

# 2021 Tennessee Climate Data Summit

May 25 & 26

1:30-4:35 / 12:30-3:35 (EDT/CDT)

*Presented by:*



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# Tennessee Climate Data Summit

## Improving Data Access & Services for Better Decision Making

***Agenda At-A-Glance***

***Registration/Zoom Link: [bit.ly/TNCDS](https://bit.ly/TNCDS)***

### **Tuesday, May 25**

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1:30/12:30pm (EDT/CDT)	Welcome: Summit Overview, Survey, & Southern Regional Climate Center
1:40/12:40pm	Tennessee Climate Office: Current Services & Goals
1:50/12:50pm	State & Federal Agencies Panel on Climate Data & Decision Making
2:20/1:20pm	National & Regional Climate Services (NOAA)
3:20/2:20pm	Break
3:30/2:30pm	Regional Tools & Discussion (Drought, USGS, & USDA)
4:30/3:30pm	Closing & Overview for Wednesday

### **Wednesday, May 26**

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1:30/12:30pm (EDT/CDT)	Local Issues & Sector Breakout Session
2:15/1:15pm	State Climate Offices & Climate Monitoring
3:15/2:15pm	Break
3:25/2:25pm	University Research & Services (UT-K, MTSU, TSU, Vanderbilt, Memphis)
3:55/2:55pm	Regional Tools & Discussion (SE Regional Climate Center & National Weather Service)
4:30/3:30pm	Closing & Next Steps



# Tennessee Climate Data Summit

## Improving Data Access & Services for Better Decision Making

*Tuesday, May 25*

### 1:30/12:30pm **Welcome: Summit Overview, Survey, & Southern Regional Climate Center**

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**Glenn Kerr** ([glenn.kerr@stateclimate.org](mailto:glenn.kerr@stateclimate.org)) is the Executive Director for the American Association of State Climatologists (AASC). Previously, he served as the Commander of the 14th Weather Squadron for the United States Air Force as well as the Weather Division Chief for the Air Force Operations Group at the Pentagon.

**John Nielsen-Gammon** ([n-g@tamu.edu](mailto:n-g@tamu.edu)) is a Regents Professor of Atmospheric Sciences at Texas A&M University. He has served as the Texas State Climatologist since 2000, and is now Director of the NOAA Southern Regional Climate Center and on the Executive Committee of the American Association of State Climatologists.

### 1:40/12:40pm **Tennessee Climate Office: Current Services & Goals**

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**Andrew Joyner** ([joynert@etsu.edu](mailto:joynert@etsu.edu)) is an Associate Professor of Geosciences at East Tennessee State University. He established the Tennessee Climate Office (TCO) in 2016 and became the official Tennessee State Climatologist in January 2021. Additionally, he is the Director of the Geoinformatics and Disasters Science (GADS) Lab and much of his research focuses on hazard mitigation/analysis, biogeography, geospatial analysis, and public health.

**William Tollefson** ([tollefson@etsu.edu](mailto:tollefson@etsu.edu)) is a Lecturer of Geosciences at East Tennessee State University and the Tennessee Assistant State Climatologist. Since 2017, he has created statewide monthly climate reports and provided drought status input for the US Drought Monitor. He is also the Director of Geospatial & Hazards Analysis for the Geoinformatics and Disaster Science (GADS) Lab.



# Tennessee Climate Data Summit

## Improving Data Access & Services for Better Decision Making

*Tuesday, May 25 (Continued)*

### 1:50/12:50pm **State & Federal Agencies Panel on Climate Data & Decision Making**

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**Kendra Abkowitz Brooks** (Kendra.Abkowitz@tn.gov) is Director for the Office of Policy and Sustainable Practices. Kendra leads the department's efforts to engage in environmental policy research and analysis and provide technical guidance to business, industry, communities and other entities to promote environmental stewardship, sustainability and resilience. She regularly engages with federal agencies on new initiatives, proposed rulemakings and other environmental policies that may impact TDEC's programs and collaborates with state and local leaders, non-governmental organizations and the academic and business community to exchange views on matters relevant to environmental policy and sustainability. Prior to working at TDEC, Kendra served as a Sustainability Professional at Vanderbilt University, where she designed, implemented, and managed numerous sustainability programs with the aim of reducing environmental impacts resulting from operations within the University and Medical Center and at campus special events. Kendra holds a PhD in Environmental Management and Policy and a Bachelor's Degree in Economics and Sociology from Vanderbilt University, a MBA from Middle Tennessee State University, and a Master's Degree in Sociology from the University of Chicago.

**Kyle Spangle** (Kyle.Spangle@tn.gov) is the technical lead for the Division of Air Pollution Control's air quality measurements and forecasting groups. Kyle has a B.S. in Meteorology from Purdue University and has 13 years of experience in the field of environmental science.

**David Borowski** (David.M.Borowski@tn.gov) is an Environmental Epidemiologist in the Environmental Epidemiology Program at the Tennessee Department of Health



# Tennessee Climate Data Summit

## Improving Data Access & Services for Better Decision Making

*Tuesday, May 25 (Continued)*

### 1:50/12:50pm **State & Federal Agencies Panel on Climate Data & Decision Making (Continued)**

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**Lisa Huff** (Lisa.Huff@tn.gov) grew up in Knoxville, Tennessee, south of the river, has lived in various states of the South, and has traveled all over North America and parts of Europe and Africa. She has worked in her field since the early 1980s, starting out with seasonal interpretive positions within Tennessee State Parks. Just prior to obtaining her Bachelor of Science she worked in the Great Smoky Mountains National Park on the first wild hog study undertaken there. She then took a short internship at Land Between the Lakes before working at the Savannah River Ecology Laboratory doing research on wood storks for the University of Georgia. While working on the wood stork project, she took time to go to Spain, where she helped a former colleague search for the last European brown bears in the Picos de Europa. Before attending graduate school, she did a brief stint as a biologist sampling trawler hauls in the Bering Sea for the National Marine Fisheries Service. After obtaining her graduate degree, Lisa worked as an environmental scientist for two firms in North Carolina's Research Triangle Park where she primarily conducted research on greenhouse gas source locations and emissions estimations for the U.S EPA. She then took a position with the N.C. Division of Coastal Management directing the development of their nonpoint source pollution control program. Lisa began working for Tennessee State Natural Areas in 2000. She is tasked with the daily operations and management - either solely or jointly with managing partners - of over 42,000 acres in 21 East Tennessee natural areas.

**Brian Childers** (bachilders0@tva.gov) is a native of Knoxville, and now works for TVA in Chattanooga. He attended the University of Tennessee in Knoxville and Penn State, studying economics, political science, and business analytics. He began his career with TVA's load forecasting group in 2019, contributing to understanding weather-related load risks. He also helped model a long-term climate change scenario for the TVA system with the help of ORNL's Climate Change Climate Institute. Last year, he contributed to measuring and forecasting COVID impacts on the TVA's load forecasts. He recently moved to TVA's Advanced Analytics group.

**William Terry** (William.C.Terry@usace.army.mil) is the Chief of the Water Resources Section at the United States Army Corps of Engineers-Nashville District





# Tennessee Climate Data Summit

## Improving Data Access & Services for Better Decision Making

*Tuesday, May 25 (Continued)*

### 2:20/1:20pm **National & Regional Climate Services (NOAA)**

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**Doug Kluck** ([doug.kluck@noaa.gov](mailto:doug.kluck@noaa.gov)) is the NOAA Regional Climate Services Director for the Central Region. He works closely with the Regional Climate Centers, state climatologists, tribal colleges and universities, land grant universities and extension services, federal and state governments, and nongovernmental organizations on a number of issues, including informing adaptation, climate data stewardship, building climate change capacity, and assessment of climate services needs by sector and community.

**Victor Murphy** ([victor.murphy@noaa.gov](mailto:victor.murphy@noaa.gov)) has served as the NOAA National Weather Service (NWS) Southern Region Climate Service Program manager since 2002. Located in Fort Worth, the NWS Southern Region includes 33 weather forecast offices and four river forecast centers. Dr. Murphy oversees the daily ingest and publication of climate data from the volunteer COOP network and more official sources. He also oversees the issuance of routine daily and monthly climate products, which includes calculations of temperatures and precipitation.

**Adam Smith** ([Adam.Smith@noaa.gov](mailto:Adam.Smith@noaa.gov)) is lead scientist for NOAA National Centers for Environmental Information's (NCEI's) U.S. Billion-dollar Weather and Climate Disasters. Over the last decade, he has led research, developed new data partnerships, and gained national and international experience merging environmental and social-science data into research tools for studying the impacts and costs of natural disasters.



# Tennessee Climate Data Summit

## Improving Data Access & Services for Better Decision Making

*Tuesday, May 25 (Continued)*

### 3:30/2:30pm **Regional Tools & Discussion (Drought, USGS, & USDA)**

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**Mark Svoboda** ([mrvoboda2@unl.edu](mailto:mrvoboda2@unl.edu)) is a climatologist by training and has been with the National Drought Mitigation Center at the University of Nebraska-Lincoln since its formation in 1995 and serving as director of the NDMC since 2016. He co-founded the weekly U.S. Drought Monitor and authored the map for 17 years. Mark has worked closely with local, state, basin, federal, tribal, and over 65 international organizations and governments on drought monitoring early warning information systems, drought risk management planning and various outreach, training, research and service activities.

**Meredith Muth** ([meredith.f.muth@noaa.gov](mailto:meredith.f.muth@noaa.gov)) is a Regional Drought Information Coordinator for the National Integrated Drought Information System (NIDIS), which is part of the NOAA Climate Program Office. She coordinates the Southeast Drought Early Warning System (DEWS), which is a collaborative federal, regional, state, and local interagency effort to improve drought early warning capacity and build long-term drought resilience throughout the region.

**Michael Gavazzi** ([michael.gavazzi@usda.gov](mailto:michael.gavazzi@usda.gov)) is the coordinator for the USDA SE Climate Hub, as well as a natural resource specialist for the USDA Forest Service Eastern Threat Center. Michael has a master's degree in forestry from Virginia Tech and over 20 years of research experience studying the influence of prescribed fire on fuel loads, and management and climate impacts on forest productivity. His current work focuses on delivering resources to help producers make climate-informed decisions.

**Ryan Boyles** ([rboyles@usgs.gov](mailto:rboyles@usgs.gov)) is the Deputy Director of the Department of Interior Southeast Climate Adaptation Science Center (SE CASC), one of the nine regional centers that form the National and Regional Climate Adaptation Science Center network. He is an applied climatologist focused on using weather and climate science and data to support effective management of natural resources.



# Tennessee Climate Data Summit

## Improving Data Access & Services for Better Decision Making

Wednesday, May 26

1:30/12:30pm

**Local Issues Panel & Sector Breakout Session: An interactive discussion exploring how climate data from the Tennessee Climate Office can best serve and be utilized by various sectors (Pick a Sector to join for discussion!)**

**Non-Profits: Christine Hart** (Christine.Hart@lung.org; Session Co-Lead) joined the American Lung Association in March 2018 where she strategizes, implements and manages initiatives to support the Healthy Air Campaign in Tennessee, North Carolina and Pennsylvania. In her role, Ms. Hart works with health organizations and professionals to highlight the health impacts of outdoor air pollution and advocate for policies that curb climate change and improve air quality. She graduated from the University of Minnesota with degrees in Political Science and Communications Studies and also studied at the Higher Education Consortium for Urban Affairs, where she trained in grassroots organizing for social justice.

**Local Government: Morgan Dickie** (morgan.dickie@nashville.gov; Session Co-Lead) has been an Environmental Health Specialist for the Metro Public Health Department in Nashville, TN since 2018. She manages the quality assurance program for MPH's Ambient Air Monitoring Program, which monitors the Nashville area air quality and National Ambient Air Quality Standards (NAAQS) pollutants. She also helps coordinate the Tennessee Air Quality Flag Program, aimed at spreading awareness for air quality among local communities. She has a degree in Environmental Science from American University, and a background working with non-profit organizations and informal science education institutions.

**State/Federal Government: Jennifer Tribble** (jennifer.tribble@tn.gov), Senior Policy Analyst in the Office of Policy and Sustainable Practices at the Tennessee Department of Environment & Conservation

**Higher Education: Leah Dundon** (leah.a.dundon@vanderbilt.edu), Director of the Vanderbilt Climate Change Initiative at Vanderbilt University

**Agriculture: Connie Bowen** (cbowen@aglaunch.com), Director of Innovation and Investment at AgLaunch

**Private Sector: Candace Listz** (Candace.Listz@Nissan-Usa.com) Manager for Product, Service, and Technical Training and President of the Nissan Green Team at Nissan North America





# Tennessee Climate Data Summit

## Improving Data Access & Services for Better Decision Making

*Wednesday, May 26 (Continued)*

### 2:15/1:15pm **State Climate Offices & Climate Monitoring**

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**Kathie Dello** (kddello@ncsu.edu) is the State Climatologist of North Carolina and the Director of the NC State Climate Office at NC State University. She has a PhD from Oregon State University. Kathie is grateful to serve the 10.5 million citizens of North Carolina.

**Sytske Kimball** (skimball@southalabama.edu) received her Ph.D. in Meteorology from the Pennsylvania State University in 2000. She joined the faculty at the University of South Alabama in 1999 and became department chair in 2014. Dr. Kimball's research interests center around hurricanes, local weather, and weather instrumentation and observing. She started the South Alabama Mesonet in 2006.

**Sean Heuser** (speuser@ncsu.edu) is the ECONet Manager for the State Climate Office of North Carolina. He manages, installs, and maintains a network of research weather stations across North Carolina and handles all ordering and testing of sensors used for the network. Daily activities include monitoring communication, performing quality assurance/quality control (QA/QC) on all data, and data analysis.

**Noah Newman** (noah.newman@colostate.edu) is the education and outreach coordinator for the Community Collaborative Rain, Hail and Snow (<https://www.cocorahs.org/>) network. He works with volunteers of all ages and backgrounds and also leads the CoCoRaHS for Schools effort for teachers to implement the project in their classrooms.



# Tennessee Climate Data Summit

## Improving Data Access & Services for Better Decision Making

*Wednesday, May 26 (Continued)*

3:25/2:25pm

**University Research & Services (UT-K, MTSU, TSU, Vanderbilt, Memphis)**

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**Kelsey Ellis** ([ellis@utk.edu](mailto:ellis@utk.edu)) is an Associate Professor in the Department of Geography at the University of Tennessee. She is a hazards climatologist, specializing in risk and vulnerability analyses of hurricanes, tornadoes, flooding, extreme heat, and other atmospheric hazards.

**Leah A. Dundon** ([leah.a.dundon@vanderbilt.edu](mailto:leah.a.dundon@vanderbilt.edu)) is the Director of the Vanderbilt Climate Change Initiative. She is also a practicing environmental attorney with the law firm of Beveridge & Diamond, P.C., and holds a research appointment in environmental engineering at the Vanderbilt University School of Engineering. Leah is part of a research group at Vanderbilt that focuses on climate change, risk management, and assessing the impacts of extreme weather on infrastructure adaptation.

**Jianwei Li** ([jli2@tnstate.edu](mailto:jli2@tnstate.edu)) is an Associate Professor in the Department of Agricultural and Environmental Sciences at Tennessee State University. His research seeks to understand how climate change factors alter soil microbial processes, and the degree to which these changes feedback to long-term carbon and nutrients cycling in soils and terrestrial ecosystems (e.g., bioenergy cropland). His interdisciplinary research integrates field and laboratory observations as well as modeling approaches to address questions that intersect external disturbances and terrestrial biogeochemical cycles.

**Alisa Hass** ([Alisa.Hass@mtsu.edu](mailto:Alisa.Hass@mtsu.edu)) is an assistant professor in the Department of Geosciences at Middle Tennessee State University. She specializes in applied climatology, biometeorology, and extreme heat.

**Dorian J. Burnette** ([djbrntte@memphis.edu](mailto:djbrntte@memphis.edu)) is an atmospheric scientist in the Department of Earth Sciences at the University of Memphis. After working as a broadcast and severe weather meteorologist for a TV station and private weather company in Wichita, Kansas, Dr. Burnette expanded into homogenization and reconstruction of historical climate records and dendroclimatology during graduate school. He now uses a wide array of datasets to investigate extreme weather and climate events at a variety of time scales and their impacts on society.

**Arleen A. Hill** ([aahill@memphis.edu](mailto:aahill@memphis.edu)) is a hazards geographer in the Department of Earth Sciences at the University of Memphis. Arleen's research focuses on managing/reducing impacts of disruptions to our society and environment associated with environmental hazards and vulnerabilities. She seeks to identify and address root causes of vulnerability and build resilience. Her projects are applied or engaged, multidisciplinary, and intentionally involve practitioners.



# Tennessee Climate Data Summit

## Improving Data Access & Services for Better Decision Making

Wednesday, May 26 (Continued)

3:55/2:55pm

### Regional Tools & Discussion (SE Regional Climate Center & National Weather Service)

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**Chip Konrad** ([cek@email.unc.edu](mailto:cek@email.unc.edu)) is a Professor of Geography at the University of North Carolina and the Director of NOAA's Southeast Regional Climate Center (SERCC), which provides operational climate service programs and expertise in climate science for the southeastern United States. SERCC is an operational climate service center that conducts research on climate in the southeastern United States and translates that research into operational tools for users. His research interests cover a wide range of areas in climatology and meteorology, including heavy precipitation, tornadoes, hurricanes, cold air outbreaks, heat waves and winter weather.

**Sam Shamburger** ([sam.shamburger@noaa.gov](mailto:sam.shamburger@noaa.gov)) is the Lead Meteorologist for the NOAA National Weather Service Weather Forecast Office at Nashville, TN.

**Brandon Wasilewski** ([brandon.wasilewski@noaa.gov](mailto:brandon.wasilewski@noaa.gov)) is a Meteorologist for the NOAA National Weather Service Weather Forecast Office at Morristown, TN and the office's Climate Focal Point.

*We hope you enjoyed the first ever Tennessee Climate Data Summit! Please reach out to the Tennessee Climate Office (TCO) if you have any questions or climate data/services needs.*

**TCO website:** [www.etsu.edu/tn-climate](http://www.etsu.edu/tn-climate) / **TCO email:** [tnclimate@etsu.edu](mailto:tnclimate@etsu.edu)

*We would like to thank the American Association of State Climatologists (AASC) and the NOAA National Centers for Environmental Information (NCEI) for co-sponsoring and co-planning this event. We would also like to thank Matthew Taylor and Kendra Abkowitz Brooks for coordinating the State & Federal Agencies Panel and Morgan Dickie and Christine Hart for coordinating the Local Issues Panel & Sector Breakout Session.*

