2023 Clark Fork Science Forum

Located @ Holiday Inn Downtown

200 South Pattee Street, Missoula, MT 59802

"The State of the Science"

Thursday, April 20th			
8:00 – 8:30	Check-in/Morning Beverages/Social		
8:30 – 8:45	Welcome and Introductions		
8:45 – 9:30	**Keynote: Water Resources Outlook: The past, present and future of climate in the Clark Fork Basin (Kelsey Jencso, Montana Climate Office)**		
9:30 – 9:45	**Break**		
9:45 - 12:15	**Hydrology Session – Moderator, Brian Chaffin**		
	9:45–10:15	Sara Edinberg, MBMG	MBMG Groundwater Investigations and Monitoring in the Clark Fork River Basin
	10:15-10:45	Kathy Chase, USGS	Stream flow, snow, and drought
	10:45-11:15	Karin Boyd, Applied Geomorphology	Geomorphic Connectivity in the Clark Fork River Corridor: Some Challenges and Opportunities
	11:15-11:30	**Break**	
	11:30-12:15	**Hydrology Panel Discussion**	
12:15-1:15	**Lunch (On your own)**		
1:15-3:45	**Biogeochemistry Session – Moderator, Stephanie Ewing**		
	1:15-1:45	Maury Valett, University of Montana	Materials and energetics: Nutrients, algae, and productivity in the Upper Clark Fork River
	1:45-2:15	Travis Schmidt, USGS	Prevalence and bioavailability of metals in the Upper Clark Fork River Basin
	2:15-2:45	Trevor Selch, MT FWP	Organics and emerging contaminants of concern for the Clark Fork Basin
	2:45-3:00	**Break**	
	3:00-3:45	**Biogeochemistry Panel Discussion**	
3:45-4:45	**Student Research Lightning Talks**		
4:45-5:00	**Clark Fork Basin Life Time Achievement Award**		
5:15-7:30	**Poster Presentation and Social**	**Sponsored by DNRC, Clark Fork Coalition and Trout Unlimited**	

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Friday, April 21st			
8:00-8:30	Morning Beverages/Social		
8:30-9:15	**Keynote: Streams of past, present, and future: Social-ecological research opportunities in the Clark Fork River Basin (Brian Chaffin, University of Montana)**		
9:15-11:45	**Aquatic Ecology Session – Moderator, Melissa Schaar**		
	9:15-9:45	Wyatt Cross, Montana State University	Food webs.. .what's the big deal?
	9:45-10:15	Nathan Cook, NRDP	Where are all the fish? Fifty years of Clark Fork River Fisheries Investigations
	10:15-10:45	Ben Colman, University of Montana	Linkages between aquatic and terrestrial food webs in the Upper Clark Fork Basin
	10:45-11:00	**Break**	
	11:00-11:45	**Aquatic Ecology Panel Discussion**	
11:45–12:45	**Proposed and Current Research Lightning Talks**		
12:45-1:00	**Wrap-Up**		

Please see additional pages for Lightning Talk Presenters, Poster Presenters, and List of Attendees.

Student Research Lightning Talk Presenters

Presenter	Title	Email	Affiliation
Madison Boone	Understanding social learning in interdisciplinary environmental research: Case studies of the Montana Consortium for Research on Environmental Water Systems	madison.boone@montana.edu	Montana State University
Bridger Creel	Evaluating metal flux through the riparian food web and the consequences for songbirds	bridger.creel@umontana.edu	University of Montana
Megan Moore	A Dive into Water Resources in the Upper Clark Fork and Judith River Watersheds	mamoore5@gmail.com	University of Montana
Matt Nicols	The influence of nutrient limitation on autotrophic activity along the enrichment gradient of the Upper Clark Fork River	mn169338@umconnect.umt.edu	University of Montana
Jose Sanchez-Ruiz	Long-Term Recovery of Function in the Upper Clark Fork River: Assesing the Effects of Restorarion on Energy Flows to Macroinvertebrate Communities	jas091988@gmail.com	Montana State University
Qipei Shangguan	Partitioning CO2 sources in the Clark Fork River using autonomous sensors	qipei.shangguan@umontana.edu	University of Montana
Nick Wade	Warm Springs Ponds Water Quality	Nicholas.wade1@umwestern.edu	University of Montana Western
Cort Walsh	Restoration on the Upper Clark Fork: a look at stream morphology and geochemistry	cortney.walsh@umwestern.edu	University of Montana Western
Dylan White	Algal Blooms and Colloidal Particles: Using Mesocosms to Investigate how Metals Enter River Food Webs	dylan1.white@umconnect.umt.edu	University of Montana

Proposed and Current Research Lightning Talk Presenters

Presenter	Title	Email	Title	Affiliation
Stephen Carpenedo	Effectiveness of Wetland Restoration to Improve Water Quality	scarpenedo2@mt.gov	Senior Wetland Specialist	Montana DEQ
Sara Eldridge	Using eDNA to detect aquatic insects for ecological monitoring in the upper Clark Fork	seldridge@usgs.com	Microbiologist	US Geological Survey
Andy Fischer	Flow Challenges in the Upper Clark Fork	andy@clarkfork.org	Project Manager	Clark Fork Coalition
Mark Mariano Jr	Monitoring the recovery of waterfowl in the Upper Clark Fork using nesting structures	mtwetlandsandwaterfowl@gmail.com	Restoration Ecologist	Montana Wetlands and Waterfowl
Craig Neesvig	Vermillion River Restoration and Monitoring Project	craig.neesvig@usda.gov	Hydrologist	US Forest Service
Bill Pfeiffer	2023 Fish toxin study in Clark Fork	bill@montanatu.org	Outreach Coordinator	Trout Unlimited
Bailey Tasker	Monitoring the recovery of waterfowl in the Upper Clark Fork using nesting structures	Baileyrosetasker@gmail.com	Waterfowl Migration Ecologist	Rampart Solutions

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Poster Presentations

Presenter	Title	Email	Title	Affiliation
Brian Balmer	Using tree swallows (Tachycineta bicolor) as sentinels for ecosystem health and contaminant exposure throughout Montana	brian_balmer@fws.gov	Environmental Contaminants Specialist	U.S. Fish and Wildlife Service
Elliott Barnhart	Investigation of Hyporheic Microbial Biofilms as Indicators of Heavy Metal Toxicity in the Clark Fork Basin, Montana	epbarnhart@usgs.gov	USGS Research Microbiologist	US Geological Survey
Ashley Bussell	Understanding aquatic-terrestrial linkages of dynamic river ecosystems in the Upper Columbia River Basin	abussell@usgs.gov	Physical Scientist	US Geological Survey
Sydney Driver	Missoula Public Library	sydney@familiesfirstmt.org	Child Enrichment Ambassador	Missoula Public Library
Christopher Ellison	Application of Surrogate Technology to Predict Real-Time Metallic-Contaminant Concentrations in the Clark Fork near Grant-Kohrs Ranch National Historic Site, Montana, Water Years 2019-20.	cellison@usgs.gov	Hydrologist	US Geological Survey
Rafael Feijo de Lima	Spatial discontinuities in riverine restoration: an opportunity for research?	rafael.feijo@mso.umt.edu	Postdoctoral Researcher	University of Montana
Joe Griffin	The results of 30+ years longitudinal water quality and biological monitoring of the five headwaters of the Clark Fork begs the case for more biological monitoring.	jgriffin.redmountain@gmail.com	DEQ Project Manager, Retired	Montana Technological University
Alisa Hashley	Effects of magnetite particle morphology on adsorption of copper ions from aqueous solutions	ahashley@mtech.edu	Graduate Student	Montana Technological University
Andrew Hauer	CREWS Project Overview	andrew.hauer@umontana.edu	Project Manager	University of Montana
Lindsey King	Water Quality Long Term Monitoring Program	lrking@usgs.gov	Hydrologist	US Geological Survey
David Lange	Trace Element Concentrations in Sediment and Invertebrate Tissue in the Upper Clark Fork	dlange@usgs.gov	Hydrologic Technician	US Geological Survey
Teagan Leitzke	Removal and Recovery of Contaminants by Magnetite Adsorption Facilitated by a Continuous Flow Material Recovery System	tleitzke@mtech.edu	Post-Doctoral Researcher	Montana Technological University
Molly Moloney	Montana experimental stream observatory	mmoloney@usgs.gov	Hydrology Intern	US Geological Survey
Gabriella Poupart	Relationships Between Riparian Vegetation and Soil Properties Post-Remediation and Restoration of the Upper Clark Fork River	gpoupart@geumconsulting.com	Restoration Specialist	Geum Environmental Consulting
Qipei Shangguan	Long-term monitoring of inorganic carbon parameters in the Upper Clark Fork River using spatiotemporal surveys and autonomous sensors	qipei.shangguan@umontana.edu	Graduate Student	University of Montana
Dave Stagliano	A 'long-term look' of the Macroinvertebrate Community Monitoring collected by EPA/old DEQ 1986-2020	dstagliano88@gmail.com	Aquatic Ecologist	Montana Biological Survey
Maddie Torrey	Remote Sensing Methods for River Algae Monitoring	madison.torrey@gmail.com	Undergraduate Student, Optical Remote Sensing Labo	Montana State University
Caleb Uerling	Where Have the Brown Trout Gone?	caleb.uerling@mt.gov	Fisheries Biologist	Montana FWP
Grace Wandler	Effects of Nutrient Concentrations on Attached Algae: Clark Fork River Case Study	gracemcannew@gmail.com	High School Student	Hellgate High School
Vicki Watson, Claire Utzman	Long Term Trends in nutrients and attached algae levels in the Clark Fork River	vicki.watson@umontana.edu	Professor Emeritus	University of Montana

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