

Introduction

Kirsten Barber: Hi, and welcome to the NCDPS Safety Scoop, a podcast sponsored by the North Carolina Department of Public Safety. There are great people, programs and resources within the department. In each episode of the Safety Scoop, we'll share how NCDPS employees prevent, protect and prepare North Carolinians and help enhance safety in our state. We hope you'll listen along and learn something you may not have known about the largest state agency in North Carolina.

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Julia Jarema: Hi, I'm Julia.

Kirsten: And I'm Kirsten!

Julia: And you're listening to the NCDPS Safety Scoop, a podcast sponsored by the North Carolina Department of Public Safety.

Kirsten: NCDPS is the largest department in the North Carolina state government with some amazing programs and resources...

Julia: ...as well as phenomenal personnel and volunteers.

Kirsten: Listen along as we take you behind the scenes and dive into how the people, programs and resources within this department enhance the safety of the people of North Carolina—give you the scoop, if you will, of all things NCDPS.

Julia: NCDPS's mission is to safeguard the people of North Carolina through prevention, protection and preparation. As you listen to this podcast, we hope you'll learn something you may not have known about the ways the people of NCDPS are working to keep our state safe.

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Season 1 Episode 13

Kirsten: Welcome back to Safety Scoop! It may be hard to believe, but we are headed into the final stretch of this calendar year. December means the official Atlantic hurricane season has ended, and it's time to think about preparing for winter. No, we're not talking about getting ready for hibernation even though some of us may want to, speaking for those out there like me who hate being cold. Winter preparedness is a way to ready your home, vehicle and gather supplies that will help you in case severe winter weather hits.

Our first guests on today's podcast are meteorologists Kevin Kalbaugh and Diana Thomas. Kevin attended North Carolina State University where he graduated with a Bachelor of Science in meteorology. Prior to joining North Carolina Emergency Management in 2016, Kevin worked at a private company issuing weather forecasts for energy, aviation and agricultural industries across the country and around the world.

Julia: And Diana is a North Carolina native who also attended North Carolina State University to obtain her Bachelors of Science in meteorology She then went on to obtain her Masters of Atmospheric Science degree at the State University of New York at Albany where she studied the genesis of tropical cyclones. Diana has previously worked in wind energy and air quality before joining the team at North County Emergency Management about three years ago. Thank you for both joining us today.

Kevin Kalbaugh: Thanks for having us.

Diana Thomas: Hello, everybody!

[Both laugh]

Kirsten: Before we dive into all things winter, let's first take a look back at summer and fall and the Atlantic hurricane season. Our state is no stranger to severe weather, and North Carolinians have experienced the force of powerful hurricanes, especially over the last few years. Is it true that we broke a record this year for the number of named storms?

Diana: Yes, that *is* true! So far this hurricane season, the Atlantic Basin has named a total of *31* tropical systems. This year took the 2005 Hurricane Season off the board as the year with the most tropical systems in the Atlantic which *was* officially 28 systems after the National Hurricane Center identified an unnamed subtropical storm in its post-season analysis that year. However, the 2005 season did have more advisories issued by the National Hurricane Center, as we didn't have too many storms this year that we were tracking for more than a week.

Julia: The Atlantic hurricane season officially ends November 30th, but I think we've seen some hurricanes outside of that official hurricane season. Kevin, is that true?

Kevin: Yes, and we actually already have twice this year. It seems like forever ago, but we experienced impacts from Tropical Storm Arthur and Tropical Storm Bertha in May prior to hurricane season officially beginning on June 1st. 2020 was actually the sixth straight year there's been at least one named storm prior to June 1st. It's also not uncommon to see tropical systems after November 30th in active years like the one we are about to conclude. In fact, back in 2005, Zeta,

which was the final tropical system for that season, developed in December and continued into January of 2006.

Kirsten: So, Diana, what has the Climate Prediction Center predicted about winter weather this year in North Carolina?

Diana: So, the Climate Prediction Center has released their outlooks for the coming winter, and it does favor a warmer and drier overall season for the southeastern portions of the United States. So far, 2020 has been one of the warmest years in recorded history, and the Climate Prediction Center indicates signatures above normal should continue throughout the upcoming winter season; however, that does not mean that we can't see some cold snaps and winter storms.

Kirsten: Looking back several years in North Carolina where we have seen snow, it's really varied. Is there an average amount of snowfall that North Carolinians see year over year?

Diana: Yeah, there is an average amount of snowfall, but it—it really varies year to year because forecasting winter weather is very complex. But generally, for the Triad region, we have, uh, roughly nine inches of snowfall per year and for the triangle around six inches per year and for the coastal plain around four inches per year.

But with the complexities of forecasting, La Niña is one that's pretty prominent this year, and it is a large-scale feature that's down in the Pacific. La Niña officially began in September of this year, and a strong La Niña signature is expected to develop this winter. During La Niña, or the cold phase of La Niña's southern oscillation, cooler water in the tropical Pacific brings less moisture, less rainfall and generally warmer temperatures to the southern United States. I should say, however, that a few snowstorms in history have occurred during La Niña events. One of note is the December 25th and 26th snowstorm in 2010 while many areas across the state received four to 12 inches of snow. And also more recently, the 2016-17 and the 2017-18 winters were also during La Niña events, but we had several winter events during those years as well.

Julia: I remember that Christmas snowstorm, and as a native North Carolinian, I can attest how in this part of the state anyway, in the Tri—in the Triangle, in the central part of the state, how rare that is. 'Cause people who are from North Carolina will know that we do *not* typically get Christmas snows in North Carolina. In fact, winters in North Carolina can be all over the place. You may have snow or sleet or freezing rain or some combination, usually all in the same day. Kevin, can you take us through some of the main hazards that North Carolinians face? Um, I think this is especially helpful for people who have not been here that long or are moving from other parts of the country.

Kevin: Yes. You mentioned, uh, all the different types of winter weather precipitation. So, our mountains typically see the greatest amount of snowfall, and they're usually a little more adapted to respond to winter weather hazards. It's usually

across the Piedmont, uh, where the freezing line develops and precipitation type can change quickly from snow to sleet to freezing rain or even *rain* over a very short distance. During winter, our main concerns are usually road hazards and falling limbs or trees that may knock out power. The loss of power can be deadly if there are no other sources of heat or food for families, especially when we're in a cold snap. Freezing rain can be very troublesome. Just a quarter inch of ice can create widespread power outages and an increased concern for public safety.

Also, we typically don't see dry, powdery snow here. Usually, our snow can be, uh, wet and heavy at times which increases the threat of power outages, um, especially during early in the season and late in the season when trees may still have leaves on them. During winter precipitation, dangerous road conditions can occur even with minor snow accumulations or just a glaze of ice. Those hazardous driving conditions are not just with the initial round of winter precipitation, but after the storm moves out and we see melting during the day and refreezes overnight, creating icy conditions. Areas of black ice are particularly dangerous, as they are nearly impossible to see at night. So also, when we have large coastal systems during the winter, we see many of the same effects during tropical season with high winds, coastal flooding and beach erosion.

Kirsten: Uh, so when you were speaking about the ice and the wet winter precipitation, um, I kind of stifled a groan because I know many North Carolinians have that emotion due to that refreezing after the snow and ice has melted, uh, overnight and just creating havoc on the road, even though sometimes it can make for some great sledding. In saying that, how can North Carolinians stay updated or in-the-know about weather events throughout the state?

Diana: Yeah, that's a good question. So, we know that we are inundated with information, and we can get weather updates from so many places, and several of those are not really trusted sources. We really recommend that you use trusted sources of information.

Kirsten: That's a great point, to use trustworthy sources.

Diana: We highly recommend NOAA's National Weather Service as the primary source of trusted information, and that way you can stay up to date with all hazards. You can also get a NOAA weather radio in order to keep up to date with information without having to get on the computer or utilize electricity if the power is out. Kevin and I also distribute daily weather emails from North Carolina Emergency Management, and we also utilize trusted sources of information from the National Weather Service and other federal partners, so you can also use our daily updates. However, as with any weather system, conditions are constantly changing, and it's best to check regularly with the National Weather Service forecast pages for current conditions in your area.

Kirsten: So, earlier in the podcast, we spoke about the different types of winter precipitation that North Carolina receives. Can you take us through what the difference is between a winter weather advisory, warning and watch and how people should prepare to respond to each of these?

Diana: Sure. Well, overall, advisories and warnings really mean the same thing and that is “take action.” And watches mean “be prepared.” So, getting a little bit more into the details, a winter weather advisory indicates that a winter storm is approaching that’s capable of producing one to three inches of snow or about a half inch of sleet or about a quarter inch of freezing rain which is basically enough to make walking and driving conditions hazardous, and these conditions are expected within the next 24 hours.

A winter storm watch and warning are very similar, but it really comes down to the time period. For the conditions, a winter storm is approaching that’s capable of producing at least three inches of snow and/or at least a quarter inch of ice within the next 12 to 24 hours. The difference between the watch and the warning is the winter storm watch is expected within the next 24 to 48 hours, and the winter storm warning is within the next 24 hours, so really there’s just a day difference in there. Um, and again, a winter storm warning means that you need to take action.

And just a final thing, as I mentioned earlier, forecasting winter storms is very complex, and generally when people hear sleet and freezing rain, they just think of ice and kind of group them into the same category, but the hazards associated with these two precipitation forms are very different. Sleet freezes before the impact on the Earth’s surface or anything really, and it’s really where the snow melts higher in the atmosphere. And then you get freezing rain where the snow melts higher and then falls when it hits the ground, the trees, power lines, anything, and that is really where we get our—our most hazardous conditions which—which is why it’s less in the amount. It’s only a quarter of inch where we start to—to see hazardous conditions and really widespread power outages where we only have a half inch for sleet. So, just really to wrap up, watches mean to be prepared, and warnings or advisories mean to take action because the winter storm is fastly approaching.

Julia: That makes sense. Thank you for that summary. And sometimes we share on our social media channels, uh, graphics that talk about watches and warnings, and we talk about a sweet tea watch and a sweet tea warning, and a sweet tea watch is that when the kettle is boiling, and a sweet tea warning is when you have a glass of sweet tea in front of you. So, that helps to keep in mind. So, Kevin, what steps can we take, um, to prepare our homes for winter in North Carolina? What do we need to do?

Kevin: All right, so, I’ll begin with steps everyone can do no matter the season, such as making sure they have an emergency kit. So, you want to gather and store supplies in case you need to stay home for several days without power. That’s not just winter, um, that’s all year round. And you want to keep in mind each

person has specific needs, including medications or items for babies and pets. Um, you want to have extra batteries for radios and flashlights, and given the ongoing pandemic, you want to add face masks and hand sanitizer as well. You'd also want to install, test and replace batteries and smoke alarms and carbon monoxide detectors, and ensure all family members know how to evacuate in the event of a fire, and designate an outdoor meeting place.

So, when you're thinking specifically for winter, you can keep the cold out with insulation, caulking and weather stripping. And you would also want to insulate water pipes to keep them from freezing during really cold weather and allow faucets to drip slightly in order to avoid freezing. Also, you would want to inspect fireplaces and wood stoves, and make sure you have a sturdy screen door in front of them. Now as we approach holiday season, you want to make sure your holiday decorations are away from heat sources and be aware of overused electrical outlets. I know it seems this year people are putting up decorations a little earlier than normal, and we even have our tree up, so you want to make sure those trees have water and away of heat sources.

Kirsten: Speaking of pets, that reminds me, don't forget to make accommodations for your pets and livestock, especially on days or nights when the temperatures are expected to dip below freezing. But having items in your emergency kit are always helpful. So, what about when the power goes out, Diana? How can people prepare for that and prepare their homes for that?

Diana: Oh yes, the dreaded power outages. We get them so frequently when we have winter storms. But I think one of the first things you could do is to make sure that you have plenty of batteries around, so you can have them in your flashlights or even battery-powered lanterns to use for light sources. If you are using a candle, though, remember to not leave them lit while you're away from your home or even while you're sleeping because they could easily catch fire. Also, remember when we're in that watch phase, go ahead and charge your electronics before the storm hits. That way, you will have your phones fully charged, and you'll be able to contact your loved ones. Also, think about carbon monoxide poisoning, and only use generators and grills outdoors and away from windows, and never use them in a garage or in enclosed areas. And finally, never heat your home with a gas stove top or an oven.

Kirsten: Guys, these are really helpful tips. And I know doing activities outdoors when it's snowing can create some fun memories, but all these things that you've mentioned are worth considering, um, for people to keep themselves safe whether they're inside their homes during winter weather or outdoors. Is there anything else that you feel is important for our audience to know to keep themselves safe during winter?

Diana: Yeah. I know we've talked a lot about supplies and being prepared, but really, now is the time, when it's just starting to get cooler, to prepare your supplies and really just learn more about winter weather hazards around the area before the season really begins and before we get our first winter storm. Really, now is

the time to prepare, and it's especially important to be prepared this year amongst the COVID-19 pandemic, so we can all remain safe.

Kirsten: Thank you so much. This was great.

Kevin: Thank you again.

Diana: Yep, thanks!

Julia: So, as we heard, if your area is under a winter storm warning (remember that means that it's either on its way or it's just about to be here), it's best to stay indoors and off the roads. As we've all experienced, those roads can get icy during winter storms and create really hazardous driving conditions.

Our next guest, Sergeant Marcus Bethea, is here to speak with us more about how to be safe on the road if you must travel during the winter. Marcus is a 12-year veteran of the Highway Patrol. He began his career by patrolling Cumberland and Wake Counties, and then from 2017 to 2020 he took over and was working at the training academy in Raleigh, helping to recruit and train new troopers. Sergeant Bethea is now assigned back to the Highway Patrol's Public Information Office. Welcome, Sergeant!

Sgt. Marcus Bethea: Hi, Julia. Thanks for having me.

Julia: Well, let's start off by reviewing. Um, tell us some quick tips for how motorists can prepare for winter.

Sgt. Bethea: Uh, well, some of the things that motorists can do, um, be aware of some of these certain minor maintenance things that some of, you know, oftentimes we might take for granted, such as our tire pressure or our tire tread depth. Now, these are things that sometimes we might just tend to overlook or not really pay much attention to on a daily or weekly basis, but it becomes much more important when driving in cold or hazardous weather to look at things like that. Definitely check your tire pressure. Take a look at your tread wear. If you have a spare tire in your vehicle, make sure that tire is inflated. Make sure it is in good working order. Once again, sometimes we tend to just kind of overlook the obvious and might just let that spare tire sit there for sometimes up to years at a time before it's ever even touched, so you might want to make sure it's properly inflated if you have a spare in your trunk or underneath your vehicle.

Uh, windshield wiper fluid; top that fluid off, and I can say that from personal experience. A few years ago, I was actually driving after some snowy weather, and the snow was not falling. The snow had already come and gone, but there was so much brine and salt on the roadway that it was kicking up onto my windshield from the other traffic on the road, and of course, surely enough, when I needed my windshield wiper fluid to clear my windshield, I ran out. So, lesson learned: top off that windshield wiper fluid. Sometimes that can come in very handy when you're trying to clean off your dirty windshield.

Um, evaluate the brakes on your vehicle. Do you have anti-lock brakes or not? Does the vehicle have electronic stability control? We're seeing these types of technological systems in a lot of our newer vehicles that are coming out, and this can definitely play a key in how your driving habits should be and your ability to control your vehicle. And also, give yourself plenty of time to reach your destination, of course. My advice is just treat the situation as if there's going to be a delay. Go ahead and plan for delays. That way, if and when you do get to your destination on time, um, it comes as a welcome surprise. But if you go into it just anticipating maybe some delays or maybe the need to change your route, sometimes that just kind of alleviates the stress. And if all goes well, you get there safe and on time and, uh, sooner than expected.

Julia: Those are great tips, thank you. I was actually taking notes, and I can't even remember the last time I checked my spare tire, so I appreciate that. Thank you very much.

Sgt. Bethea: Yeah.

Julia: So, we need to get our cars prepped and checked for winter just like we need to get our homes prepped.

Sgt. Bethea: Definitely.

Kirsten: What are the top priorities for the NC State Highway Patrol during winter weather?

Sgt. Bethea: W-well, I've highlighted a few, uh, priorities, of course. These are few in—number, but certainly very important. Uh, first of all: safety. That is, uh, definitely a top priority for us, not only for the public and—and those that are operating their vehicles, but also for our troopers that are out here responding to calls, all of our first responders that are responding to these calls for service. Safety is paramount, and that is by far the biggest priority for all of us here.

Um, awareness is—is the next priority for us. We want to make the public aware of how to drive safely in cold weather. We want the public to be aware of the hazards of driving in snowy or icy weather and the certain types of conditions that winter weather can bring, so a forum such as what we're doing right now, a discussion like this, this is a good way to get that awareness out to people.

And, uh, ultimately prevention is another priority that I've listed that is very important for us. We want to prevent any type of hazardous situation to happen to anybody, and this prevention takes place through, like I said, awareness, through forums such as this. It takes place through us practicing safe habits, and it also takes place by us en-engaging in proactive enforcement of our state laws and of our motor vehicle traffic laws and violations. So, I know we—we oftentimes don't like to entertain the idea of being subject to a traffic citation or getting in a little bit of trouble on the roadway, but oftentimes, ultimately,

through proactive enforcement, we can once again regain that—that confidence from the public that we are watching. We are making sure that driving behaviors are safe. That way, everyone who's on the road can have a safe experience while they're driving to their destination.

Kirsten:

Earlier, Kevin mentioned items to have in your emergency kit or home kit that you can have on hand in case of an emergency at home. But what about an emergency while driving or emergency while you're away from home? What items should be in an emergency kit that you have in your car?

Sgt. Bethea:

Uh, that's—that's definitely a good idea. Definitely keep some sort of emergency bag or a go-bag, if you will, uh, to take with you while you travel and especially in weather that's unpredictable or weather that's hazardous. Even if you're going a short distance, you never know what you might encounter, so definitely prepare. Uh, I would say bring some jumper cables. That's—that's a very useful tool to have, um, in case your battery is weak or dies on you. Carry some flares or some reflectors. That way if you do get stranded and it's—it's nightfall or visibility is poor, you can have some type of reflective device to help further, um, your visibility. Carry a flashlight with you. That's always handy. You might need to change a tire on the side of the road. You might need to look under your hood. It might be dark. Uh, carry a flashlight.

An ice scraper for the windshield—you might need to get some of that ice off the windshield if it's—if it's been a particularly cold night and there's some frost, or we had a freeze overnight. Carry that ice scraper with you. Keep your cell phone charged and keep a charger with you for your cell phone and other personal devices. Um, that way you don't have to worry about losing power with those. Especially in that moment where you definitely need to communicate or—get on the phone, you want to make sure that it's powered up and working.

Carry some blankets with you. You definitely want to stay warm if—if you run out of gasoline on the side of the road, your car can't run, you can't run that heater, you want to at least have something to keep you warm whether it's your jacket or even some blankets that you can kind of rest under while you're waiting for help to arrive. If you're—if you're really want to get technical about it, um, invest in some—some cat litter or some sand. Sometimes these can be useful to put under the tires to increase your traction if you find yourself being stuck somewhere, uh, whether it's on a grassy surface or a slick surface. Sometimes a little bit of cat litter or sand or dirt can actually help you get out of those situations.

And lastly on my list, uh, bring some snacks. Bring some water. Bring something to keep you hydrated. Bring something to keep you fit. That way, if you do find yourself in some sort of long delay, at least you got some food to eat, and you've got some fluids to keep you hydrated, and you don't have to worry about any—any issues on that end as far as dehydration or any other lack of food or snacks being available.

Julia: Always bring snacks. So, what are some things that motorists should keep in mind if they do have to drive in winter weather?

Sgt. Bethea: Uh, I would recommend, uh, first of all, just slow down, and leave plenty of stopping space for yourself as well as for other vehicles. Definitely just—just tone things down a notch then you typically would and, uh, drive defensively. Stay alert. Um, driving defensively is what, ultimately, will get you to where you need to be, and if everyone around you is driving defensively and staying alert, that makes for a very safe traveling experience. Right now, in this time of year, it's getting dark a lot earlier, so make sure your headlights are on sooner than maybe you're used to activating them. Make sure you're traveling with your headlights on. Once again, that increases visibility, makes it easier for others to be able to see you and to be able to react to you. Wear your seatbelt. Wear your seatbelt. Be mindful of the speed limit. Exercise these safety measures to help yourself.

Wearing a seatbelt is something that we at the Highway Patrol take very seriously. This is, uh, something that we enforce very heavily, so we want all passengers to be restrained in their seatbelts. We want, uh, children to be in proper car seats or booster seats. Definitely wear the seat belt while you're traveling, and ultimately try to eliminate distractions. Try to avoid, uh, things like fiddling with the GPS unit in the car or talking on the phone or messaging on a phone or playing with electronic devices. We want to eliminate these types of distractions. Yes, there are times when these are needed. There are times when we rely upon these, but the more we can eliminate distractions, the safer we can be.

Uh, keep an eye out for—for children that are playing. You might be traveling through your neighborhood during winter weather. Surprisingly, as much as we talk about how hazardous it is, sometimes it can actually be fun, you know. Kids will sled in the weather. Families will play in the snow. So, be mindful of that as you travel in and out of your neighborhood. Be cautious of people that might be outside and, uh, enjoying the winter weather. Definitely don't want to—run into any kind of hazard with pedestrians or children playing or anything along those lines. So, those are just some of the tips I would recommend for people.

Julia: That's a lot of great information. Thank you, Sergeant Bethea. Is there...

Sgt. Bethea: You're welcome.

Julia: Is there anything else you would like to share with our audience?

Sgt. Bethea: Uh, lastly, I would just say once again, drive defensively. Stay alert. If you do find yourself driving in icy or snowy weather—of course, we recommend that you try to avoid it if—possible—but if ultimately, you have to drive in that type of weather, prep your vehicle first. Um, make sure that you clear your vehicle of any ice or snow that is packed onto it. Oftentimes while traveling down the

roadway, this snow and ice can dislodge from the vehicle, travel through the air and strike someone else's vehicle, and it can actually cause some serious damage. So once again, just prep accordingly, drive safely, drive defensively and certainly be careful in your travels.

Julia: Good information. So, we need to get our homes ready for winter, get our cars ready for winter. Also, want to let people know that you can find more information on the website on readync.org, and you can follow NC Emergency on Facebook and Twitter.

Conclusion

Kirsten: Well, I would like to thank all our guests again for joining us on the Safety Scoop. As they've stated, being winter ready is an important part of our yearly preparedness plan. If you haven't already, this is a reminder to review your family's emergency plan, update your emergency kits, check your smoke alarms and carbon monoxide detectors. Make sure they have batteries. Make sure your pets have a warm place to spend those winter nights. Stay safe and thank you for listening.

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Julia: Thanks for listening to this episode of the Safety Scoop. To learn more about NCDPS, go to ncgps.gov. Tune in next time on your favorite podcast app to hear more behind-the-scenes stories from the North Carolina Department of Public Safety.

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