



RIVER CURRENTS

Summer 2023

Welcome to the Brooksher Watershed Institute

Christina Medved, Director of Community Outreach & Rick Lofaro, Executive Director

Roaring Fork Conservancy (RFC) was founded in the fall of 1996 during a time when watershed organizations were sprouting throughout the west. At that time, it was estimated that only 11% of Americans knew the definition of a watershed. Aside from the obvious focus on the Roaring Fork watershed, RFC was built on a foundation of education. One of the original three staff members developed our watershed education program, and many programs she created are still being taught today.

In addition to offering educational school programs to kindergarteners through college, and field-based adult and family programming, an early board member had an idea back in 1998: the creation of a Watershed Institute. The Watershed Institute would serve as a series of presentations with water leaders that would discuss water at the regional, state, national, and international levels. These presentations would also give the public access to water experts in a casual atmosphere to ask questions and increase their knowledge and understanding of the complexities of water and water in the west. It was this vision, timed with moving into The River Center, that this idea catapulted into reality when we established The Brooksher Watershed Institute in early 2019.

To date, RFC has hosted 28 Brooksher Watershed Institute (BWI) presentations. Speakers have included scientists, reporters, explorers, adventurers, authors, and meteorologists. Several BWI's were virtual with attendees from all over the world. One virtual attendee called in from New Zealand – an entire day ahead of Colorado time - to ensure he did not miss a presentation by someone conducting soil moisture research similar to his research. Most presentations have been in-person to sold-out audiences; we had to change venues a few times to fit more people because we wanted as many people as possible to benefit from these water leaders. We have used creative spaces to host intriguing presentations and films, such as Bristlecone Mountain Sports and TACA.W. Most recently, several BWI's were at the Basalt Regional Library and moving forward, most will remain there. Not only is it a community hub, but a place of learning. Where better to learn something new from a “living textbook” than at the library!

While the BWI began in effort to educate us, the public, and other professionals about water issues, we quickly discovered that we developed great relationships and friendships with each of the water leaders who participated. RFC staff maintain contact with almost every speaker, benefitting years later from the insight and expertise of groundbreakers in the field. Whether we're monitoring anchor ice and ice jam releases in the winter, or discussing the Colorado River

and reservoir systems between the Upper Basin and the Lower Basin, our new friends have not only educated us on the intricacies of the Colorado River but allowed us to lean into their areas of expertise in an advisory capacity, elevating our work.

The topics of the BWI's have also been timely. After the Grizzly Creek Wildfire, we sought to understand the nature of landslides and their long-term impacts on the Colorado River; 150 years after John Wesley Powell's expedition on the Colorado River we caught up with modern-day explorers retracing his journey; as Colorado River Basin states prepare to be allocated less water, a lower basin perspective was shared with us in the upper basin; and as exceptional drought conditions lingered on for months we learned about efforts to monitor and understand soil

moisture in a changing climate. Each of these water leaders has given us a deeper understanding and helped us make connections with other work we are doing. You might say each BWI is like taking a college course but without the pressure of finals.

Throughout this newsletter, you'll read about other ways RFC staff are leaning into the expertise of our BWI speakers. We hope you'll consider joining us in person for a future BWI. Learn more at www.roaringfork.org/education-and-outreach/brooksher-watershed-institute/.

The Brooksher Watershed Institute is named in honor of former board member and long-time supporters, Carter and Dane Brooksher. It was their dream back in 1998 that became a reality in 2019.





Boaters float through what used to be a beaver dam at North Star Nature Preserve.

Making Science Exciting: A Way of Thinking and Doing Things

by Heather Lewin, Director of Science & Policy

Mr. Williams, my seventh grade science teacher, greeted us each day in class with a large banner on the wall (printed out on connected DOT matrix paper!) that said, “Science is a way of thinking and doing things.” Funny how that has stuck with me so many years and science classes later. His definition is simple and broad. It is easy to understand without limiting what one could learn or achieve. With this premise, he taught the scientific method, set up experiments, led us through his extensive rock collection, and brought science to life. His enthusiasm engaged a group of rowdy young teenagers in what was, for many of us, our first “real” experience with science.

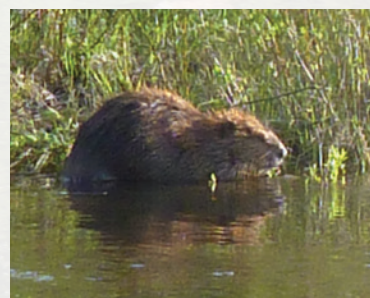
Unfortunately, over time, science seems to become less and less accessible, and the terms more and more complicated for many. Young children and teens are often intrigued by science, but somewhere down the line it gets too complex, too inaccessible. When is the last time you picked up a scientific journal for a little “light reading?” I know I never have! However, shying away from hard science does not diminish its importance, perhaps it even enhances it. As a science-based organization, when RFC “brings people together to protect our rivers,” there is inherently a level of science involved. So how do we re-engage the population who decided years ago that science is too complicated and boring? We hire educators, not just as our education staff, but also as our science, administrative, and executive staff. We are trained and practiced in sharing science in a common language - in a way that is easy to understand. Even better, we bring in experts with the same skills - people who are highly regarded in their field (and even author those complicated journal articles) - with a gift for making a hard science not only understandable, but exciting again!

To this end, the BWI brought Mark Beardsley to Basalt. Mark, who specializes in riparian monitoring, assessment, and restoration with a keen focus on ecological health and natural system processes, is one of the most dynamic and engaging speakers to grace the stage at watershed conferences nationwide. His infectious wit and humor

bring the science of restoration to life, providing the audience with a renewed affection for the water world’s current superstar, the beaver. For years, Mark has been advocating for “process-based restoration” (PBR), a low tech, light touch approach that sets the stage for rivers to reconnect to riparian areas and wetlands over time, creating space and opportunities for rivers to be rivers. This increases resiliency, lowers costs, and increases possibilities. And there is a near guarantee you will leave his presentation a full-blown beaver fan!

The relevance of Mark’s talk is apparent throughout Colorado, as constrained reaches of stream, detached from their floodplain with minimal vegetation, are more the norm than a wet and diverse riparian area. The timeliness became even more clear as the Colorado legislature began discussing whether stream restoration - particularly PBR, which increases the wetted area - should require a water right. In response, Colorado Department of Natural Resources drafted SB23-270, to create a venue for restoration projects to register with the state, and allow them to proceed under the assumption that they do not impact any existing water right and operates under the premise that “functioning natural streams are beneficial to all Coloradans.” Having an engaged public that recognizes those benefits builds supports for functioning stream ecosystems.

Bringing science back into the everyday life of the community, whether to restore an impaired stream reach or to allow thoughtful engagement in public process, is a goal RFC strives for at each BWI. We give the community a better insight into how we “think and do things” at RFC, and the science of a healthy river becomes exciting again.



Staff Flows



THANK YOU!

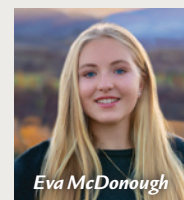
After 2 years as RFC’s Watershed Educator, **Alexis Hitzeroth** is starting a new chapter in Grand Junction. Alexis has taught thousands of students during her tenure at RFC. Her can do attitude, easy going demeanor, excellent teaching qualities, and her fly tying skills, will be greatly missed. We wish you all the best on your future endeavors, Alexis!



WELCOME!

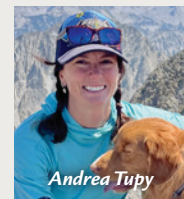
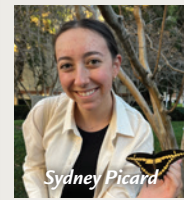
Shashi Neerukonda

After moving from Colorado as a kid, Shashi has always been interested in coming back to the Valley. For the last 10 years, she’s scaled startups, managed public-private partnerships and strengthened organizational cultures in countries throughout Africa, Asia, Europe and North and South America. While her journey to learn to ski has been a slow one, Shashi is passionate about travel and learning about different cultures, scuba diving and developing a blue economy, spending time in nature, and confusing folks with her different sports allegiances (Philadelphia Eagles, New York Rangers, San Antonio Spurs). She graduated from Haverford College (BA in Anthropology) and New York University (MBA) and is excited to join RFC’s policy team to gain a deeper understanding of water rights.



WELCOME BACK!

We are excited to welcome back **Eva McDonough, Sydney Picard** and **Andrea Tupy** this summer! **Eva** will be assisting with Return to the River and other events. **Sydney** will be greeting everyone at the front desk, teaching Watershed Explorations and assisting with community outreach. As RFC’s ecologist, **Andrea** will be continuing her work on our conservation easements and other science and policy projects.



Supporter Spotlight

Pamela & Craig Mackey



What hooked you with RFC?

Craig first learned of and partnered closely with RFC while directing a business coalition working to maintain healthy flows in rivers and streams across the Colorado River Basin - including the Roaring Fork Watershed. After we moved to the Roaring Fork Valley five years ago, we reengaged with RFC to support and reinforce its strong messaging and education on how critical water and the Roaring Fork Watershed are to our quality of life, economy and daily lives. RFC truly leads the way on water education and engagement in the Roaring Fork Valley - join us!

What do you wish people knew about RFC?

We wish more people knew about and participated in the fabulous field trips sponsored by RFC. The field trips are a wonderful combination of outdoor activity, education about our important Roaring Fork Watershed, and an opportunity to meet other residents and visitors to our beautiful valleys. From the diversion tunnels on Independence Pass, to the SNOTEL site on McClure Pass, to the riparian gems of Capitol Creek Ranch, the field trips offer an informed insight into the importance of water not only to residents of the Roaring Fork Valley but far beyond.



2023 Robert Billingsley River Conservator Award Goes to Andy Mueller

Roaring Fork Conservancy is honoring Andy Mueller as the 2023 Robert Billingsley River Conservator.

Andy Mueller is the General Manager of the Colorado River Water Conservation District. Prior to taking the helm at the River District, he spent 23 years in private law practice on the West Slope of Colorado. His work ranged across the breadth of critical western Colorado topics: water, natural resource, land use and community issues.

His combined experience prepared him to lead the River District, whose work is to lead in the protection, conservation, use and development of the waters of the Colorado River for the residents of the West Slope, and to safeguard for all of Colorado all waters of the Colorado River to which the state is entitled. Andy also serves on the advisory board of the Family Farm Alliance and as an ex-officio member of the Water for Tribes Initiative Advisory Board.

Andy is a valued partner and a dear friend of RFC, and we are thrilled to honor him as the River Conservator for his dedication to the West Slope and the Colorado River!

Base flows: (n) the normal flow conditions in a river that provide adequate habitat to support diverse, native aquatic communities and maintain groundwater levels for riparian vegetation.

BECOME A MONTHLY Base Flows Donor

Your monthly support provides dependable funding so we can focus on inspiring people to explore, value, and protect the Roaring Fork Watershed!

www.roaringfork.org/baseflows

Join today!

Thank You to the FRYINGPAN & BEYOND RIVER CLEANUP VOLUNTEERS & SPONSORS!

- Alpine Bank
- American Rivers
- A Squared Associates
- Colorado Parks & Wildlife
- Eagle County
- Jennifer & Cap Grossman
- Cornelia Long
- Barbara & Jons Milnor
- Jean Moore
- Odell Brewing
- Gerard Tomasso & Sherry Caloia
- Town of Basalt
- Waste Management



- ### 2023 BUSINESS MEMBERS
- Alpine Bank
 - Barnes Pearson & Rudow PC
 - Blazing Adventures
 - Bristlecone Mountain Sports
 - DHM Design
 - FirstBank
 - Incline Ski and Board Shop
 - JD Fly Fishing
 - Jordie Karlinski
 - Compass Real Estate
 - K and W Concrete, Inc.
 - Karp Neu Hanlon
 - Land Design 39
 - OpenSnow
 - Organic Return
 - RJ Paddywacks
 - Pet Outfitter
 - Snowmass Base Village
 - Stacey K. Kelly at Christie's International Real Estate
 - 32 Winds Wine

Thank you for supporting essential river research, education and conservation work!



2022 Annual Report

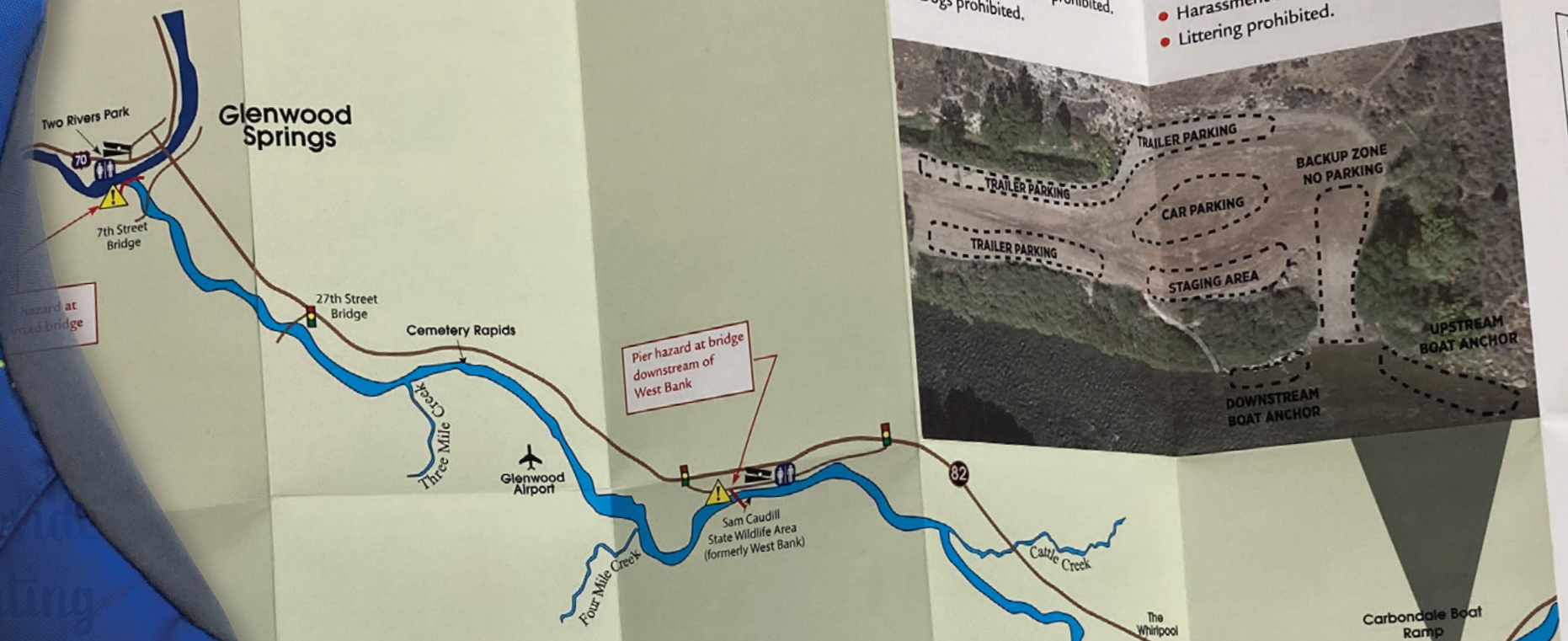
Available now at

www.roaringfork.org/about-us/annual-reports/

NEW

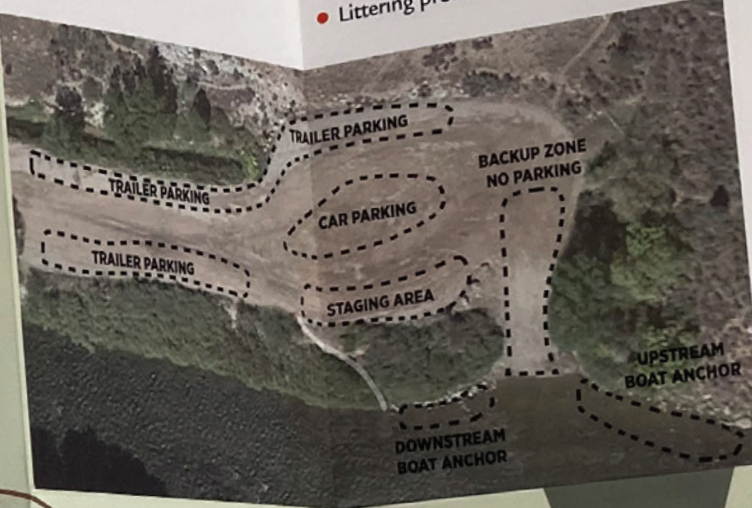
USER GUIDE TO THE LOWER ROARING FORK RIVER

Lower Roaring Fork River Carbondale to Glenwood Springs



Carbondale Boat Ramp Bob Terrell State Wildlife Area

- REGULATIONS:**
- Camping is prohibited.
 - Fires are prohibited.
 - Discharge of firearms prohibited.
 - Dogs prohibited.
 - All persons 16 and older accessing this property are required to possess a valid Colorado hunting or fishing license or a State Wildlife Area Pass.
 - Harassment of wildlife prohibited.
 - Littering prohibited.



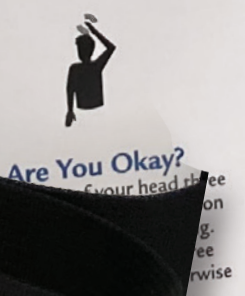
Scan the QR code to learn more and check the flows!

USER GUIDE to the LOWER ROARING FORK RIVER

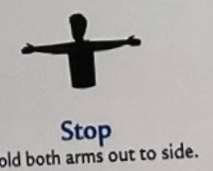
Presented to you by Roaring Fork Conservancy River Stewards



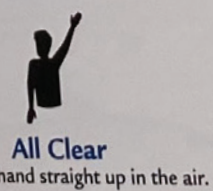
Universal River Signals



Are You Okay?
Hold one hand straight up in the air.



Stop
Hold both arms out to side.



All Clear
Hold one hand straight up in the air.

- KEY:**
- Boat ramp
 - Intersection
 - Public restroom
 - Hazard

Safety First! Float Checklist

- Ask yourself:
- Is the water at a safe level for me and my guests today? Am I capable of navigating the river?
 - Do I have a plan? Does someone know where I am floating and when I plan to be back? (Remember to make contact when float is finished and take out reached safely.)
- Life Jackets – for each passenger plus one spare
- Whistle and safety knife
- First aid kit
- Sun protection
- Medication
- Patch kit
- Phone
- Spare oar or paddle
- Boat pump
- River shoes or sandals with heel strap
- Dry bags for clothing (thermal layers, rain jacket etc.)
- Drinking water and snacks
- Throw bag
- Whitewater:
- Helmets strongly recommended in all whitewater, and for kayakers and stand up paddleboarders in all conditions.
 - One rescue line (Z-drain)

RFC's Water Quality Team Always Delivers!

by Chad Rudow, Water Quality Program Manager

"Neither snow nor rain nor heat nor gloom of night stays these couriers from the swift completion of their appointed rounds."* While many associate this quote with the U.S. Postal Service (USPS), we've been told the RFC water quality team also shares this mantra. While we, by no means, want to take anything away from the underappreciated, hardworking employees of the USPS, we do appreciate the sentiment. Our team has certainly conducted field work through snow, rain, sleet, wind, heat, cold, high flows, and even the occasional "gloom of night," not to mention accessing remote sample sites via foot, snowshoes, skis, bicycle, ATV, 4-wheel drive, and snowmobile. While we can, and do, conduct field work in all these conditions, it is important to understand those conditions and how they might affect our work before we begin.

RFC's field work provides valuable information as we collect baseline water quality data, study streams of concern, or highlight high quality waterways. Many times, study goals are dependent on collecting data during certain seasons or specific types of weather. We can often be found pouring over weather forecasts and discussing timing leading up to a field day. This is where Joel Gratz and the OpenSnow app come in as one of our most utilized weather tools. Joel started [OpenSnow.com](https://www.opensnow.com) with the goal of providing snow forecasts for skiing (a.k.a. powder days) and other outdoor winter enthusiasts, for whom it has become the go-to source for snow forecasting in



Colorado. RFC met Joel through our BWI speaker series, where he has been a presenter to captivated and packed houses. Through this relationship, we have learned much about the "science of predicting powder," or from RFC's viewpoint, the valuable snow that will become water in our rivers each summer. This is a prime example of how, in addition to public education, RFC benefits professionally from the BWI.



Returning to our water quality field work, Joel generously provides RFC with a complimentary subscription to OpenSnow. For us, it has become one of the leading tools we use to plan and schedule field work relating to weather and our study objectives. For example, when studying the formation of winter anchor ice in the Fryingpan River, we learned coldest conditions typically come during the clear nights just after a winter storm. With this knowledge, we time our anchor ice surveys so we are standing in the river studying ice in ideal conditions (a.k.a. the coldest winter mornings possible). Thus, we return to the opening quote, which accurately captures the lengths RFC water quality staff go to in pursuit of collecting scientifically valid and informative data regarding river health. Oh, and we occasionally take the opportunity to verify OpenSnow's forecast by closely examining the powder on the ski hill – for science, of course!

*Original phrase from *The Histories* written in the 5th century B.C. by Greek historian Herodotus.

Leaning Into the Expertise of Brooksher Watershed Institute Speakers

RFC water quality staff maintain relationships with BWI speakers for technical advice and expertise for several ongoing projects.

Dr. Ed Kempema

A leading authority on the formation of ice in freshwater ecosystems, Dr. Kempema was instrumental in helping RFC develop a plan to study and document anchor ice conditions in the lower Fryingpan River. He also educated RFC staff about ice jams, aiding in the ability to predict conditions that could cause ice jam releases which can be dangerous to winter stream users.

Dr. Dianne McKnight

Dr. McKnight is a professor at the Institute of Arctic and Alpine Research at the University of Colorado where she studies the effects of climate change on alpine lakes. When RFC learned of increased algae formation in local alpine lakes, Dr. McKnight guided us as we investigated this phenomena, and her lab has analyzed RFC algal samples.

Kendall Bakich

Kendall is an Aquatic Biologist with Colorado Parks and Wildlife and a frequent collaborator with RFC. She provides valuable knowledge as we work together on projects relating to the health of fish and insects in local streams and rivers, particularly in recent years where heat and drought have negatively impacted aquatic life.

Karl Wetlaufer

Karl is a Hydrologist and Assistant Snow Survey Supervisor for Natural Resource Conservation Service Snow Survey and Water Supply Forecasting Program. RFC staff reach out to Karl and his colleagues throughout the winter months with questions about snowpack data, graph interpretation, and Colorado-specific snow questions.

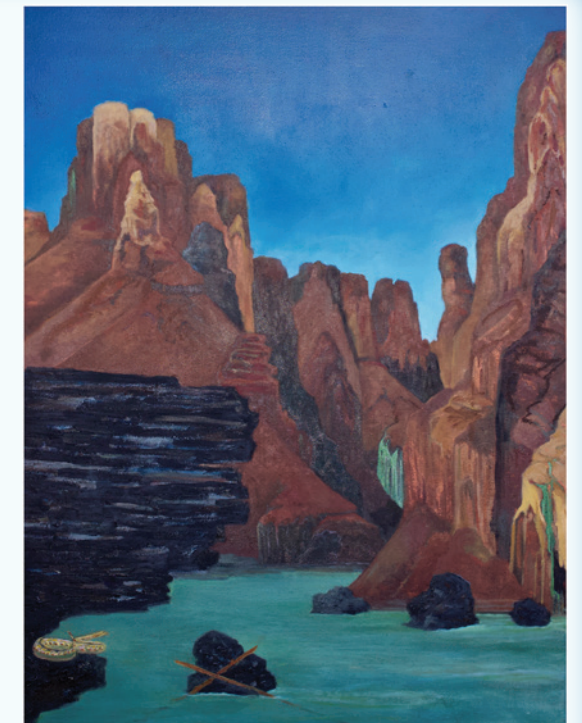
Field Drawing Workshop & Art Exhibition

with Patrick Kikut, MFA

Patrick is a painter and when he was a lecturer at the University of Wyoming in Laramie in 2019, he was the lead artist on the Sesquicentennial Colorado River Exploring Expedition: a 70-day, 1,000-mile journey, retracing John Wesley Powell's first passage down the Colorado River.

As lead artist and one of the few adventurers making the entire journey, Kikut was following in a centuries-old tradition of painters joining researchers on expeditions. Starting in the 1700s, researchers relied on painters to depict plants and animals as they studied new species and landscapes as they explored new terrain. Patrick will exhibit artwork from the expedition and teach a field drawing workshop on Friday, July 7.

Additional details and registration at www.roaringfork.org/events.



Camp Deep in the Canyon by Patrick Kikut

Diving in Deeper

by Megan Dean, Director of Education

One of the best practices an educator can incorporate is always being a student. Capitalizing on the expertise of national water leaders and most up-to-date research and policy, is essential for program relevance and depth. RFC educators are constantly updating and revising programs, utilizing current issues and water projects that are applicable to the field programs that we offer in the Roaring Fork Valley. BWI speakers bring a wealth of knowledge and provide RFC educators an opportunity to weave new and exciting information into our programs. Here are just a few examples.

BWI presentation:
Partnering with Beavers to Restore Colorado's Mountain Wetlands

Mark Beardsley & Jessica Doran, Founders of Econometrics

RFC Education program: *Beavers as Ecosystem Engineers*

Students learn about beavers as keystone species in wetland ecosystems by building a giant Jenga®-like game with beavers as the pillars of the tower.

Mark illustrated how beavers can be a partner in rebuilding and maintaining wetlands. A partner that isn't afraid to get their hands dirty and who comes with their own housing!



BWI presentation:
Where Do We Flow from Here?

Alex Hager, Reporter for the Colorado River Basin and Water in the West at KUNC

RFC Education Program: *Watershed Pen Pal Program*

This program connects students who utilize water from the Frypan River Headwaters. Through activities, videos, and images, students that live on both sides of the continental divide connect by writing letters to each other and communicating about water conservation.

Alex travels throughout the Colorado River Basin to give a voice to the Colorado River and the various groups of people that depend on it. After presenting at RFC's BWI, he published a story that highlighted the *Watershed Pen Pal* program and its innovative approach to water education, connection, and conservation. His story aired on National Public Radio in three states, greatly expanding the reach of this program.



BWI presentation:
"A River out of Time" Film Screening and Q&A with Expedition Leader Tom Minckley

Tom Minckley, Ph.D., Professor of Geology, University of Wyoming

RFC Education Program: *Plumbing the Colorado*

The images and stories that Dr. Minckley created with "A River Out of Time" gives students an opportunity to experience, through film clips, what the canyons of the Colorado River basin look like. Those film clips are great pre-activities that students can view before they participate in RFC's program *Plumbing the Colorado*.

BWI presentation:
A Lower Basin Perspective on the State of the Colorado River

Kathryn Sorensen, PhD, Director of Research & Professor of Practice, Kyle Center for Water Policy at Morrison Institute at Arizona State University

RFC Education Program: *Plumbing the Colorado*

Aspen High School students worked in teams to explore a branch of the Colorado River Basin, calculating how much water is added from tributary rivers and how much is diverted by human use, as it travels through 7 states to reach the 40 million people that depend on its waters. Information shared by Dr. Sorensen allowed us to dig deeper into how much water Arizona receives and how they will find alternative sources of water when their share runs low.

Plumbing the Colorado launches the experiential education program that Aspen High School students take to explore places along the Colorado River in the southwest.



Thank you to everyone who came out to our first **Runoff Party: Get River Ready with RFC on May 20!**



Explore the Roaring Fork Watershed With Us This Summer!

Float through North Star Preserve, catch a firefly, see rare orchids, tour a transbasin diversion and more!

RFC's summer program calendar is available at

www.roaringfork.org/events/.

RIVER CURRENTS

is published biannually by Roaring Fork Conservancy. Since 1996, Roaring Fork Conservancy has inspired people to explore, value and protect the Roaring Fork Watershed. We bring people together to protect our rivers and work to keep water in the streams, monitor water quality, and preserve riparian habitat. Roaring Fork Conservancy is an independent 501(c)(3) not-for-profit organization registered in the state of Colorado.

Board of Directors:

- Pat McMahon PRESIDENT
- George W. Kelly III VICE PRESIDENT
- Michelle Schindler SECRETARY/TREASURER
- Jeff Conklin
- Rana Dershowitz
- David Knight
- Jim Light
- Rick Lofaro EXECUTIVE DIRECTOR
- Don Schuster
- Diane Schwener
- Larry Yaw

Staff:

- Rick Lofaro EXECUTIVE DIRECTOR
- Heather Lewin DIRECTOR OF SCIENCE & POLICY
- Christina Medved DIRECTOR OF COMMUNITY OUTREACH
- Sheryl Sabandal DEVELOPMENT DIRECTOR
- Megan Dean DIRECTOR OF EDUCATION
- Chad Rudow WATER QUALITY PROGRAM MANAGER
- Elliott Audette BUSINESS MANAGER
- Matthew Anderson WATER QUALITY TECHNICIAN
- Andrea Tupy ECOLOGIST

River Stewards Steering Committee

- Jordie Karlinski, CHAIR
- Quinn Harnett
- Alex Heller
- Nick Kilbourn
- Leah Mancabelli
- PJ Murray
- Chris Vaughn

Thanks to our newsletter sponsor:



GRAN FARNUM PRINTING



ROARING FORK CONSERVANCY
P.O. Box 3349 ~ Basalt, Colorado 81621
(970) 927-1290 ~ www.roaringfork.org

NONPROFIT ORG
U.S. POSTAGE PAID
GLENWOOD SPGS, CO
PERMIT NO. 90



Return to the River

CELEBRATE WESTERN RIVERS

Benefitting Roaring Fork Conservancy

Wednesday, July 12th
featuring: **Woody Creek Distillers**

Wednesday, July 19th
featuring: **32 Winds Wine**

**WOODY
CREEK
DISTILLERS**

**FREE RANGE
KITCHEN**

**32 Winds
WINE**

Learn more at www.roaringfork.org/events.