

Beth Hall
4207 W Old Church Rd, Champaign, IL 61822

Tel: 217-418-7403
Email: bethhall@illinois.edu

Education

Ph.D.	Atmospheric Sciences	Univ. of Nevada – Reno	2006
	Dissertation title: <i>Precipitation and Radar Reflectivity Characteristics Related to Natural Wildland Fire Ignitions in Arizona and New Mexico</i>		
M.S.	Atmospheric Physics	Univ. of Nevada – Reno	1998
	Thesis title: <i>Climate Factors Related to Nevada's Fire Season</i>		
B.A.	Geography	Indiana Univ.	1994

Professional Interest

- Professional Interest: *Applied climate, weather, and/or earth science research that contributes to the advancement of understanding of environmental relationships, data acquisition and product development.*
- Research areas include: *Applied climate science; extreme climate and weather; drought; climate variability; ecosystem database management; scientific visualization.*
- Thesis work examined: *Surface, upper air and cloud-to-ground lightning strike climatology related to natural fire starts in Nevada.*
- Dissertation work examined: *Quantifying precipitation amounts associated with natural wildfire ignitions, weather radar reflectivity patterns associated with wildfire ignitions, and statistical relationships between monsoonal moisture surges/pulses and wildfire ignitions.*

Professional Experience

Director Indiana State Climate Office Mar 2019 - present
Department of Agronomy

Manage the office and serve as state climatologist. Manage the quality control, data acquisition, and data delivery from the Purdue Automated Agricultural Weather Stations (PAAWS) mesonet. Provide climate services (*i.e.*, data, tools, information, applied climate research) for all Indiana residents and climate stakeholders.

Director Midwestern Regional Climate Center Jan 2012 – Feb 2019
Lead administrator of the MRCC Program promoting the services and talent of the staff and center. Coordinate and collaborate with other regional climate centers, NOAA, and other national climate service agencies and programs. Encourages and pursues research and other grant opportunities to assist in the advancement of the applied climate science field.

Assistant Professor Towson University Aug 2008 – Dec 2011

Tenure-track faculty member in the department of Geography and Environmental Planning. Responsible for teaching courses in physical geography, meteorology, and climatology with class sizes ranging from 25-100 students. Research focus was climatologically based on both local and national issues particularly pertaining to drought, wildland-urban interface, and wildfire issues.

Contractual Researcher Towson University June 2008-Aug 2008

Co-principle investigator on a National Science Foundation pilot project that examined downstream convective climatology for the Las Vegas Valley. Contributions to the project included analysis of lightning and wildfire patterns for the study area.

Research Scientist Desert Research Institute June 2007-2016

- Consultant** *Division of Atmospheric Sciences*
Continued research and collaboration for funded projects following my physical departure from the Desert Research Institute in August 2007. Research included climatological assessment of wildland fire danger (both past and present) for North America, development of an historical, gridded fire weather dataset for federal and local wildland fire agencies, and assessment of hourly wildland fire internet products for California
- New Hampshire State Climatologist** University of New Hampshire Sep 2007 – May 2008
Principle contact for climate-related data needs from stakeholders. Also initiated outreach to local schools and community groups to communicate a variety of climatological topics. Conducted research and mentored climatology students on application-driven climate research in New Hampshire.
- Faculty Lecturer** University of New Hampshire Sep 2007 – May 2008
Department of Geography
Responsible for teaching a Freshman-level course on the introduction to meteorology. Class size was typically 120 students. Also, responsible for teaching Sophomore-level courses on climatology and extreme weather. Class size was typically less than 30.
- Associate Research Scientist / Deputy Director of the Program for Climate, Ecosystem and Fire Applications (CEFA)** Desert Research Institute July – Aug 2007
Division of Atmospheric Sciences
Responsible for overseeing a staff of 6-8 that typically included 2-4 graduate students, 1-3 research support staff, and 1-3 computer support personnel at any one time. Managed all funded CEFA projects (between 10 and 15, at any time) for details such as project and report deadlines, budget status, and project progress. I supervised bi-weekly meetings with the CEFA program staff, and was personally responsible for the partial or entire research duties for between 7 to 10 funded projects at all times. The Director of CEFA was on travel approximately 2/3 of the year, during which time I oversaw the graduate student research for all CEFA graduate students directly. I was also the CEFA representative for the Operational Advisory Group within the California and Nevada Smoke and Air Committee (CANSAC; an MM5 operational modeling facility located within CEFA). For this position, I was the liaison between the direct users of the CANSAC products and the CEFA/CANSAC staff who developed the web and MM5 products (<http://cefa.dri.edu>). I was empowered to write proposals and publish findings in peer-reviewed journals, although this was not a requirement for the position.
- Assistant Research Scientist / Deputy Director of CEFA** Desert Research Institute 2000-2007
Division of Atmospheric Sciences
Same responsibilities as for the 'Associate Research Scientist' position that began mid-2007 with a reduced emphasis on pursuing external funding and publishing.
- Research Assistant** Desert Research Institute 1998-2000
Division of Atmospheric Sciences
Primary research scientist on approximately 8 separate research projects funded by both state and federal wildland fire agencies. Projects included state and regional climatology of fire-related atmospheric variables, quality control of surface weather data, and recommendations to agencies on spatial distributions of weather networks. Deliverables from most projects included an agency report

and/or a web-based climatology product. During this time, the Program for Climate, Ecosystem and Fire Applications (CEFA) was being developed. I co-founded this research program under the primary leadership of Dr. Timothy J. Brown (program director). I developed the program's web site, logo, and marketing materials (e.g., brochures, posters, etc).

Graduate Research Assistant Desert Research Institute 1995-1998
Division of Atmospheric Sciences /
 University of Nevada, Reno
Physics Department

Performed general scientific data analysis and visualization on large data sets including surface weather station networks, upper-air modeled data (e.g., NCEP/NCAR reanalysis), and national lightning data. Assistantship required a minimum 20 hr/wk commitment while enrolled full-time as a graduate student.

Teaching Experience

Severe and Hazardous Weather Towson University Fall 2009
Department of Geography and Env Planning Spring 2011

A second-year course that offered an appreciation for the complexities and power of severe weather, and presented a clear understanding of the way hazardous weather events, such as those of recent years, developed and evolved in our atmosphere. A first-year introduction to meteorology course was a pre-requisite.

Meteorology GEOG 377/515 Towson University Spring 2009
Department of Geography and Env Planning Fall 2010

This junior-level course that examined the composition and structure of the atmosphere, thermodynamic processes, forces and related small-and large-scale motions, air masses, fronts, tropical cyclones, solar and terrestrial radiation, general circulation and weather forecasting.

Intro to Phys Geography GEOG 101 Towson University Fall 2008 -
Department of Geography and Env Planning Fall 2011

This first-year course highlighted the general topics of physical geography, including map analysis and the 4 'spheres' of geography. This 3-credit course had anywhere from 30-120 students. For the larger course sections, there was a TA available for assistance.

Climatology GEOG 373/515 Towson University Fall 2008, 2011
Department of Geography and Env Planning Spring 2010

This third year undergraduate / first year graduate course addressed the controls on climate, atmospheric phenomena that drive climate, climate classification, and an introduction to global climate issues.

Severe and Hazardous Weather University of New Hampshire Spring 2008
Department of Geography

A second-year course that offered a new appreciation for the complexities and power of severe weather, and presented a clear understanding of the way hazardous weather events, such as those of recent years, develop and evolve in our atmosphere. A first-year introduction to meteorology course was a pre-requisite.

Elements of Weather GEOG 473 University of New Hampshire Fall 2007
Department of Geography Spring 2008

First-year course on the basic principles of weather phenomena and the physical

processes underlying these phenomena. Included a weekly lab.

**Climatology
GEOG 570** University of New Hampshire Fall 2007
Department of Geography
 Second-year course on the general survey of climate classification and the geographical distribution of climate types, interpretation and applications of climate data, climate change over geologic time, and issues of global warming.

**Intro. to Phys.
Geography
GEOG 103** Truckee Meadows Community College Spring 2007
Department of Physical Sciences Fall 2006
Reno, NV Spring 2006
 This first-year course highlighted the general topics of physical geography, including map analysis and the 4 'spheres' of geography. This was a 5-credit course that involved 3 hours of lecture and 3 hours of laboratory work every week. There was no T.A. assigned to this undergraduate level course.

**Intro. to FORTRAN
77 and Scientific
Visualization** Desert Research Institute Fall 2003
Reno, NV
 This graduate-level course was offered to all graduate students, faculty, and staff at the Desert Research Institute. There were approximately a dozen students in the class – most of whom were graduate students. Topics ranged from program design (e.g., flow charts) to arrays to file I/O. Students learned how to read ASCII and binary files and manipulate data using F77 programming syntax. The visualization aspect of the course used GrADS (Grid Analysis and Display System) for demonstration and introduction to scientific visualization. At the end of the course, students would know how to import binary, netCDF, and GRID formatted files into GrADS and make plots such as contour, streamline and raster maps.

**Intro. to
Meteorology
ATMS 117** Truckee Meadows Community College Fall 2002
Department of Physical Sciences Fall 2001
Reno, NV
 This first-year course provided students with the fundamental knowledge of meteorology. The primary text used was *An Introduction to Meteorology* (Ahrens). This was a 4-credit course that included four 3-hour labs throughout the semester. There was no T.A. assigned to this course.

Proposals and Grants

<u>Submission Date</u>	<u>Title</u>	<u>Sponsor</u>	<u>Amount</u>	<u>Status</u>
2018	Assessment and Monitoring of Climate Variability and Extremes Impacts and Vulnerabilities on Specialty Crop Production in the Midwest using Climate Big Data Information	USDA-FACT	\$1,000,000	Pending
2018	Monitoring Boundary Layer Inversions for Agricultural Practices	USDA	\$60,000	Pending
2018	Accumulated Winter Season Severity Index (AWSSI) Predictive Capability	NOAA-NWS	\$25,304	Awarded
2017	Past, Present, and Future Impacts of Weather and Climate on the Geology of the Illinois Coast	Illinois-Indiana Sea Grant	\$99,840	Awarded
2017	Monitoring for temperature inversions in the Midwest	North Central Soybean Research	\$75,327	Rejected

		Program		
2017	Drought Early Warning System (DEWS) for the Midwest Region	NOAA/NIDIS	\$127,000	Awarded
2017	Investigating perceptions about drought information and forecast accuracy in an agriculturally-based, decision-making and planning framework	NOAA-SARP	\$16,093	Awarded
2017	NWS Climate services partnership with Midwestern Regional Climate Center to build climate services capacity at WFOs	NOAA-NWS	\$14,483	Awarded
2017	Climatological data and product development support for the Great Lakes Integrated Science and Assessment (GLISA) program	NOAA-OAR	\$25,032	Awarded
2017	Development of bi-national precipitation anomalies between US and Canada	IJC	\$14,959	Pending
2017	Integrated Midwest partnership for actionable tools and science (IMPACTS)	NOAA-OAR	\$4M	Rejected
2017	Extending hindcast of water supply components over Canada / US Transboundary watersheds based on the CaPA, CaLDAS, and GEM systems and coordination with NWS Multi-Precipitation Estimates (MPE)	International Joint Commission (IJC)	\$15K	Rejected
2016	Investigating insolation impacts on near-surface atmospheric and soil parameters at an accelerated timescale	NASA	\$50,000	Rejected
2016	Managing water supplies for sustainable agricultural production: The Water Scarcity Assessment Tool (WaterSAT) for strategic decision making	NASA	\$8,000	Rejected
2016	Drought Early Warning System (DEWS) for the Midwest Region (B. Hall)	NOAA Climate Program Office	\$100,000	Awarded
2016	Midwest Climate Science Center	USGS	\$567,284	No Awards Offered
2016	Midwest Partnership for Actionable Climate Science (<i>L. Prokopy, lead; B. Hall co-PI</i>)	NOAA Climate Program Office	\$532,426	No Awards offered
2016	Regional Climate Services in the Midwest Region: Midwestern Regional Climate Center (<i>B. Hall</i>)	NOAA	\$3,331,026	Awarded
2016	NOAA-BEDI Hourly	NOAA	\$132,238	Rejected
2015	Drought Early Warning System (DEWS) for the Midwest Region (B. Hall)	NOAA Climate Program Office	\$60,000	Awarded
2015	Regional Climate Services in the Midwest Region: Midwestern Regional Climate Center (<i>B. Hall</i>)	NOAA	\$901,865	Awarded
2015	Radon concentrations related to climate variability (<i>P. Francisco and B. Hall</i>)	Illinois EPA	\$18,997	Awarded
2015	Improving upon flash flooding forecasts for two major Great Lakes cities (<i>B. Hall and O. Kellner</i>)	NOAA-Sea Grant	\$172,420	Awarded

2014	Atmospheric threshold exceedance notification system for extreme climate variability (<i>B. Hall, L. Stoecker, and N. Westcott</i>)	PRI-MRAP	\$30,000	Rejected
2014	Real-time risk-based flash flooding forecast for two major Great Lakes Cities (<i>B. Hall, P. Roebber, B. Miller</i>)	NOAA Coastal Storms Management	\$200,000	Rejected
2014	Expanding climate capacity within Extension and across Illinois (<i>B. Hall and J. Angel</i>)	UI Office of Extension and Outreach / Provost	\$245,151	Rejected
2014	Water resource education to support community and rural development	UI Office of Extension and Outreach / Provost	\$300,000	Rejected
2014	Great Lakes Integrated Climate Consortium (GLICC)	NOAA Climate Program Office	\$3,485,786	Rejected
2013 Oct	Regional Climate Services in the Midwest Region: Midwestern Regional Climate Center (<i>B. Hall</i>)	NOAA	\$646,000	Extension
2014 Aug	Pushing Boundaries: Redefining the sustainable use of water resources in the eastern corn belt (<i>L. Bowling, and B. Hall</i>)	AFRI/USDA	\$170,534	Rejected
2014 Feb	Community atmospheric threshold exceedance notification system (<i>B. Hall, L. Stoecker, N. Westcott</i>)	PRI	\$30,000	Pending
2013 Sep	Regional climate services support in the Midwest Region: The Midwestern Regional Climate Center (<i>B. Hall</i>)	NOAA	\$1,015,445	Awarded
2013 Jul	Integrating probability of frost/freeze damage to Michigan's small fruit industry due to climate variability (<i>B. Hall, M. Woloszyn</i>)	NOAA-GLISA	\$50,000	Rejected
2013 Apr	Reducing flooding vulnerability of Chicago critical facilities (<i>M. Woloszyn, B. Hall</i>)	NOAA Sea Grant	\$100,000	Awarded
2013 Feb	Regional Climate Services in the Midwest Region: Midwestern Regional Climate Center (<i>B. Hall</i>)	NOAA	\$248,221	Extension
2012 Sep	Engaging Illinois: Susceptibility, Preparedness, and Response to Extreme Weather Events (<i>B. Hall, N. Westcott, J. Angel</i>)	University of Illinois	\$19,429	Declined
2012 Sep	Usable to Useful (<i>PI: L. Prokopy [Purdue U]; Co-PI: B. Hall et al</i>)	USDA-NIFA (AFRI)	Multi-university contracts	Extension
2012 Sep	Spatial and Temporal Relationships Between Winter Conditions on Two Continents (<i>PI: N. Westcott; Co-PI: B. Hall, D. Kristovich</i>)	NSF	\$258,490	Declined
2012 Mar	An ACIS-based Tool for Managed Lands (<i>B. Hall (PI-MRCC), N. Westcott, HPRCC</i>)	NOAA	\$14,596	Funded

2010 Sept	Elementary Climate Literacy Improvement Project (ECLIP) (<i>R. Hermann (PI), B. Hall (co-PI)</i>)	NOAA	\$499,000	Declined
2010 Jan	Development of a web-based planning tool for understanding the climatology of potential burn windows. (<i>B. Hall, (PI)</i>)	North Carolina Department of Environment and Natural Resources	\$45,000	Declined
2009 Nov	Development of an historical prescribed fire smoke management database for North Carolina (<i>B. Hall (PI)</i>)	North Carolina Division of Forest Resources	\$20,000	Funded
2009 Oct	Development of a web-based planning tool for understanding the climatology of potential burn windows. (<i>B. Hall (PI), G. Curcio (co-PI)</i>)	State and Private Forestry, Southern Region FY 10 Competitive Resource Allocation	\$60,040	Declined
2009 Mar	Examination of climate variability in relation to escaped prescribed burns in the eastern United States (<i>B. Hall (PI)</i>)	Towson University	~\$3500	Declined
2009 Jan	Predicting Wildfire Risk in the United States Sierra Nevada's Expanding Wildland Urban Interface in a Changing Climate (<i>B. Hall (PI), J. Abatzoglou (co-PI), J. Morgan (co-PI), K. Lu (co-PI)</i>)	NSF	~\$485,000	Declined
2008 Oct	Development of an Historical Database of Prescribed Burns in North Carolina (<i>B. Hall (PI)</i>)	Towson University	\$896	Funded
2007 Aug	Predicting Wildfire and Flood Risks in the Western United States' Expanding Wildland-Urban Interface in a Changing Climate (<i>B. Hall (PI), J. Abatzoglou (co-PI), L. Edwards (co-PI)</i>)	NSF	~\$324,000	Declined
2007 Apr	The development of extremely dry surface air due to vertical exchanges under the exit region of a jet streak: Implications for fire weather prediction and atmospheric transport processes (<i>M. Kaplan (PI); B. Hall (co-PI)</i>)	NSF	~\$375,000	Declined
2007 Jan	Investigating the relationship between urbanization and the convective climate in the Las Vegas Valley, Nevada: An	NSF	~\$60,000	Funded

	analysis of convective cloud development, cloud-to-ground lightning, and rainfall (<i>J. Underwood (PI); B. Hall (co-PI)</i>)			
2006 Nov	Building a precipitation network for Grades 7-12 for science education (<i>Hall (PI); J. Ashby, Western Regional Climate Center (WRCC)(co-PI); M. Breckner, WRCC (co-PI)</i>)	Nevada Collaborative Teaching Improvement Program (NeCoTIP)	~\$100,000	Declined
2006 Aug	Analysis of long continuing currents Associated with natural wildfire ignitions (<i>Hall (PI)</i>)	Vaisala, Inc. Quasar Federal Systems	\$12,000	Funded
2002 Sep	Correlation of drought and precipitation indices to wildfire occurrence (<i>Hall (PI)</i>)	Bureau of Land Management	\$17,993	Funded

Service to Employer and Community

Planning Committee for stakeholder climate services workshops	Served on planning committee for state-focused and regionally-focused workshops that invited key stakeholders to discuss their climate services and impact-based decision-support needs. Session topics also included sharing information about existing climate services resources and applications	2017 - 2018
District Representative for University Employees	Prairie Research Institute district representative for the Council of Academic Professionals at UI	2015-2018
Planning Committee member for Midwest NIDIS DEWS	NOAA's National Integrated Drought Information System (NIDIS) launched a Drought Early Warning System (DEWS) in 2016. Planning Committee identified key stakeholders and worked on several meetings to bring stakeholders together to define a strategic plan for the DEWS.	Sep 2015 – May 2016
MRCC representative for NOAA Great Lakes Regional Team	Great Lakes Regional Team coordinates the various line offices of NOAA along with its key partners to discuss funding opportunities and research interests.	Jan 2012 – present
MRCC representative for the NOAA Great Lakes Climate Working Team	Great Lakes Climate Working Team coordinates the climate personnel from the NOAA line offices and key partners to discuss funding opportunities and research interests relevant to the climate and the Great Lakes.	Jan 2012 – present
NOAA representative for the US Corps of Engineers Ohio River Basin Alliance	The USACE-ORBA examines climate modeling, societal impacts of potential flooding, and resource management along the Ohio River. The MRCC has partnered with this group to help gain a better understanding of the risk of extreme rainfall events and the future trends that could impact the communities	Jun 2012 – present
Member of planning committee for the Midwest Climate Collaborative Workshop	The MCCW held its first meeting August 2012 that brought together ~30 people involved with climate research and impacts across multiple agencies and sectors. The planning committee helped to identify and invite key participants.	Jun 2012 – present
MRCC representative for the NWS Central Region Climate Response Team	The 2012 central US drought had such an impact on the community that the NWS, state climatologists, regional climate centers, and members of various drought agencies teamed up to provide regular webinars on the	Jun 2012 – present

	current status of the drought and informational material to help communicate the impacts.	
Geography Representative for the College of Liberal Arts Technical Committee	Attended monthly meeting representing the department on matters related to technology (computing, media, software, lab support, etc.)	Fall 2010-present
Senior Editor of Newsletter	Collected, wrote, organized and distributed semi-annual departmental newsletter for the Towson University Department of Geography and Environmental Planning	2009-present
General Education Course Assessment Participant	Representative for both the Geography Department and College of Liberal Arts at Towson University for assessing the quality and uniformity of all sections of general education courses.	2008-2010
Proposal Reviewer	Reviewed a proposal submitted to NOAA titled "Stakeholder-driven decision-making for adaptation: Design and implementation of a water infrastructure adaptation plan"	2008
Department Recruitment Organizer	Co-organized a recruitment open house for the Geography Department. Involved development of advertising media such as handouts/flyers, PowerPoint presentation, and informative handouts on careers, curriculum, and focus tracks in geography	2008
Interview Guest on WTSN 1270AM	Guest appearance on Mike Pomp's "Open Mike" show. Topic concerned probability of a White Christmas and global warming's relationship to current snow season	2007
Program Planning Participant	Association of American Geographers Planning for the Boston Annual Meeting (2008)	2007
Invited Speaker	Marston School's Fifth Grade class <i>Hampton, NH</i> Spoke on the differences between a meteorologist and climatologist. Explained what a climatologist does.	2007
Conference Session Co-organizer	"Wildfires in a Changing Environment"; Annual Association of American Geographers Conference, Boston, MA (2008)	2007
Conference Session Chair	Seventh Symposium on Fire and Forest Meteorology, AMS, Bar Harbor, ME	2007
Search Committee Chair	Programmer for the Desert Research Institute's Information Technology department	2006
TA Microteaching Mentor	University of Nevada – mentored incoming Teaching Assistants on teaching/presentation skills. Lead microteaching sessions where each incoming TA would give a 10-minute, videotaped 'lecture' and I would provide one-on-one feedback with the student and facilitate group feedback for each microteaching presentation.	2006

Interview guest on NPR	Interviewed by Fin Keegan (National Public Radio) as an expert on wildfire climate to respond to Dr. Westerling's article in ScienceExpress re global warming and an increase in large fires (http://www.knpr.org/son/archive/detail.cfm?programid=813)	2006
Student poster/presenter judge	First Annual Nevada Wildland Fire Research and Outreach Conference	2006
Scholarship Award Panel	Storm Peak Laboratory Scholarship	2006
Search Committee Member	For a post-doc position within the Western Regional Climate Center	2006
Career Development Host	For a group of local 8 th graders to visit and talk to scientists at DRI to learn more about career opportunities at the Institute	2006
Conference Session Chair	Sixth Symposium on Fire and Forest Meteorology, AMS, Canmore, Canada	2005
Search Committee Advisor	Assistant Scientist working with atmospheric scientists in the Division of Atmospheric Science	2003
Conference Session Chair	Fifth Symposium on Fire and Forest Meteorology, AMS, Orlando, Florida	2003

Graduate Student Committee Involvement

Student's Name	Degree	Thesis/Dissertation Title	Year of Defense
Doug Pibal	M.S. Atmospheric Sciences University of Nevada, Reno	<i>Development and Validation of MM4 MOS-Based Forecast Equations</i>	2007
Charlene Morhle	M.S. Atmospheric Sciences University of Nevada, Reno	<i>The Southwest Monsoon and the Relation to Fire Occurrence</i>	2003
Paul Schlobohm	M.S. Environmental Sciences University of Nevada, Reno	<i>NDVI-Derived Green-Up Date for the National Fire Danger Rating System</i>	2003

Publications

Peer Reviewed Journals

Hatfield, J. L., L. Wright-Morton, and B. Hall, 2017: Vulnerability of grain crops and croplands in the Midwest to climatic variability and adaptation strategies, *Climatic Change*, 13 pp. DOI 10.1007/s10584-017-1997-x.

Prokopy, L.S., C.E. Hart, R. Massey, M. Widhalm, J. Andresen, J. Angel, T. Blewett, O.C. Doering, R. Elmore, B.M. Gramig, P. Guinan, B.L. Hall, A. Jain, C.L. Knutson, M.C. Lemos, L.W. Morton, D. Niyogi, R. Power, M.D. Shulski, C. X. Song, E.S. Takle, and D. Todey. 2015. "Using a team survey to improve team communication for enhanced delivery of agro-climate decision support tools." *Agricultural Systems*. 138: 31-37. DOI: 10.1016/j.agry.2015.05.002

- Hall, B. L., M. S. Timlin, M. E. Woloszyn, Z. A. Zaloudek, S. D. Hilberg, P. E. Guinan, J. Andresen, A. C. Curtis, R. Wolf, P. J. Spoden, 2015: A community frost/freeze susceptibility operational guidance tool. *J. Operational Meteor.*, **3** (3), 21-29, doi: <http://dx.doi.org/10.15191/nwajom.2015.0303>.
- Hall, B. L. and R. Davis, 2012: An historical prescribed fire smoke database for North Carolina, *Fire Management Today*. **72** (1), 38-43.
- Hall, B. L., 2008: Fire ignitions related to radar reflectivity patterns in Arizona and New Mexico. *Internatl J. of Wildland Fire*, **17**, 317-327.
- Evelt, R. R. et al., 2008: The effect of monsoonal atmospheric moisture on lightning fire ignitions in southwestern North America. *Agric. Forest Meteorol.*, doi:10.1016/j.agrformet.2008.05.002.
- Hall, B. L., 2007: Precipitation associated with lightning ignited wildfires in Arizona and New Mexico. *Internatl. J. of Wildland Fire*, **16**(2), 252-254.
- Westerling, A. L., D. R. Cayan, T. J. Brown, B. L. Hall, and L. G. Riddle, 2004: Climate, Santa Ana winds and autumn wildfires in southern California. *EOS*, **85**(31), 289-296.
- Brown, T.J., B.L. Hall, and A.L. Westerling, 2003: The impact of Twenty-First Century climate change on wildland fire danger in the western United States: an applications perspective. *Climatic Change*, **62**, 365-388.
- Brown, T. J. and B. L. Hall, 1999: The use of t-values in climatological composite analyses. *J. Climate*, **12**, 2941-2944.

Conference Papers

- Hall, B. L. and T. J. Brown, 2006: Comparison of weather data from the Remote Automated Weather Station network and the North American Regional Reanalysis, *Proceedings of the 14th Symposium on Meteorological Observation and Instrumentation*, San Antonio, Texas, 16 January 2007.
- Hall, B. L. and T. J. Brown, 2006: Climatology of positive polarity flashes and multiplicity and their relation to natural wildfire ignitions, *Proceedings of the 19th International Lightning Detection Conference*, Tucson, Arizona, April 24-25.
- Hall, B. L., 2005: Precipitation associated with lightning ignited wildfires in Arizona and New Mexico. *Proceedings of the Sixth Symposium on Fire and Forest Meteorology*, American Meteorological Society, Canmore, Alberta, 25-27 October.
- Kennedy, J., B. L. Hall and T. J. Brown, 2005: New York state fire climatology. Sixth *Proceedings of the Sixth Symposium on Fire and Forest Meteorology*, American Meteorological Society, Canmore, Alberta, 25-27 October.
- Hall, B. L. and T. J. Brown, 2005: Estimating missing station weather data using North American Regional Reanalysis. *Proceedings of the Sixth Symposium on Fire and Forest Meteorology*, American Meteorological Society, Canmore, Alberta, 25-27 October.
- Reinbold, H. J., B. L. Hall and T. J. Brown, 2005: Development of model output statistic (MOS) products for predictive services. *Proceedings of the Sixth Symposium on Fire and Forest Meteorology*, American Meteorological Society, Canmore, Alberta, 25-27 October.
- Hall, B.L., and T.J. Brown, 2003: A Comparison of Precipitation and Drought Indices Related to Fire Activity and Potential in the US. *Proceedings of the 5th Symposium on Fire and Forest Meteorology*, 6 pp.

- Hall, B.L., T.J. Brown, L.S. Bradshaw, W.M. Jolly, and R. Nemani, 2003: National Standardized Energy Release Component Forecasts. . *Proceedings of the 5th Symposium on Fire and Forest Meteorology*, 3 pp.
- Mitchell, D.L., D. Ivanova, B. L.Hall, Miguel Lavin and A. Mascarenhas, Jr., 2003: Predicting the onset of the North American monsoon and progress toward a mechanistic understanding. National Center for Atmospheric Research (NCAR), 27 June.
- Mitchell, D.L., D. Ivanova, B. L.Hall, Miguel Lavin and A. Mascarenhas, Jr., 2003: Predicting the onset of the North American monsoon and progress toward a mechanistic understanding. Climate Diagnostics and Prediction Workshop, Reno, Nevada, September.
- Mitchell, D.L., D. Ivanova, Miguel Lavin and B. L. Hall, 2003: A possible ocean-atmospheric mechanism for the Arizona onset of the North American monsoon. Workshop on the North American Monsoon Experiment (NAME): Oceanographic Component, Centro de Investigación Científica y de Educación Superior de Ensenada (CICESE), 21 April.
- Mohrle, C.R., B.L. Hall, and T.J. Brown, 2003: The Southwest Monsoon and its impact on wildland fire. *Proceedings American Meteorological Society Fifth Symposium on Fire and Forest Meteorology*, 8 pp.
- Reinbold, H., B.L. Hall, T.J. Brown, and J.O. Roads, 2003: Verification of ECPC's regional spectral model forecasts for wildland fire climate applications. *Proceedings American Meteorological Society Fifth Symposium on Fire and Forest Meteorology*, 14 pp.
- Schlobohm, P.J., B.L. Hall, and T.J. Brown, 2003: Using NDVI to determine green-up date for the National Fire Danger Rating System. *Proceedings American Meteorological Society Fifth Symposium on Fire and Forest Meteorology*, 15 pp.
- Brown, T.J., B.L. Hall, C.R. Mohrle, and H.J. Reinbold, 2002: Applications of the National Lightning Detection Network Data for Wildland Fire Management. *Proceedings of the 17th International Lightning Detection Conference*, 7 pp.
- Brown, T.J., and B.L. Hall, 2001: Assessing long-term fire danger variability and change from climate model output. *Proceedings of the American Meteorological Society Fourth Symposium on Fire and Forest Meteorology*, 217-219.
- Hall, B.L., and T.J. Brown, 2001: Development of lightning climatology information over the western U.S. *Proceedings American Meteorological Society Fourth Symposium on Fire and Forest Meteorology*, 112-114.

Technical and Research Reports to Agencies

- Hall, B. L. and R. Davis, 2011: *Development of an historical prescribed fire smoke management database for North Carolina – Final Report*, Towson University Department of Geography and Environmental Planning, Towson, MD, 44 pp.
- Brown, T. J. and B. L. Hall, 2010: *Verification of North Carolina mixing height forecasts for smoke management – Final Report*, CEFA Report 10-02, Desert Research Institute, Reno, NV, 17 pp.
- Hall, B. L. and T. J. Brown, 2009: *Development of historic fire weather data and wildland fire occurrence data for the New York Division of Protection and Fire Management – Final Report*, CEFA Report 09-02, Desert Research Institute, Reno, NV, 15 pp.

- Brown, T. J. and B. L. Hall, 2006: *Climate and ecosystem studies and product development for wildland fire and resource management*, Annual report prepared for the Bureau of Land Management, CEFA Report 05-03, December 2006, 44 pp.
- Hall, B. L., T. J. Brown, and L. Bradshaw, 2005: *Development of U. S. operational fire danger 15-day forecasts*. Report prepared for Interagency Fire Management, CEFA Report 05-02, December 2005, 17 pp.
- Brown, T. J. and B. L. Hall, 2005: *Climate and ecosystem studies and product development for wildland fire and resource management*, Annual report prepared for the Bureau of Land Management, CEFA Report 05-03, December 2005, 49 pp.
- Hall, B. L. and T. J. Brown, 2005: *RAWS data quality check and estimation – Phase 1*. CEFA Report 05-01, 16 pp.
- Brown, T. J. and B. L. Hall, 2004: *Climate and ecosystem Studies and Product development for wildland fire and resource management*, Annual Report prepared for the Bureau of Land Management, CEFA Report 04-01, 50 pp.
- Brown, T. J. and B. L. Hall, 2003: *Climate and ecosystem Studies and Product development for wildland fire and resource management*, Annual Report prepared for the Bureau of Land Management, CEFA Report 03-02, 40 pp.
- Brown, T.J., B.L. Hall, C.R. Mohrle, and H.J. Reinbold, 2002: *Coarse Assessment of Federal Wildland Fire Occurrence Data*, Report for the National Wildfire Coordinating Group, CEFA Report 02-04, December 2002, 30 pp.
- Brown, T.J. and B.L. Hall, 2002: *Climate and Ecosystem Studies and Product Development for Wildland Fire and Resource Management*, Annual Report prepared for Bureau of Land Management, CEFA Report 01-03, December 2002, 25 pp.
- Brown, T.J., B.L. Hall, and G.D. McCurdy, 2002: *Quality Control of California Historical RAWS Data*. Report prepared for the California Firescope Weather Working Group, CEFA Report 02-01, March 2002, 27 pp.
- Brown, T.J. and B.L. Hall, 2001: *Climate and Ecosystem Studies and Product Development for Wildland Fire and Resource Management*, Annual Report prepared for Bureau of Land Management, CEFA Report 01-04, November 2001, 13 pp.
- Hall, B.L., and T.J. Brown, 2001: *Development of Lightning Climatology Information over the Western U.S.* Report prepared for Bureau of Land Management, CEFA Report 01-03, October 2001, 4 pp.
- Brown, T.J. and B.L. Hall, 2001: *Climate Analysis of the 2000 Fire Season*. Report prepared for Bureau of Land Management, CEFA Report 01-02, August 2001, 37 pp.
- Brown, T.J., B.L. Hall, K.T. Redmond and G.D. McCurdy, 2001: *Great Basin RAWS Network Analysis*. Report prepared for U.S. Forest Service Region 4 and Bureau of Land Management, CEFA Report 01-01, February 2001, 49 pp.

Conference Posters

- Peake, B., L. Stocker, M. Timlin, B. L. Hall, and G. McCurdy, 2016: *An Historical Hourly Climate Database and its Value-Added Resource Potential*, National Weather Association Annual Meeting, Norfolk, VA, September 2016.
- Hall, B. L., M. Timlin, 2016: *Drought and Precipitation Climate Monitoring Tools*, 2016 North Central Soil Survey Conference, Sycamore, IL, July 2016.

Spoden, P, C. Black, R. Wolf, V. Deheza, B. L. Hall, 2016: Midwest DEWS: Drought Early Warning System – Launch and Future Plans, National Weather Association Annual Meeting, Norfolk, VA, September 2016.

Presentations (most recent eight years)

Indiana Silver Jackets, Indianapolis, IN	2019
North Central Regional Agricultural Extension webinar	2017
National Weather Service Climate Services webinar	2017
Missouri Crop Management Conference, Columbia, MO	2017
North Central Soil Conference, Sycamore, IL	2017
National Weather Service's National Climate Services Workshop, Silver Spring, MD	2016
AMS Annual Meeting, New Orleans, LA	2016
Climate Predication and Applications Sciences Workshop, Burlington, VT	2016
Conference on Radiation Control Program Directors, San Diego, CA	2016
Climate Prediction and Services Workshop	2016
North Central Soils Survey Conference	2016
National Weather Association Conference	2016
NWS Climate Services Conference	2016
AMS Applied Climate Conference	2016
American Geophysical Union, San Francisco, CA	2015
UI Labs, Chicago, IL	2015
National Weather Service, Lincoln, IL	2015
AMS Fire and Forest Meteorology, Minneapolis, MN	2015
Tallgrass Prairie Wildfire Conference, Davenport, IA	2015
Chicago Calumet Stormwater Coalition, Chicago, IL	2015
AMS Annual Meeting, Phoenix, AZ	2015
AMS Applied Climatology Conference	2014
USDA National Climate Hub, Washington, DC	2014
SW Michigan Horticultural Days, Benton Harbor, MI	2014
Hydrologic Engineers, Champaign, IL	2014
American Geophysical Union Annual Meeting, San Francisco, CA	2013
American Association of State Climatologists, St. Louis, MO	2013
Illinois State Water Survey, Champaign, IL	2013
National Weather Service – Lincoln, IL	2013
Prairie Research Institute Lightning Symposium, Champaign, IL	2012
Climate Impacts Strategies Workshop, Racine, WI	2012
Midwest Climate Collaboration Workshop, Chicago, IL	2012
Keep Indianapolis Beautiful, Indianapolis, IN (invited)	2012
9 th Symposium on Fire and Forest Meteorology, Palm Springs, CA	2011
Annual Applied Climatology Conference, AMS, Asheville, NC	2011
Association of American State Climatologists Annual Meeting	2010
Association of American Geographers Annual Meeting, Washington, DC	2010
Association of American Geographers Annual Meeting, Las Vegas, NV	2009
Association of American Geographers Annual Meeting, Boston, MA	2008
7 th Symposium on Fire and Forest Meteorology, AMS, Bar Harbor, ME	2007
87 th Annual Meeting for the American Meteorological Society	2007
Association of American Geographers Annual Meeting, San Francisco, CA	2007
2007 Joint Assembly of the American Geophysical Union, Acapulco, Mexico	2007
International Conference on Lightning Detection	2006
Association of American Geographers Annual Meeting, Chicago, IL	2006
6 th Symposium on Fire and Forest Meteorology (presentation and poster), AMS, Canmore, Alberta, Canada	2005
Association of American Geographers Annual Meeting, Denver, CO	2005

BLM Resource Management and Tools Conference, Phoenix, AZ	2005
5 th Symposium on Fire and Forest Meteorology (2 presentations), Orlando, FL	2003
BLM Resource Management and Tools Conference, Phoenix, AZ	2003

Professional Activities

Invited US representative to WMO Climate Expert Team	2018
National Weather Association	2014-present
American Association of State Climatologists	2012-present
Association for Environmental Studies and Science	2008-2012
National Association of Geoscience Teachers, member	2006-2012
American Geophysical Union, member	2005-present
Session chair at the Fire and Forest Meteorology conference (AMS)	2003, 2005
Association of American Geographers, member	2004-2013
American Meteorological Society (AMS), member	2003-present
AMS, student member	1997-1998
AMS, student member	1993-1995

Awards and Honors

Association of American State Climatologist Dissertation Medal in Applied Climatology	2007
Teaching Excellence Award, Truckee Meadows Community College	2007
Honor Award from the National Predictive Services Group, National Interagency Fire Center	2005
Sierra Pacific Fellowship	1997
Nevada Medal Fellowship Award	1997
National Weather Service Graduate Student Fellowship	1995, 1996

Technical Skills

Programming/Scripting Languages	Strong: FORTRAN 77, Perl, UNIX shell programming
	Moderate: C, C++
Visualization Packages	Strong: GrADS, NCL
	Moderate: InDesign, ArcGIS
Statistical and Data Analysis Packages	Strong: Kaleidagraph, Jmp
	Moderate: SPlus (R)
Data formats	NetCDF, GRIB, binary, ASCII, image (e.g., gif, jpeg, bil, bmp, etc.)
Microsoft Packages	Strong: Word, Excel, PowerPoint
Web Design	Strong: Dreamweaver

Master's Degree Advisors

Dr. Timothy J. Brown – University of Nevada, Reno, Atmospheric Sciences
 Dr. Melanie Wetzels – University of Nevada, Reno, Atmospheric Sciences
 Dr. Scott Mensing – University of Nevada, Reno, Geography

Dissertation Advisors

Dr. Melanie Wetzel – University of Nevada, Reno, Atmospheric Sciences

Dr. David Mitchell – University of Nevada, Reno, Atmospheric Sciences

Arlen Huggins – University of Nevada, Reno, Atmospheric Sciences

Dr. Jeffrey Underwood – University of Nevada, Reno, Geography; Nevada State Climatologist

Dr. James Carr – University of Nevada, Reno, Geological Engineering