

Lindsay E. Johnson

University of Nebraska – Lincoln, School of Natural Resources, 249 Harden Hall, 331 Holdrege Street,
Lincoln, NE 68583-0988 USA, Email: ljohns518@gmail.com, Cell: (303)919-0464

RESEARCH INTERESTS

My current research focuses on how climate change is influencing natural hazards, with a particular focus on drought monitoring, impacts and communications.

EDUCATION

01/2018 – Present **Ph.D. in Natural Resources** University of Nebraska – Lincoln
Specializing in Climate Assessment and Impacts
Supervised by Michael Hayes, Ph.D.
Graduation expected: May 2022

Projects: Drought influence on New Mexico’s Food-Energy-Water Systems.

08/2014 – 08/2016 **MA Earth Science** University of Northern Colorado
Specializing in Climatology

Thesis Title: Designing Multimedia Videos to Teach Climate Concepts

Using the theories of cognitive retention of multimedia learning, animated videos of two fundamental climate concepts were created (Radiative balance and Feedback Loops). Nonscience undergraduates were given a pretest followed by the videos then a posttest.

08/2007 – 05/2011 **BSc Meteorology/Climatology** University of Nebraska – Lincoln
Minor: Mathematics
Completed curriculum in compliance to the National Weather Service’s requirements.

RESEARCH EXPERIENCE

2021 – Present **Using Machine Learning to Better Understand and Predict Drought Impacts in Texas**
School of Natural Resources, University of Nebraska – Lincoln

- I provide climate and drought background and will be looking at possible applications and policy- and decision-making implications of this tool.

03/2020 – Present **Flooding Resilience in Nebraska:** An Inter-disciplinary, Mixed-methods Analysis of Vulnerability and Resilience in the March 2019 Nebraska Floods.
Department of Civil and Environmental Engineering, University of Nebraska – Lincoln

- This was in conjunction with a pop-up undergraduate course offered online to all University of Nebraska campuses in summer 2020.
- My contributions include:
 - Attending all 8 weeks of the pop-up course,
 - Participate and conduct semi-structured interview via Zoom with stakeholders in Northeastern Nebraska,
 - Assist in building presentation for the 2020 American Geographical Union; Session: Bridging Divides in Social and Hydrologic Science: Integrative Practices and Stakeholder Participation in Hydrologic Research I

01/2018 – Present **NSF Innovations in Food-Energy-Water Systems (INFEWS)**
Influence of drought on the Food-Energy-Water Systems of New Mexico

- Part of my contribution to the NSF INFEWS project was exploring drought impacts, both historically and present, for New Mexico. This included building an up-to-date drought climatology for New Mexico.

TEACHING / ADMINISTRATIVE EXPERIENCE

08/2020 -12/2020 **Graduate Teaching Assistant** University of Nebraska – Lincoln

NRES 208: Climate Literacy in Natural Resources

- Worked with two other instructors to facilitate a hybrid (in-person and online) course.
- Helped to lead the in-person portion of the course which included setting up the technology to allow students to attend via Zoom for safety protocol or protection.
- Guided group projects, providing feedback and instruction for their final presentation.

08/2014 – 05/2016 **Graduate Teaching Assistant** University of Northern Colorado

AST 100: Introduction to Astronomy

- Administered three laboratory sections with a total of 80 to 100 undergraduate students.
- Promptly responded to students' questions by capturing important lectures by sitting in on classes.
- Leveraged proficiency in operating and locating astronomical objects.

- Incorporated, edited and eliminated unnecessary laboratories to ensure meaningful laboratory section course for the students learning, including adding effective essay to the laboratory by offering feedback with set objectives of enhancing student's knowledge of the solar system, as well as their scientific research and writing skills.

05/2019 – Present **School of Natural Resources:** University of Nebraska – Lincoln
Graduate Student Association

05/2018 – 05-2018 Treasurer Officer

05/2019 – Present Graduate Representative for the School of Natural Resources Faculty
 Advisory Committee

PUBLICATIONS

Published:

- Johnson LE, Geli HME, Hayes MJ and Smith KH (2020) Building an Improved Drought Climatology Using Updated Drought Tools: A New Mexico Food-Energy-Water (FEW) Systems Focus. *Front. Clim.* 2:576653. doi: 10.3389/fclim.2020.576653

PRESENTATIONS AT PROFESSIONAL CONFERENCES

2016 *Using multimedia to teach climate science concepts to undergraduate students* (96th Annual American Meteorological Society Conference). New Orleans, LA USA. January 2016.

2020 *Using New Tools to Build an Improved Drought Climatology for Food-Energy-Water System (FEWS) Impacts in New Mexico* (100th Annual American Geophysical Union Conference). San Francisco, CA USA. December 2020.

OTHER WORK EXPERIENCE

07/2015 – 05/2018 **Associate Scientist I** The COMET Program – UCAR

I began as a student intern and upon graduating with my Master's Degree was promoted to Associate Scientist I.

- Assist staff in developing and preparing training modules visualizations, website and facilitated course materials
- Conduct background research and provide support on graphical design for module development including quality assurance on meteorological and geoscience educational modules
- Render assistance with data entry for model validation; in-house classroom for the professional development courses; as well as with various projects

- Provide scientific expertise in authoring education and training content in one or more areas including, meteorology, hydrology, and climate science

02/2013 – 03/2013
10/2013 – 12/2013

**Contract Operational
Meteorologist**

PAE – US Antarctic Program
Amundson-Scott South Pole Station

This is a seasonal position. I was there from or two different seasons: 02/2013 to 03/2013 and 10/2013 to 12/2013.

- Hourly weather observations and METAR updates, with SPECI reports when weather conditions deteriorated when certain criteria have been met.
- Prepare and launch weather balloon at 0000 UTC and 1200 UTC.
- Collect daily sunshine data and monthly snow depth.
- Communicate with McMurdo station meteorologists and/or with pilots about conditions for traveling and landing at the south pole.

PROFESSIONAL MEMBERSHIPS

- American Meteorological Society
- American Geophysical Union

MEDIA CONTRIBUTIONS

2020 **College of Journalism and Mass Communication: Climate Change Nebraska**
University of Nebraska – Lincoln

- [Scientists Say: Climate Change is Here and Nebraska's Not Immune](#)
- [A Call for Change: Putting a Price on Carbon](#)

REFERENCES

Michael J. Hayes, Ph.D. (Advisor)
School of Natural Resources
National Drought Mitigation Center
Daugherty Water for Food Institute
University of Nebraska – Lincoln

Tel: 402-472-4271
Email: mhayes2@unl.edu

Lucinda Shellito, Ph.D.
Department of Earth and Atmospheric Science
University of Northern Colorado
Ross Hall 3235G
Greeley, Colorado USA

Tel: 970-351-2491
Email: lucinda.shellito@unco.edu