We Can’t Wait to SEE You at the 2021 Conference

Hannah Riedl, President

Your AWRA officers are excitedly, optimistically planning for our annual meeting in Missoula, MT. We can’t wait to hear the opportunities you uncovered and the adaptations you settled into over the past couple years.

Our pre-conference event Oct. 6th at 10:30 am, a Forum at the Forefront of Research, will settle us into the theme “Opportunities in Adaptation.” Have you ever attended a talk at AWRA and thought, “I wish I knew that was going on!”? This is your opportunity to steer the trajectory of Montana’s water research and adapt research plans to fill gaps. The Water Center’s Dr. Wyatt Cross and DNRC’s Ann Schwend will guide the group through identifying unified big picture challenges and necessary research applications that inform

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We Can’t Wait to SEE You at the 2021 Conference (continued)

policy, decision-making and effective communication.

See what Treasurer Tom has to say about the Oct. 6th field trip on page 3! The annual Hydrophile 5k walk or run will take off from the conference venue at 5:30 pm (the route to be announced in the conference proceedings). Meet up at Imagination Brewing afterwards to share some stories.

Oct. 7th will feature our invited speakers. You’ll hear from the Water Center and this year’s treasurer nominees, receive a legislative update, celebrate a new Water Legend, and enjoy the keynote content. One big opportunity provided by 2020 was the passage of the CSKT Water Compact. Learn more from CSKT’s Seth Makepeace and DNRC’s Kathy Olsen about its implementation, specifically how $1.9 billion dedicated to rehabilitating the Flathead Indian Irrigation Project can help improve beneficial uses in addition to irrigation, and how a novel Unitary Management Ordinance may provide unique opportunities. Of course, we can’t talk about adaptation without talking about climate adaptation. Enter Hydroclimatologist Dr. Nick Silverman and UM’s Dr. Laurie Yung. Both speakers work to build buy-in with landowners and cost-effective improvements in water resources by providing tools for citizens to understand climate impacts and incorporate solutions into their operations, Nick from a hydrologist’s perspective and Laurie from a social scientist’s perspective.

Oct. 8th and Oct. 9th features our professional and student presenters. Be sure to submit your abstract! The deadline is July 16th. Don’t miss out on the social and poster session the evening of Oct. 8th! We’ll honor our friend Tom Henderson by announcing a Henderson awardee here.

Our student and Big Sky Watershed Corp member award ceremony will round out the conference. MT AWRA is proud to award $750 in cash prizes to student and Big Sky Watershed Corp members presenting during a poster or oral session. We’ll announce the 2022 conference location and incoming Treasurer, pass on the AWRA presidential gavel, and send you on your way.

Other Conference Logistics

Nancy Hystad, with AWRA for 18 years(!), will run registration and sling merchandise Wednesday 10-6, Thursday 7-5, and Friday 7-noon.

Registration opens Aug. 6th. If you’re a student or Big Sky Watershed Corp member in need, apply for our NEW student travel funding (thank you, USGS!). Preference will be given to minority students.

Submit treasurer nominations when you register, or email the name to Nancy (Nancy.Hystad@montana.edu). Self-nominations preferred! Due Sept. 15th, 2021.

Have a dedicated colleague that made extraordinary contributions throughout their career? Water Legend nominations are also due by Sept. 15th to Nancy. Find the form at montanaawra.org/conference/water-legends/

Have a colleague that exhibits passion excellence, and vibrancy? Henderson Award nominations are also due by Sept. 15th. Fill out the form at montanaawra.org/conference/the-henderson-award/

We want your photos! Scenic, technical, recreational, or embarrassing—there will be prizes for each category! Send your photos to Brent at BZundel@mt.gov by Sept. 22nd.
**2021 Field Trip: A Dam Good Opportunity**

*Tom Michalek, Treasurer and Field Trip Leader*

Three stops are planned, working our way upstream on the Clark Fork River. Starting at the City of Missoula Wastewater Treatment Facility, we’ll learn about using hybrid poplar trees to reduce nutrient loading to the Clark Fork.

Next, we’ll visit the Rattlesnake Dam and find out about why and how this dam was removed in 2020, what’s happening now, and the next phase of restoration.

And finally, we’ll get a historic perspective and update at Milltown State Park a Superfund and dam removal site.

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**2020 Conference Recap: Scientific Impacts on a Historic Landscape**

*Brent Zundel, Vice President*

Many thanks to those who attended our virtual 2020 conference and to our membership for continuing to advance water resources research and management through turbulent times. The past pandemic year brought many challenges and opportunities, and it is fitting that for such a year, our conference was streamed lived from a city with as indomitable a spirit as Butte, America.

As an AWRA community, we gathered virtually to learn about the theme “Scientific Impacts on a Historic Landscape.” To understand scientific impacts on a historic landscape, we first need data. Luke Buckley, Associate Professor at Montana Tech and Data Scientist for the Montana Bureau of Mines and Geology (MBMG), kicked off the 2020 annual meeting with a training workshop about using the Groundwater Information Center (GWIC) database. Hannah Riedl, Water Quality Specialist at the Department of Environmental Quality (DEQ), then shared how to access surface water data. To round out the first day, Melissa Schaar, hydroscience manager for the Department of Natural Resources and Conservation (DNRC), led a panel discussion about workforce development for university students. Panelists included David Donohue, Senior Hydrogeologist at HydroSolutions; Madeline Gotkowitz, Research Division Chief at MBMG; Nate Korb, Freshwater Program Director for the Natural Conservancy; Laura Rennick, Deputy Administrator for the Water Resources Division at DNRC; and Joanna Thamke, Hydrologist at the U.S. Geological Survey (USGS).

We continued the Hydrophile tradition, with members in Butte, Helena, Bozeman, and Missoula meeting up for socially distanced hikes.

The theme of the conference shined during the plenary presentations. Julia Crain, special projects planner for Butte-Silver Bow City County (BSB), shared how historic mining in Butte influenced its urban pattern and created the challenges of today.

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**2021 Summer Extras**

*Pint nights*

- Monday June 28th, 4 – 8 p.m. MAP Brewing in Bozeman
- Tuesday June 29th, 4 – 8 p.m. The Gold Bar in Helena
- Sunday, August 22nd, 2 – 8 p.m. Bozeman Brewing

Check it out! Past president Melissa Schaar represented Montana in Colorado AWRA’s 2021 Multi-State Panel: Water Planning Challenges in the West: youtu.be/S60XxaRekRM

Want to donate to MT AWRA’s NEW student travel fund? Contact Tom.Michalek@respec.com

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2020 Conference Recap: Scientific Impacts on a Historic Landscape (continued)

Nick Tucci, senior geochemist with Haley & Aldrich, spoke about how mining impacted Butte’s aquifers. Dr. Chris Gammons, professor at Montana Tech, explained how management of the acidic Berkeley Pit lake has resulted in chemical changes such as a 30% decrease in total acidity and precipitation of >95% of the dissolved iron and arsenic. Pat Cunneen, senior operations engineer for BSB, unfurled how 150 years of evolution has left Butte with some of the most sophisticated water systems in the country. Joe Griffin, retired hydrogeologist, covered the decades-long history of Butte’s Superfund cleanup and explored the practicable limits of meeting water quality standards. Caleb Uerling, fisheries biologist with Fish, Wildlife, and Parks, and Casey Hackathon, restoration specialist with Trout Unlimited, traced how Silver Bow Creek’s dramatic recovery from being a fishless stream 20 years ago. Josh Bryson, Atlantic Richfield Company, rounded out the plenary giving vision to the final Superfund remedy.

Twenty-six professionals and students shared their work during concurrent technical sessions. Thanks to our sponsors, Montana AWRA presented cash awards to four student presenters, totaling $525. Robert Ray, DEQ, was pronounced this year’s Henderson Awardee.

AWRA Treasurer Jacqueline Knutson headed to Norway to conduct water resources research, so the board welcomed two new officers: Vice-President Brent Zundel, DNRC, and Treasurer Tom Michalek, RESPEC. We hope that Jacqueline will return to teach us everything she learns, and Brent and Tom are grateful to Hannah for her hard work as the sole returning board member.

As we look forward to smiling faces in-person at our fall conference, we are grateful for our AWRA friends and colleagues. Thank you again, attendees, presenters, field trip leaders, volunteers, and especially our sponsors, for contributing to another successful MT AWRA event, even in the face of adversity!

Awards were presented to the following students for their outstanding work:

Oral Presentations – Bachelor Level
- First place – Kori Mooney, University of Montana Western

Oral Presentations – Graduate Level
- First place – Daniel Armstrong (MS), Montana State University
- Second place – Megan Conley (MS), Montana State University
- Third place – Patrick Wurster (PhD), University of Montana