

Supporting Professionals
Who Study, Protect, and Manage
North America's Rivers

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RMS Journal



Amargosa Wild and Scenic River near China Ranch, CA. Photo: Bob Wick

It's Time to Think Bigger

Like the river we serve, our organization is learning to adapt to changes in the landscape. The Amargosa Conservancy started as the Amargosa Land Trust, a truly grassroots scrappy organization working to secure protections for some of this most vital and vibrant wetland habitat in the Mojave Desert. The Amargosa River flows for 186 miles from the mountains near Beatty, NV south into the Mojave Desert before coming to rest in Badwater Basin in the heart of Death Valley National Park. This is harsh basin and range country, marked by vast treeless mountains, stark wide valleys, and scant annual precipitation. But where the Amargosa River flows, life is able to keep its footing. The river runs through the Amargosa Basin like a string of oases which support some of the highest concentrations of

by Mason Voehl

endemic species in North America. In one of the hottest and driest landscapes on Earth, all of these species depend on the stable flow of groundwater to survive and thrive. This is where we work.

We've had some big wins since we got started, including helping designate a spectacular 33.7 mile stretch as the Amargosa Wild and Scenic River in 2009. In the years following, we have strived to restore habitat and mitigate the spread of invasive species such as tamarisk that threaten the exceptional biodiversity present in this river canyon. We have worked with federal agencies and private landowners to create and maintain trails so that visitors can come and experience some world-class wildlife

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Articles are not edited for content and may not reflect the position, endorsement, or mission of RMS. The purpose of this policy is to encourage the free exchange of ideas concerning river management issues in an open forum of communication among the RMS membership. Unless indicated, points of view are solely those of the author.

Executive Director's Eddy



Risa Shimoda, RMS Executive Director

Rebooting, Rediscovering, Redefining

This issue of the RMS Journal shines a light on the work of members and colleagues in the Pacific Chapter and marks the return of Pacific Chapter leadership that has been missed! Kristina Rylands (President), Leigh Karp (Vice President), Larry Freilich (Secretary and past Chapter officer) and Bob Stanley (Event Coordinator) lost no time recruiting authors to assemble the material offered here within weeks of the ballots having been cast. In addition, Kristina and Leigh joined Bob, Dave Payne and Kirstin Heins and invited Christina Boston, Tom O'Keefe, Togan Capozza, Heidi Anderson, Clavey Wendt from O.A.R.S and Momentum Rafting, Dan Shelby, and Patrick Kolledge to host over forty individuals over a long Klamath River weekend. The epic event included three river trips, two land-based tours, presentations by agency and tribal fisheries and management, the outfitting community and those charged with the post-dam restoration. You'll see a full

recount of who we met and what we learned in the Fall 2022 issue, and it may impress you as it did us as the most successful integration of member expertise and partner outreach in recent RMS history, backlit by the largest dam removal we'll experience in our lifetime.

The folks who attended the Klamath River experience reminded us of the connectedness between those who are fortunate enough to spend time working on and enjoying rivers. While attending the Colorado Parks and Wildlife Partners in the Outdoors conference (article on page 20), I encountered and spent a bit of time reminiscing with Jason Robertson, Regional Director Recreation, Lands, Minerals, and Volunteers at U.S. Forest Service; one month later, I found myself chatting with him and a few others in a 'Region 5' virtual breakout session during the National Wilderness Skills Institute. Both events were a seeming lifetime since

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President's Corner

Partnerships are key to the protection and management of rivers, waterways, and public lands

— resources that are given into our hands by the American people. Today, partnerships and collaborative efforts are even more important to protect our nation's waterways as we continue to experience mega droughts and fires in the west that impact expansive watersheds and Outstandingly Remarkable Values (ORV's) that Wild and Scenic River managers are required to protect as part and parcel of the Wild and Scenic Rivers Act.

The complexities and history of the management of western river flows are not known to many who use the resources for recreation and this can be a disservice to the collaborative efforts of conservation districts, the Bureau of Reclamation, and the historical water users — which in the case of the Rio Grande and in part the Rio Chama, leads back to centuries of irrigation diversions by the Pueblo Indians prior to the arrival of the 17th century Spanish settlers, who created a permanent system of diversions and water shares called acequias.

The El Vado Dam was built by the Middle Rio Grande Conservancy District in 1934-1935 and is now managed by the Bureau of Reclamation in partnership with the conservancy district. The Rio Chama water that is stored at El Vado Reservoir is used by district residents to meet the priority needs of the Six Middle Rio Grande Pueblos (including Cochiti, Isleta, Sandia, Santa Ana, San Felipe and Santo Domingo) to provide a minimum flow for threatened and endangered fish and recreational flows during the Rio Chama boating season.

Managers on river systems that are not solely based on snow melt, such as the Rio Chama, are challenged to explain

these complexities to boaters who do not understand why water flows are unpredictable and outside the control or knowledge of river managers. This issue has been amplified in recent years by boaters who have begun to flock to the Rio Chama, in part because there are "guaranteed" minimum recreation flows in the drought-stricken west. "Guaranteed" minimum recreation flows are only guaranteed on the Rio Chama when there is enough stored water to support those flows. Releases that occur outside of the "guaranteed" minimum recreation flows are the result of local rain events or the call for irrigation waters from downstream users. The call for water can occur with little to no warning and can be canceled with no warning if the irrigators receive localized rains to support irrigation.

Boaters unfamiliar with the variations of western waterway management do not generally correlate river flows, especially recreational flows, with the call for water for irrigation. How do we as river managers inform river users of the complexities of western water management based on years or centuries of irrigation practices, senior water rights, and flood control protocols? How do we inform boaters that each watershed is managed differently and that water flows in New Mexico are dependent on the call for irrigation water that all who live in the southwest seek?

In my third year managing the Rio Chama, the one stark observation that I have had is that this dynamic river system has been destabilized by the mega drought and increased demand for water, and yet the resiliency of the river system and the people who rely on the river's life-giving waters is ever present. The call for water from upstream and the payment of water debt downriver in the face of continued drought and record-breaking temperatures make it more difficult to make informed predictions on what each boating season will look like and how we will manage the river.

In 2020, Rio Chama augmented flows were affected by an extremely dry spring,



Judy Culver, RMS President

summer, and early fall that resulted in fairly steady water flows outside of the "guaranteed" recreational flows due to the continuous call for water downstream. The summer rains on the Rio Chama were heavy and steady, providing localized water surges, while the surrounding lands were parched. Outside of the Rio Chama closure and then access issues for out-of-state residents during much of the boating season due to COVID, 2020 was a good boating season.

In 2021, much of the Middle Rio Grande Conservancy District received ample spring and early summer rains, eliminating the need for a call for water to augment the Rio Chama flows. The remainder of the 2021 season was fraught with stories of boats being stranded on the river as the augmented water was turned off and natural flows hovered around 25 cfs. Some of the strandings were intentional — boaters would catch the rare surge of water, make it to a camp, and wait until the water was turned back on to continue boating. This backlog of boaters resulted in the scramble for camps within the canyon during the release days.

2021 boaters were also subjected to a few rare incidents where localized flash floods would see a rock marred riverbed rising

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Amargosa Basin near Grimshaw Lake, CA. Photo: Bob Wick

viewing and desert recreation. We've formed strong coalitions dedicated to preserving our endangered and threatened species of rare plants, fish, and mammals occurring throughout the watershed.

But as we move into this new chapter of the Anthropocene marked by higher average temperatures, protracted megadrought, and increased development pressures, we believe it is time for our organization to change once again. It's time for us to think bigger.

Climate change coupled with increased human presence and development have forced many of us working to conserve wild rivers in the American West into triage mode, and nowhere is this more true than in our reach of the Mojave Desert. In landscapes this large, the work to be done is always greater than the day is long. Working with limited resources and few staff members often makes choosing where to focus our effort to make the largest impact a difficult decision. If we are to meet the moment, many organizations like ours must use what capacity we have as a lever to move management in the direction of sustainability. We must attend to these challenges we face on the macro level through landscape-scale collaborative conservation.

The Amargosa Conservancy is embarking on a path towards landscape-scale conservation that we believe is our best chance at securing a vibrant future for the river and the human and non-human communities that call it home. Though our heart has always been in the wild and scenic portion of the river, the interconnectedness of this vast and complex watershed requires us to perceive and respond to threats throughout the basin. Residential and commercial pumping in adjacent basins is already diminishing spring flows many miles removed, causing rapid habitat decline. Potential projects such as gold mining, industrial solar arrays and the ever-looming threat of the Yucca Mountain Nuclear Waste Repository pose risks of dewatering and chemical contamination around the Amargosa River headwaters. Without a management plan that attends to the watershed in its entirety and is inclusive of all its stakeholders, the future of our beloved Amargosa Wild and Scenic River will remain in jeopardy.

This aspiration is certainly not without its significant challenges. For one thing, watersheds and ecosystems are not neatly contained within state boundaries. Navigating changes and reforms to water management policy in one state is difficult. Doing so in a watershed that spans two states with fundamentally different legal and regulatory structures for managing the same resource is a much greater challenge. Unfortunately, this is a common situation for many watersheds throughout our country and particularly in the American West. The crisis unfolding within the Colorado River watershed illustrates the magnitude and complexity of managing our rivers in an era of water paucity. But despite the complexity of the crisis, one thing remains clear: developing scientifically sustainable and politically equitable solutions for managing our nation's water resources will require a significant investment in collaborative conservation. Without landscape-scale collaboration in the very near future, all of our rivers are endangered.

So how can small organizations like ours with limited resources and time work towards such a lofty aspiration? We believe we can make the biggest impact by investing in authentic relationships with our regional partners. This includes the federal and state agencies, Tribal nations, NGOs, and local leaders that are the greatest decision makers and stakeholders in our watershed. We believe our organization needs to be a builder of community, and then we need to find ways to give that community a voice. We need to share our stories, research, and expertise as often and as eloquently as possible. We need to advocate for charters and bi-state water compacts to guide conservation efforts into alignment with a collective vision. In short, we need to create opportunities for land managers and stakeholders to come together and start planning what future we want to live in for ourselves and for the rivers we serve. There has never been a better time for organizations great and small to start thinking bigger, and the best way to think bigger is to do that thinking together. ♦

Mason Voehl is the Executive Director of Amargosa Conservancy.



Save the date for the 2023 River Management Symposium “Reimagine River Access” from February 28 - March 2, 2023! Join river managers, advocates, stewards, academics and students in San Antonio, Texas, for three days of learning, sharing and growing together! We'll explore the physical, economical and social issues surrounding river access in a variety of concurrent sessions, keynote presentations, field trips and discussions.

Stay tuned for the call for proposals and information about sponsorship and registration by visiting river-management.org/2023-symposium and by following RMS on social media. (Also, see pages 30-31 in this issue.)

A River Runs Into It

by George Wolfe

Fourteen years ago, in 2008, the LA River was a place few people wanted to be near, let alone be associated with. In the last few years of the Bush presidency, the Supreme Court cast doubt on the validity of the Clean Water Act, and by fate the LA River became an odd but significant test case in what waterways might keep or lose protections. Much of this hinged upon the murky notion of “navigability.” As a whitewater kayaker, I saw an opportunity and led a ragtag flotilla of two dozen boaters down the 51 miles of the river to officially prove its navigability. In 2010 our LA River expedition, and the report from our trip to the EPA, ultimately helped win federal protections not only for the LA River but other waterways nationwide through the precedent that it set.

With this change designated by the EPA, a new era of river optimism burst forth in Los Angeles. Old adversaries began fresh conversations with new

personnel, new programs were formed and new organizations emerged. Veterans like Lewis MacAdams of FoLAR, and other established organizations like LA Riverkeepers, found new wind in their sails to finally, perhaps, push forward progress on our much maligned river. Master plans were dusted off and new planners were brought in to rethink the river with their own grand ideas; older plans were changed for new plans. Money poured in. Riverside pocket parks sprouted, cafes and bike shops opened, and people bought riverside properties as home prices spiked. New condo developments proudly adopted names like LA River House and RiverFront Lofts. Pedestrian/bike/equestrian bridges began to span the river. A dozen years passed. Currently, in 2022, those grand plans for the river’s fundamental, substantial revitalization have failed to be realized; not a single pound of concrete has been

removed.

Now, with International Rivers’ designation of the LA River as a 2022 Most Endangered river, there must be a reckoning. What’s our problem? Are we such a big bureaucracy that we can’t implement a plan for a healthy river that removes some concrete while still protecting its citizenry from floods? Are we so commercially driven that we can’t produce a plan that allows for naturally recharging the aquifer while also providing surplus greywater to local communities? Granted, getting the various entities to agree to a singular plan is a daunting challenge akin to herding cats — but we really have no legitimate excuses. Other big cities like Seoul, Munich and Madrid have managed to pull off success stories in short periods of time, why can’t we? Why are we looking, once again, at a dark age and a regressive plan that risks sucking the river dry and not properly

The LA River Expedition co-organizer, Jeffrey Tipton, is in the Glendale Narrows approaching Los Feliz Blvd.



LA River Expeditions participants paddle on a guided kayak tour in the Sepulveda Basin Recreation Area through the section of the Los Angeles River nicknamed the Little Grand Canyon, one of the portions of the River opened as a Recreational Zone during the Summer months.

meeting the ecological and common sense needs to sustain the region’s flora and fauna (including the recreational and peace-of-mind needs of its urban human wildlife)?

We may get there yet, but we seem to be taking the path of most resistance. Every year that passes increases the risk of losing that driving passion which makes these modern-day comeback miracles actually happen. But it’s worth the continued fight. Real success in Los Angeles wouldn’t be an isolated incident but a hopeful model and a global beacon to every other struggling river community on Earth. LA with a giant central park downtown, and a hundred or so pocket parks along its park-staved lower half? Absolutely. LA with a smart design that maximally retains and reuses the water we get each year? For sure. LA that treats its current residents with respect and is supported by robust recreation (i.e., kayaking and biking) and a creative community (i.e., vibrant murals and performing arts). Yes. LA is the perfect set for such a rags-to-riches story. Let’s get this project over the hump and into the record books, as a harbinger of a world community that can, and must, get its act together. ♦

George Wolfe, founder of LA River Expeditions, has run guided kayak tours on the river since 2011 (lariverexpeditions.org). The original 2008 expedition is covered in an excellent 1-hour documentary film, *Rock the Boat: Saving America’s Wildest River* (rocktheboatfilm.com). Peter Bennett’s book, *The Los Angeles River*, is available at www.citizenoftheplanet.com.



LA River Expeditions founder, George Wolfe, in the Glendale Narrows section of the LA River, 2009. All photos: © Peter Bennett / citizenoftheplanet.com

How to Run a River Like a Nightclub

by Gary Ananian

It used to be *shot, shot, shot* and now it is *trash, trash, trash*. Before I founded Kern River Conservancy, I spent nearly 20 years working in the nightlife scene of Los Angeles. I was very fortunate to have worked at two of L.A.'s biggest and most popular venues. Celebrities, after-hours parties, and red carpet events were my everyday life, but that all changed one day.

Every few months, my friends and I

would travel to the Kern River to find the peace and tranquility of the outdoors. But instead, we found campsites trashed and vandalized along a designated Wild & Scenic River corridor. After a few trips, I reached out to the US Forest Service to see if we could volunteer to help clean things up on our next visit. I quickly learned that the Kern River not only didn't have a volunteer program but there wasn't even a conservation group attached to this Wild

Gary Ananian after a successful Earth Day cleanup on April 23, 2022. Boulder Gulch Campground, Sequoia National Forest.



& Scenic River. I couldn't believe it, but it was real.

On our next trip, we experienced once again a trashed and vandalized campground and that was it for me — I had to do something about it. I came back home and told everyone that I was going to start a nonprofit dedicated to taking care of the Kern River. They all laughed and said, "you're wasting your time." They knew me too well. I was the party promoter all about partying, and here I was trying to explain to my friends I was somehow going to be an environmentalist with zero education.

After I started my organization, I informed the US Forest Service that "here we come" to help, which was met by excitement and readiness to bring change to the Kern. The first few years were a challenge. No volunteers, no money, and no momentum. What was I doing wrong? I volunteered with several other groups to watch and learn, but I ended up leaving bored and never wanting to come back. I would tell myself that this is just a passion project and not my life.

The first few years were a challenge. No volunteers, no money, and no momentum. What was I doing wrong?

Then came the 50th Anniversary of the Wild & Scenic Rivers Act and *River Rally* (a national conference hosted by River Network) in 2018. After teaching a workshop on *Millennial Engagement on Wild and Scenic Rivers*, I quickly realized that my room was full of people trying to figure out how to grow their community engagement and volunteer numbers. I walked into *River Rally* terrified — knowing I had zero education in anything environmental and to top the cake, I was a high school dropout. Paranoia kicked in, thinking I was going to get ignored and voted off the island for being there, but the complete opposite happened. I was embraced and welcomed for my workshop presentation, took shots at the bar with all the executive directors and presidents of every big river group there was. I felt like I was in the movie *Goodfellas*, like I was a made guy.

I returned to L.A. and decided I wanted to quit my job and run Kern River Conservancy full time — on St. Patrick's Day of 2018, I left the big city for a small river town. I had a new sense of what I wanted for my organization; I changed our mission, rebranded, and used my promoting skills to run the conservancy like it was a club — and it worked! That year we saw unbelievable growth in our group's capacity. Cleanups that only had 15-20 volunteers were now seeing 125-150 volunteers. Finances tripled and our ability to become a serious power player in California's river game was born. That same year, River Network named me and Soul River's Chad Brown as being the next generation of river champions and honored us with the American Canoe Association's *Paddle Hero* award.

Today, after Covid, we are still pushing the limit of being a major player in California. For a small grassroots organization from the small town of Kernville (population

under 2000 people), we've amassed one of the biggest social media followings in the country, with nearly 30,000 followers. Our volunteer army went from just a few dozen to now over 1,300 people and not just locals! The majority of our volunteers are traveling 3-5 hours just to participate in our river cleanups, and *yes* I know every single one of them. Back when I volunteered for other groups, I always noticed that the director, president or founder of those groups never participated in their own events. I've always felt, and still do today, that volunteers are the backbone of any nonprofit organization and it is extremely important for them to know who you are. When volunteers show up, they are excited, shocked, and surprised to see me there picking up trash with them — this goes a long way for volunteers and 80% of our volunteer base returns every year. My volunteers always admire and compliment my commitment to show up and meet each and every one of them, picking up trash alongside them.

That personal connection to volunteers and community is what makes a successful organization. Most environmental groups don't engage their communities and most operate on grant funding. I made it the opposite for us. Engage the community as much as possible from river cleanups to monthly fundraisers to local film festivals — we are doing it all here on the Kern River and our success was so grand that I decided to expand our operations to several other rivers in Sequoia National Forest — birthing our new chapter under the Kern River umbrella: the Southern Sierra Conservancy.

Our rivers need us more than ever today. Wild and Scenic or urban. Flowing or endangered. It's our responsibility to carry on the next generation of river stewards. ♦

Paddle forward!

Out of the Ashes – The Hopeful Rise of the Upper Merced River Watershed Council

by Kristina Rylands

It's not an unfamiliar story: a nonprofit secures funding, hires a handful of staff, engages eager partners, corrals legions of volunteers, activates on its mission, raises over \$1M in additional grant funding... until the recession followed by a funding drought. Take that and the ONE-TWO punch of a fire that destroyed its office and incinerated over ten years of the work to the ground, and you have a recipe for the demise of a once thriving organization.

What remained was a small group of dedicated board volunteers who kept the mission alive for another 10 years while struggling to regain its former footing. Today, thanks to a WaterSMART grant from the Bureau of Reclamation, the Upper Merced River Watershed Council is looking to reignite its efforts and re-envision itself for the needs of the river and community today. How the organization goes about reintroducing itself to federal and NGO partners, as well as the general public, is the subject of a year-long capacity-building effort. If you were to essentially start from scratch, where would you begin?

A Robust Past

The Upper Merced River Watershed Council was founded in 2001 with a mission to protect and enhance the Upper Merced River Watershed through education, stewardship, and community-based projects. The geographic reach extends from the headwaters of the wild and scenic river corridor in Yosemite to where the designation ends at the mouth of Lake McClure, nearly all of which are under the jurisdiction of the NPS, BLM, or USFS. For over ten years, the organization received grants, had paid watershed coordinator staff, 50 committed volunteers, 300 member supporters, and a number of community-serving projects, including:

- Invasive species eradication of yellow starthistle and bullfrogs while partnering with the Bureau

of Land Management, Yosemite National Park, and the Sierra Foothill Conservancy.

- Merced River water quality monitoring in partnership with Yosemite National Park and Yosemite's environmental education partner, NatureBridge.
- South Fork, Merced River trail improvement and community education which rehabilitated the historic trail and established a docent program for nearby Hites Cove.
- Elementary school Merced River watershed education program for all 5th grade students.
- Various collaboration projects involving private and public partners including, but not limited to Bureau of Land Management, Yosemite National Park, Sierra National Forest, State of California, Sierra Nevada Alliance, Sierra Nevada Conservancy, State Water Resources Control Board.

With the completion of a collaborative action strategy, priorities were established and memorialized in a 2006 watershed plan. Thanks to watershed coordinator grants from the California Department of Conservation, mobilization on the plan was in full swing...until 2012 when grant funding dried up due to a shift in state priorities. The Upper Merced River Watershed Council suffered another crippling event when our offices burned down, resulting in the loss of all records, equipment, and property. With the loss of paid staff, much of the connection with volunteers and supporters dwindled. Projects effectively came to a halt. After the end of consistent funding and the fire, the UMRWC had to reinvent its purpose and operation, with only a small group of dedicated board members to keep the mission alive.

The focus shifted from what could be done with limited grant resources to what could be done with essentially no money and only modest amounts of volunteer

support. Rather than directing projects, the UMRWC became an umbrella organization, amplifying the work of other organizations and sponsoring a focused group of projects reminiscent of its former workload.

What little funding was secured was focused on providing scholarships to Mariposa High School seniors majoring in science and to students participating in the University of California, Merced's Naturalist (CalNat) Program "citizen science" project. And when the wild and scenic status of the Merced River was threatened due to a spillway modification project proposed by a local lawmaker to inundate over a quarter mile of the wild and scenic river, the UMRWC rallied community members and drew attention to the Merced's wild and scenic river status.

In recent years, numerous river conservation minded groups approached UMRWC with specific and increasingly urgent needs. The effects of climate change within the watershed could be seen everywhere in the pine die-off caused by beetle kill. Repeated years of devastating wildland fires ripped through the Merced River canyon and watershed. And just last year, toxic algal blooms closed entire sections of the river. While the less than 10-member board could appreciate the demand, the organizational capacity was not where it needed to be to resume a leadership role.

Still, what we heard repeatedly from the community was, WE NEED YOU.

Rebuilding From the Ground Up

Today, thanks to a WATERSmart grant from the Department of Reclamation, the Upper Merced River Watershed Council is looking to REIGNITE its efforts. While it might be tempting to go back to the old watershed plan and the former way of doing things, the organization is taking a fresh look at the needs of the river,



The Upper Merced Watershed Council is embarking on a two-year planning process to determine its future direction. Collaborating with the community and getting feedback on the most pressing issues facing the watershed is the first step. Photo: Kristina Rylands

the needs of federal and NGO partners, and the unique needs of the community TODAY. While building on the successes of the past, the Upper Merced River Watershed Council is looking to the future and how best to create a sustainable model for the long term.

The first phase involves a re-branding effort built on the collaborative participation of all stakeholders. However, before going out to stakeholders, our volunteer board began with some soul searching, namely looking internally at the very values of the organization. How

do we want to be seen? What do we stand for? What emerged were statements such as:

- **Trustworthy Source Of Information.** As a clearing-house of science based information, we are: *Reliable | Respectable | A go-to source | Dependable Accessible | Consistent | Welcoming*
- **Inclusive.** As an growing organization, we strive for diversity, equity and inclusion, we are: *Supportive | Curious | Open-minded | Adaptive*
- **Cultivate Partnerships &**

- **Collaboration.** As a partner of our community and of federal, state, tribal and local agencies, we seek broad perspectives, we are: *Equitable | Purposeful | A Conduit | Organizers Fosterers | Inclusive | Active Listeners*
- **Focus On River/Watershed Values.** As stewards of the Merced River, we are: *Knowledgeable | Explorative | Conscientious | Thorough Solution-Driven | Story-sharers*
- **Watershed Champions.** As advocates for the Merced River, we are: *Protective | Attentive | Responsive | Present*

We seek to renew old partnerships and forge new ones with a variety of federal, state, regional, and local partners to re-establish the Upper Merced River Watershed Council as a force for grappling with the issues that affect our watershed. A central part of taking the pulse of stakeholders was launching a listening campaign with some of the most basic questions posed to our partners and community:

- What do you *love* about the Merced River and its watershed?
- What do you want to see *protected*? What are the most pressing *needs*?
- What *actions* are needed to improve your experience and the health of the river and its watershed?
- What can/should the Upper Merced River Watershed Council do to *help support* the river, agency partners, and our community?
- For our agency partners, what *gaps* exist that could be addressed with the collaboration?

With so much taking place in the Merced River corridor and watershed, an information gap exists. Where would one go to understand the scope of projects and volunteer opportunities, along with the issues and potential threats to the river? Broadly, our leadership sees an opportunity for the organization to serve as a coordinator of and clearinghouse for the latest information related to the river, as well as restoration and management activities that are identified in the federal comprehensive river management plans. While the National Park Service, US Forest Service, and Bureau of Land Management are ultimately responsible for carrying out the actions specified in their respective river plans, there is a critical need to both support interagency coordination and enhance federal, state, and local understanding of the desired future conditions for the river.

The first goal is to regain organizational capacity, highlighted by strong and diverse relationships with a shared sense of purpose. We're beefing up our social media presence, and showing up at any and all community events to announce, WE'RE HERE. The next goal is to establish a shared understanding of the management and restoration goals and responsibilities established by the river's managing agencies, and specify federal,



The Upper Merced River Watershed encompasses the wild and scenic river from its wilderness headwaters in Yosemite National Park to the inlet of Lake McClure. Photo: Kristina Rylands

state, and local roles in implementing and bringing public awareness to those efforts.

In addition to seeking advice from our community and federal partner, we're looking to other river-serving nonprofits. So many are doing a lot with very little by staying focused on the most important priorities and casting a wide and inclusive net. If RMS members have advice for us, we're listening and would love your ideas.

While our organization was quite literally burned to the ground, we are beginning to feel a renewed sense of optimism and hope as we reinvent and reimagine what we could be in support of the river, our partners, and community. ♦

To learn more, visit www.merced-river.org, follow us on Facebook at www.facebook.com/mercedriverwatershed.council and Instagram [@upper_merced_river](https://www.instagram.com/upper_merced_river).

Getting Ready for Restoration – The Importance of Pre-Project Monitoring

by Aaron Zettler-Mann

The environmental consequences of the 49er Gold Rush in Northern California are still being seen today. One of its victims remains the native fish populations of the Yuba River, located in northern California, northeast of Sacramento. Historically, the Yuba River supported large numbers of spring- and fall-run Chinook salmon and Central Valley steelhead. However, the fisheries suffered enormous losses as a result of Gold Rush era mining practices and, even further, by subsequent dam construction.

By the early 20th century, due to the use of hydraulic mining in the area, approximately 684 million cubic yards of debris were washed into the lower Yuba River. To put this into perspective, this is more than three times the amount of material removed to build the Panama Canal. After hydraulic mining was banned in 1874, this mining material, along with the river's natural channel and floodplain it had buried, was reworked via dredge mining. Not surprisingly, but devastatingly, these practices reduced the availability of habitat in the lower Yuba River, severely impacting fish population.

To add to the problem, Englebright Dam, constructed in the 1940s and located about two miles upstream of the Rose Bar area, limits spring- and fall-run Chinook to roughly 10% of their historic range. Much of this has to do with the fact that Englebright Dam's design function is as a sediment trap for hydraulic mining debris, including spawning size gravels. High

flow events in the area immediately downstream of Englebright Dam, but upstream of the hydraulic mining debris and dredger tailings, have further eroded the spawning size gravels. This important aspect of spawning habitat is not being replaced as no natural sources of gravel upstream of the project site exist. All of this represents serious impediments to the recovery of native salmon and steelhead populations in the lower Yuba River.

To address these issues, the Rose Bar Restoration Project is designed to enhance spawning habitat in the lower Yuba River in California. This project seeks to improve and restore ecosystem function by augmenting two riffles, shallow places in a river where water flows quickly, in the project footprint with appropriately sized spawning gravels. By improving the available spawning habitat, this project hopes to increase the number of redds, the location where female salmon deposit their eggs for fertilization. This gravel will be sourced on-site using hydraulic mine tailings that have been sorted for size and washed of mercury. Before taking on a restoration project of this scope, though, systematic pre-project monitoring must be done in order to have significant and solid data to best communicate the project's success. The South Yuba River Citizens League (SYRCL), in partnership with Cramer Fish Sciences, has just finished the pre-project monitoring for the Rose Bar Restoration Project. This pre-project monitoring allows restoration entities to know what conditions, processes, species compositions, and densities

Fish biologists from SYRCL and Cramer Fish Sciences conducting redd surveys at the control site in the lower Yuba River.



were like prior to the restoration action. After the restoration is done, continuing monitoring allows organizations like SYRCL to talk about the benefits of restoration in a quantifiable way. This type of hard data is integral for effective public outreach to explain why these sorts of restoration projects are important. Additionally, these data can help restoration practitioners improve their assumptions and the models they use to help inform other designs, like the Habitat Suitability Index models (HSIs) used in salmonid restoration projects, for example. Both of these benefits make the next restoration project easier to fund, easier to get community buy-in, and more effective at ensuring that future restoration projects are even better.

At this project site, SYRCL and its partners are using the Before-After-Control-Impact (BACI) study design for their monitoring. In this type of study design, a control site is established which strives to meet several criteria: 1) it is representative of conditions which hope to be produced through the restoration action, 2) it shares similar hydraulic and climatic characteristics as the project site, and 3) it will not be impacted in any way by the restoration action. In the years before and after the restoration project, the control site and project site are both monitored using the same protocols. While this

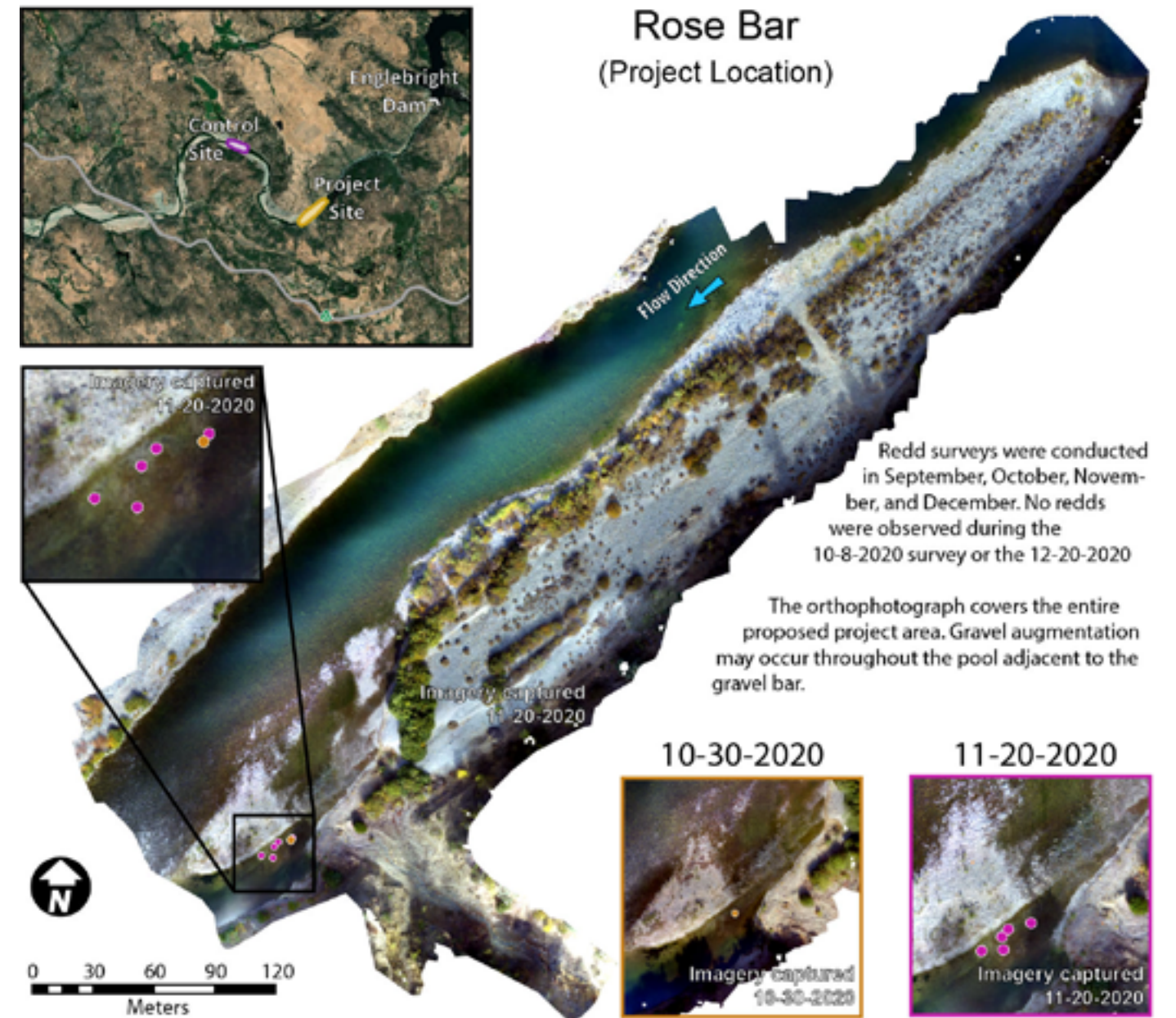
The Rose Bar project area, looking upstream. In the foreground the riffle has appropriate depth and velocity during the spawning period, but the gravel size is much too large for spawning habitat. A second small riffle in the background is too deep for spawning and gravel supplementation will create additional, new spawning habitat. Redd surveys at both new riffles and the control site downstream will occur for three years after project construction. Photos: Aaron Zettler-Mann, SYRCL's Watershed Science Director



approach to monitoring increases the effort it takes to conduct monitoring each year, it is incredibly important in systems where environmental variability and/or lifecycles of the target species are likely to play a significant role in the presence, absence, and density of the target species. The control site therefore provides a baseline, or control, by which natural environmental variability can be considered in the context of the restoration project outcomes. This type of data is crucial to demonstrating to the public the success of the project and helps everyone evaluate the effectiveness of this type of intervention.

At the Rose Bar project site, for example, a decrease or only a slight increase in the number of salmonids utilizing the new spawning habitat after construction could indicate that the project was not very successful. However, if there was also a decrease in the number of redds at our control site, one can more confidently say that natural variability in the number of returning adult salmonids played a role in underwhelming results. Conversely, if the data shows a significant increase in redds in the project area, and redd density at the control site remains unchanged, then we can be confident that the restoration project is a success.

For the Rose Bar Restoration project, SYRCL and its partners aimed to conduct a redd survey once per month



Redd presence in the project area as surveyed during the 2020 season. In 2021 there were zero (0) redd identified.

between September and December. For each survey day, an Unmanned Aerial Vehicle (UAV) collected aerial imagery and an orthophotograph was created. Field technicians surveyed a subset of the redds in the survey area. The objective was to survey approximately 10 individual redds per sampling event. However, this was not always possible based on the number of redds present. Printed field-maps and real-time GPS monitoring were used to ensure that previously surveyed redds were not re-surveyed. At each redd the following data types were recorded: Fish species (if identifiable), fish size (if present), redd age, redd size, water depth, water velocity upstream of the pot, the size of the pot (width, length, depth), the size of the tail spill (width, length), substrate size, and distance to nearest cover, distance to river center, and distance to the nearest bank. A piece of rebar with known intervals was gently placed on top of each pot and photographed. This was used to accurately measure gravel sizes within each pot. This pre-project monitoring shows that,

not surprisingly, Chinook are spawning in areas where depth, velocity, and gravel sizes are generally conducive to spawning. In 2020 and 2021 just under 30 redds were measured with an additional 8–10 unmeasured redds noted in the orthophotograph.

With the pre-project monitoring finished, SYRCL and our partners have a portion of the data they need to continue the BACI study. Despite the added effort, SYRCL is committed to identifying and conducting restoration projects where are informed by the best available science. And the best way to do that is to contribute to the body of knowledge. SYRCL is engaged in BACI monitoring on restoration projects throughout the Yuba River watershed which is further informed by more than 20 years of community driven water quality monitoring. By taking a planned and scientific approach to our restoration projects and monitoring efforts, SYRCL is working hard to ensure that we are tracking how our watershed's health is changing through time and that our restoration efforts are leading to the intended benefits. ♦

Why Degraded Meadows Matter – Fire, Water, and Carbon

by Alecia Weisman

In the Sierra Nevada region of California and Nevada, fire and water seem to be on everyone’s mind. Too much of the first, too little of the latter. As drought conditions continue across many of America’s western states, so too does an increase in the frequency, size, and severity of catastrophic wildfires. As the effects of climate change become harder and harder to ignore, more and more people are looking for solutions.

One of those solutions, it turns out, happens to be the restoration of mountain meadows. In terms of carbon sequestration, groundwater storage, and fire refuge, meadows have proven themselves again and again to be powerhouses. In the Sierra Nevada mountains of California and Nevada, meadows make up less than 2% of the geographic land area but are estimated to contain 12–31% of soil organic carbon stocks. Due to years of intensive grazing practices, fire suppression, and hydrologic modifications such as dams and roads, though, the majority of meadows throughout the Sierra Nevada are in

various states of degradation, many on the edge of complete collapse. Federal and state agencies, along with community and environmental organizations, are looking to turn around the state of these meadows and, by doing so, hope to turn around some of the devastating effects of climate change. One of these organizations is the South Yuba River Citizens League, or SYRCL, located in Nevada City, California. In the last decade, SYRCL, in partnership with the Tahoe National Forest, has completed restoration on three mid-sized meadows in the Sierra Nevada mountains, Loney Meadow, Deer Meadow, and Beartrap Meadow.

Decades of road building, fire suppression, and historic grazing and logging activities had severely impacted these meadows, contributing to an unraveling and degradation process that prevented these areas from providing the variety of ecosystem benefits that healthy meadows are able to provide. At Loney Meadow, in particular, these activities resulted in what is known as a partially incised stream channel. An incised stream

occurs when flowing water cuts its channel into the bed of a valley through erosion. In a healthy meadow, water is dispersed through a wide area. An incised stream channel concentrates the water in a narrower fashion. As a down-cut stream channel continues to erode, the water table drops and the surrounding vegetation changes from wetland and meadow types to dry pasture or xeric, a type of desert biome, types. A higher groundwater table helps maintain the meadow as a habitat for a diverse species population – everyone is looking for water, after all – as well as improves the quality of water available because of reduced erosion. A healthy meadow that does not have an incised stream channel also better regulates how water flows downstream, as it provides a wider surface for water to settle, contributing to the groundwater basins that feed stream flow later into the year. This helps mitigate some of the effects of drought, as it allows for a slower release of water downstream during the dry months of summer.

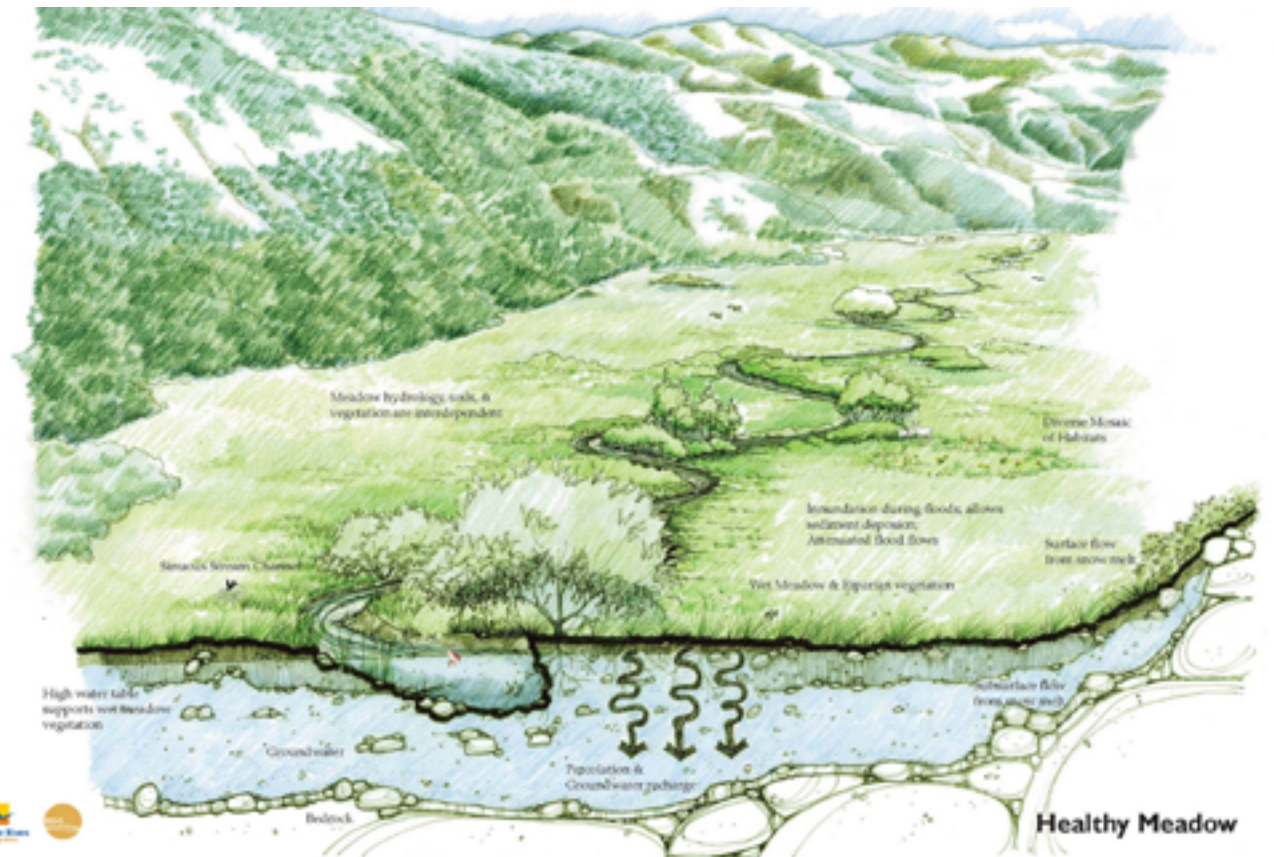
The degradation of Loney Meadow also manifested as destabilized stream banks, a habitat lacking complexity, and a proliferation of disturbance tolerant non-native species which were choking off the vegetation needed to maintain the meadow’s health. All of these factors contributed to the further destruction of the meadow, impacting its important climate change mitigation functions. SYRCL and its project partners began restoration of Loney Meadow with the main goals of improving plant and wildlife habitat, recharging groundwater, reducing stream erosion, and increasing carbon sequestration.

A healthy meadow sequesters six times the carbon of an adjacent forest. As well, meadows sequester the carbon deep in the soil. This means that if a wildfire roars through a meadow, that carbon remains protected in underground reserves. This is the opposite of a forest where, as the trees and underbrush burn, the majority of that carbon is released back into the atmosphere. A healthy meadow, because it remains wet even in



Downstream section of the meadow in relatively good condition. Little to no restoration actions planned in this area – no channel fill. This represents desired condition, with shallow, sinuous swales that has high floodplain connectivity and complexity. Credit: SYRCL drone footage.

Desired condition or Healthy Meadow illustration. Courtesy of American Rivers.



Active erosion in Castle Creek within Van Norden Meadow. Taken during a public tour in 2018, showing erosion after the 2017 Water Year. Credit: SYRCL

dry months, also acts as a natural fire break. This not only has the potential of slowing the progress of a catastrophic wildfire, but a healthy meadow will also provide a refuge for creatures seeking shelter from the ravages of fire.

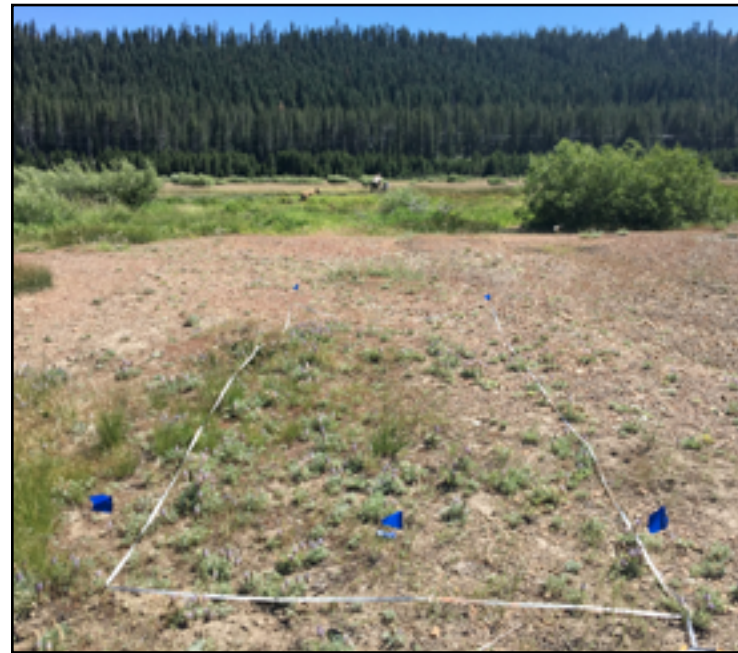
The restoration project on Loney Meadow was completed in one summer season, but the planning and pre and post restoration monitoring all together lasted about five years. Post-restoration monitoring done by SYRCL and its project partners clearly shows how their efforts positively influenced the ecological function of the meadow. Specifically, the restoration increased the meadow's ability to store groundwater and sequester carbon. Additionally, with the elimination of the incised stream channel, there is now a clearly delayed peak stream flow, which means more water heads downstream later into the spring, helping to mitigate some of the downstream effects of drought. The meadow's vegetation and wildlife populations also showed a significant rebound.

With this success clearly demonstrated, SYRCL and their partners have turned their attention to the restoration of a much larger, heavily degraded meadow, Van Norden Meadow. Consisting of 485 acres, Van Norden meadow (Yayalu Itdeh in Washoe) is an ecologically and environmentally important meadow at the headwaters of the South Yuba River, located in the Sierra Nevada mountains. At one point in the early 2000s, the meadow was slated for development, but, in 2012, the Truckee Donner Land Trust, multiple local conservation groups, and thousands of local community members raised funds and purchased the land and stopped development from happening. Now, SYRCL, in partnership with the Tahoe National Forest (TNF), the Truckee Donner Land Trust (TDLT), and other partners are in the midst of restoring this beautiful plot of land.

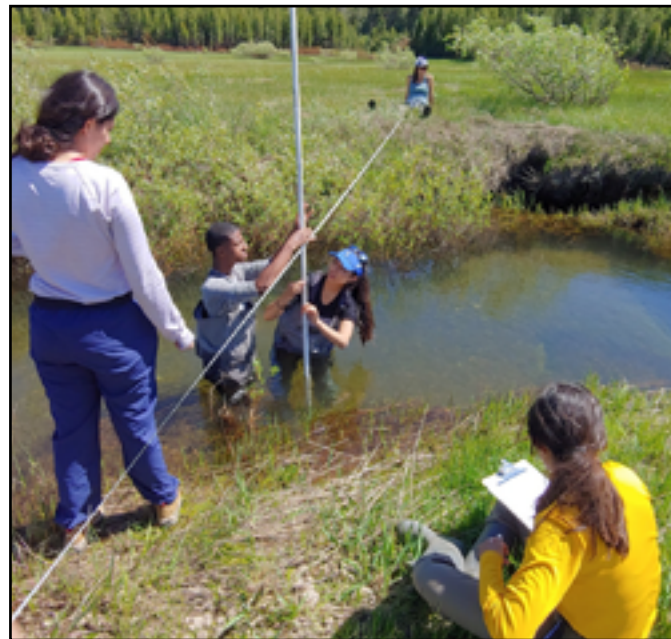
The proposed actions for the Van Norden Meadow Restoration Project include filling sections of the South Yuba River and Lytton Creek, and building Beaver Dam Analogs, a man-made structure designed to mimic the form and function of a natural beaver dam, in Castle Creek to reconnect the currently disconnected stream channels with the meadow floodplain in order to increase the groundwater levels within the meadow. Willow and sedge planting will occur in areas where native plant restoration is needed. In addition, invasive species, specifically reed canary grass will be removed from along the stream channel, encroaching conifers will be removed from within the meadow and around the meadow edges, and new trails and viewing platforms will be erected.

Once implemented, this project will result in improved meadow habitat, enhanced ecological and hydrologic function, improved water quality and increased summer base flows, increased carbon storage, more environmentally conscious and sound recreational opportunities, and the improvement of the overall resiliency of the headwaters of the South Yuba River to changing climatic conditions. The project will also lead to a greater scientific understanding of meadow processes which can then be applied to meadows and headwater streams across the Sierra region.

This is a huge undertaking that will require the time and effort of a number of stakeholders. Heavy equipment will be working in the meadow over the next two summers with the addition of nearly uncountable hours of human labor, all in the name of getting Van Norden meadow back to health. And yet,



Vegetation Monitoring Plot that shows areas of high compaction due to grazing and high proportion of bare ground/loss of wetland vegetation due to hydrologic disfunction within the meadow. Credit: SYRCL



Long-term monitoring efforts through SYRCL's longstanding Earthwatch Ignite program. Measuring channel depth from floodplain in July 2019 in the incised South Yuba Channel. Credit: SYRCL

all of this is done with an investment in the future, one with the possibility of more water and fewer catastrophic fires for the area. Managing global greenhouse gas emissions requires identifying and conserving ecosystems that have high rates of soil carbon sequestration. Mountain meadows fit this bill, but only if they are healthy.

SYRCL is always looking for volunteers to help with its restoration projects. From seed collection to water monitoring, from willow planting to aspen fencing, anyone who is interested in taking action to combat climate change and preserve the environment has an opportunity to pitch in. ♦

Alecia Weisman is the Watershed Science Program Manager.

A Vision For Parks in Modesto, California



California State Parks has awarded the Tuolumne River Trust's Trekking the Tuolumne Safely program a \$367,128 Outdoor Equity Grant. These funds will improve equitable access to the outdoors for Modesto residents and will empower youth and families with outdoor leadership education, safe access to parks, recreation opportunities, and environmental education.

by the Tuolumne River Trust

Earlier this spring, our staff had the opportunity to meet in person and tour one of our projects in the Lower Tuolumne River Parkway. We toured Carpenter Road Park and envisioned what it will look like in the future.

This empty field will soon be a flourishing park that provides multiple benefits to the community. It will improve outdoor recreational opportunities, restore a priority part of the San Joaquin Valley's environment, improve water quality, and provide flood control.

We believe that safe access to the outdoors should be a human right.

Having equitable access to the outdoors offers members of our communities the chance to combat social isolation, maintain physical and emotional health, establish healthy habits, and participate in stewardship activities that protect and restore the environment. This is why we have made it part of our mission to work with the city of Modesto to ensure safe and equitable access to local parks for our riverside communities. We are working to change inequitable park access, through grassroots action led by residents and community partners.

Our present work on this Carpenter Road Park project focuses on engaging youth and residents in community decision-making to support the future of vibrant parks and recreational opportunities for all.

The Tuolumne River Trust protects and restores the Tuolumne River watershed for present and future generations. We do this through three key program areas: education, advocacy, and restoration. For over 40 years, we have continued this decades-long legacy of restoring and protecting this irreplaceable watershed that spans from the Sierra Nevada Mountains through the Central Valley to the San Francisco Bay. To learn more, visit www.tuolumne.org.

The Carpenter Road Park Project Will:

- Provide families with access to the outdoors in Modesto's backyard
- Be a place to teach kids about nature
- Expand public fishing, hiking, and boating opportunities
- Enhance flood management for Modesto
- Improve habitat for fish and wildlife and improve water quality through capturing stormwater in wetlands

Recreation Opportunities: Fishing, Canoeing, Biking, and Hiking

There will be countless ways for the community to enjoy this park once it is developed. Native salmon and rainbow trout migrate past this region on their way to spawning gravels further upstream – making Carpenter Road Park an excellent spot to fish in the Tuolumne River! The park is also ideally situated as a put-in/take-out point for canoe trips on the Tuolumne, giving community members a chance to get out on the water and explore the river. Trail riding and running are gaining in popularity in Modesto and throughout the San Joaquin Valley.

Already, enthusiastic volunteers have constructed unofficial trails through the project area. These trails have proven to be popular for bikers, hikers, and runners. They will be maintained and expanded as the park is further developed, creating new beautiful routes for recreationists to explore! ♦

Colorado Parks and Wildlife 2022 Partners in the Outdoors Conference

RMS, Advisors, Partners Present Emerging River Recreation Issues

by Risa Shimoda

The 2022 Partners in the Outdoors Conference, hosted by Colorado Parks and Wildlife, is described as the State's place to "cultivate common ground, explore best practices of partnering, and design collaborative solutions with diverse voices and stakeholders to conserve Colorado's outdoor heritage." 600 participants representing 250 organizations, agencies, schools, businesses and communities convened in person April 18-20, 2022, after a two-year in-person hiatus during which they hosted partners through a pandemic-inspired virtual format.

This year's conference addressed topics related to managing public land and wildlife habitats sustainably; providing welcoming environments to all people; cultivating a stewardship ethic among outdoor users; and funding resource protection and management.

RMS was well represented at the conference during a panel session that explored emerging issues affecting river recreation. Bob Randall and Nate Hunt of Kaplan Kirsch & Rockwell LLP, who also support the RMS National Board of Directors as legal advisors, invited Executive Director Risa Shimoda to join them as a panelist. They also invited Sarah Judkins, a colleague at Kaplan Kirsch & Rockwell, and Southwest Rockies Stewardship Director for American Whitewater Hattie Johnson. The following provides a snapshot of our panel topics:

Emerging Legal and Regulatory Issues

Minimum wage for federal permit holders, electronic logging devices (ELD) — Sarah Judkins, Kaplan Kirsch & Rockwell

Sarah addressed 1) litigation over the applicability of the federal minimum wage order for contractors to outfitters and other federal permit holders, and 2) the Department of Transportation's regulations for the use of electronic logging devices (ELD). For the minimum wage litigation, the executive order and regulations establishing the minimum wage requirements are on hold for entities with contracts or contract-like instruments entered into with the Federal government in connection with seasonal recreation services on public lands. The litigation over the legality of the requirements continues. For the DOT ELD regulations, the regulations are currently in force and outfitters (and other entities to which they apply) must comply. Sarah shared her hope that the audience "learned about



Sarah Judkins



Bob Randall

two issues to pay attention to that impact how outfitters conduct business and ensure compliance with federal requirements."

Legal developments concerning floating through private property — Bob Randall, Partner, Kaplan Kirsch & Rockwell

Bob presented an overview of the background and recent developments in litigation arising in New Mexico and Colorado related to public, recreational access to rivers flowing through private property.

In March 2022, the New Mexico Supreme Court sided with the Adobe Whitewater Club in its challenge to a State Game Commission rule allowing private landowners to exclude the public from public waters flowing through private property. The NM Supreme Court found that the rule violated Article 16, Section 2 of the New Mexico Constitution, which provides that the "unappropriated water of every natural stream ... within the state of New Mexico, is hereby declared to belong to the public.

In April 2022, the Colorado Attorney General filed a petition for certiorari to the Colorado Supreme Court, contending that the Court of Appeals was incorrect to conclude that a member of the public had standing to seek a declaratory judgment that private landowners

could not exclude him from the riverbed of the Arkansas River because title passed to the State of Colorado at statehood. The Attorney General's petition contends that having the court force a determination of state's ownership of riverbeds – without the state's consent – bypasses the state's role in determining the process for adjudicating navigability and ownership, which it contends is a legislative or executive function, not a judicial one.

Bob hopes that attendees "learned that river access is neither simple nor settled, and that they are very live issues before the courts and administrative agencies."

Impacts water projects can have on river-based recreation through mitigation and enhancement measures provided by project applicants — Nate Hunt, Kaplan Kirsch & Rockwell

Nate addressed the consideration of recreational opportunities in the Clean Water Act Section 404 permitting requirement for dredge and fill activities in jurisdictional waters. His presentation included a focus on mitigation of environmental impacts as part of a Section 404 permit. The recent recognition of dam removal as a mitigation opportunity for Section 404 permits, as well as increased public awareness of this form of mitigation, should result in more dam removal projects with a river recreation component. Nate hopes the attendees learned a new, alternative approach to facilitating river recreation through the federal permitting process.



Nate Hunt

Transference of water for recreation to benefit local communities and economies — Hattie Johnson, Southern Rockies Stewardship Director, American Whitewater

Hattie described a potential state policy that would provide a mechanism for communities to acquire and deliver water to a recreational reach of river for boating or angling. Colorado water law includes rights for recreation only at qualifying structures (typically whitewater parks) but does not protect all other river recreation. Due to diminishing streamflows because of increased development and climate induced aridification, this tool would provide for flexible water management that could support the river recreation economy.

The main issue is that of diminishing streamflows that are

preventing recreational use - either flows too low for boating or high water temperatures that trigger voluntary or strict fishing closures. While state legislative efforts have not yet succeeded, they will continue to pursue policy reform.

Hattie shared, "I hope the audience learned about the need for improved mechanisms to protect and enhance streamflows for recreation and the threats that are pushing that need."



Hattie Johnson

Measures to fostering inclusivity through systemic culture change in the river recreation industry, including the elimination of workplace discrimination and harassment — Risa Shimoda, Executive Director, River Management Society

Risa described an exciting event planned by the RMS Pacific Chapter, a trip that will involve paddling three sections of the Klamath River, the site of the largest dam removal in our nation's history and the implications this historic event may bring to people and habitat management, outfitters' businesses and cultural community in Northern California and Southern Oregon.

She also provided an overview and evolving impact of the A-DASH Collaborative, a group of river professionals and consultants cultivating equity, inclusion, support and trust on and off the river (RMS is an A-DASH Collaborative founder). She asked attendees to take care to "1) listen in order to learn to better respond to the needs of rivers and their wise management; 2) realize that offering empathy regarding generations of obfuscation can be difficult; and 3) be open to stand corrected about what 'is' as we discover more of what has been."

Takeaways

Looking back at the gathering and the information that was shared by agency and partners alike, "Conservation of our natural resources and preservation of recreational opportunities do not happen by chance or in a vacuum. They require partnership, diligence, and sincere efforts to create an inclusive environment."

Nate reflected, "This was my first conference, and I was impressed, as well as inspired, that so many people in Colorado would be working on common objectives regarding outdoor recreation and conservation from so many different angles and perspectives." (continued)

Explosively surprising conference endnote

Our presentation day ended with a dinner of all attendees, at which appreciation was offered by Dan Prenzlöw, Colorado Parks and Wildlife Director to Aloe Lee, Colorado Parks and Wildlife's statewide Partnership Coordinator who was a primary conference organizer. He asked folks to join him in thanking her as she stood at the rear of the room.

"There she is!" he said, "in the back of the bus, Aloe!"

The dinner ended. Late that evening, attendees received an email message:

From: Prenzlöw - DNR, Dan <dan.prenzlöw@state.co.us>
Sent: Wednesday, April 20, 2022 1:17 AM
To: undisclosed-recipients:
Subject: To My Friends and Partners - My Sincere Apologies

My Friends and Partners,

At tonight's Awards Banquet, which was intended to be the peak of celebration, I made an insensitive comment for which I want to sincerely apologize. I appreciate those who pointed out my statement and how my comment evokes painful realities that many have and continue to face. When we talk about intent versus impact, I learned how quickly a statement can have a harmful and hurtful impact. I am sincerely sorry. I would like to personally apologize to all of you, and address the statement. Please join me tomorrow at breakfast at 8am.

In appreciation and dedicated partnership,
Dan Prenzlöw
###

Articles published just after the conference, and another roughly one month later, describe both the story of this specific incident and a much larger issue.

Colorado Parks and Wildlife director on leave over "back of the bus" remark directed at Black employee Aloe Lee, the agency's statewide partnership coordinator, is calling on Gov. Jared Polis to fire Dan Prenzlöw

Dan Prenzlöw, the head of Colorado Parks and Wildlife, stood on stage last week at the state agency's annual conference in Vail and asked the 600 attendees to turn their attention to the event's organizer, who was standing in the rear of the room. "There she is!" Prenzlöw said, according to that organizer, "in the back of the bus, Aloe!" Prenzlöw was referring to Aloe "Aloe" Lee, Colorado Parks and Wildlife's statewide partnership coordinator, who is Black.

Heads turned in shock, Lee — who planned the agency's Partners in the Outdoors conference — wrote in

an [open letter](#) to Gov. Jared Polis, the Colorado General Assembly and Colorado Parks and Wildlife's board of directors. She ran into the arms of another Black woman, crying ...

— S. Tabachnik, [The Denver Post, April 25, 2022](#)

Black Colorado Parks and Wildlife employee targeted by "back of the bus" remark also on leave as her comments are investigated

Firm hired to investigate comments by CPW director Dan Prenzlöw, employee Aloe Lee and others at conference

State officials investigating Colorado Parks and Wildlife's director for an alleged racist comment made at the department's annual conference last month are also looking into comments made by the Black employee who was the target of the director's remark ...

— S. Tabachnik, [The Denver Post, May 19, 2022](#)

The Journey Toward Greater Inclusion in the Outdoors

Why training on diversity, equity, and inclusion must remain a priority at the state agencies that carry out conservation in America

"...The irony is that the remarks came at a conference designed to welcome new and diverse voices to Colorado's outdoors. The issue of equity and inclusion in the outdoors is finally being taken seriously across the country, including in the federal and state government. Colorado deserves credit for being toward the front of this effort, as evidenced by the Vail conference's goal: "to cultivate common ground, explore best practices of partnering, and design collaborative solutions with diverse voices and stakeholders to conserve Colorado's outdoor heritage."

The author continues, "But the Vail event also shows what a slow and often difficult process this will be across the country. While we are working to help break down centuries of overt and subtle racism, many of the leaders in the conservation community are older, male, and white. I am one of those people. It is, unfortunately, not surprising that phrases like "back of the bus" are repeated without thinking about the root of the phrase and its impacts on people who were, before the civil rights movement, made to sit at the back of the bus."

— W. Fosburgh, [Theodore Roosevelt Conservation Partnership, May 19, 2022](#)

Hattie Johnson reflects on the incident in the context of the conference itself. "I've been thinking about my takeaway a lot. There are energetic, brilliant and activated folks from many different backgrounds who are dedicated to better access to and conservation of our outdoors, yet the people in power either don't know how to handle the change that entails — either because of fear of change or more likely, deep seeded bias and racism." ♦

LAYPERSON'S GUIDE TO

Water Rights Law

Prepared by the Water Education Foundation



Layperson's Guide to Water Rights Law

Reviewed by: Kevin Lewis, former Conservation Director and Executive Director of Idaho Rivers United

Authored by Tom Hicks and Jennifer Harder, and produced by the Water Education Foundation, this guide provides a wealth of information for those seeking a starting point for understanding the complex and often confusing world of water rights.

Written to discuss some of the water issues unique to California, this guide is equally valuable for readers in other states as the core tenants of water rights are interchangeable throughout the country.

My advice for reading this guide is to start with the section on the Public Trust Doctrine before digging into the rest of the guide. When I became involved in river conservation issues in California in the 1990's, water rights were not even on my radar screen. When I moved to Idaho in 2004, it was a baptism by fire for me. My education would have greatly benefited if this guide had existed at that time.

I strongly recommend a copy of this guide in your water library. ♦

The Evolution of Hydro and the Most Important Dam Dialogue Yet

by Risa Shimoda

If you are interested in rivers, you know that the flow has been plugged up by dams in many, many of them across the United States: 90,000 according to the US [Department of Energy](#) DOE. Dams have been designed to collect water for a variety of purposes, such as to serve communities' municipal needs, to fulfill obligations to landowners in service to established rights, and to pool water for year-round recreation.

If you also happen to be a river professional or a recreationist who manages or frequents rivers with appreciable gradient (Class II+), you are probably familiar with a few of the 90,000 total that were built for the primary purpose of producing electricity. The steeper the reach, the greater the efficiency with which water can run through turbines and give us light in the kitchen when we flip a switch. Hydropower dams in the US total nearly 2,300.

Thirdly, if you are a fan (and even better, a member) of American Whitewater (AW), Friends of the River, Idaho Rivers United, New England FLOW or the Appalachian Mountain Club (AMC), you know individuals representing these organizations who changed the course of the hydropower industry's sole ownership of rivers flowing below or between their dams. Their convergence with a half dozen other organizations to form the Hydropower Reform Coalition (HRC) in 1992 (Happy 30th Anniversary!) established the first voice for rivers in the U.S.

RMS members who are also stewardship leaders involved in the relicensing of hydropower dams represent the founding of public participation in hydropower relicensing and the lion's share of its historical path, current leadership and trajectory. As the economics of hydropower and dam ownership has changed, Tom O'Keefe (AW), Kevin Lewis (Idaho Rivers United, retired and AW), Tom Christopher (New England FLOW and AW), Ken Kimball (AMC, now retired) and others have intervened in negligent processes, attended a new or renewal licensing process for five, seven or more years, supported by ridiculously knowledgeable and dedicated volunteers. Hydro-savvy stewards have become experts about the process, given their thirty years of practice under their boats.

Advocates then and now will agree that until power companies (or dam operators contracted to power distributors) are able to create their own water, they should share the water that was for decades diverted through penstocks past unnaturally dewatered riverbeds whenever there was a call to make a buck or two. This 'sharing' became a requirement through the Electric Consumers Protection Act (ECPA), an amendment to the original Federal Power Act of 1935. The ECPA requires hydropower licensees to give "equal consideration" to non-power uses of the water such as habitat protection, energy conservation and recreation. It also required the Federal Energy Regulatory Commission (FERC) to seek input and address the effects of a license agreement on fish and wildlife from State and Federal



Dave Steindorf

natural resources agencies and organizations.

February 2017 brought nationwide attention to unattended dams in the Oroville, California, basin with the feared failure of the Oroville Dam, the tallest dam in the US, and the evacuation of hundreds of thousands of residents. This event fueled the concern by both environmentalists and industry leaders over their respective cases for dam removal and our seemingly insatiable need for energy. Oroville Dam is central to its North Fork Feather River system and relicensing effort, whose hydropower-related flows have been on Dave Steindorf's priority list for well over two decades.

This spring, [an article](#) was published by the Stanford Magazine entitled "Watershed Moment" — it takes a good long peek at the Stanford University Woods Institute for the Environment's Uncommon Dialogue program whose participants represent organizations most often at odds. Member organizations include American Whitewater, the National Hydropower Association, Washington's Skykomish Tribe, and American Rivers. Since March 2018, participants have been meeting monthly, if not weekly in a neutral platform that has welcomed the divergent groups in search of real-world solutions to environmental problems.

"[Watershed Moment](#)" begins with Dave Steindorf, Hydropower Specialist for AW, offering a firsthand look at the river whose near disaster called attention to his life's work and his emergence as one of our country's hydro sages. His perspective on the challenging balance and honest appreciation for the needs of the river, communities and the economy introduce the telling of the Uncommon Dialogue project, accomplishments and trajectory.

An important early milestone was the group's fourteen page agreement on primary tenets: rehabilitating dams to current standards, adding capacity to current projects by retrofitting or adding pumped storage, and removing those dams whose upgrades or mitigation requirements are not cost-effective. The November 2021 Infrastructure bill included \$2.4 billion for dams, including roughly \$800 million for dam removal, \$800 million for dam safety and \$800 million for dam retrofitting. In addition, tax credit has been proposed to increase the viability of these expensive actions. Funds are now available to shore up Oroville Dam infrastructure, as water quantity has emerged as a threat as large as the aged dams.

In 2021, the Oroville Lake level dipped below the minimum level required to generate power. That is another discussion. ♦



Profile: David Greenwood
Merced River Ranger
Bureau of Land Management

by Kristina Rylands

Along the Merced Wild and Scenic River, the BLM's David Greenwood is a one-man show who has spent over 20 years perfecting the art of grassroots getting s*** done. On a river managed by three federal agencies (NPS, USFS, and BLM), David is the face of river management on the Merced. He brings to the job a sense of ingenuity, excellent networking and problem solving skills, collaboration, and always a smile and willingness to get creative. On top of that he mentors up-and-coming rangers and leads by example to make the Merced River a better place. He is a true example of the river management profession at its finest.

In 2018, he spearheaded the Merced Wild & Scenic Film Festival, which resulted in a huge community turnout and celebrated 50 years of river protection through the Wild & Scenic Rivers Act.

David actively collaborates with community members to solve problems and address issues, finding endless volunteer groups to get work done. And if volunteers are not available, he reaches out to community contacts to find funds or situations to get more volunteers.

In summers when seasonal river rangers arrive to help with the busy

season, he mentors each one, setting a brilliant example of how to be a successful river professional. He interacts and participates with other federal, state, and local agencies; he oversees a busy commercial whitewater rafting season at put-ins and take-outs; he spends time frequently on the river to monitor how things are going; he creates his own educational signage to help educate visitors; he does everything from writing NEPA documents to getting a trail project done to helping visitors at campgrounds and picnic areas.

As a steward, David helped lead an effort to eradicate the insidious and hideously invasive yellow starthistle (*Centaurea solstitialis*) along the wildest (by designation) segment of the Merced River.

David is a past member of RMS and continues to remain active in activities within the Pacific Chapter. And while our chapter has not been terribly active, David and his efforts with neighboring land management agencies have helped continue to organize events for river professionals. For example, in 2019, he helped Bob Stanley (USFS, Stanislaus) organize a two-day speaker series on the Tuolumne Wild and Scenic River that culminated in an educational day trip.

David's supervisor, Jeff Horn (BLM Recreation Branch Chief, BLM Mother Lode Field Office) says, "David is without a doubt the best River Ranger I have ever hired, and continues to be one of the best recreation professionals I have the privilege of working with. His skill on the river and off continues to be an example of professional river management — but on the river is where he shines. BLM has relied on David to manage the Merced as a partnership with all the different agencies and entities in a complex mix of different management goals and styles. David has always managed to keep the focus on the river, and what is best for the resource — he is a true steward."

When we need impeccable photos of the Merced Wild and Scenic River, David is there. When we need a volunteer to do water quality monitoring, David is there. When we've needed anything, David is there. He is the kind of river professional that brings people together for the sake of protecting rivers and advancing the field. It's hard to think of someone who has done more for the ongoing advocacy of the Merced Wild and Scenic River while setting an example of all that is outstandingly remarkable about the river management profession than David Greenwood. ♦

The Unemotional Nature of Water

by Moose Mutlow

The dynamic nature of the river and water captured my attention as a child. Early on I would imagine the route I would take down rapids, no matter how big the stream, and where the fish might hole up for an optimistic cast.

I played in the water shaping it to pool and crash. I formed wave trains and hydraulics to snare flotillas of leaves and pine cones in foamy entrapment that was broken only by the insertion of a well placed Wellie.

I have retained that childlike wonder as an adult. I still throw large sticks in and watch their cartwheeling descent with delight. But it is balanced with a deeper respect for water's power and implacable force. After a couple of decades of search and rescue operations there is a sobering damper on my appreciation for waters unthinking downhill pursuit to the next confluence.

People are naturally drawn to the water's edge. Maybe there is a hydrologic magnetism with our bodies being 60% water. Whatever the reason we reach out and touch it. We embrace it. And for the most part that interaction is without consequence. Teetering on the edge of a torrent there is little thought to the danger of a slip because we are dry and warm and seemingly secure.

Water is unemotional. It might stir feelings, it might inspire art. It has no moods apart from those we name. It just relentlessly seeks a lower point or a briny collision at the end of its journey.

Working in swiftwater environments, particularly in remote settings, I have learned to balance the optimism of rescue with the reality of recovery. When calls go out, I start my stopwatch as I am dispatched with sirens wailing. Struggling into gear as the vehicle sprints to witnesses I roll around the backseat finally shrugging the pfd on as I bundle out to assess the scene.



Moose Mutlow

Most of the time a sobering reality is that the incident happened an hour hike away and the family members' hope has evaporated with my arrival. Water takes with alarming speed. There is a splash, a momentary struggle and then nothing.

We get lucky sometimes. Super cold immersion. Young vs. old victim. A freak air pocket or buoyant cooler saves a life. But for the most part I deal in recoveries and the trauma of the search, then recovery.

Looking at my watch and making calculations I know it will be two hours before I am on scene. Way too late for an optimistic outcome.

I stop my watch.

For all of us that work in, on and around water Norman Maclean's declaration of being "haunted by water" may strike a cord. It certainly does for me. My dreams are of smooth tongued glassy runs with crashing waves and sucking eddy lines. As a community we all have the responsibility to keep the nightmare of drowning and loss at bay.

To remain un-haunted by tragedy.

There is hope out there though.

We can all carry a message of river safety and enjoyment. Many swiftwater



Since 2002, Moose Mutlow has been a member and senior trainer of Yosemite Search and Rescue, working as a technician and within Incident Command, at one of the busiest SAR operations in the world. He is also the Lead Trainer for Family Liaison Officers for the National Park Service teaching trainings with staff from Yosemite, Arches, Great Smokey Mountains, Olympic, Rocky Mountain, Theodore Roosevelt, Joshua Tree, Sequoia Kings, Point Reyes, Lassen, Teton and Yellowstone National Parks. His books are available at moosemutlow.com and on Amazon.

drownings are avoidable. As advocates we can campaign for all children to learn to swim and have access to clean safe water to jump in. We can be good neighbors by donating to programs that offer life jackets as part of river safety programs. We can model good risk management even at the danger of being seen as too stiff and by the book. Every opportunity to engage and educate other river users should be grabbed as a meaningful moment.

It all adds up. It makes a difference. ♦

(President's, continued from page 3)

to 1,000 or 4,000 cfs and then back down in quick succession. Luckily the biggest of these flash floods did not result in any death, injuries, or lost gear but one of the campsites was damaged and closed for the rest of the season.

In 2022, the Bureau of Reclamation, Corps of Engineers, and the conservancy districts developed a collaborative plan to support recreation and irrigation water augmentation even while El Vado Dam was being drawn down for repairs. Although unsure of what the entire boating season would pan out to be, the BLM felt secure that the augmented season bolstered by good watershed snow pack would result in the good season.

Then Mother Nature threw a wrench in the works with extremely early warm weather throughout New Mexico and Colorado resulting in good water flows on the Rio Chama and Rio Grande only to see the Rio Chama shut down once again, this time due to extreme fire danger. Will the Rio

Chama reopen to boating during the 2022 season, and if it does, will there be enough water available to supply the "guaranteed" recreation flow augmentation? That is yet to be known.

As a river manager, the last three years have proven that without strong collaboration and partnerships, managing the dynamics of a southwestern river in the face of climate change, population growth, drought, and the onslaught of mega fires, would be impossible. Resiliency and growth of these partnerships are essential to the management and protection of the Rio Grande and its ORV's. Finding the most effective tools to inform river users of these challenges is paramount, as is continuing to develop water-wise solutions to decrease the impacts of the surge in population growth out west. ♦

Judy Culver
RMS President

RMS Northeast Chapter



Allagash Wilderness Waterway Trip September 2-11, 2022

Back by popular demand! The 92-mile Allagash Wilderness Waterway (AWW) in northern Maine is one of America's preeminent canoe trips. Established by the State of Maine in 1966 to preserve, protect, and enhance the natural beauty, character, and habitat of a unique area, the AWW was designated in 1970 as the first state-administered component of the National Wild and Scenic Rivers System. The AWW is composed of a chain of lakes, ponds, and rivers, including much of the Allagash River, and is managed by the Maine Department of Agriculture, Conservation, and Forestry to preserve wilderness character.

Visit the RMS Northeast Chapter webpage, or contact:
emma_lord@nps.gov for more information.

Celebrating World-Class Outdoor Recreation in the 14-State Ohio River Basin

by Harry Stone, Ph.D. Battelle (retired), ORBA Chairperson

The Ohio River Basin Alliance (ORBA) has announced that 28 events across six states are celebrating the Ohio River basin as a world-class outdoor recreation destination. Multi-day paddling trips, youth fishing, an old-growth forest hike, camping clean-ups, and the ORSANCO Ohio River Sweep provide a small sampling of the fun and discovery possible along 55,000 miles of interconnected, floatable streams and rivers in the region. According to the Outdoor Industry Association, for just five of the basin states, outdoor recreation supports 757,000 direct jobs and \$8 billion in consumer spending.

“ORBA has encouraged this Celebration of the Ohio River basin to raise awareness of the public and elected officials that they are part of our world-class outdoor recreation region,” said Harry Stone, chair of ORBA.

Stretching from New York to Illinois and Alabama, the Ohio River basin includes about 60 Congressional Districts. US Representatives in these districts are eligible to join the Ohio River Basin Caucus. Growing engagement in this Caucus provides a tremendous opportunity to increase the impact of the Ohio River basin. Specifically, members of Congress can advocate for investments in the Ohio River basin, including geographically-targeted restoration, like that of Lake Erie, being welcomed by other US watersheds.

The Ohio River Basin Alliance (ORBA) was founded in 2009 to provide a unified voice for the priorities of the region — a need identified by the US Environmental Protection Agency, the US Army Corps of Engineers, and the Ohio River Valley Water Sanitation Commission (ORSANCO). ORBA’s main goals, on behalf of its 500 members and over 200 organizations, are to: facilitate basin stakeholder collaboration; inform elected officials on critical issues related to sustainable economic growth and wise management of our natural resources; and, facilitate coordination and delivery of projects to address Ohio River Basin priorities. ♦

ORBA Membership is free to stakeholders by signing up at: <http://eepurl.com/dxY1UT>

Full event schedule: <https://sites.google.com/view/ohioriverbasincelebration/home>

Ohio River Basin and event-based congressional breakdown maps were produced for the 2022 Ohio River Basin Awareness event by James Major (RMS National Rivers Project Coordinator) and Bridget Taylor (ORSANCO). The project has been supported generously by the Ohio River Basin Recreation Committee Chair David Wicks and Committee collaborators: John King – West Virginia Department of Environmental Protection, Brewster Rhoads – Ohio River Way, Vic Elam – US Fish and Wildlife Service, Richard Harrison - ORSANCO, Brad Collett – Tennessee RiverLine, Bridget Taylor - ORSANCO, and David Rutter – OKI Regional Council of Governments.

Make It Shine Greenbrier River
Greenbrier River, West Virginia

Earth Day on Sand Island
Ohio River, Kentucky

Earth Day Clean-Up and Tree Planting!
Chalfant Run, Pennsylvania

5th Annual Wild & Scenic Red RiverFest
Red River, KY, Kentucky

Ohio River Challenge – Days 1-10
Ohio, Kentucky, Indiana

Discover the Forks (of Coal River)
Big Coal River and Little Coal River, West Virginia

Raccoon Creek Partnership Family Outdoor Day
Lake Hope Raccoon Creek, Ohio

Wild & Scenic Film Festival
Ohio River, Ohio

Moonlight Kayak
Atwood Lake, Ohio

Friends of the Mahoning River, RIVERFEST
Mahoning River, Ohio

**Caesar Creek Kayak / Canoe Wildlife Excursion;
Stand-Up Paddle Board**
Caesar Creek/Little Miami Subwatershed, Ohio

Canoes & Conversations
Mill Creek, Ohio

River Sweep
Gunpowder Creek, Kentucky

Camping Cleanup at Rock Island State Park
Caney Fork Watershed, Tennessee

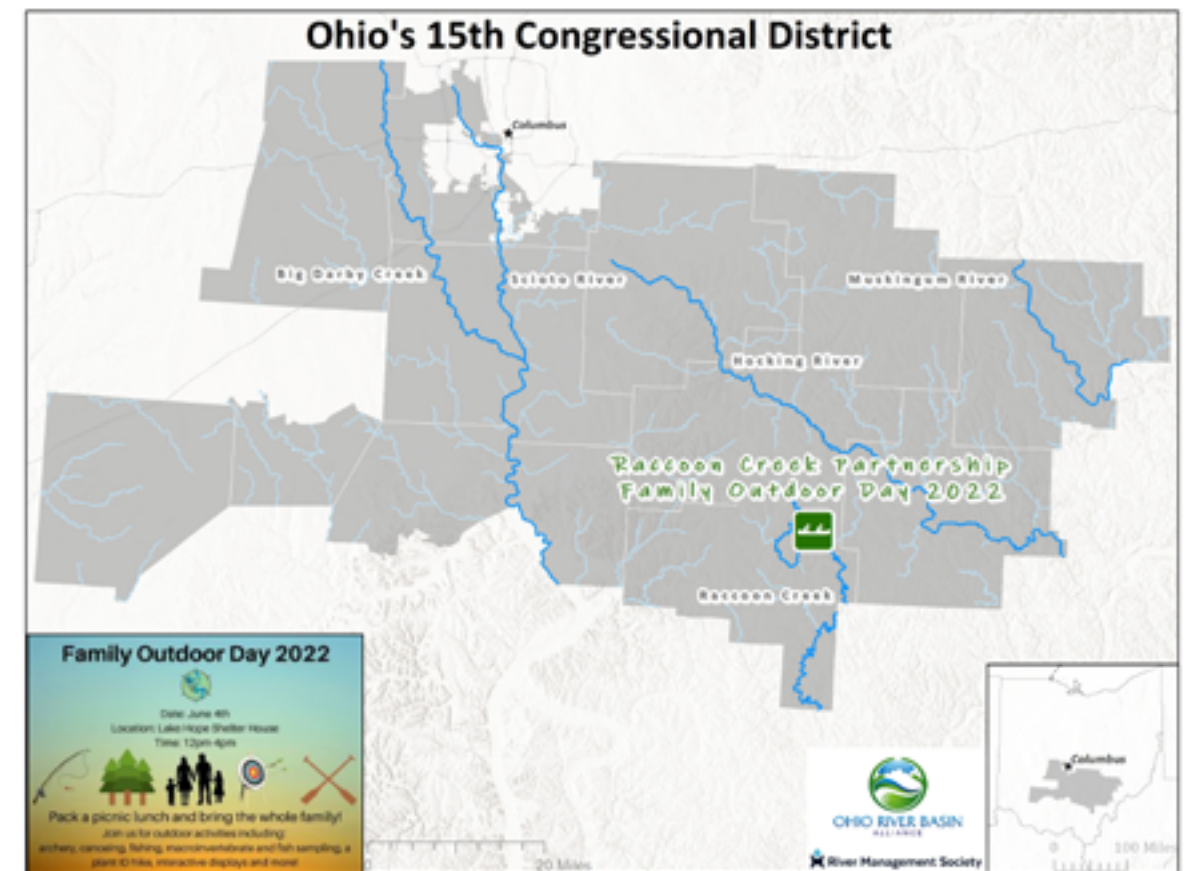
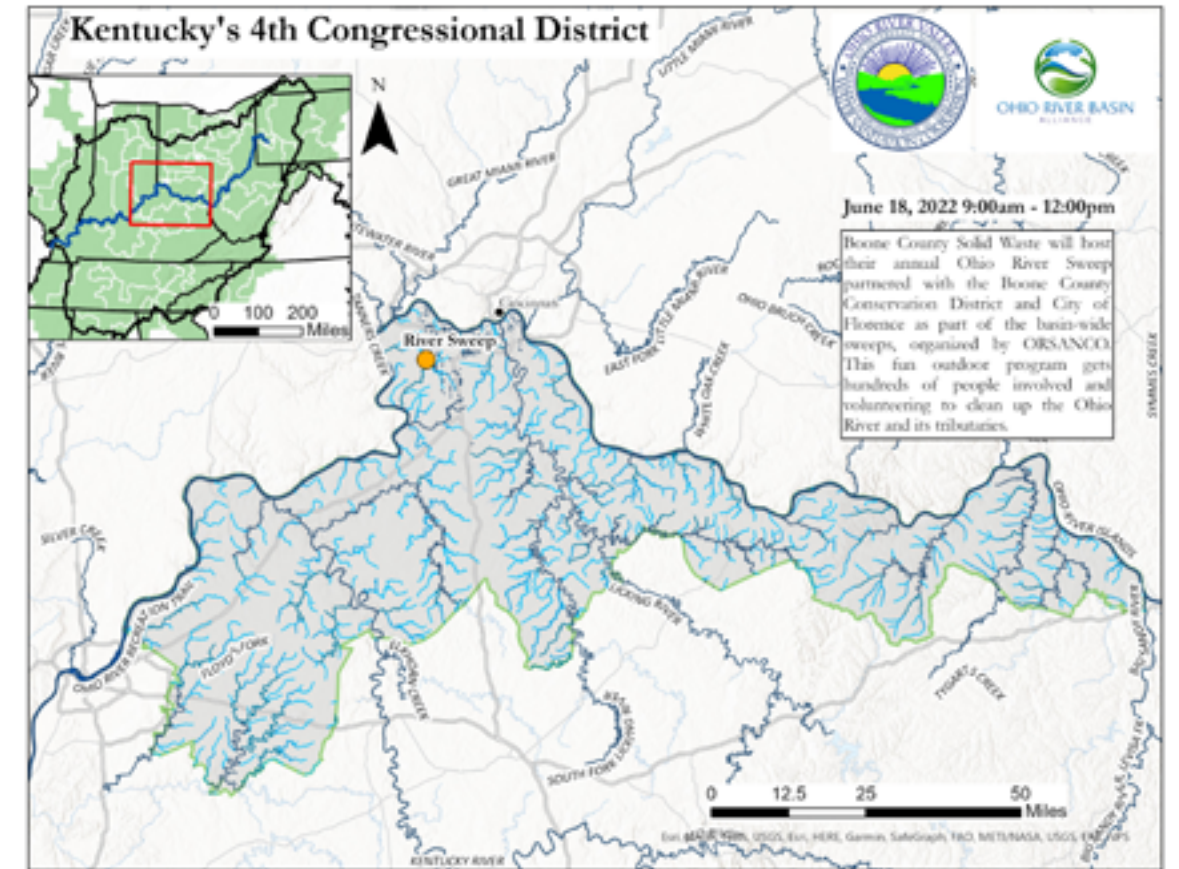
**Tomlinson Run State Park
Native Plant and Old-Growth Forest Hikes**
Tomlinson Run of Ohio River, West Virginia

Family Float Day
Jacobs Creek, Pennsylvania

The GREAT Miami Riverway FLOAT
Great Miami River, Ohio

Ohio River Sweep and Fishing Rodeo
Ohio River (RM451), Kentucky

Fun Family Float Day
Clarks River, Kentucky





REIMAGINE RIVER ACCESS

RIVER MANAGEMENT SYMPOSIUM
SAN ANTONIO 2023

Plan to Join Us!

February 28 - March 2, 2023

Join river managers, advocates, stewards, academics, and students at the La Quinta Inn Riverside in San Antonio, Texas, for three days of learning, sharing, and growing together! We'll explore the physical, economic, and social issues surrounding river access in a variety of concurrent sessions, keynote presentations, field trips, and discussions.

Share your river management successes, challenges, and aspirations!

**Request for Proposals
Due September 30, 2022 (at midnight ET)**

We welcome session presentations, panels, and posters that share innovations, creative approaches, successes, and visions for the future of river access from river management professionals (e.g., managers, planners, academics, consultants, and students).

Review and Selection

All proposals will be reviewed by the Program Committee. Due to the limited number of program times available, not all proposals are guaranteed a place in the schedule. All participants submitting a proposal will be notified of acceptance or rejection in October 2022.

Presenter Expenses

All presenters of an accepted proposal must register for the Symposium to participate. As a session organizer, you are responsible for ensuring that your co-presenters understand the policy and register. One-day and Student registration rates will be available.

Online Submittal Procedures

<https://docs.google.com/forms/d/e/1FAIpQLSfFWJRfkavqljWLwRDwly5dKCL5NcJCPgW3spjP4QL6Kvo3w/viewform>



Physical Access

River access points are the gateways to opportunities for visitors to enjoy and experience water-related activities. The sessions in this track will address the challenges of providing for diverse visitor uses and protecting natural resources.

Potential Topics:

Designing put-ins and take-outs, creating a "brand" and other signage, evolving role of hydro power, river restoration, repairing the effects of natural events or encroaching development, fish passage in-river/dam construction, visual resource management and training, endangered species protection, invasive species management, etc.

Economic Access

Investments in river access can increase visitor spending that directly supports many types of jobs, businesses, and local governments. The sessions in this track will address sources of funding and diverse partnerships that can lead to thriving river communities.

Potential Topics:

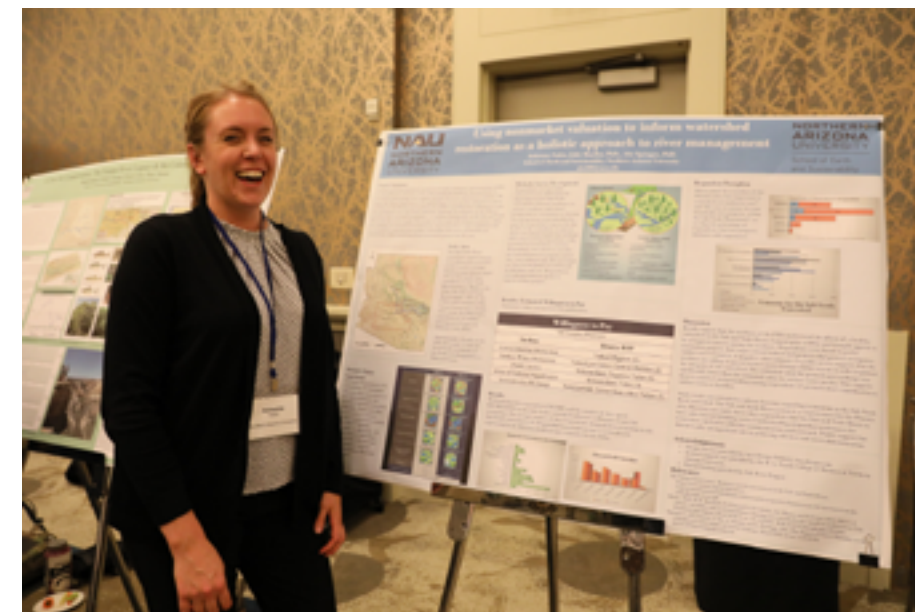
Funding sources and permitting programs, relationships between economic beneficiaries and administering agencies (i.e., New Braunfels, WORD of Comal County, and San Antonio River Authority), water trails, water districts, outfitting, administrative relationships with tribes, rights of rivers, etc.

Social Access

River and waterways access and the opportunity to enjoy and learn about them should be accessible to everyone. The sessions in this track will address the work being done to overcome barriers that keep communities from accessing, enjoying, and protecting rivers.

Potential Topics:

Welcoming and inclusive experiences, visitor use and management, accessible features and solutions, addressing underserved groups, sexual harassment prevention, institutional barriers like language, underperforming internet, cost, and location, etc.



Presentation Formats

You may submit more than one proposal, however, a separate submission is required for each presentation and/or poster session. The in-person meeting rooms will be equipped with a laptop computer, digital projector, screen, and podium. We will evaluate requests for other equipment on a case-by-case basis.

We welcome presentations, panels, and posters that share innovations, creative approaches, successes, and visions for the future of river access from river management professionals (e.g., managers, planners, academics, consultants, and students). Download the Request for Proposals PDF online.

Paper or Topic Presentation:

In-person concurrent sessions can be 30, 45, or 60 minutes depending on the type of presentation, including time for questions or discussion. We will be grouping presentations based on similar themes to fit within the 90-minute concurrent format. In addition to presenting in person, a pre-recorded video of your presentation to share on the Symposium app and resource library will be required.

Poster Presentation:

Poster presenters will interact with interested participants at the location of the poster display from 6-8 pm during the Welcome Reception on the evening of Tuesday, Feb. 28, 2023. In addition, a PDF copy of your poster to share on the Symposium app and resource library will be required.

Panel or Roundtable Discussion:

In-person panel or roundtable discussions can be 45 or 90 minutes, during which several people present or facilitate a discussion or brainstorming session on a specific topic, issue, solution, etc. The discussion should demonstrate a practical application and include audience interaction.

Photos courtesy of Meredith Meeks.

Rivers and Water at Various Angles

by Sierra Lucero

The Southwest offers many opportunities when it comes to water, and Colorado Mesa University (CMU) sits right in the center of a major basin, the Colorado River basin, which provides a multitude of opportunities for various people. When people think about rivers and water, it is typically recreation, politics, or news about the drought that comes to mind. There are so many facets of water that one can explore and throughout my career at CMU my goal has been not to look at water from only one viewpoint but from a multitude. This program has given me perspectives ranging from recreational opportunities, policies concerning water, hydrology, and field experience. This article will take you through my journey of loving and learning from rivers.

Water and rivers in particular have fascinated me since I was a child. I was naturally drawn to the unpredictable twists and turns and variety a river can be. Growing up on the Western Slope of Colorado, I fell in love with and spent many hours around the Gunnison River, Colorado River, Uncompahgre River and a few others — seeing various landscapes that rivers helped form and learning about how they are such an integral part of the West. They are lifelines that provide resources and sustain our communities. We see engineers straighten channels and interrupt their natural state, but also celebrate restoration and know certain wild rivers refuse to be contained. Throughout college I was able to work with the U.S. Forest Service (USFS), Natural Resource Conservation Service (NRCS), and Colorado Parks and Wildlife (CPW), as well as participated in the college's Outdoor Program and Outdoor Recreation Major. Having classes such as hydrology, river dynamics, swift water rescue, environmental politics and policies, and many others, shaped my knowledge of how important these waters are — growing not only my love of rivers, but also my knowledge of how they work.

Being an Outdoor Recreation major, I have learned about many different activities in which people take part, not only on rivers but other larger bodies of water. While this was fun and a good pastime, it was also key to learn about concepts like “leave no trace” and how to preserve and protect our resources. Rivers support water sports, hunting, fishing, and other types of recreation that address a majority of people in one form or another. I learned about the different agencies, the private sector, and other stakeholders that play a significant role in keeping our rivers clean and protected, as well as managed for various stakeholders and an ever-growing population.

On the flipside of recreation, I decided I wanted to increase my science base and technical knowledge, so I added Environmental Science as a second minor. I was able to take basic environmental science classes, like hydrology and river dynamics, and focused any research projects on rivers that are full of controversy. I surveyed flash flood channels in a canyon, looked at the hydrology of major rivers, and learned about the policies that have shaped them. Most of this experience came from the classroom but also included volunteer opportunities. A



Gunnison River

major focus was the Colorado River, since it was in my backyard and there are so many aspects that shape it. First was looking at the history of this mighty river and the policies such as the Colorado River Compact that has allocated water through several states in the West. Next was looking at the topography, geology, climate, and hydrology of different sections of river as well as structures such as dams and diversions. Another key aspect of the Colorado River is the native fish species. I was able to volunteer with CPW and set up a presentation with U.S. Fish and Wildlife about what is being done to protect the native fish species — breaking down the river and seeing how unique it truly is and how much it has to offer. If I were to go into detail about each aspect, I had the opportunity to learn about how I would probably be able to write a book. Rivers are truly unique due to how they flow and how much impact they can make.

During my college career, I also got the opportunity to have a hydrology internship with the U.S. Forest Service on the Grand Mesa Uncompahgre and Gunnison forest based out of Gunnison, Colorado. This internship was a unique experience because I got to look at different projects and how each was impacted by hydrology. This included trail maintenance, assessing campsite relocation based on proximity to riparian habitat, fen research, and restoration of a stream using beaver dam analogues (BDA's). The fen study looked at a different aspect of water, focusing on

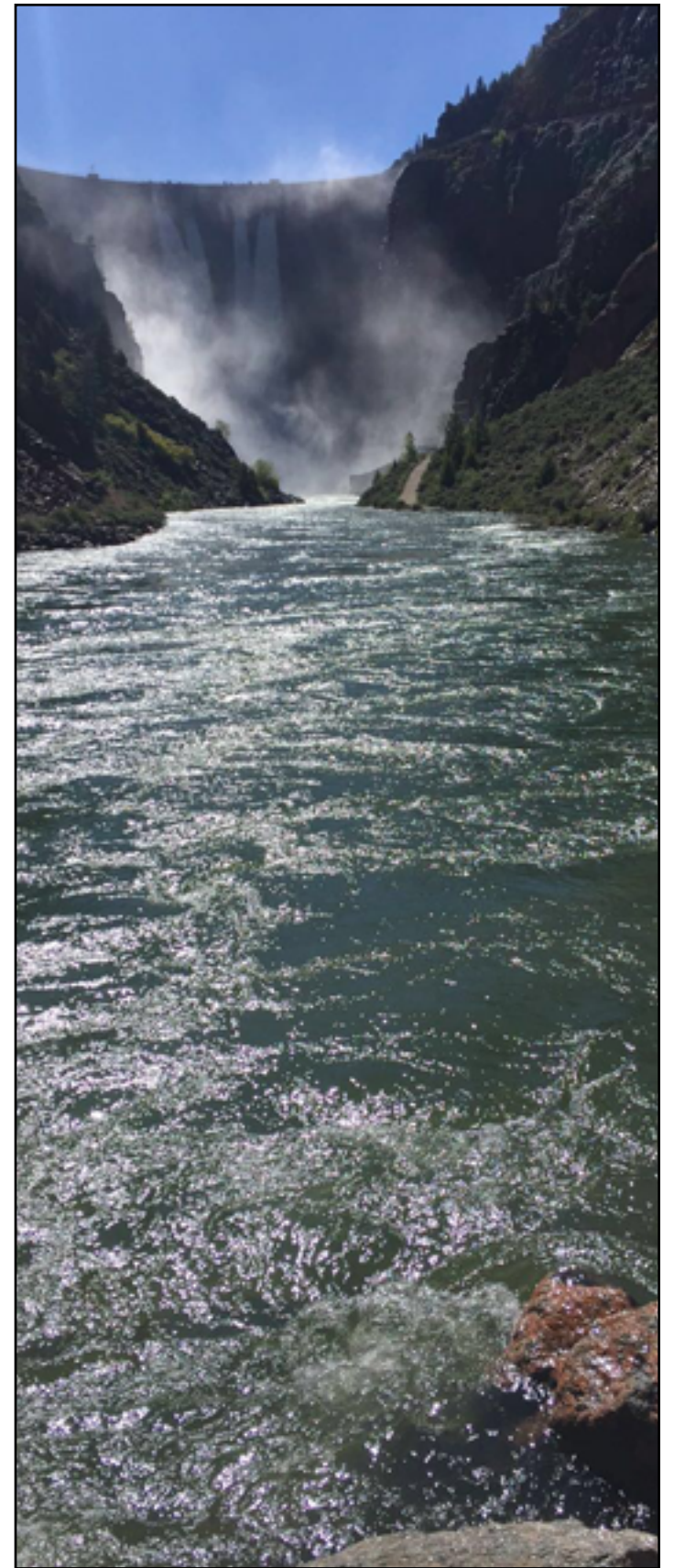
groundwater and springs and locating fens in the Taylor Park area. After locating the fens, we were able to go out and survey as well as take core samples of peat, look at the acidity of the water, and remap the fens based on our data collection. The other large project that brought multiple stakeholders together was using beavers and beaver dam analogues to restore riparian habitats. This included meetings with the public and different agencies such as Colorado Parks and Wildlife, National Park Service, Natural Resource Conservation Service and Bureau of Land Management, and looking at what areas in Taylor Park needed restoration from years of mining, grazing, and recreation that impacted the watershed. An initial site was picked and surveyed in order to see what points would have a better success rate for BDA's that would be implemented to reintroduce beavers to where they had historically been. This opportunity gave me excellent field-based survey and data collection experience.

In this short period of college, I have gained so much experience and had many opportunities to learn about rivers and how they shape our society. Rivers are vast, and I am excited to continue my education to learn more about them in the next chapter. ♦

This article represents a fulfillment component of the [River Studies and Leadership Certificate \(RSLC\)](#), which Sierra Lucero has now completed through Colorado Mesa University (CMU). This program was founded in 2014 by faculty at the Water Center at CMU and Prescott College, and has grown to include eleven colleges and universities across the United States. Reflecting on the opportunity to complete this Certificate, Sierra shares, “The RSLC program has given me opportunities that I would not have had during my college career. It also helped me build a foundation around rivers and water, and will hopefully help me continue to work with rivers in my future.” Photos by Sierra Lucero.



Colorado River



Morrow Point Dam is a 468-foot-tall concrete double-arch dam on the Gunnison River located in Colorado, the first dam of its type built by the U.S. Bureau of Reclamation. Located in the upper Black Canyon of the Gunnison, it creates Morrow Point Reservoir, and is within the National Park Service-operated Curecanti National Recreation Area. The dam's primary purpose is hydroelectric power generation. (Source: Wikipedia)

Welcome New Members!

Individual

Andrea McElwain
Helena, MT

Kelcy Huston, Hydrologist
USDA Forest Service
Grants Pass, OR

Renee Snyder, Retired
Stevensville, MT

Organizational

Rivershed SPC, Acme, WA
- Chris Elder, Principal

National Park Service, Anchorage, AK
- Adrienne Lindholm, Wilderness Program Manager
- Brenna McGown, Outdoor Recreation Planner
- Sharon Kim, Outdoor Recreation Planner

USDA Forest Service, Emmett, ID
- Erika Schaubach, Recreation Technician

National Park Service, Fort Collins, CO
- Susannah Erwin

Associate

Dave Johnson, Tribal Liaison (OR/WA)
Bureau of Land Management, Redmond, OR

Linda Hagedorn, River Ranger, Retired
Missoula, MT

Bill Sedivy, Boise, ID

Student

Sensairanay Duty-Stone
Virginia Commonwealth University
Richmond, VA

Henry Allen
University of Utah, Salt Lake City, UT

Ashley Rypkema
Fort Lewis College, Durango, CO

Jacob Long
Fort Lewis College, Bayfield, CO

(Executive Director, continued from page 2)

we worked together at American Whitewater in the early 2000s and even longer since we met in an eddy at Hell Hole Rapid on the Ocoee River. While we communicate very infrequently, one of us could call on the other for information and count on the other's assistance with no notice due to years of meaningful, hard-knocks learning. I so appreciate Jason, our shared experiences and his friendship.

In anticipation of the recent Klamath River trip, I very much looked forward to meeting Scott Harding, a new RMS member who lives in Forks of Salmon, CA. As we paddled, he reminded me that WE had met as well at Hell Hole (c.1993), and confirmed the time and place by mentioning the company I kept and the boats we paddled at the time!

Finally, an example of how river affinity transcends workplace roles, RMS reconnected with our much appreciated former legal advisor, John Putnam, who on May 12th was confirmed by the U.S. Senate, and sworn in as General Counsel of the U.S. Department of Transportation! Familiar with John's long-time interest in whitewater paddling and open canoe racing, I invited him to join me two days after his confirmation day as a finish timer for the 67th Annual Canoe Cruisers Association Potomac Downriver Race, the nation's longest continually-run downriver race. He signed up without hesitation and biked upriver from Capital Hill on a drizzly race day morning to serve on one of two teams clocking kayaks, canoes and SUPs at the finish line. He says he had fun during the respite from work-related travel and Department of Transportation complexity, and I believe him!

The Summer Solstice has once again opened the door to enjoy and learn during summer breaks from classes, extreme weather events and record-breaking river visitation. RMS' Summer 2022 River Management Roundtables offer opportunities to learn from each other as we provide the [Must Have River Management Resources](#) available to members of the community of river professionals, encourage participation in [Latino Conservation Week](#), and learn about the [History of racism](#) and its effect on water-based outdoor recreation... and this takes us only through July. The Northwest Chapter Blackfoot River trip is full, but the [River Ranger Rendezvous](#) on the San Juan River is on the horizon and may be calling your name!

River Management Roundtables are offered free of charge — watch for notices of upcoming sessions in the bi-weekly RMS News Digest that is emailed to all members, or check the Events Calendar from time to time. ♦



Risa Shimoda
Executive Director

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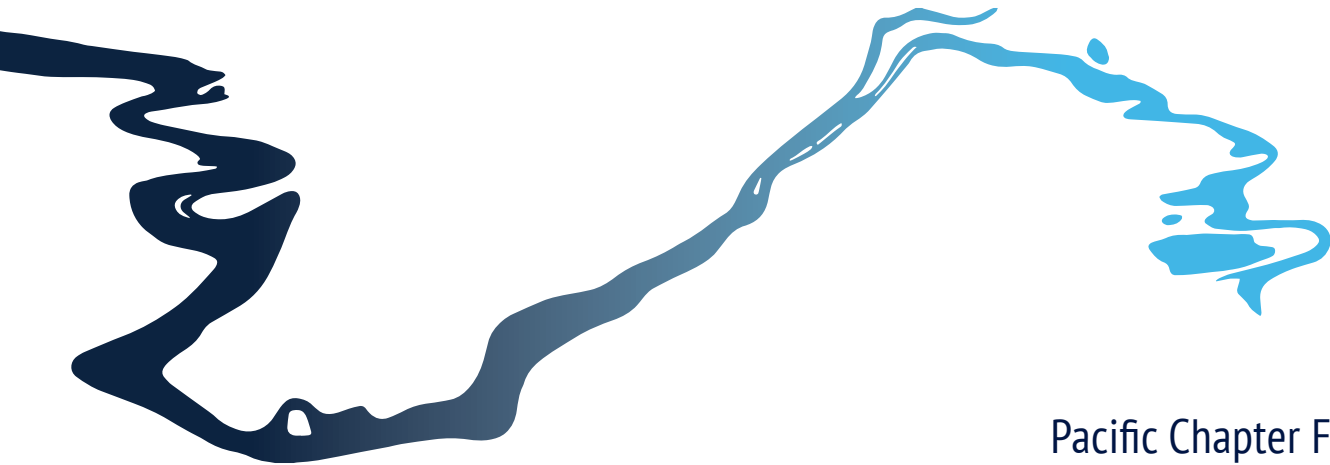


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