

THE WEDGE FRONT

NATIONAL WEATHER SERVICE GREENVILLE-SPARTANBURG SC



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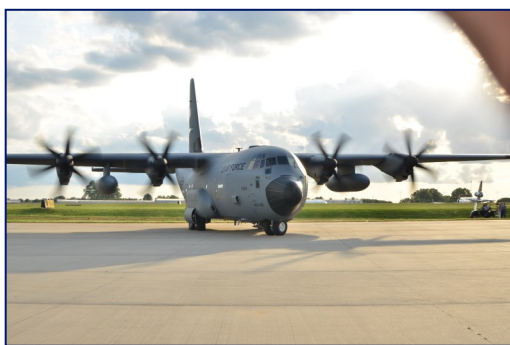
Summer 2019

NOAA's Hurricane Awareness Tour Comes to Charlotte, NC

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On Thursday, May 9, 2019, Hurricane experts from the National Oceanic and Atmospheric Administration (NOAA) made a stop in Charlotte, NC, as one of the five locations participating in the 2019 Hurricane Awareness Tour (HAT) along the U.S. East Coast. The purpose of this tour was to raise awareness of the impacts from tropical cyclone threats and the dangers of not having a personal hurricane plan in place. Ken Graham, the director of the National Hurricane Center, along with hurricane specialists Dr. Michael Brennan and Daniel Brown, and mission specialist Warren Madden were in attendance. USAF hurricane hunter crew members and NOAA aircraft crew members were also in attendance, to educate residents of vulnerable communities about hurricane preparedness. In addition, over 25 exhibitors were at the event, including local emergency management, non-profit organizations such as the Federal Alliance for Safe Homes (FLASH), American Red Cross, as well as personnel from the NOAA National Weather Service forecast office in Greenville-Spartanburg, SC, Columbia, SC, and Raleigh, NC. The day-long event drew quite the crowd from around the Carolinas, along with seven local school groups.



Two aircraft were at the event—the WC-130J, and the NOAA WP-3D Orion Aircraft. The U.S. Air Force Reserve WC-130J is only one of a total of ten aircraft, located at Kessler AFB in Biloxi, MS, and from the 53rd Weather Reconnaissance Squadron, 403rd Wing, that flies directly into the eye of a hurricane on several occasions during a flight. These aircraft are extremely important to tropical system forecasting and research. The data they collect is directly transmitted via satellite to the National Hurricane Center in Miami, FL, and is used in the forecasting process, especially by providing valuable information including the track and strength of the tropical system.

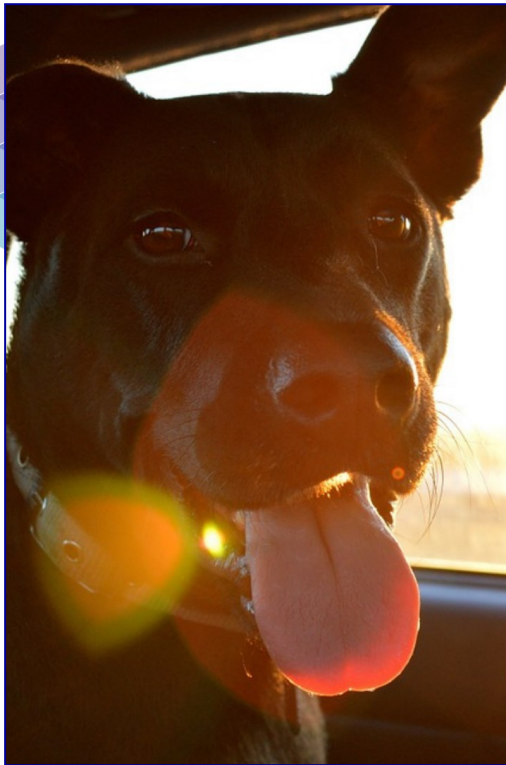


The NOAA WP-3D Orion turboprop aircraft is based at NOAA's Aircraft Operations Center in Lakeland Linder Airport in Lakeland, FL and is used primarily by scientists on research missions to study various elements of a hurricane, flying through the eye of the storm several times each flight, which can last 9 to 10 hours. During each flight, crew members will deploy instruments known as GPS dropsondes. These devices will transmit vital data information that provides measurements of pressure, humidity, temperature, and wind, as the fall from the aircraft, through the storm, and down to the ground. This information provides a detailed look at the structure of the tropical system, as well as its intensity.

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From Left to Right: David Novack (WPC, Director), Chris Rohrbach (NWS CAE, Forecaster), Michael Coyne (NWS Southern Region Headquarters, Deputy Director), Whitney Smith (NWS CAE, Forecaster), Steve Wilkinson (NWS GSP, Meteorologist In Charge), Hunter Coleman (NWS CAE, Forecaster) Kathleen Carroll (NWS RAH, Forecaster), Chrissy Rockwell (NWS RAH, Forecaster), Trisha Palmer (NWS GSP, Forecaster), Sandy LaCorte (NWS GSP, Forecaster), Lauren Carroll (NWS GSP, Forecaster), Doug Anderson (NWS CAE, Hydrometeorological Technician), Bill Martin (NWS GSP, Science Operations Manager), Ken Graham (NHC, Director), Daniel Brown (NHC, Warning Coordination Meteorologist). Not Pictured: Angel Montanez (NWS GSP, Information Technology Officer)



PET HEAT SAFETY

SAVE A PET'S LIFE IN A HOT CAR

Animals can die of heatstroke within 15 minutes.

Cracking the windows does not help, the inside still gets dangerously hot.

During hot weather, keep your pets at home.

If you see a pet in an unattended vehicle, do not leave until the problem has been resolved!



weather.gov/heat

So far in 2019, **NINE** toddlers have died in hot vehicles. Heat is one of the leading and underestimated weather-related killers in the United States. During the hot summer months, it's extremely important to **NEVER** leave children, the elderly or disabled, or pets in the car. Unfortunately, children like to play in cars as well and can accidentally lock themselves in the car, as well. Be sure to know where they are at all times!

For more information on Heat Safety, visit www.weather.gov/safety/heat

Look Before You Lock!

Hot Cars and Children Safety



38 KIDS

Die each year by being left in an unattended vehicle



88%

Are ages of 3 & Under



54%

Were forgotten by caregiver



100% of These Deaths Can Be Avoided!

Statistics courtesy of noheatstroke.org

NWS GSP Hosts First Multi-Market Media Partner Meeting

While NWS Greenville-Spartanburg, SC (GSP) has hosted media partner meetings in the past, for the first time in office history, media partners from both major media markets were in attendance at one meeting, including 10 meteorologists from 6 TV stations. With the responsibility of a 46-county County Warning Area (CWA) expanding across North Carolina, South Carolina, and Georgia, the major media markets are Charlotte (NC) and Asheville (NC)/Greenville-Spartanburg (SC).

NWS GSP meteorologist and media partner meeting organizer, Sandy LaCorte, decided to approach this meeting differently than previous ones. "We all love the science – that's why we're here. But instead of a meeting filled with Power Point presentations and little time to talk, I wanted the main focus of this meeting to be communication and getting to know each other.", LaCorte said. From an in-depth tour of NWS operations and the duties and responsibilities of each NWS employee, to a variety of rich discussion topics which included local flood products, preparedness weeks, severe weather operations, and more, this 2-hour meeting was not only a success, but extremely beneficial to everyone. "It's this type of face-to-face interaction that allows us to get know our partners better, and for our partners to get to know us, as well, and each other too – that's how you strengthen relationships and build trust.", LaCorte said. Learning about NWS and media working operations from all perspectives was an eye opening experience for everyone.

Even the 10-minute ice breaker at the beginning of the meeting in which everyone had to introduce themselves and share why they became a meteorologist showed to be beneficial. From a handful of similar childhood weather stories, to those who went to the same school, or even found out they were classmates at one point and didn't even know (or remember) it, connections were made. Its simple connections such as these that positively attribute to successful and trusting professional partnerships. We here at NWS GSP look forward to continuing our growing partnership with our media partners!



Group Photo: NWS GSP, WSOC (Charlotte NC), WLOS (Asheville, NC), WSPA (Spartanburg, SC), Fox Carolina (Spartanburg, SC), Fox 46 Charlotte, and WBTV (Charlotte, NC).

- Sandy LaCorte, Meteorologist

Summer Hazards: Are You Prepared?

Summer means vacation, outdoor activities, and fun in the sun! It's a time when families hit the road to visit national parks or distant relatives. The warm months and long days mean that there is plenty of time for baseball games and barbecues. The sultry temperatures practically invite you to take a dip in the pool or ocean. But don't let the sunny days and warm nights fool you. Summer also holds significant weather hazards. Heat waves can be lengthy and deadly. Lightning deaths are at their peak during the summer. Beach hazards such as rip currents can catch the unprepared. And, it's the start of hurricane season.

To learn more about summer safety, visit <https://www.weather.gov/wrn/summer-safety>

Building a Weather-Ready Nation



Know your Risk, Take Action, Be a Force of Nature!

SAFE BOATING TIPS



HIGH WINDS/WAVES
Know Your Action
 Reduce speed
 Head to shore

KNOW BEFORE YOU GO
 Check the forecast at weather.gov
 Always wear a life jacket!



COLD WATER
Know Your Action
 Remain calm and control your breathing
 Minimize time in the water
 Get dry and warm ASAP



LIGHTNING
Know Your Action
 Remain weather-ready
 If you hear thunder, it's time to stay in the cabin or head to shore



CAMPING SAFETY TIPS



FLASH FLOODING
Know Your Action
 Avoid hiking in canyons
 Don't camp near streams or rivers

KNOW BEFORE YOU GO
 Check the forecast at weather.gov
 Always pack for inclement weather, regardless of the forecast!



HEAT
Know Your Action
 Remain hydrated/bring extra water
 Wear light, loose fitting clothing
 Use sunscreen
 Take breaks in shade



LIGHTNING
Know Your Action
 Remain weather-ready
 If you hear thunder or see lightning... go immediately to an enclosed building or hard-topped vehicle.
 Avoid isolated tall trees or ridge tops.



BEACH SAFETY TIPS



RIP CURRENTS/DANGEROUS WAVES
Know Your Action
 Swim at a beach with lifeguards
 Never swim alone
 If caught in rip...relax and call for help and swim along the shoreline

KNOW BEFORE YOU GO
 Get beach-specific forecasts at weather.gov/beach



HEAT
Know Your Action
 Remain hydrated
 Use sunscreen
 Find shade - beach umbrella
 Cool off in water



LIGHTNING
Know Your Action
 Remain weather-ready
 If you hear thunder or see lightning...go immediately to an enclosed building or hard-topped vehicle.



Hurricane Safety in the Carolinas

As we've seen in the last few years, even areas hundreds of miles inland from the coast, tropical systems can have devastating impacts. One of the biggest killers related to tropical systems is actually inland flooding. The good news? A majority of flood deaths are due to people driving their vehicles into flood waters – this means most flood deaths are preventable! If a road is barricaded, blocked, or covered with water, don't drive over it. Find a different route – turn around, don't drown!

Inland Tropical Cyclone *Flooding*

Tips to stay safe:

- Don't drive into flood waters.
- Assess your need for flood insurance. It's not just areas in the flood plain!
- Remember, there is a 30-day waiting period for flood insurance.
- Don't allow your children or pets to play in flood waters.



Charlotte Observer: Hurricane Florence 2018



Landslides are another hazard that can result from a tropical system moving inland toward the southern Appalachians. Landslides can happen extremely quickly (especially during a tropical cyclone impact, which can bring rainfall rates of 2"+ in an hour) and the National Weather Service doesn't issue warnings for them, but we may issue flash flood warnings that mention landslide activity is possible.

Inland Tropical Cyclone *Landslides*

Tips to stay safe:

- Assess your landslide risk. Do you live in an area of steep terrain? A modified slope?
- If you're in a prone area, make an evacuation plan.
- Rainfall amounts of 5"+ in 24 hours increase landslide risk. Stay aware of the forecast!



Peek's Creek Debris Flow, 2004



Strong winds that can knock down trees and power lines can extend hundreds of miles inland. It doesn't take hurricane-force winds to do damage, either. Even winds of weak tropical storms (sustained 40mph) can knock down hundreds of trees, as demonstrated by Florence (2018) and Michael (2018).

Inland Tropical Cyclone *Wind*

Tips to stay safe:

- Trim loose or dead limbs near your home. Have dead trees removed.
- Secure or put away any yard furniture or other objects.
- Stay aware of the potential for falling trees and power lines, especially while driving.



WCNC: Charlotte, NC, Hurricane Matthew 2016



Tropical systems that move inland also create an environment that is favorable for tornadoes to form - so favorable, in fact, that tornadoes can form very quickly, even quicker than our radar can see them in some cases.

Inland Tropical Cyclone *Tornadoes*

Tips to stay safe:

- Have multiple ways to get warnings. Make sure at least one will wake you up!
- Identify a safe shelter within your home, work and school.
- If you live in a mobile home, make plans to abandon it and get to a safe shelter.



This is why, even inland, you need to have a hurricane preparedness plan. An important portion of this is an emergency kit.

MUST Have Supplies

First Aid Kit	Phone/Charger	NOAA Weather Radio	Water
Non-Perishable Food	Flashlight	Batteries	Whistle (to signal help)

Additional Supplies

Extra Infant Food	Pet Supplies	Books/Games
Extra Cash	Fire Extinguisher	
Important Records	Change of Clothes	

If you have pets, keep these things in mind:

- Make a plan and gather supplies for your pets too.
- Most shelters don't allow pets. Many hotels don't allow pets either.



Finally, some general tips that may help you in making a hurricane preparedness plan:

- Write your plan down!
 - Don't assume your family will be all together. Have an out-of-town contact, meeting place both in and out of town, and a communication plan
 - Don't assume you will have cell phone or internet service (for communication or warning purposes)
 - Don't assume help will be able to reach you right away.
- Don't assume you will be able to leave your home to get supplies, or that any supplies will be available immediately before, during, and after a disaster.

WFO Greenville-Spartanburg Hosts Third Integrated Warning Team Meeting

On Tuesday, March 5 2019, WFO Greenville-Spartanburg (GSP) held our third Integrated Warning Team (IWT) meeting in Spartanburg, SC, on the campus of Spartanburg Community College. Around 80 representatives from the NWS, emergency management, broadcast media, and many other state and local partners attended. We were honored to have a sponsorship from WHNS-TV Greenville to help pay for snacks, while Spartanburg County Emergency Management covered the room fee and assisted with event coordination.

Melissa Griffin, Assistant SC State Climatologist, started the day off with a fun icebreaker to challenge attendees' knowledge of the forecast area, and then discussed how the State Climate Extremes Committee assesses records. Presentations were given by WFO GSP meteorologists on limitations of forecast accuracy and the 2018 tropical season; we also polled partners on their understanding of graphics and products that we issue. Dr. Laura Myers from the Center for Advanced Public Safety at the University of Alabama gave a presentation about messaging from a social science perspective. Representatives from SCDOT explained how they pre-treat and respond to road conditions during winter weather. Also well-received were three panel discussions: one from area EMs about preparedness and response activities; one from local school officials about weather-related closing and delay decisions; and one with area media to address their needs and relationships with the NWS.

We also took this opportunity to honor former WCM Tony Sturey, who retired on March 2. Each state in the GSP area (NC/SC/GA) presented Tony with a special gift, and several other attendees had kind words (and funny stories) to share. We will miss him tremendously!

Right Picture: NC Emergency Management Agency Western Branch Director Greg Atchley presents former GSP WCM Tony Sturey with a commemorative retirement gift: a plaque and a North Carolina state flag that had been flown over the state capitol.



As has been the case with our previous IWTs, partner feedback was incredibly positive, with some very informative take-home points that we can implement in operations. We tentatively plan to hold our fourth IWT in spring 2020 at Clemson University.



NWS GSP Lead Forecaster, Harry Gerapetritis and WBTV (Charlotte, NC) meteorologist, Al Conklin.



Media Panel Discussion led by Jessica Stumpf (Greenville EM)

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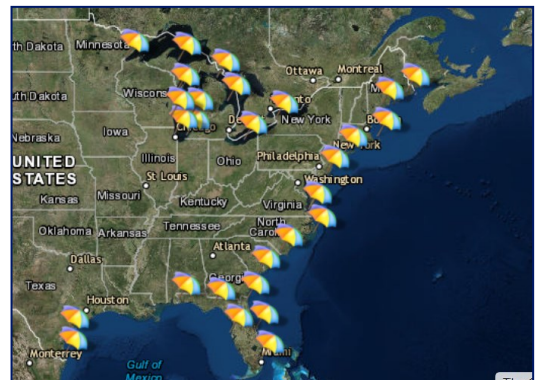
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Stay Safe at the Beach This Summer

Headed to the beach this summer? Did you know that a majority of rip current fatalities are linked to those who are from the inland areas? Make sure you know the hazards before heading to the beach! Your biggest risks will be the heat and rip currents. National Weather Services along the coast issue a Surf Zone Forecast each day. This forecast provides important information to all beachgoers, including the daily rip current risk ("low", "moderate", "high"), as well as expected weather conditions, water temperatures, UVI index, and any additional hazardous information, including waterspout risk. Before heading to the beach, make sure to be go over the expected beach conditions. When at the beach, always swim near lifeguards— never swim alone! NWS Beach Forecast Page: www.weather.gov/beach

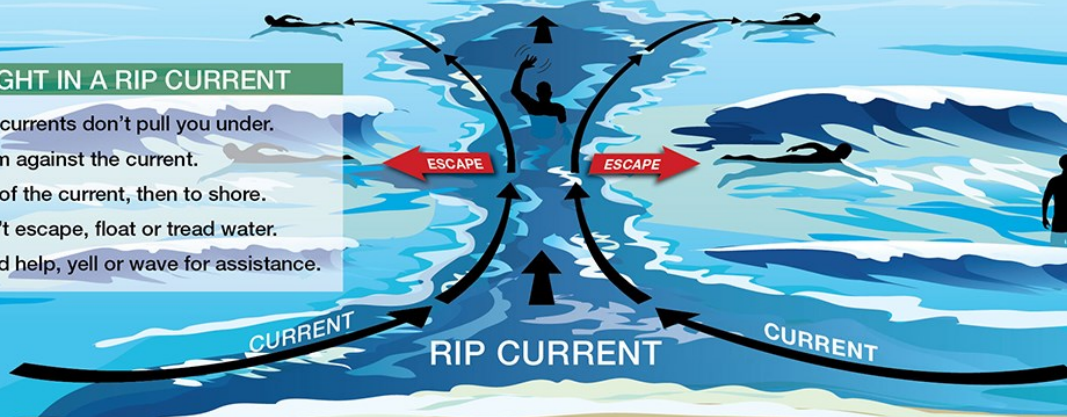


RIP CURRENTS

KNOW YOUR OPTIONS

IF CAUGHT IN A RIP CURRENT

- Relax, rip currents don't pull you under.
- Don't swim against the current.
- Swim out of the current, then to shore.
- If you can't escape, float or tread water.
- If you need help, yell or wave for assistance.



Rip currents are powerful currents of water moving away from shore. They can sweep even the strongest swimmer away from shore. If at all possible, swim near a lifeguard.