Transcript of "Doug Kluck, Climate Services Director for the Central Region at NOAA's National Centers For Environmental Information in Kansas City, Missouri"

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 and 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, **Doug Kluck**. He is a Climate Services Director for the Central Region at NOAA's National Centers for Environmental Information (NCEI) in Kansas City. Welcome, Doug. Thanks very much for joining us today.

Doug Kluck:

Thanks for having me. And we have to always say Kansas City, Missouri, because often I say I'm from Kansas City and they go, "Oh, you're from Kansas." And I say, "No, it's Missouri." Although it's confusing because there's a Kansas City, Kansas. Anyway, on we go.

Kelly:

And they're pretty close to each other, aren't they?

Doug:

Across the river.

Kelly:

Which makes it even more confusing.

Rex:

Coincidental, huh?

Doug:

Yes, odd.

Kelly:

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

Doug:

Yes. My background is an earth science background. So my undergraduate degree is actually in geology, University of Nebraska. After leaving my bachelor's degree or after getting my bachelor's degree at the University of Nebraska, I went off to sell pizza for two years and that drove me back into the educational world again. So I've always been interested in weather and basically processes. Why do things happen or what makes it happen? And I think from a earth science point of view, it doesn't matter if it's geology or meteorology or climatology for that matter, it's all figuring those things out. So that was my big interest, I suppose, to go back to graduate school and get more understanding of all that.

Doug:

So then yeah, went back to school, got a master's degree actually in geography officially with an emphasis in climatology, but I wanted to make sure that I could be a meteorologist with the National Weather Service. So I took all those undergraduate and graduate courses to check all the boxes, if you will, to make sure that if nothing else I could go and be a forecaster for a while. And after I graduated, I worked for a private organization, North American Weather Consultants, for a couple years in Utah and then was hired by their service back in Silver Spring at the headquarters where I stayed for six years.

Kelly:

So for the National Weather Service, do you need to have the equivalent of a bachelor's degree? Do you have to have a bachelor's degree or can you have taken all the courses and maybe not have a degree?

Doug:

It's a funny thing. I was told when I went through the program that actually there's nothing at that time. And I can't say right now, but at the time you do not actually have to have a bachelor's, but you have to have synoptic one and two, you to have dynamic one and two, and you have to have at that time up to calc three. Now it's differential equations. So yeah, it would be crazy if you didn't have the degree though, because you certainly have the hours and the liberal arts training actually, which is not a requirement, but goes along with a college degree.

Kelly:

So you pretty much have to have whatever's required to get a bachelor's degree in meteorology or atmospheric science for the most part.

Doug:

Yes, but in my case it was those courses, plus a bunch of climate courses and seminars and things like that. That's the way it was at the University of Nebraska at the time. You pretty much had to get a physical geography degree with an emphasis in climate. It wasn't a climate or meteorology degree that I got.

Kelly:

Right.

Rex:

Doug, did you do any meteorology-related work or pursue that interest in high school?

Doug:

No. Other than having a few hobbies. I had some goofy weather vane and I was supposed to have all kinds of instruments on it, but it was so low tech that I think we had it up for a month before it blew over in my backyard.

Rex:

Was it like ping pong balls cut in half on sticks?

Doug:

Yeah, but it was more official than that. It actually was like a kit. Right?

Rex:

Oh, okay.

Doug:

Yeah, but in no way was it ever accurate about anything, but it's fun. It was just a fun thing. And I think someone knew that I liked weather, and one of my uncles gave me a handheld wind speedometer, so I could go out and hold it up real high above my head or whatever when it was on a windy day and be amazed.

Rex:

And if you got knocked over, you knew the wind was pretty strong.

Doug:

I did try to go out in the worst conditions, if possible, in terms of wind.

Rex:

You made it to Nebraska for your undergrad. At that point, what opportunities did you pursue inside and outside a school that you thought would be beneficial to securing a job in atmospheric science? You'd said your focus was on the Weather Service at that point. So what opportunities did you think would help you along that path besides the curriculum?

Doug:

Well, again, my undergrad was in geology, right? So I found out pretty quickly that you needed to get a master's in geology and I didn't have the passion to do that at the time. That's why I went elsewhere and was driven back very quickly within a year or two to getting a graduate degree. And at the time not a lot of people—not like today—had a graduate degree in climate or meteorology. So I knew that would give me, if you will, extra points, right? Extra points when it came to qualifying for various jobs in NOAA, to be honest, and others.

Rex:

Were you doing any internships while you were still heading on the geology track?

Doug:

Yeah, so I had some summer jobs that were more on the agricultural side, I'll just leave it at that, and had nothing to do with meteorology and climatology. I was actually a herbicide and pesticide pusher and it was a summer job for a big chemical company actually. I'm not proud of that.

Kelly:

So you mentioned your first job in the field and tell us a little bit about that, and then how you managed to get a job at NCEI.

Doug:

That's a much more longer drawn-out question. So my job was with, as I said, North American Weather Consultants in Salt Lake City. And I was primarily hired because of a very particular grant. So it was to look at probable maximum precipitation in the upper Midwest area. And what that is, is to come up with a theoretical, maximum value for precipitation so that high hazard dams and things like that wouldn't break. So it was a combination of coming up with these fantastic numbers that can't happen, or else I wouldn't say were reliable, but if they were ever reached, you weren't doing your job. How about that?

Doug:

And so we had to come up with these problem, maximum precipitation numbers, and they were put into a problem maximum flood so that the Corps or the Bureau of Rec or anybody else could build their dams or make sure they were built big enough to withstand that kind of water. And that's built above a high hazard dam, all that kind of stuff, or a high hazard area. So if they break, hundreds, thousands, whatever, people die. That's what I did for North American Weather Consultants. I'll try to get this really quick here.

Doug:

From there, I was basically pirated by the Weather Service by a guy who was reviewing that study that I was doing for a private group, because the federal government generally did these. And so we were a private group being hired to do it. That gets a little hairy, to be honest with you, when you're talking about high hazard dams and being careful so that people don't die and dams don't break and all that stuff.

Doug:

Anyway, so I said, “Okay, I'll go back and work.” This was within the Weather Service. And so I said, “Okay, I'll go back and work with the Weather Service.” I did that for six years doing probable maximum precipitation. In this case, very focused on California. After that, I went to Hastings, Nebraska as a forecaster—a general forecaster. After that I was at the River Forecast Center in the Missouri River basin for a couple years. Then I moved to the region within the Weather Service. So basically 18 years I was in the National Weather Service, and the last 10–11 years, I've been doing this Regional Climate Services Director job. And there's more to that story in terms of Regional Climate Services Directors and why we were created in the first place.

Rex:

Well, we're going to find out part of that story next. My understanding is that Regional Climate Services Directors—there's six of them—and according to NOAA, they are an integral part of NCEI's local,

regional, national, international, sectoral, and topical engagement. And the directors, the RCSDs, are key to increasing the value of climate information to users across the U.S. and its territories and helping meet a wide range of local needs for environmental information services. So that's my brief introduction to your position, but I'd love to hear it from your perspective how you would describe your work and what a day or a week is like in the job that you hold.

Doug:

I grew up in this position under a woman by the name of Eileen Shea and the description that I like to use for climate services is helping to solve problems at the local and regional scale across time scales. Okay. So we're not just talking about 10,50,100 years from now, we're talking about two weeks from now. We're also talking about the entire past—the climate record—if you will. So there are questions that come to us and anybody in the climate realm and weather worm for that matter that are place-based questions or for people who need to make decisions. They span, like I said several times already, time scales. So you never know exactly what people want and it changes all the time, well, based upon their needs, based upon extremes, based upon lots of different decisions, based upon sector for sure.

Doug:

And that's what we try to help inform. We can give you an answer, but it may not be the whole thing you need to make an informed, good—keyword "good"—decision. Right? We can help people make decisions all the time, but we want to have them make good decisions based upon the information. Or I like to say, inform them on what's coming at them. And that's the longer range. Looking back actually at history, one could say, even without climate change, we're not prepared for a lot of the extremes that we're going to face. We could exclude the whole argument on climate change and say, "Well, are you really ready for 10 years of drought like we've seen in the past?" The answer is almost always no. Or the flood of, I don't know, 1935, if that happened again, are we prepared for that? And again, the answer is often "no, not really" because it doesn't happen very often.

Doug:

Anyway, with climate change it adds a degree of complication and a lot more discussion and a lot more deliberation, to be honest with you. It's an iterative process often working with and handholding, if you will, depending upon the sector or individual that needs the help.

Kelly:

So in your position, do you interact with the public at all or is that a whole separate department?

Doug:

So interestingly I began this job in 2010, but soon after, it was the spring of 2011, we had one of maybe the worst flood episodes where 800% of normal precipitation.

Kelly:

Wow.

Doug:

And at least 300% of normal fell in May, and it was already wet. Mountains had a lot of snow on them up in the upper Missouri basin. And it flooded the lower basin and everything in between for three to six

months, depending upon where you were and flooded in a major way. People couldn't get back to their homes or anything else in the Missouri bottoms, if you will. That spurred us in its new position to think about delivering information beyond the next seven days or 10 days, like the weather service does and a very good job of it, to looking at how can we use the climate prediction center's outlooks? How can we use antecedent conditions? How can we put all this technical climate stuff together and make sense of it for people who again, need to make decisions either short or long term?

Doug:

And so we began a webinar series. It doesn't sound like much, but a monthly webinar series that we attempted to use ... people who are used to speaking to public audiences across sectors. And so we started, if you will, leveraging our partners with the American Association of State Climatologists. In fact, we have great state climatologists in this region, the north central part of the U.S., them in the National Drought Mitigation Center and what became the USDA's climate hub folks and other people in the climate business to monthly talk about drought, talk about extreme events, talk about the way things are going and helping people understand what La Nina and El Nino and all these things are. An it's turned out to be a relatively popular thing.

Doug:

And yes, it's 100% public and anybody can get on and people from around the world get on it, interestingly enough. If you ask me why, I don't know. I never went out and talked to them, but I think they're mostly commodities based people, but that's okay. We don't care. Anybody can get on them.

Kelly:

Wow. Well, I'm glad that was a positive thing and people are actually taking advantage of it.

Rex:

Doug, did you find that viewership of the webinar series has increased over the last year or two?

Doug:

Oh, absolutely. And there's a number of reasons for that. One is a consistency thing. So I hate to compare it to McDonald's, but we're pretty consistent in what we do. You know what to get. You know what you're going to get when you come to this thing, right? We change it up a little bit here and there. And certainly every time there is an extreme event, it has to be a regionally extreme event, not just a local one, there's a lot more interest in tuning in. So we just had one. We do it the third Thursday of every month. And this month, guess what happened in the Midwest? Gosh, it was active, right? There were giant tornadoes and lots of them and crazy warm temperatures twice. By the way, it's going to be almost 70 or maybe 70 here this Friday. That's crazy. It's the end of the year. We should not be seeing this. Right?

Doug:

So anyway, that perks interest, right? And so more people tend to tune in, even in December when everybody's not paying attention, and it shouldn't be a big deal. It should not be. Yeah, sure, we could have some floods and that could be big deal, but really, December's an off month, if you will. And we still had a record number of December attendees, so yeah. And again, these are ag energy and I think general interest, but I also think a whole bunch of federal agencies. FEMA and those kinds of people like to hear what we think we know from, if you will, an unbiased source.

Kelly:

Yeah. Well, people love the weather. There's a lot of interest in it. Just the general public really are interested in learning more. And I can see with everything that's happened over the last couple of years, people are used to watching things on the computer now and [crosstalk 00:16:55] And you said you've been doing it for a while, right, since 2011? Was that what you had told me?

Doug:

Yeah. Well, after the big floods of 2011, I don't remember how we figured this out, but we figured out ... well, we started getting a lot of questions like, oh, it's another [inaudible 00:17:11] year back to back. Oh, my God, that means we're going to have more floods next year. Well, of course, I don't know if any of you remember what happened in 2012, but we'll just say 2011, we started at the fall in saying, okay, okay, folks. Yeah, it sure is wet. We got to worry about this. We got to worry about this. And then 2012 happened. And if you're old enough to remember, or you have a memory like a climatologist, you'd say, oh, my God, we went into the worst drought of all time, a one year, however, drought of all time.

Doug:

And so there was a bit of a flip there, which also kept the interest of a lot of folks coming back. And getting the word out on this is one of the things we try to do a lot of. Yeah, we address realtime climate as opposed to what I would consider climate change aspects. Now we've got questions about climate change, but really we're addressing real time climate issues, a season or two in the future and the last 90 days or something like that.

Rex:

Well, Doug, it's great that you're serving up a Big Mac of climate information that your folks are finding incredibly satisfying and fulfilling, so congratulations. One more question for you before we move on. I just wanted to touch base on what the central region comprises how many states. And how would you describe the range of your region?

Doug:

Yeah, well, officially, it's 14 states, but we really adopted two extras. So I'm going to say we cover everything from the Great Lakes on the east, down to Kentucky, over to the Rocky mountains. So I like to say north central states. And so the Southern border's really Kentucky, Missouri, Kansas, and Colorado. [crosstalk 00:18:57] all the way north.

Kelly:

That's definitely [crosstalk 00:18:58] a big section.

Doug:

It's a bit. It's a bit big. Yeah. Yeah.

Kelly:

So your position, you've been working in it for a while. What would you say you like most about it?

Doug:

Well, like the weather business, it changes. I wouldn't say almost every day, but it changes often enough to keep my weather and climate needs satisfied, I guess. It's also interesting. I think the service aspect is what I've grown to like over time and understanding that you are actually helping people make informed decisions. We like to say, we inform adaptation. We're not experts on how to do adaptation, right? We don't say you need to put white roofs on or green roofs or whatever, or do your streets in a particular manner. But we will say, look, heavy precipitation is happening more often, and in some cases, increasing. So again, I couldn't tell an engineer how big they need to build ... put a culvert in, but I can give them values on how often and how much, that kind of thing. So that's what we mean by informing, as opposed to informing you how to do an adaptation, right. It's two different things.

Kelly:

Yeah. You just hope they will take your advice and figure it out for themselves and they will do the right thing.

Doug:

Right. So I would say the service aspect is cool. And especially when you get people commenting that this has helped us do this. And we just completed a survey by the way, just on the webinars. I'm going back to that again, just on the webinars to find out, are we being relevant and are we saying the right things? Are we being too technical? All that kind of stuff. And we got very, very favorable responses on that. And, Hey, if you want to go watch an AGU presentation, you can go watch me spout about that. I have a session in there, and AMS. Oh gosh, I should be careful who I'm talking to. I forgot. So I will be at AMS delivering a talk on our survey on the 25th.

Kelly:

Excellent.

Rex:

Well, Doug, I won't ask you to tease or spoil too much of the survey, but I'm certainly interested to know how you posed those questions. If for instance, you asked flatly, are we relevant? Or if you had some other ways to tease that information out of the survey responses.

Doug:

So I'm not going to take credit for the survey. I'm going to give all the credit to Tanya Haigh at the National Drought Mitigation Center in Lincoln, Nebraska, because that's who we went through to do the survey, so they did that. I would say the questions we asked were ... yeah, questions like was this helpful to make decisions? What decisions? That kind of stuff. But we have numerous quotes that show various sectors are using this. A lot of times they'll take our information and repackage it. That happens a lot. Media gets on there all the time and we're surprised. Sometimes we actually hear our own voices, but there's always a news story that comes out of it, or various news stories that come out of it, depending upon who happens to be on at that time. We do spend a lot of time on agriculture because the north central part of the U.S. is ag heavy when it comes to ... In fact, agriculture is often the canary in the coal mine when it comes to a number of climate processes.

Rex:

Doug, I've heard that Great Lakes are the other canary in the coal mine, is that true?

Doug:

They are. They can be, I'll put it that way. And there's quite a few theories out there, hypotheses out there on if the Great Lakes are getting higher, or they have been and higher than normal. Not now, but they were a couple years ago and that caused a lot of damage and such. But it seems like if someone would ask me what changes that we're seeing the most of that people notice is the variation in water level, in the Great Lakes, for example. And variation in rainfall and runoff would be the other thing that I would claim would be the most that we're increasing variability year to year at east on some of those variables.

Rex:

Doug, we've talked about your successes with the webinar series. Could you tell us what some of the biggest challenges are that you face while working in your position?

Doug:

Right. Well, one of the biggest challenges is ... and I guess I've learned to figure this out, but one of the biggest challenges is anybody and everybody, once you tell them what you do for a living, asking you immediately. The golden question is, do you believe in climate change? Do you believe it? And my answer to that is, well, I don't really think of it as a belief system. I do understand the science behind it, and I understand the facts. I mean, if you want to know about the facts, I can talk to you about that, but I'm really not going to talk to you about a belief system because it's not a belief system to me. And so that I think helps.

Doug:

I don't know, some people continue on that line and that seems fine to them. They understand what I'm saying when I say, well, I understand the science, okay, as opposed to a belief system, because belief systems, then you can shrug it off more easily if you don't want to believe. I don't try to be too smart about it. I don't say, yeah, I believe in Santa Claus and climate change. I don't say those kinds of things to people.

Rex:

I just was going to tease out the definition of a belief system versus climate change as a collection of scientific facts, and belief system usually pertains to religion or philosophy or a moral code, usually involves a higher power or a higher guiding principle of the universe and everything. And what you're saying is contrary to that, the climate is you see it as a collection of facts, not as a religion that one can have faith in or not have faith in.

Doug:

Well, yeah, one can choose. I'm not choosing, right?

Rex:

Exactly.

Doug:

That's my point.

Kelly:

Right. And I think that's a really good way to explain it. You're just like, well, I see the data. I can read it for myself. I can figure out what's happening and there's really nothing to wonder about. It's there.

Doug:

It is there. And I'd say that's my main challenge while although getting eyes and ears on the information that we provide is also a challenge. And I think that comes over time and constant because there's so much information, right? We get hit all the time. And to be honest, I would say just like there are forecasts of opportunity, there are probably communications of opportunity. And it's during those extreme events, unfortunately, where people pay attention.

Kelly:

Right. Right. So we've read that you're a tribal liaison for NOAA. Could you explain to our listeners what's involved in that role, what it means to be a tribal liaison?

Doug:

Well, different parts of NOAA have different regulatory, I'll say, responsibilities, whether it's with tribes or states or business sectors. The part of NOAA I come from doesn't have any regulatory responsibilities when it comes to any of those things. So, that's mostly a good thing. I'm not seen as a threat to regulate your fish, right? Your fish catch or whatever. There are other parts of NOAA that do have those responsibilities and they have to do what we call government to government consultation with tribes, for various reasons. I don't want to get into that because that gets very deep, very fast, but luckily I haven't had to go that route and be that formal.

Doug:

Most of my dealings with tribes and indigenous peoples in general are about sharing information. And I say sharing because it's not a one way street. It's not just me spouting. Right? It's the first thing I've learned in this job is to listen, especially when dealing with, well, anybody really, but tribes in particular because they have a lot of ... I'll just say they have a lot of background. They've been here a long time. And some people call it traditional ecological knowledge, right? And there's a whole field devoted to that and what various people within the tribes ... And every tribe is different, so I got to be careful just saying, tribes [inaudible 00:28:01].

Doug:

So there is a general interest, however, in climate and climate change. If you're in a part of the world for a long enough time, things are supposed to work or climate doesn't usually change that quickly. What I would say is there are some tribes who are very, very cognizant of those changes that they're having to deal with. And that may be plant species, animal species, pollution, et cetera that is changing their lives. And they want all the most updated information they can get for their own capacity to be self-sustaining. And my job is I work with a lot of other, I guess, areas or people [inaudible 00:28:45] with interesting climate is trying to explain again, from a Western science point of view, what I know in terms of the science and what they're going to confront in the future. What's going to make a tribal

community's life different, harder, or easier in the future based upon the science? And that gets blended with a lot of other information that they have to make their decisions.

Kelly:

So how often do you interact with the tribes? Is this a monthly thing or a few times a year? How does it work?

Doug:

Yeah. So there are a number of tribes across the north central part of the U.S. There are tribal colleges across the U.S. as well. My region's already too big, just from a state point of view. It's even bigger when you look at the number of tribes. So actually I work through a number of partners. Occasionally I work directly with a tribe or a small group of tribes on building capacity for that tribe, with climate information, for example. And it could be climate change or it could be drought. It could be a lot of things. I've worked a lot with a group called the Great Plains Tribal Water Alliance, but I've also with them through other entities. And that's important, is to build trust through other entities that you already know that they know that you're okay and can be trusted to give them good information and all that kind of stuff.

Doug:

So how often? That's a tough one. It comes and goes. There are these Bureau of Indian affairs climate resilience grants, for example. We will sometimes help tribes get the language or write particular language sometimes, or participate in whatever the grant is. And we don't make any money off that. That's not our game, but we can help them with their grant, putting the grant in and maybe even pointing them in the right direction in terms of what do you want to get out of this? A climate adaptation plan or something like that. So there's a lot of go betweens and a lot of partnerships. I have to say that my job is basically a giant partnership. I can't do 16 states by myself. There's no way. There's no way, even with all of NOAA's capabilities. Actually, in the center part of the country, we have a lot less capabilities than we do on the coast. And I would say that's just a matter of numbers really. We're hoping that the importance of that gets elevated in the future in NOAA.

Rex:

Speaking of trust building and information sharing, what have you found are some of the most effective ways to explain technical climate information to different levels of government and other entities?

Doug:

Yeah. So that's another challenge that I could have mentioned earlier in that you need to suit your presentation or information based upon the audience. Right? So if I go talk to, let's say corn growers in Iowa, I'm probably not going to say the same thing I do or put it the same way I do if I go talk to a renewable energy in Kansas. It'll be similar in a lot of ways, but the way I will tell it, and maybe some of the facts that I'll add or not add will be pertinent to their particular sector, whatever I think they care about. Right? One thing I do in the agricultural side is make sure everyone understands that I grew up on a farm and worked on a farm, a feed lot, actually in Nebraska for a number of years. And so I have some relationship with agriculture from that point of view, but I also work with a lot of folks in agriculture that know a lot more than I do. So it's easy for me to reach out and get quote unquote "answers" beforehand.

Rex:

Do you find that analogies can sometimes be more helpful than data? There's the famous instance of using a glass of water and ice cubes to talk about climate change or a bath water or things like that. Do you find that those concrete examples provide any perspective that wouldn't otherwise be available through let's say a Celsius degree changing?

Doug:

Sure. Billy Nighy the Science Guy, right? He's excellent at that kind of stuff. My take on that is if I can think of a personal story that relates to either their question or what the point is I'm trying to get at is best for me in terms of communicating. So if I can think of something that I personally have noticed or been through or lived through or whatever, that seems to connect a little bit better. So the storytelling aspect of even doing the webinars is key, and I say that pretty loosely. So the way we do it on webinars is look at the past and then move to the future. And in between is a bunch of impacts, right, that we've noticed across the region.

Kelly:

So, Doug, you mentioned that you do presentations and talks at AGU and AMS. What are some other professional development activities you engage in to stay current in your field?

Doug:

What do I do? I read a lot, right? So I read a lot of news and I read a lot of, I'll just be honest with you, E&E news. And like I said earlier, this partnership thing, state climatologists are really key. We get them together at least once or twice a month and just have a conversation on what's happening in their state, right? That's how we, us regional folks stay up on things, and you got to hope you're plugged in to the right feeds, if you will. So I sit here in a national weather service building, and I used to work on the other side of this building, but I'm still part of various email groups. So when stuff hits the fan, I get to see some of that stuff. And that's helpful, right?

Doug:

And vice versa, I can say, Hey, we're going through the worst heat stretch than we have in the last 50 years. Do you know that? And they say, oh, no, but we'll include that and this and the other thing. So again, it goes both ways. It's all about partnerships. Working with a core of engineers on water supply and all that kind of stuff is also key. Like I said, I mentioned FEMA, a little bit about EPA. And then there's all the states and all the drought coordination and the National Integrated Drought Information System, also known as NIDAS. There's all these networks within networks and it's incestuous. I'm totally going to be honest about that, is that a lot of the same people are doing similar things, and there's a bunch of these big circles crossing each other, right, where we interact.Well, it's complicated. It's one of those things that takes a while, takes a while to build that network and appreciate it, to be honest with you.

Kelly:

You keep your eyes and ears open. That's [crosstalk 00:36:03] a really important part of your position it sounds like.

Doug:

Yeah. But luckily I don't do daily operational stuff. Right? That saves me [crosstalk 00:36:15] One person, again, can't do it all.

Rex:

For our listeners who might be interested in a potential career at NCEI, what level of education or skillset is required or desired for most positions?

Doug:

Well, I can't speak for all those positions because there's a lot of stuff that they do down there in terms of data, archiving data, well, everything to do with data, because that's the storehouse, well, global store storehouse for climate and environmental information. And that includes climate models, meteorological models, obviously satellite information, forecasts, as well as all the variables that we collect, like temperature and precipitation at a lot of gauges on various networks. So I'd say that's ... I don't know what percent, but it's a huge percent of what happens at NCEI in terms of data collection and archiving. Right?

Doug:

And then making sure the other part of that is service, right? So, what, you collect all this information? What good is it unless you do something with it, right? So then there's a whole service aspect. I'm part of that, but there's also a lot of people who do daily take inquiries all the time, and you'd be fascinated by the different number of requests for information from lawyers, obviously litigation purposes, but also people doing research, right, and energy production groups and whatever. There's all kinds of people or all kinds of needs for that kind of information.

Doug:

On my side of the house, I guess, in a service point, what kind of education do you need? That's a great question. I think I got lucky. I'm not sure why I'm here, but I would say a strong background in climate and meteorology is a necessity to understand what's happening. And it really depends on if you're ... I don't mean all, but if you just want to focus on climate change, that's one thing. But if you want to be relevant in the real time, you should be able to answer some, if you will, real time questions as well. And thus a broad background. Maybe I didn't appreciate it as much when I was in it, but the liberal arts background is really important as a basis.

Doug:

And then on top of that, the science. And then on top of that, if you will, and I don't know how I learned this, I think it's just over time and maybe you'd say I haven't learned it yet, is the communication skills it comes with, with me, came with just doing it over and over and over and over and over again. I'm really bad on TV. If you ever see me on TV, it's bad. It's bad, really bad, but I'm not as intimidated as I once was in terms of standing up and talking. Right?

Kelly:

Right. That seems to be one of the ... From doing these podcasts, the communication aspect of it seems to be really, really important and more important than it used to be, to be well rounded.

Doug:

I'm afraid so. And it's definitely not a class you take. It's not. Yeah, you can go take, oh, what is it? Toastmasters. Wine masters, you can tell where my mind is. I did that once and I thought, oh, boy, I don't like this, so I didn't. And then I guess I had to learn the hard ways. It's throwing me to the wolves and getting me out there in front of people, and talking a lot. So I would say, yeah, hone your communication skills and don't be afraid to try it. I know that we are challenged in the technical side. I know, I know. I've listened to enough of us. I've listened to me 10 years ago and it's changed. It's changed the way I delivered. I guess I'm a little more at ease, a little, not perfect, but ...

Rex:

Do you feel that the changes to the job market brought on by the pandemic have had any effect at your workplace in the sense that there's much more of a need for employees and that the standards for different positions might be changing based on the level of need?

Doug:

I'm going to say I think the same capabilities are needed that were needed before that, but I'll say this though. I will say that I do believe depending upon the position a little bit, I think we're leaning towards folks with better communication skills in the past. Of course, we just talked about that. If you want to do research, you're still going to have to have that technical background and you're going to really going to have to dwell in that world, which isn't necessarily communications at all. Right? Now, it's an added bonus if you're good at it, right? And there are people who cover all the bases and those are amazing people to me. I can't do that. I'm not a researcher, right? But I certainly like the information that they provide me.

Kelly:

Would you say that you wouldn't necessarily need to have a higher degree, a master's degree in order to work NCEI or would that be favorable?

Doug:

I'm only going to speak for this job. And yes, at least a master's degree is recommended I would say, because that'll put you ahead of everybody else or a lot of others.

Kelly:

Right.

Doug:

Right? If nothing else, it'll do that for you. Is there something practical you get out of it? Probably. Actually going through the rigor of higher expectations, I guess, and maybe looking a little more analytically at some of the climate information that you have, I think that's important. And I think there are a few of these degrees out there, but something like an applied climate degree that would include communications. And here's how you can talk about climate change and make it understandable to people, right? We're always interpreting, translating, and like I said, educating as much as we can on our public facings.

Kelly:

And you need something to set you apart, because I'm sure it's very competitive. I'm sure there are many people applying.

Doug:

Yeah, to get the initial job. Is that what you're saying? Yeah.

Kelly:

Yes.

Doug:

Absolutely. Once you're in the government, that's a huge step. Right? And then vying for other jobs can be also very competitive too, but you do have a lot of choices on where you can go in the U.S. once you're in. Right? That's the good thing. So if you want to live in Boulder, you want to live in Asheville, you want to live on the west coast, I'm not saying you always have those, or Alaska, you always have those choices come up in your career to do those things.

Rex:

Well, Doug, it's been an absolute pleasure talking with you. However, before we end the podcast, we always asked our guests one last fun question that is unrelated to meteorology. I'd love to ask you if you could meet one famous person alive or dead, who would it be?

Doug:

Yeah. I think there's some special on some pay per view channel right now about the Beatles. And if I could meet all the Beatles, whether they're dead or alive, that'd be fantastic. I think since he's already died, John Lennon would be someone who would be pretty interesting to meet for are a number of reasons. And I think his career, I think the way he evolved over the sixties and seventies certainly is worthy of understanding from my point of view a little bit more. It's someone I would look up to. Like I mentioned earlier, he was actually ... I don't even know what show I was listening to, but something about him hosting the Mike Douglas Show in the seventies came up and I thought, what? Mike Douglas? It seems like that's an old fashioned talk show, daytime talk show.

Doug:

If you don't know what I'm talking about, you'll have to Google it or YouTube it, see if there's any old episodes. But John Lennon actually hosted a few, I don't know, a week's worth or something like that. I still haven't looked it up yet, but hosted a series of Mike Douglas shows, which seems totally contrary to the way I think about John Lennon as being, I don't know, counterculture and all this other stuff and that's pure culture.

Kelly:

Yeah.

Doug:

That's pure seventies culture, the Mike Douglas Show, so it's bizarre to me.

Kelly:

I would never imagine that. I have to go and try to find that on YouTube because I do love John Lennon and I'm just so curious how that went.

Doug:

We can all imagine.

Kelly:

Yes. On that note, thanks so much for joining us, Doug, and sharing your work experiences with us.

Doug:

Hey, thanks. I hope I didn't screw it up too much.

Rex:

No. Not at all. Not at all, Doug. That's our show for today. Please join us next time, rain or shine. 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, and edited by Peter Trepke. Technical direction is provided by Peter Killelea. Our theme music is composed and performed by Steve Savoie, and the show is hosted by Rex Herbst Horner and Kelly Savoie. You can learn more about the show online at www.ametsoc.org/clear skies, and can contact us at skypodcast@ametsoc.org if you have any feedback or would like to become a future guest.

Rex:

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