Transcript for "Alec Kownacki, Meteorologist Meteorologist with the Michigan Department of Environment, Great Lakes and Energy."

Clear Skies Ahead: Conversations About Careers in Meteorology and Beyond

December 12, 2022

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 Matt Moll 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.

Matt Moll:

We're happy to introduce today's guest, Alec Kownacki, a meteorologist with the Michigan Department of Environment, Great Lakes and Energy. Welcome, Alec, and thanks so much for joining us today.

Alec Kownacki:

Hi everyone. Thank you for having me.

Kelly Savoie:

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

Alec Kownacki:

Yeah, so I can't really pinpoint per se what really sparked my interest in science initially because I've always been interested in science for as long as I can remember, whether it's obviously weather or just kind of like the physical sciences, earth science. I always loved in grade school and middle school through high school, like the earth science classes and the physical sciences. And then probably it's the typical tale for meteorologists that we get the interest of weather at a very young age. So I always remember leaving the dinner table when the news was on, when the weather cast came on. My parents always said that I was going to be a meteorologist one way or another. So that kind of really steered my path to becoming a meteorologist.

And also just living in Michigan, we are pretty gracious to have a lot of weather happen here, basically everything but hurricanes, especially with lake effect snow and just everything be affected by the lakes around here. So both sets of my grandparents, they lived off of a Lake Huron, one up in the upper peninsula and one in the thumb region of Michigan. So I always used to love going up there, obviously to visit the grandparents, but to see storms come off of the lake and just seeing these beautiful shelf clouds. So that really sparked my interest at a young age to see those kind of weather phenomena occur and just be like, "How does that happen? I really want to get into the weeds about how that kind of stuff occurs." So like I said, just from a young age, it really sparked my interest. So I always wanted be a

meteorologist, but I also wanted to stay in Michigan, so it's kind of into a smaller field and putting into a smaller cabinet of just having a very somewhat specific career path, being a meteorologist and staying at Michigan.

So educational wise, that kind of steered me to Central Michigan University where my degree is from. So for meteorology's sake, Central Michigan University is the only university in the state that has an undergrad in meteorology. So I believe Michigan, University of Michigan has a master's program, or at least a certificate. And I think the Northern Michigan University in the UP, they have some certificates, but for just undergrad in meteorology, it's Central Michigan University. So that kind of obviously steered my path to go there. So yeah, from what kind of really sparked my interest in that.

Kelly Savoie:

Yeah, it's amazing how few schools actually have specific degrees in meteorology or atmospheric sciences. A lot of them will have geo sciences, geography, earth science, but well at least there was one, right? One's better than none in Michigan.

Alec Kownacki:

Exactly. And I didn't really know that until my freshman year when my professor from my intro class said, "Hell yeah, this is the only school in the state that has meteorology." I was like, "Oh, I didn't really know that." So I just chose CMU because I saw meteorology.

Matt Moll:

So what opportunities did you pursue inside and outside of school that you thought would be beneficial to securing a job in the profession?

Alec Kownacki:

Yeah, so I just mentioned my intro class. They had obviously an intro to meteorology class and with the same professor, it was a smaller, shorter one credit class called professional development. So basically we took that freshman and sophomore year and it basically just exposed us to opportunities like internships, networking opportunities to get into where we are now with our career. So my professor, he really hammered on networking, talk to the people in the field, reach out, email, all that kind of stuff. So I really took it to heart and I'm more of a introvert. So at first I thought that'd kind of be an issue, but I was like, no, I really want to go into meteorology. I really want this career path. So I kind of initially forced myself to email these people and just kind of reach out. And it usually eventually just became natural for me just kind of reaching out and networking.

The other opportunities inside schooling, I was a part of a fuel campaign called CMU Storm, where one of my professors, he was granted a mobile mesonet. So that was kind of cool just to look at the different weather instruments affixed to this Ford Explorer, I believe it was. It had three or four monitors within the mesonet as well. So really just a mobile weather car essentially. So we were basically looking at lake breeze fronts coming off of Lake Michigan. It's about a two and a half week campaign and that was just really cool. That was my sophomore and junior year of schooling. It was really kind of seeing all these theories and equations that I learned in the classroom coming into real life, seeing all these ake breeze fronts and applying all the knowledge I learned in the classroom that was just really cool and interesting to be a part of.

I bring that up because it kind of steered to where I am now because at that point in my college career, I was really thinking about going into research and after that, although it was like I said really, really cool

to be a part of, I was kind of like, eh, this research meteorology stuff isn't really for me per se. I think it's awesome and really cool, but I just was just more so wanting to find a different path. So that just checked that box off saying, "Okay, I tried that, not for me," but that really opened the door for air quality meteorology where I am now. And after that I really dove deep really into that. And then some other things within the school was the student chapter, the American Meteorological Society that I believe every meteorology school has. Basically. I usually describe it, I mean me and my friends describe it as weather nerd club, actually.

We just get together once a week for an hour and just talk. We have different events that we put on and it really helped too because we had, and they still have guests come on and speak at some of the meetings, whether it's alumni or just professors in the field, just to talk about what they're doing for their job, and just exposing these students to just opportunities in the workforce, which I think is great. And also akin to that, my other professor, he usually puts on a career day, usually in October every year where he has alumni from Central Michigan come in from broadcasting the NWS, the private sector, the government. And my freshman year, my now coworker, she came and spoke, because that was one of my first exposures to air quality meteorology. So that was just kind of cool, just the path from freshman in college now working along with her. So it was kind of interesting.

Kelly Savoie:

Yeah, I mean it sounds like the meteorology department was really great at your university. I wish I had a one credit professional development course when I was in school. It sounds like between that and the local chapter and just the professors really trying to get the students knowing more about all the different fields. That's great.

Alec Kownacki:

Yeah, it really helped too because the class size at CMU was pretty small. It ranges between 15 to 20 students per class. So that just really helps students and professors build that relationship. So the professors can really be like, "Hey, what do you want to go into?" And they can steer some of their classroom material to what the majority of people want to go into. And they always had an open door policy and you can just go in there, ask questions and they're very, very open to that kind of professional development.

Kelly Savoie:

And it's like you almost have your own personal advisor since-

Alec Kownacki:

Yeah, exactly.

Kelly Savoie:

The classes are so small. So you had mentioned that it helped you decide what you wanted to do for a career. So is the position you're at now the first job you had in the field or did you work somewhere else prior to that?

Alec Kownacki:

Yep, this is my first job in the meteorology field. I got pretty lucky and I'm very appreciative of what happened. So we could talk about it a little bit more because I think that's one of the questions that

we're going to discuss. But my senior year in the fall, I had reached out to my now boss just because like I mentioned earlier, I always just try to find people to email and just talk about their current jobs. So reached out to my boss and just asked about this position and he forwarded it to my now coworker and we networked and discussed for a couple months and then she told me, "Oh hey, there might be an opening in the coming year or so or coming months. So just keep an eye out." And so this job opening opened in February of 2021. So I instantly applied.

My interview was in March and I heard end of April that I was the one chosen. And so they couldn't technically offer me the job because I wasn't graduated yet because I graduated in May of '21. So once I got my final transcript sent to my boss and he said, "Okay, you're official, you got the offer." So like I said, I was very gracious for it to happen very soon because I have friends, I've always hear about people in the field or just in any field that the stress of your last semester in college like okay, where's my job going to come? Where's the job offer at? And I've just, like I said, I got a little lucky and I'm very gracious for it.

Kelly Savoie:

You're thinking, how am I going to pay my school loans?

Alec Kownacki:

Yeah, exactly.

Kelly Savoie:

No, but that's awesome that you just, that's all it took was just reaching out to someone and having a just informal chat and she remembered you and that's the way to go for sure.

Matt Moll:

So can you walk us through what's a typical day if there is a typical day as a meteorologist with the Michigan Department of Environment, Great Lakes and Energy, what does that day look like?

Alec Kownacki:

Yeah, so I would say that there's a pretty much broad overview of a typical day, but each day is pretty much different obviously depending on there's meetings, there's a kind of project going at the time. But basically the bare bones of what I do is there were three meteorologists within this department, me and my two coworkers. And we do rotating weeks of forecasting ozone and PM2.5 throughout the state of Michigan. And so when it's my week, we usually do every Monday we forecast for either the upcoming days or out to a week. It's pretty season dependent. In the summertime, we usually do every two days or every three days for forecasting because that's when ozone is high. But in the wintertime it's usually PM2.5 is the driving pollutant and that can just be out for the week. So first off, when it's my Monday to forecast, it's usually the entire morning I forecast.

And I usually just look at your classic weather models, weather forecasts, just because ozone and PM2.5 are very dependent upon the weather patterns and what have you with what's going on in the weather. So after that, I look at the air quality models, there's quite a few. I know NOAA and NW West, they have an air quality model. There's some other models that have our air quality filter to it just to get a basic idea of what other models are thinking based on what we have while looking at the weather forecasts. So just by understanding the fronts and boundaries where they are, which really helps us forecast. So like I said, that's basically Monday morning and every day after that, after we send out our forecast, I'll check

it every Tuesday, Wednesday and so on for rest of the week. And when it's not my week, I also like looking at the forecast just because I'm a meteorologist, I'm a weather nerd.

So I like looking at that stuff. And also just in case my other coworkers, they need a second pair of eyes or an other idea of what to think with the forecast for that week. And like I said, too, time can vary with the forecast, especially in the summer. If it's a high ozone day, we have what we call air quality alerts or clean air action days. So that's where we call the local NWS offices and they put out alerts through the NWS saying, "Hey, this is air quality alert." I'm called by our department. So that takes a little bit more time. There's a little bit more documentation to go through that, different write-ups to do. So that's basically the forecasting side of it. Obviously I can go way more in depth but won't go that far yet. And then basically probably the other 50% of my job is performing air quality modeling using the gold standard air mod model, which is the gold standard model agreed upon by EPA and the American Meteorological Society.

So I can go through the application process a little bit. So basically if a facility or a company within Michigan, they need to pull air permit for if they're building an addition to their facility, if they're making a change to what their process is. If they're making any change or edit, that will cause air emissions to increase, they need to pull air permit. And that goes through our permit engineering staff and then they do their own little separate calculations and everything. But if it warrants modeling, it comes to us. And there's two ways to do modeling. With the bigger facilities, they usually hire a consultant through the modeling and then they send us their modeling files and their modeling write up and we basically just QA QC. But the more smaller facilities that don't want to spend the money on a consultant, they usually just send us their parameters of what they're doing and we build the facility within the model.

So the first kind of leg to that where we get the input files. So like I said, the consultant sends us their input files and their modeling write up, which basically is just explaining what they did, how they did it and why they did it, just so we can follow their reasoning and their input files. So we take those files, import it into air mod, and it's a pretty step-by-step process. It's pretty user-friendly with how it is set up in the model. You look at the pollutant pathway, what pollutant you're modeling for, the averaging time. That can be one hour, eight hour, 24 hours or annual for an averaging time.

Then you go to or you have the stack parameters, the building parameters, how tall the stack is, where the pollutant is coming out, and then the emission rate. And there's a couple other different parameters that we have to look at. And then we go to the receptor grid. Now receptors are essentially pseudo monitors. So those tell us within the model what that pollutant is at that specific point. So that's basically the entire brunt of the model is basically getting what the impacts are for that pollutant for what the facility is producing or processing.

Kelly Savoie:

Sounds really involved. Lots of stuff.

Alec Kownacki:

Yeah, exactly. But like I said, within the model it's pretty user-friendly, so it's pretty easy to follow, just go step by step by step. Then after that you go, you input the meteorological files, and we have, I forgot the number, but numerous upon numerous of meteorological stations throughout the state that we get data from. So wherever the facility is, we choose the closest or the more like station that would give us the most accurate data. And then basically just QA QC, make sure everything's up to code, everything's good to go, and you just hit run. And then that's basically that way.

And the other way is basically the exact same, but you just build a model within air mod or build a facility within the model rather. And I always prefer that one more because it's just more fun for me just to build the facilities within the model, drag and drop these buildings and you can export it to Google Earth and make sure it's all pinpointed correctly. So just really cool process.

Kelly Savoie:

And I'm assuming that any company that it's a requirement that they have to go through the state to get these things approved?

Alec Kownacki:

Yeah, exactly. Yeah.

Kelly Savoie:

All that good stuff.

Alec Kownacki:

And like I said, it goes to the permitting staff. They have a whole separate part of the job that they really handle that I don't really understand. So then if it comes to us, then yeah, it's a whole separate process.

Kelly Savoie:

Is there also, I don't know if your group does it, but do they do water quality too? Or is it just air quality? That's part of-

Alec Kownacki:

Yeah, I'm just within the air quality division. Eagle does have a water resource division. So actually one of my coworkers, her husband works for it, so we kind of get what they're working on information from her. But yeah, we have a water resource/water quality division as well within Eagle.

Kelly Savoie:

Nice. So with all the stuff that's going on, what do you like most about the job?

Alec Kownacki:

Yeah, so obviously the weather portion I love because like I said, I'm a certified weather nerd, but also the air quality side too because I believe, at least for me, air quality meteorology is still somewhat in its infancy, I'd say because for the longest time and for the longest time I can remember I didn't really hear that much about air quality from a meteorology standpoint until my sophomore, junior year at Central. And even now I'm seeing more air quality forecasts on your local news channel. A lot of the broadcast meteorologists in Michigan I know and I went to class with, and I'm seeing them forecast air quality, especially in the summertime. So like I said, it's kind of a growing field in terms of getting the public knowledge out about it. So I like that a lot. Just being able to forecast and make sure the air quality within Michigan is obviously up to par and good, having good quality.

And also just the camaraderie with my job. I've always heard for the longest time, make sure your work environment is good and it's enjoyable and make sure your, what's the saying is, make sure your vocation

is a vacation kind of thing. So I couldn't ask for a better boss, better coworkers, and if they're listening to this, I'm not sucking up. I genuinely mean that.

Kelly Savoie:

Oh, maybe just a little.

Alec Kownacki:

Yeah, maybe just a little. But yeah, I love my job, like everything about it and my coworkers add a lot more to it just being able to go over to their cubicle or call them on Microsoft Teams and just say, "Hey, how's your day going," kind of thing. Just that camaraderie, like I said.

Matt Moll:

That's great. And so those are some wonderful things about the job. What are some of the challenges that you face?

Alec Kownacki:

Like you said, with the modeling standpoint, it can get more involved and it seems like a lot of stuff involved with it. Like I said, there is, but it's kind of, the interface is pretty user-friendly, but there are some modeling applications that can be pretty difficult. Not everyone is cookie cutter, so each one is different. Although there could be some applications, they're pretty similar, just kind of plug and play. But for the majority, it can get pretty difficult. And for example, I had one application for three asphalt plant, three portable asphalt plants up in the upper peninsula. And initially I was like, okay, this can be a home run, this is pretty easy. They're all pretty similar, just the location of them are different. And then I dove more into it. I did the first round of modeling and just nothing was working.

Nothing passed to the EPA standards, so me and the permit engineer and the consultant were looking at it and we're like, what is going on? And so then it turned into, like I said, three different asphalt plants and we ran it for five separate years, and I believe there were five separate pollutants, so I'm not going to do that math, but that's just a lot of modeling runs we had to set up. And half of them were not working. For the majority of them my meteorological files just disappeared. Like I said, a lot of can of worms can happen. So that's kind of more like the biggest challenges. But I also find that kind of fun. I kind of see modeling as a jigsaw puzzle, just putting stuff together and making sure it's working correctly and all that kind of fun stuff. And I guess another challenge that I also kind of find fun is forecasting ozone.

Like I said, in the summertime it can get pretty high, especially with Lake Michigan and all the little pollutants and the industry in that area of Chicago and Gary, Indiana and the portions of Michigan. There is some days where it can be a home run with ozone with the... So for high ozone days, I can explain that a little bit, you need clear skies, surface temperatures ranging around 85 plus degrees, you need dew point right around 65 degrees Fahrenheit to 70. And for Michigan's sake, a southwest wind will blow all those pollutants and ozone into Lake Michigan, west, southwest Michigan area. And typically when we see those days, you would just think, okay, yeah, let's call air quality alert, this is going to happen. But on some cases, we saw this two summers ago, my first summer when we had a pretty high wildfire content that enough of the PM2.5 from the wildfires got up into the upper atmosphere that it caused somewhat of a pseudo cloud that blocked the sunlight just enough to where it didn't initiate the ozone chemical reaction to occur.

And so a couple times me and my coworkers were just pulling our hair out, wait, this is a busted forecast, what happened here? We're like, oh wait, there's too much PM2.5. So that's an added thing to the

forecasting realm that we need to pay attention to is okay, how much PM2.5 is too much. And also there can be a catch 22 of if there is enough PM2.5, not too much, it can actually initiate more ozone. So that's one of the challenges that I also find fun is because you're learning as you go kind of thing. Obviously we have the background for forecasting and all the chemical background, but just kind of that kind of stuff for learning as you go.

Matt Moll:

Do you do any forecasting for post fireworks displays? I've seen past couple of years, I think Houston and I might get the year wrong, I think it was 2019 after these large city firework displays, air quality alerts are going out if there's a temperature inversion. And is any of that happening in your area or have you been seeing that?

Alec Kownacki:

So basically, yeah, around 4th of July we always put out... I don't say we put out alerts because we just basically say the quality's going to be not up to par because just all the fireworks smoke in the air, especially around the metro Detroit area here in Michigan. So whoever's forecasting that week, whenever we send out our weekly write up for forecast, we always make sure to put in there expect higher levels of PM2.5, potentially higher levels of ozone just because of just the pollutants in the air from the weekend or a couple days that 4th of July occurs.

Kelly Savoie:

How dangerous is it? Is it more dangerous for people who say have asthma or other type of breathing issues? Or is it really bad for when the ozone and the air quality is really terrible? Is that even if you're healthy, should you just try to stay inside on those days?

Alec Kownacki:

Yeah, I mean, I guess the overall is if you can stay inside, stay inside. So for the categories for ozone and PM2.5, it's good, moderate, unhealthy for sensitive groups, unhealthy, very unhealthy, and then hazardous. So we call air quality alerts for ozone when the category gets to the USG or the unhealthy for sensitive groups. And that's what you said with people with asthma and respiratory illnesses. That's where we say, if you can, don't mow your law on this day to produce more ozone or maybe fill up your gas tank to the next day just to help out the overall environment and air quality.

And then the higher you get up in that list and the more it brings in everyone saying, "Hey, okay, the air quality is pretty bad, not right now, so just stay inside if you can." But at least in my two-ish years I've been, or year and a half, two years I've been here, and for what I've heard from my coworkers, for eight-hour average for ozone, which is what we forecast for, we've really only seen the USG average. We've had some hourly values in the unhealthy or very unhealthy range, but they decrease pretty quickly.

Kelly Savoie:

Yeah, well, I mean it could have a big impact on public health. So do you think the way that you forecast is the tools you have are good enough or do you think that there's going to be a change in the future to make that even better?

Alec Kownacki:

Yeah, so I think they're good right now. They help us a lot. It's more so just knowing your stuff and knowing the region that you're in for forecasting ozone. Like I said, the Lake Michigan, the west/southwest state of Michigan area, you really need to know your stuff to forecast in that area, especially with say, a west or southwest wind. But with air quality meteorology forecasting, it's pretty similar to the meteorology field as a whole. It's very data based. So with increased data and increased modeling, just those forecasts models for ozone and PM2.5 are only going to increase, I believe, just with any typical weather meteorological model. So with those increasing though, I feel like that will increase the quality of the forecast that we're able to put out just because whether it's better resolution, better grids, grid spacing, just better understanding, better equations or calculations within those models, I think yeah, that will inevitably help the forecasting on our standpoint.

Matt Moll:

So you're also a weather forecaster and scientific writer for Global Weather and Climate Center. So could you tell our listeners a little bit about how you use your communication skills to bridge that gap between the scientific community and the general public?

Alec Kownacki:

Yeah, so as along with other scientific fields, the meteorology field has a lot of nomenclature and terms and terminology that are just like, what does even mean. In the medical field, there's a lot of stuff that I don't even understand or can't even start to understand. So I feel like by explaining things in a way to simplify the terms and terminology that people can understand is really beneficial for the field as a whole and just the general public, just to understand what we're trying to convey and explain because obviously I love weather. I want people to understand weather so they can love it more. And just so we're able to understand the weather more I feel like would help the general public. So like you just said, I write for the Global Weather and Climate Center, so just being able... I've always had a knack for writing just because ever since I can remember, I've always just loved writing.

I don't know where it comes from. So what we do with, we just write little articles just based on any kind of weather subject. So recently I've just been writing more so air quality and like I said, with our forecasts for my current job, we had to write forecast discussions. So with those, I obviously write what is expected, what we're thinking the forecast is going to be for the week or the coming days, but I also try to put in a little the chemistry behind what's going on with the ozone or PM2.5 or maybe a little meteorology blurb or terminology just to give the exposure to the general public of this is what, opening the door to the field, this is what we're thinking and this is what other things are within the field rather than just, oh, it's going to be 85 degrees and sunny today. So just being able to expose people to that I think will benefit everyone overall.

Kelly Savoie:

It sounds like you did all the right things to get a job right out of school. So what advice do you have for students or early career professionals looking to establish a career in your field? Were there certain courses that you took that you think were really valuable or any professional development opportunities or just any advice you could offer?

Alec Kownacki:

Yeah, so like I mentioned earlier, networking I would say is very, very important, just exposing yourself to the different professionals in the field and just basically getting your name out there. That was very important. Like I mentioned earlier too, one of my professors, he has a career day every semester at CMU. So just being able to get exposed to that and getting people's email and their business card and just reaching out, I'd say is very beneficial and is, I'd say is on top on my list for giving recommendations.

And then some other things, at least in my field, and it's a growing field overall, I'd say within meteorology is taking GIS courses. That's a big booming field I'd say is being able to be proficient and just being able to work with GIS would benefit people I feel like a lot. Obviously within my field, weather forecasting, being able to understand the regional aspect of what you're forecasting for and just also obviously within air quality, just basic air quality knowledge and being able to and wanting to learn more about the overall air quality and also learning more about air quality models, I'd say.

Kelly Savoie:

Yeah, I mean, you got lucky getting a job in an area where you grew up, so that definitely helped. You knew a lot about the weather and things that were going on. It wasn't a big learning curve.

Alec Kownacki:

Yeah, like I said, just growing up here with, like I said, we experience, we can experience every weather phenomena, say exception of hurricanes. So just growing up in that environment really helped so.

Matt Moll:

Well, we're so grateful for everything you 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 band?

Alec Kownacki:

Yeah, so right now I'd say I go around every couple months or couple years switching between my favorite band or favorite artist. But right now I'd say my favorite band is Greta Van Fleet.

Kelly Savoie:

Ooh, I like them.

Alec Kownacki:

They are a... Oh, do you?

Kelly Savoie:

Yes.

Alec Kownacki:

Okay. I was hoping one of you two knew who they were, but yeah, they're... Actually, me and my wife, we went to their hometown just yesterday. They're from Frankenmuth, Michigan. And so we went there and it's a pretty big Christmasy kind of area, so we went there and just hung out and just enjoyed, went shopping. So yeah, I'd say they're my favorite band.

Kelly Savoie:

So do you feel like they have Led Zeppelin sound? I really like Led Zeppelin and that's why I like Greta Van Fleet because I'm like, oh cool. Finally a real rock band that sounds like the seventies groups, that were awesome. Do you feel the same way about it?

Alec Kownacki:

Yeah. Yeah. I hear a lot of similarity between Greta Van Fleet and Robert Plant, just their voice and their sound. I hear a lot of similarities, which I know a lot of people, they kind of take the negative aspect of it. But no, it's good music overall. Just enjoy the music. So yeah, I enjoy them a lot.

Kelly Savoie:

Well, thanks so much for joining us, Alec, and sharing your work experiences with us.

Alec Kownacki:

Thank you so much for having me.

Matt Moll:

Well, 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 edited by Peter Trebki, technical direction is provided by Peter Kilala. Our theme music is composed and performed by Steve Savoie, and the show is hosted by Matt Moll and Kelly Savoie. You can learn more about the show online at www.ametsoc.org/clear skies. And you can contact us at Sky Podcast at ametsoc.org if you have any feedback or would like to become a future guest.