



SAN JUAN MINING & RECLAMATION CONFERENCE

**10TH
ANNUAL**

ADAPTIVE CAPACITY IN UNCERTAIN TIMES



SEPTEMBER 21-23, 2020

**Presented by:
Mountain Studies Institute
Uncompahgre Watershed Partnership
San Miguel Watershed Coalition
Headwaters Alliance
Beer2Clear
and Solid Solution Geosciences**

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Thank-you to the Colorado Department of Public Health and Environment for the \$5,000 grant from their Nonpoint Source Program.

PARTNERS AND PLANNING COMMITTEE



Click the logos to learn more



Mountain Studies Institute (MSI) is a non-profit, non-advocacy, mountain research and education center established in 2002 in Silverton, Colorado in the heart of the San Juan Mountains. MSI has developed a highly

collaborative, dynamic, and unique approach to serving our region, which has grown to encompass fourteen counties in Southwest Colorado. Our mission is to empower communities, managers, and scientists to innovate solutions through mountain research, education, and practice. This mission has positioned MSI to identify and articulate information needs, facilitate and complete research and restoration initiatives, and most importantly to ensure that pertinent scientific information is made available to decision makers and the general public. It is our vision that through science education, information is not only understood, but used to transform our communities into healthier, more sustainable places to live.



The Uncompahgre Watershed Partnership was founded in 2007 by a coalition of citizens, nonprofits, local and regional governments, and federal and state agencies dedicated to understanding, restoring and protecting land and natural resources within the Upper Uncompahgre Watershed. The UWP was incorporated as a 502(c)3 nonprofit in 2013, to help protect the natural, scenic and economic values of the Upper Uncompahgre River Watershed. The Partnership works to inform and engage all stakeholders and solicits input from diverse interests to ensure collaborative restoration efforts in the watershed. We strive for a healthy river in a thriving community.

Did you know that Colorado is home to over 23,000 abandoned mines? Pollution from these mines is the biggest source of surface water pollution in the state. Beer2Clear® is a groundbreaking approach to resolving these impacts using a passive mitigation treatment method that creates a beneficial re-use market for spent brewery grain (SBG) while restoring the overall health of the watershed in a sustainable and cost-effective way. Beer2Clear® has the potential to stop acid drainage into Colorado's rivers and streams while promoting the sustainable use of brewery waste.



PARTNERS AND PLANNING COMMITTEE



The San Miguel Watershed Coalition was formed in 1998 to enable a collaborative forum for all stakeholders to discuss and influence the future of the watershed. The San Miguel Watershed Coalition's purpose is to give the communities and stakeholders in the watershed a voice to direct the future management of watershed resources. Its mission is to advance the ecological health and promote the economic vitality of the watershed through the collaborative efforts of the entire community. Our ultimate goal is to realize a watershed that is healthy in every respect, while offering a sustainable and quality lifestyle for all who live within it.

Headwaters Alliance (HWA) has deep roots in the Creede community. The brain-child of Guinevere Nelson, long-time director of the Willow Creek Reclamation Committee, HWA was founded in 2016 to support and continue the incredible work accomplished by the Willow Creek Reclamation Committee (WCRC) over the past 22 years. HWA is proud to build upon the legacy of this small group of determined citizens who laid the foundation for community driven mining reclamation work within a community that loves its mining history. The work completed through volunteerism by the WCRC continues to benefit the community and remains an expression of dedicated stewardship. And in turn, Headwaters Alliance honors this stewardship by seeking the pathways and projects that enable us to serve you - the water, mountains and community at the headwaters of the Rio Grande.



Solid Solution Geosciences, LLC is a small firm headquartered in Western Colorado that specializes in water-quality sampling, water treatment, compliance reporting (such as discharge monitoring reports), geochemical modeling, NEPA baseline studies, mine permitting, and water discharge permitting. Contact Briana at briana@solidsolutiongeosciences.com to discuss your compliance and permitting needs.

ADAPTIVE CAPACITY IN UNCERTAIN TIMES



Dear SJMRC Partners and Friends,

Miners and mining communities are no strangers to challenge and changing conditions. The year of 2020 brought with it a series of challenges and opportunities. As a result, the San Juan Mining & Reclamation Conference theme is “Adaptive Capacity in Uncertainty Times” to encourage discussions of how the mining and reclamation community can plan for success in an uncertain world. From global markets to pandemics and climate, change is the only certain constant for the next decade and beyond.

We seek to learn from the experiences and insights of those with approaches to adaptive management and risk assessment that respond to changing conditions and pivot to take advantage of current and future trends. We are interested in discussing trend outlooks, best practices, and solutions from the perspective of adaptation and pivoting to respond to disruptions effectively in dynamic times.

The mining and reclamation industries face special challenges because they are often located in geographic areas with extreme weather, remote locations, and limited infrastructure. Further, national policy and global market dynamics play central roles in moderating or dictating local options for resilience and recovery. Adaptive capacity refers to the ability of a system to adjust to changing conditions, moderate potential damages and risks, take advantage of opportunities, and cope with the consequences. Indeed, adaptive capacity is the interplay between the level of exposure, dynamics of risk, and the potential for mitigation.

Through sharing useful information about these topics, the 10th annual San Juan Mining & Reclamation Conference aims to create a productive forum with helpful takeaways and more innovative projects. We welcome you and hope that you will find many opportunities for sharing and networking.

With Gratitude,

The SJMRC Steering Committee

2020 AGENDA

ALL SESSIONS ARE VIRTUAL UNLESS OTHERWISE NOTED



MONDAY 9/21

4:00-5:15pm

**WELCOME HAPPY HOUR AND KEYNOTE SPEAKER
CHRIS CASKEY**

**+ PLUS, MUSIC, GAMES & NETWORKING LED BY
EMCEE ANTHONY POPONI**



A Mine for a Mine: Chris' talk details -from concept to present day- Delta Brick & Climate Company's efforts to point two problems at each other: Using waste coal mine methane to convert nuisance reservoir sediment into usable materials. This is a story of private enterprise enabled by public-sector innovation. But that will not stop him from poking fun at the permitting process. You'll see cool pictures, interesting materials science, and some atmospheric chemistry. He will discuss the need for meaningful climate action, job creation in greenhouse gas management, and any lessons that are applicable to the wider reclamation field.

TUESDAY 9/22

8:30-8:40am

WELCOME AND INTRODUCTIONS

8:40-9:00am

JULIE PENNER

**Exploring the Next Frontier of Opportunities
for Emerging Technology: How you can get
involved.**



9:00-9:20am

JIM GUSEK

**Using Spent Brewery Grain to Suppress
Acid Rock Drainage from Historic Tailings**



2020 AGENDA

ALL SESSIONS ARE VIRTUAL UNLESS OTHERWISE NOTED



TUESDAY 9/22

9:20-9:30am

SPONSOR HIGHLIGHT

9:30-9:50am

DOUGLAS YAGER

**Helicopter-Borne Electromagnetic Survey
Over the Bonita Peak Superfund Area,
Silverton, Colorado**



9:50-10:00am

BREAK

10:00-10:30am

WHAT IS ADAPTIVE CAPACITY?

An interactive panel featuring Chris Caskey of Delta Brick & Climate, Jim Gusek of Linkan Engineering, Emily Zmak of CDR Associates, and Summer Waters of Red Rocks Community College

10:30-11:00am

OPTIONAL BREAKOUT SESSION AND NETWORKING

1:00-4:00pm

IDARADO BULKHEAD TOUR*

***In-person tour in Telluride, CO led by Devon Horntvedt, Newmont's Director of Colorado Legacy Site Management. Tour details provided to registrants.**



WEDNESDAY 9/22

8:30-8:40am

INTRODUCTIONS

8:40-9:00am

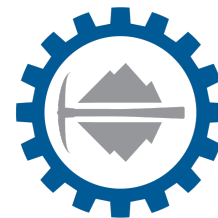
MIKE RAWITCH

**Big Data: Guiding Effective Reclamation and
Updating the Historical Record**



2020 AGENDA

ALL SESSIONS ARE VIRTUAL UNLESS OTHERWISE NOTED



WEDNESDAY 9/23

9:00–9:10am

SPONSOR HIGHLIGHT

9:10–9:30am

WINFIELD G. WRIGHT

**Instantaneous Mass Discharge:
New Phrase to Describe Dissolved
Constituent Mass Loading in Alpine Streams**



9:30–9:40am

BREAK

9:40–10:00am

BILL DAM

**Can Examining San Juan Regional
Background Water Quality Support Local
Compliance Assessments?**



10:00–10:25am

CLEAN WATER ACT

**An interactive panel with Barb Horn of Colorado Parks and
Wildlife, Curtis Cross of Grand Mesa Uncompahgre and
Gunnison National Forests, Scott Garncarz with Colorado Water
Quality Control Division, and Shahid Mahmud with the US
Environmental Protection Agency**

10:30–11:00am

OPTIONAL BREAKOUT SESSION AND NETWORKING

1:00–4:00pm

RED MOUNTAIN TAILINGS TOUR*

***In-person tour on Red Mountain Pass, CO.
Participants will view the RMT-2 tailing site
and explore concepts relating to tailing
remediation in the field. The tour will be led
by former CDPHE Project Manager, Camille
Price. Tour details provided to registrants.**



SPEAKER PROFILES & PRESENTATION DESCRIPTIONS



IN ORDER OF APPEARANCE IN PROGRAM



CHRISTOPHER CASKEY

Christopher Caskey is a scientist and entrepreneur who is passionate about climate, energy, and sustainable business development. He has worked in academia at National Renewable Energy Laboratory and Colorado School of Mines, and in the private sector consulting, at startups, and guiding mountaineering trips. He holds a doctorate in Applied Chemistry and volunteers on the boards of the Western Slope Conservation Center and One Delta County: An Economic Alliance (transitional).

A MINE FOR A MINE

This talk details -from concept to present day- Delta Brick & Climate Company's efforts to point two problems at each other: Using waste coal mine methane to convert nuisance reservoir sediment into usable materials. This is a story of private enterprise enabled by public-sector innovation. But that will not stop us from poking fun at the permitting process. You'll see cool pictures, interesting materials science, and some atmospheric chemistry. We'll discuss the need for meaningful climate action, job creation in greenhouse gas management, and any lessons that are applicable to the wider reclamation field.

JULIE PENNER

Julie is the Entrepreneur in Residence for Telluride Venture Accelerator and Venture Partner with New Frontier Capital. Julie has worked closely with and invested in more than seventy early-stage companies through her previous years working at Techstars Boulder and at Telluride Venture Accelerator. She is a leadership coach, a facilitator, and a COO. She has extensive training in Conscious Leadership and lean startup principles and work. Julie holds a JD from University of Colorado Law School and an MBA from the Leeds School of Business with a focus in entrepreneurship. She completed undergraduate work at Brown University. In her free time, she serves on the board for Studio Arts Boulder where she is also an avid pottery student, and continues to mentor founders and startups through CU and Techstars.



EXPLORING THE NEXT FRONTIER OF OPPORTUNITIES FOR EMERGING TECHNOLOGY: HOW YOU CAN GET INVOLVED.

New technologies disrupt every industry; mining and reclamation is no exception. Join this session to hear more about how Mountain Studies Institute is partnering with Newmont Corporation and others to catalyze the next generation of companies in our industry and learn how YOU can get involved!

SPEAKER PROFILES & PRESENTATION DESCRIPTIONS



JIM GUSEK

Jim is based in Golden, Colorado. He graduated from the Colorado School of Mines in 1973 with a B.Sc. in Mining Engineering. He specializes in the design of passive treatment systems for mine influenced water. Since 1987, his work with acid rock drainage prevention and passive water treatment systems includes over 100 projects throughout the U.S. and internationally.

He is on the steering and mitigation committees of the Acid Drainage Technology Initiative - Metal Mining Sector (ADTI-MMS). He joined Linkan Engineering in February 2019. Linkan was founded in 2012 and focuses exclusively on providing water solutions to industry and communities. From offices in Elko, Nevada, and Golden, Colorado, Linkan works globally for the mining and mineral industry and locally with communities throughout North America. Linkan approaches water management with a holistic perspective. Through effective planning, design, procurement, construction, and operation Linkan provides solutions for water issues by taking into account every aspect of the system from initial mine water management/treatment planning, to operation, and mine closure.

USING SPENT BREWERY GRAIN TO SUPPRESS ACID ROCK DRAINAGE FROM HISTORIC TAILINGS

The pyritic Atlas mill tailings in Ouray County have been impacting nearby Sneffels Creek for about a century. The State of Colorado plans to re-vegetate the tailings to mitigate runoff impacts to the creek. Previous research suggests that spent brewery grain (SBG) can suppress the microbial community that produces acid rock drainage (ARD). The decaying SBG produces humic acids that can suppress the microbiological component of pyrite oxidation and the resulting ARD formation. This presentation will report the most recent results of a kinetic cell test (KCT) program whose goals are to determine the proper ratio of SBG to the Atlas tailings, assess the potential benefits of adding other ARD-inhibiting amendments, and gauge field success of application methods.

20 KCTs were constructed in January 2020 by James Gusek, Tahne Corcutt, and Lee Josselyn at an off-site location in Ridgway, Colorado to facilitate sampling during the winter months. The KCTs were sampled during the COVID-19 pandemic; some planned laboratory testing was delayed. However, preliminary monitoring results were very encouraging: The KCTs that received SBG generated leachates with pHs near or above 8.0 while the two control KCTs produced leachate from 4.5 pH (un-vegetated) to 6.1 pH (vegetated). The SBG-amended KCTs also out-performed other cells that received alternative proven ARD-inhibiting materials and lime.

The Beer2Clear® Initiative represents a groundbreaking approach to mitigating the surface water quality impacts associated with ARD using a passive mitigation treatment method that will create beneficial use of a waste stream. This approach will create a new capital market for SBG while restoring the overall health of impacted watersheds in a sustainable and cost-effective way. Colorado officials are excited about the prospects of this initiative that could utilize local waste products to clean up abandoned mine sites.

SPEAKER PROFILES & PRESENTATION DESCRIPTIONS



DOUGLAS YAGER

Douglas Yager is a geologist with the U.S. Geological Survey, Geology, Geophysics, and Geochemistry Science Center in Denver, Colorado. He has extensive experience working in volcanic and mineralized terrain as part of abandoned mine lands investigations. Much of his 35-year career with the USGS has focused on the San Juan Mountains, Colorado where he has co-lead several field trips and student field courses. Currently, Doug is co-leading a project that is developing a 3D, geological and geophysical model of the San Juan and Silverton caldera complex.

HELICOPTER-BORNE ELECTROMAGNETIC SURVEY OVER THE BONITA PEAK SUPERFUND AREA, SILVERTON, COLORADO

The U.S. Geological Survey in cooperation with the U.S. Forest Service and ASARCO Trust acquired variable time domain electromagnetic data covering the Bonita Peak Mining District Superfund area. Data were acquired between March and May of 2019 by Geotech Ltd. Electromagnetic data image the subsurface at a scale and depth of investigation not possible in prior airborne surveys. Project goals include building a 3-D electromagnetic model of the San Juan and Silverton caldera complex, characterizing the geophysical response of alteration and mineralization, and imaging areas of possible shallow groundwater that could be used to interpret the hydrogeologic plumbing system. Preliminary results from analysis of upper Mineral Creek Basin reveal a depth of investigation greater than 300 m in many areas. Interpretation has made use of ground-based magnetotelluric and hydrologic studies.

Conductivity-depth profiles corresponding to individual flight lines show conductivity differences in lithologies across the entire Mineral Creek Basin. Multiple conductive zones may indicate possible interconnected groundwater, with 100-m-deep, lava-permeable lenses being separated from near surface conductors by resistive terrain. The conductive zones may have formed from weathering of quartz-sericite-pyrite altered rock. Integration of map-view electromagnetic depth slices and a 3-D voxel model are being used to interpret the framework of possible groundwater flow paths. Yager, D.B., Deszcz-Pan, Maria, Anderson, E.D., Martinez, Benerito, Rodriguez, B.D., Runkel, R.L., Hoogenboom, B.E., and Smith, B.D.

EMILY ZMAK - ADAPTIVE CAPACITY PANELIST

Emily Zmak, Water Practice Lead, CDR Associates, brings expertise in navigating conflict-charged social, environmental, and political contexts. Her portfolio includes stakeholder engagement around complex water resources challenges; natural resource management and dispute resolution; water agreement analysis; and community-based conflicts. Prior to CDR, Emily worked for Newmont Mining in corporate social responsibility. She holds an MA in Conflict Resolution from the University of Denver and is a former Fulbright grantee.



SPEAKER PROFILES & PRESENTATION DESCRIPTIONS



SUMMER WATERS - ADAPTIVE CAPACITY PANELIST

Summer Waters has her MS in Civil Engineering from CU Boulder and a BS in Biology from USF. Her work has spanned the United States and Mexico over the last 20 years, with an emphasis on water related issues in the Intermountain West. Since 2017, Summer has directed the Water Quality Management Program at Red Rocks Community College.

MIKE RAWITCH

Mike Rawitch is a geologist and geographer specializing in the implementation of geospatial technologies to optimize environmental problem solving. As Operations Director on Ramboll's Galago team, his focus is on remotely sensed data analysis, collection and visualization applied to mine site investigation and remediation. Galago uses aerial imagery and image analysis to understand site conditions, reduce uncertainty and help efficiently characterize sites for environmental risks. Mike is an Interstate Technology and Regulatory Council (ITRC) team member and is a co-author on the ITRC Chapter for Advanced Site Characterization Tools. He is also a certified Federal Aviation Administration (FAA) Remote Pilot and is a senior Unmanned Aerial System (UAS or drone) operator within the Ramboll's global drone practice group and serves on industry advisory boards at Kansas State University and the University of Kansas for his expertise in UAS.



BIG DATA: GUIDING EFFECTIVE RECLAMATION AND UPDATING THE HISTORICAL RECORD

Maintaining a rich mining history while simultaneously facilitating abandoned mine land reclamation is a challenging task that requires effective utilization of the latest technological advances. During the summer of 2019, Ramboll was tasked with documenting the Silver Lake area to assist in reclamation efforts and provide a detailed record of the historical mining activities as a community resource. In addition to this task, Ramboll also mapped and calculated volumes for two, large waste rock piles in the vicinity of the former Aspen Mine and Amy Tunnel to assist in reclamation efforts.

This large volume of data was processed and displayed as a cohesive story using web-based GIS to share with stakeholders including project consultants, regulators, clients, and the local community. During this presentation, we will discuss the challenges associated with collecting large volumes of data on abandoned mine lands, the methodologies used to characterize these sites, and share the results of the activities conducted during the summer of 2019. In detail, this presentation will discuss the use of small unmanned aerial systems (sUAS or drones), high-precision GPS, cloud-based computing, advanced imagery analyses, and innovative ways of sharing digital data to stakeholders.

SPEAKER PROFILES & PRESENTATION DESCRIPTIONS



WINFIELD G. WRIGHT

Winfield G. Wright, M.S., P.E., C.P.H. (a.k.a Win Wright), is a Professional Engineer, Certified Professional Hydrologist, President of Southwest Hydro-Logic in Durango, Colorado. For more than thirty-eight years, Mr. Wright has conducted studies of complex hydrological and geochemical systems (twenty-two years with the U.S. Geological Survey), and is author of more than sixty papers in the hydrological sciences, covering a wide spectrum from groundwater and soil contamination, acid mine drainage, natural background metals, hydrologic tracer technology, isotope hydrology, and the hydraulics of groundwater flow in fractured rocks. Other expertise includes surface and subsurface hydrogeochemical investigations and site characterization (RCRA, CERCLA), geochemical modeling, groundwater age dating, contaminant fate and transport, water rights, expert witness/expert testimony, NEPA documentation, and Tribal technical representation. Mr. Wright is a registered Professional Engineer in Colorado and a Professional Hydrologist Certified by the American Institute of Hydrology.

INSTANTANEOUS MASS DISCHARGE: NEW PHRASE TO DESCRIBE DISSOLVED CONSTITUENT MASS LOADING IN ALPINE STREAMS

Mass transport of dissolved constituents in streams has been described as “mass loading” or “constituent load.” However, the term mass loading comes from the civil engineering field, and is frequently expressed in pounds per day as a fixed, steady-state design parameter for wastewater treatment plants. The Total Maximum Daily Load (TMDL) program is similarly based on steady-state estimates of mass loading in streams receiving pollutants. In the real world, streamflow discharges are constantly changing, especially in alpine streams where discharge and dissolved constituents fluctuate due to precipitation, snowmelt, evaporation, plant transpiration, freezing, ice dams, ice thawing, mineral dissolution and precipitation, oxidation and reduction, and non-conservative behavior of dissolved constituents. Given the intrinsic variability of streamflow discharge and dissolved constituent mass transport, the steady-state conditions defining TMDL are inappropriate for many stream systems.

A new alternative term is introduced called Instantaneous Mass Discharge (IMD). The use of IMD represents the volume mass rate of change of dissolved constituent that flows through a given cross-section of the stream channel. IMD is determined by multiplying instantaneous streamflow discharge by the momentary, or mean-time, dissolved-constituent concentration; units of the original measurements are preserved (for example, micrograms per second); and IMD is not a fixed or steady-state value. Extrapolation of instantaneous values to pounds per day or tons per year is a gross misrepresentation of the actual data. Instead of TMDL, watershed chemistry should be described using ranges of IMD and modeled statistical correlations between streamflow discharge, concentrations, and constituent instantaneous mass discharge.

SPEAKER PROFILES & PRESENTATION DESCRIPTIONS

BILL DAM

Presenter Bill Dam is a Certified Professional Geologist (CPG) and Project Management Professional (PMP) with 25 years federal and 11 years consulting experience focusing on groundwater quality who launched Conserve-Prosper LLC in 2019 for local to international consulting. Dam developed his presentation with two colleagues. Dr. Tony Ranalli has a PhD in geochemistry



TONY RANALLI

Dr. Tony Ranalli has a PhD in geochemistry and 35 years experience. His work involves reactive transport modeling of uranium and nitrate in groundwater and designing remediation strategies for groundwater contaminated with uranium and nitrate.



COLIN LARRICK

Mr. Colin Larrick is the Water Quality Program Manager for the Ute Mountain Ute Tribe, working to protect the physical, chemical and biological integrity of the Tribe's surface and groundwater in the Colorado Plateau region.



CAN EXAMINING SAN JUAN REGIONAL BACKGROUND WATER QUALITY SUPPORT LOCAL COMPLIANCE ASSESSMENTS?

Dam, Ranalli, and Larrick propose to examine background and baseline water quality to assess impacts from the uranium-vanadium mining and milling industries in San Juan County, Utah. Local and regional water quality assessments are used to determine impacts from sites and set remediation goals. A 1995 USGS study by the lead author in the San Juan Basin of New Mexico is being used to compare degraded water quality at the White Mesa mill. Regional sources of water supply include the D, M, and N aquifers. For the alluvial system, Cottonwood Wash comprises a 143,000 acre watershed that flows across several federal-state-tribal jurisdictions into the San Juan River. We are comparing methods used to establish background and baseline water quality by looking at upgradient wells, intra well comparisons of compliance wells to historical background, and statistical methods. We are seeking to establish additional partnerships and grant funding in order to evaluate existing information, collect new water and sediment samples, and to document our results.

CURTIS CROSS - CLEAN WATER ACT PANELIST

Curtis Cross has been the Engineering and Minerals Staff Officer on the Grand Mesa Uncompahgre and Gunnison National Forests (GMUG) for the last 5 years. Prior to his work on the GMUG, Curtis served on the Six Rivers National Forest in various positions for 14 years. Curtis worked as an environmental engineer for Phelps Dodge Mining Corporation and as a consulting engineer prior to his employment with the Forest Service.



SPEAKER PROFILES & PRESENTATION DESCRIPTIONS



BARB HORN - CLEAN WATER ACT PANELIST

Ms. Horn has worked on water quality issues Colorado Rivers since 1986 as a Water Resource Biologist for the Colorado Parks and Wildlife. She founded the Rivers of Colorado Water Watch Network, which is a volunteer monitoring program which annually monitors over 400 stations on 300 plus rivers in Colorado for chemical, physical and biological parameters. She has served on numerous national, regional, state and local technical and policy groups such as the National Water Quality Monitoring Council, National Advisory Council for Environmental Policy and Technology and the Colorado Nonpoint Source Council. A Colorado native, she claims she reached her maximum potential when at five years old and has been trying to get it back since.



SCOTT GARNCARZ - CLEAN WATER ACT PANELIST

Scott Garncarz has worked for the Water Quality Control Division for over 11 years. His work includes 401 water quality certifications, water quality assessments, and Biological Habitat monitoring and assessments. Scott also has assisted communities in receiving grants State Revolving Fund money for drinking water and wastewater projects.



SHAHID MAHMUD - CLEAN WATER ACT PANELIST

Shahid Mahmud is the acting Interim Director of EPA's new Office of Mountains, Deserts, and Plains and the team leader of EPA's National Mining and Abandoned Mine Lands teams under the Superfund program. He is currently leading Superfund's consultation process for regional work activities at mine sites with potential fluid hazards. He is the lead EPA representative on the multi-federal agency Federal Mining Dialogue and the Abandoned Uranium Mines workgroups. Shahid has over 20 years of policy and technical experience on addressing mining sites, and overall he has more than 30 years of experience in the environmental field.



AND OUR FAVORITE EMCEE: ANTHONY POPONI

Hailing from Crested Butte, Anthony Poponi will be serving as emcee and moderator. His past experience includes watershed management, water treatment and Superfund cleanups. He took a turn in his professional career to pursue being a modern-day court jester and is now without a court due to COVID-19 restrictions. In his role at the SJMRC he will glue together themes which he likes much more than gluing together his fingers during home-improvement projects - and will help us stay connected and laughing during this virtual experience. Find out more about Anthony's latest mishaps and missteps via his Full-Circle Tangents blog at www.anthonypoponi.com.

SPECIAL THANKS TO:

**BASECAMP OURAY
COLORADO BOY BREWERY
RIGS FLY SHOP & GUIDE SERVICE
SKA BREWING
MOUNTAIN LODGE TELLURIDE
YOU KNEW ME WHEN**

FOR YOUR GENEROUS DONATIONS TO THE EVENT!



**SAN JUAN
MINING &
RECLAMATION
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**SEE YOU NEXT YEAR
FOR THE 2021 CONFERENCE:**

**"MERGING OF ARTS, HUMANITIES,
AND MINING"**

IN TELLURIDE, COLORADO