

ISU Student Questions for NWS Des Moines Staff – Fall 2014

Answered by a new-hire (July 2014)

- **Work**

- What do you do every day? What is your task list at work?
 - It can vary day to day. As an intern, I don't do much (really any) in the way of forecasting. I work in a rotation with the other interns and an HMT to work what we call the DATAQ (Data Acquisition) desk. Our group of 4 staffs the desk two shifts a day (6am-2pm and 4pm-midnight). The main duties are to make sure things are in order, that the data coming in are quality, and to generally be the first contact for calls to the office. In addition, we issue products like regional and state temperature and precipitation summaries, watch over the rivers to issue flood warnings when necessary, and provide support during severe weather. There are a lot of little things to check off on each shift, but those are the big things.
- What do you do during downtime? Like when the weather is nice.
 - TRAINING! Especially as a new-hire. To put that in perspective, the NWS has an online learning center that I have done over 150 modules on. Topics range from fire weather, convective weather, aviation weather, and much much more. Currently I'm in the middle of DLOC (Distance Learning Operations Course), which is basically their radar and severe weather course. DLOC has you learn the ins and outs of the radar system, including the background nuts and bolts, then progresses into the various generated products, and finally how to properly use the products in diagnosing various meteorological phenomena. The emphasis is severe weather during DLOC, but includes winter weather too. Once I get through DLOC, things will presumably 'calm down' on the training front, so then I will be able to use my free time to get more involved in outreach, the office climate team, other training, and more.
- How hard is it to get used to shift work? How do you balance it with the rest of your life?
 - It certainly isn't the easiest thing in the world. I was fortunate, in a way, that I was exposed to shift work via my girlfriend. While we were in Champaign-Urbana, IL (University of Illinois ... I worked at a climate center there for nearly 3 years, leading up to my current spot in the NWS) she worked at a local hospital in the emergency room as check-in/insurance. There she basically worked the two shifts I do now. So from that perspective I knew what it would be like.

In general though, it is a bit taxing at first. At the University of Illinois, I worked M-F, 8 am to 5 pm. So the transition took a little while to get organized. For me and the other interns though, our shifts are a piece of cake compared to the forecasters since we don't have to work an overnight shift. Basically, the intern position is typically the best you'll have it in the weather service, from a shift work perspective. Also note, not all offices

staff the same shifts for interns. Here, it's a piece of cake working no earlier than 6am or later than midnight. I know interns at other offices, like Goodland, KS, that work a midnight shift and a morning shift. That would be tougher to get used to, in my opinion, because over the overnight shift.

- What shift is your favorite?
 - I haven't worked midnight shifts, so I can't say with full certainty since I haven't been exposed to them all. Currently, though, I like the morning 6am-2pm shift because it forces me out of bed (am NOT a morning person by nature), and when I'm done at 2pm, I still have a huge chunk of the day to get other things done, including a couple of hours where most of the rest of the world is still working.

Other forecasters will certainly mention that there are pros and cons to all the shifts, which is definitely true. For the two shifts I work, I already mentioned why I like the morning, but the evening (4pm-midnight) shift is nice from the perspective that I can go to the doctor, DMV, run errands, etc... during times others traditionally can't. It is especially nice getting holiday shopping done!

- What position requires the least amount of science and math at the NWS?
 - It sort of depends... all positions require it. Will you be deriving equations of motion? Most likely not, unless you are doing research or are a SOO (Science and Operations Officer). On shift and while forecasting, math isn't heavily done on the fly, but it is necessary to at least have a working knowledge of how much of the items are derived. Hopefully that makes sense.
- What are some examples of private sector jobs?
 - There are a lot more places you can work with a meteorology degree than you might think. I personally know people that work for the Utah/Salt Lake City DOT, NASA, Mars Corporation (yes, the chocolate/candy company), Wal-Mart, Southwest Airlines, and more. Others include energy companies, trading firms, corporations, and Universities (of course, I came from one!). The reason you probably don't know of them or hear of them often is because those places don't hire armies of meteorologists... just a couple or a handful in most cases. Be diligent when looking and don't be afraid to ask/reach out to companies.
- What is the main thing meteorology jobs look for when hiring someone?
 - It definitely depends on the hiring official and their needs at the time. In that case, it is hard to be prepared for everything. In general, I've found that hiring officials across all areas want an individual that is confident, personable, passionate, and able to work with others. So don't ignore your people skills!
- How "family friendly" is a job in meteorology?
 - I can't comment fully on this from a true family (as in kids) perspective, so the other forecasters should help here. For me and my girlfriend, it is good and bad. For one, it again helped that she used to work shifts so we're used to it already. The two biggest and most obvious hits against being family friendly is 1) the rotating shift work and 2)

that weather can throw a wrench into plans and force you into work at times. The latter is worst during convective season, but they cannot call you in if you're out of town so that is limited anyways.

Probably the biggest key to keeping things kosher with family, whether it be your wife and kids or the extended family, is to be FLEXIBLE. The more flexible plans can be, the happier and more 'family friendly' it will all seem.

- **Graduate School**

- Is going to grad school worth the time and money?
 - It completely depends on your goals. In general, a graduate degree will only help you with jobs. If you want to do media, a graduate degree is probably unnecessary. If you want to do research, heck yes grad school is a must. If you want to work in the private sector, I couldn't say with certainty. If you want to work in the NWS, it will only help your chances. The key is to really sit down and evaluate where you'd like to be/what you want to do with a career and gather as much information as possible. For me, it was 100% worth it. No doubt.
- How do you decide when and where to go to grad school?
 - For meteorology, the job market typically dictates that decision, as well as your career goals. The best piece of advice I can give is to not put all your eggs in one basket. Meaning, if you're on the fence with grad school, you should more than likely apply to grad schools and continue your job hunt at the same time. If you find a job, great! If you don't, you'll at least have that back up. If you don't find a job and didn't apply to grad school, you've likely lost at least a year of your time waiting for the next grad school cycle. Plus that's likely a year you will spend not doing much related to meteorology.
- In general, is getting your masters degree better than getting a job right out of undergrad? Does it significantly increase your odds of getting a job?
 - The degree does increase your odds of getting a job. I can say that with confidence. Does it mean you won't get a job without it? Of course not. If you can find a job, and more importantly a job you're happy with, right out of undergrad, graduate school may not be the way to go. I go back to the previous question, though, noting that you shouldn't just expect to get a job out of undergrad. Have a backup plan and be prepared because your best case scenario doesn't always come to fruition.
- Where did you go to undergrad and grad school?
 - University of Nebraska-Lincoln for both undergrad and graduate school.
- If my end goal is to end up at the NWS, what is your opinion of what I should do (grad school, apply right out of undergrad)?
 - Continuing the thoughts of a couple of the previous questions, BOTH! I applied to the NWS at the end of undergrad and applied to grad schools at the same time. Obviously I didn't get in, so grad school it was. Always keep your options open. Heck, after grad

school the hiring freeze was still on, so I made my way to the University of Illinois (for work, not more school) for a couple of years.

- What studies are most applicable in grad school for the NWS?
 - It can be more wide ranging than you think. I have a friend in the NWS that did grad school for Emergency Management (her undergrad was meteorology at UNL with me). In general, meteorology is a solid choice, but others that are relevant and wouldn't rule you out of the weather service (strictly in my opinion) are things like GIS, Emergency Management, climate/climatology (I did a lot of both in undergrad and grad), education, and other environmental sciences.

As a bit of a side note, it is not a bad idea to be broad brush at times too. The more you wedge yourself into a specific area, you limit the number and type of jobs you will likely be qualified for. For example, if you do some satellite work as an undergrad and then focus on it in grad school, you're probably not going to work at a climate center. I had a lot of classes in climate/climatology, which helped me land my job at the Midwestern Regional Climate Center at the University of Illinois.

- What is the best way to prepare yourself for grad school as an undergrad?
 - Keep up your grades and seek out as much information as you can. In this case, upper classmen that are applying for grad schools are invaluable. Also talk to your professors, reach out to professors at other universities as you begin to narrow down grad schools and hone in on your interests. Seek out undergraduate research opportunities!! I took part in a couple of undergraduate research projects, and that helped me immensely.

- **Setting Yourself Apart**

- What programs should I look into applying for to get accepted into a job with the NWS?
 - Programs? Like grad school? Anything with relevant application to meteorology. Otherwise... seek out anything that will build you up as an individual and obviously things related to meteorology. So for example, I was part of a National Science Foundation program that had various science majors go into the public school system to work with teachers to improve science curriculum and show students the many faces and areas of science. Not related to meteorology, but improved my speaking skills, teaching skills, working with those unfamiliar with meteorology, etc... Plus it was a great resume item in general! Other programs to consider are field projects, outreach opportunities of all kinds (again, not just meteorology related), and other leadership type programs.
- What is the best way to get an internship with the NWS?
 - By internship I assume you mean volunteering? Reaching out. Don't be afraid to ask questions, make calls or emails, etc... even if you don't know who you need to be talking to. Take the initiative. Opportunities don't typically find you, you need to find them. In most cases, taking initiative will lead to great things and often impresses. This sort of ties into 'who you know' ... covered in a later question.
- Where can you get experience before getting into the NWS?

- Lots of places. Specifically for meteorology look towards media, forecasting contests (like what Oklahoma runs every year), research opportunities, internships (I interned at the High Plains Regional Climate Center), etc... Outside of meteorology, but relevant to build your resume, looks towards outreach and education (like working an event at a science museum) and leadership (ie, AMS officers). Don't underestimate experiences that are not strictly meteorologically related. They're probably just as important.
- Which extracurricular activities benefitted you the most in undergrad?
 - Being president of the AMS group, taking part in VORTEX2, being involved in multiple outreach/education events. Again, some of these activities can be as important as your education and experiences in meteorology. These are the sorts of things that begin to set you apart from everyone else. Everyone has the degree... but what did you do to stand out from the rest?
- What can I do to set myself apart on a Pathways application?
 - Much of what was just mentioned in the extracurricular activities question.
- What was your foot in the door with the NWS?
 - This job! I did all my schooling at the University of Nebraska-Lincoln, then took a job at the Midwestern Regional Climate Center at the University of Illinois, then was fortunate enough to get a bunch of interviews with this last NWS hiring cycle.
- What are the best things to do post-graduation to land a job?
 - Stay relevant. Continue to seek out things relevant to what you want to do. Even if that means doing them for free/volunteering. It will pay off in the end. The longer you are away from school and any relevant jobs or experiences, the smaller your chances are to land a job. Remember, as time passes new students are graduating and trying to find jobs, so you always have to be cognizant of the fact that there are always new people competing for the jobs you want.
- What is the best way to get a job at the NWS besides pathways?
 - Boost your skills and resume as much as possible. Network (who you know... more later)! I obviously didn't do the Pathways program (it was known as SCEP – Student Career Experience Program when I was in school), so you can get in without it.
- **Other**
- Do grades matter a lot when getting hired for NWS or is it your experience that matters more?
 - Both... not exactly the answer you probably wanted, but it's true. You obviously have to have the grades, but experience matters just as much. Having a 4.0 GPA and no experience probably won't get you hired over someone with a 3.0 GPA that has a bunch of relevant experience. At the same time, if you have a low GPA and lots of experience, you probably won't get hired over someone with a high GPA and just some experience. There is a balance in there somewhere; you just need to find what works for you.
- Can you please expand on the phrase "It's about who you know, not what you know"?
 - It's a little misleading. You can know Warren Buffet, but he's not likely to hire you if you don't know anything about business. More appropriately, it's a combination of both. Networking will open so many more doors for you than just education/what you know

alone. I can say with 100% certainty that the networking I have done in the past led me to my internship at the High Plains Regional Climate Center, my job at the Midwestern Regional Climate Center, and finally here at the NWS in Des Moines. Don't underestimate the who you know, but definitely don't ignore the what you know.

- What is one thing you wished you knew as an undergrad?
 - Loaded question in a sense. Hindsight is always 20/20. As an undergrad, a lot of the questions above would have been helpful to know more about. Picking out one thing, though, I would have liked to know more about how difficult finding a job in the field really is... then tied to that, I would have told myself to take on a double major in something outside of meteorology, but still relevant. Something like math (you're probably only a couple classes away... then you could teach it!), computer science, or GIS. That way I would have other options besides just the competitive meteorology field.
- What's an interview with the NWS like?
 - Intimidating! When talking to someone, I key in on body language for feedback, but NWS interviews are all done over the phone for obvious reasons. That lone makes it tough since there is no visual feedback and verbal feedback is often limited at best. With the hiring spree this last spring, I was fortunate to get interviews for ~25 offices. Each interview was different, though there were similarities between most of them. They ranged from as little as 30 minutes to as long as 90 minutes. One common theme through the majority of the interviews was that the questions had little to nothing to do with meteorology. They were almost exclusively questions that were driving at who I am, how I interact with people, and what my ambitions are.

With regards to preparing for an interview like that, I fully recommend practicing a ton. The first couple I did (back at the end of undergrad) were rough. I had no clue what to expect. The lack of feedback (they're taking notes while you talk) can be shocking. Don't get discouraged. That's where practice comes in.

- What's your favorite 90s rock band?
 - Probably Red Hot Chili Peppers ... I also enjoy Velvet Revolver (super band no longer together) and Muse, but they're from the early 2000's.
- What do you recommend for people who want to get better at forecasting?
 - Practice! Also, review your forecast after it has happened. That's probably where you'll learn the most. Examine why your forecast was good, or wasn't good. Did you miss something? Was there a better indicator than what you used? Were there subtle clues you missed?
- What college classes have helped most with your job?
 - Everyone takes the core meteorology classes... everyone. If you didn't, you wouldn't even be eligible to apply to the NWS. So, in my opinion, it's the other classes, your electives both within the major and outside of it, that helped the most. Within the major I keyed in on climatology because I was very interested, and alas it helped me get

my first real job. Outside of the major I enjoyed taking GIS and a couple computer science courses. Those classes helped build a useful skillset that some applicants likely don't have.

Obviously each person is going to have different interests, so I would recommend following them, especially if they help build skills that may come in handy for a future job in meteorology.