

UtahStateUniversity.

SPRING RUNOFF CONFERENCE

2019

Water Challenges in the West

March 26, 2019

Eccles Conference Center
Utah State University
Logan, Utah

Photo by Wayne Wurtsbaugh

The Spring Runoff Conference, hosted by the USU Water Initiative, is held annually on the campus of Utah State University. The conference provides a forum for interdisciplinary sharing and exchange of ideas on water-related issues in Utah and the Intermountain Region.

Online Agenda can be found at
water.usu.edu/conference/2019

AGENDA Tuesday, March 26

ROOM: ECC 205/207

8:30 am – 8:40 am **Welcoming Remarks**
Dean Kenneth White, USU College of Agriculture and Applied Sciences

Plenary 1 Moderator: Sarah Null, Dept. of Watershed Sciences

ECC 205/207

8:40 am – 9:10 am **An Update on the 2019 Water Year**
Brian McInerney, National Weather Service

9:10 am – 9:40 am **An Update on Water Legislation From the 2019 Utah Legislative Session**
Rep. Tim Hawkes, Utah Legislature

9:40 am – 10:10 am **Harmful Algae Blooms in Utah**
Scott Daly, Utah Division of Water Quality

// MORNING BREAK 10:10 – 10:30

Plenary 2 Moderator: Matt Yost, Dept. of Plant, Soils, and Climate

ECC 205/207

10:30 am – 11:00 am **Water Management in the West—A Federal Perspective**
Brent Esplin, USBR

11:00 am – 11:30 am **Water Challenges in the Lower Colorado River Basin and the Drought Contingency Plan**
Sharon Megdal, University of Arizona

11:30 am – 12:00 pm **Ascending the Data Usability Gap in Mountainous Regions Through Scientist-Stakeholder Co-production**
Alan Rhoades, Lawrence Berkeley National Laboratory

12:00 pm – 1:50 pm **Lunch On Your Own**

Paper Session #1 Moderator: Tianfang Xu, Dept. of Civil and Environmental Engineering, Utah Water Research Lab

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1:50 pm – 2:10 pm **Perceptions of a Wicked Problem: Situation Assessment of Water Quality Issues in the Jordan River Watershed**
Sarah Hinners, Debolina Banerjee

2:10 pm – 2:30 pm **Nutrient Criteria to Protect Utah's Headwater Streams**
Jeff Ostermiller

2:30 pm – 2:50 pm **Interdisciplinary Green Infrastructure Research for Northern Utah: Social, Ecological, and Hydrological Sciences Across Multiple Sites**
Sarah Hinners, Diane Pataki, Rose Smith

// AFTERNOON BREAK 2:50 – 3:10

Paper Session #2 Moderator: Bethany Neilson, Dept. of Civil and Environmental Engineering, Utah Water Research Lab

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3:10 pm – 3:30 pm **The Utah Water Reuse Study: Initial Findings, Implications, and the Landscape of Wastewater Reuse Application**
Hillary Fishler, Courtney Flint

3:30 pm – 3:50 pm **Cache Valley Resident Perspectives on Water Reuse**
Courtney Flint, Kristen Koci

3:50 pm – 4:10 pm **Detection and Quantification of a Variety of Pharmaceuticals and Personal Care Products in Domestic Reclaimed Water Reuse in Northern Utah**
Leila Ahmadi, Kwame Tweneboah Duodu, R. Ryan Dupont, Joan McLean

4:10 pm – 4:30 pm **Stream Centric Methods for Determining Groundwater Contributions in Karst Mountain Watersheds**
Bethany Neilson, Hyrum Tennant, Trinity Stout, Matt Miller, Rachel Gabor, Yusuf Jameel, Mallory Millington, Andrew Gelderoos, Gabe Bowen, Paul Brooks

Poster Session

Logan Golf and Country Club

5:00 pm – 7:00 pm **Poster Session & Networking Social at Logan Golf & Country Club**
Light Appetizers Will Be Served

POSTER SESSION

LOCATION: Logan Golf & Country Club

#	POSTER TITLE	PRIMARY PRESENTER
1	A Comparison of Smart Irrigation Controllers in the Urban Landscape	Shane Evans
2	A Dynamic River Temperature Model for the Colorado River within Grand Canyon	Bryce Mihalevich
3	A Water Cycle for the Anthropocene	Audrey Stacey
4	Aquifers Determine Nutrient Removal Capacity at the Catchment Scale More than Riparian and Hyporheic Zones	Camila Vargas
5	Comparing the Salt Tolerance of Three Landscape Plants Using Near Continuous Gradient Dosing System	J.J. Chen
6	Calcium Carbonate Co-Precipitation with Phosphorus: Developing a Novel Technique for Reconstructing Historic Lake Trophic States	Mark Devey
7	Calculating the Impact of ~65 years of Anthropogenic Activity on the Utah Lake Watershed Using Remote Sensing and Spatial Modeling	Erin Call
8	Carbon and Nutrient Dynamics in Arctic Stream Networks Determined Directly with Catchment-Scale Estimates of Redox Reactions	Ben Abbott
9	Characterizing Streamflow and Temperature Patterns on the Blacksmith Fork River to Prevent Summer Channel Dewatering	Madison Alger
10	Concentration-Discharge Relationships Reveal Trends in Geogenic Contaminant Input into the Upper Provo River, UT	Cameron Cordner
11	Environmental Controls on Didymo Bloom Formation in the Logan River	Lindsay Capito
12	Evapotranspiration Under Climate Change in the Ganges Delta of Bangladesh	Sonia Binte Murshed
13	Feasibility of Multi-Year Forecast for the Colorado River Water Supply: Time Series Modeling	Brian Plucinski
14	Forests and Water Yield: A Synthesis of Recent Disturbance Effects on Streamflow and Snowpack in Western Coniferous Forests	Sara Goeking
15	Heavy Metal Accumulation in Flora at the Great Salt Lake	Sam Sedgwick
16	Impacts of Glacier Meltwater on Water Chemistry and Discharge in Dinwoody Creek, Wind River Range, Wyoming, USA	Natalie Shepherd
17	Leaky Legacies: Multi-Tracer Inference Affordably Predicts Long-Term and Large-Scale Nutrient Retention Capacity	Rebecca Frei
18	Mapping Waterborne Pathogens in Ecuador to Reduce Infection and Elevate Human Quality of Life	Leslie Lange
19	Nitrogen Requirements in Irrigated Small Grains After Alfalfa	Collin Pound
20	Numerical Simulation of Near-Surface Soil Water and Heat Transport Under Varied Irrigation Rate and Water Table Depth	Chihiro Naruke
21	Pathogen Monitoring and Quantitative Microbial Risk Assessment of Secondary Water in Cache Valley, UT	McKinley Olsen
22	Persistent Nitrogen Flux from Tundra Ten Years After Massive Wildfire	Samuel Bratsman
23	Pretreatment of Waste Activated Sludge with Caldicellulosiruptor Bescii Increases Methane Production During Anaerobic Digestion	Anne Bennion
24	Reservoirs as Magnifiers of Climate Change: Effect of Climate-Driven Water Management on Kokanee Salmon (Oncorhynchus Nerka) Habitat and Migrations in Idaho's Island Park Reservoir	Jack McLaren
25	Response of Invertebrate Assemblages to Phragmites Australis Invasion and Native Plant Revegetation in Great Salt Lake Wetlands	Emily Leonard
26	Rock, Paper, Sciss—(I Mean, Vegetation): The Vulnerability of Littoral Structure Loss Under Drought	Jenna Keeton
27	Temporal Stability of Water Chemistry Spatial Patterns Across Temperate Ecoregions	Chelsea Abrahamian
28	The Logan River Observatory: A Lab In Our Own Backyard	Patrick Strong
29	The Response of Utah Lake's Plant Community Structure to Cultural Eutrophication	Leighton King
30	The Sunflower Project: Using Sunflowers To Provide Clean Water To Those Living In Areas Polluted By Uranium Mining Via Partnership With High-School Aged Students	Zak Webber
31	Using Citizen Science to Locate Nutrient Sources and Foster Community Connection in the Utah Lake Watershed	Erin Jones
32	Wildfire and Water Quality: Using Fluorescence Spectroscopy to Predict the Biodegradability of Dissolved Organic Matter	Leika Patch
33	Wildfires and Storm Events: Multiple Stressors Alter Stream Form and Function in Semi-Arid Watersheds	Trevor Crandall

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Utah State University supports a broad community of students and faculty engaged in water education, research and outreach. The USU Water Initiative provides an overarching umbrella for the activities of this community, aimed at fostering interdisciplinary collaboration and collegial sharing of ideas related to water across the departments and colleges of Utah State University. The Spring Runoff Conference provides an opportunity for the sharing of ideas and scholarly debate.

CONFERENCE CHAIR:

Paul Jakus—Department of Applied Economics, Utah State University

COORDINATING COMMITTEE:

Niel Allen, Soren Brothers, Jeff Horsburgh, Scott Jones, Bethany Neilson,
Tammy Rittenour, David Rosenberg, and Matt Yost

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