


Alumni Job Panel No. 2



By ISU Alumni :)

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Private Sector: Fire Meteorology - Chloe Macey

B.S Meteorology - ISU Class of 2023 → Chloeta OKC - HailTrace

What to know about fire weather

- Uptick in wildfires → growth in fire meteorology
- Fire weather is challenging & rewarding
 - No true off season
- Monitor severe & winter weather conditions
- Provide detailed yet concise briefings to firefighters



What skills & experiences do you need?

- **Forecasting**
 - WxChallenge
 - Forecast Contest - Meteorology 3110, 4110, & 4170
- **Collaboration and Communication**
 - Outreach events
 - Job experience
- **Networking**
 - Attend the AMS conferences if you can
 - Contact firefighters & dispatchers



Airport
Fire, 2024

HIGH SCHOOL SCIENCE EDUCATION - RACHAEL STRAUGHN (WITTER)

WHY EDUCATION?

- **Help grow the next generation of scientists, literate citizens**
- **always have opportunities to keep learning and growing for yourself** (higher degrees paid for in some cases!)
- **job security** (many states are desperate for good science teachers!)
- **stable schedule** (school breaks, weather days!), **decent benefits** (health insurance, pension/retirement)
- I was a broadcast met for 8 years before pivoting into education, **it's never too late for a change!**

TEACHER CERTIFICATION

- Check your state's regulations for teacher certification!
Sometimes it is as simple as taking an exam!
- I am Earth Science, Chem, Bio, Physics and Assistant Principal (soon to be Principa!!! certified!)



WHAT TO DO NOW

- participate in school visits
 - get a feel for how schools "are" now
- don't let negative academic experiences get you down!
 - Never thought I'd go back to school, but now I'm 1/3 through a doctorate :)

ISU B.S. Meteorology, 2011; Utica U M.S. Ed, 2020; Valdosta State U Ed.D. Leadership (in progress)

Private Sector: Energy Meteorology - Grace Hansen

How do people in the energy sector use weather?

- Energy is bought and sold like the stock market
- Important to know relationship between **supply**(generation) and **demand**(load)
 - Cold weather means high demand
 - Wind speed and sun affect supply
- Utilities, Banks, Hedge Funds, Oil and Gas Companies

How do I use my skills from ISU in a sales position?

- Science communication is **essential**
 - Most traders do not have a weather background
- Confidence is **key**
 - We are the experts
- Understanding of large scale patterns and teleconnections
 - Looking for extremes and volatility



What I love about my job

- Speak with unique individuals everyday
- Very flexible and desirable hours
- Compensation for sales
- Amazing work environment and team



U.S. Forest Service: Wildland Fire Dispatcher - Cassidy Cook (Hoium)

Los Padres National Forest in Central California

ISU B.S. Meteorology '22

Overview

- Keep track of and communicate with fire resources out in the field (firefighters, crews, patrols)
- Primary response to wildfires on public lands
 - LPF ~2 million acres
- Work with other forests/agencies
 - R5 Forests, CalFire, BLM, surrounding counties
 - Helped ANF/LA County with the Palisades, Eaton, and Hughes fires (Jan '25)

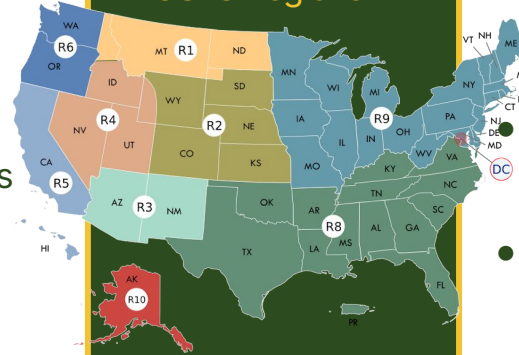
Other Duties

- Maintaining daily weather log
- Broadcasting daily fire weather over forest radio
- Collecting, analyzing, and sharing forest fuel moisture data

More Opportunities in USFS

- Currently training to get my Incident Meteorologist (IMET) qualification
 - Online trainings with some in-person classes
 - 7-14 day assignments on large fires across the region or nationally

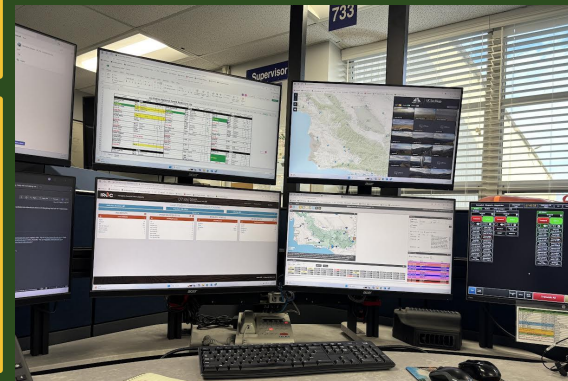
USFS Regions



[Forest Service Website](#)

Where to Start

- Dispatch only requires a 4 year degree in any field, no prior experience needed
Research and learn basics of wildfires and wildfire management
- Keep an eye on [USAJobs.gov](https://www.usajobs.gov) for openings (Keywords: logistics dispatcher)



Pathways

- Great way to get involved with the NWS while in school
- Learn and gain experience for all of the tasks expected of forecasters, such as:
 - Upper Air
 - Social Media
 - Daily Forecasts
 - TAF's
 - AFD's
 - Issuing Warnings
 - Community Outreach
- Can gain experience in a region outside the midwest
- Direct hire into agency after successful completion (potentially up in the air)



Graduate School

- Great way to gain experience on a specific topic you're interested in
 - My research at Texas Tech is focused on modeling electrification and lightning from lake effect snow storms
- Allow you to get involved with various types of field work
 - Local scale - Slow antennae & lightning mapping array sensors
 - Larger scale - Hurricane research missions
- Try to not worry too much about location/university, but more so about the professor and research topic you are interested in working with
- Applications typically open in the fall semester and are due over winter break or at start of spring semester
- Make sure to ask about funding/stipend, you should be getting paid to attend
- Depending on your universities coursework, you may want to continue forecasting on your own or join WXChallenge if you plan on entering a field involving forecasting

Graduate School & Academia

Natalie Trout

National Wind Institute - Texas Tech University



B.S. Meteorology (ISU) - Class of 2021

- AMS (President & Outreach Chair)
- NLAE (3 Summers)
- Student Admissions Rep. (STAR)

M.S. Atmospheric Science (TTU) - Class of 2023

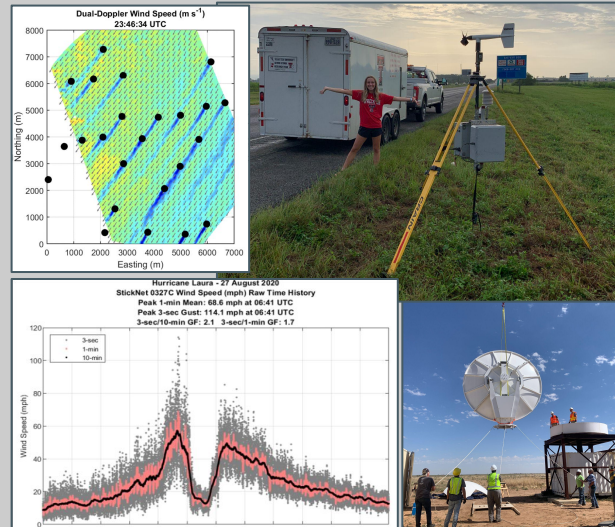
- Sfc. wind characteristics in landfalling hurricanes measured by TTU StickNets
- Instrumentation & deployments

Research Scientist at NWI

- Complete research :)
- Outreach! NWI tours/school visits/social media
- Deployments & field work
 - Hurricane/thunderstorm/mesonet/wind energy

What skills do I use that I learned at ISU?

- Coding (Matlab>Python, I said it)
- Academic writing
- Juggling responsibilities
- Communication skills



What can you do?

- Graduate School
 - Reach out to professors fall senior year
 - Understand the Prof. and the school (website, reach out to current students, etc)
 - Focus on your potential research topic and how that might impact you more then the university name/location/funding*
- General
 - Diversify your skill set! Show you can work with multiple types of data, be able to communicate your work (and its importance), take a short course in machine learning
 - GPA is important, but it isn't everything. Schools are looking for well rounded individuals who can actually work (not just book smart). Be INVOLVED in organizations!
 - Network network network! Everyone knows everyone, *positively* get your name out!

Taylor Nicolaisen - B.S. 2000 18 years of TV → NWS

**@ISU
For TV**

AMS

KURE Radio

Campus TV

- **Cy's Eyes**
- **Greenlee**

WHO Weather Internship

**NWS
Thoughts**

**Increasingly interested in
communication skills**

Job Security (wink)

Shift Work

Known Pay Raises / Scale

Good Benefits

Both Jobs Hard on Family

Trey Fulbright | NWS Intern, REU, Broadcast Meteorologist



- **B.S. Meteorology: Class of 2022**
- **Undergraduate Involvement**
 - AMS
 - Iowa NWA
 - Cy's Eyes
- **Internships**
 - NWS Volunteer (2019)
 - NEPARS REU (2021)
- **Career**
 - KCCI-TV (2022-2024)
 - KDKA-TV (2024-Present)
 - MSU Remote Graduate Student (2023-2025)

NWS Fort Worth, TX, Internship (2019)

- **Skills Needed:** Organized, Work Ethic, Basic Meteorology Knowledge, Computer Skills
- **What I learned/experienced:** Severe WX, Balloon Launches, Damage Surveys, Intro to Research and Presenting Research
- **How it benefits(ed) me?** Better forecaster, Knowledge of the Weather “Enterprise”,



NEPARS REU (2021)

- **Skills Needed:** Organized, Work Ethic, Basic Meteorology Knowledge, Computer Skills
- **What I learned/experienced:** Research process, collaborating, scientific writing & communicating, presenting at conference, cool trips :)
- **How it benefits(ed) me?** ISU Senior Thesis, graduate school capstone, problem solving, networking!



BROADCAST METEOROLOGIST (2022-PRESENT)

- **Skills Needed:** Organized, Work Ethic, FULL Meteorology Knowledge, Computer Skills, Communication & Writing
- **What I learned/experienced:** Covered extreme weather, presenting, writing, graphic designing
- **How it benefits(ed) me?** Better communicator, expanded social & geographic circle, networking!

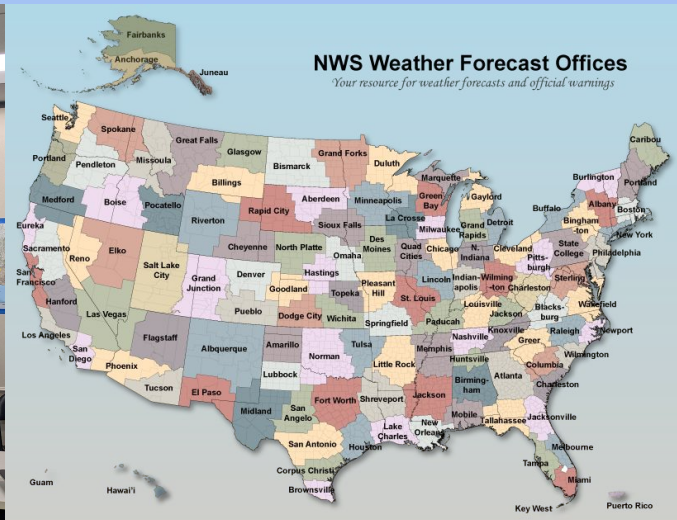


Antoinette Serrato

ISU Cyclone → Substitute Teacher → Graduate Student → National Weather Service

- NWS focuses on protection of life and property and enhancement of the national economy.
- Can really focus on anything in the NWS: forecasting, communication, research.
- Issue watches, warnings, aviation forecasts, upper air balloons (some offices).
- Good salary, you get bumped up relatively quickly.
- Many offices to choose from all over the country!

- Interactions with so many people!
- State, county, and federal emergency managers.
- Collaboration with other NWS offices!





**Questions
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