







Roaring Fork Conservancy (RFC) sprang to life as a regional watershed group in the mid-1990's, in the midst of a water-focused movement in Colorado. Originally charged with educating the public, promoting conservation practices and protecting the Roaring Fork River, twenty years later, RFC still functions as the first and only organization focused solely on river and water issues throughout the Roaring Fork Watershed.

Celebrating milestones provides opportunities to reflect on the impact of our work in the last 20 years: Over 103,000 students exposed to watershed education programs; Over 53,000 water quality tests conducted to determine the health of local streams; • Over 3,000 volunteers helped with river cleanups and restoration projects; Almost 300 acres of riparian land protected in perpetuity through conservation easements; and An invaluable number of friends and supporters who continue to make this important

- work possible!

With the publication of the Crystal River Management Plan in June, RFC is now working to implement one of the first stream management plans in the state of Colorado. People across the state are watching the work we are doing here in the Roaring Fork Valley, and we are assisting some of them in replicating our successful studies and programs in their watersheds.

As we move into our third decade of Watershed Action and Education, we are continuously reminded that even this beautiful watershed has its challenges to overcome and significant reasons to invest in its protection. Each day we embrace our responsibility to every river, streambank, community member and student.

Please enjoy this year-end review of our 2016 programmatic and financial success. Thank you for enabling us to bring people together to protect our rivers. Here's to the next 20 years of inspiring people to explore, value and protect the Roaring Fork Watershed.

Thank you for your continued support!

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Pat McMahon President, Board of Directors

Here's what 20 years of protecting rivers looks like

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Rick Lofaro **Executive Director**

Who We Are

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, work to keep water in the streams, monitor water quality, and preserve riparian habitat.

As one of the largest watershed organizations in Colorado, Roaring Fork Conservancy serves residents and visitors throughout the Roaring Fork Valley through school and communitybased Watershed Education programs and Watershed Action projects, including regional watershed planning, water resource policy, and stream management and restoration initiatives.

Roaring Fork Conservancy is an independent, 501(c)(3) not-for-profit organization.





Roaring Fork Conservancy Highlights





Watershed Action

The Watershed Action program addresses current issues and future threats to watershed health and integrity. Proactive science and watershed planning help inform decision-makers and direct on-the-ground improvement and restoration projects. Most current endeavors, including scientific studies, restoration projects, policy work, and educational campaigns, are rooted in the Roaring Fork Watershed Plan. Watershed Action staff focus on water quantity and quality, hydrology, riparian and river ecology, and geomorphology.



Inspiring people to take action requires knowledge. Each year, the Watershed Education programs reach thousands of students and adults with hands-on, exploratory experiences. School programs cover topics such as water chemistry, river ecology, watershed mapping, aquatic insect identification, snow science, and the economics of water. Adult community outreach programs include river guide trainings, watershed explorations, educational dialogues and forums, tours of local water facilities, and river float trips. Teacher professional development workshops provide engaging opportunities to earn continuing education credits required by Colorado's Department of Education. Every program is designed to engage participants with people and places in the watershed that they otherwise might not encounter or have access to.



Watershed Education

Water Quality in Action: Ongoing Assessment of Cattle Creek

In 2015, with funding provided by Garfield County, RFC embarked on an extensive study to better understand water quality impairments in Cattle Creek. Based on standards set by the State of Colorado, RFC assessed chemical and biological water quality data at seven sites along Cattle Creek to provide insight into the source of the impairment.

The Cattle Creek Stream Health Evaluation was released in 2016, providing sampling results, data interpretation, and land use analysis from the study. The report was co-authored by Lotic Hydrological, Timberline Aquatics, and Roaring Fork Conservancy.

Based on the findings in this report, and the need for a larger dataset, RFC initiated a second round of sampling in 2016. This sampling, funded by Garfield and Eagle Counties, was designed to both compliment the 2015 data and provide additional information attuned to state standards. The data provided by these two rounds of sampling will allow RFC to better address the state 303(d) listing for aquatic life, and provide a broader understanding of the creek's health and related macroinvertebrate (aquatic insects) impacts.

2016 Water Quality Accomplishments:



The Emma Stream Team conducting water quality tests on the Roaring Fork River

- Conducted 22 sampling events examining water quality, discharge (stream flow), and macroinvertebrates on Cattle Creek.
- Assisted with the annual statewide training of 45 new Colorado River Watch participants.
- Partnered with volunteer Stream Teams to conduct regular water quality monitoring at 23 Roaring Fork Watershed sites, including 112 samples, and more than 15 volunteers working a combined 186 hours.

In response to reports of a significant algal bloom in the Roaring Fork River from Carbondale to Glenwood Springs in the summer of 2016, RFC designed and implemented a water quality and algal survey with volunteer John Newbury, an aquatic scientist and local fishing guide. This algal bloom appeared more extensive than in previous years and raised concerns of detrimental impacts on aquatic life.

Continued surveying *Didymosphenia geminata* (Didymo) levels along the Fryingpan River for the third consecutive year. Didymo streambed coverage surveys were conducted along with basic water quality monitoring at 7 locations in the spring, summer and fall of 2016.

Results from the Cattle Creek Stream Health Evaluation

The Cattle Creek Stream Health Evaluation provides an in-depth look at the results of the 2015 study. Water chemistry sampling indicated increased levels of nutrients, bacteria and total dissolved solids moving downstream. These increases appear to correlate with various land use impacts along the creek, depletions from water diversions, and riparian habitat alteration. All these factors combined indicate a gradual degradation of creek health moving downstream, with related impacts on macroinvertebrate communities.

View a summary or the complete report at <u>www.roaringfork.org</u>.



Crystal River Management Plan

Identifying, prioritizing and guiding management actions that honor local agricultural production, preserve existing water uses, and enhance the ecological integrity of the river. In the spring of 2016, RFC in partnership with Lotic Hydrological and Public Counsel of the Rockies released the Crystal River Management Plan (the "Plan"), one of the first Stream Management Plans completed in the State of Colorado. With both the Colorado State Water Plan and the Colorado Basin Implementation Plan calling for increased Stream Management Planning, RFC remains ahead of the game, as we look toward implementation of the Plan's recommended actions.

Planning around water needs on the Crystal River required development of a scientifically rigorous and consensus-based framework for predicting the ecological and social consequences of proposed projects or management strategies. The Plan utilized a science-based and stakeholder-centered approach to consider complex interactions between the physical components driving watershed structure; the biological components of riverine ecosystems; the social context of competing perspectives, needs, and values; and the existing legal and administrative frameworks governing water use in an effort to identify and evaluate management and structural alternatives that honor local agricultural heritage, preserve existing water uses, and enhance the ecological integrity of the river. A series of stakeholder meetings held throughout the planning process served to clarify outstanding questions, summarize results from previous studies, refine planning goals and objectives, and evaluate the feasibility of various management alternatives.

The functional assessments conducted as part of this process concluded that few external stressors exist in the headwaters of the Crystal River, contributing to a generally healthy ecosystem above Redstone; however constraints on riverine functions increase downstream due to the cumulative effects of floodplain development and surface water diversions. The dominant nature of these impacts on stream flow and habitat suggest that management strategies that focus on these two variables will yield the greatest overall environmental benefit.

Characterizations of water management and use identified the chronic and transient water shortages that exist among the multiple water uses on the Crystal River under the current legal and administrative framework. The presence of agricultural shortages highlights the difficulties associated with managing water to satisfy ecosystem needs without burdening existing water users. Alternative management strategies were proposed to respond to the overlapping themes and management prospects that emerged from reviews of water use patterns, legal and administrative considerations, and evaluations of ecosystem function. The Plan considered the relative effectiveness of a wide array of market-based programs, efficiency measures, water supply projects, and channel modifications for meeting planning goals and objectives.

Unfortunately, no single management option presented a panacea for meeting existing needs and addressing observed ecosystem impairments. Rather, each alternative was associated with a unique set of environmental, capital, and social costs and benefits. Consideration of these factors by local stakeholders led to a prioritization of management actions over the short-and long-term. Stakeholder groups involved in the cost-benefit analysis process included: agricultural producers, state water administrators, local municipalities, natural resource agencies, local and national environmental organizations, recreational advocates, and other water rights holders.

RFC was granted funding to continue Plan implementation and stakeholder engagement through 2017, with hopes that, in the next drought year, the Crystal River will continue to flow.

Watershed Action Policy Highlights

RFC's Watershed Action program addresses water issues, river health, and related land management through participation in public processes. In 2016, RFC took the opportunity to comment, influence and advise agencies at the local, state and federal levels on a variety of important watershed issues.

Fryingpan River and Ruedi Reservoir Operations

RFC strives to bridge the gap in communication between the Bureau of Reclamation, which is charged with the management of Ruedi Reservoir, and local stakeholders - from law enforcement and safety personnel to homeowners and anglers. Because Ruedi Reservoir is managed for multi-purpose considerations, including hydropower, recreational, aesthetic and environmental needs, ongoing and upfront communication is critical to ensuring the safety and productivity of all uses.

Pitkin County Open Space and Trails (PCOST) Management Plans

RFC continues to work with PCOST to enable best management practices on their riparian properties. Regularly sought for input, RFC contributes to, and comments on new and updated management plans, and regularly consults with PCOST staff on site management issues and concerns. In 2016, RFC participated in the new Lazy Glen Open Space Management Plan.

U.S. Forest Service (USFS) Environmental Impact Statement (EIS) and National Environmental Policy Act (NEPA) Reviews

RFC is regularly contacted as a stakeholder in USFS EIS and NEPA reviews. After careful consideration, meeting attendance, and follow up with USFS staff, RFC comments on projects that may impact water resources. In 2016, RFC submitted comments regarding the reintroduction of native trout to the Fryingpan River ecosystem and the pending sale of the EI Jebel tree farm property.

Environmental Impact Statement (EIS) for Previously Issued Oil and Gas Leases on the White River National Forest (WRNF)

From 2014 to 2016, the Bureau of Land Management (BLM) conducted an EIS analyzing 65 oil and gas leases in the WRNF, including areas of the Roaring Fork Watershed and Thompson Divide. RFC staff were involved throughout the public process - attending meetings, submitting official comment letters, and providing community outreach. Based on the best science available, including RFC water quality studies, RFC encouraged cancelation of all leases within the Roaring Fork Watershed to protect pristine, irreplaceable water resources. On November 17, 2016, Interior Secretary Sally Jewell signed the Record of Decision cancelling 25 leases in the Thompson Divide area.

Colorado's Water Plan

RFC staff continues to regularly attend Colorado Basin Roundtable meetings, working to implement the local recommendations of Colorado's Water Plan as part of our role in Stream Management Planning and community engagement.

State Water Legislation

RFC staff works to stay up to date on pending state legislation, submitting comments and working with elected officials when appropriate.





School Programs

In 2016, RFC educators taught 295 programs to over 6,250 elementary, middle, high school, and college students. The range of our diverse and interdisciplinary programs includes teaching college students about western water issues, digging snow pits on local mountains while teaching about snow science, using the lens of art to teach science, and demonstrating riverbank erosion with a Stream Trailer. We taught students how to read and use watershed maps, become stewards of their local waterways, and even joined Aspen Middle School students on their week-long outdoor education trip on the Colorado River. RFC educators also taught a multiple unit Watershed Education program for 4th grade students at Basalt, Crystal River and Glenwood Springs Elementary Schools.

Youth Fly Fishing

Now in our third year of teaching river stewardship using fly fishing as the instructional tool, RFC has exposed hundreds of children in the Roaring Fork Valley to this popular sport. In 2016, RFC educators along with volunteers from Roaring Fork Valley Fly Fishing Club taught a three-day fishing clinic for middle school students through Basalt Regional Library, and partnered with Aspen Center for Environmental Studies to teach a week-long fly fishing summer camp at Rock Bottom Ranch for 6-12 year olds. Introducing children to all aspects of fly fishing, from casting to fly-tying, proves time and again to be an incredibly effective and enjoyable form of experiential education.





Let's go fishing!

Water quality class with Glenwood Springs Elementary School





Fly-tying for the first time



Exploring stormdrains and Colorado River cleanup with Two Rivers Community School



Understanding snowpack on McClure Pass





Twin Lakes Tunnel and Diversion Tour at Grizzly Reservol

Watershed Explorations

RFC offers field-based educational programs for adults and families through its Watershed Explorations. These field-based programs are designed to bring participants to unique places in the watershed and to educate participants about particular water issues via local and regional experts. Thirty-two Watershed Exploration opportunities were offered in 2016 including river floats, hikes through riparian habitats, water diversion project tours, snowshoe hikes, and excursions to view fireflies in rare thermal wetlands. Many Watershed Explorations are offered free of charge because of support from Pitkin County Open Space and Trails, City of Aspen Parks and Open Space, and the City of Aspen Water Department. In 2016, over 764 adults participated in RFC Watershed Explorations.

Teacher Professional Development

- In June, 10 local teachers and volunteers attended the National Fishing in Schools Program teacher training led by RFC educators. This curriculum educates students about fish, insects, aquatic environments, resource conservation and stewardship using fly fishing and casting as the instructional tool. Over 700 students across the Roaring Fork Valley started learning how to fly fish through this program.
- RFC staff trained a total of 45 teachers, students and citizen volunteers in water quality testing procedures for the statewide River Watch program.
- RFC taught a Leaf Pack Citizen Science Workshop at Morrison Nature Center in Aurora with eight teacher participants. Additionally, a condensed Leaf Pack workshop was offered by RFC at the annual Colorado Alliance for Environmental Education Conference in Denver. Twenty-five teachers from around the state participated.





Touring the Rio Grande Wetlands in Aspen

North Star Float by Christina Medved

Community Outreach and Engagement



Fryingpan Cleanup

The 18th Annual Fryingpan Cleanup drew over 200 residents and visitors to pick up trash along 14 miles of road adjacent to the Fryingpan River, the Roaring Fork River through Basalt, and Lake Christine. Trash along the road can easily become trash polluting the river. These committed, hard-working volunteers helped ensure clean water and happy fish in the Gold Medal waters near Basalt in 2016.

Crooked Creek Restoration Project, Year Two

For the second year in a row, the U.S. Forest Service (USFS) continued work in the upper reaches of the Fryingpan River watershed to restore a section of Little Lime Creek and its associated wetlands to a more natural condition. The 2015 project was replicated in June of 2016 with USFS, RFC, Roaring Fork Outdoor Volunteers, and Wilderness Workshop once again collaborating on a volunteer

project to plant native vegetation in the restored wetlands. Over 25 staff and volunteers camped along the creek and spent two days revegetating the second phase of this project. Participants worked tirelessly, transplanting locally sourced sedges and willows, in an effort to foster a budding wetland along the new stream channel.

Glenwood Springs Tamarisk Removal Project

On October 8th, RFC partnered with Roaring Fork Outdoor Volunteers, Garfield County, the City of Glenwood Springs, and the Mount Sopris Conservation District on a successful Tamarisk Removal Project along the Roaring Fork and Colorado Rivers in Glenwood Springs. Tamarisk, currently on the state noxious weed list, is known for its ability to out-compete native plants, alter riparian diversity, and even change hydrologic patterns. Twenty staff and volunteers worked all day removing and discouraging the regrowth of this invasive species.



Crooked Creek planting

Tamarisk removal volunteers by Todd Patrick

Crystal River Valley Visitor Guide

RFC, in collaboration with Mark Fuller of Ruedi Water and Power Authority, created the Crystal River Valley Visitor Guide during the summer of 2016. Distributed to fly shops and hotels throughout the Roaring Fork Valley, the guide was such a hit that the Carbondale Chamber of Commerce replicated key pieces to display at the Mount Sopris overlook on Highway 82.

Blue Creek Ranch Conservation Easement Work Day

Volunteers from Backbone Media in Carbondale joined RFC staff to close social trails, stabilize banks, and improve existing trails on RFC's conservation easement on the banks of the Roaring Fork River near Catherine Store Bridge. A popular spot for anglers and dog walks, the work will benefit this well-used riparian area.



River Stewards

RFC's River Stewards, a volunteer group of young professionals, spearhead community engagement events to inspire young river enthusiasts to explore, value and protect the Roaring Fork Watershed. 2016 events included:

Think Outside the Banks Campaign, Riparian Workshop

Riparian vegetation consists of the plant communities adjacent to rivers and streams. Vital to stream health, riparian vegetation provides essential habitat and food for plants and animals, minimizes erosion, and mitigates nonpoint source pollution.

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In 2016, RFC partnered with Roaring Fork Leadership to host a one-day Riparian Workshop in Basalt, the first of its kind in the Roaring Fork Valley. The 45 participants included realtors, homeowners, landscapers, and agency representatives from local and statewide organizations. Attendees participated in conversations about the importance of riparian vegetation, discussed local ordinances, and toured a riparian restoration project along the Roaring Fork River.

Pitkin County's Healthy Rivers and Streams Fund and the City of Aspen provided integral funding for this successful campaign.



Elk Camp Farm to Table Dinners

In July and August, RFC staff loaded the Elk Camp gondola in Snowmass and spent evenings at Aspen Skiing Company's Farm to Table Tuesdays. These beautiful summer events featured locally sourced meals and beverages, live music, family activities, and more. RFC was one of two nonprofits selected to receive a percentage of the proceeds from food sales and the privilege to speak about our work throughout the Roaring Fork Watershed. Over 650 children and adults participated in fly-casting demonstrations, learned fun facts about the watershed, and got their pictures taken with Captain Cutthroat.

Captain Cutthroat waves hello at Farm to Table

Business of Water Summit

RFC staff and RFC Board Member Jim Light participated in the Business of Water Summit in Glenwood Springs on October 12. Hosted by Protect the Flows, with RFC as a sponsor, the Summit engaged business owners in conversations about current threats to our water supply and future water issues.

Voter Awareness

The 2016 elections brought debate on a variety of significant issues. At RFC, we worked to ensure that the importance of water stayed on voters' and the candidates' radars through publication of the 4th edition of the Roaring Fork Valley Voter's Guide to Water Issues, a nonbiased, non-partisan opportunity for each candidate, from county commissioner to U.S. Senator, to answer the same two questions about local and/or state-wide water concerns. In addition, RFC joined Backcountry Hunters & Anglers, Colorado Wild Public Lands and Wilderness Workshop to co-host the Public Lands Candidate Forum, attended by U.S., state, and county candidates. By creating venues for citizens to learn about their elected officials' views on water issues RFC is encouraging a better informed electorate to help shape future legislation to protect vital water resources.

- Hosting a Women Only Fly Fishing Clinic in Carbondale
- Holding a Runoff Party/Crawfish Boil at the Roaring Fork Beer Company
- Staffing the RFC display at the Fly Fishing Film Tour in Aspen
- Sponsoring a local "Can I Surf That?" film screening
- Supporting RFC's Annual River Float
- Creating and hosting the FISHSPRINT Race along the Roaring Fork River in Aspen



Think Outside the Banks Riparian Workshop

2016 Financial Summary

Other RETA Conservation 5% 4% Easements 5% Program Fees 8% Fvents 37% Grants 14% Memberships 28%

2016 OPERATING REVENUES

2016 OPERATING EXPENSES

2016 Revenues	
Events	\$370,180
Memberships	280,172
Grants	138,965
Program Fees	80,123
Other	50,440
Conservation Easements	49,493
RETA	38,483
Total	\$1,007,855

2016 Expenses	
Programs	\$719,765
Fundraising	194,465
Administrative	38,093
Total	\$952,323





2016 Roaring Fork Conservancy Staff





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Chelsea Brundige, *Public Counsel of the Rockies* Sharon Clarke Seth Kurt Mason, *Lotic Hydrological, LLC* Melissa Resutko Rose Ann Sullivan, *Kootenay Resources, LLC* Andrea Turpy

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Join us in protecting the Roaring Fork Watershed at www.roaringfork.org

Cover photo: Fall on the Fryingpan River by Paul Hilts Back Cover photo: Bankside Crystal River by John Newbury Printed on recycled paper

