

# Hurricane Preparedness: No Time to Wait

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## SPEAKERS

Angie Lindsey, Craig Fugate, Ricky Telg, Phillip Stokes

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Ricky Telg 00:04

This is Science by the Slice, a podcast from the University of Florida's Institute of Food and Agricultural Sciences Center for Public Issues Education. In this podcast, experts discuss the science of issues affecting our daily lives, reveal the motivations behind the decisions people make, and ultimately provide insight to solutions for our lives.



Phillip Stokes 00:38

Hello, and welcome to Science by the Slice. I'm Phillip Stokes, and for today's episode, we're doing something a little different. You see, I'm recording this on September 27, 2022. And as we speak, Hurricane Ian is traveling north in the Caribbean, right around the western part of Cuba. And after that will likely continue to travel north and most likely make landfall on the west coast of Florida. Of course, hurricane trajectories can change but that's what their current models are forecasting. Be sure to stay updated if this storm will affect you. So today, we are rebroadcasting a segment from one of our previous episodes on hurricanes and hurricane preparedness. For those of you listening that are currently prepping for the storm. I hope this will be helpful information. And I also recognize that some of you listening are not in the path of the storm. This episode still offers pertinent information about general disaster management for natural hazards. And first, I'm joined by Dr. Angie Lindsey, associate professor in the Department of Family, Youth and Community Sciences at the University of Florida and researcher within the PIE Center. Angie is the point of contact in Florida for the Extension Disaster Education Network, a multistate effort by Cooperative Extension Services to improve the delivery of services to citizens affected by disasters. Angie provides some insights about Hurricane Ian and advice for preparation and recovery.



Phillip Stokes 02:05

So Angie, I do want to say the time and the date real quick, just so everyone listening has a frame of reference. It is September 26, Monday at 3:19pm. Now 3:20. It just turned. And we're

talking about Hurricane Ian which currently is a little bit south of Cuba in the Caribbean. So we thought today we could just give some advice from you on what to do before and after the storm. So what are just some things you can say real briefly about hurricane Ian and what this could be and may be?

A

Angie Lindsey 02:40

Sure I'll be happy to so we haven't had a major hurricane in Florida since 2018 with Hurricane Michael. So so this will be one of our first major hurricanes and in quite some time. And so I think as Floridians, we get kind of complacent a little bit like ah, this year will be like last year, we'll have a couple of small things. But this one looks like it's the real deal. This one looks like it's going to happen. And one of the things I mean, if we're going to say one of the one of the bright spots, if we're going to find a bright spot is that we do know this is coming and we do have a couple of days to prepare. We don't want to wait till the last minute obviously. We do want to prepare today and tomorrow, especially for folks that are in the Southwest Florida area. We definitely want to on go ahead and start those preparations. I'm sure many people have started them today. But I think the the beauty of time has been given to us with this particular storm because we have been watching this since it was before it was even a tropical storm when we were just watching it. And it wasn't an INVEST out there and a system to watch. So I think that's something that has been a bit of a blessing that we have been able to prepare a little bit more with this one. And so hopefully that extra time to in preparations is going to help in the recovery afterwards.

P

Phillip Stokes 04:07

And you mentioned this is the first major hurricane we've had since Hurricane Michael. And we were just chatting before this that things can change on a dime. You know, we didn't expect Hurricane Michael to intensify like it did. So we just we never know fully what's going to happen. Right?

A

Angie Lindsey 04:24

Right. Absolutely. And in fact, I was on a call earlier today that they were talking about Well, I mean the Gulf is just a bathtub. You never know what's going to happen once it hits the Gulf of Mexico because it there's a lot of uncertainty there because it is so warm. So there is still some uncertainty and although our technological and a lot of the meteorologists that we come to rely on have done an amazing job of being able to predict what's going on with the storms., it's still the weather and sometimes the weather is unpredictable.

P

Phillip Stokes 04:55

So what are some of the things we should be doing in these uh few days if you are a Floridian or somewhere in the Gulf Coast, or even inland, what are some of the things we should be doing now in preparing for the before and the during of the storm?

A

Angie Lindsey 05:12

Sure. So definitely should be following on the guidelines within your own county. If you haven't already done so make sure you sign up for the alerts on your cell phone. And you can do that through [floridadisaster.org](http://floridadisaster.org). That's through the Florida Disaster Emergency Management. So you definitely want to make sure you get on those lists so they can keep you up to speed on what's going on within your area. Definitely. And I would, I would say, follow your preparedness plan. If you have one. If you're new to Florida and you don't have one, there are a lot of templates out there that can help you in developing one. And a lot of the time it is about what are you and your loved ones going to do if you are asked to evacuate? Do you have somewhere to go? Are you going to go to a shelter? Are you going to shelter, if you don't have to evacuate? Are you going to shelter at home? Do you have what you need in order to do that? So that includes you know, the water, the food. Now they're suggesting a five to seven day supply of food instead of just three to five. So just making sure that you have enough supplies for that for that time period. But I think it's also important to think about planning for recovery. So storm passes. Sometimes it's slow to get power back on, we know that. But as we try to get back to normal, and I use that in quotation marks, um, you know, what are the things that you are going to need in order to recover to try to recover? And it can be as simple as, hey, I don't have a rake, and I know I'm going to have a lot of yard trash. So do I need to run out real quick to one of the home supply stores and grab a rake and grab some extra lawn bags because I know I'm gonna have a lot of branches and a lot of leaves in my yard. Something as simple as that. Is there stuff that maybe you're going to need to possibly do your job with, you cannot get online. Do you need to print out some phone numbers? I know for me, I can't remember a single phone number anymore. So one of the first things I do is print out my contact list on my phone just in case I can't access my phone afterwards. So things like that, that you know that okay, what am I going to need when the dust settles, so to speak, you know, what am I going to need to try to get back to normal? How what am I going to need in order to recover and help my family recover? So those types of things are, are good to think about not only in preparing and the things that we know, gotta go buy some bread, got to go buy some milk and some water. But what are some of the things that maybe I'm going to need when the blue skies return? So just just another level to think about.

A

Angie Lindsey 05:35

And we were also talking about before, that the hazards don't just exist while the storms going on. Sometimes there can be hazards due to generator safety or downed lines or trees or different things like that. Right?

A

Angie Lindsey 07:55

Absolutely. In fact, on one of the one of the updates that I was watching on The Weather Channel earlier today was talking about a lot of the a lot of the fatalities and the injuries that we see are after the storm through some sort of accident. So that it's very important to make sure that you're operating your generator safely make sure it's outside, and that it is in an open open area dry open area. And that there are other things out there to be careful of, especially in working recovery after after a storm like this. And flooding. Like they're anticipating some storm surge and some flooding with this particular storm. So you know, powerlines and water

don't mix. So, you know, thinking about things like that, as you go out to try to help your neighbors or trying to clean up your yard. Just think through some of those acts of accidents that could happen.

P

Phillip Stokes 08:48

Right. Yeah, that's great. No, I, I still remember, back during Hurricane Irma in Gainesville, Florida, which of course was before Hurricane Michael. We were we were one of the last groups in Gainesville to get our power back out or get our power back. Excuse me. I think we were out for almost two weeks and so hoping for the best hoping not to repeat something like that. But of course preparing for whatever might be in front of us.

A

Angie Lindsey 09:15

Absolutely. Yeah. And it's so hard. You don't realize how much you love electricity till you don't have it for that long. I know.

P

Phillip Stokes 09:23

That's right. Well, Dr. Angie Lindsey, thanks so much for sharing these quick tips with us. And we'll be sure to include some of these resources that you mentioned in the show notes.

A

Angie Lindsey 09:30

Awesome. Thank you for having me. Stay safe everybody.

P

Phillip Stokes 09:35

And now here's a segment from a 2021 episode titled Hurricane Preparedness Part One: No Time to Wait. In this episode I spoke with Craig Fugate, former Administrator of the Federal Emergency Management Agency or FEMA, and former director of the Florida Emergency Management Division. Craig and I discussed disaster management, the famous Waffle House index, and advice for citizens about hurricane preparedness and recovery. We'll join in as I'm asking Craig about operating during a crisis.

P

Phillip Stokes 10:10

There's has to be so much you learned about operating in a crisis. And so from your times, at the Florida Emergency Management Division and with being the director of FEMA, what have you learned? And what would be good to have our listeners hear about operating in a crisis? And what communities can do and what you learned in all of those experiences?



Craig Fugate 10:20

**C** Craig Fugate 10:29

Well, probably the most important thing I've learned is recognizing that you need to do something different. And this may seem an oversimplification, but if you think about government, we always try to make events fit our systems or processes. You know, there's one thing about government systems is they're built for the day to day, and then we try to adapt them to the crisis, and it doesn't work very well. And you have to fundamentally change things. And what I found was, even though we were in these disasters, a lot of the day to day processes weren't adapting. They were doing what they would have done. If there was no storm hittin, everything from procurement to travel to decision making, like we needed more information, we needed assessments. And I'm like, why it's a hurricane, it just hit why don't we just respond like, it's bad, because I found the most precious commodity and any disaster was time. And government is not built to be nimble, it's built to be deliberate, very slow, very risk averse. You're trying to avoid mistakes and maximize efficiencies. And getting quick decisions is not something it's good at. But yet that was the demand. And so for the team, it was important to clearly set what the outcomes were, and then give permission to deviate from the norms to achieve that. Like I told people, I said, Look, I remember when President Obama came into the the FEMA National Response Coordination Center, we had the federal agencies. And he's telling everybody to cut the red tape. And I had to remind them, I said, but he didn't say break the law. So there's some boundaries there. But unless the law specifically says it's illegal, it's possible. And getting people to understand that they got to do something different. We need to focus on the outcome. Don't start with your processes, and try to make it fit the problem to find the problem and what success looks like and work backwards and figure out how we're going to do it. And be willing to work in a situation where it's very fluid, situation is changing decisions you make an hour ago may be irrelevant because of new information. But you can't keep waiting for the new information, you have to start acting and adjust to that situation. Because the time you spend trying to get to the best possible answer is time that may cost people their lives.

**P** Phillip Stokes 12:46

I think that is such great advice. And I want to ask you now. Okay, so you're speaking more from an organizational level, right from kind of government? Well, let's take that same advice. And let's now talk about the households. So how can households How can homeowners and people in the state of Florida and the Southeast when they're hurricanes coming when they're in them? And then shortly after? How can we use that advice of of acting quickly to help the individual at the individual level, if that makes sense?

**C** Craig Fugate 13:17

Yeah, we're going to talk about the public this is it's cut and dry. First thing is find out if you live in an evacuation zone. And if you're not sure what that means, if you live anywhere along the coastal areas, certain areas inland even particularly around Lake Okeechobee, and some of the river systems that are subject to severe flooding during hurricanes, you can look up, go to your county emergency management agency, you can go to the state of Florida, you can go to Florida, storms.org. And look up and find out if you're in an evacuation zone, this is the key thing. If you're in the evacuation zone, your plan is to move to higher ground if an evacuation orders given. And that means you your pets and everything that you need to have medications papers, and the reason we evacuate is not because of wind. We evacuate because these are

areas where people drown. And this is I think one of the biggest problems we see and trying to explain people coastal and other areas where you may need to evacuate from a hurricane is there's so much focus on the wind, that the winds not the big killer. If you look at all the data at the National Hurricane Center, all the deaths from the storms, the number one cause of death is drowning and trauma by water. And that's why we evacuate we don't evacuate from when we evacuate those low lying areas. So that's the first thing find out if you're an evacuation zone and again, you're moving away from water, not wind so you don't have to get 10s of miles. So that's the first thing if you're not in the evacuation zone, you may still need to evacuate older homes, not well constructed, particularly a lot of homes that were built before codes, older mobile homes, you may have local officials or evacuate if you're in a recreational vehicle Park, you're definitely going to have to evacuate The winds will be a problem. Apart from most other people, it's really about getting your home ready for the storm security outside, being prepared for power outages that, you know, it's not just days in some cases is weeks in a lot of cases, and having the supplies on hand to get through that timeframe. But the big thing is, if you already know that you're in an evacuation zone, you don't have to think about that. And you can now start thinking about where you're going to go. And it turns out that the more people think about it, the better their outcome is, even if they did nothing else. If they just knew in their head that okay, if I'm in a storm surrounding my community, I know I'm in evacuation zone, I know I need to get everybody and go. If you've just thought through that, you just increase the chance of survival. Because when that warning comes, you've already made the mental decision, you're leaving. Now. It's just the execution of that. So if we're going to keep the loss of life down, we need people to heed those evacuation orders. And don't wait for another forecast. And don't hope it gets better. Don't hope it turns because, as I tell people hopes not a strategy. And we've seen people run out of time, there was a very eerie series of 911 calls I listened to in a Scambia county with Hurricane Ivan. And it was people dialing normally one is a storm was approaching the coast and the storm surge was coming and all that water was rushing in. And they were calling to get rescued. And the 911 operators were telling him it was too late. It was too dangerous. They couldn't get out there to cruise couldn't go, you were kind of left wondering, did those people survive? You don't want to be that person you want you and your family moved to higher ground.

P

Phillip Stokes 16:34

So I want to change things a little bit and talk about something that you have kind of coined the term. It's the Waffle House index. And so just tell us a little bit about that. And, you know, what are the greater implications of of this?

C

Craig Fugate 16:48

Yeah, the wolf house index came out of the 2004 hurricane seasons, we were down in Hurricane Charley. And our day started early, and we were running long days and you weren't sure because it was a pretty devastated area. There wasn't like places to go eat. So you tried to get breakfast because you didn't know what the rest of your day look like. And we were staying just south of the area devastation. We were out on the interstate and we found a waffle house and it was open we went in. And normally if you go in the wolf house, they have these big bright plastic menus with all this great food on there. We walked in, sit down and the waitress handed us a paper copy of a menu and it was limited. And she said, Look, this is all we've got. We brought fresh stuff in. We lost power. So everything in the freezer had to be thrown out. So

this is all we got. But it was breakfast. It was hot. And we got coffee. It was a good way to start our day. Next morning, similar routine, except there was a waffle house open closer to the disaster area. So we stopped there. Same deal. My team we were we were dealing with so many counties. And if you remember Charlie, it was like a 10 mile wide tornado. As bad as it was in Charlotte DeSoto. And Henry counties, you had the Orlando International Airport they had major damage there you had hotels as the second or third floors ripped off in Orlando, and it exited out Volusia County. And the problem we were running into so many counties had different levels of impact that what normally on a routine event would have been like the priority County was like, You're not even close to being bad compared to what we're dealing with here. But nobody could really visualize that. So we just borrowed the stoplight analogy. And red was bad yellow is not as bad, but you're gonna need help and Green was you really need to handle what you got, because we don't have enough resources to get everywhere. It didn't mean you didn't have impacts. But it wasn't as bad as other areas. And we started using that across indicators like school openings, water systems, Power BI team threw in a slide on waffle house and it was a the Waffle House index. The Waffle House was closed because of the disaster. It was read. If it was opened with a limited menu, it was yellow. And if it was opened with a full menu, it was green. And the reason why if you if you know waffle houses, they don't close there 24 hours a day, seven days a week, and they're up and down. Most of Florida's interstate system, there's hardly an interchange, you go by that you don't see a waffle house. And the reason this became something other than just that one time slide. Was it speeding up our response to disasters? We weren't waiting for the locals to go out and do assessments. You know, I thought, well, if we're going to speed up our response to disaster, we need to cut out every step that isn't adding to the outcome. And historically, we try to assess incident teams and to see how bad it was. But that generally meant 24 hours to three days, we were still trying to get information before it made a decision to go and I'm like, let's do something radically different. Let's just assume that a hurricane making landfall is going to be problems and why don't we respond based upon the population and the impact of that storm? Well, that's all good until you start thinking about okay, I got National Guard, I got search and rescue teams. I got highway patrol, and they're all driving to that area of landfall. And well before you get there, you're gonna start seeing damages. You know, trees down billboards blown over awnings ripped off the gas stations The question was, how do we know we're in the heart hit area yet. And that's where the Waffle House index became operational, they would drive by and they would check the Waffle House and it was open and they had full menu. They kept going. If they got there, and they had a limited menu, they knew there was a lot of power outages water problems. But that was more than the mass care, sheltering and feeding operations. But for the rescue teams, that wasn't a hard hit area, keep going. And if you got to the spot where the Waffle House had been closed by the disaster, you're in a hard hit area, if there's stuff that needs to be done, go to work. So that index became something that we became operational, we began using, it got talked about a lot, but also goes back to the Waffle House, the company itself, they have a very strong mission statement about getting open after disasters. And they take a lot of steps to do that they do this safely, but they have a lot of experience. And if there's anything that's going to get open in the aftermath of a disaster, it's it's generally going to be a waffle house. So the index, it gave us a quick snapshot, because if you get there and it's open, and you got a full menu, that basically means the power system, the water system, the roads are fine, because their workers could get there, they didn't have any disruption in utilities, if you get there. And it's all that limited menu, it's a very quick size up that I got water and power problems. Otherwise, they would be up and running full menu. And if they're closed because of the disaster, and knowing that a waffle house will get open. I mean, basically, if they can get propane or gas to their flat top, they'll open that not only can they not workers

can't get there, they can't even get the store open. I would tell people, it's like taking a pulse of the community. It doesn't tell me everything that's going on. But if you don't have a pulse, I know you're in a lot of trouble.

P

Phillip Stokes 21:41

I thought it was interesting. You know, at the beginning, you said about things that you learned during your time at FEMA, and just working with government is you have to do something different. And that's what you did you employ those your own advice, and you said, Hey, we need we need to work quicker. And so this is this is one thing we can do that will kind of help us assess a storm. Are there any stories or scenarios where you have seen communities respond better after a storm, some of those stories of success?

C

Craig Fugate 22:12

Well, probably the big success in Florida has been our building code. And for every builder and developer, remember, the legislature tries to water it down or weaken it because they say is too much red tape. The reality has been the difference in how homes are performed. And hurricanes often comes down to when it was built and under what building code we know that in adapting to climate change and adapting to the increased rainfall, the increased damage to the storms that were in how we build are the big determinants of how resilient communities are. And so we're seeing that the building codes most notably for wind has driven down the losses and made homes more survivable.

P

Phillip Stokes 22:55

So I think today as we're kind of wrapping up, I just wanted to ask if there were any last points you wanted to mention, you know, any last tips for hurricane preparedness as we're coming into hurricane season and just next month, any any last points you want to say before we close out today's conversation?

C

Craig Fugate 23:14

As we get ready for hurricane season, get with your insurance agent, check your policies, I strongly recommend to get flood insurance. Don't let somebody tell you you're not in a flood zone because we got feet of water coming down from a storm you're gonna probably get water in your home. Second thing is, you see all the supply kits you got to go out and buy and you periodically people go out and they'll buy all that stuff is hundreds of dollars and people can't afford that. And it's Alaska growing up in Florida. First of all, we didn't drink bottled water we drink tap water perfectly fine. And we got ready for hurricanes we would store water and empty milk jugs and soda bottles, we rent them out, clean them out filled full of water, put them in the freezer, leave a little bit of space from the Expand turns out, that still works. The other thing somebody recommended I thought was genius was filled Ziploc bags full of water because it packs and better. Not only do you now have cool water on hot days after the power has been out for several days. It keeps the things in your freezer cold longer because it fills in all the voids and gives you more mass there. Storms threatening pick up everything outside doesn't



cost you anything but get things that can be windblown into Windows and stuff. If you can get shutters up great, if not plywood still works. But another step that is doesn't cost anything. It turns out that when the winds are really howling shut all of your interior doors of your home. It helps to have more home strengthened and perform better. Because what generally happens with wind is it that it blows your house down, it blows out a garage door blows out a window and blows out a sliding glass door. And that creates a pressure inside of your home that lifts up. That's why we have hurricane straps and all the stuff that people say well, you know, it costs too much and it slows down construction. But it's all those things we do in Florida that keeps the homes together. and keeping the doors closed is another simple thing to do. And then probably the last thing is, I'm a pet owner, I've had dogs most of my life. And as much as you see all the human tragedy to me, one of the most unexcusable cruelties I've seen are the animals that are chained up or kept in their cages while their family evacuated, when the floodwaters come in, so always plan for your pets. And if you're told to evacuate, take your pets with you. Increasingly, across Florida, we have pet friendly shelters, hotels and motels will often relax their policies on pets. But again, this is not something you want to figure out the last minute, plan ahead and know where you're going. And if you need transportation, or you need assistance, find out what's available at local level. Don't wait until the storms threatening and most of the steps will take a lot. Then the last thing is take your phone and make sure you got all the contacts for all of the folks you need to communicate with. So that if something happens you you have everything there. And a lot of times the cell systems will go down, keep a portable radio handy. Stay tuned to the local stations because they're going to have the best information about what's going on in your community.

P

Phillip Stokes 26:12

Craig Fugate It was an honor and a privilege talking with you today. I just want to thank you for being on our podcast for this this series on hurricanes.

C

Craig Fugate 26:21

Well, thanks for having me. And, again, as we go through this hurricane season, we always hope to avoid the storms. But if you know what to do, we can always rebuild. We just can't replace you. So take steps now to protect you and your family.

P

Phillip Stokes 26:38

Once again, that was Craig Fugate, former director of the Federal Emergency Management Agency or FEMA. You can always go back and listen to his entire episode. In that series, we also had an episode titled Hurricane Preparedness Part Two: How Do Buildings Feel Hurricanes? about wind effects on residential structures. And of course, we'll put resources for hurricane preparedness and recovery in the show notes. I'm Phillip Stokes. Thanks for listening to Science by the Slice.

R

Ricky Telg 27:13

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