

Jacklynn K. Beck

Atmospheric Sciences Program
The Ohio State University
154 North Oval Mall
Columbus, Ohio 43210

Email: beck.746@osu.edu
Office: 1070 Derby Hall
Phone: (217) 460-2504
Date: October 2024

EDUCATION

Doctor of Philosophy (expected 2026), Atmospheric Sciences, The Ohio State University
Cumulative GPA: 3.878 | Graduate Advisor: Dr. Steven M. Quiring

Graduate Certificate in Practice of Data Analytics (expected 2026), College of Engineering
The Ohio State University

Graduate Certificate in College and University Teaching (expected 2026), Drake Institute for
Teaching and Learning, The Ohio State University

Graduate Certificate in Geographic Information Science and Technology (expected 2026),
Department of Geography, The Ohio State University

Bachelor of Science (2021) Atmospheric Sciences, The Ohio State University,
Cumulative GPA: 3.207 | Major GPA 3.515

Associate of Science (2018) Earth Sciences, Lake Land College
Cumulative GPA 3.38

Certificate in Geospatial Technology (2017), Math and Science Division, Lake Land College

RESEARCH EXPERIENCE

Graduate Research Associate, Climate Analytics Group, The Ohio State University, Project: *Soil Moisture Data Value Study Sensitivity Analysis in the Upper Missouri River Basin*, Summer 2024, PI: Dr. Steven M. Quiring

Climate Engagement and Capacity Building Program Analyst, (Contractor) Climate Program Office, National Oceanic and Atmospheric Administration, Project: *Inventory of Federal Climate Programs*, May 2023 – August 2023, PI: Mr. Frank Niepold

Graduate Research Associate, Climate Analytics Group, The Ohio State University, Project: *Developing an Objective, Impacts-Based Framework for Drought Mitigation Activities in Ohio* Fall 2021 – Autumn 2022, PI: Dr. Steven M. Quiring

William M. Lapenta Intern, Climate Program Office, National Oceanic and Atmospheric Administration, Project: *An Inventory of Federal Climate Workforce Development, Education, Training, and Engagement Programs*, Summer 2022, PI: Mr. Frank Niepold

Undergraduate Research Associate, Climate Analytics Group, The Ohio State University, Project: *Developing an Objective, Impacts-Based Framework for Drought Mitigation Activities in Ohio* Fall 2020 – Summer 2021, PI: Dr. Steven M. Quiring

Undergraduate Research Associate, Byrd Polar and Climate Research Center, The Ohio State University, Project: *Monitoring OSU's Urban Heat Island to Maximize Campus Sustainability*, Winter 2021 – Summer 2021, PI: Mr. Jim Q. DeGrand

TEACHING EXPERIENCE

Instructor, GEOG 5922 Microclimatology: Microclimatological Measurements, The Ohio State University, Autumn 2024

Instructor, GEOG 5940 Synoptic Meteorology: Synoptic Lab, The Ohio State University, Spring 2024

Instructor, GEOG 5922 Microclimatology: Microclimatological Measurements, The Ohio State University, Autumn 2023

Graduate Teaching Associate, GEOG 5940 Synoptic Meteorology: Synoptic Lab, The Ohio State University, Spring 2023

Guest Lecturer, ATMOSSC 2940 Basic Meteorology, The Ohio State University, November 2022

Guest Lecturer, GEOG 5922 Microclimatology: Microclimatological Measurements, The Ohio State University, November 2022

Guest Lecturer, GEOG 5921 Microclimatology: Boundary Layer Climatology, The Ohio State University, March 2022

Graduate Teaching Associate, GEOG 5940 Synoptic Meteorology: Synoptic Lab, The Ohio State University, Spring 2022

Volunteer Graduate Teaching Associate, GEOG 5941 Synoptic Meteorology: Synoptic Analysis and Forecasting, The Ohio State University, Autumn 2021

Volunteer Graduate Teaching Associate, GEOG 5922 Microclimatology: Microclimatological Measurements, The Ohio State University, Autumn 2021

PUBLICATIONS

Refereed Literature

Gu P., **Beck J.K.**, Ding R., Quiring S.M., (2024) *Methods for Evaluating the Climate Change Risk on Company Supply Chain*, Bulletin of the American Meteorological Society, (Second Review)

Beck J.K., Leasor Z.T., Li, Z., Quiring S.M., (2024) *Impacts of Ecological Drought on Terrestrial, Aquatic, and Avian Species in Ohio*, International Journal of Biometeorology, (In Preparation)

Salopek B.J., Quiring S.M., Houser J.B., **Beck J.K.**, (2024) Climatology of High Sheer Low CAPE Tornadoes in the Ohio Valley. Journal of Applied Meteorology and Climatology, (In Preparation)

Beck J.K., Quiring S.M., (2024) *Impacts of Ecological Drought on Pollinators in the Mid-Atlantic United States*, Journal of Applied Meteorology and Climatology, (In Preparation)

Beck J.K., Quiring S.M., and Dobriva I., (2024) *Soil Moisture Data Value Study Sensitivity Analysis in the Upper Missouri River Basin*, Journal of Climate, (In Preparation)

Leasor Z.T, **Beck J.K.**, and Steiner J.C., (2024) *Simplified Methods for Calculating the Standardized Ecological Water Deficit Index*, Ecological Indicators, (In Preparation)

Non-Refereed Literature

Contributed to United States Government, “*Upper Missouri River Basin Data Values Study Report*” Report to the United States Congress, (In Preparation)

Contributed to United States Government, “*Climate Literacy: Essential Principles for Understanding and Addressing Climate Change*” United States Global Change Research Program Published: September 25, 2024

Beck J. K., Crim H., Rodriguez C., Avery Z., Niepold F., (2024) *Inventory of Federal Climate: Services, Resilience, Education and Solution Programs*, Report of the Climate Education Program, National Oceanic and Atmospheric Administration, Published: January 21, 2024

Beck J. K., Crim H., Niepold F., (2023) *Inventory of Federal Climate Engagement and Capacity-building Programs*, Report of the Climate Education Program, National Oceanic and Atmospheric Administration, Published January 15, 2023

Contributed to United States Government, “*Chapter 9 Climate Education, Engagement, Workforce Development and Training*” in United States 8th National Communication. United Nations Framework Convention on Climate Change, Published: December 29, 2022

Book Chapters

Quiring, S. M., **Beck J.K.**, (2024) *Soil Moisture from Surface to Bedrock*. In: Encyclopedia of Climate System Science, 2nd Edition, Vol 1, pp. TBD, Editor-in-chief: Sumant Nigam, Section Editor: Zong-Liang Yang, Publisher: Elsevier, (In Preparation)

Quiring, S. M., **Beck J.K.**, (2024) *Drought*. In: Encyclopedia of Atmospheric Sciences, 3rd Edition, Vol 1, pp. TBD, Editor-in-chief: Walt Robinson, Climate Editor: Robert S. Ross, Publisher: Elsevier, (In Preparation)

Project Reports

Peng G., Ding R., **Beck J.K.**, Quiring S.M., *Climate Risk Analysis for Fortune 500 Company Facility Supply Chain*, Company Sustainability Team

INVITED PRESENTATIONS

Beck J.K., and Quiring S.M., (2024) Presentation: *Evaluation of Drought Indices and Indicators for Ecological Drought Monitoring in Ohio*, Midwest Drought Early Warning System Partners Meeting, Indianapolis IN., August 2024

Beck J. K., and Niepold F. (2023) Presentation: *Who, What, Where, and How Much: An Inventory of Federal Climate Programs*, Interagency Council for Advancing Meteorological Services (ICAMS), October 2023

Beck J. K., Niepold F., Crim H., (2022) Presentation: *Inventory of Federal Climate Education, Engagement, and Capacity-building Programs*, Education Engagement and Capacity-building Interagency Working Group, United States Global Change Research Program, August 2022

CONFERENCE PRESENTATIONS

Beck J.K., Quiring S.M., and Dobriva I., (2025) *Soil Moisture Data Value Study Sensitivity Analysis in the Upper Missouri River Basin*, American Meteorological Society Annual Meeting, New Orleans Louisiana, Session: Soil Moisture Observations from Measurement to Application, (Submitted)

Beck J.K., and Quiring S.M., (2025) *Climatology of Ecological Drought in the Mid-Atlantic*, American Meteorological Society Annual Meeting, New Orleans Louisiana, Session: Advancements in Analysis and Prediction of Drought, (Submitted)

Salopek B.J., and **Beck J.K.**, (2025) *Alaskan Climate Resilience: Understanding Social and Climate Vulnerabilities through 2100*, American Meteorological Society Annual Meeting, New Orleans Louisiana, Session: Merging Meteorological and Societal Datasets, (Submitted)

Chester N., and **Beck J.K.**, (2025) *Soil Moisture Variability Across Local Climate Zones of Columbus and Cleveland Ohio*, American Meteorological Society Annual Meeting, New Orleans Louisiana, Student Session: Applied Meteorology and Climatology, (Submitted)

Long N., and **Beck J.K.**, (2025) *Impact of Vegetation on Day and Night Surface Temperatures Across an Ecotone*, American Meteorological Society Annual Meeting, New Orleans Louisiana, Student Session: Applied Meteorology and Climatology, (Submitted)

Patel V., **Beck J.K.**, Quiring S.M., (2025) *Exploring Mixed Boundary Layer Heights: The Impact of latent, Sensible and Ground Heat Fluxes Through the Bowen Ratio Method*, American Meteorological Society Annual Meeting, New Orleans Louisiana, Student Session: Applied Meteorology and Climatology, (Submitted)

Styraneck S.M., and **Beck J.K.**, (2025) *evaluation of Air Quality and How it is Affected by Temperature and Relative Humidity in Columbus Ohio*, American Meteorological Society Annual Meeting, New Orleans Louisiana, Student Session: Atmospheric Chemistry, Aerosols, and Air Quality, (Submitted)

Braskett P., **Beck J.K.**, and Quiring S.M., (2025) *Evaluating the Impact of Soil Composition on Near Surface Temperatures in Central Ohio*, American Meteorological Society Annual Meeting, New Orleans Louisiana, Student Session: Applied Meteorology and Climatology, (Submitted)

Mikulski B., **Beck J.K.**, and Quiring S.M., (2025) *Evaluating the Correlation Between Soil Moisture and Net Solar Radiation*, American Meteorological Society Annual Meeting, New Orleans Louisiana, Student Session: Applied Meteorology and Climatology, (Submitted)

Bugos M., **Beck J.K.**, and Quiring S.M., (2025) *Comparison of Soil Moisture Predictions with In-Situ Measurements*, American Meteorological Society Annual Meeting, New Orleans Louisiana, Student Session: Applied Meteorology and Climatology, (Submitted)

Bard T., **Beck J.K.**, and Quiring S.M., (2025) *Comparing Near Surface and Sub Surface Temperatures to Determine Effectiveness of Green Spaces in Urban Spaces*, American Meteorological Society Annual Meeting, New Orleans Louisiana, Student Session: Applied Meteorology and Climatology, (Submitted)

Ridgway A., **Beck J.K.**, and Quiring S.M., (2025) *Analysis of Temperature Difference Between Turf and Grass Fields in the Context of Athletics*, American Meteorological Society Annual Meeting, New Orleans Louisiana, Student Session: Applied Meteorology and Climatology, (Submitted)

Rakoczy B., and **Beck J.K.**, (2025) *Assessing HRRR Representation Accuracy of Autumn Near-Surface Conditions over Ohio*, American Meteorological Society Annual Meeting, New Orleans Louisiana, Student Session: Applied Meteorology and Climatology, (Submitted)

Beck J.K., Quiring S.M., and Dobriva I., (2024) *Soil Moisture Data Value Study Sensitivity Analysis in the Upper Missouri River Basin*, National Soil Moisture Workshop, Logan Utah. July 2024

Beck J.K., and Quiring S.M., (2024) *Evaluation of Drought Indices and Indicators for Ecological Drought in the Mid-Atlantic*, American Meteorological Society Annual Meeting, Baltimore Maryland, Session: Advancements in Analysis and Prediction of Drought, January 2024

Gu P., **Beck J.K.**, Ding R., and Quiring S.M., (2024) *Methods for Evaluating the Climate Change Risk on Companies Supply Chain*, American Meteorological Society Annual Meeting, Baltimore Maryland, Student Session on Applied Meteorology and Climatology, January 2024

Crim H., **Beck J.K.**, Niepold F., Avery Z., Rodreguez C. and (2024) *Who, What, Where, and How Much: An Inventory of Federal Climate Programs*, American Meteorological Society Annual Meeting, Baltimore Maryland, Session: Expanding and Enhancing Climate Information and Services: A Whole-of-Government Framework and Action Plan, January 2024

Wallen L., Webb R., Liu Y., Chowdhury K., and **Beck J.K.**, (2024) *Land Cover Boundary Orientation on Wind, Temperature and Humidity*, American Meteorological Society Annual Meeting, Baltimore Maryland, Student Session on Boundary Layer Meteorology, January 2024

Glodzik A., Castro A., Tate S., Kellman A., and **Beck J.K.**, (2024) *Impact of Topography on Soil Conditions in Central Ohio* American Meteorological Society Annual Meeting, Baltimore Maryland, Student Session on Boundary Layer Meteorology, January 2024

Shaffer M.N., Porter S., Baltes D., Giovannucci A., and **Beck J.K.**, (2024) *Evaluating Numerical Weather Prediction Forecasting Accuracy in Columbus, Ohio*, American Meteorological Society Annual Meeting, Baltimore Maryland, Student Session on Operational and Local Meteorology, January 2024

Murray B., Mrazik E., Edwardson E., Hersey E., and **Beck J.K.**, (2024) *Environmental Conditions of Cow Hutches in the Agricultural Industry*, American Meteorological Society Annual Meeting, Baltimore Maryland, Session: Applied Meteorology and Climatology, January 2024

Nutting, T., Peters A., Scheufler J., White G., Zhang J., and **Beck J.K.**, (2024) *Soil Moisture Measurement Variability: A Duel of Instruments and Rainfall*, American Meteorological Society Annual Meeting, Baltimore Maryland, Session: Observations and Instrumentation, January 2024

Wilson A., **Beck J.K.**, Cervenec J., Davis G., Ding R., Gravina M., Johnson S., Leasor Z., Peggau K., Quiring S.M., Reynolds A., (2023) *Delivering Climate Services to Enhance Disaster*

Curriculum Vitae for Jacklynn K. Beck

Preparedness and Resilience in Ohio, American Geophysical Union Annual Meeting, Session on Regional and Local Climate Data and Services for Building a Climate Ready Nation, December 2023

Avery Z., Rodriguez C., Crim H., Niepold F., **Beck J.K.**, (2023) *Impacting Your Community: An Analysis of Federal Climate Resilience Programs*, American Geophysical Union Annual Meeting, Session on Climate Science and Policy, December 2023

Beck J.K., Crim H., Niepold F., Avery Z., and Rodriguez C., (2023) *Who, What, Where, and How Much: An Inventory of Federal Climate Programs*, Midwest Student Conference on Atmospheric Research, Champaign-Urbana Illinois, Session: Climate, October 2023

Beck J.K., and Quiring S.M., (2023) *Evaluation of Drought Indices and Indicators for Ecological Drought in the Mid-Atlantic*, Midwest Student Conference on Atmospheric Research, Champaign-Urbana Illinois, Session: Climate, October 2023

Gu P., Ding R., **Beck J.K.**, and Quiring S.M., (2023) *Methods for Evaluating the Climate Change Risk on Companies Supply Chain*, Midwest Student Conference on Atmospheric Research, Champaign-Urbana Illinois, Session: Climate, October 2023

Beck J. K., Niepold F., Crim H., (2023) Oral Presentation: *Inventory of Federal Climate Education, Engagement, and Capacity-building Programs*, American Meteorological Society Annual Meeting, Denver Colorado, Student Session on Education, January 2023

Beck J. K., Leasor Z.T., Li Z., Quiring S.M., (2023) Poster: *Impacts of Ecological Drought on Terrestrial, Aquatic, and Avian Species in Ohio*, American Meteorological Society Annual Meeting, Denver Colorado, Student Session on Applied Climatology, January 2023

Beck J. K., Quiring S.M., (2023) Poster: *Impacts of Ecological Drought on Pollinators in the Mid-Atlantic United States*, American Meteorological Society Annual Meeting, Denver Colorado, Student Session on Applied Climatology, January 2023

Beck J. K., Niepold F., Crim H., (2022) Oral Presentation: *Inventory of Federal Climate Education, Engagement, and Capacity-building Programs*, American Geophysical Union Annual Meeting Chicago Illinois, December 2022

Beck J. K., Leasor Z.T., Li Z., Quiring S.M., (2022) Poster: *Impacts of Ecological Drought on Terrestrial, Aquatic, and Avian Species in Ohio*, Midwest Student Conference on Atmospheric Research, Champaign-Urbana Illinois, October 2022

Beck J. K., Niepold F., Crim H., (2022) Poster: *Inventory of Federal Climate Education, Engagement, and Capacity-building Programs*, Midwest Student Conference on Atmospheric Research, Champaign-Urbana Illinois, October 2022

STUDENTS ADVISED & MENTORED

Undergraduate Research Theses Co-Advised with Steven Quiring

Tristian Bard, Atmospheric Sciences, The Ohio State University	Autumn 2023 – Present
Marissa Bugos, Atmospheric Sciences, The Ohio State University	Autumn 2023 – Present
Varig Patel, Atmospheric Sciences, The Ohio State University	Autumn 2023 - Present

Curriculum Vitae for Jacklynn K. Beck

Aiden Ridgway, Atmospheric Sciences, The Ohio State University	Autumn 2023 – Present
Brayden Mikulski, Atmospheric Sciences, The Ohio State University	Autumn 2023 – Present
Paul Braskett, Atmospheric Sciences, The Ohio State University	Autumn 2023 – Present

Research Projects

Gavin White, Atmospheric Sciences, The Ohio State University	Autumn 2024 - Present
Megan Shaffer, Chemical Engineering, The Ohio State University	Autumn 2023
Camilla Rodreguez, Environmental Engineering, Polytechnic Uni. of Puerto Rico	Summer 2023
Zavier Avery, Environmental Studies, North Carolina A&T University	Summer 2023

Professional Development

Rachel Webb, Atmospheric Sciences, The Ohio State University	Spring 2024 - Present
Sam Porter, Atmospheric Sciences, The Ohio State University	Autumn 2023 – Spring 2024
Cole Good, Atmospheric Sciences, The Ohio State University	Autumn 2023 – Spring 2024

PROFESSIONAL SERVICE

Secretary, Central Ohio Chapter of the American Meteorological Society	August 2024 - Present
Session Chair, AMS Student Conference, Agriculture and Climate	August 2024 - Present
Member, AGU ECC Resources Subcommittee	December 2023 - Present
Member, AGU Early Career Committee	December 2023 - Present
Member, AMS Student Conference Planning Committee	February 2022 - Present
Student Member, AMS Board for Continuing Professional Development	January 2022 - Present
Panelist, AMS Graduate School Panel	January 2024
Session Chair, AMS Student Conference, RQ Panels – Energy Industry	August 2023 – January 2024
Member, AMS SCPC Media Subcommittee	April 2022 – April 2023
Volunteer, NOAA Climate Program Office, CEE Division	August 2022 – May 2023
Volunteer, National Weather Service, Jackson Mississippi	March 2021 – August 2021
Summer Intern, University of Illinois Extension	Summer 2019

DEPARTMENT & COLLEGE SERVICE

Reviewer, 29 th Annual Denman Undergraduate Research Forum	March 2024
Membership Chair, Atmospheric Sciences Alumni Association Board	April 2022 – Present
Committee Member, Air Transportation Faculty Hiring Committee	August 2023 – January 2024

Curriculum Vitae for Jacklynn K. Beck

President, Graduate Geography Organization	Spring 2022 – Spring 2023
President, Chi Epsilon Pi Atmospheric Sciences Honor Society	Fall 2020 – Spring 2022
Masters Representative, Graduate Studies Committee	Fall 2021 – Spring 2022
President, Scarlet & Gray Forecasting Team	Fall 2020 – Spring 2021
Student Associate, Department of Geography	Fall 2018 – Summer 2021
Treasurer, Scarlet & Gray Forecasting Team	Fall 2019 – Spring 2020
Peer to Peer, Lake Land College Math & Science Division	Spring 2017 – Spring 2018
President, Lake Land College Environmental Club	Fall 2016 – Spring 2018

GRANTS

- 2024 – Travel Grant, University Corporation for Atmospheric Research (UCAR), Cooperative Programs for the Advancement of Earth System Science Fund, *Attendance for NIDIS Midwest Drought Early Warning System Partners Meeting*, (\$1,052)
- 2024 – Teaching Equipment Grant, Ohio State Department of Geography Gary and Connie Sharpe Geography Research Innovation Fund, *Meteorological Instrument Update for GEOG 5922 Course* (\$26,672.76)
- 2024 – Travel Grant, American Meteorological Society, *2024 AMS Summer Policy Colloquium Graduate Student Funding*, (\$6,000)
- 2023 – Experiential Learning Grant, Ohio State Department of Geography Sharpe Field School, *Travel Grant for 22 GEOG 5922 Undergraduate Students to attend 2024 AMS Annual Meeting in Baltimore Maryland* (\$18,000)

AWARDS & HONORS

College of Arts and Sciences Graduate Student Award for Teaching Excellence	2024
NWA Dr. Arthur C. Pike Scholarship in Meteorology	2024
Chi Epsilon Pi, DeGrand Research Award	2023
Graduate Associate Leadership Award (GALA)	2023
2022 AGU Annual Meeting, Outstanding Student Presentation Award (OSPA)	2023
NWA Dr. Roderick A. Scofield Scholarship in Meteorology	2022
Robert Max Thomas Fellowship	2022
Fenburr Scholarship for Outstanding Graduate Students	2022
Ohio Emergency Management Agency, Certificate of Appreciation	2022
Illinois Farm Bureau & Affiliates, Premier 20 LCP Award	2017

Curriculum Vitae for Jacklynn K. Beck

Salute to Illinois Scholars Recipient	2017
Bonny Potter Memorial Scholarship	2016 & 2017
Mike Nauta & Chuck Womack Memorial Scholarship	2016
Illinois 4-H Key Award	2015

PROFESSIONAL ORGANIZATIONS

American Geophysical Union	Summer 2022 - Present
National Weather Association	Summer 2022 - Present
Geography Graduate Organization	Fall 2021 – Present
American Meteorological Society	Fall 2020 – Present
AMS Student Chapter at The Ohio State University	Fall 2018 – Present
Collegiate 4-H at The Ohio State University	Fall 2018 – Spring 2021
National Society for Leadership and Success	Fall 2017 – Spring 2018
Phi Theta Kappa Honor Society	Spring 2016 – Spring 2018

TECHNICAL SKILLS

GIS Software: ArcMap, Business Analyst, ArcGIS Pro, QGIS, PostGIS 3 and PGAdmin 4

Remote Sensing Software: ERDAS Imagine, and Earth Engine

Campbell Scientific Software: PC200 W and Shortcut

3-D Printing Software: Ultimaker3 Cura

Adobe: Illustrator, Photoshop, Premiere Pro and Media Encoder

Programing Language: Python, and R