

Understanding and Assessing Climate Change: Preparing for Nebraska's Future

2024 Climate Change Impact
Assessment Report
Appendix A - About the Authors



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About the Authors

Heather Akin is an Assistant Professor of Strategic Communication. Her research and service focus on understanding the social and psychological dynamics underlying the public's attitudes and behaviors related to scientific issues and risks. She received a Fulbright Teaching Fellowship in Indonesia and maintains a strong interest in issues and politics in Southeast Asia. She received her PhD in Mass Communications from the University of Wisconsin–Madison and was the Howard Deshong Postdoctoral Fellow at the University of Pennsylvania's Annenberg Public Policy Center.

Andrea Basche is an Associate Professor in the Department of Agronomy and Horticulture at the University of Nebraska–Lincoln. Her research team studies several aspects of diversified cropping systems, including carbon and nitrogen cycling, water and weed dynamics, and policy and human decision-making. In her role, she also teaches several undergraduate courses in crop management. She has expertise in cover crops, soil health, and climate change and was a co-author on the Northern Great Plains chapter of the 5th National Climate Assessment, published in 2023. Dr. Basche received her PhD in Crop Production and Physiology and Sustainable Agriculture from Iowa State University.

Deborah Bathke is the Nebraska State Climatologist and an Associate Professor in the School of Natural Resources. She was a climatologist with the National Drought Mitigation Center for 16 years, and during that time, she authored the U.S. Drought Monitor, served as the coordinator for the center's education and engagement activities, and worked to develop decision-support tools for drought risk management. Dr. Bathke was the lead author of the state's 2014 climate change impact assessment, *Understanding and Assessing Climate Change: Implications for Nebraska*. Before working at UNL, she served as the Assistant State Climatologist for New Mexico. Dr. Bathke is a native Nebraskan and grew up in Ponca.

She earned her BS and MS from the University of Nebraska–Lincoln and a PhD in Atmospheric Sciences from The Ohio State University.

Jesse E. Bell is the Claire M. Hubbard Professor of Water, Climate, and Health in the Department of Environmental, Agricultural, and Occupational Health at the University of Nebraska Medical Center and the School of Natural Resources of the Institute of Agriculture and Natural Resources at the University of Nebraska–Lincoln. He is the director of the Water, Climate, and Health Program at UNMC and the Director of Water, Climate, and Health at the University of Nebraska's Daugherty Water for Food Global Institute. These programs aim to develop interdisciplinary research, education, and collaborative solutions to public health challenges associated with environmental issues in Nebraska and worldwide. As the founding director, he has helped grow these programs and to lead 25 faculty, staff, and students. His expertise and research are focused on understanding how human and natural processes are connected to environmental and climate changes. Dr. Bell is a native Nebraskan and received his PhD from the University of Oklahoma.

Daniel R. DiLeo is a Catholic moral theologian, Associate Professor, Justice and Peace Studies Program Director, and Chair of the Department of Cultural and Social Studies at Creighton University. Since 2009, he has been a consultant with Catholic Climate Covenant, founded with support from the U.S. Conference of Catholic Bishops. Dr. DiLeo earned his PhD in Theological Ethics with a minor in Systematic Theology from Boston College.

Ross Dixon is an Assistant Professor in the Department of Earth & Atmospheric Sciences at the University of Nebraska–Lincoln. His research is focused on climate modeling, regional climate dynamics, and precipitation projections. Dr. Dixon joined UNL in 2021 after obtaining a PhD from the University of Wisconsin–Madison,

followed by postdoctoral positions at the Centre National de Recherches Météorologiques in Toulouse, France, and the University of Arizona. He has worked on various projects that focused on understanding uncertainty in projections of West African climate. He has recently been involved with research on rain-on-snow events across the central United States. To further this research, he regularly designs and runs simulations with a wide range of complexities and applies statistical techniques to model output and observations.

Martha Durr is an Applied Climatologist Faculty in the Math and Science Department at Nebraska Indian Community College. Her specialization areas are meteorology, climatology, and climate change impacts. Before NICC, she was an Applied Climatologist at the Alaska Climate Research Center, Director of the NOAA High Plains Regional Climate Center, and most recently served as the Nebraska State Climatologist. Dr. Durr earned her PhD in Soils and Climate from the University of Minnesota.

F. John Hay is an Extension Educator for the University of Nebraska–Lincoln Extension. Based in the Department of Biological Systems Engineering, his teaching focuses on energy issues, including biofuels, renewable energy, and farm energy management. John has taught extensively about economic analysis for behind-the-meter solar applications for farms, residences, and businesses. He received a BS in Agronomy from the University of Nebraska–Lincoln and an MS in Agronomy from Texas A&M University.

Tonya Haigh is a Research Assistant Professor and Social Science Coordinator of the National Drought Mitigation Center at the University of Nebraska–Lincoln. Her research focuses on the adaptive capacity of agricultural producers, rural communities, and others to cope with drought. Her research connects social science with climate science by informing the development of stakeholder-driven resources and tools. Dr. Haigh received her PhD in Natural Resource Sciences, specializing in Human Dimensions, from the University of Nebraska–Lincoln.

Eric Hunt is an Assistant Extension Educator of Agricultural Meteorology and Climate Resilience for the University of Nebraska–Lincoln Extension. He is based in the Nebraska State Climate Office

and the School of Natural Resources. Dr. Hunt provides routine weather and climate updates for the agricultural community across the state. He received his PhD in Natural Resource Sciences with a specialization in Bio-Atmospheric Interactions from the University of Nebraska–Lincoln.

Kristina W. Kintziger is the Claire M. Hubbard Professor of Health and Environment and Associate Director of the Water, Climate, and Health Program at the University of Nebraska Medical Center, College of Public Health. Dr. Kintziger also has an appointment with the National Center for Environmental Health at the Centers for Disease Control and Prevention. She is an environmental and disaster epidemiologist with experience in academia and public health practice. Her research focuses on the impacts of climate change on human health and applying advanced and interdisciplinary methods to improve public health practice in environmental, climate, and disaster epidemiology. Dr. Kintziger received an MPH in Epidemiology from Emory University and a PhD in Epidemiology from the University of South Carolina.

Nicholas McMillan is an Assistant Professor in the Department of Agronomy and Horticulture and the School of Natural Resources. He is the Grazing Lands Ecologist at the University of Nebraska–Lincoln and has plant, landscape, and rangeland ecology expertise. He received his PhD in Natural Resource Ecology and Management from Oklahoma State University.

Henry “Hank” Miller (1962–2025) was an educator and researcher at Nebraska Indian Community College since 2003. He served as the Math and Science division head and led the development and administration of programs. He taught a variety of life science classes and conducted numerous of environmental research projects. Mr. Miller attained a BS and MS in Biology and served on boards for science literacy and science education programs. He was also a member of the Nebraska Academy of Science.

Jerome Okojoku-Idu is an energy professional and co-founder of a leading communications firm in Nigeria, with expertise spanning energy transition, sustainability, resilience, environmental justice, and Indigenous knowledge systems. He is pursuing a

PhD in Natural Resource Sciences at the University of Nebraska–Lincoln, where he researches the creation of fair and sustainable energy systems in developing countries and tribal nations.

Crystal Powers is an Associate Extension Educator with the University of Nebraska Water Center and the Daugherty Water for Food Global Institute. Her work reaches statewide, focused on water management and science communication. She holds an MS from Cornell University and a BS in Biological Systems Engineering from the University of Nebraska–Lincoln.

Tirthankar Roy is an Assistant Professor in the Department of Civil and Environmental Engineering at the University of Nebraska–Lincoln. His group focuses on a wide range of topics related to hydrology and its intersections with multiple other fields. He received his PhD in Hydrology from the University of Arizona and worked as a postdoc at Princeton before joining UNL in 2019.

Sarah Sonsthagen joined the Nebraska Cooperative Fish and Wildlife Research Unit in 2020 after working at the U.S. Geological Survey Alaska Science Center, where she studied the evolutionary relationships among Arctic vertebrate populations. Dr. Sonsthagen was a post-doctoral fellow at the Smithsonian Institution, National Museum of Natural History, and National Zoo. She was awarded her PhD in Biological Sciences from the University of Alaska Fairbanks. Her research investigates ecological drivers of connectivity and adaptive capacity of species of conservation concern using field- and laboratory-based methods. Movement underlies many key processes in ecology and evolution and is critical for species' responses to environmental change. As such, she applies population- and community-driven approaches to evaluate genomic and demographic connectivity across the landscape, adaptive capacity, and the influence of species biology in shaping spatial and temporal genomic diversity to inform management decisions.

Jonathan Spurgeon received graduate degrees from the University of Missouri and the University of Nebraska–Lincoln, where he studied large-river ecology and conservation and management of fish populations. Before joining the Nebraska Cooperative Fish and Wildlife Research Unit in 2020, Dr. Spurgeon

was an Assistant Professor at the University of Arkansas at Pine Bluff. A major focus of his research is quantifying the patchwork of habitat conditions needed by stream fishes across their life history. Research outcomes are intended to inform decisions regarding habitat restoration and conservation strategies, including translocation and suppression of nonnative species. Dr. Spurgeon uses diverse study designs and analytical techniques, including occupancy modeling and mark-recapture methods. Dr. Spurgeon is working across a gradient of systems from small streams in the Nebraska Sandhills and Ouachita Mountains to the largest rivers in North America.

Zhenghong Tang is a Professor and the Community and Regional Planning Program Director at the University of Nebraska–Lincoln. His research focuses on hazard mitigation and environmental planning, promoting an integrated approach to address long-term, uncertain, and strategic environmental and hazard challenges for Nebraska communities and beyond. Dr. Tang received his PhD in Urban and Regional Science from Texas A&M University.

W. Ryan Wishart is an Assistant Professor and Program Director of Sociology in the Department of Cultural and Social Studies at Creighton University. His research and teaching focus on environmental and political sociology, including problems of energy and environmental justice. Dr. Wishart completed his PhD in Sociology at the University of Oregon.

Aaron Young is a geologist with the Conservation and Survey Division (CSD) at the University of Nebraska–Lincoln. The CSD is Nebraska's state geological survey. He has a BS in physical geography from the University of Wisconsin–Platteville and an MS in Natural Resources Science from the University of Nebraska–Lincoln. Aaron has been a geologist with CSD since 2008. He has extensive experience with geologic and aquifer mapping in Nebraska, has overseen the Nebraska Groundwater-Level Monitoring Program, and has published the annual *Groundwater-Level Monitoring Report* since 2011.