

**CRYSTAL J. STILES, PH.D.**  
**Applied Climatologist, NOAA High Plains Regional Climate Center**  
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## **EDUCATION**

- Ph.D. *Natural Resource Sciences with specialization in Climate Assessment and Impacts*, School of Natural Resources, University of Nebraska-Lincoln (2014)
- M.S. *Geoscience with emphasis in Meteorology-Climatology, certificate in Geographic Information Systems*, Department of Geography & Geology, Western Kentucky University (2009)
- B.S. *Geography with emphasis in Meteorology-Climatology*, Department of Geography & Geology, Western Kentucky University (2005)

## **PROFESSIONAL EXPERIENCE**

- 2017-present *Applied Climatologist and Assistant Geoscientist*, NOAA High Plains Regional Climate Center, School of Natural Resources, University of Nebraska-Lincoln
- 2014-2017 *Applied Climatologist and Postdoctoral Research Associate*, NOAA High Plains Regional Climate Center, School of Natural Resources, University of Nebraska-Lincoln
- 2013-2014 *Instructor*, Department of Geography & Geology, Western Kentucky University
- 2009-2013 *Graduate Research Assistant*, School of Natural Resources, University of Nebraska-Lincoln
- 2008-2009 *Instructor*, Department of Geography & Geology, Western Kentucky University
- 2006-2008 *Graduate Research Assistant*, Department of Geography & Geology, Western Kentucky University
- 2004-2006 *Meteorology Lab Instructor and College Heights Weather Station Observer*, Department of Geography & Geology, Western Kentucky University

## **GRANTS AND CONTRACTS**

- Stiles, C.J. (Principal Investigator), *Kansas, Nebraska, and Iowa Tribes Adaptation Planning* (\$14,768). Submitted to the Bureau of Indian Affairs Tribal Resilience and Ocean and Coastal Management and Planning FY2017 Competition, proposal is pending.
- Stiles, C.J. (Principal Investigator), *Standing Rock Sioux Tribe Drought Resilience Plan* (\$32,899). Submitted to the Bureau of Reclamation WaterSMART Drought Response Program: Drought Contingency Planning Grants for FY2018, proposal was not funded.
- Stiles, C.J. (Principal Investigator), *Building Capacity to Make Informed Decisions: Enhancing the Resilience of Tribes through Climate and Drought Needs Assessments and Training Sessions* (\$153,549). Submitted to NOAA Climate Program Office FY2018 Competition, proposal was not funded.
- Stiles, C.J. (Principal Investigator), *Great Plains Tribal Water Alliance Climate Partnership: Development of Water Resource Vulnerability Assessments to Build Tribal Resilience*,

subcontract awarded by the Great Plains Tribal Water Alliance (funding provided by the Bureau of Indian Affairs), \$29,983, project period 1 October 2016 – 30 September 2018.

Stiles, C.J. (Principal Investigator), *Great Plains Tribal Water Alliance Climate Partnership: Development of Water Resource Vulnerability Assessments Process and Guidebook*, subcontract awarded by the Great Plains Tribal Water Alliance (funding provided by the Bureau of Indian Affairs), \$11,999, project period 1 October 2016 – 30 September 2018.

Stiles, C.J. (co-Principal Investigator), *HPRCC: Tribal Climate Summaries*, contract awarded by the U.S. Department of Commerce – National Oceanic and Atmospheric Administration, \$60,000, 17 November 2016 – 17 August 2017.

Stiles, C.J. (co-Principal Investigator), *High Plains Regional Climate Center*, contract awarded by the U.S. Department of Commerce – National Oceanic and Atmospheric Administration, \$898,437, 1 August 2016 – 5 March 2018.

Stiles, C.J. (co-Principal Investigator), *Drought Planning Using Community Threat and Hazard Identification and Risk Assessment*, grant awarded by the National Oceanic and Atmospheric Administration Sectoral Applications Research Program, \$284,588, 1 July 2016 – 30 June 2018.

Stiles, C.J. (Principal Investigator), *Building Capacity for Climate Monitoring and Drought Management on Tribal Lands in the Missouri River Basin*, submitted to the National Oceanic and Atmospheric Administration Sectoral Applications Research Program, \$143,693, 1 July 2016 – 30 June 2018. Proposal was not funded.

Stiles, C.J. (Principal Investigator), *Establishing Healthier Communities in Native Rural Nebraska: Addressing Climate Change Impacts on Public Health*, submitted to the Rural Futures Institute of the University of Nebraska, \$100,000, 1 July 2015 – 30 June 2017. Proposal was not funded.

Stiles, C.J. (Collaborator), *The Wind River Indian Reservation's Vulnerability to the Impacts of Drought and the Development of Decision Tools to Support Drought Preparedness*, grant awarded by the North Central Climate Science Center at Colorado State University, \$393,618, 1 June 2015 – 31 May 2017.

## **PUBLICATIONS**

### **Peer-Reviewed Publications**

**Stiles, C.J.**, and N.A. Umphlett (submitted): Building Adaptive Capacity in Tribal Communities: A Case Study from the Northern Plains. *Weather, Climate, and Society*.

McNeeley, S.M., C.F. Dewes, **C.J. Stiles**, T.A. Beeton, I. Rangwala, M.T. Hobbins, and C.L. Knutson, 2017: Anatomy of an Interrupted Irrigation Season: Micro-Drought at the Wind River Indian Reservation. *Climate Risk Management*, early online release, <https://doi.org/10.1016/j.crm.2017.09.004>.

**Stiles, C.J.**, and M.J. Hayes, 2017: Recommendations for Collaborative Drought Management in Transboundary River Basins. *Water Resources Impact*, 19(3), 17-19.

**Stiles, C.J.**, N. Umphlett, J. Rattling Leaf Sr., M.D. Shulski, D. Kluck, M. Hayes, and C. McNutt, 2015: Improving Climate Resiliency in Tribal Communities: Partnering for Change in the Missouri River Basin. *Water Resources Impact*, 17(4), 15-17.

Shulski, M.D., W. Baule, **C. Stiles**, and N. Umphlett, 2015: A Historical Perspective on Nebraska's Variable and Changing Climate. *Great Plains Research* 25(2), 109-120.

### **Book Chapters**

Smith, K.H., **C.J. Stiles**, M.J. Hayes, and C.J. Carparelli, 2016: Support for Drought Response and Community Preparedness: Filling the Gaps between Plans and Action. In *Water Policy and Planning in a Variable and Changing Climate*, K.A. Miller, A.F. Hamlet, D.S. Kenney, and K.T. Redmond, eds., CRC Press – Taylor and Francis.

### **Workshop Reports**

Bathke, D., N. Wall, J. Nothwehr, K. Smith, D. Woudenberg, T. Bernadt, **C. Bergman**, J. Robine, M. Hayes, M. Svoboda, L. Darby, and R. Pulwarty, 2012: Building a Sustainable Network of Drought Communities. National Integrated Drought Information System Engaging Preparedness Communities Workshop Report, Chicago, Illinois, 37 pp. [Available online at [http://drought.unl.edu/archive/Documents/NDMC/Presentations//06082011\\_Chicago-IL/NIDIS\\_EPC\\_ChicagoWorkshopReport\\_Final.pdf](http://drought.unl.edu/archive/Documents/NDMC/Presentations//06082011_Chicago-IL/NIDIS_EPC_ChicagoWorkshopReport_Final.pdf)]

### **Dissertations and Theses**

**Bergman, C.J.**, 2014: *Improving Drought Management for Transboundary River Basins in the United States through Collaborative Environmental Planning*, Ph.D. Dissertation, University of Nebraska-Lincoln, Lincoln, NE, available at <http://digitalcommons.unl.edu/natresdiss/91/>.

**Bergman, C.J.**, 2009: *A Survey of Drought Impacts and Mitigation Planning in Kentucky*. Master's Thesis, Western Kentucky University, Bowling Green, KY, available at <http://digitalcommons.wku.edu/theses/95/>.

**Bergman, C.J.**, 2005: *The National Weather Service's Polygon Method: Warning Dissemination of the Future*. Honors College Capstone Experience/Thesis Project, Western Kentucky University, Bowling Green, KY, available at [http://digitalcommons.wku.edu/stu\\_hon\\_theses/159/](http://digitalcommons.wku.edu/stu_hon_theses/159/).

## **PRESENTATIONS**

### **Abstracts for Professional Meetings (Oral and Poster Presentations)**

**Stiles, C.J.**, N. Umphlett, and D. Kluck, 2018: Building Capacity with Tribal Communities in the Missouri River Basin to Use Climate Information for Decision Making. *American Association of State Climatologists Annual Meeting*, Nebraska City, NE, June 20-22.

Umphlett, N., W. Pettee, W. Sorensen, and **C.J. Stiles**, 2018: ACIS-based GIS Data Retrieval Portal. *American Association of State Climatologists Annual Meeting*, Nebraska City, NE, June 20-22.

- Stiles, C.J.,** D. Crow Ghost, and N. Umphlett, 2018: Increasing the Capacity of Tribal Communities to Incorporate Climate Information into Decision Making. *Climate Prediction Applications Science Workshop*, Fargo, ND, May 22-24.
- Stiles, C.J.,** N. Umphlett, and D. Kluck, 2018: Building Capacity with Tribal Communities in the Missouri River Basin to Use Climate Information for Decision Making. *American Association of Geographers Annual Meeting*, New Orleans, LA, April 11-14.
- Stiles, C.J.,** D. Bathke, N. Wall, T. Bernadt, and E. Wickham, 2017: Developing a Drought Scenario for Threat and Hazard Identification and Risk Assessment (THIRA). *American Meteorological Society Conference on Applied Climatology*, Asheville, NC, June 26-28.
- Stiles, C.J.,** 2017: Capacity Building with Tribes in the Missouri River Basin through the Development of Climate Summaries. *NIDIS Missouri Basin User Forum: Drought Early Warning for the Upper Basin*, Rapid City, SD, May 23-25.
- Stiles, C.J.,** 2017: Increasing Resilience of Tribal Communities through Climate Data Training and Production of Climate Summaries. *National Adaptation Forum*, St. Paul, MN, May 8-11.
- Stiles, C.J.,** 2017: Building Capacity with the Tribes of Wind River: Developing Climate Assessments to Support Decision Making. *Great Plains Tribal Water Alliance Spring Conference*, Fort Yates, ND, April 4-7.
- Stiles, C.J.,** 2017: Capacity Building with Tribes in the Missouri River Basin through the Development of Climate Summaries. *NIDIS Missouri Basin User Forum: Drought Early Warning for the Lower Basin*, Nebraska City, NE, March 7-9.
- Stiles, C.J.,** 2016: Climate Summaries 101 and Specific Tribal Examples. *Great Plains Tribal Water Alliance Fall Conference*, Rapid City, SD, November 29-30.
- Stiles, C.J.,** N. Umphlett, 2016: Building Capacity with Tribes in the Missouri River Basin: An Example of Engaging a Community on Climate Issues. *American Association of State Climatologists Annual Meeting*, Santa Fe, NM, June 28-July 1.
- Stiles, C.J.,** 2016: Building Capacity for Climate Monitoring and Drought Management on Tribal Lands in the Missouri River Basin: Opportunities for Collaboration. *Great Plains Tribal Water Alliance Spring Conference*, Fort Pierre, SD, April 13-14.
- Stiles, C.J.,** 2016: Recent Activities of the High Plains Regional Climate Center. *USDA Northern Plains Climate Hub Meeting*, Casper, WY, March 16-17.
- Stiles, C.J.,** 2016: Communicating Climate Science to Inform Natural Resource Management Decisions among Native American Communities in the Missouri River Basin. *American Meteorological Society Annual Meeting*, New Orleans, LA, January 10-14.
- Stiles, C.J.,** 2015: Building Capacity for Climate Monitoring with Tribal Nations in the Missouri River Basin. *American Association of State Climatologists Annual Meeting*, Cape May, NJ, June 23-26.

- Stiles, C.J.**, N. Umphlett, B. Fuchs, and M. Shulski, 2015: Building Capacity for Climate Monitoring and Drought Management on the Wind River Indian Reservation. *13<sup>th</sup> Annual NOAA Climate Prediction Applications Science Workshop*, Las Cruces, NM, March 24-26.
- Bergman, C.J.**, M.J. Hayes, D.J. Bathke, C.L. Knutson, and Z. Tang, 2014: Improving Drought Management for Transboundary River Basins in the United States through Collaborative Environmental Planning. *40<sup>th</sup> Annual Center for Great Plains Studies Symposium*, Lincoln, NE, April 1-4.
- Bergman, C.J.**, M.J. Hayes, D.J. Bathke, C.L. Knutson, and Z. Tang, 2013: Investigating the Experiences of Transboundary Watersheds and Hydrologic Basins to Improve Drought Planning in the United States. *Association of American Geographers Annual Meeting*, Los Angeles, CA, April 9-13.
- Bergman, C.J.**, M.J. Hayes, D.J. Bathke, C.L. Knutson, and Z. Tang, 2012: Investigating the Experiences of Watersheds and Hydrologic Basins to Improve Drought Planning in the U.S. *American Meteorological Society Annual Meeting*, New Orleans, LA, January 22-26.
- Bergman, C.J.**, M.J. Hayes, D.J. Bathke, C.L. Knutson, and Z. Tang, 2011: The Status of Drought Planning for Watersheds and Hydrologic Basins in the United States. *American Meteorological Society Conference on Applied Climatology*, Asheville, NC, July 18-20.
- Bergman, C.J.**, M.J. Hayes, D.J. Bathke, C.L. Knutson, and Z. Tang, 2011: An Overview of Watershed Management and Basin-Level Drought Planning in the United States. *Nebraska Academy of Sciences Annual Meeting*, Lincoln, NE, April 15.
- Bergman, C.J.**, D.J. Bathke, M.D. Svoboda, N.A. Wall, J. Nothwehr, J. Robine, T.K. Bernadt, and M.J. Hayes, 2011: Vision into Action: The Establishment and Facilitation of an Effective Drought Coordinator Network in the United States. *American Meteorological Society Annual Meeting*, Seattle, WA, January 23-27.
- Bergman, C.J.**, and S.A. Foster, 2010: An Analysis of Drought Impacts in Kentucky. *Nebraska Academy of Sciences Annual Meeting*, Lincoln, NE, April 23.
- Bergman, C.J.**, and S.A. Foster, 2010: A Survey of Impacts Resulting from the Drought of 2007 in Kentucky. *American Meteorological Society Annual Meeting*, Atlanta, GA, January 17-21.
- Bergman, C.J.**, and S.A. Foster, 2009: An Analysis of Drought Impacts in Kentucky. *Association of American Geographers Annual Meeting*, Las Vegas, NV, March 22-27.
- Bergman, C.J.**, and S.A. Foster, 2008: A Spatio-Temporal Analysis of the 1930-1931 and 2007 Droughts in Kentucky. *National Weather Association Annual Meeting*, Louisville, KY, October 11-16.

**Bergman, C.J.**, and S.A. Foster, 2008: An Analysis of Impacts Resulting from the Kentucky Drought of 2007. *Association of American Geographers Annual Meeting*, Boston, MA, April 15-19.

**Bergman, C.J.**, and S.A. Foster, 2007: A Media Perspective on the Kentucky Drought of 2007. *Kentucky Academy of Science Annual Meeting*, Louisville, KY, November 8-10.

**Bergman, C.J.**, A.H. Wulff, and R. Mahmood, 2005: Modeling Relationships between Soil and Climate Parameters using the Basic GAPS Program. *Geological Society of America Southeastern Section Annual Meeting*, Biloxi, MS, March 17-18.

## **STUDENT SERVICE**

2017-present Serving on doctoral committee of Elliot Wickham, tentative dissertation title: "Building Resilience of Future Water Supply through Integrating Land-use, Water, and Drought Planning: A Case Study of Raleigh, North Carolina"

## **TEACHING EXPERIENCE**

### **Courses Taught:**

- Introduction to Meteorology
- Introduction to the Physical Environment
- World Regional Geography
- Climate in Crisis
- Applied Climate Science (Teaching Assistant)
- Earth's Natural Resources System (Teaching Assistant)

## **HONORS AND AWARDS**

- *Great Plains Fellow*, Center for Great Plains Studies (2018)
- *Honorable Mention Climate Adaptation Leadership Award*, sponsored by the National Fish, Wildlife, and Plant Climate Adaptation Strategy's Joint Implementation Working Group (award given to the Wind River Drought Preparedness Team of which I am a collaborator) (2017)
- *Chancellor's Award for Employee Wellness*, School of Natural Resources, University of Nebraska-Lincoln (I helped the department earn this award) (2016 & 2017)
- *Natural Resource Sciences Graduate Student Conference Travel Grant recipient*, University of Nebraska-Lincoln (2013)
- *School of Natural Resources Graduate Student Association Student Travel Grant recipient*, University of Nebraska-Lincoln (2011)
- *Weather and Society Integrated Studies (WAS\*IS) summer workshop attendee*, Boulder, Colorado (2010)
- *Graduate student presentation competition winner*, first place, Nebraska Academy of Sciences Annual Meeting Earth Sciences section, Lincoln, Nebraska (2010)

- *Larrick and Whitmore travel grant recipient*, University of Nebraska-Lincoln (2009)
- *Geography Awareness Week poster contest winner*, fourth place, University of Nebraska-Lincoln (2009)
- *Graduate research assistantship recipient*, School of Natural Resources, University of Nebraska-Lincoln (2009)
- *Outstanding Student Leader in Geoscience*, The Center for Leadership Excellence, Western Kentucky University (2007)
- *Graduate research competition winner*, third place, Kentucky Academy of Science, Louisville, Kentucky (2007)
- *Gamma Beta Phi Society inductee*, Western Kentucky University (2007)
- *Graduate research assistantship recipient*, Kentucky Mesonet, Department of Geography and Geology, Western Kentucky University (2006)
- *Ronald R. Dilamarter Outstanding Geography Senior Award recipient*, Department of Geography and Geology, Western Kentucky University (2006)
- *Honors Program graduate*, Western Kentucky University (2005)
- *Magna Cum Laude distinction*, Western Kentucky University (2005)
- *Golden Key International Honor Society inductee*, Western Kentucky University (2003)
- *Phi Eta Sigma Honor Society inductee*, Western Kentucky University (2002)

## **SPECIAL SKILLS AND TRAINING**

### **Software Skills**

- Microsoft Suite: Word, Excel, PowerPoint, Access
- Blackboard
- ArcInfo (ArcGIS)
- Adobe InDesign
- MAXQDA

### **Training**

- Office of Sponsored Programs Budget Template Training, University of Nebraska-Lincoln (2015)
- Search Committee Orientation, University of Nebraska-Lincoln (2015)
- Grant Writers' Seminars and Workshops "Write Winning Grant Proposals" Seminar, University of Nebraska-Lincoln (2013)
- Responsible Conduct of Research, University of Nebraska-Lincoln (2010)
- Institutional Review Board (IRB) Collaborative Institutional Training Initiative (CITI), University of Nebraska-Lincoln (2010)
- Basic College Teaching Skills Program, Western Kentucky University (2007)
- OK-First Full Certification Course, Oklahoma Climatological Survey (2006)

## **SERVICE AND OTHER PROFESSIONAL ACTIVITIES**

- *Search Committee Member*, Applied Climatologist/HPRCC Director, School of Natural Resources, University of Nebraska-Lincoln (2017-present)
- *Associate Member*, Graduate Faculty at the University of Nebraska-Lincoln (2017-present)
- *Consultant*, National Integrated Drought Information System (NIDIS) Education and Public Awareness Working Group (2015-present)
- *Member and Co-Chair*, School of Natural Resources Social Committee, University of Nebraska-Lincoln (2015-2017)
- *Wellness Ambassador*, Campus Recreation Wellness Initiative, University of Nebraska-Lincoln (2014-present)
- *Reviewer*, International Journal of Disaster Risk Science (2013-present)
- *Coordinator*, Department of Geography & Geology Fall Seminar Series, Western Kentucky University (2013)
- *Chair*, Earth Sciences section, Nebraska Academy of Sciences (2010-2011)
- *Member*, American Meteorological Society (AMS)
- *Member*, Earth Science Women's Network
- *Member*, American Association of State Climatologists (AASC)
- *Member*, American Association of Geographers