

CODY L. KNUTSON

National Drought Mitigation Center
821 Hardin Hall
University of Nebraska-Lincoln
Lincoln, Nebraska 68583-0988

Telephone: (402) 472-6718
Fax: (402) 472-2946
E-mail: cknutson1@unl.edu

EDUCATION

Ph.D. 2004 University of Nebraska-Lincoln, Geography (Human-Environment Interaction)
PPAC 2001 University of Nebraska-Lincoln, Graduate Public Policy Analysis and Program
Evaluation Certificate, Political Science
M.A. 1997 University of Nebraska-Lincoln, Applied Anthropology
M.S. 1996 South Dakota School of Mines and Technology, Geological Engineering
B.S. 1993 South Dakota School of Mines and Technology, Geological Engineering

CURRENT ACADEMIC APPOINTMENT

Research Associate Professor, 07/2012 – present, National Drought Mitigation Center, School of
Natural Resources, University of Nebraska-Lincoln

Essential functions: Serve as the NDMC's Planning and Social Science Program Leader supervising staff and graduate students, leading research and service activities, and teaching periodically. Activities include research on drought impacts, management strategies, and stakeholder information needs; facilitating the development of decision support tools using participatory science processes; collaborating with stakeholders to develop drought mitigation and response plans; and providing training to support capacity building on the topics of water scarcity, drought, and climate change.

PAST PROFESSIONAL EXPERIENCE

2006 – 2012 Research Assistant Professor, National Drought Mitigation Center, UNL
2004 – 2006 Assistant Geoscientist, National Drought Mitigation Center, UNL
2002 – 2004 Water Resources Specialist, National Drought Mitigation Center, UNL
2001 – 2003 Lecturer and Teaching Assistant, Anthropology and Geography Department, UNL
2001 – 2002 Applied Anthropologist, Development Systems International, Lincoln, NE
1997 – 2000 Water Resources Specialist, National Drought Mitigation Center, UNL
1996 – 1997 Technical Assistant, United States Geological Survey, Lincoln, NE
1994 – 1996 Hydrologic Technician (seasonal), USDA Forest Service, Custer, SD
1994 – 1995 Research and Teaching Assistant, Geology and Geological Engineering Department,
South Dakota School of Mines and Technology, Rapid City, SD
1993 – 1994 Project Manager, American Technical Services, Sioux Falls, SD
1991 – 1992 Geologist (seasonal), Independence Mining Corporation, Elko, NV

PUBLICATIONS

Peer Reviewed Journal Articles

Haigh, T., W. Schacht, J. Volesky, A. Smart, M. Stockton, C. Knutson, and L. Perkins (in review)
Weathering the Drought: Rancher Perceptions of Impacts, Range Condition, and Grazing
Management, *Rangeland Ecology and Management*
Church, S., T. Haigh, M. Widhalm, S.G. de Jalon, N. Babin, J.S. Carlton, M. Dunn, K. Fagan, C.
Knutson, L. Prokopy (in press) Agricultural Trade Publications and the 2012 Midwestern
Drought: A Missed Opportunity for Climate Risk Communication, *Climate Risk Management*,
<http://dx.doi.org/10.1016/j.crm.2016.10.006>
Knutson, C. and B. Fuchs (2016) New Tools for Assessing Drought Conditions for Range Management,
Rangelands, Vol 38 (4): 177-182.

- Bachmair, S., K. Stahl, K. Collins, J. Hannaford, M. Acreman, M. Svoboda, C. Knutson, K. H. Smith, N. Wall, B. Fuchs, N. Crossman, and I. Overton (2016) Drought Indicators Revisited: Practice in Monitoring and Early Warning and the Link to Drought Impacts, *WIREs Water*. doi: 10.1002/wat2.1154
- Carlton, J.S., A.S. Mase, C.L. Knutson, M.C. Lemos, T. Haigh, D.P. Todey, L.S. Prokopy (2015) The effects of drought on climate change beliefs, risk perceptions, and adaptation attitudes, *Climatic Change*, DOI: 10.1007/s10584-015-1561-5
- Prokopy, L., C. Hart, R. Massey, M. Widhalm, J. Klink, J. Andresen, J. Angel, T. Blewett, O. Doering, R. Elmore, B. Gramig, P. Guinan, B. Hall, A. Jain, C. Knutson, M. Lemos, L. Wright Morton, D. Niyogi, R. Power, M. Shulski, C.X. Song, E. Takle, D. Todey, (2015) Using a Team Survey to Improve Communication for Enhanced Delivery of Agro-Climatic Decision Support Tools, *Agricultural Systems*, Vol 138, 31-37.
- Haigh, T., L. Wright Morton, M.C. Lemos, C. Knutson, L.S. Prokopy, Y.J. Lo, J. Angel (2015) Agricultural Advisors as Climate Information Intermediaries: Exploring Differences in Capacity to Communicate Climate. *Weather, Climate, and Society*, Vol 7, 83-93.
- Prokopy, L.S., T. Haigh, A. Mase, J. Angel, C. Hart, C. Knutson, M. Lemos, Y. Lo, J. McGuire, L. Wright Morton, J. Perron, D. Todey, and M. Widhalm (2013) Agricultural Advisors: A Receptive Audience for Weather and Climate Information? *Climate, Weather, and Society*, 5(2), 162-167.
- J. Arbuckle, L.S. Prokopy, T. Haigh, J. Hobbs, T. Knoot, C. Knutson, A. Loy, A.S. Mase, J. McGuire, L.W. Morton, J. Tyndall, and M. Widhalm (2013) Climate Change Beliefs, Risk Perceptions, and Attitudes toward Adaptation and Mitigation among Farmers in the Midwestern United States, *Climatic Change Letters*, Vol. 117 (4): 943-950
- Knutson, C.L. and T. Haigh (2013) A Drought Planning Methodology for Ranchers in the Great Plains, *Rangelands*, 35(1): 27-33
- Haigh, T., and C.L. Knutson (2013) Role of Perceived Control and Planning in Ranch Drought Preparedness,” *Great Plains Research Journal*, 23(1): 51-58
- Mehta, V., C. L. Knutson, N.J. Rosenberg, J.R. Olson, M.J. Hayes, N. Wall, and T. Bernadt (2013) Decadal Climate Information Needs of Stakeholders for Decision Support in Water and Agriculture Production Sectors: A Case Study of the Missouri River Basin. *Weather, Climate and Society*, 5: 27-42
- Knutson, C.L., T. Haigh, M. Hayes, M. Widhalm, J. Nothwehr, and M. Kleinschmidt (2011) Farmer Perceptions of Sustainable Agriculture Practices and Drought Risk Reduction in Nebraska, USA, *Journal of Renewable Agriculture and Food Systems*, 26(3): 255-266
- Ryu, J.H., M.D. Svoboda, J.D. Lenters, T. Tadesse, and C.L. Knutson (2010) Finding Potential Extents for ENSO-Driven Hydrologic Drought Forecasts in the United States, *Climatic Change*, 101(3-4): 575-597
- T. Tadesse, M. Haile, G. Senay, B.D. Wardlow, and C.L. Knutson (2008) The need for integration of drought monitoring tools for proactive food security management in sub-Saharan Africa, *Natural Resources Forum*, 32:4, pp. 303-316
- Knutson, C.L., S. Jones, M.E. Sittler, M. Higgins, M.D. Svoboda, D.R. Kluck, and D.A. Wilhite (2008) Development of a Low Flow Early Warning System for the NOAA National Weather Service, USA, *Stream Ecology and Low Flows*, Special Issue of the *International Journal of Ecological Economics and Statistics*, Vol. 12(F08), pp. 44-57
- Knutson, C.L., M.J. Hayes, and M.D. Svoboda (2007) Case Study of Tribal Drought Planning: The Hualapai Tribe. *Natural Hazards Review*, Vol. 8(4), pp. 125-131
- Cooter, E., B. Eder, C. Rosenzweig, B. Lynn, R. Goldberg, C. Knutson, M. Hayes, D. Wilhite, J. DeCarolis, and T. Barnett. Effects of Climate Change on Weather and Water (2005) *Environmental Management*, Special Issue on Climate Change and Air Quality, pp. 32-35
- Hayes, M.J., C.L. Knutson, and Q. Hu (2005) Multiple-Year Droughts in Nebraska, *NebGuide*, University of Nebraska Cooperative Extension Service, Lincoln, NE

- Hayes, M.J., O. Wilhelmi, and C.L. Knutson (2004) Reducing Drought Risk: Bridging Theory and Practice. *Journal of Natural Hazards Review*, 5(2): 106-113.
- Wilhite, D.A., M. Hayes, C. Knutson, and K.H. Smith (2000) Planning for Drought: Moving from Crisis to Risk Management, *Journal of the American Water Resources Association*, 36(4): 697-710.
- Wilhite, D.A., M. Hayes, C. Knutson, and K.H. Smith (2000) Planning for Drought: Moving from Crisis to Risk Management, *Water Resources Journal*, 207: 8-22 (re-printed from the Journal of the American Water Resources Association).
- Gollapudi, C.L. Knutson, S.S. Bang, and M.R. Islam (1995) A New Method for Controlling Leaching Through Permeable Channels, *Chemosphere* 30(4): 695-705.

Book Chapters

- Prabhakar, S.V.R.K., C. Knutson, J. Cummins and B.N. Razafindrabe (in press) Decision Making for Responding to Drought - Ensuring They are Driven by Objective Assessments of Drought. In Madu, M.N. and Chu-hua Kuei (Eds) Handbook of Disaster Risk Reduction and Management, Imperial College Press, London.
- Knutson, C., Redmond, K., and M. Svoboda (2013) Drought: The Knowledge Base. In: James C. Schwabe (ed.) *Planning and Drought*, American Planning Association Planning Advisory Service, Vol 574, 144 pp., Chicago, IL.
- Knutson, C.L. and T. Haigh (2013) Ranchers in the United States, Scientific Information, and Drought Risk. In: L. Botterill and G. Cockfield (eds.), *Drought Risk Management and Policy: Decision Making Under Uncertainty*, CRC Press: Boca Raton, FL
- Knutson, C.L. (2013) Managing Water Stress, Drought, and Climate Change in the 21st Century. In: J. Maestu (ed.), *Water Trading and Global Water Scarcity*, RFF Press: Washington, D.C.
- Tadesse, T., D.A. Wilhite, M.J. Hayes, J.F. Brown, and C.L. Knutson (2006) Modern Drought Monitoring Tool for Decision Support Systems, In: A. Anttiroiko and M. Malkia (eds.), *Encyclopedia of Digital Government*, Volume 3:1212-1218
- Wilhite, D.A., M.J. Hayes, and C.L. Knutson (2005) Drought Preparedness Planning: Building Institutional Capacity. In: D.A. Wilhite (ed.), *Drought and Water Crises: Science, Technology, and Management Issues*. CRC Press: Boca Raton, FL

Peer Reviewed Technical Publications

- UNDP (2010) *Local Climate Change Adaptation: Case Studies from the Community Water Initiative*, C.L. Knutson (Lead Author), United Nations Development Programme, New York, NY, 30 pp.
- UNISDR (2009) *Drought Risk Reduction Framework and Practices: Contributing to the Implementation of the Hyogo Framework for Action*, C.L. Knutson (Co-Lead Author), United Nations International Strategy for Disaster Reduction, Geneva, Switzerland, 194+vi pp.
- Knutson, C.L., and M.Z. Islam (2009) *A Plan to Reduce the Risk of Mass Mortalities of Reintroduced Animals in the Mahazat as-Sayd Protected Area in Saudi Arabia*, National Wildlife Research Center and National Commission for Wildlife Conservation and Development: Taif and Riyadh, Saudi Arabia, 30 pp.
- FOA/NDMC (2008) *The Near East Drought Planning Manual: Guidelines for Drought Mitigation and Preparedness Planning*, C. L. Knutson (Lead Author), Food and Agriculture Organization of the United Nations Near East Regional Office and the National Drought Mitigation Center, USA. FAO: Rome, Italy, 52+iv pp.
- FAO/NDMC (2008) *A Review of Drought Occurrence, Monitoring, and Planning Activities in the Near East Region*, C.L. Knutson (Lead Author), Food and Agriculture Organization of the United Nations Near East Regional Office and the National Drought Mitigation Center, USA. FAO: Rome, Italy, 44+ix pp.
- UNISDR (2007) *Drought Risk Reduction Framework and Practices: Contributing to the Implementation of the Hyogo Framework for Action*, C.L. Knutson (Lead Author), United Nations secretariat for the International Strategy for Disaster Reduction (UN/ISDR), Geneva, Switzerland, 97+vi pp

Other Publications and Reports

- Collins, K., J. Hannaford, M. Svoboda, C. Knutson, N. Wall, T. Bernadt, N. Crossman, I. Overton, M. Acreman, S. Bachmair, and K. Stahl (2016) Stakeholder Co-inquiries on Drought Impacts, Monitoring and Early Warning Systems. *Bulletin of the American Meteorological Association*. doi:10.1175/BAMS-D-16-0185.1
- Wright Morton, L., L.S. Prokopy, J.G. Arbuckle, Jr., C. Ingels, M. Thelen, R. Bellm, D. Bowman, L. Edwards, C. Ellis, R. Higgins, T. Higgins, D. Hudgins, R. Hoorman, J. Neufelder, B. Overstreet, A. Peltier, H. Schmitz, J. Voit, C. Wegehaupt, S. Wohnoutka, R. Wolkowski, L. Abendroth, J. Angel, T. Haigh, C. Hart, J. Klink, C. Knutson, R. Power, D. Today, and M. Widhalm (2016) *Climate Change and Agricultural Extension; Building Capacity for Land Grant Extension Services to Address the Agricultural Impacts of Climate Change and the Adaptive Management Needs of Agricultural Stakeholders*. Technical Report Series: Findings and Recommendations of the Climate and Corn-based Cropping Systems Coordinated Agricultural Project. Vol 3 of 5. CSCAP Publication no. CSCAP-0192-2016.
- Knutson, C., T. Bernadt, N. Wall, and M. Podebradska (2015) Knowledge Sharing Workshop on Drought: North Carolina Water Suppliers in the Neuse and Cape Fear River Basins. Research Report. National Drought Mitigation Center, University of Nebraska-Lincoln
- Knutson, C., (2015) Drought Risk and Vulnerability Assessment (extended abstract), Proceedings of the NENA Regional Stakeholder Workshop on Operationalizing the Regional Collaborative Platform to Address Water Consumption, Water Productivity and Drought Management in Agriculture, FAO and Daugherty Water For Food Institute, Cairo, Egypt, October 27-29.
- Hannaford, J., M. Acreman, K. Stahl, S. Bachmair, M. Svoboda, C. Knutson, N.D. Crossman, I.C. Overton, and M.J. Collof (2015) Enhancing drought monitoring and early warning by linking indicators to impacts - an international perspective (extended abstract). Proceedings of the International Conference on Drought: Research and Science-Policy Interfacing, European Commission, March 10-13, Valencia, Spain.
- Wall, N., T. Haigh, C. Knutson, and T. Bernadt (2015) Workshops in the Southern Great Plains Focus on Drought Risk Management on the Ranch. *Southern Climate Monitor*, Vol 5 (10): 2-3, October.
- Blue, J., R.A. Krop, N. Hiremath, C. Gillette, J. Rooke, C.L. Knutson, and K. Smith (2015) Drought Management in a Changing Climate: Using Cost-Benefit Analyses to Assist Drinking Water Utilities, Water Research Foundation Web Report #4546
- Church, S., Haigh, T., Melissa J Widhalm, Prokopy, L., Arbuckle, J., Hobbs, J., Knoot, T., Knutson, C., Loy, A., Mase, A., Mcguire, J., Morton, L., Tyndall, J. (2015). Farmer Perspectives on Agricultural Practices, Information, and Weather Variability in the Corn Belt: A Statistical Atlas, Volume 2. Purdue University Research Repository. doi:10.4231/R79W0CFS
- Tyndall, J., J.G. Arbuckle, T. Haigh, C. Knutson, L. Wright Morton, L. Stalker Prokopy, M. Widhalm. (2015) New Atlas Features Corn Belt Farmers' Perspectives on Agriculture and Climate, *Journal of Extension*, Vol 53 (1)
- Nam, W.H., Hayes, M.J., Wilhite, D.A., Tadesse, T., Svoboda, M.D., Knutson, C.L. (2014) Drought management and policy based on risk assessment in the context of climate change. *Journal of the Korean Society of Agricultural Engineers*, 56 (2): 2-15.
- Knutson, C., I. Beernaerts, and M. Bazza, Towards Risk-Based Drought Management in Europe and Central Asia, European Commission on Agriculture Thirty-Eighth Session, Bucharest, Romania, April 1-2, Food and Agriculture Organization of the United Nations, ECA 38/14/4
- Knutson, C. and K. Smith (2014) Wind River Reservation Tribes Begin Drought Monitoring and Planning, DroughtScape, Fall, pg 14. <http://drought.unl.edu/Portals/0/docs/DroughtScape/Fall%202014.pdf>
- Knutson, C., and K. Smith (2014) InterTribal Buffalo Council Begins Planning for Drought, DroughtScape, fall, pg 15. <http://drought.unl.edu/Portals/0/docs/DroughtScape/Fall%202014.pdf>

- Knutson, C. and K. Smith (2014) SDSU-Led Partners help South Dakota ranchers with Drought, DroughtScape, fall, pg 16, <http://drought.unl.edu/Portals/0/docs/DroughtScape/Fall%202014.pdf>
- Knutson, C. and K. Smith (2014) NDMC Helps UN with Drought Plan Training for Central Asia, DroughtScape, winter, pg. 12, <http://drought.unl.edu/Portals/0/docs/DroughtScape/Winter2014.pdf>
- Loy, A., J. Hobbs, J.G. Arbuckle, L. Wright Morton, L. Stalker Prokopy, T. Haigh, T. Knoot, C. Knutson, A. Saylor Mase, J. McGuire, J. Tyndall, M. Widhalm (2013) Farmer Perspectives on Agriculture and Weather Variability in the Corn Belt: A Statistical Atlas (pp 109 pgs). Iowa State University: CSCAP 05153-2013. Ames, IA: Cropping Systems Coordinated Agricultural Project (CAP): Climate Change, Mitigation, and Adaptation in Corn-based Cropping Systems.
- Smith, K., and C. Knutson (2013) Drought Management Database Debuts in 2013, *Southern Climate Monitor*, 11th ed., vol 3: 2-3.
- Knutson, C., and M. Hayes (2013) Transition of an Interactive Drought Management Database for the Identification and Comparison of Drought Mitigation and Response Strategies. Final Report to NOAA's Climate and Societal Interactions-Transitions Program. Silver Spring, MD.
- Knutson, C., N. Wall, and M. Svoboda (2013) Developing Seasonal Predictive Capacity for Drought Mitigation Support: Report of Workshop Group Discussions. Final Report to the University of Idaho, NASA.
- Gasteyer, S., C. Knutson, N. Wall, and A. Schutz (2013) Shifting Intermediaries: Tracing the Land Grant Role in Water Management in Nebraska. Final Report to the USDA North Central Regional Center for Rural Development, East Lansing, MI.
- Knutson, C.L. and T. Haigh (2012) Managing Drought Risk on the Ranch: A Planning Guide for Great Plains Ranchers, National Drought Mitigation Center, University of Nebraska-Lincoln, pp. 39
- Haigh, T. and C. Knutson (2012) Modeling Impacts of Decadal Climate Variability in the Missouri River Basin Project: Stakeholder Advisory Team Interviews Report. NDMC Project Report Submitted to USDA-NIFA.
- Svoboda, M., K.H. Smith, M. Widhalm, D. Woudenberg, C. Knutson, M. Sittler, J. Angel, M. Spinar, M. Shafer, R. McPherson, H. Lazrus (2011) Drought-Ready Communities: A Guide to Community Drought Preparedness, National Drought Mitigation Center, p. 53.
- Islam, M.Z., C. Knutson, and A. Boug (2010) Strategy and action plan to reduce the risk of mass mortalities of reintroduced ungulates in the Mahazat as-Sayd Protected Area in Saudi Arabia. *Gnusletter* 28(2): 9-15
- Knutson, C.L. (2009) A Drought Monitoring and Early Warning System for Western India, Quarterly Newsletter of the Indian Centre for Climate and Societal Impacts, 2(1):5-6, Gujarat, India.
- Knutson, C.L. (2008) Adaptation to Water Stress in the Great Plains. *Water Resources IMPACT*, Vol. 10(4), pp18-21
- Knutson, C.L. (2008) Feature: The role of water conservation in drought planning. *Journal of Soil and Water Conservation*, Vol. 63(5)
- Knutson, C.L. (2008) Review of *Methods and Tools for Drought Analysis and Management*, Giuseppe Rossi, Teodora Vega, and Brunella Bonaccorso (Eds.), *Eos*, 89(2)
- Wilhite, D.A., and C.L. Knutson (2008) Drought management planning: Conditions for success, *Options Mediterraneennes*, Series A., No. 80, pp. 141-148
[<http://www.colorado.edu/hazards/research/qr/qr183/qr183.html>]
- Woudenberg, D.L., C.L. Knutson, M.D. Svoboda, and S. Jones (2007) Low Flow/Stage Related Impacts in the Red River of the North and Upper Mississippi River Basins, North Dakota and Minnesota: Low Water Impact Information Database Project, NDMC Technical Report to Central Region Climate Services, NOAA National Weather Service, Kansas City, MO
- Woudenberg, D.L., C.L. Knutson, M.D. Svoboda, and S. Jones (2007) Low Flow/Stage Related Impacts in the Upper Trinity River Basin: Low Water Impact Information Database Project, NDMC Technical Report to Southern Region Hydrologic Services, NOAA National Weather Service, Fort Worth, TX

- Knutson, C.L., M.D. Svoboda, and M.J. Hayes (2006) Analyzing Tribal Drought Management: A Case Study of the Hualapai Tribe. Report to the Natural Hazards and Applications Information Center, University of Colorado, Boulder, CO
- Knutson, C.L., S. Jones, M. Sittler, and M.D. Svoboda (2006) Low Flow/Stage Related Impacts in the Upper Missouri River Basin: NDMC Technical Report to Central Region Climate Services, NOAA National Weather Service, Kansas City, MO
- Knutson, C.L., M. Higgins, and M.D. Svoboda (2005) Low Flow/Stage Related Impacts in the North Platte River Basin. NDMC Technical Report to Central Region Climate Services, NOAA National Weather Service, Kansas City, MO
- Knutson, C.L. (2004) Low Flow/Stage Related Impacts in the Upper Mississippi River Basin. NDMC Technical Report to Central Region Climate Services, NOAA National Weather Service, Kansas City, MO
- Knutson, C.L. (2004) Pick-Sloan Plan. In: D. Wishart (ed.), *Encyclopedia of the Great Plains*, University of Nebraska Press: Lincoln, NE, pp. 858-859
- Knutson, C.L. (2004) *Rural Water Development for Marginal Regions: With a Case Study of South Dakota's Mni Wiconi Rural Water Project*. Ph.D. Dissertation. University of Nebraska Press: Lincoln, NE
- Knutson, C., M. Bloomstedt, and K. Slaughter (2001) Agricultural Producers of Howard County, Nebraska: Perceptions of Drought Mitigation and Response. *Drought Network News*, 13(1): 3-6
- Wilhite, D.A., M. Hayes, C. Knutson, and K.H. Smith (1999) A Methodology for Drought Planning, Prepared for the Bureau of Reclamation, Cooperative Agreement 1425-97-FC-81-3007
- Knutson, C., M. Hayes, and K. T. Phillips (1998) How to Reduce Drought Risk, Guide Prepared by the Preparedness and Mitigation Working Group of the Western Drought Coordination Council, Lincoln, NE
- Knutson, C.L. (1996) Bacteriogenic Plugging of High Permeability Areas Through a Reduction in Porosity, M.S. Thesis, South Dakota School of Mines and Technology, Rapid, City, SD

CURRENT GRANT SUPPORT

- Huq, S., R. Red Cloud, J. Rattling Leaf, C. Chapman, C. McNutt, C. Knutson, C. Stiles, L. Edwards, and D. Kluck, Great Plains Tribal Water Alliance Climate Partnership: Category 1: Development of Water Resources Vulnerability Assessments Process and Guidebook, BIA Tribal Climate Resilience Program, \$206,258, 10/16-9/18
- Huq, S., R. Red Cloud, J. Rattling Leaf, C. Chapman, C. McNutt, C. Knutson, C. Stiles, L. Edwards, and D. Kluck, Great Plains Tribal Water Alliance Climate Partnership: Category 2: Development of Water Resources Vulnerability Assessments to Build Tribal Resilience, BIA Tribal Climate Resilience Program, \$243,202, 10/16-9/18
- Hayes, M., C. Knutson, C. Neale, M. Svoboda, B. Wardlow, and D. Wilhite, Development of the MENA Regional Drought Management System, International Center for Biosaline Agriculture/USAID, \$1,009,700, 1/16-03/17
- Mehta, V., N. Rosenberg, and C. Knutson, Decadal Drought Information Needs of Food and Bio-fuels Agriculture in the Missouri River Basin, NOAA CPO/CSI/SARP, \$285,000, 8/15-7/17
- Hayes, M., M. Svoboda, C. Knutson, T. Tadesse, D. Bathke, and B. Fuchs, Providing Drought Information Services for the Nation: The National Drought Mitigation Center (NDMC), NOAA/CPO, \$2,439,400, 7/15-6/18
- Knutson, C., M. Cottenoir, J. Wellman, S. McNeeley, and M. Svoboda, The Wind River Indian Reservation's Vulnerability to the Impacts of Drought and the Development of Decision Tools to Support Drought Preparedness, USGS/North Central Climate Science Center, \$393,618, 6/15-9/17
- Hayes, M. D. Bathke, B. Fuchs, C. Knutson, M. Svoboda, and T. Tadesse, Drought Risk Management for the U.S., University of Oklahoma/NOAA, \$693,696, 9/14-8/17

- Stahl, K., C. Knutson, M. Svoboda, J. Hannaford, K. Collins, J.C. Overton, N.D. Crossman, M.J. Colloff, and M. Acreman, Drought Impacts: Vulnerability Thresholds in Monitoring and Early Warning Research, Belmont Forum and G8 Research Councils, \$1,540,249 (\$542,073 to Knutson and Svoboda through NSF), 10/13-8/17
- Smart, A., S. Clay, D. Clay, T. Troovien, L. Perkins, W. Schacht, J. Volesky, C. Knutson, and M. Stockton, Demonstrating Grazing Land Resilience to Drought in the Northern Great Plains. USDA NRCS, \$713,019, 4/13-3/17
- Prokopy, L.S., J. Andresen, J. Angel, T. Bartholomay, T. Blewett, O. Doering, R. Elmore, B. Erickson, B. Gramig, P. Guinan, C. Hart, S. Hillberg, A. Jain, C. Knutson, M.C. Lemos, R. Massey, L. Wright Morton, D. Niyogi, M. Shuski, X.C. Song, G. Takle, and D. Todey, Useful to Usable (U2U): Transforming Climate Variability and Change Information for Cereal Crop Producers, USDA NIFA-AFRI, \$5,000,000, 3/11-3/17

PRESENTATIONS (2016)

- Hannaford, J., M. Svoboda, C. Knutson, K. Stahl, K. Collins, N. Wall, Building Better Drought Resilience Through Improved Monitoring and Early Warning: Learning from Stakeholders in Europe, the USA, and Australia, 2016 AGU Fall Meeting, San Francisco, CA, December 13
- Smith K., E. Tidjeman, S. Bachmair, L. Barker, C. Knutson, N. Wall, T. Bernadt, K. Stahl, Reconstructing Droughts Beyond the Hydro-meteorological indicators, AGU Fall Conference, San Francisco, CA, December 13
- Knutson, C., An Introduction to Drought Vulnerability Assessment, Great Plains Tribal Water Alliance Fall Water Conference, Rapid City, SD, November 29
- Knutson, C., Linking Drought Indicators and Impacts: The U.S. Perspective, The Future of Drought Monitoring and Early Warning Systems in the U.K. Workshop, Centre for Ecology and Hydrology, Wallingford, U.K., November 8
- Knutson, C., Drought Planning Basics and Tribal Case Studies, Institute for Tribal Environmental Professionals Climate Adaptation Training, Nebraska City, NE, September 4
- Knutson, C., and K. Smith, Drought Planning Overview and Update, Wind River Drought Vulnerability Assessment Workshop, Eastern Shoshone and Northern Arapaho Tribes, Ft. Washakie, WY, July 21
- Knutson, C., North Carolina Drought Impact-Indicator Analysis, DrIVER North Carolina Drought Indicator-Impact Assessment Webinar, Lincoln, NE, May 12
- Knutson, C., Assessment and Use of Historical Drought Information in the United States, National Environment Research Council Historic Droughts Symposium, Wallingford, U.K., March 22
- Knutson, C., North Carolina Drought Impact-Indicator Analysis, DrIVER North Carolina Indicator-Impact Assessment Webinar, Lincoln, NE, March 2
- Knutson C., State Drought Planning and Case Studies, National Drought Policies and Early Warning System Training Workshop, Caribbean Institute of Meteorology and Hydrology, Rodney Bay, St. Lucia, February 24
- Knutson, C., Risk-Based National Drought Policies and Plans, National Drought Policies and Early Warning System Training Workshop, Caribbean Institute of Meteorology and Hydrology, Rodney Bay, St. Lucia, February 24
- Smart, A., C. Knutson, T. Haigh, W. Schacht, J. Volesky, and M. Stockton, Drought Management Education is Still Needed for Great Plains Ranchers, Society for Range Management Annual Conference, Corpus Christi, TX, February 2
- Knutson, C., Risk-based National Drought Policies and Plans, National Drought Policies and Early Warning System Training Workshop, Caribbean Institute of Meteorology and Hydrology, St. Johns, Antigua, January 27
- Knutson, C., State Drought Planning and Case Studies, National Drought Policies and Early Warning System Training Workshop, Caribbean Institute of Meteorology and Hydrology, St. Johns, Antigua, January 27

UNIVERSITY OF NEBRASKA-LINCOLN SELECTED SERVICE

2009-present Member, Environmental Studies Coordinating Committee
2009-2012 Member, Outreach Committee, School of Natural Resources (SNR)
2009-2011 ACE Curriculum Certification Coordinator, Faculty of Geography and GIScience
2009-2010 Co-coordinator, Faculty of Geography and GIScience, SNR
2008-2012 Chair, Geography and GIScience Program Graduate Curriculum Committee
2008-2009 Member, UNL Climate Change Initiative Advisory Panel
2007-present Leader, NDMC Planning and Social Science Program Area
2006-2009 Member, Faculty Advisory Committee, SNR

SELECTED EXTERNAL PROFESSIONAL SERVICE

2016-present United Kingdom Historic Droughts Project International Advisory Panel
2015 NOAA NIDIS Tribal Engagement Advisory Group
2014-present North Central Region Water Network Member
2013-present Missouri River Interest Group Member
2012-present DOI North Central Climate Science Center Adaptation/Decision Making Working Group
2012-present NOAA RISA – Southern Climate Impacts Planning Program Affiliate
2012-2013 Colorado Water Conservation Board - Drought Mitigation/Response Planning Committee
2010-present NC1190 Midwest Applied Social Science Research Group
2010-2011 Water Resources Committee Chair, Rotary International District 5650
2009-2013 Human Dimensions Group, Heartland Regional Water Coordination Initiative
2008-2009 Education Committee, NOAA National Integrated Drought Information System
2007-2016 Scientific Advisory Committee, Indian Centre for Climate and Societal Impacts, Ahmedabad, India
2006-2007 Conceptual Design Committee, NOAA National Integrated Drought Information System
2006-2009 Drought Advisory Group, United Nations International Strategy for Disaster Reduction
1999-2000 Environmental Issues Working Group, National Drought Policy Commission
1999-2000 Municipal and Industrial Water Group, National Drought Policy Commission,
1998-present Municipal Water Supply, Health, and Energy Subcommittee, Nebraska Climate Assessment and Response Committee
1997-1999 Drought Preparedness Committee, Western Drought Coordination Council
1997-1999 Drought Response Committee, Western Drought Coordination Council

ACADEMIC AND PROFESSIONAL AWARDS

2015 USDA NIFA Partnership Award for Mission Integration (U2U multi-university project team)
2013 UNL-IANR Omtvedt Innovation Award for exceptional service (NDMC team)
2011 Fellow, UNL Environmental Studies Program
2009 Editor's Choice Honorable Mention for Best Article, "The Role of Water Conservation in Drought Planning," Journal of Soil and Water Conservation
2007 Fellow, Center for Great Plains Studies
2001-02 Graduate Teaching Assistantship, Anthropology and Geography Department, UNL
2001 Research Fellowship, Human Rights and Human Diversity Initiative, UNL
2000-01 Doctoral Research Fellowship, UNL, 2000-2001
2000 Gamma Theta Upsilon International Geographic Honor Society
1997 Certificate of Appreciation, United States Geological Survey
1996 Service Award, USDA Black Hills National Forest
1994 Research and Teaching Assistantship, Geology and Geological Engineering Department, South Dakota School of Mines and Technology
1990 Tau Beta Pi National Engineering Honor Society