



2017 Newsletter

Each year, the Montana Section of the American Water Resources Association (Montana AWRA) holds their annual meeting to encourage water managers, academics, consultants, students, and others to share experiences, research, and concerns. If you work in water resource management, protection, or are simply interested in “all things water” in Montana, please join us!

Montana AWRA 2017 Conference: *Science, Policy & Communication: The role of science in a changing world*

Aaron Fiaschetti, President

Hello! We are excited to host this year’s annual AWRA conference in the Queen City of the Rockies, Helena, MT on October 18-20, 2017. To register for the conference, please visit <http://www.montanaawra.org/events/registration-page-for-the-2017-annual-montana-awra-conference/>

Current events have inspired this year’s conference theme. The plenary session and workshop will dive into the interplay of science, policy and communication. We hope the theme will stimulate conversations about the role of science in these changing times. If possible a special break-out session will be dedicated to talks related specifically to science and policy. We hope you will find these talks engaging and interesting.

Pre-conference activities start at 10:00 a.m. Wednesday, October 18th, with an optional workshop *Science and Collaboration with the Public* will be provided by Dr. Susan Gilbertz from MSU Billings. The workshop will focus on communicating scientific information to the public through writing, speech and social media.

After the workshop, the optional field trip leaves from the Great Northern Hotel at 1:00 p.m. for the Canyon Ferry Dam area. This year the field trip is organized by AWRA Treasurer Melissa Schaar. More details on the field trip are provided later in the newsletter. We return around 5:00 p.m. with plenty of time for those wanting to participate in the Annual Hydrophile 5K run/walk event. This year the run will be special as we will shuttle runners to Helena’s trail network for a trail run ending at a downtown brewery. The fun run/walk is free and is open to everyone who attends!

The registration desk will be open Wednesday from 9:00 a.m. until 7:00 p.m. and re-opens at 7:30 a.m. Thursday morning. The conference will start with our Plenary Session at 8:00 a.m. Thursday, with opening announcements by Montana AWRA officers and the Water Center.

Two keynote presentations will be given during the plenary. Tom Livers, Director of the Montana Department of Environmental Quality will discuss science and policy in Montana. Dr. Robert Lackey, will present the second keynote *A Practitioner's Guide to Identifying Advocacy Masquerading as Science*. Dr. Lackey is a professor of Fisheries Science at Oregon State University.

We will close out the plenary session with an update on water policy activities and legislation by Jason Mohr. Mr. Mohr is a research analyst with the Montana Legislative Environmental Policy Office and serves as staff to the Water Policy Interim Committee (WPIC).

After the plenary, lunch will be provided as part of your registration fees. At 1:00 pm, we will begin our technical break-out sessions. The poster session and social will start at 5 pm. As usual, the social will have local craft beer, wine, and hors d'oeuvres for everyone to enjoy while looking over the posters.

The annual banquet (ticket purchase required for all banquet-goers \$32) begins at 7 PM and features the induction of a new AWRA Water Legend.

Friday technical sessions start at 8:00 a.m. and run until noon. We will conclude the conference with a brief closing plenary which will include final remarks, notice of where the 2018 AWRA Conference will be held, the student presentation and poster awards, the announcement of the incoming AWRA Treasurer, and the passing of the AWRA gavel to the next President.

2017 Field Trip: *Canyon Ferry - Present, Past and Future*

Melissa Schaar, Treasurer and Field Trip Leader

The 2017 pre-conference field trip will take place on October 18th. The bus will load outside the Great Northern Hotel, on the Front Street (east) side of the hotel, doors near the conference rooms, leaving at 1:00 pm and returning at 5:00 pm. This year's field trip takes us to Canyon Ferry Dam focusing on the history, a tour inside the Dam, and discussions on current management, future predictions, and aquatic invasive species.

Stop 1. The first stop is Upper Prickly Pear Creek. Jennifer Mcbroom of the Lake Helena Watershed Group will discuss the re-watering and restoration projects on Prickly Pear Creek. The flow restoration project began in 2008 to keep the creek flowing during the summer months. Water from Bureau of Reclamation is transported through the Helena Valley Irrigation District to Prickly Pear Creek. This benefits junior water users, aquatic life, and the overall health of the creek. Also discussed will be a 2011 Prickly Pear Creek joint restoration project between private landowner (Elliott) and Montana Fish Wildlife and Parks. The purpose was to restore channel functionality and address water quality and quantity concerns.

Stop 2: The second stop is Shannon Boat Launch with an overlook of Canyon Ferry and Cemetery Island. Ellen Baumler, from the Montana Historical Society, will lead the group with a unique historical perspective of Canyon Ferry, including the social and economic climate when the Dam was originally constructed and the village that remains entombed under Canyon Ferry Lake.

Stop 3: The third stop is below the Dam at the Riverside Group Use Area located along the Missouri River with a southern view of Dam workings. Thomas Woolf, the Montana, Fish Wildlife, and Parks Aquatic Invasive Species Bureau Chief will be leading a discussion on invasive species.

Stop 4: The Fourth stop is the Bureau of Recreation's (BOR) Canyon Ferry Dam entrance where BOR representatives will lead field trip participants through the inner workings of Canyon Ferry Dam. There will be some discussion on current, past and future management.

<https://goo.gl/maps/DuaAGNzUKZu>

2017 Photo Contest

Emilie Erich Hoffman, Vice-President

Once again, it is the time of year where we ask you for your latest and greatest water resources photos! We are looking for any and all photos related to Montana's water resources and water resource professionals. These can be scenic photos, technical photos, recreational photos, or humorous and embarrassing photos! There will be prizes for the winners of each photo category. **Please send your latest and greatest water resources photos to Emilie Erich Hoffman at eerichhoffman@mt.gov. If possible, please submit photos by September 30th, although late entries may be accepted!**

Revisiting the 2016 MT AWRA Conference

Emilie Erich Hoffman, Vice-President

We convened for the 32nd annual conference at Fairmont Hot Springs Resort, October 12-14, 2016. Our theme was "Water Quality and Quantity in a Changing Climate." Over 200 students, professional, and academics participated.

Peter McCarthy of USGS led a well-attended pre-field trip training on the latest version of StreamStats. The StreamStats training was entitled *Montana StreamStats: A method for retrieving basin and streamflow characteristics at gaged and ungaged sites in Montana and a review of the recent studies by USGS to characterize streamflows in Montana.*

After lunch, we headed out on an excellent field trip to Warm Springs Ponds Operable Unit (WSPOU) and Washoe Park Trout Hatchery. The first part of the field trip, led by Dr. Chis Gammons of Montana Tech and featuring Brian Bartowiak of DEQ, examined the hydrogeology and chemistry of the Warm Springs settling ponds. An overview of the WSPOU described the history of the ponds and how they are currently being used to improve the quality of the water in Silver Bow Creek. Discussion also covered the lime

treatment used here, how ground and surface water flow through the system, water loss due to evaporation, seasonal changes in limnology, seasonal release of arsenic from the ponds, and how different closure scenarios for the WSPOU could influence water quality of the Upper Clark Fork River.

The second part of the field trip was a tour of the Washoe Park Trout Hatchery in Anaconda. This hatchery was Montana's first state-run hatchery, built in 1907. The hatchery produces over one million eggs per year and currently manages the state's only westslope cutthroat broodstock. Historically, the hatchery has raised several species, including Arctic grayling, westslope cutthroat trout, rainbow trout, brook trout, golden trout, lake trout, and brown trout.



2016 Field Trip – Warm Springs Ponds (WSPOU)



2016 Field Trip – Washoe Park Trout Hatchery

After the field trip the Annual Hydrophile 5K run/walk rounded out the evening. Participants enjoyed the evening event. Thanks, Aaron, for handing out refreshments.

Attendees gathered at Fairmont on Thursday and Friday to take in excellent presentations and posters. A plenary session kicked off Thursday morning with three keynote addresses and a legislative update. National AWRA 2016 President, Martha Narvaez addressed Montana AWRA membership with news from National, and an initiative to get more involvement from members and state chapters. Dr. Shemin Ge, the 2016 Birdsall-Dreiss distinguished lecturer, gave a talk about Groundwater Dynamics in Headwater Regions under a Changing Climate. Dr. Ge is Professor of Hydrogeology (Department of Geological Sciences) at the University of Colorado-Boulder.

Dr. Kelsey Jencso and Dr. Nick Silverman of the University of Montana presented 'Building Montana Water Resource Resiliency through Information Gathering and Communication at Multiple Space and Time Scales'. Dr. Jencso is Assistant Professor of Watershed Hydrology and Dr. Silverman is a researcher at the Montana Climate Office. They spoke about how the Montana Climate Office is working to provide climate and water data that can be used by all Montana stakeholders. The plenary session concluded with an update in water policy activities and legislation by Helen Thigpen. Helen is a senior staff attorney with the Legislative Services Division. She is legal Counsel for the Environmental Quality Council and the Water Policy Interim Committee

(WPIC). WPIC's final meeting was held days before the AWRA conference, so information was fresh and relevant.

Concurrent sessions on the afternoon of the 13th and the morning of the 14th covered special topic water quality and quantity in a changing climate, surface water, isotopes, evaporation, forestry, and water management, groundwater-surface water interaction, modeling, microbiology, site characterization, and microbiology and water quality. The conference concluded on Friday with the MT AWRA elections and student award presentations. Melissa Schaar, a Water Quality Standards Specialist with the Montana Department of Environmental Quality, was elected the new Treasurer of MT AWRA. She joined Vice President Emilie Erich Hoffman and President Aaron Fiaschetti.

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

Oral Presentations

First Place: Katie Fogg, Montana State University, *When and How Dynamic Hyporheic Temperature Mosaics Influence Channel Temperature Regimes*

Second Place:

Katherine Davis, Montana State University, *Identifying the source, pathways, and rates of enhanced microbial mediated methane production in the Powder River Basin*

Third Place:

Zachary Hoylman, University of Montana, *Landscape Heterogeneity Modulate Forest Sensitivity to Climate*

Poster Presentations

First Place: Christine Brissette, University of Montana, *Science to inform restoration: Effects of channel reconstruction on hydraulic exchange and baseflow generation*

Second Place: Renee Schmidt, Montana Tech, *Natural Amelioration and Increase of Arsenic in Flooded Underground Mines*

Third Place: Meryl Storb, Montana State University, *Understanding human Influence on a stream network through analysis of diel and seasonal patterns of metabolic regimes in stream water*

Thank you to all the attendees, presenters, field trip leaders, speakers, sponsors, and volunteers who helped make the 2016 Montana Section American Water Resources Association conference a huge success.

Montana AWRA 2017 Treasurer Nominations

Time for nominating our next treasurer! The elected treasurer serves for one year as Treasurer, one year as Vice-President, and one year as President. Serving as a MT AWRA officer is a great way to get more involved in the community of water professionals in Montana and the U.S. Please note that self-nominations are encouraged. This is a great way to give back to your community of professionals. Other benefits include membership in the National AWRA and paid MT AWRA conference expenses. Nominations can be entered on the conference registration form or emailed to the Montana AWRA Executive Secretary Nancy Hystad at nancy.hystad@exchange.montana.edu.

Montana AWRA membership

Montana AWRA membership is included in conference registration. For those unable to attend the conference, membership dues are \$15 for students and \$35 for professionals. Membership dues support our Montana AWRA, student discounts and scholarships, and communication among water professionals.