By David Glenn, Meteorologist-in-Charge

Have you ever wondered how much rain fell during a recent thunderstorm? How about snowfall during a winter storm? If so, an important volunteer weather observing program needs your help!

The Community Collaborative Rain, Hail, and Snow network, or CoCoRaHS, is looking for new volunteers across North Carolina. The grassroots effort is part of a growing national network of home-based and amateur weather spotters with a goal of providing a high density precipitation network across the country.

CoCoRaHS came about as a result of a devastating flash flood that hit Fort Collins, Colorado, in July 1997. A local severe thunderstorm dumped over a foot of rain in several hours while other portions of the city had only modest rainfall. The ensuing flood caught many by surprise and caused $200 million in damages. CoCoRaHS was born in 1998 with the intent of doing a better job of mapping and reporting intense storms. As more volunteers participated, rain, hail, and snow maps were produced for every storm showing fascinating local patterns that were of great interest to scientists and the public. Recently, drought reporting has also become an important observation within the CoCoRaHS program across the nation. In fact, drought observations from CoCoRaHS are now being included in the National Integrated Drought Information System.

North Carolina became the twenty-first state to join the CoCoRaHS program in 2007, and by 2010, the CoCoRaHS network had reached all 50 states with nearly 10,000 daily observations. Through CoCoRaHS, thousands of volunteers, young and old, document the size, intensity, duration and patterns of rain, hail, and snow by taking simple measurements in their own backyards.

Volunteers may obtain an official rain gauge through the CoCoRaHS website (http://www.cocorahs.org) for about $33 plus shipping. Besides the need for an official 4 inch plastic rain gauge, volunteers are asked to review simple training modules online and use the CoCoRaHS website to submit their reports. The process takes only five minutes a day, but the impact to the community is tenfold: by providing high quality, accurate measurements, the observers are able to supplement existing networks and provide useful data to scientists, resource managers, decision makers and others.

“CoCoRaHS observers have reported the highest rainfall amounts for both Hurricane Florence and Dorian,” said Darrian Betrand, CoCoRaHS State Co-Coordinator and Applied Climatologist at the State Climate Office of NC. “During these high-intensity

Citizen Science Program Needs Your Help Observing the Weather (Continued)

events, we can really spot the local variability in rainfall and fill in gaps between existing networks. On the other hand, we also use CoCoRaHS Condition Monitoring reports every week to determine drought conditions across the state and give recommendations to the U.S. Drought Monitor authors."

"Monitoring weather and climate conditions in North Carolina is no easy feat," said Heather Aldridge, CoCoRaHS State Co-Coordinator. "CoCoRaHS volunteers help by painting a better picture of precipitation patterns across North Carolina, filling in data gaps where there are no nearby stations."

"An additional benefit of the program to the National Weather Service is the ability to receive timely reports of significant weather such as hail, intense rainfall, or localized flooding from CoCoRaHS observers that can assist meteorologists in issuing and verifying warnings for severe thunderstorms," says David Glenn, CoCoRaHS State Co-coordinator and meteorologist with the National Weather Service in Newport/Morehead City.

How does one become a CoCoRaHS observer? Go to the CoCoRaHS website above and click on the "Join CoCoRaHS" emblem on the upper right side of the main website. After registering, take the simple online training, order your 4 inch rain gauge and start reporting!

"We are in need of new observers across the entire state. We would like to emphasize rural locations, areas of higher terrain, and areas near the coast," added Glenn.

North Carolina CoCoRaHS can also be reached on Facebook and through Twitter.

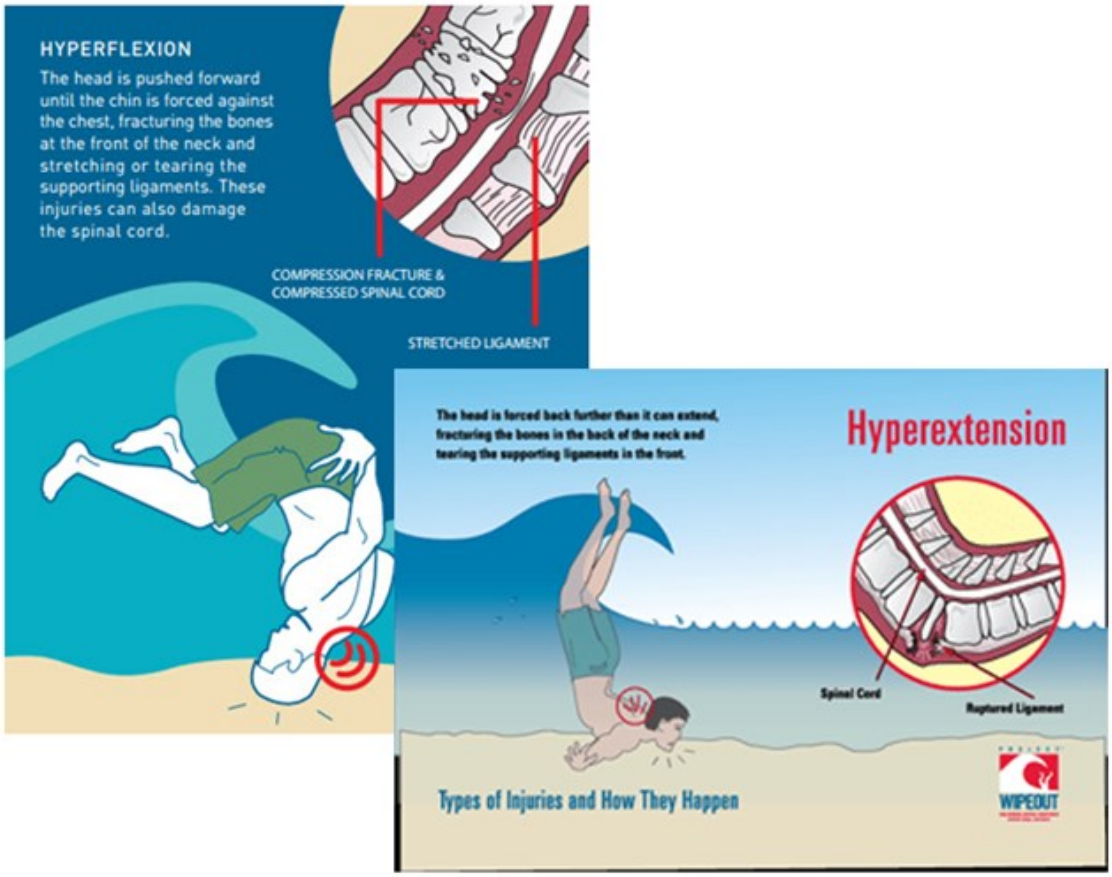
Rip Currents and Other Beach Hazards

by Tom Lonka, Meteorologist

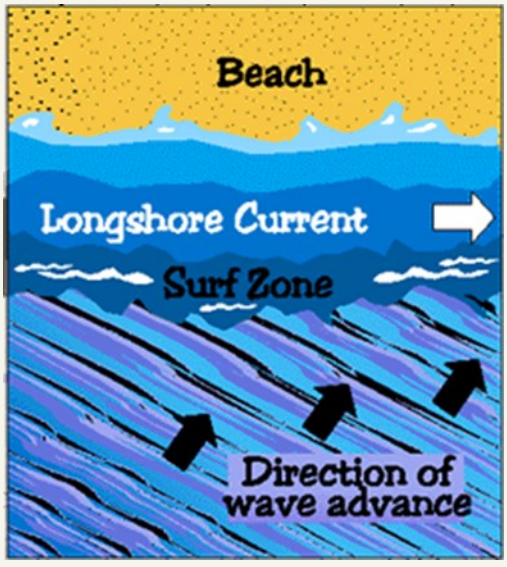
Summertime in Eastern North Carolina brings flocks of visitors to our beautiful beaches. Unfortunately, sometimes tragedy strikes unsuspecting folks that head into the ocean. Tragically, 12 fatalities occurred in the surf zone at Eastern NC beaches during the spring, summer and fall of 2019. A majority of those fatalities were caused by rip currents, which are defined as powerful, channeled currents of water flowing away from the shore. Rip currents often form where there is a break or low spot in the sandbar, and near manmade structures such as piers and jetties. Several of those twelve fatalities have been attributed to strong shorebreak, which is defined as large waves breaking directly on the beach. Shorebreak can cause severe to fatal injuries to the spine and neck. Longshore, or lateral currents, can sweep swimmers into rip currents or other hazards like piers and jetties. Fatalities and injuries can be prevented by becoming informed about hazards in the surf.

Overhead view of a rip current (courtesy of UNC Coastal Studies Institute).

Rip Currents and Other Beach Hazards (Continued)



Strong shorebreak can cause spinal and neck injuries (image courtesy of Project Wipeout).



Longshore or lateral current.

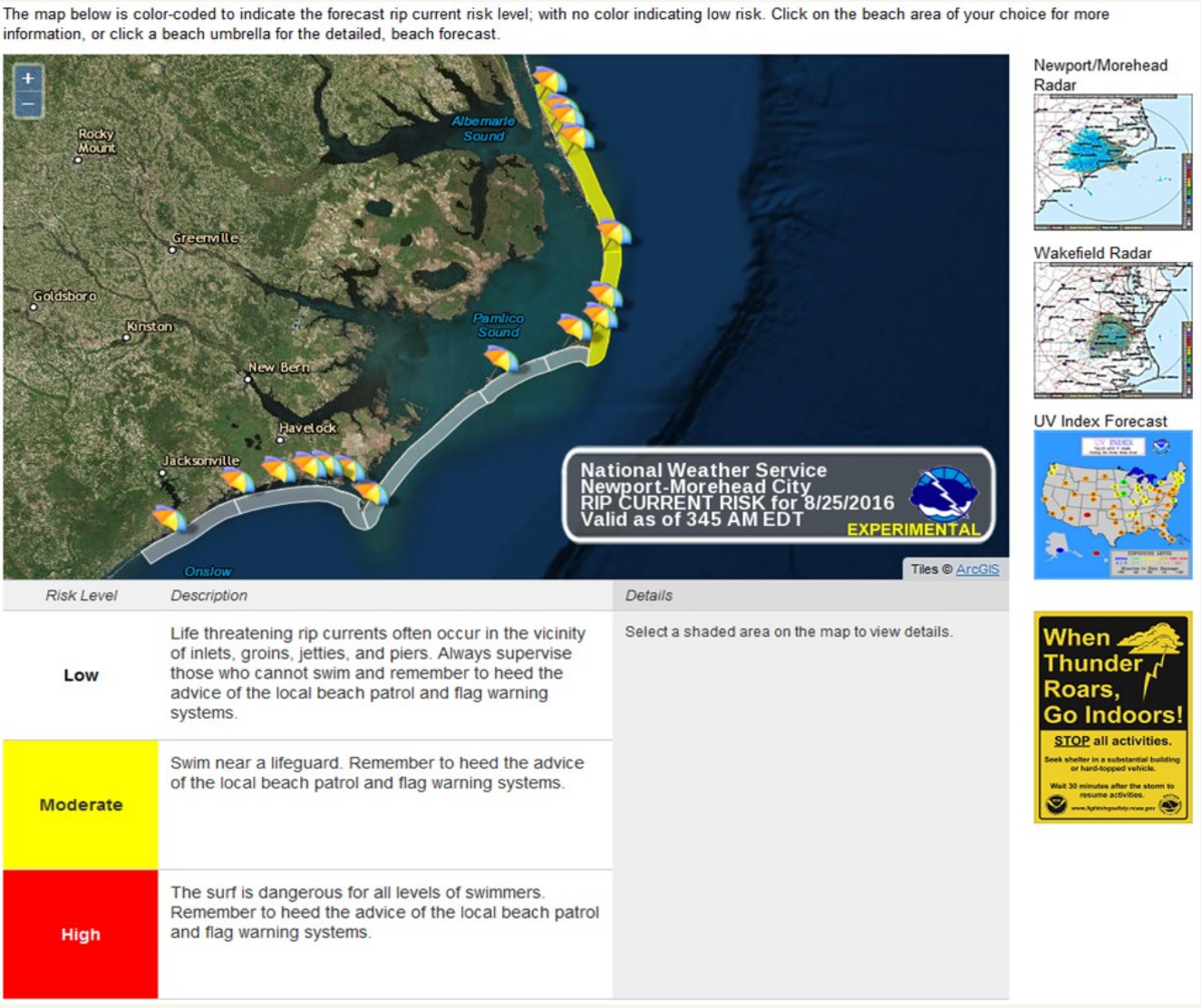
Rip Currents and Other Beach Hazards (Continued)

There are steps you should take before planning on heading into the surf. First and foremost, it is advised to swim at a lifeguarded beach. The fatalities that occurred this summer all occurred at beaches that did not have a lifeguard. Most lifeguarded beaches fly flags to inform beachgoers whether it is safe to enter the water or not. A yellow flag usually means be extra vigilant when entering the surf. A red flag usually means the water is extremely unsafe to go into. Many times a red flag will mean the beach is closed to swimming. Familiarize yourself with the beach's flag system before entering the water.

Familiarize yourself with your beach's flag system.

Rip Currents and Other Beach Hazards (Continued)

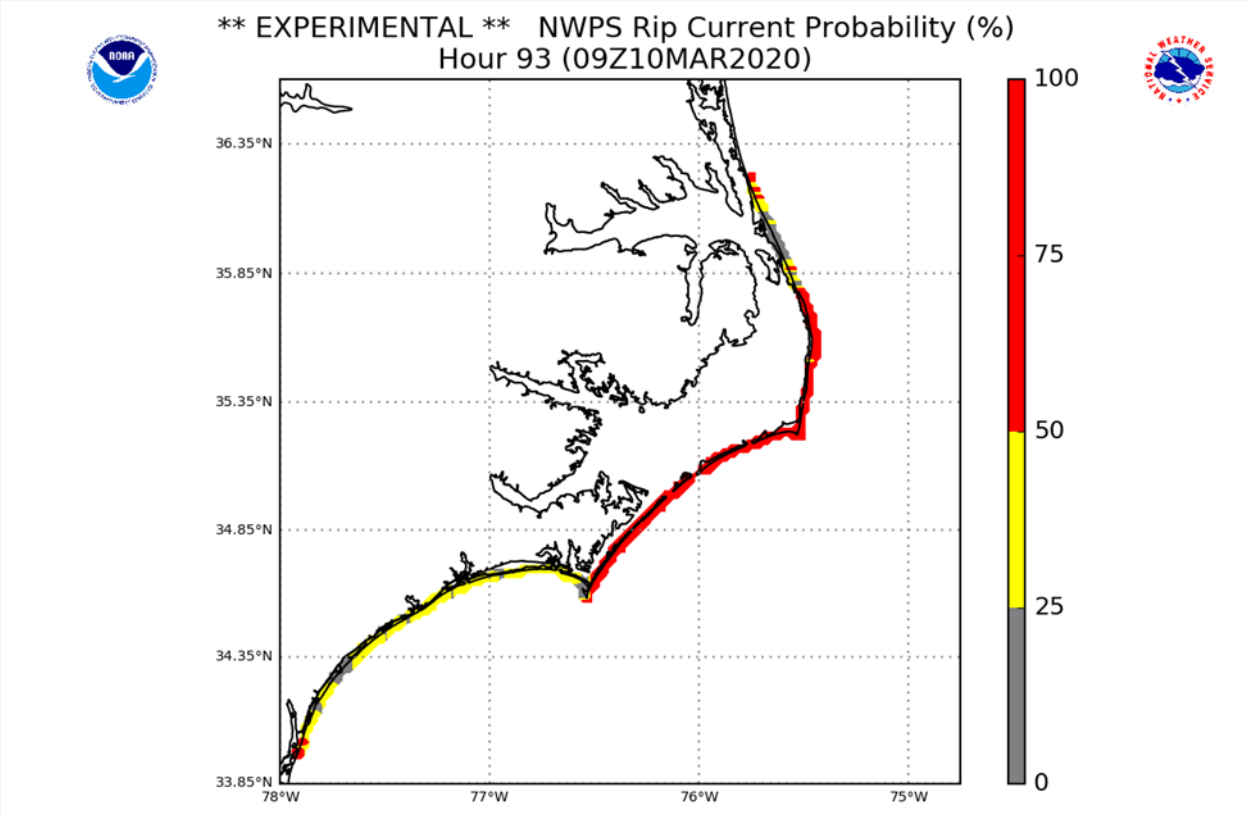
The Newport/Morehead City NC NWS office, along with most coastal and Great Lakes offices in the U.S., issues a daily surf zone forecast. The surf zone forecast includes the rip current risk for the day, classified as low, moderate, or high. Before heading to the beach, be sure to check out the surf zone forecast for your area of interest. Other important parameters are included in the surf zone forecast, such as the U.V. index, water temperatures, and surf height.



Rip current forecast issued by NWS: http://www.weather.gov/beach/mhx

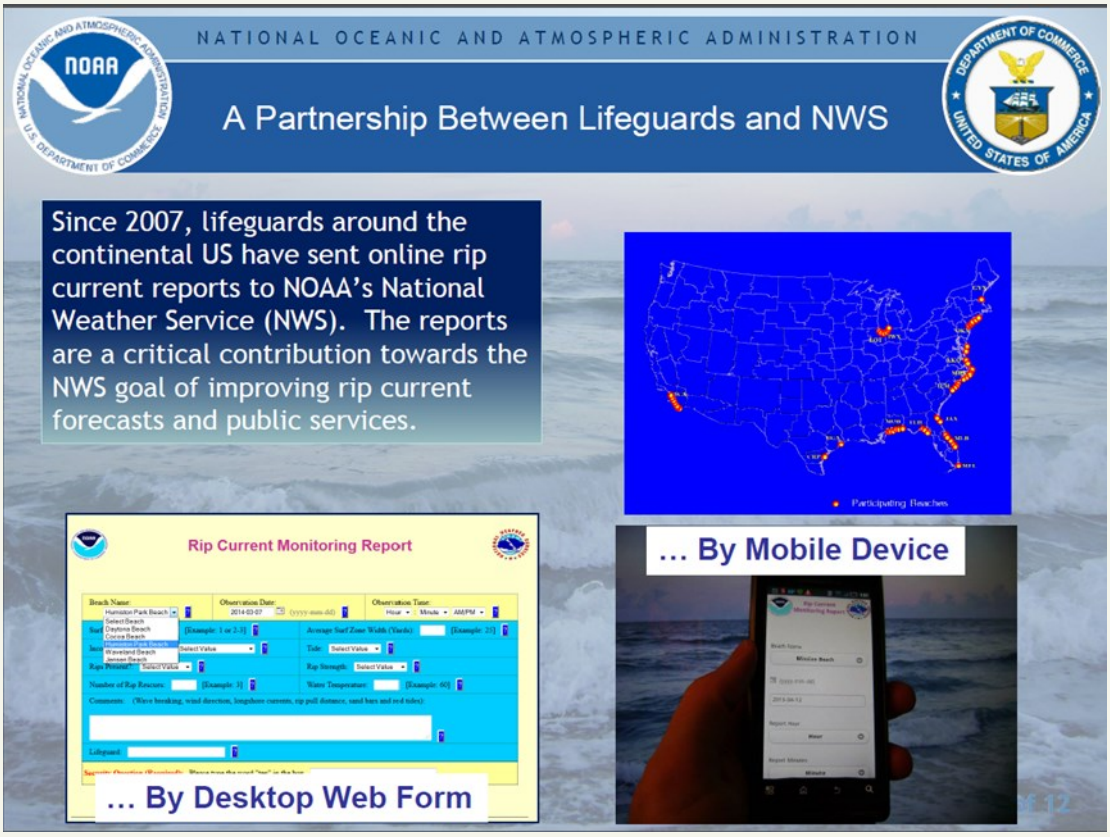
Rip Currents and Other Beach Hazards (Continued)

The National Weather Service has partnered with researchers at the National Ocean Service (NOS) and Environmental Modeling Center (EMC) to produce experimental rip current probability forecasts generated by the Nearshore Wave Prediction System (NWPS). The NWS has also been partnering with lifeguards and ocean rescue units for many years to refine and improve rip current forecasting. The lifeguard units send rip current and surf reports to the NWS via a rip current reporting form.

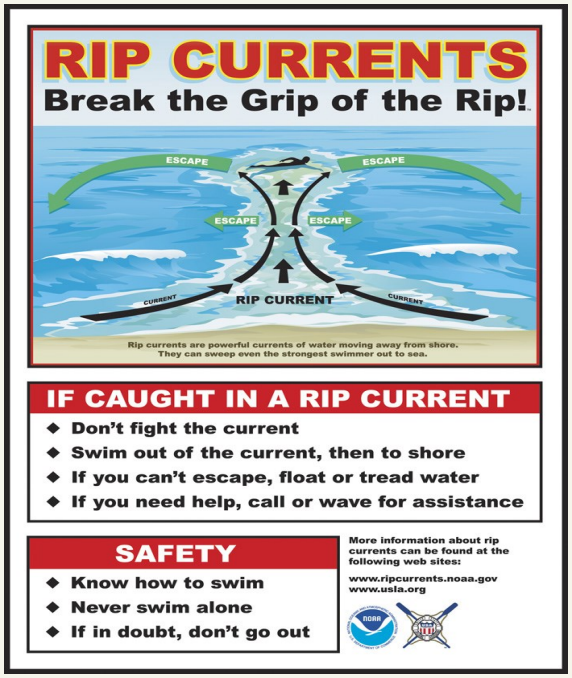


Experimental rip current forecast guidance generated by the NWPS.

Rip Currents and Other Beach Hazards (Continued)



Lifeguard rip current reporting form



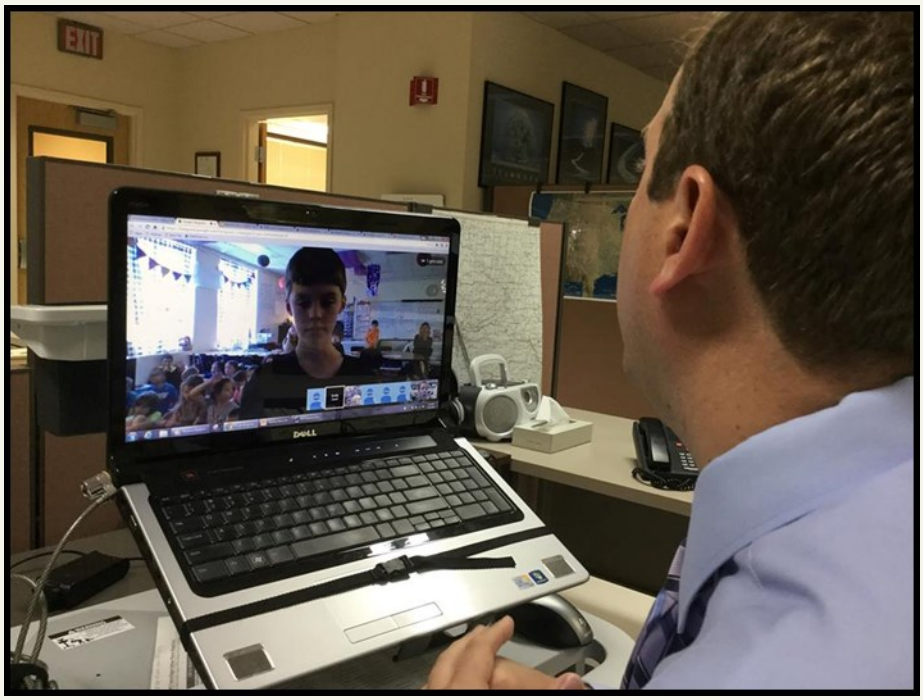
Come Visit the National Weather Service, Virtually!

By Erik Heden, Warning Coordination Meteorologist

Attention all third through fifth grade teachers! We will be hosting a Google Hangout on Tuesday March 24th at 10 AM. Our goal is to teach students some weather basics, give a tour of the office, and show what a typical day is like for a meteorologist. In our brief presentation at the beginning we will cover 5th grade weather standards such as high and low pressure, fronts, and climate versus weather. After the virtual tour we will have plenty of time for questions, with the total time of the hangout being less than an hour. If this is something you would be interested in please fill out this form:

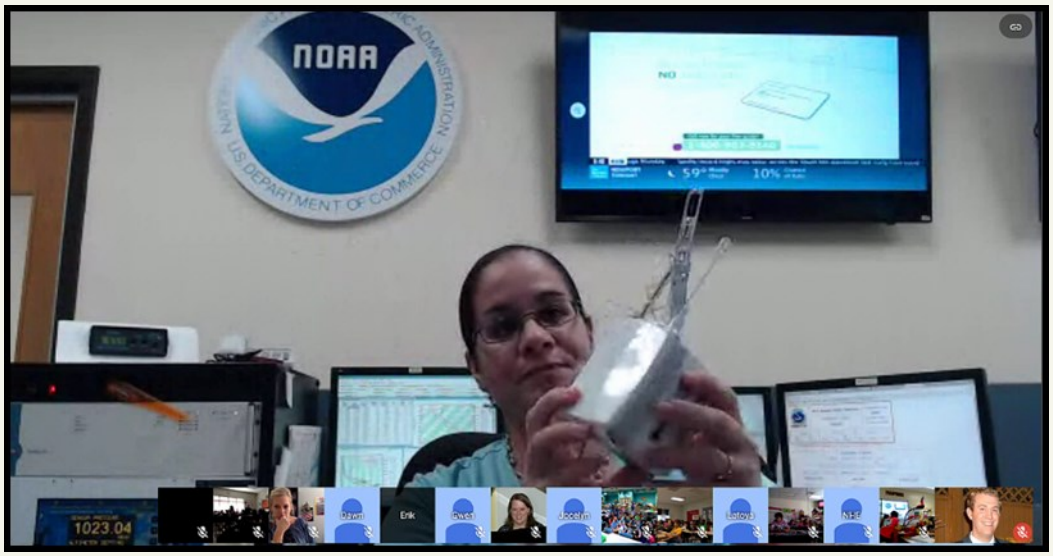
https://forms.gle/rABsKyjCz4ExnWn8A

Space will be limited, so sign up early! Below are some recent examples of hangouts we have done at our office!

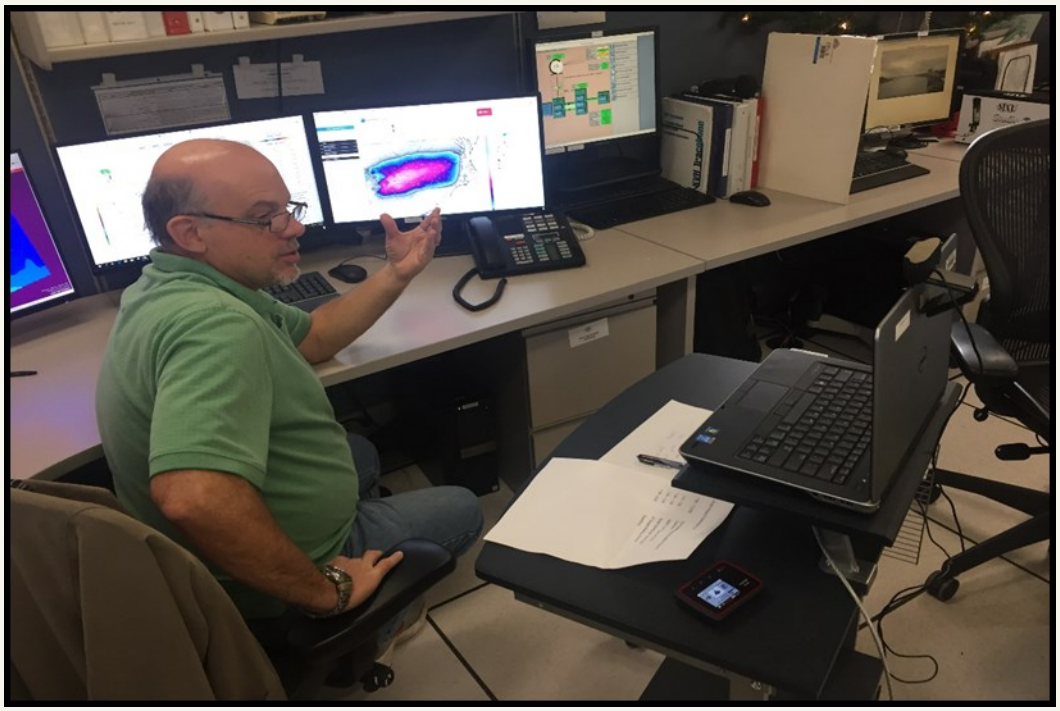


Forecaster Erik Heden takes questions from one of the students. We leave plenty of time for questions.

Come Visit the National Weather Service, Virtually! (Continued)



Forecaster Bel Melendez shows the students how a radiosonde measures the atmosphere above us, which helps in the forecast process.



Forecaster Chris Collins goes over how he is working on the forecast and what tools he uses.

Come Visit the National Weather Service, Virtually! (Continued)

In addition to forecasters at the office, we also have guest scientists join us. Sarah Spiegler from Sea Grant helps us talk about climate change and sea level rise.

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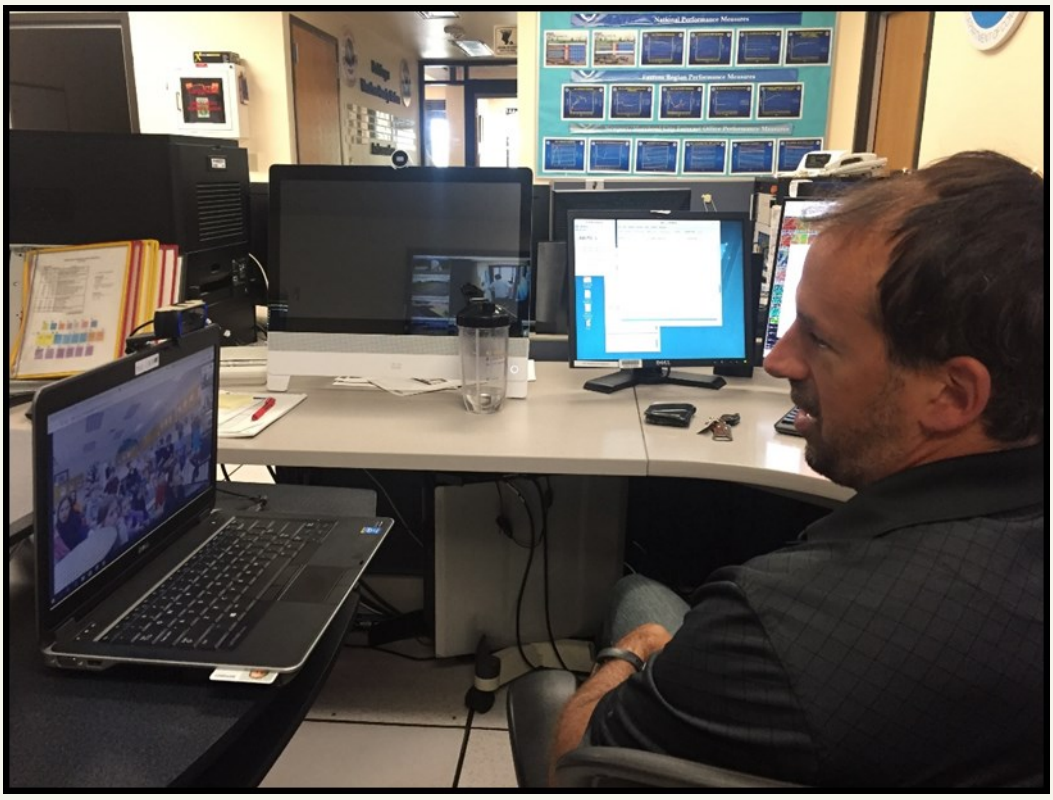
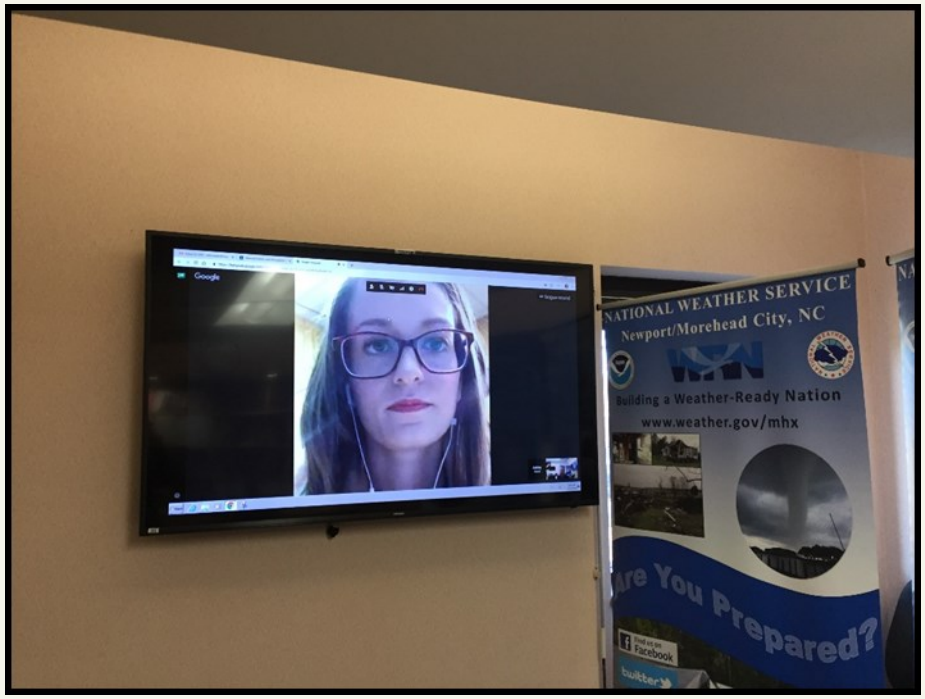


Forecaster Tom Lonka takes questions from the students.

Come Visit the National Weather Service, Virtually! (Continued)



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Ashley Pratt, formerly of NewsChannel 12, has joined us in the past. Showing various career paths in the sciences is beneficial to the students.

Tony Saavedra explains how his job of data collection is important to our forecasts each day.

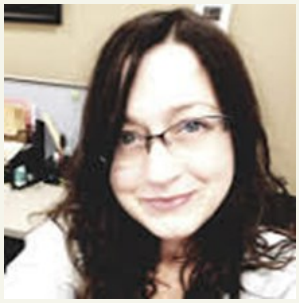
New Employees

By Ryan Ellis, Science and Operations Officer

We have some new faces here at the office in Newport over the last couple of months! In November, Brandye Taylor came over to us from civil service where she worked as an administrative support assistant in a variety of offices on Marine Corps Air Station Cherry Point. She will fill the same role here at the office working on a variety of projects that keep the office running every day. Brandye hails from Greeneville, Tennessee and joined the Marine Corps in 1999. While in the military, she served as a software computer programmer and a career planner. In 2012 she left the military side and transferred over to civil service. We are happy to have her as part of the NWS Newport/ Morehead City family!

In December, Charlie Bowen joined us from the Sunshine State as the newest meteorologist on our staff! His experiences with Florida Thunderstorms and Hurricanes like Hurricane Andrew in Miami, surfing, and flying with his father are what sparked his interest in the weather. He received his bachelor's degree in Meteorology from Florida State University in 2016 and is expected to graduate with his Master of Science degree in Meteorology from Florida State University in May of this year. His undergraduate and graduate research includes work on sea breeze circulations and how they affect local rainfall as well as some lightning research.

Prior to his meteorology schooling, Charlie spent time working as a first mate on a private yacht, tutoring and teaching high school math and physics, and as an IT recruiter. He enjoys all sports, especially baseball, football, and basketball. In his free time he enjoys surfing, playing sports, playing with his dog Truman, and above all, being together with his fiancée whom he plans to marry this summer**.**



New Employees Brandye Taylor and Charlie Bowen

National Weather Service

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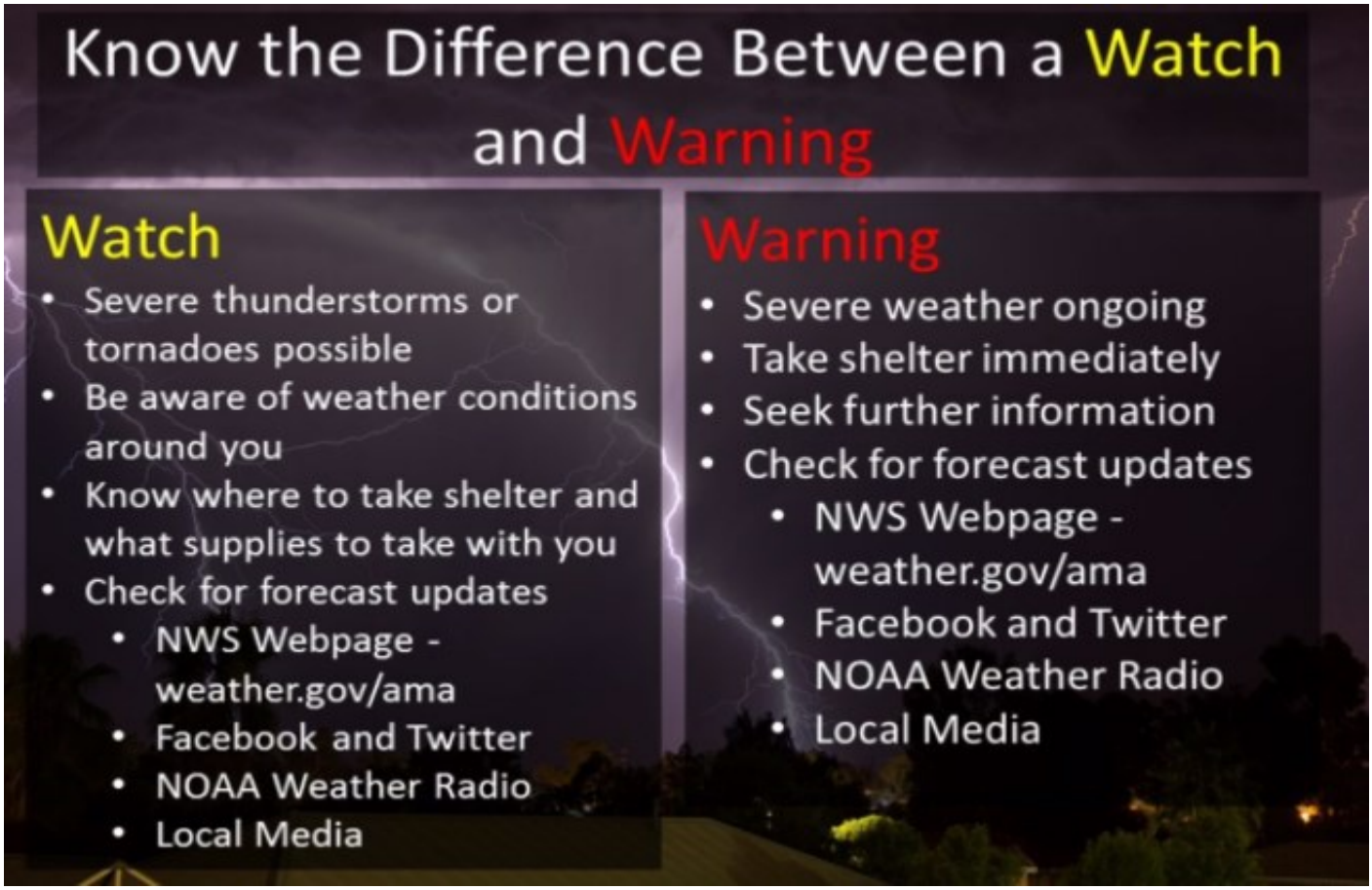

To report adverse weather conditions 24/7, please call us at: **1-800-889-6889**