

Transcript of “Randy Bass, Manager of the Federal Aviation Administration’s Weather Research Branch and AMS Certified Consulting Meteorologist”

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 on careers in the atmospheric and related sciences. I’m Kelly Savoie, and I’m here with Rex Horner, and we will be your hosts. Our podcast series will give you the opportunity to step into the shoes of an expert working in weather, water and climate sciences.

Rex Horner:

We are excited to introduce today’s guest, Randy Bass, a manager of the Federal Aviation Administration’s weather research branch and an AMS certified consulting meteorologist. Welcome, Randy. Thanks so much for joining us.

Randy Bass:

Thank you. It’s great to be here.

Kelly:

Randy, could you tell us a little bit about your educational background and what sparked your interest in meteorology?

Randy:

Sure. I have a bachelor’s of science and meteorology from North Carolina State that I received in 1987, and a master’s degree in meteorology from Texas A&M in 1996. When I first started college as an undergrad, I was an electrical engineer major. Then I started taking double E classes, but quickly realized that wasn’t the path for me. So I started looking through the book of majors that North Carolina State offered, and came across meteorology. It’s something I’d had an interest in, as far as weather, so I thought I’d check it out. As it turned out, the night before my meeting with the head of the meteorology department, and this is back in 1984, we had an unprecedented tornado outbreak in North Carolina. And from that, I was just hooked.

Kelly:

So that’s pretty interesting. So as you were a kid, when you were in high school, you really thought that you wanted to go into engineering. And then what made you veer to meteorology from the engineering point of view? You just were like, “Oh, this seems kind of interesting. I’ll give it a try.”

Randy:

It was between meteorology and psychology.

Kelly:

Wow.

Randy:

And my roommate was a psychologist with a 4.0, who was graduating with no prospects for a job. So I thought, "Hm, meteorology is a much better way to go."

Kelly:

Yeah. Good choice.

Randy:

I thought so.

Rex:

Speaking of job prospects, Randy, I'd be interested to know. What was your first job you found after you achieved your meteorology degree or degrees? And how did that first job eventually take you to where you are now?

Randy:

Back in the 1980s, after graduation, there were basically three paths for meteorologists they could take, the National Weather Service, grad school, or the military. But there was a hiring freeze, so the Weather Service was really hard to get into. And realistically, I needed a break from school. So after a year of being out of school, I joined the Air Force and became a weather officer, which to me was the best thing I ever did. I entered as a second lieutenant, and my first job was as a wing weather officer at Grissom Air Force Base in Indiana. So for the first year or so, I trained as an operational meteorologist, just doing forecasting, putting out terminal aerodrome forecasts, or TAFs, issuing watches and warnings, and providing flight briefings to the air crews.

Randy:

During that time, I also learned all aspects of weather support to aircraft and military operations for peace time training and war time contingencies. So throughout my career in the Air Force, I deployed three times to the Middle East and Egypt for almost a year total. I commanded weather units during those deployments, as well as two tours as a weather flight commander here in the states. I spent almost eight years supporting the intelligence community, working with satellites, and even learned a little bit about space weather on the side. So the Air Force even sent me back to school for my master's degree, so that was just a great deal.

Kelly:

Wow. That sounds really interesting, the work that you did. It must've been really cool to have that position. Were you a pilot at all? Or were you just more the operational and providing that information to pilots?

Randy:

No. One, my eyesight was never good enough to be a pilot. And two, it was just something I had no desire to do. So I had my meteorology degree, and I wanted to use it in my career. So after I retired as a major after 20 years, I then joined a defense contractor doing some weather related jobs. But after a few years, those duties started to change in direction, so I started to look for other opportunities. It just so happened, the FAA posted an announcement on USA Jobs looking for someone to lead their convective weather research program at the time. And with my background in aviation and my veteran's preference, I thought I'd at least get an interview, but I was fortunate enough to get the position and started working for the FAA back in 2012. In 2018, I moved up to be the acting manager of the weather research branch and got the permanent position around Memorial Day that year, so that's where I'm at now.

Rex:

That's great to hear.

Kelly:

So what opportunities did you pursue while you were in school, or just about to graduate, or even the first few months after graduation, that you thought would be beneficial to securing a job in the profession you wanted?

Randy:

My father had been in the Air Force, so he was the one who really encouraged me to look into the military. And since I had that degree, I was eligible to go in as an officer, and that really appealed to me. They had a need for meteorologists back then, so they accepted me into officer training school, and I started my training in 1988, so that would be the main one. Another couple of other opportunities that I did, I joined AMS and the National Weather Association, and being a member of both of those for years. It's through AMS that I was able to pursue my consulting meteorologist certification. I did that in 2013 after seeing a couple of friends and colleagues do it, and obtained that designation in 2014. So I think pursuing the career in the military and joining professional societies are the two opportunities that really come to mind.

Rex:

When you were in school, Randy, were there any classes other than the typical math and science classes that you think would be useful for students that might be interested in following your career footsteps?

Randy:

I think there's three areas that I try to talk to students and even young career professionals about, computer programming courses, like C++ and Python. Matter of fact, I just started learning Python on my own, so it's never too late to learn. Another area I'd encourage students to focus on is just mastering English or whatever your native language is, especially in writing. Whether

you're writing a forecast discussion, a journal article on your research, a performance report on an employee, writing skills are incredibly important and something that they need to focus on. And then finally, take a public speaking course. Granted, most meteorologists aren't going to become broadcasters, but we still end up speaking to a lot of groups in public, whether it's at an AMS conference, or even in your workplace. It can be very intimidating, but those kind of courses are really helpful.

Rex:

That's great to hear.

Kelly:

So during your career, I know you mentioned your dad had an influence in you joining the military. Did you have any other mentors that provided you with guidance along the way?

Randy:

I didn't really have any formal mentors in the sense of any kind of formal program. But I've had a lot of supervisors, managers, and colleagues that have provided tremendously helpful advice and guidance throughout my career. I've also worked with a lot of great people that I've watched and emulated over the years that I would basically consider indirect mentors or I guess you could call them mentors by proxy. There's just so many, too many to name or single out.

Rex:

On a different note, Randy, could you tell us currently what a typical day on your job might be like?

Randy:

Sure. So the branch that I manage, our job is to conduct research that mitigates the impacts on aviation. So anyone who's probably flown more than a couple of times has, I'm sure, had some kind of weather issue during their flight. It could've been delays because they had to deice their airplane. Maybe their flight was rerouted in the air because of thunderstorms, or they encountered turbulence, and the flight attendants couldn't serve beverages. What we do is research on convection, icing, turbulence, cloud ceilings, invisibilities. What we're trying to do is make your next flight as smooth and as safe as possible. So I oversee the program managers who do all that. And to me, it's really exciting stuff. And I think we're making a difference.

Kelly:

That does sound really exciting. So now where is your place of work? I know that some people work at airports. But are you not at an airport? Are you at a different location where you just provide information for different airports?

Randy:

I actually work in Washington DC at the FAA headquarters. So again, we're doing the research or we're monitoring the program management of that research that's done by national labs and other vendors and industry. So no, we're not actually at an airport or anything. But the good

work that we do and the successful algorithms and other things that we do get sent to usually the National Weather Service for incorporation into their support to the FAA.

Kelly:

What do you like most about your job?

Randy:

Yeah, actually, that's a good segue because what I really love about the job is when we transition that new capability to operations, or do something that enhances the safety of aviation, or the efficiency of flying. In many cases, those capabilities not only help the flying community, but the general public. For example, we funded the initial development of the high resolution rapid refresh model, the HRRR. It was developed specifically for aviation, but because it was so good at forecasting thunderstorms in that zero to six hour timeframe, that now all National Weather Service forecasters use it for their area forecast. And with convective weather season coming up right now, it's always cool to see that what we were doing in research just a few years ago is now being used in operations to make better forecasts.

Rex:

What is the most challenging part about your job?

Randy:

I'd have to say the timeframe for research. We get a need and everybody wants it done right then. But unfortunately, it takes a while to get the research done and into operations. We want to do it as fast as possible, but it takes much longer to develop that capability and then transition it into operations. And we just can't develop something and then send it out for use. You've got to do a quality assessment to determine how accurate it is, and then use their evaluations to make sure that the operators know how it's supposed to be used, and that it performs operationally like it does in the lab. And that includes training the users as well. So the greatest invention in the world is useless if people don't use it correctly. It just takes time, and that can be exasperating at times.

Kelly:

Does your job allow for a good work/life balance? Do you work a Monday through Friday regular shift job? Or is it different hours, depending on the day?

Randy:

No, we actually have a good work/life balance. I work a 980 schedule, meaning I work nine hours a day for eight business days, then one eight hour day, and then get one day off every two weeks. There's no shift work, so I don't have to worry about working nights or weekends. And I do travel occasionally, but there's no chance of being deployed like I was in the Air Force, so it's definitely a better deal as far as work life balance.

Kelly:

Yeah. I mean, it must be good to have a set schedule because I know that a lot of forecasters are on those shifts where they have to wake up at 1:00 in the morning. It's got to be really hard.

Randy:

It was easier to do when I was younger. I do not envy people that do that at my age anymore.

Rex:

Randy, what is one of the most exciting moments in your career, either in assuming a new responsibility, completing a project, working with a particular person, a team?

Randy:

To me, it's probably events. And there's a ton of them, but I think a couple of them I can think of right off the top of my head. While I was stationed at Grissom, this was I believe 1993, we had three tornadoes go over the base in one night. And of course, there was a huge base-wide formal dinner going on. We blew the alarm, so the guests had to huddle in a shelter for about three hours. And every time we'd start to give the all clear, another storm with a hook echo would form and move towards the base. That was really my first brush with tornadoes right there at us.

Randy:

But it wasn't until 2001 when I visually saw my first and only tornado when I was stationed at Ellsworth Air Force Base in South Dakota. Fortunately, it stayed off to the north and just grazed the very edge of the base, so it didn't really do any damage. But that was the first time I was able to actually see one. But I think what really stands out is an event that happened back in the late 1990s. If you remember the movie *Free Willy* about the whale, the whale's name was Keiko. And the Air Force was tasked to fly Keiko to Iceland, where it was released back into the ocean. I actually set up the weather support for that flight.

Rex:

Wow.

Kelly:

Cool.

Randy:

To me, it was pretty exciting. And my daughter thought I was cool.

Kelly:

Well, it's definitely cool. Is there anything you wish you had done differently in your career?

Randy:

My career's had some up and downs like everybody else's. But I've always thought that things happen for a reason. And I wouldn't be where I am today if I had done things differently. And I like where I'm at today, so no, I can't say that there really is anything.

Rex:

We talked about the CCM as a form of professional development. Are there any other opportunities that you've pursued to keep current, classes, or any other sort of meetings, or events, or anything really?

Randy:

Sure. Obviously, my job keeps me current because we're always looking to enhance safety in working with weather. Besides just the CCM, I'm really involved as a member of both the AMS and the National Weather Association, being a member of a couple of committees with those organizations. I do try to attend the annual meetings for both of them. I read BAMS, the *Bulletin of the American Meteorological Society*. And even though I don't do any operational forecasting, per se, I still check out numerical weather models and other data to stay informed and try to, if nothing else, alert family and friends when weather's approaching. So I'm proud to be a weather geek.

Kelly:

Do you have any advice for any of our listeners who are looking to pursue a career in aviation meteorology?

Randy:

Sure. Aviation meteorology is an interesting career field. So if you're a student, first of all, explore opportunities just beyond your regular classes. I'd say look into the intern programs. The National Weather Service and the airlines have intern programs specifically for aviation weather. We even have an intern program here at the FAA. And our aviation weather division has hosted interns last year and in the past. Of course, consider graduate school or the military. And then for everyone, including mid and late career, it's never too late. So you can get involved with your local AMS chapter. These are great places to network and even find a mentor if you need to. Contact your TV meteorologist or others in the career field that may be in the local area. Talk to them. Don't be afraid to ask someone to be a mentor or help you out with some advice. And then if all else fails, and actually, I shouldn't say that, feel free to contact us at the FAA. There's about a dozen meteorologists that we have on staff. And any of us would be happy to answer any questions you might have about the career field.

Kelly:

So for the FAA for aviation jobs, are there any other majors besides meteorology that would work for that field, or do they specifically look for meteorology majors?

Randy:

No, we're a very small minority. Most of the people that work at the FAA are engineers, or of course, air traffic controllers. And even in our division, it's about half various types of engineers and half meteorologists, so it is certainly not just meteorologists that work for and support the weather program.

Rex:

If you were hiring a meteorologist, what would you look for on a resume?

Randy:

I believe the two things we always look for in a well written resume and cover letter, it just needs to reflect your experience. Obviously, anything aviation or weather related should be highlighted. But we want to look and see how well rounded an individual is. We're looking at leadership experience, or experience with managing a project, something that makes you stand out. Just remember you're competing against others who are just as qualified as you are. And employers, and that includes us, we're looking for anything that sets you apart. So those are the kind of things that we look for in a resume.

Kelly:

Are there opportunities for entry level positions all the way up to senior positions in the FAA? Or is it more you look for people who have a little bit more experience?

Randy:

For the FAA itself, it can run the gamut from right out of college to senior people in their career field. For meteorologists, other than the intern program, realistically, we'd like somebody that's had some operational experience or had a few years of experience in weather, so more of a mid career person is probably better suited for us just because it is a very intensive position.

Kelly:

So Randy, we always asks our guest one last fun question at the end of each of our podcasts. What is your favorite hobby?

Randy:

That's an easy one for me. That would be fishing.

Kelly:

What kind of fishing?

Randy:

I prefer saltwater fishing, specifically for a species like drum and trout. But I enjoy freshwater as well, bass fishing, crappie fishing. And once I retire and move to wherever we end up, my plan is to buy a boat and fish as much as possible.

Kelly:

Have you always fished since you were a kid? Or is this a new hobby?

Randy:

No, I probably learned to fish right after I learned to walk. So I've always found it challenging and relaxing at the same time. So yeah, I look forward to my days on the lake.

Kelly:

What's your biggest catch?

Randy:

I've caught a couple of red drum that weighed probably 40 to 50 pounds.

Kelly:

Wow.

Randy:

I caught them off the pier and they were actually too big to keep, so all we did was see how long they were, held them up, took a picture and then threw them back. So I don't know exactly how much they weighed, but typically it's about a pound an inch, and they were over 40 inches.

Kelly:

Not bad.

Rex:

Thanks so much for joining us, Randy and sharing your experiences with us.

Randy:

You're certainly welcome. Like I said, if anybody ever has any questions, feel free to contact me and we'll be happy to answer any of your career questions.

Rex:

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