

Preliminary Program – Subject to Change

(if you have emailed adjustments and changes haven't been made, please be patient)

Tuesday, June 11

7:30 AM - 3:30 PM Registration

7:30 AM - 8:30 AM Breakfast

8:30 - 9:50 AM Plenary Session

Speakers: Jack Schmidt & Rob Davies

9:50 - 10:10 AM Break

10:10 - 11:25 AM Concurrent Technical Sessions (75 minutes) (Moderator)

Session 1

Groundwater (TBD)

10:10 AM	Understanding the Causes and Impacts of Groundwater Depletion	John Tracy
10:25 AM	Robust Adaptation to Multi-Scale Climate Variability	James Doss-Gollin
10:40 AM	Other-regarding Behavior when Common Pool Resources Have Tipping Points	Alexander Maas
10:55 AM	TBD	
11:10 AM	TBD	

Session 2

Between Science and Policy: Toward closing the gap between scientists and policy-makers in the water-energy-food nexus (TBD)

10:10 AM	Modeling the uptake and spread of technological and institutional innovations in managed storage for a FEW system	Daniel Mueller
10:25 AM	A proposal to evaluate the impact of agricultural practices in the Water-Energy – Food Nexus in Rio de Janeiro, Brazil	Ana Paula Turetta
10:40 AM	Toward Understanding the level of Convergence between Researchers and Stakeholders Perspectives on issues related to Water-Energy-Food (WEF) Challenges: The Case of San Antonio, Texas	Bryce Hannibal
10:55 AM	Produced Water Reuse and Recycling in Oklahoma	David Lampert
11:10 AM	The Blue City: Urban Metabolism and the Energy-Water Nexus	Christopher Chini

Session 3

Extension Education - Adapting to a Changing Audience (Drew Gholson)

10:10 AM	Texas Watershed Steward Program	Michael Kuitu
10:25 AM	The Ups and Downs of Watershed Protection Plan Implementation	Ward Ling
10:40 AM	Successful Watershed Management in the Midwest: Getting to Scale	Rebecca Power
10:55 AM	Oklahoma's perspectives on water issues and implications to water education programs	Kevin Wagner
11:10 AM	Panel Discussion	Panelists

Session 4

Panel Discussion

Connecting Land and Water: Research in the Colorado River Basin (Faith Sternlieb)

10:10 AM	Panelists: Sharon B. Megdal Gretel Follingstad Sam Fernald David Kreamer Ginger Paige	
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Session 5

Hydrologic Processes (TBD)

10:10 AM	Effects of Disturbance on Soil Hydrology in Northern Great Plains Grasslands	Laurent Ahiablame
10:25 AM	Circular buffer strips to conserve water and improve water use efficiency of center pivot irrigated agriculture in the Southern High Plains	Sangu Angadi
10:40 AM	Linking Landscape Hydrologic Processes to Spring Ecosystem Dynamics	Nathan Reaver
10:55 AM	TBD	
11:10 AM	Unimpaired Hydrologic Metric Scaling for California Streams	Karl Christensen (lightning talk)
11:15 AM	Physical processes underlying dramatic structural changes to a mangrove lagoon in the U.S. Virgin Islands: surface and groundwater trends surrounding Hurricane Maria and recurring drought	Allie Durdall (lightning talk)

11:25 AM - 12:45 PM UCOWR Delegate Luncheon | Everyone else Lunch on their own

11:45 AM - 12:45 PM Snowbird Water Tunnel Tour

1:00 - 2:15 PM

Concurrent Technical Sessions (75 minutes) (Moderator)

Session 6		Panel Discussion
Informing the future of water resources programing through integration of the social and natural sciences and enhanced trans-organizational collaboration (Mary Donohue)		
1:00 PM	The USGS Water Resources Research Act Program, integrating university and federal research, outreach, and education	Earl Greene
1:15 PM	The NOAA National Sea Grant College Program and USGS Water Resources Research Act Program - A natural partnership.	Darren Lerner
1:30 PM	Bridging the Water Information Gap: The National Water Extension Program	Karen Bareford
1:45 PM	A trans-disciplinary faculty cluster hire in energy and water sustainability: developing actionable scholarship via collaboration and diversity	Mary Donohue
2:00 PM	Panel Discussion	Panelists
Session 7		Ag Water Conservation (TBD)
1:00 PM	Agricultural water management decisions in ungauged semi-arid watersheds: value of remote sensing integrated hydrologic modeling	Manashi Paul
1:15 PM	Impacts of Variable Irrigation Regimes on Cotton Yield and Fiber Quality	Saleh Taghvaeian
1:30 PM	Scarcity amidst plenty: can farm-level profitable water conservation practices reverse the decline of the Mississippi River Alluvial Aquifer in the Delta?	Nicolas Quintana Ashwell
1:45 PM	Conservation Management Practices in Mid-Southern, USA Corn Production	Dave Spencer
2:00 PM	Increasing Mid-Southern USA Furrow-Irrigation Application Efficiency Through Conservation Production Systems	Corey Bryant
Session 8		Water Quality Monitoring and Assessment (TBD)
1:00 PM	Three Rivers QUEST – Ohio Basin Monitoring	Melissa O'Neal
1:15 PM	Engaging high school students as collaborators in ecological investigation of the Columbia River Estuary: Lessons from a transdisciplinary university-high school partnership	Gretchen Rollwagen-Bollens
1:30 PM	Effect of Surface Coal Mine Reforestation on Soil Water Chemistry	Amir Hass
1:45 PM	Exceedence of Maximum Contaminant Level drinking water standards in Grand Canyon springs and implications for future monitoring	David Kreamer
2:00 PM	Three Rivers QUEST (3RQ) REACH 4Schools STREAMing	Melissa O'Neal
Session 9		Panel Discussion
Sustainable Water Resources for Irrigated Agriculture (John Tracy)		

1:00 PM	Evaluating water scarcity under climate change with a basin scale model	Alex Mayer
1:20 PM	Evaluating salinity and other water quality concerns with SWAT	Essayas Ayana
1:40 PM	Panel Discussion with Bill Hargrove, Sam Fernald, Ali Mirchi, Zhuping Sheng, Essayas Ayana, Alex Mayer	
Session 10	CUAHSI Water Data Services Workshop (Liza Brazil)	
1:00 PM	Must be pre-registered to attend	

2:15 - 2:35 PM Break

2:35 - 3:50 PM

Concurrent Technical Sessions (75 minutes) (Moderator)		
Session 11	Tips and Tools for Effective Visualization, Design and Communication of Your Research (Nicole Wilkinson)	
2:35 PM	Participatory workshop presented by Nicole Wilkinson and Walt Gurley	
Session 12	Ag Water Conservation (TBD)	
2:35 PM	Stochastic analysis of cover crops and conservation tillage practices in Louisiana soybean production under risk	Naveen Adusumilli
2:50 PM	A Dry-Year Option for Irrigation in the Texas Lower Rio Grande Valley	Ron Lacewell
3:05 PM	Crop Diversification and Critical Stage Based Irrigation to Sustain the Ogallala Aquifer	Sangu Angadi
3:20 PM	Evaluation of Agricultural Best Management Practices on Groundwater Recharge	Glen O'Neil
3:35 PM	Salton Sea Solutions: Water Markets	Lucia Levers
Session 13	Data Management and Modeling (TBD)	
2:35 PM	The Role of Data Standardization in Support of Water Governance: An Ongoing Data Integration Experiment in the Western U.S.	Sara Larsen
2:50 PM	Using HydroShare for FAIR Data Management: Improving Opportunities for Data Reuse and the Reproducibility of Research Results	Jeffery Horsburgh
3:05 PM	Effects of point and non-point sources on water quality short-term assessment at the Kanawha river, West Virginia	Fernando Rojano
3:20 PM	TBD	
3:35 PM	Hydrodynamic and Sediment Transport Modeling of a Large, Shallow Lake in the Semi-Arid West	Nicholas von Stackelberg
Session 14	Human induced planetary change - the broader view of climate change adaptation and its implications for water resources management I (TBD)	
2:35 PM	Advances in Cyberinfrastructure for Hydrologic and Environmental Science: HydroShare for Data Sharing + Tethys Platform for Web Applications	Dan Ames
2:50 PM	Adapting to Extreme Hydrologic Events in the Bear River Basin	Connely Baldwin
3:05 PM	Water Management and Policy Innovations in a Changing Climate: Integration of Resource, Hazard, and Stewardship Considerations	Shaleen Jain
3:20 PM	Water Futures - Planning and Management considering the relative roles of Technological, Social and Climate Change	Upmanu Lall
3:35 PM	Decision Framework for Infrastructure Sequencing (DFIS): A holistic approach for regional water supply planning	Tirusew Asefa
Session 15	CUAHSI Water Data Services Workshop Continued (Liza Brazil)	
2:35 PM	Must be pre-registered to attend	

3:50 - 4:10 PM Break

4:10 - 5:10 PM

Concurrent Technical Sessions (60 minutes) (Moderator)		
Session 16	Panel Discussion	
Stakeholder engagement in answering to water quality and quantity problems (TBD)		

4:10 PM	Panelists: Chittaranjan Ray Clinton Williams Schad Nelson	
Session 17	Water resource development and environmental quality in developing communities (TBD)	
4:10 PM	Technical, economic, and social viability of low-cost biochar for agricultural stormwater treatment	Nathan Howell
4:25 PM	Water Resource Development - Lessons Learned from the Kansas Ogallala Aquifer	Bill Golden
4:40 PM	Stakeholder Perceptions of the Importance of Groundwater for Sustaining Communities	Bridget Guerrero
4:55 PM	Hydrophilanthropy Gone Wrong: How Well-Meaning Scientists Can Make the Situation Worse	David Kreamer
Session 18	Bacteria sources, fate, and transport in aquatic systems (TBD)	
4:10 PM	Evaluating sources and quantifying differences in soil E. coli occurrence in minimally impacted catchments	Lucas Gregory
4:25 PM	Identification of Factors Affecting Fecal Pollution in Beaver Lake Reservoir	Kristen Gibson
4:40 PM	Streambed sediment and E. coli: Variability, attachment, and the impact of riparian management	Rachel McDaniel
4:55 PM	Microbial Community Dynamics in a Karst Aquifer System and Proximal Surface Stream in Northwest Arkansas	Kristen Gibson
Session 19	Human induced planetary change - the broader view of climate change adaptation and its implications for water resources management II (TBD)	
4:10 PM	Rainwater harvesting in Mexico City: who, where, how much?	Paulina Concha Larrauri
4:25 PM	Implications of climate variability and change for Water Resources Management across the conterminous US	Laureline Josset
4:40 PM	Long Term Climate Change Impacts on Arid Groundwater Basins - Environmental Issues related to Aquifer Flow Capacity	Barry Hibbs
4:55 PM	Evapotranspiration Adjustment Factor (ETAF) Study	Janet Hartin

5:30 - 7:30 PM Welcome Reception & Poster Session

Wednesday, June 12

7:30 AM - 3:30 PM Registration

7:30 AM - 8:30 AM Breakfast Open Roundtable Discussions

8:30 - 9:20 AM Plenary Session

Speaker: Dr. Jackson Webster - Warren Hall Medal Recipient

9:20 - 9:40 AM Break

9:40 - 10:40 AM Concurrent Technical Sessions (60 minutes) (Moderator)

Session 20	Introducing & Exploring SMERGE: An Improved Historical U.S. Soil-Moisture Product (Dannele Peck)	
9:40 AM	Introducing SMERGE and Accessing its Data	Dannele Peck
9:55 AM	Clarifying Questions about SMERGE? (Q&A with Audience)	Dannele Peck and Ken Tobin
10:05 AM	Using SMERGE to Understand Pre-Storm Soil Moisture's Effect on Post-Storm Streamflow	Ken Tobin
10:15 AM	Applying SMERGE to Agricultural Drought-Risk Research	Julian Reyes
10:25 AM	How Can SMERGE be Helpful in Your Research? (Participatory Activity)	Dannele Peck

Session 21		Water Issues in the Columbia River Basin I (TBD)	
9:40 AM	INFEWS Uncertainties to Solutions: Alternative Futures to address agricultural runoff for Magic Valley, Idaho		Daniel Cronan
9:55 AM	A Socio-Hydrologic Vulnerability Index and Hotspot Map for the Columbia River Basin		Paris Edwards
10:10 AM	Understanding Drought Impacts on Agricultural Water Use in the Walla Walla River Basin		Rajendra Khanal
10:25 AM	Comparative minimum instream flows across states and provinces in the Columbia River basin: Resilience in the face of climate change		Adam Wicks-Arshack
Session 22		Wastewater Treatment - Innovative Methods and Funding (TBD)	
9:40 AM	Assessment and Characterization of Hybrid Mesoporous Material MCM with Titanium Dioxide for Water Treatment		Jiajun Xu
9:55 AM	Application and Quick Removal of Powdered Activated Carbon by A Cloth Media Filtration System: A Feasibility Study		Hafiz Ahmad
10:10 AM	Biobeads as substrate to capture and reuse of nutrients from agriculture-runoff		Srinivas Janaswamy
10:25 AM	CWSRF loans - do they work?		Brian Rahm
Session 23		Climate Change Impacts (TBD)	
9:40 AM	Observed changes in Upper Rio Grande snowpack water storage and snowmelt timing: 1980 to 2018		Emile Elias
9:55 AM	Determining the responses of mountainous watersheds for water supply under future climate change scenarios		Mohammad Hasan
10:10 AM	A Water Quality and Climate Change Impact Modeling on Small Scale watershed Based on Limited Climate Data Availability		Richard C. Peralta
10:25 AM	Water Quality Simulations over the Jordan River through the Water Quality Assessment Simulation Program (WASP)		Juhn-Yuan Su
10:40 AM	Evidence-based decision making in a post-truth world		Christopher Scott (lightning talk)

10:40 AM - 11:00 AM Break

11:00 AM - 12:00 PM

Concurrent Technical Sessions (60 minutes) (Moderator)			
Session 24		Water Research and Training: Diversity and Interdisciplinary Efforts (TBD)	
11:00 AM	NIFA's IBCE Kicks Around Some New Twists for Programming in Water		James Dobrowolski
11:15 AM	Managing interdisciplinary teams: Lessons learned from coupled natural and human systems modeling in lake catchments		Kelly Cobourn
11:30 AM	Diversity, Equity, and Inclusion Efforts that Engage U.S. Virgin Islanders in the Marine Sciences: The Supporting Emerging Aquatic Scientists (SEAS) Your Tomorrow Program at the University of the Virgin Islands		Kristin Grimes
11:45 AM	Intersections of Gender, Agriculture, Water and Renewable Energy in the U.S. Southwest		Stephanie Buechler
Session 25		Water Issues in the Columbia River Basin II (TBD)	
11:00 AM	Water Supply and Demand Forecast for the Columbia River Basin		Jonathon Yoder
11:15 AM	Water Management for Hydroelectric Power Production in the Columbia River Basin		Ashley Mills
11:30 AM	Technology for trade: a conceptual framework to improve water use for agriculture and beyond.		Kirti Rajagopalan
11:45 AM	Modeling reservoir operators as autonomous agents provides opportunities to elicit how discretion is exercised in balancing competing objectives		Alejandro Flores
Session 26		Panel Discussion	
Illinois Stakeholder Implementation of the Nutrient Loss Reduction Strategy			

(Julie Armstrong)		
11:00 AM	Illinois Farmer Implementation of the Nutrient Loss Reduction Strategy	Lauren Lurkins
11:15 AM	POTW Efforts and Collaborations on the Illinois Nutrient Loss Reduction Strategy	Albert Cox
11:30 AM	Environmental Community Activity to Support and Implement the Illinois Nutrient Loss Reduction Strategy	Cindy Skrukud
11:45 AM	Panel Discussion	Panelists
Session 27	In-stream Flows	
11:00 AM	Promoting instream flows in western states	Belize Lane
11:15 AM	A modular integrated modeling framework for ecohydraulic analysis	Fengwei Hung
11:30 AM	Characterizing Streamflow and Temperature Patterns on the Blacksmith Fork River to Determine Impacts of Summer Dewatering	Madison Alger
11:45 AM	Climate impacts on drought in the Ganges Delta, Bangladesh	Sonia Murshed

12:00 PM - 1:50 PM Awards Luncheon

2:00 - 3:15 PM

Concurrent Technical Sessions (75 minutes) (Moderator)		
Session 28	Panel Discussion	
	How to have a successful grant proposal: Insight from Syntheses of the USDA-NIFA Water and Climate Portfolios (Linda Prokopy)	
2:00 PM	Panelists: Jim Drobowski Mike O'Neill Linda Prokopy	
Session 29	Urban Water Conservation and Water Security (TBD)	
2:00 PM	Urban Response to Prolonged Drought in the Las Vegas Region	Kent Sovocool
2:15 PM	Getting to Know Your Audience: A Performance-Based Approach to Residential Outdoor Water Conservation	Alan Lewis
2:30 PM	Evaluating the Sensitivity of Residential Water Demand Estimation to Model Specification and Instrument Choices	Roshan Puri
2:45 PM	Colorado River Drought Contingency Planning and What it Means for Municipal, Tribal, and Agricultural Water Users in Arizona	Sharon Megdal
3:00 PM	US Army Plans for Water Security to Sustain Critical Missions	Elisabeth Jenicek
Session 30	Illinois Stakeholder Implementation of the Nutrient Loss Reduction Strategy (Julie Armstrong)	
2:00 PM	Agricultural best management practices in tile-drained fields of southern Illinois	Gurbir Singh
2:15 PM	Applying Research: Cover Crops in the Field and Policy	Jonathan Coppess
2:30 PM	Impact of subsurface drainage on field-scale hydrology and crop production	Rabin Bhattarai
2:45 PM	Toward a regional phosphorus (re)cycle in the U.S. Midwest	Andrew Margenot
3:00 PM	Cover Crop Impact on Nitrogen Fate and Cash Crop Yield	Shalamar Armstrong
Session 31	Operational satellite-based remote sensing products to support agricultural adaptation to drought (TBD)	
2:00 PM	Satellite data-driven modeling of field scale evapotranspiration in croplands using the MOD16 algorithm framework	Colin Brust
2:15 PM	Weather Fluctuations, Expectation Formation, and Short-run Behavioral Responses to Climate Change	Xinde Ji

2:30 PM	Evaluating the spatial distribution of drought impacts in Montana using a remote sensing-driven hydro-economic model	Marco Maneta
2:45 PM	Achieving Groundwater Sustainability in the San Joaquin Valley: A Hydro-Economic Approach	Josue Medellin-Azuara
3:00 PM	Current State-of-the-Art Satellite Remote Sensing Tools for Agricultural Drought Monitoring	Brian Wardlow

3:15 - 3:35 PM Break

3:35 - 4:50 PM Concurrent Technical Sessions (75 minutes) (Moderator)

Session 32	The USGS Water Resources Research Act National Competitive Grants Program (104G), what have we learned in the last 10 years? (Note: 10 minute presentations)	
3:35 PM	Introduction	Earl Greene
3:40 PM	Using weathering geochemistry to understand sources of stream flow generation in streams traversing mountain-basin transitions in the Upper Missouri Watershed	Stephanie Ewing
3:50 PM	Calibrating NMR logging for estimating hydraulic conductivity in glacial aquifers	Alexander Kendrick
4:00 PM	Recharging near-surface aquifers using low-cost direct push wells: A case study in the Lower Republican River basin, Kansas	Gaisheng Liu
4:10 PM	Application of a Bioaccessibility-Based Method for Pyrethroid Insecticides: A Case Study	Michael Lydy
4:20 PM	Landscape and organic carbon controls of methylmercury in stream ecosystems	Vivien Taylor
4:30 PM	Does the use of a sediment holding time bias laboratory bioassay results	Kara Huff Hartz
Session 33	Water Reuse in Utah: Exploring Opportunities and Risks through Engineering, Extension, and Social Science (TBD)	
3:35 PM	Pathogen Monitoring and Quantitative Microbial Risk Assessment of Secondary Water in Cache Valley, UT	Jennifer Weidhaas
3:50 PM	Monitoring pharmaceuticals and personal care products in secondary water distribution: Risks to human and environmental health	Ryan Dupont
4:05 PM	Water Reuse in Utah - Is it your Water to Reuse?	Niel Allen
4:20 PM	Public Perspectives in Northern Utah on Water Reuse in Secondary Water Systems	Courtney Flint
4:35 PM	Variations in water reuse practices in Utah	Hillary Fishler
Session 34	Ag Water Quality BMPs (TBD)	
3:35 PM	Leveraging Soil Health for Watershed Health	Ann Lewandowski
3:50 PM	Agricultural best management practices to limit nutrient export in southern Illinois	Gurbir Singh
4:05 PM	Alternative Practices to Reduce Nutrient Pollution: A Bio-economic Spatial Model	Lucia Levers
4:20 PM	The role of systems thinking in early adopter conservation behaviors: Implications for middle adopters	Linda Prokopy
4:35 PM	Meta-Review of Barriers and Motivations for Farmers to Adopt Conservation Practices	Linda Prokopy
Session 35	Tools and resources for coping with the impacts of drought and water scarcity in a changing climate (Emile Elias)	
3:35 PM	What is the United States Drought Monitor and how does it Identify Drought	Brian Fuchs
3:50 PM	Drought in New Mexico - challenges and opportunities for characterizing and communicating drought impacts	Dave DuBois
4:05 PM	Using Ecological Site Information to Develop Drought Response Strategies	Joel Brown

4:20 PM	Grass-Cast: a new tool to inform drought management in the West	Dannele Peck
4:35 PM	Assessment of UAV Flight Times for Estimation of Daily High Resolution Evapotranspiration in Complex Agricultural Canopy Environments	Ayman Nassar

5:00 - 6:00 PM Hiking with Professionals | Student Activities Session

5:00 - 5:45 PM JCWRE Editor & Associate Editor's Meeting

5:00 - 6:00 PM Snowbird Water Tunnel Tour

6:00 - ?? PM Happy Hour/Social Networking

Thursday, June 13

7:30 AM - 10:00 AM Registration

7:30 AM - 8:30 AM Breakfast

7:30 AM - 8:30 AM Snowbird Water Tunnel Tour

8:30 - 9:50 AM Plenary Session

Speakers: Amy Vickers & Peter Mayer

9:50 - 10:10 AM Break

10:10 - 11:40 AM Concurrent Technical Sessions (90 minutes) (Moderator)

Session 36

Lightning Talk Session

WERA - Watershed processes and human water systems (Sam Fernald)

10:10 AM	Western WERA - Watershed Processes and Human Water Systems	Sam Fernald
10:15 AM	Resiliency Analysis of Stormwater Drainage System under Climate and Landuse Changes in Jordan River Watershed	Muhammad Imran Chaudhry
10:20 AM	Agriculture as a System for Managed Aquifer Recharge for Drylands by Restoring Hydrologic Connectivity to Floodplains and Aquifers in Watersheds	Connie Maxwell
10:25 AM	California Climate Smart Agriculture	Laurent Ahiablame
10:30 AM	Public Perceptions of Flood Risk and Infrastructure Options	Jamie McEvoy
10:35 AM	Improving the predictability of actual evapotranspiration across different climates and land uses	Fabian Nippgen
10:40 AM	Ecohydrology of Western Juniper	Carlos Ochoa
10:45 AM	Evaluating Policy and Management Instabilities of Hydrol-Social Systems to Rectify Public Health Concerns	Ashley Page
10:50 AM	Use of eco-hydrologic indicators in assessing differences in watershed hydrologic response in Wyoming	Ginger Paige
10:55 AM	Discussion	

Session 37

Panel Discussion

Water-efficient Cities and Schools Ready To Meet Our Water-short Future (Amy Vickers)

10:10 AM	Panelists: Holly R. Holt-Torres , Water Conservation Division Manager, Dallas Environmental Quality & Sustainability, City of Dallas Malini Banerjee , Ph.D., Statistical Analyst, Financial Planning, Dallas Water Utilities Michael P. O'Neill , Ph.D., Associate Dean & Associate Director, UConn Extension, University of Connecticut/Storrs Roger Ebbage , CEM, Adjunct Faculty, Energy and Water Education Programs, Lane Community College (OR)	
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Session 38

Harmful Algal Blooms (Brian Haggard)

10:10 AM	The Evolving Legal Landscape for Nutrient Pollution and Harmful Algal Blooms	Catherine Janasie
10:25 AM	Satellite Remote Sensing of Harmful Algal Blooms in the Southern Great Plains	Abubakarr Mansaray
10:40 AM	Comparison of Harmful Algal Blooms in Large Eastern and Western U.S. Lakes	John Bratton
10:55 AM	MN HAB Group: responding to proliferating blue-green algae in Minnesota lakes	Shahram Missaghi
11:10 AM	Connecting Extension and Water Resources Research Institutes to Advance Harmful Algal Bloom Research and Outreach	Chad Cook
11:25 AM	Occurrence of microcystin (or lack thereof) across a nutrient gradient in Ozark streams	Brian Haggard
Session 39	Predicting, monitoring, and responding to drought (Caitriana Steele)	
10:10 AM	Drought insights from retrospective analyses of federal crop insurance payments and causes of loss	Julian Reyes
10:25 AM	TBD	
10:40 AM	TBD	
10:55 AM	LandPKS: a user-friendly mobile app for reducing drought vulnerability and increasing water use efficiency	Jeffrey Herrick
11:10 AM	Island of resilience: community challenges and responses to the 2018 Colorado Plateau exceptional drought	Emile Elias
11:25 AM	Recent streamflow declines and snow drought in Upper Rio Grande tributary basins	Caitriana Steele

11:40:00 AM Conference Concludes

12:45 - 5:00 PM Post Conference Field Trip