

Transcript for “Andrew Markowitz, a Meteorologist at Xcel Energy in Denver, CO”

Clear Skies Ahead: Conversations About Careers in Meteorology and Beyond

November 14, 2023

Kelly Savoie:

Hello, Clear Skies Ahead listeners. This is Kelly Savoie and I'm hoping you can take a moment of your time to rate and review our show wherever you listen to podcasts. We have produced over 60 episodes and you can help us reach even more individuals that will benefit from the diverse experiences shared by our guests. Thanks so much for listening, and I hope you enjoy this new episode. 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 Emma Collins 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.

Emma Collins:

We're happy to introduce today's guest, Andrew Markowitz, a meteorologist at Xcel Energy in Denver, Colorado. Welcome, Andrew. Thanks so much for joining us today.

Andrew Markowitz:

Happy to be here. Thanks for having me.

Kelly Savoie:

Andrew, could you tell us a little bit about what sparked your interest in meteorology and how it influenced your educational path?

Andrew Markowitz:

Yeah, so for me, which I'm sure is true for many people in this field, it was kind of started at a very young age. I remember being about five or six and just kind of infatuated with the Weather channel. Just had it on all the time. I read a lot of books growing up about different weather phenomena, so I wouldn't say that it was just a storm that got me into the weather, unlike other people, it was just more so a general interest in the science. And then later on I just became fascinated with the big storms. So that was kind of what sparked it. And then when I was seven years old, my parents thought it would be a good idea for me to audition for a guest weather person contest in Philadelphia just because they knew that it was something that I was interested in.

And so I went to the Franklin Institute and got to meet Glenn Hurricane Schwartz, and there were about 65 people there, most of whom were about twice my age, and ended up winning the contest, did the weather on TV for a day in Philadelphia on NBC10. From there is just one of the biggest memories that I think I have from growing up and something that I just never forgot about and neither did the passion. The passion just continued all throughout my schooling. So in middle school, another example of what I think is kind of a sign of this being a destiny for me is that when you're a Jewish person like I am, you have a bar mitzvah and that's the sign of becoming a man. So on my day, it was December 19th, 2009, which ended up being the biggest December snowstorm in recorded history in my hometown.

So every other kid would've been upset because a lot of people couldn't make it. We had to cancel half the festivities, including most of the parties. But me, I was just happy that it snowed and I was excited for

it. So that just signaled again, that weather was just my calling here. And I wouldn't say I'm an overly spiritual person, but to me that was a sign from above if there was one, that weather was my destiny in life. And the passion continued all throughout high school. I became famous for predicting snow days in high school and again during college.

And because of all of that, I ended up doing advanced weather camp at Penn State my junior year of college, junior year of high school going into my senior year. And that solidified that one, that was a career path that I could go into and I felt like I could make a difference. And number two, that Penn State was the place I wanted to be. So that got me to going to Penn State where I graduated, and the weather just continues to be an integral part of my life from there. So I just feel like I'm living a dream every day, which I'm really thankful to be able to say.

Kelly Savoie:

Wow. How old were you when you won that contest?

Andrew Markowitz:

I was seven years old.

Kelly Savoie:

Oh, my...

Emma Collins:

That's awesome.

Kelly Savoie:

Did you prepare for it? Did you really prep?

Andrew Markowitz:

From what I remember, they just gave me a script and I just winged it.

Kelly Savoie:

That's incredible. How much fun. You must've been so excited.

Andrew Markowitz:

Oh, yeah. I mean that's one of the greatest memories of my childhood. I mean, I still talk about it to this day. So yeah, I was beyond excited about that.

Kelly Savoie:

I don't even know if I remember anything from being seven. You mentioned the advanced weather camp. Do you remember anything in particular that definitely, "This is what I want to pursue later as a meteorologist." Did you ever do anything there that sparked your interest?

Andrew Markowitz:

Yeah, so the advanced weather camp at Penn State, every year they have a subset of people coming in from all across the country. And the advantage of being at Penn State is you have access to a bunch of

different resources. So in the small town of state college, you have an NWS office, you have AccuWeather who get exposure to the private sector and the public sector. And I always thought it was interesting going to both places, but I think the idea of just being surrounded by other people who love the weather when I was the only one who grew up, it was something that made me want to feel a part of that community. And then they didn't really delve into all of the options that you could do with the degree, but I was starting to realize that hey, people care about the weather and I can actually make a difference in people's lives.

Emma Collins:

That's great. So what opportunities did you pursue inside and outside of school that you knew would be beneficial to securing a job in your profession?

Andrew Markowitz:

Well, so I was someone who was very involved on my campus, so both in meteorology and outside of meteorology. So inside of meteorology, I did our campus weather service for four years. So that gave me experience as a forecaster, writing weather discussions as well as doing broadcasts that were aired on YouTube. I'd say with frequency once a month that I would do it and then I would do it behind the scenes for other people. So that was kind of the best way I thought to gain exposure before going into the real world. Aside from that, I was vice president of our storm chase team. I went storm chasing for three summers with Penn State.

And that was kind of an example of, first of all, I was kind of pursuing a lifelong dream I had of seeing a tornado in the plains, but secondly, it was just more so getting that hands-on exposure to the things you learn in the classroom. And that just made it all real for me after sitting through Dynamics and those other classes. Aside from that, I was also president of our Weather Risk Management club, and that was a way to make people aware, myself included, of different career paths in meteorology that we don't traditionally think of.

And being involved with that solidified me on the career path that I was in as opposed to a more traditional career like in the private sector as an operational forecaster or someone who was on TV or working for National Weather Service Office. So those were the three main things in meteorology, but I also wanted to make sure that I got to do things outside of meteorology being at a big school. So I was very involved in our dance marathon at Penn State, which is the largest student run philanthropy in the world. So I was helping out both in terms of the fundraising aspect, but then also with a committee that made sure that things ran smoothly. So all of that, I'd say that the college experience was definitely what I was looking forward to, and I'd say I made the most of it.

Kelly Savoie:

Yeah, definitely.

Emma Collins:

Sure sounds like it.

Kelly Savoie:

So what was your first job in the field and how did you end up where you are now?

Andrew Markowitz:

Yeah, so my first job in the field, it was right after I graduated in 2019, I worked as an intelligence analyst at World Aware in Annapolis, Maryland. And basically that job was one where I looked at severe weather all around the world and I wrote up reports that said, "Okay, well this is where severe weather is happening. This is the timeframe, and then this is what you need to do to prepare as well as the assets that would be affected." So the target audience here were various businesses that subscribed to our services, primarily for people that were traveling on business, but just in general. So I like the idea that it was a straight up forecasting job. That's what I was interested in, but also had applications into the business and the finance sector, which I also had a degree in.

So I had that job and then it was through the pandemic, we switched to work from home and I started really thinking about what I wanted in my career. The energy sector felt like my calling, it wasn't really easy to get into. I didn't really see any jobs for it right after graduating, but I figured that was the path I wanted to go on. So my second job, I worked as a market associate slash meteorologist at Wood Mackenzie in Boston. And with that one, that one was doing weather forecast but tailored for the energy sector to traders who basically tried to figure out what demand is going to be on the electric grid or at least certain parts of the electric grid and try to make some money off of it. So I thought that was really interesting to tie the two together. And then that led me to my current opportunity at Xcel Energy where I'm working on the utility side of things.

Emma Collins:

So could you walk us through a typical day on the job as an energy meteorologist?

Andrew Markowitz:

Yeah, absolutely. And I can tell you just from the perspective of someone who works with traders and someone who works with utilities since I have experience with both. So the idea is if you're working with someone who's a trader, that trader is trying to take advantage of what the market is looking like. So the best way to think about it is intuitively. Weather is what the main driver is of demand across the US every single day on the electric grid, if you have a very hot day or a very cold day, people are going to be using their heat, their ACs, and that's going to drive up demand, which in turn drives up the prices. So the idea here is that if you had a meteorologist who is making forecasts for the demand as well as wind generation, solar generation, that would be inputted into a model and we compare to what the default forecast is from say, an ISO, and the trader can look into that and say, "Hey, this is where I can get an advantage in the market and make some money."

So I always thought that that was pretty interesting. And then from a utility perspective, I can't really go too much into detail about what I do, but the general idea here is you are basically providing the information to people who are operating to try to make sure that the lights stay on for everybody in the service territory. We want to predict what the demand is going to be on a given day, but in turn we also want to see if we have enough generation, whether it's wind, solar, other forms of energy. So there's kind of two different sectors in energy and I'm glad to have been part of both.

Kelly Savoie:

And it sounds like there's probably going to be more of a demand for meteorologists in those sectors since that's the wave of the future, especially with renewable energies and things like that. Do you think that there are going to be more opportunities?

Andrew Markowitz:

Oh, absolutely. I mean, especially with a lot of companies that are trying to go green, even some utility companies are transitioning their resources to more of green energy. And so with what happens with climate change, a lot of cities, for example, need to reevaluate their infrastructure, emergency preparedness. And so meteorologists are going to be at the forefront of whatever these developments are going to be. So I think this is a terrific opportunity for anyone who's interested in that. And I would argue it's probably one of the fastest growing, if not most lucrative sectors out there, just given the amount of opportunities that are going to be presented, not just now, but in the future.

Kelly Savoie:

Do you think that having some business experience is helpful for the position or does that not matter at all?

Andrew Markowitz:

I mean, I always like to tell people if you can have meteorology plus another specialized skill that's going to kind of separate you from the pack. And there are not a lot of people that have the STEM degree, a meteorology degree, which is niche, but also that business background. And I find the business and finance background to be especially helpful because those people are not usually scientists. Those people do not think about things the same way that we do going through our science education. And so you in some sense kind of act as a translator.

You look at this weather information, you kind of look at the models and use your own knowledge to come up with a forecast, but then you have to translate it in a way that these people can understand in a way that they can actually take action from it. So having that business knowledge can bridge that communication gap here that exists, I'd say between STEM fields and non STEM fields. And just understanding, okay, well weather impacts businesses, but just understanding what they do with that information. And from there you can tailor things to be more direct. So I would strongly recommend if there's the option to do so, to get that business background as well if you are able to fit it in your schedule.

Kelly Savoie:

That totally makes sense. What do you like most about the job?

Andrew Markowitz:

I'd say the most exciting thing about the job is the fact that you know that every day you come in, you're making a difference for ordinary people. Being with a utility company, your goal is to make sure that the lights stay on for everybody. And so the main input of that is the weather. The main driver of that is the weather. So doing whatever that I can to provide accurate and informative forecasts that people can use to help people. That's always exciting to me. There isn't a day that goes by where I come in and I feel like I'm not doing anything or I'm not helping people. So it feels quite fulfilling.

Emma Collins:

On the flip side, what are some of the biggest challenges you face working in the field?

Andrew Markowitz:

Well, I would say it goes back to what I was saying earlier about being a translator, that you talk to people that have a variety of different backgrounds, and sometimes you have to say the same thing, but

in multiple different ways. So sometimes you have to translate very quickly and say, "Well, some people want things to be very technical. Some people know about things like teleconnections or more advanced terminology, meteorology. Other people just want it to be very brief and very basic." And so, translating that back and forth, that can be pretty difficult. I would say another difficult aspect about working in the energy sector is that you have to wake up pretty early in the morning. My job starts right at 4:15, but you have to get up a little bit earlier to review things.

Kelly Savoie:

Whoa.

Andrew Markowitz:

And of course there's the upside of that, like I get done at one o'clock, usually sometimes a little bit later, depending on if there's a serious weather situation. But that certainly is not for everybody. It's hard for me, but you just have to do what you got to do. But again, that's true for meteorology as a whole. I'm not sure that there is one that provides a totally normal schedule compared to the rest of the world. I think everybody to some extent-

Kelly Savoie:

Yeah, right. I was going to ask you that before you brought it up. What's the work-life balance like? Where you work, is it shift work? I mean, do you have just an earlier schedule than others? Is it around the clock or does the company close at a certain time?

Andrew Markowitz:

So with this particular role, I mean, we work early mornings and then we get done in the early afternoon, again. Sometimes we have to be on a little bit later if there's a severe weather situation. We also occasionally provide updates during the weekend, but aside from that, we work Mondays to Fridays. So generally in that sense, you could say that it's more of a normal schedule compared to someone who works in broadcast or NWS or other private sector companies where it's a 24-7 around the clock thing, you have to work weekends, holidays. We don't really do that working just for a company that isn't weather based, but there are people working around the clock when it comes to working for a utility company.

Kelly Savoie:

Right. Well, it sounds like there's a lot of perks to it, even though you have to get up early, which kind of stinks, but I'm sure you get used to it. Well, maybe not, but you might get used to it after a while.

Andrew Markowitz:

Well, it's true. You certainly have to shift your sleep schedule around, and there are sacrifices you have to make. Sometimes you have to choose between being social or getting your sleep. So for me, oftentimes I choose being social and take a nap the next day. That's usually how I get what I need to because I do believe that it's important to at least have some degree of work-life balance.

Kelly Savoie:

Exactly.

Andrew Markowitz:

Yeah. I understand in this field it can be hard just given the critical nature of our roles, but I wanted to make sure that if I was going to move 2,000 miles away to a place that I didn't know anybody, that I still had an opportunity to have a social life to some extent.

Kelly Savoie:

So we've heard that you have a very successful weather TikTok account. How did that come about?

Andrew Markowitz:

Yeah, so I guess the background of this was COVID for me was a very transformative time. I felt like I had a lot of introspective time, just being by myself for a few months in quarantine. And I noticed that more and more people were downloading TikTok. And originally I thought it was like, Musical.ly, where people were just dancing, and that didn't appeal to me. But then I started seeing people post memes. I thought that was funny. So I just joined. And then as I was getting into it, I started seeing people posting informative content in some things that were niche. And so I had this idea, it's like, "Wait a minute, if people are doing these videos for these niche topics and people are interested in, certainly there would be people who would be interested in the weather."

I didn't really see anybody who was doing it in the weather, aside from people who were doing behind the scenes from their TV studios, which is cool, but I couldn't do that. So I started making videos on an infrequent basis in the summer of 2020, and then it didn't really go anywhere, so I stopped. And then 2021 picked it up again and again, just wasn't gaining traction. So we go to the end of 2021, this is a year and a half later, and finally I started having videos that were getting me tens of thousands of views, thousands of likes, and then it really started to blow up at the beginning of 2022. So basically from when I started TikTok in 2020 to the end of 2021, I got up to around a thousand followers. And then 2022, when I started making more regular content, things started blowing up, ended up getting to 44,000 or so by the end of the year.

Kelly Savoie:

Whoa.

Andrew Markowitz:

Yeah, no, it's crazy. But I would say one of the biggest things for me was the ability to live stream and just talk to people at once, answer questions. And I would say kind of my big breakthrough was during Hurricane Ian. So during Hurricane Ian, I would just, after my day was done, just hop on the live stream and I was on for several hours a day at some point. And at that point, I believe I got over a million viewers throughout the week of people just wanting to know what the update was on the hurricane. And some people were asking me questions like, "Hey, should I evacuate my family? Am I going to be okay?" And to know that I was bearing that responsibility, it was a mixed feeling.

On one hand, it was exciting or to some extent because it's like, "Well, they trust me as a voice and I'm one of the only people doing this that actually has the credentials." There's a lot of bad information out there too, which was my motivation. I wanted to be the one person with credentials to give accurate information. But then number two, it's also a little bit nerve wracking because you know that in some cases it could literally be life or death, and they're trusting me with that. So I would say the other upside with being on TikTok is just the idea of those communication skills that I was emphasizing.

You're talking to a wide variety of people around the world. And that's something that actually really excited me about TikTok because on a platform like Twitter or Instagram, you're capped, because you have followers, your followers see it. But with TikTok, your videos could theoretically be pushed to everybody because of the way the algorithm works going onto the for you page. So because of that, it had the most opportunity to reach the people that it needed to. So it's reaching people of all different backgrounds all across the country and to some extent even the world depending on the video. So that all is very exciting.

And then in 2022, my follower count is now up to, I think 65,000 or so at the time of this recording. And I just continue to, whenever there's severe weather, just try to get on here, make videos, and try to be as informative as possible. But also, I like teaching and I want to try to explain things to people who are interested in the weather. I think there are a lot of very smart people that want to know more. And so I wanted to do that as well. So the idea of just informing people, but also educating it and just another way to let my passion break through.

Emma Collins:

Yeah. Do you have a regular upload schedule that you've balanced with your current work? Or do you find that it's mostly reacting to severe weather situations as they happen?

Andrew Markowitz:

Well, work will always take priority. So it's always after work hours. I just go on, record a video. The frequency, I try to do something every day now that it's getting bigger, but whenever there's severe weather, I definitely try to post every day and usually would go live. For example, with the East Coast severe weather on August 7th, I think I was on for four straight hours just answering questions and tracking the storms coming in. So that's something that I would do in a serious situation.

But aside from that, whenever there is severe weather across highly populated areas across the country, like the East coast, I'll try to crank out at least one video about that. But if it's kind of a slow weather time, then I'll probably try to make more informative content. One video I did recently was explaining how thunderstorms form and why it's a misconception for a sunny day why that is actually an ominous sign for severe weather. A lot of people ask about that. So I try to keep it semi-regularly, but I also don't want it to get in the way of other things in life as well.

Kelly Savoie:

So how does it work with TikTok? Do you do the video and then tell people that you'll be live to answer questions at a certain time, or do you just do it live, the whole thing?

Andrew Markowitz:

So that's something some people do recently, I haven't done that. But basically how it works is that if you go live, TikTok will send a notification to your followers and your followers will join in. So usually it starts at two to five people in the first few seconds and then grows to a couple hundred. And after that, depending on how your followers react to it, then it gets pushed to more people. It's kind of the same principle as your videos. And the thing is, the algorithm is kind of tricky here because there are some videos that blow up and get hundreds of thousands of views, and then the next one may get two 3,000 views. It's pretty unpredictable, which again, it's exciting, but it is also a little bit frustrating. So with that live the other day, basically it started out small and then more and more people joined and there were between one and 2,000 people just constantly for that four hour period. And I think the peak that I've gotten during Ian was maybe in the 7,000 range at one time.

Kelly Savoie:

That's amazing. Well, I'm glad you have the credentials to actually talk about it and really know what you're talking about. So that's a good thing.

Andrew Markowitz:

Well, that's the thing. There are people out there that make these forecasts on there, and I know they're ridiculous, but an average person really won't. And there's just so much misinformation out there, not just in meteorology, but in other fields. And so I want to do whatever I can to set the record straight for people. And another motivating factor behind that is the fact that if we think about what our industry is looking like, more and more people are turning away from cable, from local news. And so there needs to be another way to inform people about the weather. And a lot of the people that are watching TikTok are on the younger side of things. They don't necessarily follow the weather. So to have something like that come on their for you page, that can be another way to keep them informed. So I think it's something that people, it's a lot more powerful than I think a lot of people realize just because of the idea that your videos could theoretically be pushed to anybody. But again, it's very hard to predict a time.

Emma Collins:

Well, we're glad you're out there fighting the good fight for true, real information.

Andrew Markowitz:

It's not easy, but I'm trying my best here.

Emma Collins:

So, when you're not at work and you're not making TikToks, you are also the chair of the AMS Board of Private Sector Meteorologists. What are some of the goals of this board?

Andrew Markowitz:

My number one goal this year as the chair was to improve transparency about the private sector, because I'm finding a pretty shocking amount of people are just unaware of these private sector opportunities. In fact, even from some of the largest programs in the country, I had somebody come up to me and say, "They only taught us about broadcast or NWS." These other opportunities that are out there, things that are interesting frankly may provide better work-life balance, better benefits are just not being informed to people. And so there is clearly a gap in terms of these jobs, but then letting people know where they are and how to find them. And so I want to do whatever I can to make people aware of that, but also do so early on, because based on my experience is that college is a serious investment. We're talking a six-figure education that in many cases puts people in substantial debt, and that's something that can be seriously crippling to people.

And so I believe that people going into college as early as they can, they need to know what they can actually get out of this degree. And I think that if people are not aware of these opportunities that exist in meteorology, then I don't believe that they can make an informed decision about whether or not this degree is worth it for them, not just from a financial standpoint, but also from a happiness standpoint. I'm not sure that people are aware of just how brutal the shift work can be or even aware of the realities of it. So I just want to do whatever I can to make sure that people can make a fully informed decision to see if, "Hey, meteorology is the right path for me?" And if it's not, to try to exit that as soon as possible.

Kelly Savoie:

Does the board put out any webinars or any other types of things? I believe you have a mentoring program. Is that still happening?

Andrew Markowitz:

Yeah, so actually the mentorship program is one of the ways that I found out about the BPSM, and I would attribute it to one of the reasons that I got my job, so just a background about myself is that my senior year of college, I went to the AMS annual meeting in Phoenix and I learned about this program. And from there I was matched up with a mentor in the energy sector, Todd Crawford, and every couple of weeks he called me, he would give me some pointers about career advice, help me kind of decide between these two opportunities right after college. And I even shadowed him one day and over a mass at his company, and we kind of just went over what he does on a daily basis, what a career, it looks like for an energy meteorologist.

And that was one thing that always stuck with me is, yeah, this would be an interesting path to go down. Now where this connects to later on is that he gave me connections from there that were in the energy sector. One of those connections ended up being someone who ended up becoming a primary mentor for me, and he worked as a meteorologist at Xcel. Well, he ended up leaving that position and there was a vacancy. I applied for it. I wasn't really expecting much, but then I ended up getting the job. So indirectly the idea of having a mentor to try to guide me through my end of college, transitioning to an early career professional that gave me what I needed to do to be on the path that I was hoping to be on, it was basically the idea of this is what you need to do if you want to get into the energy sector, which is hard to come by.

And if it wasn't for that program, I don't think I would've made it there. So given the success that I've had in the field, I always feel like I have to return the favor to the next generation and serve as a mentor or someone that people look up to. And so this mentorship program is still going. And in fact, this year, 2023 with me as the chair of it, we actually have our highest numbers ever in terms of both mentor and mentee participation. And one of the other things that we did this year was we added a summer mentorship program. So that one, unlike the other one that I did, which was matching one-on-one with mentors and mentees, this one is workshop based. So we have freshmen go on Zoom calls once a month during the summer, and we have a few different mentors coming in serving as panelists, but giving presentations and just giving an overview of things like private sector careers, different skill sets that you can have, and just forming connections from there.

So we wanted to not only incorporate the people that were at the tail end of college thinking about careers, but also just getting that early college aspect, those freshmen, the people who are still undecided about what they want to do. Then aside from that, one of the other things that we've been doing this year is we started reaching out to universities to try to see if we can be utilized as resources. So we would love to be able to do more with AMS like webinars, but we also just want to have a clear line of communication from us directly, directly to the university level. Because I've also found in my own experience, there just are not a lot of resources available on the internet with such a niche field. And of course, that's something that we want to try to address as well, being our board, some of the other boards, but whatever we can to give the information directly to students that is not already being accomplished.

That's just what we just want to do. We want to utilize all of that to get back to the important goal of improving transparency, not just between students, but also between private sector...and at the university level, which I helped with that, when I was a part of the Mind the Gap Initiative as well. Just giving people an idea of how the field is evolving or at least how it's changed and then what we can

expect in the future, and then how we should tailor our curricula based on that. So yeah, I mean it's definitely been a successful year and I think there's a lot more that we could be doing as well.

Kelly Savoie:

Yeah, it sounds like you're doing a lot that's really helpful for students. It's a good segue here. So do you have any other advice for students or early career professionals looking to establish careers as meteorologists in the energy sector? Is there anything that you wish you had done differently or that you're glad you did that helped you out?

Andrew Markowitz:

So I would say there are two main things here that I would pass along. So number one, I believe in the idea of meteorology plus one, you have the meteorology degree, plus another specialized skill. Because you have to kind of think about it is that these jobs, there are not a lot of meteorologists out there or people with the degrees, but that being said, for each individual job, there's probably going to be dozens if not hundreds of people applying for it. So you have to think about what I can do to stand out over everybody else, your classmates or people that are ahead of you. And of course, that's not to say that everybody is your competition, but you kind of have to be looking at that. It's like, "Yeah, I have a degree in meteorology, so do hundreds of other people, what do I bring to the table that nobody else does?"

So for me, that background was the energy business and finance degree from Penn State, but something like programming could be very useful as well. GIS could be very useful as well. Even something like communications. I know someone who had a degree in Spanish and of course that comes in handy for broadcast, but other fields as well. So just something that you can kind of differentiate yourself from somebody else. Then also just kind of realizing how your skills translate to other fields. Meteorology is like an engineering degree, but for the weather, if you think about the classes you take. The four semesters of calculus, the thermo dynamics, the physics, the chemistry, you put that all together, plus the programming we do, the statistics classes. And there is a lot more that we can do with the degree than we realize, even things that are just outside of the weather.

So again, that just goes to the idea that this is actually a pretty lucrative degree, but I'm not sure that that message is as clear as it could be right now. I think students need to just evaluate everything that they're taking right now and just being creative with the options that they want to do. Someone who's dead set on just being a straight-up operational forecaster, that's nice, but I think we need to expand our horizons in terms of the job prospects, or at least the opportunities that we'd be open to. And that goes into my second point here, which is just be open-minded about not just the opportunities themselves, but the location. So for me, I've already moved three times since college into places where I didn't know a ton of people. I moved to Maryland, then I moved to Boston, and now I've moved to Denver.

And that can be scary, especially if you don't know anybody, but unfortunately that's kind of the nature of this field. It's that if you want to move to where you want to be in a timeframe that's as quick as one would desire. You have to be open to moving to new places and experiencing new things. And for me, I became involved in my local communities. It's not really easy to make friends, especially with COVID and kind of on the other side of COVID as well. It's still very difficult. You have to be creative, but I do think that that provides an example, not only for you to move up quickly in your career to perhaps become more successful, but also I think it's good for personal growth. So those I think are the two main things here that I would recommend to somebody.

Kelly Savoie:

Well, that's great advice for sure.

Emma Collins:

Well, Andrew, we're so grateful for everything that you've told us about your career. However, before you go, we always ask our guests one last fun question at the end of our show. So what is your favorite hobby?

Andrew Markowitz:

Yeah, so my favorite hobby is currently just exploring and traveling to new places. So a little bit of background about that is growing up, I didn't really have an opportunity to do too much outside of maybe within a few hours of my home. I was always a little bit envious of people who had opportunities to go on vacation. So now that I'm an adult, I feel like I have more freedom. And so I like to just do whatever I can. And when I say traveling, exploring, I don't necessarily mean going far away. I mean trying new things in my town.

So being in Denver, I knew basically nothing about it when I was moving here. So my goal is to every week try a new restaurant or to try to go to some kind of concert or other activities. So just being acquainted and things like that. It makes the transition easier or going on a hike every weekend, which I was doing in New England as well. And aside from that, I do like to go on vacations. I have a big solo trip coming up in a few weeks, which I'm pretty excited about.

Kelly Savoie:

Where are you going? Where are you going?

Andrew Markowitz:

Yeah, so I'm going to Spain and Portugal.

Kelly Savoie:

Oh, awesome.

Emma Collins:

Wow, that's cool.

Kelly Savoie:

I've been to Portugal and Spain. I loved Portugal, and Spain was really cool too. Are you going to Barcelona or are you going to go somewhere else in Spain?

Andrew Markowitz:

Yep, so the itinerary, I'm starting in Barcelona, then I'm going to Madrid, and then I'm going to Southern Spain, so Granada and Sevilla, and then I'm ending in Portugal and Lagos and then Lisbon.

Emma Collins:

Oh, amazing.

Kelly Savoie:

Oh, that is going to be incredible. You're going to love it. I loved it. The people were so nice, really friendly and welcoming. It was a great trip. You're going to love it.

Andrew Markowitz:

Yeah, I mean, if you have any recommendations, I'd be happy for you to pass it along.

Kelly Savoie:

I will send you some, because some of the places that I went to just outside of Lisbon, like day trips were really cool, so I will send those along to you for sure.

Andrew Markowitz:

Yeah. Did it happen to be Sintra, Pena Palace?

Kelly Savoie:

Yes, Sintra was one of them.

Andrew Markowitz:

Yeah, that's on my list.

Emma Collins:

That's awesome.

Kelly Savoie:

Some of them are probably already on your list because they were really great. But thanks so much for joining us, Andrew, and sharing your work experiences with us.

Andrew Markowitz:

Yeah, I mean, it's my pleasure. I love talking about what I love to do. It's been a passion of mine, and I hope that I can do whatever I can to educate people and help people, guide them on their career journeys.

Emma Collins:

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

Kelly Savoie:

Clear Skies Ahead. Conversations about careers and meteorology and beyond is a podcast by the American Meteorological Society. Our show is edited by Johnny Le. Technical direction is provided by Peter Klay. Our theme music is composed and performed by Steve Savoie, and the show is hosted by Emma Collins and Kelly Savoie. You can learn more about the show online at www.ametsoc.org/clearskies. And you can contact us at skypodcast@ametsoc.org if you have any feedback or would like to become a future guest.