

RIVER CURRENTS

An Unforgettable Summer...

By Rick Lofaro, Executive Director

While it could be said about any summer and every summer, the summer of 2018 was truly an unforgettable one in Basalt and the Roaring Fork Valley. A record dry winter devoid of any serious snowfall or honest powder days gave way to a spring with below average runoff across the watershed. In May and June river flows peaked early, absent the roiling torrent we often see and anticipate in late spring - the kind of runoff that sweeps the stream of last year's sediment and algae, and overtops its banks to saturate the riparian habitat, allowing the 'green ribbon of life' to thrive. The

kind of winter our mountain ecosystem relies on, one with robust snowfall that remains in a high elevation frozen reservoir and slowly releases over a warming spring, is less and less common.

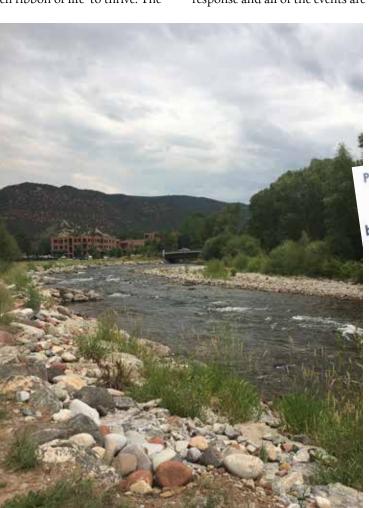
By late June, river levels were dropping fast, and water temperatures were rising to a concerning level. Enter Hot Spots for Trout, a Roaring Fork Conservancy (RFC) citizen science temperature monitoring program (see related article on page 12). River flow levels throughout the watershed were 1/3 to 1/6 of average, and summer was shaping up to be hot and dry.

Weeks of 90°F plus temperatures in Glenwood Springs, Basalt and even in Aspen, exhausted even the Roaring Fork Valley's tolerance for sunny days. RFC worked closely with the Roaring Fork Fishing Guide Alliance and Colorado Parks and Wildlife by holding weekly conference calls to discuss how to respond to these conditions. As a

result, the Hot Spots for Trout program was expanded to a new voluntary closure program from 2 PM to midnight on some area rivers, giving the trout a break during the hottest part of the day. The response from the commercial fishing industry and

the angling public at large was fantastic, and most everyone was reeled in by 2 PM.

On June 29, in the midst of monitoring the already stressed rivers, RFC loaded the final boxes from the old rental office and officially moved into the River Center. Four days later, on the evening of Tuesday, July 3, the Lake Christine fire ignited ¼ mile from the River Center. The fire fighters, the first responders, the community response and all of the events are truly unforgettable.



Roaring Fork River behind the River Center on July 20, 2018. The flow was 285cfs whereas one year ago on the same date it flowed at 1,050cfs.

Words cannot describe it, but if you were here you know, saw and have a unique story of just how heroic the effort was to save our towns. Yet, all the while we kept thinking about the river.



It was very stressful for everyone to see our beloved rivers struggle through summer. Tourism, agriculture, and municipal water supplies, all suffering in a dire time of need. Now that we are into fall and still lacking precipitation, there is talk of a Colorado River Compact Call, the ultimate repercussion of years of drought and water

shortage. The water struggle is real and never so pressing as today. So, start the snow dance and prayers now, and hope for a better snow year, ski season, water year and a rejuvenation of our rivers... so that we can try to forget about this past summer.



What happens after a wildfire?

A LAKE CHRISTINE WILDFIRE UPDATE

Steve Hunter, Civil Engineer/Hydrologist, White River National Forest, United States Forest Service

On the July 4th holiday in 1994, I was a fly fishing guide floating down the Colorado River staring at a small plume of smoke which would become one of the worst tragedies in wildland firefighting. I did not know it then but the South Canyon Fire would have an effect on my life and career. Fast forward 24 years to July 3, 2018, I again found myself staring at a plume of smoke of what would become the Lake Christine fire.

Like most valley residents, I followed the incredible efforts of local, state, and federal firefighters and first responders. I spent the 4th of July watching the aerial assault on the fire from tankers, heavy helicopters and single engine air tankers as the smoke would turn into impressive pyrocumulus clouds in the afternoon.

As the firefighters gained containment on the fire I knew the work of the U.S. Forest Service was far from over. I am the Burned Area Emergency Response (BAER) coordinator and specialist for the White River National Forest. I worked to mobilize a BAER team for the fire when the fire was still actively burning. Due to the busy fire season in the West, several team members were coming off other fires to assist while others were here locally.

A BAER team is composed of scientists, engineers and other specialists whose main objective is to rapidly access post-fire conditions to determine the level of potential risks to life and safety, property, critical natural and cultural resources. The team conducted analysis in the field and used science-based computer models to rapidly evaluate and access the burned area.

The team uses satellite imagery to create a soil burn severity map which categorizes the burn in areas of unburned, low, moderate, and high. The amount of moderate and high soil burn severity help to determine post-fire hydrologic and geomorphic response.

Debris flow modeling is done by the United States Geological Survey (USGS) to help determine the risk of such events occurring. The BAER team worked with interagency partner's including the Natural Resource Conservation Service (NRCS) who worked with private property owners in preparing for increased runoff and potential flooding.

The BAER team analysis helps determine the appropriate post-fire treatments for the area. Treatments for the Lake Christine fire included noxious weed detection and eradication, seeding and planting, improving drainage features on roads and trails, hazard trees, signage, and storm patrols.

At Left: High soil burn severity on the top of Basalt Mountain with hazard tree. Soil burn severity helps determine post-fire hydrologic and geomorphic response.



There are three phases of wildfire recovery:

- 1. Fire suppression repair
- 2. Emergency stabilization Burned Area Emergency Response (BAER)
- 3. Long-term recovery and restoration

Fire suppression repairs took place for over a month until fire crews demobilized at the end of September. BAER restoration work has begun as well, and this work will continue through the fall of 2018 and resume in the spring and summer of 2019.

Roaring Fork Conservancy is leading the effort on the long-term restoration. A team of experts from multiple jurisdictions met at the end of September to begin plans for addressing and prioritizing recovery and restoration efforts.

The Lake Christine fire changed the landscape that we were all used to. Portions of the fire that were lightly burned were greening up in August and will recover quickly. Areas that burned the hottest will take decades to recover though ground vegetation should begin to reestablish in one to two years.

Roaring Fork Conservancy is leading the effort on the long-term restoration.

There will be the continued risk of flooding, sediment and debris flows with any significant rain or snow events. The last BAER assessment on the White River National Forest was the Coal Seam fire in 2002. In 2018, there were four BAER assessments on the White River National Forest.

For additional information about the Lake Christine fire and other wildfires, please visit InciWeb which is "an interagency all-risk incident information management system" and can be found at https://inciweb.nwcg.gov/. More specifically, the Rocky Mountain Region can be found at https://inciweb.nwcg.gov/incident/5928/. Stay tuned to post-Lake Christine fire volunteer efforts in 2019!





Above: US Forest Service BAER team soil scientists and hydrologists analyzing soil burn severity on the Lake Christine fire. **Top Right:** Aerial image shows a mosaic of high, moderate, and low/unburned burn severity on Basalt Mountain above Upper Cattle Creek. **Bottom Right:** Aerial image of mostly high burn severity. Helicopters help BAER specialists rapidly access the entire fire to verify burn severity. The team then targets specific areas to analyze on the ground.

A COLLABORATIVE CLEAN-UP

Matthew Anderson, Watershed Action Intern

In 2015, RFC embarked on the Cattle Creek Stream Health Evaluation, intended to understand and address impaired conditions on the stream as designated by the State of Colorado. This included significant water quality monitoring, stakeholder outreach, fundraising, and collaborative efforts up and down the stream. That work continued this summer as 23 individuals from RFC, the Bureau of Land Management (BLM), Garfield County, and Rocky Mountain Youth Corps (RMYC) partnered to address concerns on BLM property along Lower Cattle Creek, a tributary to the Roaring Fork River.

The two-day project started with trash removal in a heavily littered riparian area. The enthusiasm and energy of the high school-aged RMYC volunteers kick-started the work, and soon, trash was being found everywhere, including in the trees! The bulk of findings included hundreds of bullet casings and shotgun shells, beverage bottles, and clay pigeons, while more unusual items such as a DVD player, car seat, and leaky oil container were also found. In addition to trash removal, an old fire pit was dismantled, the ash shoveled away, and a large wood pile was removed to discourage future fires. A few lucky RMYC volunteers donned hip waders and searched the stream itself for unwanted trash – which they found! Finally, BLM staff strategically placed boulders to discourage vehicular access to the creek while still allowing walk-in access.

On day two, approximately 450 yards of barbed wire was removed. This fencing was no longer in use and posed a hindrance to wildlife attempting to access the creek. RMYC's previous fencing experience was invaluable at this stage; their record-time removal of the fencing allowed more time for further trash cleanup. In total, 2,260 pounds of trash and debris were removed from Cattle Creek and the surrounding riparian habitat during the two-day work project.

This project was an excellent opportunity for RFC to continue working with Garfield County and the BLM in addressing the health of Cattle Creek. Additionally, the project allowed RFC to provide some knowledge and context about local watersheds to RMYC volunteers. The youth learned about the importance of riparian habitats in Colorado and quickly connected this project to river conservation. Projects such as these foster partnerships and provide meaningful, educational, and fun opportunities for youth from inside and outside the valley to interact with the Roaring Fork watershed.

Top Right: Removing unnecessary barbed wire fencing. **Middle:** So many shotgun shells and bullet casings. **Bottom:** We found a muffler. Hope the car got out okay!















Not Your Typical Science Class

Liza Mitchell, Education Programs Manager

What were the most memorable moments of your childhood? Surely they weren't sitting in the classroom.

While traditional education might not top the charts of a young person's life, discovery often does. RFC's new Youth River Stewardship Project combines interdisciplinary, place-based lessons about watershed science with a float trip on the river!

RFC's emphasis on field education aligns with a significant body of research showing how effective field-based experiences are in building students' sense-of-place, self-efficacy and environmental literacy. Targeting middle school students, RFC has partnered with several local schools and rafting companies to overcome traditional barriers to getting kids on the river. Once on the river, students work with each other and RFC educators to test the water quality of the river, assess riparian health, and learn to observe the intersecting dynamics of humans and nature.

Research suggests our country's youth spend less time outside, are less interested in natural resource careers, and participate in fewer outdoor recreation activities*. By providing opportunities for students of all backgrounds to connect with nature through a guided, educational rafting experience, RFC educators expose these students to careers in natural resources as well as recreation and establish authentic understanding of how healthy rivers benefit local ecosystems and economies. Water resources in the West are threatened by increasing population, climate change, and development; it is vital we prepare the next generation of citizens with the knowledge needed to make informed environmental decisions and take appropriate action at all levels.

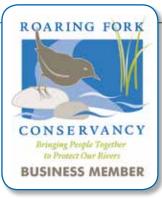
With grant support from Paddle Nation, RFC educators have spent over 31 hours in direct student instruction through the Youth River Stewardship Project, helping over 300 local students get on the river and conduct scientific assessments of river health!

Objectives of RFC's Youth River Stewardship Project

- Ensure youth of diverse backgrounds get to know and experience their local rivers
- Convey the importance of healthy rivers to our environment and economy
- Give students opportunities to do hands-on, field-based science research on the river
- Inspire the next generation of environmental stewards and water professionals

Louv, Richard. (2005). Last Child In The Woods: Saving Our Children From Nature-deficit Disorder. Chapel Hill, NC: Algonquin Books of Chapel Hill.

^{*} Hager, S., Straka, T., & Irwin, H. (2007). What do teenagers think of environmental issues and natural resources management careers? Journal of Forestry. 105(2), 95-98.



2018 BUSINESS MEMBERS: Thank you for supporting essential river research, education, and conservation work!

Aspen Fly Fishing Barnes, Pearson & Associates, LLC **Berthod Motors Blazing Adventures Blue Creek Business Solutions Blue Sky Adventures** Casey Brewing and Blending Footsteps Marketing Incline Ski and Board Shop **K&W Concrete** The Romero Group **Trout Bandits** 20/20 Eyecare



Thank Your

Each year, at our annual River Rendezvous fundraiser, a "Paddle Raise" is held to raise funds for specific RFC programs. This year the River Rendezvous planning committee decided to break with tradition and dedicate the paddle raise to the First Responders that kept our community safe during the Lake Christine Wildfire. Starting with \$10,000 from Alpine Bank, over \$120,000 was raised between the River Rendezvous on July 11 and the following weeks. The Lake Christine Wildfire was a difficult time for many in our community and we are all so grateful to the first responders from Aspen to Carbondale for their heroic actions!





Promoting Roaring Fork Watershed Pride!

RFC partnered with local artist, storyteller and environmental advocate, Sarah Uhl, to create a story map of the Roaring Fork Watershed. More accessible than a topographic map, this piece of art is incredibly accurate, thanks in part to aerial tours of the watershed with EcoFlight. It features the "important places" of the Roaring Fork Watershed – the rivers, tributaries, lakes, reservoirs, mountain peaks,

towns, and iconic landmarks that are all inexorably linked within our watershed.

The original story map is on permanent display at the River Center, but if you want to show some pride in the Roaring Fork Watershed, make a donation to RFC and receive one of the maps as a thank you gift.

\$35 donation = 12" x 16" print \$55 donation = 24" x 36" print

Where the Water Meets the Land: Impacts of Drought on Agriculture

Elizabeth Chandler, Owner/Operator, Golden Eagle Ranch, New Castle, CO

The Lake Christine wildfire, low river flows, stressed fish, and reduced recreation are all well publicized results from the hot and dry summer. Less understood is the effect the hot and dry summer has had on agriculture.

Agriculture depends on water to raise crops and grow livestock. Without water, agriculture cannot survive. Think of what happens when you forget to water your houseplants for a week or two. When given water they just don't come roaring back to life; it takes a while for them to recover and

pastures and hay fields that haven't received irrigation water or significant rain since early June. then they are usually not quite as healthy as before. Now think about our These fields didn't produce a very robust hay crop this summer and will not be able to provide fall feed for livestock. The longer term question is what will they produce next year even with good water?

The law of supply and demand holds true for agriculture. The high demand and low supply made hay extremely expensive this year, resulting in early sales of livestock and a deep culling of the mother herd. This increased supply of livestock at the market exceeds the demand and results in lower prices. The secondary issue is the reduced numbers in the mother herd. It will take multiple years for ranchers to build their herds back up to a profitable size. This reduces the buying power of ranchers and causes other businesses to also have reduced profit margins. Farm supply stores, equipment dealers, and trucking businesses will all be impacted, but so will restaurants and recreation businesses.

This is not the first extremely dry year from which agriculture has had to recover, but it is the hottest and driest year ever in our area. The combination of hot and dry magnify the effects of each other. The hot weather increases the evaporation from streams and lakes, increases the water needed by plants to produce, and lengthens the period of time plants need water. The best prediction from climatologists is this weather pattern may be our new normal. The uncertainty adds to the stress: Will rain come and the drought be over, or are the climatologists right that hot and dry weather is our new normal?

The emotional impact of working hard to tend your livestock and land only to have it lost to circumstances beyond your control is difficult to appreciate. It is hard to wake up every morning to dry fields knowing that you will have to sell off livestock that you have spent years raising. You worry about how long it will take for your fields to reestablish themselves - if you get good water next year. Will there be snow? What if next year is as dry as this one? Can we keep the ranch? Should we just sell off now? How much can we sell and still have a chance to survive if we get snow? The list of questions goes on and on, but the real point is that a drought is very stressful. It is about the survival of your livelihood, your way of life, your family's

Tourism, recreation, wildlife, and agriculture are all interrelated. Wildlife depends on irrigated lands for winter pasture. Recreation and tourism both benefit from the open space and green fields that agriculture provide. Agriculture benefits from the recreational and tourism based economy. The hot and dry year has had a negative impact on all of these areas. A good

water year will restore recreation and tourism, but it will take several years for our fields to regain full production and to build the livestock herds back up to current numbers.

At left, photo by Katherine Dessert. At right, photo by Tim O'Keefe







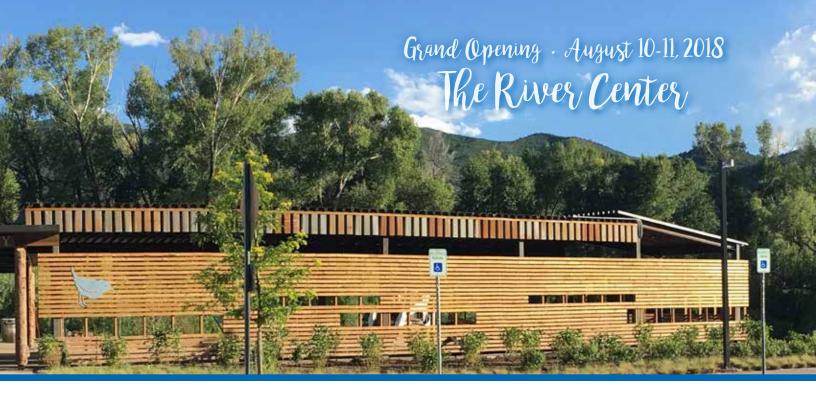






1. RFC staff with Governor Hickenlooper. 2. Children use microscopes to get a close up view of the aquatic insects!
3. Guests tour Old Pond Park. 4. Guests tour the River Center Water Quality Lab. 5. Using the River Center classroom to update guests about the Lake Christine wildfire. 6. RFC Board Members. 7. Celebrating at the donor reception, the Edwin & Jenny Long Murphy family. 8. Former Governor Bill Ritter talks to RFC's Director of Watershed Science & Policy, Heather Lewin, and Director of Community Outreach, Christina Medved. 9. Governor Hickenlooper meets Sarah Uhl, the Roaring Fork watershed map artist, along with RFC Education Programs Manager, Liza Mitchell, and executive director, Rick Lofaro. 10. Governor Hickenlooper is presented a Roaring Fork Watershed Map by executive director, Rick Lofaro, and RFC board president, Pat McMahon. 11. Franklin Carson, RFC board president Pat McMahon, RFC National Council Members Carter Brooksher and Judy Baum, with Governor Hickenlooper. 12. RFC executive director, Rick Lofaro, along with Mr. John Stulp, Special Policy Advisor to the Governor for Water and Chairman of the IBCC at State of Colorado, Vice President of RFC National Council Carter Brooksher, and former Governor Bill Ritter during the Ribbon Cutting. Photos provided by Dale Armstrong, Christina Medved and Diane Schwener.





















Creative and Cooperative Water Management Benefits the Fryingpan River

Heather Lewin, Director of Watershed Science & Policy

As the 2018 water year comes to a close, there likely won't be too many sad goodbyes. A warm, dry winter gave way to a hot, dry summer - and all that goes along with it from fire to drought. This summer, good news about water seemed about as hard to come by as a rain storm. However, hard times breed cooperation and innovation, particularly in water management. As we have seen throughout

this summer, the management of Ruedi Reservoir plays a critical role in not only the Roaring Fork watershed, but the whole Colorado Basin.

Ruedi Reservoir was built as compensatory storage for the Fryingpan-Arkansas Diversion project. Put simply, Ruedi Reservoir holds water dedicated to Western Slope use in order to offset water sent to the Eastern Slope via transmountain diversion from the

Fryingpan headwaters. Beyond a certain amount of water being held as "reservoir water"- water which is not released downstream - water in Ruedi is dedicated as either "fish water" or "contract water." Fish water is stored in Ruedi and released throughout the spring and summer to help four threatened or endangered fish species that live in the Colorado River and require additional water in an area near Grand Junction known as the "15-Mile Reach." Contract water was sold by the Bureau of Reclamation (BOR) to recover the costs of building and operating the dam. Contract water is held by a variety of entities from municipalities to HOAs, with the largest shares belonging to Ute Water Conservancy District, Colorado River District, and Exxon Mobil Corporation.* However, for most local residents, Ruedi unlocks the door to Basalt's recreation economy; from flatwater recreation on the reservoir to fishing on the Fryingpan. Those who live in the area are often concerned that these local interests are overlooked in Ruedi management efforts.

While it's true that recreation economy was not the purpose behind Ruedi's creation, there is no denying its value. In 2015, RFC commissioned an economic study with Colorado State University that showed recreation at Ruedi adds \$3.8 million to the local economy. The same study found that keeping winter flows in the Fryingpan

at a minimum of 70cfs, to lessen anchor ice formation and impacts, adds \$1.5 million to the economy. Avoiding anchor ice also has ecological benefits. Anchor ice can freeze and scour macroinvertebrate habitat, having negative effects on not only the insects, but also the fish and birds who eat them. However, without a water right on the Fryingpan or contract water in Ruedi, RFC has



Fryingpan River by Barry Mink

found it challenging to

ensure this minimum flow is met in low snow

years. Conversations

with the BOR have had

positive results, where

managers work to keep water at environmentally

beneficial flows. However,

with no guarantee as many

Ruedi water management

this arrangement comes

decisions that regulate

involve specific uses

and target areas, and

in multiple reservoirs

these needs.

are complicated by the

utilization of water stored

around the state to meet

Ensuring winter minimum flows are met consistently requires creativity and cooperation. RFC approached the Colorado River Water Conservation District ("River District") last summer with the possibility of coordinating a lease of some of their contract water for winter flows. Each contract has a specific target water use, and it is difficult to operate outside the uses specified in the contracts. Fortunately, some of the River District's contracts included winter environmental flows as a specified use. However, water is not free, and leasing water comes at a cost. This is the first environmental contract water lease that the River District has ever participated in, requiring staff to ask their governing board to both allow the lease, and price it the same as an agricultural water lease. With River District Board approval, the lease was then brought to the Colorado Water Conservation Board's (CWCB) Stream and Lake Protection Section, who has money available to lease water for environmental benefits. With both boards' approval RFC helped secure 3,500 acre feet of water to supplement winter flows. CWCB staff is now returning to their board to ensure that any of that 3,500 acre feet that is not used during the winter becomes available to the 15-mile reach this summer.

Continued on page 11

RFC continues to work with both the River District and CWCB to discuss creative management options to help meet local needs. For example, the River District re-allocated their reservoir releases for the Grand Valley from other reservoirs and sent additional water down the Fryingpan in July. That release provided flow benefit not only to the Fryingpan, but also the Roaring Fork, where flows were low and temperatures were high. This water, while meeting a downstream use, was able to benefit a local use as well. At a time when water management is as important as ever, we are hopeful that this sort of creative management strategy, designed to meet multiple uses will serve as an example for the future.



*Gardner-Smith, Brent. (2016, April 17) Who Owns the Water in Ruedi Reservoir? Aspen Journalism, retrieved from https://www.aspenjournalism.org/2016/04/17/who-owns-the-water-in-ruedi-reservoir/.



Boulder Boat Works Raffle Winner!

As part of our River Center Grand Opening ceremony on August 10 and 11, RFC raffled off a beautiful Boulder Boat Works Pro Guide drift boat package valued at \$18,000. We were thrilled to pull the winning ticket of Nancy Reinisch and Dr. Paul Salmen of Glenwood Springs. RFC called and emailed Nancy to inform her she had won. This was her email response –

"YAHOOOOOO!! Please call me! I bought this ticket for my husband's 65th birthday and for being the best cancer caregiver ever to me! I am screaming for joy! Oh my gosh, oh my gosh!! Thank you, thank you! Please call me, unless of course, you don't want to hear screaming!!!"

A perfect ending to a perfect Grand Opening weekend. Nancy, now at age 65 and in the midst of a second battle with metastatic breast cancer, reached a career high by completing her 100th triathlon in 2018. Paul received the kind of birthday present fly anglers dream of. Now he and Nancy can row off into the sunset and enjoy their new Boulder Boat in the same valley where they live, where the boat was made, and where the boat belongs - on the gold medal waters of the Roaring Fork River!



Staff & Board Flows



Matthew Anderson, Watershed Action Intern

Matthew returned to RFC for a second summer to assist our Watershed Science & Policy group. Matthew was born and raised in Basalt and is currently a junior in the Environmental Science and Resource Management program at the

University of Washington in Seattle. Matthew helped conduct water quality field-work, data management, maintained in-stream temperature loggers, and monitored conservation easements throughout the Roaring Fork watershed.



Mercedes Wilson, Executive Assistant/Office Coordinator

As a recent transplant to Basalt, Mercedes welcomes the opportunity to work protecting the Roaring Fork Watershed. Living by the Mississippi and the Indian Rivers forged her passion

for water. Having spent time in Thailand, Italy and Nicaragua served to further her interests in riparian rights, conservation and wildlife. Mercedes looks forward to supporting RFC's mission with her management and administrative skills. Mercedes is also Spanish Bilingual with a Master of Science in Disaster, Resilience and Leadership. During her free time, Mercedes enjoys spending time with family, rafting and fishing.



Michelle Schindler, RFC Board Member

Michelle joined the RFC board in 2018. She is an attorney with the Matthew C. Ferguson Law Firm, P.C. in Aspen, Colorado, where she concentrates her practice in real estate and commercial litigation. Michelle grew up in

Madison, Wisconsin and then attended Northwestern University, where she earned her degree in Environmental Sciences. Prior to going to law school, Michelle worked for 5 years in environmental advocacy and the non-profit sector. After attending law school at Loyola University of Chicago, Michelle started her legal career in Chicago, Illinois and several years later moved to the Roaring Fork Valley. Michelle resides in Basalt, Colorado.

Citizen Scientists Keep a Pulse on River Temperatures!

Kristen Doyle, Watershed Educator

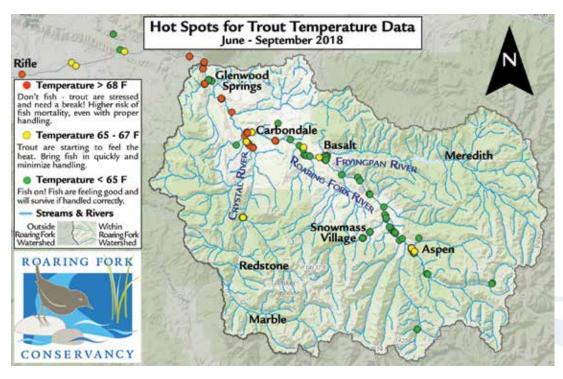
As water temperatures increased and drought persisted this past summer, RFC restarted a citizen science project, Hot Spots for Trout, to monitor local river and stream temperatures.

From June to September, 63 volunteers submitted over 280 observations throughout the Roaring Fork Watershed. That's over 1,000 individual measurements! This information allowed RFC to identify areas of concern and collect additional data where needed. The



measurements taken by our Hot Spots for Trout volunteers also helped RFC collaborate with Colorado Parks and Wildlife (CPW), resulting in voluntary fishing closures from 2pm-midnight, giving fish a break in the hottest part of the day.

The data submitted by our volunteers suggests those fishing closures may have prevented a considerable number of trout mortalities. The combined stress of angling and warmer water can be enough to kill, even when anglers follow proper catch-and-release techniques. Stream temperatures were mostly within a healthy range for trout in the Roaring Fork upstream from Basalt (below $65\,^{\circ}$ F). Downstream was a different story. Afternoon water temperatures below Carbondale often crept above $68\,^{\circ}$ F – the temperature at which CPW asks anglers to pack it up and fish another day.



Special thanks to the Roaring Fork Fishing Guide Alliance and the Roaring Fork Valley Fly Fishing Club, whose members stepped up to volunteer and get the word out, CitSci.org, and fishpond, inc. who provided thermometers.

Effects of Water Temperature

Chad Rudow, Water Quality Program Manager

Water temperature can impact both chemical and biological processes in rivers. Chemically, it directly influences pH levels, the speed of chemical reactions, and oxygen levels. In particular, warm water holds less oxygen than cold water, limiting the supply available for aquatic life.

Biologically, higher temperatures increase the rate of energy production and oxygen consumption in fish and aquatic insects. This can cause significant stress on organisms as they require increasing levels of oxygen, which are already limited in warmer water, to maintain body functions.

19TH ANNUAL REPORT THE FRY INC. ON THE BANKS OF THE FRY INC. JULY 11,

ON THE BANKS OF THE FRYINGPAN July 11, 2018



2018 River Conservators were Mary & Pat Scanlan and Mark Kleckner & Tracey Snow (pictured here)



Jennifer & Scott Thompson, Basalt & Snowmass Village Fire Chief, with Heather & Greg Knott, Basalt Chief of Police.

Dane Brooksher, Pat McMahon and Judy Baum



Edgell Pyles, Marianne & Dick Kipper, and Marty Pickett enjoy themselves on the banks of the Fryingpan River.



Crosby Vail and Kory Ross attending the trout release tank.



Rick Lofaro, executive director of RFC, with the Boulder Boat Works drift boat raffled off this summer.



Basalt Police Chief Greg Knott and Fire Chief Scott Thompson were honored at this year's River Rendezvous.



Alexandra George, Emily Davis, Sam Broom and Anna Schwinger



Sarah & Robert Woods at their final year of organizing River Rendezvous. RFC will always be grateful for their contributions and service.



Carter Brooksher with Harry and Bonnie Kloosterman and Kathy and Jerry Pettit.

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\$100,000

Timbo's Pizza

Barb & Pat McMahon

Town of Snowmass Village

White River National Forest

Waste Management

Wilderness Workshop

Willits General Store

\$50,000-\$99,999

Hyde Family Foundation Marianne & Dick Kipper

\$25,000 - \$49,999

Mary & Jim Griffith Dianne G. & James W. Light Jane & Tim McMahon Roaring Fork Club Partners

\$15,000 - \$24,999

Janie & Edward Bradley Ruth Fund Mary & Neil Dorflinger

Nancy & Rich Kinder Cornelia & Meredith Long

\$10,000 - \$14,999

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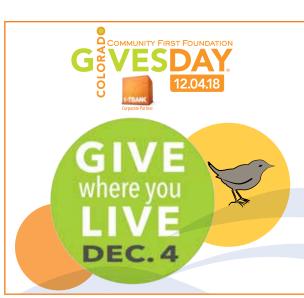


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