Transcript of "Michelle Hawkins, Severe, Fire, Public, and Winter Weather Services Branch Chief for the National Weather Service in Silver Spring, Maryland"

Clear Skies Ahead: Conversations about Careers in Meteorology and Beyond

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Kelly Savoie:

Welcome to the American Meteorological Society's podcast series, Clear Skies Ahead: Conversations About Careers in Meteorology and Beyond. I'm Kelly Savoie and I'm here with Rex Horner and we'll be your hosts. We're excited to give you the opportunity to step into the shoes of an expert working in weather, water, and climate sciences.

Rex Horner:

We're happy to introduce today's guest, Michelle Hawkins, who is a Severe, Fire, Public and Winter Weather Services Branch Chief for the National Weather Service, known by the acronym NWS, which is under the National Oceanic and Atmospheric Administration, or NOAA. She's located in Silver Spring, Maryland. Welcome, Michelle. Thanks very much for joining us.

Michelle Hawkins:

Thanks, Kelly, and thanks, Rex. I'm excited to be here with you.

Kelly:

Could you tell us a little bit about your educational background and what sparked your interest in science?

Michelle:

Sure. Well, I have always been interested in learning how things work. I've always been that curious learner who's asking questions like, "Why?" And "How does that happen?" So I was always excited when it was time for science class and when science fairs came around. One year, I got one of those little chemistry sets for kids and it was just so fascinating. And I think that that's what sealed the deal for me at a very young age. I knew that I would have to do something that had to do with science, but it wasn't until college, when I was majoring in chemistry at Howard University that I learned about the field of atmospheric sciences. As a kid, I grew up on the south side of Chicago. And one of my favorite things to do as a family was to sit outside on our porch when the storms came through.

Michelle:

And I know that that's not the safest thing to do now. I didn't know it then, I know that now, but I really enjoyed that and I enjoyed everything about it. Like the smell of the rain, the sound of the rain on our metal awning, the thunder and the lightning, and then running inside when the wind picked up and brought the rain further under our little awning, that was just so much fun for me. And I always wondered how it all worked, but it wasn't until college that I learned about meteorology and atmospheric sciences. And that that could be your career path and all the things that you could do in addition to being a broadcast meteorologist, which that was my only exposure at the time, seeing

people on TV doing the weather. But it was fun to learn that there were other career paths and that I could actually do that as a career.

Rex:

That's wonderful that the weather was a family activity for you growing up in Chicago and was experienced very firsthand and was a huge sensory experience. I love the way you described it. So, Michelle, what opportunities did you pursue while you were in high school and college, or even in your early career that you knew, or that you found out, would be beneficial to securing a job in your profession? I know that you mentioned being a part of science fairs in high school and earlier, and that certainly connected you with the STEM field. What else?

Michelle:

Yeah. So I was always in an enrichment program. I don't remember ever having a free summer, even on Saturdays, I participated in a program called Saturday College where we would take math and science enrichment courses and field trips. And we would do those standardized test prep courses. And I can't say that I always enjoyed giving up my Saturdays or my summers, but in the end I really did make some good friends. And I learned a work ethic that continues to serve me well.

Michelle:

As I learned more about atmospheric sciences in college and in grad school, I participated in research that introduced me to NOAA. So in grad school, I participated in shipboard research cruises where we sailed across the Atlantic Ocean, into Saharan dust storms to understand the evolution of the dust plume and its impact on the marine boundary layer. And I found being at sea just fascinating. And those experiences really bolstered my interest in the field and expanded my knowledge in a way that's even hard to describe. I learned so much by being on that ship with all the experiments that were taking place, all the different experiments and working side by side with the scientists from NOAA and from different universities. It was just an amazing experience.

Kelly:

So you said you started off majoring in chemistry and then you became interested in atmospheric science. Is that what your master's degree was in? And then did you go on to a PhD after that?

Michelle:

So I got my bachelor's in chemistry and initially I was thinking that I would be a pediatrician. So as I said, it wasn't until I was a little bit further in, in my matriculation that I learned more about atmospheric sciences and meteorology and then changed course. So that's when I got more interested in that field. I worked for a little while before going back to grad school and majored for a degree in atmospheric sciences. And I knew that if I stopped at a master's that I may want to go back to work and I may not come back to finish the PhD, so I didn't stop to get a master's. I just went straight through and got the PhD in atmospheric sciences.

Kelly:

So how long does that usually take? How many years?

Michelle:

Yeah, that's a good question. So typically I think the master's takes about two years and then it's another, what? Four, maybe, four for the PhD. So I just did that all the way through.

Rex:

Were there other people in your PhD program Michelle, that didn't have master's degrees? Were you the outsider by the way you got to that program or was there other folks that shared the same kind of career path as you or the learning path?

Michelle:

Well, no, I think I might have been the only one who decided to just not stop at the masters. Everyone came in thinking that we'd get a masters and then either stop there or go on to the PhD depending on what your desire was. But I think I might be the only one who just went right through. I don't remember.

Kelly:

So once you finished your PhD, what was your first job in the field? And then how did that lead to your current position at the National Weather Service as the Chief of the Severe, Fire—this is a very big title. Chief of the Severe, Fire, Public and Winter Weather Services Branch. It sounds super interesting though.

Michelle:

So I'll even take it a step back and talk about my first job out of undergrad. That was with the National Governor's Association as a policy analyst, where I provided research and outreach to assist the nation's governors on policy decisions related to science topics. So my focus was on chemical emergency management, helping them understand dispersion plumes following major chemical spills, as well as invasive species and climate change. But the climate focus was the most interesting to me and that's what spurred my decision to go to grad school and pursue the advanced degree in atmospheric sciences. So then after getting the PhD, I joined NOAA, first as a contractor where I worked on program management efforts related to climate and I contributed to the NOAA strategic plan. And then after about a year, I applied for and got a fed position at the National Weather Service. And I've been in NWS for about 12 years now. I first worked in the Climate Services Branch and then took on this role as the Chief of the Severe, Fire, Public and Winter Weather Services Branch about three years ago.

Rex:

So what does the Severe, Fire, Public and Winter Weather Services Branch do? It sounds pretty literal, but maybe you could help us understand what the main activities are of your branch.

Michelle:

Yeah, so it's pretty exciting. And I'll say life at [National] Weather Service headquarters is pretty exciting. We definitely don't get the excitement of being at a forecast office when major systems come through. It's a different type of excitement. Right now, we're in the process of planning our priorities and milestones for 2022. The Weather Service has 11 national service programs and 4 of those are in my branch. So the Severe Program, Fire Program, the Public Program and the Winter Program. On a daily basis, we have lots of meetings, we meet with representatives at the regional level to get their input on how we can advance important Weather Service priorities, such as the [crowd-led] forecast process and

impact based decision support services. We also get their input on programmatic specific milestones. So for example, the Public Program is working to develop a unified heat services strategy.

Michelle:

We have our heat index product, but recently we've introduced new tools such as the Wet Bulb Globe Temperature and the heat risk product that's used in the Western region. And we want to develop a strategy for how these various products are used and communicated under an umbrella of an overarching heat service. And as you can imagine, that takes a lot of internal and external collaboration. So we're in the process of doing that, but in addition to the more steady state planning efforts, and advancing new initiatives, and managing the policies for issuing our watch, warnings and advisories, we also have the more unpredictable tasks that we contribute to such as providing responses to inquiries from Congress or inquiries from the public.

Kelly:

So how many people work at that branch? Is it like a really big department or is it smaller?

Michelle:

Well, I have nine people on my team and each program has typically two, sometimes three people who manage the program.

Kelly:

So Michelle, what do you like most about your job?

Michelle:

This is my first supervisory position. So what I like most is seeing people thrive and being in a position to help them do that. Managing people and managing projects is very different. Both can be very rewarding, but for me, being able to set someone up for success in a field that they are just as passionate about as I am is really just joyful. I've had a number of interns come through our branch, and it's really exciting to hear where they're going in their careers and to know that I've provided a stepping stone for them is just heartwarming. When I have the opportunity to acknowledge someone on my staff with an award or even sing their praises to upper leadership, that's gratifying.

Michelle:

Of course, I love that I get to be immersed in weather. And I have a say in our agency's priorities and I get to collaborate with other agencies and other countries through the WMO [World Meteorological Organization] on how we can advance our efforts on protecting life and property from weather hazards. Also, I get to collaborate with health partners on how we can join forces and share weather and health data to better understand how to protect people from hazards, such as extreme heat. There are plenty of others. I could go on and on. But the most rewarding part is really the positive impact that I can make on someone's career, and that being in this position is different.

Rex:

That's wonderful that you're able to bring up and support so many other people, so many colleagues and interns. Are those student interns, or are they people in college or high school?

Michelle:

So NOAA has a few different programs for students. Some are undergrad and some are for graduate students. There's also the Pathways Program. And so I've had a number of students from these different programs in my branch, working on different projects and things. And they're engaging with folks on my team, they're engaging with folks across the agency and it really is fun to see what's interesting to them and what they come in as maybe a first interest, but you share so many other things with them and they become interested in other projects. And it's fun to see how much they grow and learn over the course of their time with us and the presentations that they give at the end of their programs. And even to hear that some of them have been picked up at forecast offices as they move on. It's really exciting to watch folks grow.

Rex:

That's wonderful. So on the flip side, you've told us everything you like about your job. What do you see as some of the largest challenges that you face in your field?

Michelle:

Our field has a long way to go to address issues related to diversity, inclusion, belonging and equity. I remember attending AMS meetings in grad school and just feeling so out of place. When I started in the workplace and being one of few women in the room and often the only minority in the room, male or female, when that happens, you tend to question whether or not you belong there. And of course the answer is always yes, but I think that people underestimate the impact that the lack of representation can have on someone's perception of their full potential. You've probably heard the saying, “If I can see it, I can be it.” And in our field, especially as you move up in leadership levels, you just don't see much diversity. There are plenty of studies out there though that show that the most successful companies and the most successful endeavors are the ones that are the most diverse. So I just think there's a lot of opportunity for our field to make some gains in this area.

Kelly:

Well you're definitely a great advocate for women in STEM. What advice do you offer high school students and colleagues?

Michelle:

I would say be flexible in your planning. You might have a 5 year plan and then a 10 year plan, but something might come up that peaks your interest and changes your trajectory in a way that you could have never planned for. I mean, this happened to me. I thought I was going to be a pediatrician and I'm far from being a pediatrician right now. I—long story short—discovered really quickly that I don't like seeing blood on other people and can't handle cadavers would not make it through med school with that position. And just by chance came across the information about a NASA funded program aimed at atmospheric sciences. So that's something that I could not have planned for. And again, as I said, exposure is really important, because I just was never exposed to this career path and didn't know that it was available to me.

Rex:

For our student listeners and job seekers, what types of positions are available at the National Weather Service? And how's the future job outlook in general?

Michelle:

I would say keep an eye on USA Jobs [https://www.usajobs.gov/] because there are always interesting positions to be found in the Weather Service. Whether you're looking to do something in a forecast office or be at one of our regional headquarters or national headquarters, there's so many different options available. And we're always putting things out there on USA Jobs and they're also for students, NOAA has a number of programs that students can participate in that will give them experience and hands-on experience in NOAA sciences. So I would definitely investigate those options. Moving forward, I think that expertise in social science is really needed in the Weather Service. Our warnings are only valuable if someone understands what it means for them. So we continue to find ways to better understand how people are receiving our information and how they're perceiving our information and what moves them to take protective actions. So someone with a specialty in meteorology and communications would be a great addition to the Weather Service.

Kelly:

So for the National Weather Service, not all of the positions are shift work? I mean, for your position, for instance, you don't have a shift. You just have a certain—well, you have a shift, but you just have one set shift.

Michelle:

That's right. Yeah. Our forecast offices, of course, we've got to provide the forecast 24/7. So those positions are typically shift positions. At headquarters though, it is a typical 9 to 5, 9 to 5.30, I think, 8 hour day. So that's correct.

Kelly:

So you were one of 6 NOAA employees recognized in 2019 as Modern Day Technology Leaders at the Black Engineer of the Year Awards Global Competitiveness Conference. Congratulations on that.

Michelle:

Thank you.

Kelly:

What is the history of these awards and what do they mean to you?

Michelle:

Yeah, it was such an honor to get that award. So the Black Engineer of the Year Award started, I think in the 80s and it was spearheaded by Black Engineer Magazine and HBCUs or Historically Black Colleges and Universities, for the purpose of advancing interest in STEM fields and recognizing contributions of African-Americans to STEM. And the award ceremony coincides with a career conference for students so it's an awesome opportunity for minority students to gain exposure to opportunities in STEM fields, and to learn about the contributions of minorities to the field and to share in the celebration of those contributions being recognized. So for me, it was such an honor to even be nominated for something like this, but to get the award was just validating that I'm doing what I'm supposed to be doing, I'm enjoying it, and the fact that it's recognized is just an amazing feeling.

Kelly:

That's awesome. So for the career fair side of it, do they reach out to local community schools and invite individuals? Is that how that works?

Michelle:

I am not sure how the organizers reach out broadly, but I do know that it's well attended by various companies. NOAA has a booth there, and there's a big showing of students who participate in that conference as well.

Kelly:

Great opportunity for them.

Michelle:

Yeah.

Rex:

Well, congratulations again to you, Michelle and everyone else who was recognized at the awards.

Michelle:

Thank you.

Rex:

We're so grateful for everything you've told us about your career, about the National Weather Service and all the other context you've provided. However, before you go, we always like to ask our guests one last fun question at the end of our show. So you said that you were given a chemistry set when you were younger and that you, I assume started experimenting with this set at home. So I'm just curious, what were some of your biggest success stories and what were some of your biggest disasters?

Michelle:

I think the biggest success story and the biggest disaster is probably one in the same. And that was trying to keep my younger sister and brother away from it and then failing, and learning that I didn't have all the ingredients I needed for one of the experiments. It was also fun though to be able to go through the little book and do some of the experiments and hear the “oohs and aahs” from my family. That was fun. But yeah, keeping my sister and brother away from it, the times that I could, that was a big achievement.

Rex:

So it was probably your first experience working with scientific colleagues and finding a way to have a nice sustainable work environment.

Michelle:

That's right. That's right. Managing people, communicating, all of that comes into play.

Rex:

Well thank you so much for joining us, Michelle, thank you for sharing your work experiences with us. It's been a true pleasure.

Michelle:

Thank you for having me. This has been a wonderful, wonderful chat.

Kelly:

Well, that's our show for today. Please join us next time, rain or shine.

Rex:

Clear skies Ahead: Conversations About Careers in Meteorology and Beyond is a podcast by the American Meteorological Society. Our show is produced by Brandon Crose, edited by Peter Trepke. Our theme music is composed and performed by Steve Savoie. And the show is hosted by Rex Horner and Kelly Savoie. You can learn more about the show online at www.ametsoc.org/clearskies and can contact us at skypodcast@ametsoc.org if you have any feedback or if you would like to become a future guest.