Speaker 1:	00:04	Welcome to "Prep Talk," the emergency management podcast. Find out what you need to know about preparedness. Get all the latest tips from experts in the field, and learn what to do before the next disaster strikes. From the emergency management department in the city that never sleeps. Here are your hosts, Omar Bourne and Allison Pennisi.
Omar Bourne:	00:27	Hello everyone. Thank you for listening. I'm Omar Bourne.
Nancy Silvestri:	00:30	And I'm Nancy Silvestri.
Omar Bourne:	00:31	And you are our listeners and, as always, we thank you for joining us. We want you to come back as often as you can so feel free to add "Prep Talk" to your favorite RSS feed. You can also follow us on social media, on Twitter @nycemergencymgt, Facebook, or Instagram.
Nancy Silvestri:	00:52	On this episode of "Prep Talk," Nelson Vaz, warning coordination meteorologist at the National Weather Service joins us.
Omar Bourne:	00:59	But before Nelson comes in, it is time to give our listeners the latest hot topics in the emergency management field.
Speaker 4:	01:09	Here's your "Prep Talk" situation report.
Nancy Silvestri:	01:13	This is the situation report. Let's get started.
Omar Bourne:	01:17	Thank you Nancy. Our first story here, it is important to stay hydrated in the heat but it may not be best to drink from plastic bottles exposed to higher temperatures. Most plastic items release a tiny amount of chemicals into beverages or food they contain. As temperature and time increase, the chemical bonds in the plastic increasingly break down and chemicals are more likely to leak. A study conducted by scientists at Arizona State University reported that water is contaminated in a shorter amount of time when stored in a plastic bottle on a hot day. According to industry group the National Bottled Water Association, bottled water should be kept in the same conditions that consumers keep other groceries. So what's the bottom line? Is glass better than plastic? Yes, it is. The message should be to keep the water bottle in a bag or covered when not in use. Do not leave plastic bottles in a hot car as temperatures rise fast at this time of year. It is summertime. I have a plastic bottle ... I have many plastic bottles actually and I

walk around and lose them all the time, so maybe this is a note for me to get a glass bottle, Nancy. What do you think?

Nancy Silvestri: 02:43 I'd say go for the glass bottle Omar. Our next story dovetails on heat and it's focused more on climate change which affects everyone and may soon be affecting your wallet as well. Air passengers may have to pay an extra carbon charge on flights as part of the UK's initiative to reduce CO2 emissions and tackle climate change. The extra fees will be used to fund eco-friendly projects like planting trees to reduce the carbon footprint. Government officials hope that the initiative will help consumers choose transit options that are environmentally friendly. Chris Graling, the UKs transit secretary, said, "Our focus remains to target the development, production, and uptake of zero emission technology across all modes of transport." So be on the lookout for those extra fees.

Omar Bourne: 03:34 Yeah. Yeah, I'm not happy about that one.

Nancy Silvestri: 03:37 It's great goals though.

Omar Bourne: 03:41 I have one more heat story for our listeners here Nancy. If you think it's hot now, I've got bad news for you. Just wait a few years because a new study by the Union of Concerned Scientists showed that US is in for more dangerously hot days over the next few decades. Take a wild guess, Nanc, why and what this is due to.

Nancy Silvestri: 04:09 Could it be climate change?

Omar Bourne: 04:10 You are correct, it is climate change. Now the new report shows that temperatures around the world have been increasing for decades mainly because of the burning of fossil fuels. So what does it mean? Well, the scientists state that on our current path, extreme heat days are poised to rise steeply in frequency and severity in just the next few decades. I am a summer baby, I've said it all the time, but when it starts to get extreme, I don't know.

Nancy Silvestri: 04:38 There's a normal pleasant day and then there's just too hot to be outdoors.

Omar Bourne: 04:46 Exactly, exactly. Still to come we will be talking to Nelson Vaz from the National Weather Service. But first, here's a public service announcement from New York City Emergency Management and the Ad Council.

Speaker 5:	05:00	When is the best time to talk to your family about staying in touch during a disaster? When hurricane winds are gusting? When floodwaters reach your door or a blizzard blocks all the roads? Or is the best time perhaps today? During a disaster you may not be able to stay in touch with your family or friends as easily as you think. Make your emergency plan today. Go to NYC.gov/readyNY or call 311. Don't wait, communicate. Brought to you by New York City Emergency Management and the Ad Council.
Speaker 4:	05:32	You're listening to "Prep Talk," the emergency management podcast.
Omar Bourne:	05:37	You are listening to "Prep Talk" and we are back. And we have a special guest. And for our listeners, I just want to give you guys some insight because New York City Emergency Management, we work really closely with the National Weather Service and Nelson Vaz, our guest, is our meteorologist who we speak with on an almost a daily basis and this is the first time that Nancy and I are seeing Nelson in person and so Nelson is like a celebrity to us in the world of emergency management, so this is a big deal for us. So Nelson, thank you very much for being here.
Nelson Vaz:	06:18	Thank you, Omar. That's a great introduction. New York City Emergency Management, great partners with us, Omar and Nancy. I appreciate you guys always intently listening when we're providing you guys information and we try to do the best so that you guys can make the decisions you need to help the people of New York City.
Nancy Silvestri:	06:39	Great. Well we are so happy to have you. We hear your voice day and night with all sorts of weather updates through snowstorms and heatwaves and everything in between and we're happy to share your voice with our listeners.
Nelson Vaz:	06:51	Thank you, thank you.
Nancy Silvestri:	06:52	So Nelson, you have a wealth of experience in the field of meteorology. What sparked your interest in the field and how did you get started?
Nelson Vaz:	07:00	Yeah, I think with a lot of meteorologists, including myself, it's just something you're ... right when you're young you have that passion, that interest in the weather and nature itself. I was always kind of interested in the power of nature. Seeing a

thunderstorm, seeing a snowstorm, lightning, thunder as a kid, you can get scared real easily kind of seeing something and it's nothing we can control. I think it started with thunderstorms and then snowstorms. Of course all kids, you like to get out of school so having a day off out of the school year, that's always great. So I was rooting for thunderstorms but I think it was really Hurricane Gloria in 1985 that ... that was the first time I really heard about tropical storms and hurricanes.

Nelson Vaz: 07:53 I remember people telling me, even the day before, you've got to get inside. I was just kind of playing outside, I was ten years old. And they were like, "You've got to get inside, there's a hurricane coming." And it kind of just scared me. But when it actually did come through, the power of it, the heavy rain, knocking down half the trees on our block, electricity was out for a couple of days. Just kind of that memory that lasts as a ten year old, and I think that just kind of really sparked me, this is what I want to do when I get older is work in the weather field, learn more about why is this ... what's causing these type of like really Mother Nature to have such power and to be able to kind of knock down trees, like half the trees on your block.

Nelson Vaz: 08:40 So yeah, and it kind of just grew from there. And then how I got started is I actually had a real ... I went to school for biology. I got a biology degree and kind of the reason ... my parents kind of pushed me in that direction but I always had interest in science. But as I got into the biology degree, finished my degree, started getting into the workforce, I'm like this isn't for me. I wasn't passionate.

Omar Bourne: 09:08 Right.

Nelson Vaz: 09:09 I'm like, you know what? I know one thing that I am passionate is meteorology so I went back to school about a couple of years after graduating. I got all my coursework done. I met a great professor at Stony Brook, Brian Coley. He kind of was a mentor to me. I did research with him, took a lot of the coursework. I got a volunteer job at the National Weather Service out in Brookhaven National Lab where we are the weather service office for the tri-state region including New York City, the federal government agency. But basically got my foot in the door as a volunteer. Once I was done with all my coursework, got a job there as an intern and I've been there for 16 years. Worked my way up from a general forecaster, leader forecaster, and now warning coordination meteorologist. Yeah, it's been a

great ride and I'm lucky to do something that I'm passionate about as a career. I'm very happy about it.

Omar Bourne: 10:09 So I have a question because I see the meteorologists on TV all the time, so I have to ask. Were you ever interested in being on TV for the news stations as a meteorologist?

Nelson Vaz: 10:20 Yeah, you know, a lot of people ask me that. I mean, a lot of people don't even know ... they're like, "Oh, you work in the weather. What channel are you on?"

Omar Bourne: 10:27 Right.

Nelson Vaz: 10:29 I've always been a more laid back personality, more of an introvert so TV was never something for me. So I was always more interested in the science aspect and in terms of kind of being able to do cutting edge science, doing the real forecasting, I think the National Weather Service is ... that's the place you want to be.

Omar Bourne: 10:53 And if there's any consolation, biology was never my topic either. So I'm right there with you. I always joke on the podcast that I only remember one thing from science and biology and it's symbiosis, a symbiotic relationship. I say it all the time, that's the only thing I know.

Nelson Vaz: 11:13 It was worth the education.

Omar Bourne: 11:14 There you go. But you know you talk about your experience. What have you learned and how has those experiences shaped your outlook now and into the future when it comes to the weather and even climate change, meteorology in general?

Nelson Vaz: 11:30 Yeah. You know, I mean the big thing as a meteorologist and for myself is that once you think you know everything in meteorology, I've been here 16 years which is not a long time, there's meteorologists who've been there 30, 40 years, you feel like all right, I'm comfortable. I see this pattern coming up. I see the models are showing me this. This is what's going to happen. And once you get overconfident, weather forecasting will quickly humble you. It's just ... I'm amazed actually the precision we can forecast with thee days.

Omar Bourne: 12:06 Right.

Nelson Vaz:	12:07	The potential for thunderstorms, where the most likely thunderstorms are, even a winter storm to have a 20-30 mile track difference or a tropical storm, 30-40 mile track difference you say out 24 hours, it's pretty remarkable where you look where we were 20 years ago. But, even with that said, you kind of feel, we've got this confidence, we can really hit it. And I think once you get overconfident you can be quickly humbled because you learn that Mother Nature, the atmosphere is very chaotic. Just little differences, things say on the West Coast, you have a little difference in maybe where low pressure is, maybe where a disturbance is up really high in the atmosphere. And that could change where a storm is going to occur two days later. And just little shift in a storm could mean the difference between 12 inches of snow here in New York City or maybe one inch of rain and no snow. And we've seen that where it's a very difficult thing to forecast.
Nelson Vaz:	13:13	So it's a constant learning process. Each ... I've been through tropical ... Hurricane Sandy, tropical storm Irene, Floyd, numerous blizzards, thunderstorms, so each one you learn from them. You're constantly doing training, constantly doing research. You never want to be complacent, kind of I've done this for 20 years, I know what's going to happen. It's just constantly learning and improving. So I think Sandy was a great example. We had a really good forecast, we felt confident that, all right, we can provide this information to our partners, what's going to happen to the public. And this was the meteorologic community as a whole but we quickly found that all right, even though we had a good forecast what the water level was, we didn't have all the tools we needed to communicate what the impacts were going to be. So since then, we've done a tremendous amount of work. As just an example, you've got to continuo to push, continue to push the work with your partners, the education, and having those tools properly communicate what impact it's going to be. So yeah, it's just never sitting still, continue to train and learn and do that research and that education to improve.
Nancy Silvestri:	14:36	I think you have one of the hardest jobs around. As you mentioned, a little shift in a storm can make a big difference in the forecast. And does that make New York a uniquely challenging place to work as a meteorologist?
Nelson Vaz:	14:47	Certainly. New York City you have all four seasons. So we have winter weather and you guys, this past winter, even though it

wasn't a busy winter, kind of started off with a bang in terms of ... you know, even smaller storm can have major impacts.

Omar Bourne: 15:06 Yeah.

Nelson Vaz: 15:07 Summertime we get thunderstorms, we get heatwaves. We have the oceans, we even do things like forecast rip current, we do marine forecasts. And then the tropical season so we've got to worry about hurricanes. So it's just the whole gamut of weather. So yeah, the big thing for us is we're one of the ... we are the largest metropolitan area in New York City ... in New York City tri-state region here. So just the implications of even what you would think may be benign weather or just not that impressive of storm say somewhere else in the country, here it can have major impact. And that's the reason why we work with you guys so closely is try and communicate what those hazards or impacts are going to be, even if they might be deemed not that significant, it could have significant impact in the city.

Nancy Silvestri: 16:04 Absolutely. And we find our partnership so valuable because we're interested in a lot of those granular level details. Our city is only a couple of miles across, for example, in the entire borough of Manhattan and it's challenging for meteorologists to be able to provide us with such specific forecasts and answer very, very detailed questions we have. And you and your colleagues at the National Weather Service are always able to do that for us and that helps us to prepare and really easy impacts for New Yorkers when things do happen so it is an invaluable service despite the challenges certainly of doing that.

Nelson Vaz: 16:40 I appreciate it Nancy. And I think we appreciate you guys keeping us on our toes and keeping us honest, and we're striving to always get better.

Nancy Silvestri: 16:48 Wonderful.

Omar Bourne: 16:49 Yeah. And we're in hurricane season, as you know. I'm going to get to heat but I want to talk about hurricanes for a little bit. You guys had the outlook, so where are we now with what we can expect for the Atlantic hurricane season?

Nelson Vaz: 17:05 Yeah, right now is Atlantic hurricane season. So the Climate Prediction Center and the National Hurricane Center, they look at larger scale patterns and they come up with an outlook in May each year. And then actually they are going to be updating it mid to late August here. But right now it's ... the May

prediction was for basically a normal season in terms of activity in the tropic Atlantic which means about 12 named storms, six of them which could be hurricanes and three major hurricanes. And that's generally near normal activity. And kind of the reason there's some competing factors, you may have heard about El Niño which is kind of ... we've been in a weak El Niño pattern, at least we were in May. We have some warmer waters in the Eastern Pacific, that feeds back to the atmosphere, and you have less favorable conditions in terms of winds over the tropical Atlantic where these tropical storms develop, so that's kind of been the forecast and inhibiting factor.

Nelson Vaz: 18:10 The one thing we have seen is actually we've gone into now a neutral state, so we'll see how the update in August, how that might affect things because it may make things a little more favorable in that area. But with that forecast initially, it was a slightly unfavorable winds in that area because of a weak El Niño. But a competing factor was you had the expectation of a little bit above normal sea surface temperatures which are the fuels for tropical storms in the tropical Atlantic area so they were kind of going to offset each other in terms of one promoting development of tropical ... or more development of tropical systems versus one inhibiting it. So that's the reason why it was kind of a normal season. But we'll see the initial forecast ... we'll see if it gets updated in August because of slightly more favorable wind conditions with that warmer water whether there may be a slight uptick in terms of the forecast.

Nelson Vaz: 19:14 But you know the one thing to remember is no matter if you have an active season ... it's only an outlook, no matter if it's an active season that's forecast or an inactive season, it only takes one tropical storm or hurricane to make it an active season for our region. It's keeping ... right now is the time to prepare and it's just keeping ... listening to weather forecasts, listening to National Weather Service forecasts which is media through New York City Management, just knowing what's going on. Once you're prepared, if something's going to be approaching, that's when you want to start taking some action and really paying attention to what your emergency management community and New York City Emergency Management is telling you to do.

Omar Bourne: 20:05 And I like that you said that it only takes one because we say that all the time here. And for our listeners, whether you're in New York, whether you're in the Caribbean, wherever you may be, in Miami, it only takes one storm, so prepare. Make a plan. Know your risks whether or not you live in a flood zone. We

have zones here in New York City, we have a Know Your Zone campaign and then stay informed through social media, through your local weather forecast, your local emergency management department. Really these three steps you should take to make sure that you are prepared because it only takes one storm and that can be devastating.

Nancy Silvestri: 20:50 Absolutely. And speaking of preparedness, Nelson, what does the National Weather Service do to prepare for hurricane season and what do you do when you start to see a storm forming?

Nelson Vaz: 20:59 Yeah. So I think it's basically a year round effort in terms of preparing. National Weather Service and just like emergency management, our mission is protecting life and property. We do it through our forecast, accurate and timely forecast and then providing that information to you guys so you guys can take on your role in terms of protecting your life and property. So first thing it starts with is really in the off season, education and outreach. And we try and do as much outreach as we can, especially with our emergency management communicate, whether it's hurricane talks, doing a presentation what the outlook is going to be. But really what are some of the hazards and impacts that are possible in this area from tropical storms.

Nelson Vaz: 21:48 We have some recent memory with Sandy of course, devastating effects in terms of storm surge. But one of the things ... was that a worst case scenario and ... going back in history, looking at the science of it, it's not necessarily a worst case scenario. We've looked back in the past. Sandy ... it was a hurricane at one point, it came in as we called it a super storm, it actually came in to southern New Jersey. It was weakening to a tropical storm but also turning into a type of Nor'easter so it was kind of that combined effect. It brought a lot of storm surge to the area. But in terms of a true hurricane, we haven't seen that in a while. And I think that's what we've been trying to push to our emergency management and the public is it's been since 1985, like I was talking about earlier, that we saw Hurricane Gloria which was where you're talking about 74 mile per hour sustained winds. That type of wind force, category one, and it's been since the mid-1950s since we've seen a category three hurricane where you're talking about 111, 115 mile per hour winds or greater.

Nelson Vaz: 22:59 I think people have a sense in terms of what storm surge can do but if we do have the unfortunate, and it only takes one storm

again, to see a category one, two, or especially three hurricane come up into this area, we really have to watch out for what could be the wind impact that we have and most people don't have any kind of sense with, almost double the wind speed of a Sandy or an Irene. One thing that's interesting about that, you double the wind speed, that's actually eight times the wind power, not just kind of a linear relationship. Heavy rainfall, getting about 15-20 inches of rainfall in New York City like they saw with Florence last year, that's not out of the possibility you can see that type of rainfall up in here with a slow moving even like a tropical storm. And storm surge of course, what we saw with Sandy was devastating, anywhere four to six feet of inundation, parts of Manhattan, the five boroughs in Staten Island was six to eight feet. But there is potential with a stronger, say category three hurricane taking a similar route as Sandy to see double that type of inundation.

Nelson Vaz: 24:19 And as Omar was talking about, there's been a lot of work since Sandy in terms of talking about these type of hazards and potential impact. New York City redid the storm surge zones, the evacuation zones, and that's to take in the latest science in terms of what potential storm surge there is and those flooding impacts. So that in addition to all the different products that have been ... with the hurricane center, National Weather Service has developed. A lot of the probabilistic information from which we have these inundation mapping products showing you what a worst case scenario is potentially with an individual storm approaching, what the worst case potential inundation could be. We have the storm surge watch warning to highlight the public, all right, this is a threat, either the potential or the expectation of life threatening flooding so we're talking about three feet or more. We have products such as the arrival of tropical storm force winds, the earliest arrival and most likely arrival. This helps the emergency management community. For those high risk populations where we need to get them to safety as early as possible and before even the earliest threat of tropical storm force winds are, that type of product will help. And then you want to get all your preparations done before the most likely expected tropical storm.

Nelson Vaz: 25:51 So those are just some examples of the products but this is kind of what we do in our out reach and education. And then once we get into the ... if there is a storm out there, the hurricane center is taking a look at the big picture, what the track of the storm is and most of you know about the storm track. You follow that black line, the skinny black line, and then you have

the forecast cones which show the uncertainty and that's based on kind of forecast errors that the hurricane center keeps track of.

Nelson Vaz: 26:21 Now out five days, if that forecast cone is going to have ... and that's just the center of the storm where that's forecast, not the impact around it ... but if that forecast cone is getting close to New York City, that's where ... we're already probably keeping you guys in tune, maybe a week in advance. And we talk to you guys at least once or twice a day at least, we might be kind of just giving you a heads up maybe a week or two in advance. But once we get into that 120 hour, five-day period, that's when we really ramp up with, all right, we have all these products but it's a lot for Emergency Management. You guys need the information in a way that you can make decisions quickly.

Nelson Vaz: 27:02 So that's where our decision support services, really where we do our weather briefings, whether it be PowerPoint briefings, email briefings, or weather consults or webinars where we start that five, six days in advance and multiple times a day basically giving you the latest information on the storm, kind of deciphering the products for you and really trying to streamline all the information. What are the hazards and impacts going to be in terms of wind, storm surge, rainfall, even say tornadoes? How are those impacts. And hopefully some preparedness information that we've already been doing through the season. It kind of all comes together, the partnership, the latest in the science to get that information so you guys make the right decisions and then hopefully the public can be ready and respond. It's a lot that goes into it. It's a year round process, but I think having partners like New York City who are very cutting edge in terms of wanting to be prepared for hazardous weather, I think that makes our job easier is that we have an attentive partner who's going to respond correctly.

Nancy Silvestri: 28:17 We gear up and look forward to our weather updates. As soon as we know what time we're going to touch base with you guys, we have dozens and dozens of City agencies and literally hundreds of people who hold their calendars and anxiously await the latest information and the latest products from your office to really help us get everything into motion to deal with whatever hazard that we're coming up with. And your new weather products that you were speaking about, the inundation map and all of the hurricane related products are so helpful for us on the emergency management side and just being able to map that out and really get a sense of where the impacts are

and what we can tell the public and what we can do to help then prepare and to help the city get through these events more quickly, it's hugely impactful for the work that we do. So we are deeply grateful to you guys for working so closely with us and doing so much to inform us and to help us make the best decisions we can based on those forecasts for the people in the city.

Nelson Vaz: 29:17 Thank you. We look to continue the great partnership we've had and we can continue to improve.

Omar Bourne: 29:24 So I want to take a look at heat for a little bit because we are in summer and we've had some intense heat thus far. So we read earlier in our sit rep that we could see some more days of this kind of intense, dangerous heat. Can you inform our listeners about that? And then just some of the quick tips that people can take to be prepared for heat because I feel like people may underestimate heat and the dangers that are associated with it.

Nelson Vaz: 29:59 Yeah. So in terms of kind of the first part in terms of seeing more days of heat, there is evidence that over the last at least for us in terms of last 100 years looking at global temperatures, there has been an increase. We're kind of hitting on almost top five every year in terms of global temperatures increasing. So in terms of whether ... and you take that on a global scale, a lot of that may be ... that's kind of generalized over the whole earth. So where we concentrate more is on the weather going on for the week. In terms of that, there are going to be variations. We saw last year ... last year we didn't have any 100 degree days but this year we've got two. So it's more ... when you kind of go down to the seven-day level, it is more kind of a localized, it's hard to make kind of a jumps or conclusions from looking at kind of a small period of record, say 100, 150 years in terms of increase in global temperatures whether that's having a direct impact on say like a heat wave today.

Omar Bourne: 31:15 Okay.

Nelson Vaz: 31:16 The biggest correlation that they have seen in the research is increase in global temperature having an increase in potential extreme rainfall. There is going to be some link in terms of temperature, but exactly where that's going to occur, when that occurs, it could be more warmer winters.

Omar Bourne: 31:37 I'll take that.

Nelson Vaz:	31:40	Not necessarily like warmer summers for some parts of the area. But with that being said, we're in an area that every summer we're going to have the potential for extreme heat. I think in the early 2010s we had multiple years where we saw the five boroughs reaching 100 degree temperatures at least for a day or two and then also heat wave. So that potential is going to continue with us for the years to come. Something to kind of keep an eye on. With that being said, what are some of the tips? I think this past kind of couple of days showed, in terms of just the sensitivity, people may not take the heat as seriously because it does get hot in the summer in the city. You can kind of just see it in terms of the demand on the power grid and so in terms of giving early heads up, I think that's where we can play a part in providing that information.
Nelson Vaz:	32:45	In terms of staying safe, of course if you can stay indoors as much as possible in air conditioned areas, that's kind of the key. Kind of staying inside, drinking as much fluids as possible, really important. I think if you do have to ... and the one thing is you want to check on especially elderly, the young, the infirmed. Is their air conditioning working? Do they have all the proper fluids? Are they staying cool because they are the most susceptible to heat, even if they are staying inside. So I think that's very important.
Nelson Vaz:	33:23	If you have to work outside, take as many breaks as possible. Wear lightweight, light-colored clothing, trying to reflect as much heat off as possible. Drink as much fluid as you can, take as many breaks as possible is really important. And I think we've seen it unfortunately over the last several years, in vehicles never forget your children, pets, you never want to lock them in the car, lock them in vehicles and leave them for even 15-20 minutes. It can get like an oven in there very quickly and you know that that can be deadly. So I think those are some of the tips I think in terms of really kind of heat. Just try and ... summers in the city are going to be hot but just take it slow. Keep hydrated and try and stay cool and remember to check on the kids, check on the elderly, and enjoy ... there's heat in the summer but you want to try and enjoy the short summers we have because it can be a really good time to take advantage of the city.
Omar Bourne:	34:38	And a heatwave is three days of 90-degree weather, correct?

Nelson Vaz:	34:42	Correct. And for us that's three days of 90 degrees, three consecutive days. But you go down to Texas, three days 90 degrees is ...
Omar Bourne:	34:54	Normal.
Nelson Vaz:	34:54	Yeah, it's more like three months of 90 degrees. That's for us what a heatwave ... we define it as.
Nancy Silvestri:	35:01	So we've talked a lot about different hazards today from heat to hurricanes, so many things for you to think about over the course of your forecasting time.
Nelson Vaz:	35:09	Right.
Nancy Silvestri:	35:10	So what would you say keeps you up at night?
Nelson Vaz:	35:14	I think for us it's ... for me and I think from Ross Stickman who's our meteorologist in charge and all our forecasters, it's really ... those life threatening type of weather hazards, whether it be extreme heat or ... I think really on a bigger scale it's these tropical systems like the next Sandy, say a 1938 hurricane, a category three type hurricane where a lot of lives are at risk because of hazardous weather. Making sure that we are, like we do with tropic or a lot of these other weather hazards, is that year round we're providing that education and outreach. We're making sure that the science is improving, and that's kind of a given. The science is improving so better science, doing that research so the forecasts are going to get better but also doing that outreach, that education, working with our partners, knowing what are the critical thresholds for you guys. What are your action timelines, what are your action thresholds that we can provide you that latest information, that best information but in the right format, in the right time, in the right manner so you guys can make those decisions.
Nelson Vaz:	36:35	So I think it's this constant process of just kind of thinking, looking at the past but also thinking, all right, what is something that we haven't seen in a while that people aren't prepared for, the public's not prepared for, that could pose a significant threat to life and how do we work best with our emergency management partners to help them make the decisions to keep our community safe.
Omar Bourne:	37:02	And I like that you talk about communities and education and keeping people safe because at the end of the day, that's what

		meteorology is about in concert and with emergency management, helping to inform people, teach them about not only the risks and the hazards but what they can do to stay safe when we do face extreme weather. So appreciate your work Nelson. We appreciate you taking the time out to be here with us on this episode. And we have the fun part of the episode. I mean, it's always fun, but we have our rapid response where we ask you a few simple questions and you give us the first answer that comes to mind. This is, as I said, the fun part even though the entire episode has been fun.
Nelson Vaz:	37:56	Definitely, this has been a good experience and I am looking forward to this part, the rapid Q&A.
Omar Bourne:	38:03	Yeah, it'll be good. It'll be good.
Speaker 4:	38:06	It's time for "Prep Talk" rapid response.
Nancy Silvestri:	38:11	All right, let's start with the first question. What is one emergency item you cannot live without?
Nelson Vaz:	38:16	Yeah, I mean we were just talking about hydration in the heat. Water. I think that's essential for life and I think anytime we talk about preparedness, you want to make sure water is one thing you have for any kind of weather situation.
Nancy Silvestri:	38:31	What are your hobbies?
Nelson Vaz:	38:33	Hobbies? I have three kids so just having fun with the kids. Part of that, staying fit, working out, sports, basketball, tennis, football. That's the kind of things that ... and I can do that with the kids and landscaping. I live out in eastern Long Island so I do have the fortunate ... I'm fortunate to have some property where I can do some mowing the lawn and landscaping stuff. So that's kind of my hobbies.
Omar Bourne:	39:02	I like that. What's your favorite basketball team?
Nelson Vaz:	39:04	New York Knicks.
Omar Bourne:	39:06	Okay. Okay.
Nelson Vaz:	39:08	Looking forward ... let's see what happens. We didn't get Durant, we didn't get Kyrie, we'll see what happens.

Omar Bourne:	39:13	Yeah, you have some nice young pieces in Dennis Smith, Jr. and Mitchell Robertson so the future is bright for all the New York Knicks fans so stay patient and you'll get there.
Nelson Vaz:	39:26	I've been staying patient.
Omar Bourne:	39:27	Yeah, for a long time, right?
Nelson Vaz:	39:29	I've been patient for a while, yeah.
Omar Bourne:	39:32	It'll come. What is your favorite disaster movie?
Nelson Vaz:	39:36	Of course it's got to be meteorology related, it's "Twister." I think ... there's a lot of ... there's probably been a lot of weather type movies but I thought "Twister" ... as a meteorologist you're always a critique, this stuff doesn't make sense, that's not possible, but "Twister," even though some of it was exaggerated, it did have some ... it kept true to the science in some aspects so I ... and I thought that was great movie for it's time. And it still holds true.
Omar Bourne:	40:08	Justin, our producer, for our listeners when you said Twister was churning in the background. He's a big fan of Twister.
Nelson Vaz:	40:15	It's a classic.
Omar Bourne:	40:15	He gave me the thumbs up so that's a yes. Now there are some kind of preparedness phrases that we use in emergency management and meteorology, "turn around, don't drown" is one of them. When it roars, stay indoors. So what is your favorite phrase?
Nelson Vaz:	40:38	I mean that's a couple of good ones. I've always been a beach person, grew up on Long Island, love the beach, and so rip currents, that's the big thing for me in terms of part of the education outreach we do. So "break the grip of rip," that's a good one for me. And I know that's again another thing in the summer with the heat. We have a lot of younger kids or people who might not be familiar with this with the beach and the hazards. But I think one of the important things for us is remember "break the grip of the rip." If you're going to go to the beach, stay in areas that are lifeguarded, because if you don't know how to swim you can easily ... you can easily get taken out by a rip current and you're basically not prepared. You're in an unfamiliar environment and it's easy to kind of get injured or even lose your life. So I think it's important for

anybody going out to the beach, stay in lifeguarded areas and follow the advice of the beach officials. If you do get stuck, make sure as soon as you kind of feel like you're losing it, call for help and try to, if you can try to float. And if you can finally make your way back to shore. But, yeah, I think that's an important one for me.

Nancy Silvestri: 42:00 Those are great tips for our listeners this summer. Nelson, sum up the work that you do in one word.

Nelson Vaz: 42:07 Challenging. I think as we've been talking about it, just the seasons we have, just the type of weather that even just small changes in weather, storm track, temperatures can have huge implications on weather in our area because we have the ocean right next to us that really kind of plays a moderator in it in our weather. And just the fact the tri-State region here, we're such a populated area, it's just little ... subtle weather phenomenon you think may not have a big impact in other areas, here with millions of people can have huge impact. So it's a challenge but that's what keeps this job interesting and I think for all of us, we're passionate as meteorologists and as civil servants, try to do our best. Sometimes forecast may not end up perfect, but I think it's not out of the lack of trying and learning from each one of these events to get better the next time.

Nancy Silvestri: 43:16 I can say from working with you over the course of many years that you have one of the most hardworking teams I've ever, ever seen, morning, noon and night and especially when there's any kind of weather on the horizon that may be dangerous for New Yorkers, you are nonstop and it is greatly appreciated by those of us who rely on you to help keep us safe.

Nelson Vaz: 43:36 I appreciate it guys.

Omar Bourne: 43:38 Thank you for being here.

Nelson Vaz: 43:39 Thank you very much, it was great, guys.

Nancy Silvestri: 43:41 Thanks, Nelson.

Speaker 1: 43:46 That's this episode of "Prep Talk." If you like what you heard, you can listen anytime online or through your favorite RSS feed. Until next time, stay safe and prepared.