Table Number	Conversation Title	Abstract	Host	Position	Organization/Affiliation
Partnerships, Planning, Project Development & Outreach					
1	**The Project Funding Puzzle**	Let's talk about the puzzle of putting together a project or building capacity for your organization! Are you an edge-first kind of person, or do you flip all the pieces over before beginning? Funding, capacity, and technology are vital pieces of the conservation puzzle, but how do you ensure you have all the pieces? The Soil & Water Conservation Districts of Montana (SWCDM) provides a number of tools and opportunities to that help connect conservation districts and other organizations to the resources they need through a variety of cost-share programs, the Conservation Menu, and assistance with building websites. Whether it's finding the right players, seeking the right funding source, enhancing your ability to reach stakeholders across the World Wide Web, or finding opportunities to increase the capacity of your team, come chitchat about common funding gaps and challenges, and brainstorm ways to increase your ability to get projects on the ground.	Stephanie Adams	Director	Soil and Water Conservation District of Montana
2	**Funding for Crucial State Need Projects**	What projects are of critical need in your area? They may be eligible for funding through DNRC's Reclamation and Development Grants Program (RDGP) in a funding category called crucial state need. The RDGP funds projects that develop and ensure the quality of natural resources, like water, soil, vegetation, air, and fish and wildlife, for the benefit of all Montana citizens. Crucial state need projects must be of regional or statewide importance and protect Montana's environment. These projects should prevent and eliminate severe and unacceptable damage to natural resources. The RDGP program also funds mining, oil and gas, and hazardous waste reclamation. Crucial state need projects are a different category and do not need to be linked to reclamation. Funding is available to plan and implement projects. Please join a discussion about funding projects that protect Montana's environment. Participants are encouraged to bring ideas about potential projects and questions about funding.	Heidi Anderson-Folnagy	RDG Program Manager	DNRC
43	**Whiskey's for Drinking and so is Water: Coming Together for Common Good**	Water, natural resources, wildlife and other conservation issues are often controversial, politically charged or otherwise surrounded by passionate opinions and people. Let's talk about how we can do this together with grace, and come to sustainable solutions. Gracious Space is a model of collaboration created by the Center for Ethical Leadership in Seattle, WA that is based on four concepts: Spirit, Setting, Invite the Stranger and Learning in Public. Let's talk about these concepts and how to apply them in your work and life in order to truly be collaborative with the stakeholders in your world.	Rebecca Ramsey	Executive Director	Swan Valley Connections
26	**Swimming through Alphabet Soup: Watershed Coordination in the Sea of Acronyms**	With so many partners interested in protecting and improving watershed health, how do we coordinate all our efforts? What is the value of coordination within and across Montana's watersheds? When working with everyone from local watershed groups and conservation districts, to state and federal agencies, to larger nonprofits and meta-collaboratives, what's the right level of partner coordination? How do we know if and when we've become successful swimmers in the watershed partner alphabet soup? MWCC will foster a lively discussion to inform the Watershed Approach to conservation, which seeks to engage a wide array of partners, local leaders, and resources to support collaborative, locally driven, place-based conservation.	Terri Nichols	Watershed Programs Coordinator	Montana Watershed Coordination Council
19	**Fishing for Dollars**	Are you a grantivore? Do you feel like you're casting out your funding fishing line into the same grant pond as all of the other do-gooders in the room? If your arm is getting tired of casting, join Mike Koopal, founder and executive director of the Whitefish Lake Institute, to explore alternative and creative funding approaches to increase your organization's bottom line. It's time for new lures—you might find a nice shiny one at this table to help you land that big fish.	Mike Koopal	Executive Director	Whitefish Lake Institute
30	**I have an important story to tell: Engaging public action through public awareness and education**	Aldo Leopold's *A Sand County Almanac* and Rachel Carson's *Silent Spring* raised public awareness, inspired a generation of community-engaged leaders, and stimulated public action. But engagement efforts don't necessarily require writing and publishing a book—especially in this age of social media, propaganda-mill memes, and short attention spans. Meaningful, well-constructed, and well-placed articles or media campaigns can raise public awareness, produce a community response, spur creation of public policies and legislation, and result in public and/or private funding. Participants at the table will have opportunities to: (1) share examples of stories, articles, or media that moved them to take action personally; (2) share their current and/or prior education efforts to engage community action and what they've learned works; and (3) provide support and feedback to other participants at the table who also have important stories to tell and are working to maximize the efficacy and impact of those stories.	Hal Schmid	Director	Ma Hope Institute
31	**Farmers and ranchers and EPA and water - Oh, the places we've been!**	I'd like to lead a conversation about cooperation and progress and learning from all angles. If you want to join me and complain about farmers and ranchers, you're welcome to find another table. If you want to join me and complain about the EPA, you're welcome to find another table. That's not to say that we are going to avoid areas that need improvement. I will lead a positive based conversation that focuses on successes and ideas for the future. Bring your success stories.	Jeffrey Tiberi	Retired	EPA, Montana Association of Conservation Districts
11	**Worried about Water? Let's Talk Before We are in Crisis!**	The state water planning process brought to light a number of concerns regarding just how worried we are, and should be, about water shortages during intensive and/or extended droughts. However, it is unclear whether or not water users are willing to plan for shortages in creative ways. Dr. Gilbertz will present some facts from the Yellowstone River Basin and ask the group to discuss strategies for engaging drought planning activities across user groups. The discussion will be useful to residents of any Montana basin.	Susan Gilbertz	Professor of Geography	Montana State University Billings

44	**Integrating Land and Water in Local Planning**	Land use planning and water management are siloed disciplines. Yet, if you ask land use planners, they will say they're not water providers, and thus have no jurisdiction over water. If you ask water providers, they will say they have no land use authority and thus cannot influence planning or zoning. What opportunities exist to integrate land use planning and water management? What do these look like in practice? What barriers exist, and how could these be overcome? This table is for brainstorming and troubleshooting how land use and water management can be more integrated in your community.	Erin Rugland, Zach Sugg	Research Fellows	Babbitt Center for Land and Water Policy
7	**Biomimicry**	Living on a planet, where life is subject to a state of dynamic non-equilibrium, and with a changing climate, humans need new and innovative ways to design water systems that can adapt and change over time. If we want innovation, where can we look for it? Actually, Nature has been designing water systems that fit into Earth's operating conditions for billion of years. What if we embraced this wisdom? Land management and water management are poorly integrated and increasingly complex. Biomimicry provides one way to deal with this complexity. A short introduction to the biomimicry methodology will outline how to apply this emerging science to your project design and a discussion on the challenges and benefits of inviting biologist to the engineer's design table.	Marie Bourgeois	Faculty Associate	Arizona State University
16	**The Art of Recruiting, Training, and Retaining Water Monitoring Volunteers**	Every body of water in Montana should have a devoted volunteer. Volunteers play a key role in monitoring the health of our waterways and impact the success of our water quality and AIS monitoring programs. Their work is essential to establishing a baseline of data if a waterbody comes into trouble. This informed and passionate group of people also play a valuable role in influencing others and affecting larger decisions about science policy. They help connect us to their local waterbody, share stories and perhaps serve up good cup of coffee and a treat! Over lunch, we will discuss best practices in developing, implementing, evaluating, and sustaining citizen science projects for Montana's waters. How do we find these people, train them, ensure consistency and accuracy to generate scientifically valuable data, and retain them? Anyone interested in understanding and improving the growing citizen science field for our Montana water-bodies is welcome!	Cynthia Ingelfinger	Science and Education Coordinator	Whitefish Lake Institute

Data and Research					
5	**Where the River Flows - Lidar Knows**	Elevation depicts the confluence of land and water--or, more simply put, where the river flows. With that in mind, isn't high-resolution elevation data invaluable to almost every water project? Yet, the elevation data currently available for most of Montana is far too course for most water applications. This is why the Montana State Library and partners are leading an effort to make high-resolution elevation data derived from lidar a reality statewide. Join us to learn about lidar, its many uses, where it has been collected in Montana, how to get the data, what type of data is available, and how to help prioritize and fund where to collect lidar next. Or just join us to get a free lidar postcard!	Troy Blandford	GIS Analyst/Water Information System Manager	Montana State Library
6	**Unpacking Inter- and Transdisciplinary Science: What Do They Mean to Water Issues and How Do We Achieve Them?**	More and more, the terms interdisciplinary and transdisciplinary are touted as things that we should be striving for in our work and research. But what does it mean to operate with these concepts in mind, and does it always look like what we had envisioned? Making the data and models on water translate to management of the resource is our goal. Join Madison Boone, Program Manager for the Montana Institute on Ecosystems at Montana State University, for a conversation on the "i" and "t" words and how examples of team science and collaborations between stakeholders and researchers can help us better understand these concepts and put them into practice. An emphasis will be placed on examples related to water research, though like any good interdisciplinary thinker Boone will share examples from the Montana Climate Assessment and other scientific disciplines and encourage table participants to share their own experiences to better inform how we think about the concept of translation of information.	Madison Boone	Program & Communications Manager	Montana Institute on Ecosystems
12	**The Four-Letter Word Water Nerds Can't Resist in Any Good Water Debate: Data**	New Mexico enacted a new law to identify and integrate key water data sets and make them available to all. Scientists and community members came together for a day to engage in real-time water data challenges to address current water issues. Learn more about the water data concerns, needs and wishes identified at this event and how these matters relate to broader issues. Join the conversation to discuss how can water data be used to build resilience.	Emily Geery	Natural Resources Planner/Project Manager	SWCA Environmental Consultants
22	**(Lack of) water travels downstream**	Increased irrigation provides resilience against drought but also increases the pressure on water resources during the summer months, with potential negative impacts on other water users. While the local impacts of extraction are often evident to farmers and ranchers, water use has a spatial component that is often overlooked and can travel far downstream the river network. Counties where irrigated agriculture is expanding may become water scarcity hotspots that can affect the choices available to neighbor counties situated downriver. In this Great Water Conversation we will have an opportunity to discuss topics related to the spatial dimensions of water scarcity in Montana and how location matters when it comes to building resiliency against drought.	Marco Maneta	Associate Professor of Hydrology	University of Montana
29	**Groundwater and Unicorns**	At first glance, groundwater and unicorns may seem unrelated; however, participants will discuss the many commonalities. For instance, both are unseen and if we can't see them, do either really exist? Like unicorns, groundwater is surrounded by myth. One popular myth describes groundwater as an infinite underground river – sounds magical (not unlike a unicorn). Participants are encouraged to bring their knowledge of – and questions about - groundwater and maybe leave with a better understanding of the truth about groundwater (and not unicorns).	Melissa Schaar	Groundwater Hydrologist	DNRC

Habitat, Fisheries and Wildlife					
41	**Where'd the creek go? Intermittent streams in the lower Clark Fork and their effects on fish communities and management**	Some stretches of tributaries to the lower Clark Fork River flow through coarse, permeable glacial deposits that are highly conducive to subsurface flow. This means that sometimes, under low flow conditions, the surface flow completely disappears, leaving a dry streambed. The prevalence of these intermittent streams has shaped fish communities in the region and presents numerous challenges to Avista and our partners in implementing the Clark Fork Settlement Agreement (CFSA) and Native Salmonid Restoration Plan. This discussion will use specific examples from the lower Clark Fork River basin to focus conversation on fisheries-related effects of stream intermittency and how these effects may be exacerbated by climate change. The conversation will also touch on current and potential CFSA projects designed to reduce intermittency or fishery effects thereof.	Eric Oldenburg	Fisheries Biologist	Avista
9	**Where's Your Aspen? - The Use of Beaver Mimicry and Beavers in Riparian Restoration**	The use of beaver mimicry and beavers as effective and relatively inexpensive tools in riparian restoration has received a lot of attention lately. We will look at some recent projects and data for a beavery discussion about the benefits, drawbacks, challenges and limits of beaver mimicry and beavers as methods for riparian and floodplain restoration and the enhancement of stream flows.	Michael Downey	Water Planning Section Supervisor	MT DNRC - Water Resources Division
34	**An investigation of Riparian Zones through the Blackfeet Agricultural Resource Management Plan**	The Blackfeet ARMP examines the current use of land and water resources in the Blackfeet Nation, and applies traditional ways of knowing to ensure sustainable development across multiple levels of the tribal community and ecosystem. This lunch table conversation will focus on riparian zones, and how these dynamic, ecological nexus points are representative of the greater ARMP vision; which embraces traditional lifeways to sustainably manage resources, invest in the economic success of the Blackfeet people, and maintain cultural integrity. Topics will include responsible irrigation for agricultural systems, the co-existence with beavers to promote riparian areas and increase natural water storage, and how the Tribe can utilize these zones to access traditional medicines and plants. Thus, examining not only their ecological and economic value, but the cultural significance, and how this may translate to communities beyond the borders of the Blackfeet Nation.	Michael Vogt	Big Sky Watershed Corps Member	Blackfeet Agricultural Resource Management Plan
32	**Fishing Guides: Lip Rippers or River Stewards?**	The August 2016 closure of 183 miles of the Upper Yellowstone River to all water-based recreation was a wake-up call to the fishing industry and other river users that: 1) business as usual will not suffice, and 2) there is the need to step up as advocates for—and stewards of—the river. In response, a group of fishing and conservation interests created the Guiding for the Future (G4F) program. G4F provides advanced levels of knowledge and skill development for professional fishing guides with the goal of increasing their professionalism and inspiring dedicated stewardship of the aquatic ecosystems of Montana on which their industry depends. In May 2019, 22 professional guides and outfitters became the first G4F-certified cohort. Looking forward G4F is planned to expand the program both in the number of certified guides and outfitters, and its partnerships with other water interests in Montana.	Whitney Tilt	Program Coordinator, Guiding for the Future	Fishing Outfitters of Montana
25	**Riparian Health and Food Sovereignty Through Alternative Energy and Cogeneration**	This table discussion will explore the interconnected relationship between riparian health and alternative energy methods, as well as their effect on food sovereignty, for the Amskapi Piikani People. What role can alternative energy and cogeneration play in protecting riparian health across Blackfeet Country through decreased soil erosion, decreased oil and gas intensity, and increased numbers of indigenous flora and fauna? How might this contribute to increased access to traditional foods and agricultural diversification, and serve as a launching point for holistic management practices?	Evan Melcher	Big Sky Watershed Corps Member	Blackfeet Agricultural Resource Management Plan
37	**Promoting river resiliency with Channel Migration Easements**	Channel Migration Easements are one of many tools that can be utilized to protect a river systems health and riparian corridors. They provide communities protection from flooding by acting as sponges to absorb water during times of flooding. They also provide resiliency for drought conditions by acting as a sponge, storing and holding subsurface water longer and releasing it slower during times of high temperatures, when the river, fish and wildlife need it the most. They also offer landowners who may not want to fight the river's migration with a financial incentive to a river roam across it's floodplain.	Wendy Weaver	Executive Director	Montana Aquatic Resources Services
4	**What's Next for the Montana Beaver Working Group?**	The Montana Beaver Working Group is an informal network of people interested in learning and sharing information about the role of beavers in watershed and riparian health. Come hear about innovative projects to restore natural water storage, and visit with us about priorities for outreach and advocacy.	Sarah Bates	Regional Deputy Director	National Wildlife Federation
23	**Flow Enhancement/Fish Passage/Fish Entrainment in the UCFRB**	The NRDP has been working with our partners on enhancing flows, improving fish passage and decreasing fish entrainment in the Upper Clark Fork River Basin (UCFRB) with the goal to restore the trout fishery of the Clark Fork River and Silver Bow Creek since the early 2000s. NRDP is interested in sharing our experiences as well as hearing from others about their lessons learned.	Doug Martin	Restoration Program Chief	Natural Resouce Damage Program

Water Management & Policy					
13	**Short-Term Water Leasing for Instream Flows: Tall Order or Just the Medium We Need?**	Climate change, flash drought and increased demand are stressing Montana's finite water resources, and future climate models look grim. The current framework for obtaining a long-term (10-year) instream flow change is onerous, expensive and takes too long to provide practical solutions to the problems brought on by a bad snow year. In contrast, short-term (sometimes called "split season") leases, which allow irrigators to harvest an early-season crop, and then shut down irrigation in mid-to-late summer, are effective in delivering additional water instream, and are acceptable to many irrigators, so long as the lease provides compensation for lost production. A reformed and flexible water-leasing policy in Montana could build on this concept, combining hydrologic prediction, pre-qualified water rights and fast water leases to solve tough, water-shortage problems. But is this type of program realistic? Join the Clark Fork Coalition to discuss case studies, provide supportive ideas, or tell us we're crazy.	Andrew Gorder	Legal Director	Clark Fork Coalition
17	**Make my day! Water Enforcement**	Having trouble getting your water? Is your neighbor driving you nuts? Is your ditch a dry hole? Are you so mad you view yourself as a vigilante ? Hold tight there is help. Enforcement is available.	Lezlie Kinne	Water Commissioner	18th Judical Court
10	**Made in Montana - The Treasure State's Next Wild & Scenic Rivers**	Healthy rivers and clean water are critical to Montana's outdoor recreation and agricultural industries, fish and wildlife populations, and the unmatched way of life.The made-in-Montana, Montana Headwaters Legacy Act is new Wild and Scenic River legislation designed to protect Montana's river legacy. The legislation is composed of iconic streams that flow through public lands in the Greater Yellowstone Ecosystem and Smith River System. The streams in those regions are tributaries of the iconic Yellowstone and mighty Missouri Rivers. Legislation includes segments of 17 streams totaling 336 river miles, still less than 0.25% of Montana's 177,000 miles of streams. Learn more about the grassroots process, policy and protections afforded.	Charles Drimal	Waters Conservation Coordinator	Greater Yellowstone Coalition
8	**Could Montana be a pioneer of Good Samaritan legislation?**	Montana's 2,700 miles of water bodies are contaminated by abandoned mines. Funding and willingness of agencies to reclaim those mines has decreased in the last decade. Could Montana be a pioneer of Good Samaritan legislation? Good Samaritan has been debated in congress for years with no progress to provide liability protection for local government, public or NGOs without compromising the protections of the Clean Water Act. The funding for cleanup of legacy mines and opportunities are decreasing, the population growing and recreation is skyrocketing, the need for Good Samaritan action is great. How can Montana pioneer Good Samaritan efforts to restore water quality? Discussion: Who are our Good Samaritans? How can we grow that pool Good Samaritans? Is there room to allow developers to act as Good Samaritans? What funding is out there? What is the real need for mine reclamation and what does it look like? What is success?	Autumn Coleman	Bureau Chief	Montana DNRC
18	**Irrigation Water Management: Pivoting towards the Future**	Irrigators across Montana rely on outdated and damaged infrastructure to deliver the water that fuels their livelihoods. Long-term solutions that get beyond day-to-day maintenance require multi-party collaboration, science-based planning, and innovative design. Learn how farmers in eastern Montana are making changes for a more sustainable future by improving water management, and how this can result in improvements to soil health and water quantity. Aaron Kolb works as a Conservation Specialist with the Yellowstone River Conservation District Council and is providing technical capacity to irrigation districts in the Yellowstone River basin. He will share his experiences and welcome your thoughts on irrigation water management challenges, projects, and solutions.	Aaron Kolb	Conservation Specialist	Yellowstone River Conservation District Council
20	**Who, what, when, where, and how? Planning for the next decade of Montana water policy**	Montana is at the crossroads of water policy. The general statewide water right adjudication is in its 40th year, with no clear end in sight. Yet, there is a growing consensus that the time is now to take a hard look at how we manage water rights in a post-adjudication world. From 2013-2015, the DNRC engaged stakeholders across the state to develop the 2015 Montana State Water Plan. Among the top priorities in that Plan are the completion of the adjudication, the need for water measurement, and data-driven water right administration and enforcement. Join us as we take a closer look at these priorities and brainstorm avenues to set Montana on a path toward modern and efficient water right administration.	Jan Langel	Water Resources Division Administrator	Dept of Natural Resources and Conservation (DNRC)
3	**Stream Gages: Can you manage without them?**	Montana's network of real-time stream gages provides critical intelligence to water managers, water users, forecasters, recreationists and the public. In 2019, the 66th Montana Legislature created the Stream Gage Oversight Workgroup to undertake a comprehensive review of Montana's stream gaging network. Join Paul Azevedo and Bill Milton (invited) to share ideas on the future of stream gaging in Montana. How do you incorporate stream gage intelligence into your decision making? How would you adjust if the network went dark? What actions should State Government take to support, and potentially expand, real-time stream gaging in Montana? This table is for those with a passion for stream gages.	Paul Azevedo	Bureau Chief	DNRC Water Management
21	**Modernizing irrigation operations and infrastructure to meet evolving demands on water**	Irrigation infrastructure occurs along all stream courses on the Flathead Indian Reservation and, with few exceptions, reflects original 100-year old design and construction. The CSKT Water Rights Compact, at the time it becomes effective, will phase in new instream flow and irrigation water allocations. These goals will require a backbone of operational and physical infrastructure. Water to accomplish this will first come from improvements to water operations and secondarily from improvements to irrigation infrastructure. Our conversation will explore this topic and look for participants to share their insights on effective approaches to modernize irrigation networks.	Seth Makepeace	Hydrologist	Confederated Salish and Kootenai Tribes

28	**Peeing in the Wind? Permitting Roadblocks**	For years stream restoration folks were peeing in the wind with misconceptions and faulty design concepts in attempting stream restoration projects. Ideas have evolved and the journey to restore streams to functioning systems has come a long way. In the past, restoring a stream was considered an exercise in repairing eroding banks, often with hard structures. Little thought was given to the importance of deformable banks and the critical functions the flood plain provides. Increasingly projects are delayed by requirements of floodplain permits. A Joint Committee is working to resolve some of these issues. Join Jeff Ryan with his 40 years of experience in resource issues, with 20 years at DEQ permitting many stream projects in Montana, and Traci Sears who has worked as the State National Flood Insurance Program coordinator at DNRC for over 10 years, and share thoughts on where we've been and how the journey should proceed.	Jeff Ryan	Supervisor	Lewis & Clark CD
38	**Approaches to wetland water rights and water needed for restoration projects**	Wetland water rights and water right requirements for wetland and riparian restoration projects have changed and evolved over time. Let's talk about some of that history and contemporary approaches. Hear some interesting methods of quantification. Discuss landscape implications, new opportunities, stumbling blocks, and ecological benefits. Bring your perspective.	Ethan Mace	Hydrologist	Montana DNRC
14	**Cloud Seeding- Is it snake oil? Find Out!**	We need more water so why not make more? The scientific technology of cloud seeding as a form of weather modification is successfully being used in site specific areas throughout the west for increased snow pack, rainfall and hail suppression.Does clouds seeding decrease downwind precipitation? Are there safeguards that limit too much precipitation? Does silver iodide present an environmental hazard across the landscape? How much does it cost and who pays for it. Who owns the water resulting from cloud seeding? Who is liable? Why not in Montana?	Jim Hagenbarth	Water user	Big Hole Watershed Committee
15	**Can a Water Fund help solve your water scarcity issues? Let's discuss.**	Water Funds are created to provide long-term funding tailored to suit the needs and priorities of water users. Water Funds have been established around the world and are supporting local water security priorities in areas including the Rio Grande, Colorado, and the headwaters of the Mississippi. Isn't it time to see if a Water Fund could be a solution to Montana's declining water resources? The Nature Conservancy and the Gallatin River Task Force are collaborating to kick start Montana's first Water Fund in Big Sky. Join us to discuss the possibilities of how a Water Fund could work in your watershed.	Sierra Harris	Freshwater Conservation Project Manager	The Nature Conservancy
Climate Adaptation					
24	**Blackfeet Nation Waterways - Approaching Conservation Through Indigenous Practices**	In a changing climate it is important to address one of our most valuable and vulnerable resources; water. What are the ways to mitigate the effects on our land and economies from events such as large fluctuations in precipitation and flooding? Additionally, what are the ways that we can increase water storage capacity to buffer from these fluctuations? This discussion will be looking at holistic approaches to protect waterways and wetlands using a combination of western technologies and indigenous methodologies currently ongoing in the Blackfeet Nation. Practices such as beaver mimicry, which utilizes natural process to inform modern conservation, will be discussed.	Alice McNamara	Big Sky Watershed Corps Member	Blackfeet Agricultural Resource Management Plan
39	**Addressing Water Issues through Climate Resiliency Planning: The Climate Smart Montana Initiative**	According to the 2017 Montana Climate Assessment, Montana's snowpack has declined since the 1930's and warming temperatures over the next century, especially during spring, are likely to reduce snowpack at mid and low elevations. Further, rising temperatures will likely exacerbate drought when and where it occurs particularly affecting rural water systems. This discussion offers reflection of current and anticipated climate change impacts in communities across Montana with an emphasis on how rural communities can begin to consider and implement climate resiliency efforts, specifically focusing on water availability, demand and adaptation practices. Led by a member of Climate Smart Montana (http://www.msucommunitydevelopment.org/ClimateSmartMontana.html [msucommunitydevelopment.org]), we will provide an overview of this new network as well as specific examples of climate resiliency planning efforts in Bozeman, Whitefish and Missoula with a specific focus on water.	Paul Lachapelle	Professor	Dept. of Political Science, MSU
40	**The Blackfeet Climate Change Adaptation Plan and Natural Restoration Efforts**	In 2018, Blackfeet Nation released a comprehensive climate adaptation plan which works to protect our community's diverse ecosystems from the impacts of a rapidly changing climate. Underlying this plan is the Blackfeet understanding that people and nature are one, and that people can only be healthy if we ensure the health of the environment we depend upon. Blackfeet Nation or Amskapii pikunii have worked hard to preserve our language, customs, traditions and practices throughout the 10,000 years we have called this region home. As such, the Amskapi Pikunii people hold a deep understanding that what happens to the earth happens to us, and that we can best protect ourselves by honoring our traditional principles and values of stewardship. Climate change threatens all we hold sacred, and the impacts of a changing climate are visible everywhere. For example, in recent years Blackfeet Nation has seen a major increase in the frequency of extreme weather events. The Ksik Stakii project is a direct implementation from the climate change adaptation plan.	Termaine Edmo		Blackfeet Nation

35	**From Climate Conundrum to Adaptation Action**	What does it actually mean, and what do you actually do, in climate adaptation planning? There is a growing call to move beyond climate impact assessments to active climate adaptation. We'll talk about general steps in climate adaptation for water and watershed managers, particularly around drought planning. Alisa Wade from the North Central Climate Adaptation Science Center will highlight some water management adaptation case studies relevant to Montana, while the table shares successes and challenges that managers and planners have faced in the process. We will also explore key science and information gaps for Montana natural resource managers seeking to proactively adapt to a changing hydroclimate. Join us if you are interested in discussing: 1) how does your organization think about climate adaptation? 2) what are the primary goals you would like to achieve in adaptation planning? 3) what are your primary challenges in achieving climate adaptation planning?	Alisa Wade	Research Coordinator	North Central Climate Adaptation Science Center

Drinking Water, Wastewater and Water Quality

27	**Discharge Permit Challenges: Bozeman's Story of Compliance, Improvements and an Uncertain Future**	The City of Bozeman Water Reclamation Facility (WRF), completed in 2013 at a cost of $55mln is an 8.5 MGD biological nutrient removal (BNR) facility. The facility has excellent performance, but the city is bracing itself for the next round of permitting, which could possibly include another $100 mln in improvements. The state of the regulations are in a state of flux, complicating future planning efforts for cities across the state. In 2014, after over a decade's worth of scientific study and regulation development, MDEQ issued Circular 12A establishing the in-stream numeric criteria for nutrients in Montana waterways, and Circular 12B defining variance pathways for compliance with those standards. Circular 12A base numeric criteria were very low – beyond the limits of wastewater treatment technology to achieve end-of-pipe – so general and individual variances were included in Circular 12B to provide a compliance tool to make gradual progress towards attaining the base standards. The continually shifting regulations and guidance from MDEQ coupled with the Waterkeeper lawsuit create an uncertain future for nutrient compliance statewide both in terms of timeframe and numeric targets.	Coralynn Revis	Project Manager	HDR Engineering
33	**More than Greywater: Establishing a Monitoring Program for Land Application of Septage**	Millions of gallons of septage are applied to land every year in Montana. DEQ's Solid Waste Section is establishing a monitoring program to evaluate the effectiveness of existing land application regulations. Nationwide, few associated studies have been conducted to date, and development of a monitoring program in Montana is a new initiative for the program. Water quality sampling is proposed for application sites proximate to surface waters. The study will enable us to evaluate transport of bacteria, nutrients, and metals from land applied septage to streams. We will explore existing regulations and consider typical concentrations of constituents of concern found in septage. Help us tailor our monitoring program to ensure high quality data, and learn about the fascinating world of septage!	Andrew Ulven	Environmental Science Specialist	DEQ - Solid Waste Program
36	**Who likes to drink?**	I sure do. If you like drinking, this table is for you. This discussion will focus on everyone's favorite beverage (okay, second favorite) and how it is affected by land use. There is a lot of focus on land use and our surface waters, but what about our drinking water? In what ways does land use affect our drinking water quality? What about the quantity? Does land use only affect it at its source? What should we be concerned about with the rapid growth and development in parts of the state? How can we be strategic with our planning efforts to protect our drinking water? These are some questions we will try to answer. Only participants who like drinking and have an interest in drinking should attend. Note: this table will only be talking about water. Discussions on other beverages will take place after the summit ends for the day.	Erin Wall	Source Water Protection Specialist	Montana Rural Water Systems
42	**If dead animals and sick kids don't lead to pollution reduction, what will?**	Nutrients are a natural, important component of freshwater ecosystems. Like too much of any good thing, too much nutrients can be a pain, especially when it results in toxic algae. As nutrient pollution increases, the growing season lengthens, and climate intensifies, toxic algae blooms are of increasing concern. Since 2017, the Montana State Harmful Algal Bloom (HAB) Program has collected citizen reports of HABs and assisted with deploying monitoring resources. Continued reports of animal death and human illness will lead to broad reductions in nonpoint sources of nutrient pollution - RIGHT?? How can the State HAB Program encourage the public to ask "how can I help fix this?" instead of "when is it safe to swim?" or "just engineer away the problem."	Hannah Riedl	Water Quality Specialist, State Harmful Algal Blooms Program Coordinator	DEQ