



Last Updated: July 2017

Colorado Water Conservation Board

Water Plan Grant Application

Instructions

To receive funding for a Water Plan Grant, applicant must demonstrate how the project, activity, or process (collectively referred to as “project”) funded by the CWCB will help meet the measurable objectives and critical actions in the Water Plan. Grant guidelines are available on the CWCB website.

If you have questions, please contact CWCB at (303) 866-3441 or email the following staff to assist you with applications in the following areas:

Supply and Demand Gap Projects: Gregory.Johnson@state.co.us

Water Storage Projects: Anna.Mauss@state.co.us

Conservation, Land Use Planning: Kevin.Reidy@state.co.us

Engagement & Innovation Activities: Mara.MacKillop@state.co.us

Agricultural Projects: Brent.Newman@state.co.us

Environmental & Recreation Projects: Linda.Bassi@state.co.us

Applicants interested in submitting an ‘Intent to Apply’ in the future are encouraged to check here and fill in all sections with the best information available at the time. Exhibits excluded.



This “Intent to Apply” will help CWCB prioritize Projects that are not ready for fully completed Water Plan Grant Application due to the initial timeframe and deadlines required.

Water Project Summary

| | | |
|---|---------------------------------|-----------|
| Name of Applicant | Roaring Fork Conservancy | |
| Name of Water Project | River Center Education Programs | |
| CWP Grant Request Amount | | \$50,000 |
| Other Funding Sources <u>2017 Grants</u> | | \$28,000 |
| Other Funding Sources <u>2017 Private Donations</u> | | \$10,000 |
| Other Funding Sources <u>2017 Program Income</u> | | \$18,000 |
| Applicant Funding Contribution | | \$28,000 |
| Total Project Cost | | \$134,000 |



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| Applicant & Grantee Information | |
|--|--|
| Name of Grantee(s) | Roaring Fork Conservancy |
| Mailing Address | PO Box 3349 Basalt, CO 81621 |
| FEIN | 98138510000 |
| Organization Contact | Christina Medved |
| Position/Title | Watershed Education Director |
| Email | christina@roaringfork.org |
| Phone | (970) 927-1290 |
| Grant Management Contact | Christina Medved |
| Position/Title | Watershed Education Director |
| Email | christina@roaringfork.org |
| Phone | (970) 927-1290 |
| Name of Applicant (if different than grantee) | |
| Mailing Address | |
| Position/Title | |
| Email | |
| Phone | |

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| Description of Grantee/Applicant |
|---|
| <p>Provide a brief description of the grantee's organization (100 words or less).</p> <p>Roaring Fork Conservancy is an independent, §501(c)(3) not-for-profit organization. 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. As one of the largest watershed organizations in Colorado, Roaring Fork Conservancy serves residents and visitors of the Roaring Fork Valley through school and community-based Watershed Education programs and Watershed Action projects, including regional watershed planning, water resource policy, and stream management and restoration initiatives.</p> |



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| Type of Eligible Entity (check one) | |
|-------------------------------------|---|
| | Public (Government): Municipalities, enterprises, counties, and State of Colorado agencies. Federal agencies are encouraged to work with local entities. Federal agencies are eligible, but only if they can make a compelling case for why a local partner cannot be the grant recipient. |
| | Public (Districts): Authorities, Title 32/special districts (conservancy, conservation, and irrigation districts), and water activity enterprises. |
| | Private Incorporated: Mutual ditch companies, homeowners associations, corporations. |
| | Private Individuals, Partnerships, and Sole Proprietors: Private parties may be eligible for funding. |
| X | Non-governmental organizations (NGO): Organization that is not part of the government and is non-profit in nature. |
| | Covered Entity: As defined in Section 37-60-126 Colorado Revised Statutes . |

| Type of Water Project (check all that apply) | |
|--|---|
| | Study |
| | Construction |
| X | Identified Projects and Processes (IPP) |
| | Other |

| Category of Water Project (check all that apply and include relevant tasks) | |
|---|--|
| | Supply and Demand Gap Projects - Multi-beneficial projects and those projects identified in basin implementation plans to address the water supply and demand gap. <i>Applicable Exhibit A Task(s):</i> |
| | Water Storage Projects - Projects that facilitate the development of additional storage, artificial recharge into aquifers, and dredging existing reservoirs to restore the reservoirs' full decreed storage capacity. <i>Applicable Exhibit A Task(s):</i> |
| | Conservation and Land Use Planning Projects - Activities and projects that implement long-term strategies for conservation, land use, and drought planning. <i>Applicable Exhibit A Task(s):</i> |
| X | Engagement & Innovation Projects - Activities and projects that support water education, outreach, and innovation efforts. Please fill out the Supplemental Application available on the website. <i>Applicable Exhibit A Task(s): 1,2,3</i> |
| | Agricultural Projects - Projects that provide technical assistance and improve agricultural efficiency. <i>Applicable Exhibit A Task(s):</i> |
| | Environmental & Recreation Projects – Projects that promote watershed health, environmental health, and recreation. <i>Applicable Exhibit A Task(s):</i> |



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| | | |
|--|-------|----------|
| | Other | Explain: |
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Location of Water Project

Please provide the general county and coordinates of the proposed project below in **decimal degrees**. The Applicant shall also provide, in Exhibit C, a site map if applicable.

| | |
|------------------|-------------------------|
| County/Countries | Eagle, Pitkin, Garfield |
| Latitude | |
| Longitude | |

Water Project Overview

Please provide a summary of the proposed water project (200 words or less). Include a description of the project and what the CWP Grant funding will be used for specifically (e.g., studies, permitting process, construction). Provide a description of the water supply source to be utilized or the water body affected by the project, where applicable. Include details such as acres under irrigation, types of crops irrigated, number of residential and commercial taps, length of ditch improvements, length of pipe installed, and area of habitat improvements, where applicable. If this project addresses multiple purposes or spans multiple basins, please explain.

The Applicant shall also provide, in Exhibit A, a detailed Statement of Work, Budget, Other Funding Sources/Amounts and Schedule.

Roaring Fork Conservancy (RFC) is requesting funds to support water education programs in the Roaring Fork Watershed that align with Roaring Fork Watershed Plan, Colorado Basin Implementation Plan (CBIP), and Colorado Water Plan (CWP) goals, reaching audiences of all ages. With the River Center under construction, RFC will soon be a regional and state hub for watershed-related education, research, policy, and collaboration. RFC's innovative goal of sharing and modeling the actions necessary for protecting our rivers and watershed require a significant amount of interaction with the public. We seek to extend our reach and impact through multiple avenues and coordinated efforts, ranging from school field trips and classes to college internships, from community stakeholder meetings to water professional workshops and seminars.

Using indoor classrooms alongside the outdoor environment, RFC will work to meet increasing demand for local and regional school programming, and provide mentorship to other watershed groups embarking on similar missions throughout the state. We also work closely with a strong network of citizen scientists, providing trainings and continuing education opportunities in river research and analysis.



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| Measurable Results | | |
|--|---|------------------------------------|
| To catalog measurable results achieved with the CWP Grant funds, please provide any of the following values as applicable: | | |
| | New Storage Created (acre-feet) | |
| | New Annual Water Supplies Developed or Conserved (acre-feet), Consumptive or Nonconsumptive | |
| | Existing Storage Preserved or Enhanced (acre-feet) | |
| | Length of Stream Restored or Protected (linear feet) | |
| | Efficiency Savings (indicate acre-feet/year OR dollars/year) | |
| | Area of Restored or Preserved Habitat (acres) | |
| | Quantity of Water Shared through Alternative Transfer Mechanisms | |
| | Number of Coloradans Impacted by Incorporating Water-Saving Actions into Land Use Planning | |
| X | Other | Explain: Engagement and Innovation |

| Water Project Justification |
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| <p>Provide a description of how this water project supports the goals of Colorado's Water Plan, the most recent Statewide Water Supply Initiative, and the applicable Roundtable Basin Implementation Plan and Education Action Plan. The Applicant is required to reference specific needs, goals, themes, or Identified Projects and Processes (IPPs), including citations (e.g. document, chapters, sections, or page numbers).</p> <p>The proposed water project shall be evaluated based upon how well the proposal conforms to Colorado's Water Plan Framework for State of Colorado Support for a Water Project (CWP, Section 9.4, pp. 9-43 to 9-44;)</p> <p>Colorado's Water Plan sets an Education, Outreach and Innovation measurable objective to "significantly improve the level of public awareness and engagement regarding water issues statewide by 2020." With a mission that complements many aspects of Colorado's Water Plan (CWP) and the Colorado Basin Implementation Plan (CBIP), RFC's daily work helps bring the CWCB closer to achieving its goals. By engaging with Roaring Fork Valley residents and visitors, RFC has reached over 109,000 individuals in our 21 year tenure. RFC is seeking support from the CWCB to help meet the growing demand for Watershed Education programming, using our innovative programming and extensive reach to unite statewide stakeholders and community members around a common interest in water, building on the momentum and interest currently surrounding water issues in the state (CWP, xviii).</p> <p>RFC's work addresses the following Measurable Objectives outlined in Chapter 10.2 of Colorado's Water Plan:</p> <ul style="list-style-type: none">• Conservation<ul style="list-style-type: none">○ RFC partnered with Ruedi Water and Power Authority to produce the Roaring Fork Watershed Regional Water Efficiency Plan, which includes the stipulation that all major municipal water providers in the Roaring Fork Valley produce or |



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Water Project Justification

update individual efficiency plans. As a result / in response to meeting objectives of the Plan: RFC is working closely with the City of Aspen as it begins implementing its Water Efficiency Plan with a pilot Water Efficient Landscaping Ordinance in Summer 2017. RFC provided expertise on riparian areas and helped communicate the implications of this ordinance through our biannual newsletter, reaching over 6,000 people.

- RFC partnered with the Community Office for Resource Efficiency and the City of Aspen to produce two rain barrel workshops, where 40 participants learned about the new legislation and each received a rain barrel with instructions on installation and maintenance.
- RFC partnered with Roaring Fork Leadership, Pitkin County Open Space and Trails, and City of Aspen to provide a Riparian Workshop to local landscapers, realtors, and property owners. This was the first workshop of its kind on the western slope, and drew over 40 participants from around the state.
- **Agriculture**
 - RFC continues to build relationships within the Roaring Fork Valley's agricultural community, including key stakeholder collaboration for the Crystal River Management Plan Report and Implementation projects. To communicate key elements of this collaboration and the Plan, RFC provides informative site tours to collegiate and graduate programs and multiple in-state groups including CFWE and the River Network.
 - RFC partners with the City of Carbondale to provide an annual Bicycle Ditch Tour, where participants gain access to diversion headgates and learn how agricultural and municipal ditches on the Lower Crystal function.
- **Watershed Health, Environment, and Recreation**
 - The Roaring Fork Watershed Plan, published in 2012, provides "a reference to enable laymen, students, activists, and recreationalists to get involved with watershed management" (RFPW, p.11). Out of more than 250 outlined recommendations for improving watershed health, many have been accomplished or are currently underway. With local funding, we are working on a five-year update to re-engage stakeholders and ensure that actions are still relevant to the current state of water affairs. As an outcome of this process, we are working to create an interactive dashboard to display both plan recommendations and Roaring Fork Watershed data including stream flows, diversions water quality, as well as water-related studies and resources.
 - In 2015, RFC partnered with Colorado State University to publish the Lower Fryingpan River and Ruedi Reservoir Economic Impact Study, which details the monetary value of angling in the Fryingpan Valley. Given the positive regional impact of this globally-known Gold Medal Fishery, RFC's press release was picked up by several local and national media outlets.



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- RFC served as a coordinating entity between reservoir owners and Roaring Fork Valley stakeholders, including the City of Aspen, Pitkin County, and interested citizens, after the August 2015 Grizzly Reservoir draining. RFC's work facilitated interagency cooperation, ensured timely chemical and biological monitoring, mediated public relations, and helped develop a memorandum of understanding for future communication of water releases.
- RFC hosts an annual River Float where participants float the lower Roaring Fork River with a designated 'boat ambassador,' with specific water knowledge. Ambassadors present and answer questions about water law, riparian ecosystems, and fisheries to over 100 individuals each year.
- Education, Outreach and Innovation
 - RFC and The River Center (now under construction) will play a key role on the western slope to "significantly improve the level of public awareness and engagement regarding water issues statewide." With its prime location in the center of the Roaring Fork Valley, projections show The River Center seeing up to 40,000 visitors a year. With significant tourism from all corners of Colorado, The River Center will serve as a hub of collaboration, providing "well-informed community discourse and decision making regarding balanced water solutions." We will use this venue to enhance our existing relationships with state, local, and federal partners (CWP, Ch10-2-H, pg.10-7).
 - RFC's annual Watershed Explorations highlight many key components of the Water Plan, working to educate locals and visitors, and to bridge the gaps between east and west, recreationalist and rancher, and environmentalists and agriculture. Program highlights include:
 - Twin Lakes Tunnel and Diversion Tour (CWP, Ch. 4-9; CBIP Sec. 1.2-2): Perennially filled to capacity, this tour links east and west, as we partner with Colorado Springs Utilities to engage participants firsthand to observe how water is collected from the headwaters of the Roaring Fork River and diverted under the Continental Divide to Front Range cities and farms. Program participants visit Lost Man Reservoir, the Roaring Fork collection dam and tunnel, travel Lincoln Creek Road to Grizzly Reservoir, and explore the four-mile long Twin Lakes tunnel that moves up to 40% of the Roaring Fork River's water to the eastern slope. Staff from Twin Lakes Reservoir and Canal Company and RFC staff partner to lead this informative tour of the tunnels, dams, and ditches that move water around our state. This is one of the most popular programs offered by RFC, reaching residents of the Roaring Fork Valley as well as visitors from the Front Range and out-of-state. This full-day program provides a perfect venue to discuss the CWP and help CBRT fulfill its educational goals by creating an open dialogue on



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water storage in relation to the supply-demand gap and the increasing need for water efficiencies and conservation.

- RFC's innovative, field-based Snow to Flow education program (CWP Ch. 4; CBIP Sec. 1.2, 1.3, 1.4, and 2) engages middle school to adult audiences in digging snow pits, collecting samples from different layers in the snowpack, and then melting the samples to determine the water content in each layer. Classes analyze the results and discuss snowpack density data in relation to water storage and impacts on future water supplies. Snow science classes are critical in connecting students to snow as their primary source of water. At the conclusion of this program, students partake in a water supply forecasting exercise and discuss the economics of snow in Colorado, including ties to tourism, whitewater rafting, angling, the ski industry, use in agricultural production, as well as downstream, out-of-state water uses.
- RFC partners with Ruedi Water and Power Authority (CWP Ch. 5, 6 and 8; CBIP Sec. 1.4 and 2) to host an annual tour of Ruedi Reservoir and the dam, all while discussing transbasin water diversions, how Ruedi Reservoir operates, and water rights.
- RFC has made significant connections with Colleges and Universities in Colorado Springs. Programs include:
 - An annual tour with Colorado College's Environmental Science program to discuss policy and projects including the Crystal River Management Plan, the Comprehensive Lower Fryingpan Assessment, and the Lower Fryingpan River and Ruedi Reservoir Economic Impact Study (CWP Ch. 1, 4, and 6; CBIP Sec. 2).
 - A partnership with the University of Colorado at Colorado Springs for a volunteer project designed for the staff of the Roaring Fork Dining Hall, a new facility on their campus. Staff and their families take a bus from Colorado Springs to Basalt, helping to remove wildlife fencing and noxious weeds in key migration corridors. This provides an opportunity to experience the connection between water in Colorado Springs and that in the Roaring Fork Valley, where 29 of the 32 participants had never before visited (CWP Ch. 7, 9 and 9.5; CBIP Sec. 2).
- We believe that a well-informed community often begins with our youngest residents. Our education and outreach programs serve over 6,000 local school children each year. We also recently published a children's book titled *Dee Dee the Fryingpan River Dipper*, a naturalist-focused story about a local American Dipper, illustrated by local school children through our integrated science and art program. The book, targeted towards a younger audience than we typically reach (pre-school to grade 3), also includes a River Journal section, outlining



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specific activities adults and children can do to explore their local riparian habitats and streams (CWP Ch. 9.5; CBIP Sec. 2).

The programs described above demonstrate RFC's commitment to collaboration, addressing multiple needs, valuing relationships with stakeholders and local governments, and ability to share and communicate our work through thoughtful and strategic programming. (CWP, Section 9.4, pp. 9-43 to 9-44).

From their early planning phases, RFC has worked to integrate the themes of both the CBIP and CWP into our education and outreach programs. We brought the CBIP into the classroom and solicited over 300 comments from students and submitted them to the state. This created a venue to not only have student voices heard in the plan, but also expose local youth to current statewide water initiatives. Since publication of the CBIP and CWP, RFC has worked to incorporate the themes of the plan into our lessons as well as raise awareness of CWP locally. Below are some key programs that highlight the CBIP Public Outreach Plan.

Please see Engagement Track under the Supplemental Application for further details:

- RFC education staff write a weekly river report that is published in The Aspen Times, disseminated to an electronic mailing list, and published on social media accounts including Facebook and Instagram. This directly accomplishes three primary activities described in the CBIP Public Outreach (CBIP, section 2.3, p41) related to traditional and social media, and communicating with watershed groups. RFC has been highlighted in multiple newspapers, radio spots, and on TV for various watershed policy and education initiatives including water quality monitoring, field classes, wetland and diversion tours, planning processes, and more. We are already on the radar for these media outlets and can continue to leverage this into the future to maximize the reach of our efforts. With a mailing list of over 6,000 individuals, and over 2,000 followers on Facebook, we have a significant direct audience to reach through our own communication avenues as well. CBRT frequently looks to RFC for help in outreach and communications, thus supporting this RFC education and engagement project would bolster the entire CBRT efforts.
- RFC's K-12 education programs are referenced as good models for the CBRT to use to improve connections to broader populations (CBIP, section 2.3 p41). This project will ensure that RFC can continue to model excellent K-12 education program by 1) supporting development of new/updated courses and 2) enable RFC to mentor other watershed groups and initiatives within the CBRT. Through organization to organization mentorship, RFC will help others adapt lessons to unique situations, share tips to build interest and commitment from area teachers and schools, and be a resource into the future.
- RFC educators teach two-hour long guest lectures in environmental science classes at CMC, reaching over 30 college students annually. The theme of these lectures is Water in the West and the topics covered during this lecture include: an overview of



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Colorado's watersheds and sub-basins, snow as the primary source of water in our rivers, the diverse uses of water in the west (i.e. agriculture, recreation, energy, industry, municipal, environmental), and the implications of increasing populations on the water supply, specifically addressing the supply-demand gap out lined in the CWP. Students learn about the origins of the CWP and its purpose as we close with a discussion on managing water, water priorities, and the increasing importance of water efficiencies and conservation.

- In collaboration with the Twin Lakes Reservoir and Canal Company, RFC offers annual tours of the Twin Lakes Transbasin Diversion System. During this full-day program, participants see firsthand how water is collected from the headwaters of the Roaring Fork River and diverted under the Continental Divide to Front Range cities and farms. Reaching residents of the Roaring Fork Valley as well as Front Range and out-of-state visitors, this program provides a perfect springboard to discuss the CWP and help CBRT fulfill its educational goals by sharing information on water storage in relation to the supply-demand gap, the increasing need for water efficiencies and conservation, and the long-term implications of the CBIP and CWP (CWP Ch. 4-9; CBIP Sec. 1.2-2 and 2.3 p41).
- The CBIP identifies other avenues to engage people in water issues such as film, radio, art and literature (CBIP, section 2.3 p42). RFC education programming is becoming more interdisciplinary by incorporating science and art together –through which we have published our first children's book with illustrations from local school children - and more accessible to all including specific programs that are now offered bilingual. We work with Colorado Mountain College's Isaacson School of Media and are employing two students to create a film highlighting RFC's work and the Roaring Fork Watershed.

RFC's work meets SWSI 2010 states:

- **The CWCB, in consultation with other state agencies, shall develop and implement a plan to educate and promote stewardship of water resources that recognizes water's critical role in supporting the quality of life and economic prosperity of all Coloradoans.**

RFC Watershed Education Programs detailed throughout this application continue to work to meet this goal.

RFC is highlighted as a model program within the basin for K-12 education, an experience that will only be enhanced and expanded by the completion of The River Center (CBIP, pg. 41).

RFC aligns much of its work with current state and local initiatives. We strive not only to make a difference within the Roaring Fork Watershed, but to share our work with others

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around the state thereby creating greater impact and collaboration. The continuation and expansion of RFC's Education Programs will allow the work that we do to benefit Colorado's water resources to grow and create increased exposure for the message and goals of Colorado's Water Plan and the Colorado Basin Implementation Plan.

Related Studies

Please provide a list of any related studies, including if the water project is complementary to or assists in the implementation of other CWCB programs.

RFC's education programs dovetail with all other educational efforts around the state. Our curriculum for school programs is aligned with Colorado State Education Standards and National Association for Environmental Education Standards, facilitating adoption and use by teachers and school districts. RFC programs are unique in the way we integrate watershed science and policy projects with watershed education programming. This approach applies to RFC projects previously supported by CWCB (i.e., Coal Basin & Crystal River Confluence Restoration Planning), with over 200 fifth-grade students still visiting Coal Basin, annually, on RFC field education programs that grew from our involvement in that project. We translate the science and civics of real-world issues into accessible and authentic content for our students. Growing evidence from studies around the world support the effectiveness of "real-world" problem solving, outdoor experiences, and service learning projects in educating and inspiring the public.

RFC conducted outreach efforts during the writing of the Colorado Basin Implementation Plan; many of this research was included in the final CBIP (pages 32, 36, 36, 37, and 39) and we remain in contact with many of those groups and individuals. RFC partners with numerous organizations locally and regionally that directly or indirectly supported by CWCB programs, including: Colorado River Watch, Middle Colorado Watershed Council, Colorado Basin Roundtable, Trout Unlimited, and local governments.

RFC staff participate in the Colorado Foundation for Water Education's Water Educator Network and present at workshops hosted by Colorado Watershed Assembly and River Network, all of which have received funding from CWCB.

Previous CWCB Grants, Loans or Other Funding

List all previous or current CWCB grants (including WSRF) awarded to both the Applicant and Grantee. Include: 1) Applicant name; 2) Water activity name; 3) Approving RT(s); 4) CWCB board meeting date; 5) Contract number or purchase order; 6) Percentage of other CWCB funding for your overall project.

1. Roaring Fork Conservancy
2. Crystal River Watershed- Assessment and Design of Restoration Projects in the Colorado River Basin
3. Colorado
4. April 2013
5. C150520
6. 56%



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| Previous CWCB Grants, Loans or Other Funding | |
|--|---|
| 1. | Roaring Fork Conservancy |
| 2. | Crystal River Management Plan |
| 3. | Colorado |
| 4. | January 2017 |
| 5. | POGG1 PDAA 201700000911 |
| 6. | 37% |
| 1. | Roaring Fork Conservancy |
| 2. | Coal Basin and Crystal Confluence Area Restoration Planning |
| 3. | Colorado |
| 4. | February 2012 |
| 5. | OE PDA 13000000021 |
| 6. | 35% |

| Taxpayer Bill of Rights | |
|--|--|
| The Taxpayer Bill of Rights (TABOR) may limit the amount of grant money an entity can receive. Please describe any relevant TABOR issues that may affect your application. | |
| N/A | |

| Submittal Checklist | |
|---|--|
| X | I acknowledge the Grantee will be able to contract with CWCB using the Standard Contract . |
| Exhibit A | |
| X | Statement of Work ⁽¹⁾ |
| X | Budget & Schedule ⁽¹⁾ (<i>Spreadsheet</i>) |
| | Letters of Matching and/or Pending 3 rd Party Commitments ⁽¹⁾ |
| Exhibit C | |
| X | Map (if applicable) ⁽¹⁾ |
| | Photos/Drawings/Reports |
| X | Letters of Support (Support letter from Basin Roundtable encouraged) |
| | Certificate of Insurance (General, Auto, & Workers' Comp.) ⁽²⁾ |
| | Certificate of Good Standing with Colorado Secretary of State ⁽²⁾ |
| X | W-9 ⁽²⁾ |
| | Independent Contractor Form ⁽²⁾ (If applicant is individual, not company/organization) |
| Engagement & Innovation Grant Applicants ONLY | |
| X | Engagement & Innovation Supplemental Application ⁽¹⁾ |

(1) Required with application.

(2) Required for contracting. While optional at the time of this application, submission can expedite contracting upon CWCB Board approval.

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| Colorado Water Conservation Board | |
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| Water Plan Grant - Exhibit A | |

| Statement Of Work | |
|--|---|
| Date: | September 28, 2017 |
| Name of Applicant: | Roaring Fork Conservancy |
| Name of Water Project: | Roaring Fork Conservancy's Education and Outreach |
| Funding Source: | Engagement and Innovation Activities |
| <p>Water Project Overview: Please provide a summary of the proposed water project (200 words or less). The same summary can be used from Page 5 of the CWP Grant Application.</p> <p>Roaring Fork Conservancy (RFC) is requesting funds to support water education programs that align with Roaring Fork Watershed Plan, Colorado Basin Implementation Plan (CBIP), and Colorado Water Plan (CWP) goals, reaching audiences of all ages. With the River Center under construction, RFC will soon be a regional and state hub for watershed-related education, research, policy, and collaboration. RFC's innovative goal of sharing and modeling the actions necessary for protecting our rivers and watershed require a significant amount of interaction with the public. We seek to extend our reach and impact through multiple avenues and coordinated efforts, ranging from school field trips and classes to college internships, from community stakeholder meetings to water professional workshops and seminars and teacher professional development opportunities. Using indoor classrooms alongside the outdoor environment, RFC will work to meet increasing demand for local and regional school programming, and provide mentorship to other watershed groups embarking on similar missions throughout the state. We also work closely with a strong network of citizen scientists, providing trainings and continuing education opportunities in river research and analysis.</p> | |
| <p>Objectives: List the objectives of the project.</p> <ul style="list-style-type: none"> - Increase Roaring Fork Valley resident and visitor awareness of, and investment in water issues, including Roaring Fork Watershed Plan, CWP and CBIP. - Translate complex water issues and CWP/CBIP goals into relevant, actionable messages. - Strategically match water concerns and messages with appropriate audiences. - Help people understand why they should care about water issues and state/local water plans. - Inspire individuals to explore, value and protect the Roaring Fork Watershed. - Communicate real-time water updates, concerns and successes to residents and visitors of the Roaring Fork Valley. | |



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| Tasks |
|--|
| Provide a detailed description of each project task using the following format: |
| Task 1 – Education |
| Description of Task: Education programs for students from K-12. |
| RFC educators will provide field-based and in-classroom programs to students in the Roaring Fork Valley. Examples of programming include: <ul style="list-style-type: none">• Aquatic Insects: Life Cycle, Adaptations, Pollution Tolerance Index (CWP Ch. 9, Sec. 9.5; CBIP Sec. 1.3)• Wetlands (CWP Ch. 7 and Ch. 9, Sec. 9.5; CBIP Sec. 1.2 and 2)• Stream Trailer (CWP Ch. 9, Sec. 9.5; CBIP Sec. 1.2, 1.3, 1.4)• Science and Art (CWP Ch. 9, Sec. 9.5; CBIP Sec. 2)• Watershed Mapping (CWP Ch. 9, Sec. 9.5, CBIP Sec. 1.2 and 2)• Local Water History (CWP Ch. 6; CBIP Sec. 1.1 and 1.3)• Enviroscape Model: Non-point source Pollution (CWP Ch. 7; CBIP Sec. 1.2 and 1.3)• Life Zones & Riparian Zone Metaphors (CWP Ch. 9, Sec. 9.5; CBIP Sec. 1.2 and 1.3)• Water Cycle: Incredible Journey (CWP Ch. 4; CBIP Sec. 2)• Ruedi Reservoir Field Trip (CWP Ch. 5, 6 and 8; CBIP Sec. 1.4 and 2)• Geomorphology Field Trip in the Crystal River Valley (CWP Ch. 9, Sec. 9.5; CBIP Sec. 1.3, 1.4, and 2))• Snow Science: Snow to Flow (CWP Ch. 4; CBIP Sec. 1.2, 1.3, 1.4 and 2)• Stormwater: Storm Drain Hunt (CWP Ch. 6, Sec. 6.5; CBIP Sec. 1.2 and 1.3)• Groundwater Model (CWP Ch. 4 and 6; CBIP Sec. 1.3 and 2)• Water Allocation: Plumbing the Colorado (CWP Ch. 5, Ch. 8, and Ch. 9 Sec. 9.1; CBIP Sec. 1.4-1.6, and 2)• Watershed Manager: Diverse Stakeholders (CWP Ch. 7; CBIP Sec. 1.4-1.6, and 2) |
| Method/Procedure: |
| <ol style="list-style-type: none">1. RFC will communicate with teachers from the Roaring Fork and Aspen School Districts to schedule student programming.2. RFC education staff will review all programming with teachers to ensure lessons dovetail into their curriculum.3. RFC schedules programs and makes all arrangements necessary for programs: gather teaching tools, make copies, and finalize details for field-trips.4. RFC staff will deliver high quality, informative school programming- either in the classroom or at select field locations - that aligns with Roaring Fork Watershed Plan, CBIP, and/or CWP goals and themes. |
| Grantee Deliverable: Describe the deliverable the grantee expects from this task |
| <ol style="list-style-type: none">1. RFC educators will reach and teach over 5,000 contacts.2. RFC educators will teach over 100 school programs. |
| CWCB Deliverable: Describe the deliverable the grantee will provide CWCB documenting the completion of this task |
| RFC will provide number of student contacts reached, the grade levels of students reached, and number of programs, key CWP and CBIP concepts shared, and photo documentation of select programs. |

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| Tasks | |
|--|--|
| Provide a detailed description of each task using the following format: | |
| Task 2 – Outreach | |
| Description of Task: Provide educational programming for adults and families. | |
| <p>RFC offers field-based educational programs for adults and families through its trademark Watershed Explorations. These action-packed programs are designed to bring participants to unique places in the watershed and teach them about specific water issues from local and regional experts and align with many CBIP/CWP goals and objectives. Explorations include river floats, hikes near important riparian habitat, tours of water diversion projects, and volunteer habitat restoration projects. Examples of Watershed Explorations we offer include:</p> <ul style="list-style-type: none"> • Twin Lakes Tunnel & Diversion Tour (CWP, Ch. 4-9; CBIP Sec. 1.2-2) • Aspen Tap: Drinking Water Tour (CWP, Ch. 4-7, 9; CBIP Sec. 1.2-1.5 and 2) • Water in the Age of Silver: Touring Aspen’s “Holden Works” (CWP, Ch. 5, Ch. 6, and Ch. 9 Sec. 9.5; CBIP Sec. 1.3, 1.4 and 2) • Ruedi Reservoir Tour: Storing West Slope Water (CWP, Ch. 5, 6 and 8; CBIP Sec. 1.4-1.6 and 2) • Wetland Walk in Aspen’s Rio Grande Park (CWP, Ch. 7 and Ch. 9, Sec. 9.5; CBIP Sec. 1.2, 1.3 and 2) • Snow to Flow: Exploring Snowpack on McClure Pass (CWP, Ch. 4; CBIP Sec. 1.2, 1.3, 1.4 and 2) • Emma Snowshoe Tour, Campfire and Storytelling (CWP, Ch. 4, Ch. 6 Sec. 6.6 and Ch. 9 Sec. 9.5; CBIP Sec. 1.2, 1.4 and 2) • Annual Roaring Fork River Float (Ch. 9 Sec. 9.5; CBIP Sec. 1 and 2) • North Star Preserve River Float (Ch. 9 Sec. 9.5; CBIP Sec. 1.2, 1.3 and 2) • Explore Filoha Meadows: Fireflies, Bats and Aquatic Insects (Ch. 9 Sec. 9.5; CBIP Sec. 1.2 and 2) • Rain Barrel 101 Workshop (CWP, Ch. 6 Sec.6.3 and Ch. 9 Sec. 9.5; CBIP Sec. 1.2, 1.5 and 2) | |
| Method/Procedure: | |
| <ol style="list-style-type: none"> 1. RFC will contact partners including, but not limited to: Pitkin County Open Space and Trails, Ruedi Water and Power Authority, the City of Aspen, to schedule Watershed Explorations. 2. RFC will publicize programs via Facebook, press releases, online community calendars, public radio stations, our website, and through our monthly e-newsletter. 3. RFC will register program participants and communicate program details and logistics with them. 4. RFC staff will deliver high quality, informative programming that aligns with Roaring Fork Watershed Plan, CBIP, and/or CWP goals and themes. | |
| Grantee Deliverable: Describe the deliverable the grantee expects from this task | |
| <ol style="list-style-type: none"> 1. RFC will offer over 20 Watershed Explorations. 2. RFC educators will reach over 500 adults through its Watershed Explorations. 3. All attendees will be made aware of CWP and CBIP and how the program facilitates specific goals/objectives. | |
| CWCB Deliverable: Describe the deliverable the grantee will provide CWCB documenting the completion of this task | |
| RFC will provide number of participants per program, and the number and name of Watershed Explorations offered, and photos from select programs. We will solicit and share feedback from participants on program effectiveness, successes, and opportunities for improvement. | |

| Tasks |
|---|
| Provide a detailed description of each task using the following format: |



Last Updated: July 5, 2017

Task 3 – Communication

Description of Task: Keeping water at the forefront of citizen's attention.

1. RFC will publish a biannual newsletter which will provide updates on watershed actions projects, watershed education programs, and water-related projects in the Roaring Fork Valley and the state.
2. RFC will utilize Facebook and Instagram to communicate programs, articles, and facts about water in the Roaring Fork Valley, Colorado and the west.
3. RFC will maintain an updated website reflecting program offerings and project updates.
4. RFC will create a weekly snowpack and/or stream flow report.
5. RFC will create and email a monthly e-newsletter.

Method/Procedure:

1. RFC will determine the theme of its biannual newsletters based on local and state water trends and issues. Staff and contributing authors will write articles for the newsletter. Each newsletter will be mailed to over 6,000 individuals as well as downloadable on the RFC website.
2. RFC staff will create Facebook and Instagram messages and post 2-3 times per week.
3. RFC staff will update its website with current information as needed.
4. Every week, RFC staff utilize data provided by U.S. Geological Survey and Natural Resources Conservation Service to create a snowpack and/or stream flow report (seasonally dependent) for the Roaring Fork Watershed. The reports are submitted to the Aspen Times, who publishes them each Friday. Snowpack/Streamflow Reports are also posted on RFC's Facebook page and emailed to constituents to signed-up to receive them.
5. At the beginning of every month (except December), RFC writes a monthly e-newsletter, "River Notes," which details upcoming programs, recruitment of volunteers for restoration projects, and updates on watershed action projects. RFC sends this email to every member of our database.

Grantee Deliverable: Describe the deliverable the grantee expects from this task

1. Over 12,000 total will receive RFC's biannual newsletter.
2. Over 50 Snowpack/Streamflow Reports will be written, distributed, and published.
3. Eleven e-newsletters will be written and distributed.

CWCB Deliverable: Describe the deliverable the grantee will provide CWCB documenting the completion of this task

1. RFC will provide copies of each newsletter, and quantity mailed via U.S. Postal Service.
2. RFC will provide copies of Snowpack/Streamflow Reports and quantity emailed, and a newspaper clipping of the report from the Aspen Times.
3. RFC will provide a copy of each "River Notes" and report quantity delivered.
4. RFC will provide number of Facebook followers and screenshots of select posts.

Budget and Schedule

This Statement of Work shall be accompanied by a combined Budget and Schedule that reflects the Tasks identified in the Statement of Work and shall be submitted to CWCB in excel format.

Last Updated: July 5, 2017

Reporting Requirements

Progress Reports: The applicant shall provide the CWCB a progress report every 6 months, beginning from the date of issuance of a purchase order, or the execution of a contract. The progress report shall describe the status of the tasks identified in the statement of work, including a description of any major issues that have occurred and any corrective action taken to address these issues. The CWCB may withhold reimbursement until satisfactory progress reports have been submitted.

Final Report: At completion of the project, the applicant shall provide the CWCB a Final Report on the applicant's letterhead that:

- Summarizes the project and how the project was completed.
- Describes any obstacles encountered, and how these obstacles were overcome.
- Confirms that all matching commitments have been fulfilled.
- Includes photographs, summaries of meetings and engineering reports/designs.

The CWCB will withhold disbursement the last 10% of the budget until the Final Report is completed to the satisfaction of CWCB staff. Once the Final Report has been accepted, and final payment has been issued, the purchase order or grant will be closed without any further payment.

Last Updated: July 5, 2017



COLORADO

Colorado Water
Conservation Board

Department of Natural Resources

Colorado Water Conservation Board

Water Plan Grant - Exhibit A Budget and Schedule

Date: September 28, 2017

Name of Applicant: Roaring Fork Conservancy

Name of Water Project: Roaring Fork Conservancy's Education and Outreach

| Task No. | Task Description | Start Date ⁽¹⁾ | End Date | Water Project Funding Category | Grant Funding Request | Match Funding | Total |
|--------------|--|---------------------------|----------|--------------------------------|-----------------------|-----------------|------------------|
| 1 | Education programs for K-12 | 3/1/2018 | 3/1/2019 | Engagement | \$27,000.00 | \$48,000.00 | \$75,000 |
| 2 | Outreach: education programs for adults and families | 3/1/2018 | 3/1/2019 | Engagement | \$14,000.00 | \$25,000 | \$39,000 |
| 3 | Communication | 3/1/2018 | 3/1/2019 | Engagement | \$9,000.00 | \$11,000 | \$20,000 |
| Total | | | | | \$50,000 | \$84,000 | \$134,000 |

(1) Start Date for funding under \$100K, minimum 45 Days from Board Approval; Start Date for funding over \$100K, minimum 90 Days from Board Approval.

·Round values up to the nearest hundred dollars.

·Reimbursement eligibility commences upon the grantee's receipt of a Notice to Proceed (NTP)

·NTP will not be accepted as a start date. Project activities may commence as soon as grantee enters contract and receives formal NTP if prior to the listed "Start Date".

·The applicant shall provide a progress report every 6 months, beginning from the date of contract execution.

·CWCB will withhold disbursement of the last 10% of the total grant amount until a Final Report is completed to the satisfaction of CWCB staff (2017 CWP Grant)

ENGAGEMENT & INNOVATION GRANT FUND SUPPLEMENTAL APPLICATION

Introduction & Purpose

Colorado’s Water Plan calls for an outreach, education, public engagement, and innovation grant fund in Chapter 9.5.

The overall goal of the Engagement & Innovation Grant Fund is to enhance Colorado’s water communication, outreach, education, and public engagement efforts; advance Colorado’s water supply planning process; and support a statewide water innovation ecosystem.

The grant fund aims to engage the public to promote well-informed community discourse regarding balanced water solutions statewide. The grant fund aims to support water innovation in Colorado. The grant fund prioritizes measuring and evaluating the success of programs, projects, and initiatives. The grant fund prioritizes efforts designed using research, data, and best practices. The grant fund prioritizes a commitment to collaboration and community engagement. The grant fund will support local and statewide efforts.

The grant fund is divided into two tracks: engagement and innovation. The Engagement Track supports education, outreach, communication, and public participation efforts related to water. The Innovation Track supports efforts that advance the water innovation ecosystem in Colorado.

Application Questions

*The grant fund request is referred to as “project” in this application.

| Overview (answer for both tracks) |
|---|
| <p>In a few sentences, what is the overall goal of this project? How does it achieve the stated purpose of this grant fund (above)?</p> <p>Roaring Fork Conservancy (RFC) seeks funding to support its role as a leader and hub for water education, public engagement, and collaborative planning efforts including:</p> <ul style="list-style-type: none"> • Education Programs reaching K-12 students, engaging our youngest river stewards in hands-on activities and guided discourse around current and ongoing water initiatives, while laying a foundation of watershed knowledge and understanding. • Community Outreach including field-based programs designed to facilitate a deeper understanding of water and water resources through interaction with natural and man-made water sites. • Communication with a broad spectrum of local, state, and national constituents, engaging the public around current water issues, projects, and policy through print and electronic media. <p>Notably, all of RFC’s education programs are based on current, authentic, local and regional water issues, and thus are designed to evolve and adapt alongside Colorado’s water landscape and communicate up-to-date information about local and regional projects, research, and issues.</p> |
| <p>Who is/are the target audience(s)? How will you reach them? How will you involve the community?</p> <p>The following are RFC’s target audiences, reach and involvement:</p> <ul style="list-style-type: none"> • K-12 Students: RFC educators teach over 5,000 students a year in the Aspen and Roaring Fork School Districts. During the school year we are in the classroom or in the field with students, 2-3 days a week. Programs range from water quality testing to macroinvertebrate identification, to understanding maps and tracing the path of local streams, to studying |



Overview (answer for both tracks)

geomorphology on local rivers, to learning about the human history of water use in the Roaring Fork Valley. We build relationships with local schools by reaching out to teachers as well as fulfilling program requests.

- **Front Range Water Users:** Every year we offer a tour of the Twin Lakes Transbasin Diversion Tour, in collaboration with Colorado Springs Utilities. Participants from around the state attend this popular program, with interest increasing each year.
- **College Students** (field courses, internships, graduate projects): RFC mentors 2-3 interns, annually. Interns typically help collect water quality data, monitor RFC conservation easements, or help administer community outreach programs. RFC educators are invited to Colorado Mountain College's Environmental Science, Sustainability and Elementary Education classes to present on water in the west. In addition, RFC annually hosts a one day experience with Colorado College's Environmental Program and has worked with graduate students from the University of Michigan through their School for Environment and Sustainability.
- **Western Slope Residents, Businesses and Visitors:** RFC offers field-based educational programs for adults and families through its Watershed Explorations. About 1,000 residents, visitors, and second-home owners explore our watershed through these programs, annually. Watershed Explorations are advertised on our website, via press releases, online community and radio calendars, our Facebook page, and through our monthly e-newsletter. RFC also has 26 Roaring Fork Valley business members.
- **Other Colorado Watershed groups/coalitions:** Through Colorado Rural Water, RFC is working with Eagle River Watershed Council and Middle Colorado Watershed Council, to help municipal and HOA water providers with outreach initiatives in effort to educate water-users of source water protection and health. RFC also shares our education programming strategies at a variety of state conferences.

Describe how the project is collaborative or engages a diverse group of stakeholders. Who are the partners in the project? Do you have other funding partners or sources?

Stakeholders and existing partnerships that will directly benefit through RFC programs and from activities at The River Center are:

- Colorado River Watch
- Colorado Basin Roundtable
- Roaring Fork School District, Aspen School District, Afterschool Enrichment programs
- Youth Entity
- River Network
- Colorado Foundation for Water Education
- Colorado River District
- RF Watershed Collaborative
- Ruedi Water and Power Authority
- Basalt Library
- Roaring Fork Valley Fly Fishing Club
- Pitkin County Open Space and Trails
- City of Aspen
- Town of Basalt
- Town of Carbondale
- Two Rivers Community School
- Aspen Country Day School
- Blue Lakes Preschool
- City of Glenwood Springs River Commission
- Aspen Historical Society
- National Fishing in the Schools Program



| Overview (answer for both tracks) |
|---|
| <ul style="list-style-type: none">• Colorado Parks and Wildlife• Mt. Sopris Conservation District <p>2017 Funding partners include:</p> <ul style="list-style-type: none">• Bessie Minor Swift Foundation• Pitkin County• City of Aspen• Snowmass Village Rotary Club• Town of Snowmass Village• The Thrift Shop of Aspen• Private Donations |
| Describe how you plan to measure and evaluate the success and impact of the project? |
| <p>RFC will measure and evaluate the impact of this project by:</p> <ul style="list-style-type: none">• Continuing to track program statistics including quantity of programs, number of participants (school classes, professional workshops, community seminars, etc.), demographic of participants, and on-site visitations to our outdoor displays after The River Center is built.• Conducting watershed awareness surveys as a part of select Watershed Explorations.• Continue to conduct Pre-tests and Post-tests for school groups that participate in our watershed education programs.• RFC will report back to CWCB on all Education and Outreach programming, including participant feedback, and evaluate successes, lessons learned and future opportunities. |
| What research, evidence, and data support your project? |
| <p>RFC prides itself on offering inquiry-based, authentic learning experiences to schools, many of which are field-based environmental education courses. Stanford University and the North American Association for Environmental Education released a comprehensive review and analysis of environmental education programs (including over 100 peer-reviewed studies), providing evidence that these youth education experiences in-particular, increase, knowledge, change behaviors, improve learning and academic skills, as well as increase civic interest and engagement.</p> <p>Research conducted during the CWP process showed us that even elementary and middle school students want to have a say in their future water supply, and that they truly understand the implications of a limited resource, with emphasis and insights from their individual lifestyles- particularly recreational and/or agricultural.</p> <p>Since our first year providing educational programs in the Roaring Fork Valley, the number of contacts has increased significantly: from 2,069 in 1999 to 9,186 in 2016. In 1999, RFC employed 1 full time and 1 part time education staff, RFC now employs 2 full time and 1 part time educator. This means we are reaching 7,000 more people with only 1 more dedicated education staff member. The ever increasing number of requests RFC receives from schools, camps, community groups and individuals for classes, workshops and learning opportunities demonstrates a clear need for an increase in development and delivery of educational programming surrounding water issues. Additional requests for similar programs to reach adult audiences are also coming from other Colorado-based non-profits and agencies.</p> |



Overview (answer for both tracks)

Describe potential short- and long-term challenges with this project.

RFC has an accomplished and talented education staff who navigate full education and outreach schedules while also engaging in diverse projects associated with working for a small non-profit organization. Coupled with the increasing demand for education programs detailed above, the most pressing short-term challenge is capacity to deliver the quantity of high-quality education programs that our constituents need and value. We do not want to miss the opportunity to share important aspects of Colorado Water to an eager audience because we lack the staff to do so.

Long term challenges include staff retention, capacity to create and deliver new programming while maintaining the necessary baseline watershed education in schools, and the funding to hire a third party program evaluator to provide feedback on our programs and performance to optimize growth and learning amongst the staff.

Please fill out the applicable questions for either the Engagement Track or Innovation Track, unless your project contains elements in both tracks. If a question does not relate to your project, just leave it blank. Please answer each question that relates to your project. Please reference the relevant documents and use chapters and page numbers (Colorado's Water Plan, Basin Implementation Plan, PEPO Education Action Plan, etc.).

Engagement Track

Describe how the project achieves the education, outreach, and public engagement measurable objective set forth in Colorado's Water Plan to "significantly improve the level of public awareness and engagement regarding water issues statewide by 2020, as determined by water awareness surveys."

Education (knowledge):

The K-12 curriculum used and developed by RFC educators focuses on river and watershed topics relevant to Colorado, aligning with goals in CWP 9-57. We make over 7,000 students contacts annually through field trips, camps, clinics, hands-on classroom activities, and our adult and family focused Watershed Explorations. Furthermore, our school programs are correlated with the Colorado Department of Education academic standards (a goal listed in CWP 9-54) and the North American Association for Environmental Education's guidelines for learning. Funding will also further the effectiveness of ProjectWET across the state; RFC education staff are trained to provide teacher workshops and place ProjectWET curriculum in the hands of more educators (9-57). Demand for our water education programs from schools, camps and community groups remains at an all-time high, and it is imperative that we have the capacity to capture these audiences while momentum and interest exist (9-58).

RFC plays a major role in the Colorado River Watch program, acting as the home base for 10 groups of citizen science volunteers, and providing support for 6 local River Watch Schools. RFC staff provide training and supplies for our 20+ volunteers and coordinate transport of water samples, sampling materials, and chemicals with River Watch. In addition, RFC staff attend annual River Watch statewide trainings, helping train new teachers and volunteers joining the program. This work advances the efforts of state agencies as outlined in CWP 9-55.

Outreach (awareness):

Popular community outreach programs include annual raft guide trainings, watershed explorations, Fryingpan River Cleanup (20 years), educational dialogues and forums, tours of local water facilities,



and our Annual Roaring Fork River Educational Float. In addition, RFC publishes a biannual newsletter, sent to over 6,000 individuals, and a monthly e-newsletter reaching 5,000. We also have an active Facebook page and Instagram account, with daily posts.

RFC runs a series of Watershed Explorations, hands-on programming designed to bring participants (families, community members, and water professionals) to unique places in the Roaring Fork watershed, engaging them in a particular water issue via local and regional experts. Thirty-two Watershed Exploration opportunities were offered in 2016, including guided float trips, hikes through riparian habitats, water diversion project tours, snowshoe hikes, and excursions to view fireflies in rare thermal wetlands. Every program is designed to engage participants with people and places in the watershed that they otherwise might not have the opportunity to encounter or access (9-59).

RFC is making a concerted effort to reach out to the Latino community in our watershed, which comprises approximately 30% of the population. Two years ago we launched our first bilingual school program, taking English-language learners from a local high school on a snow science field trip to enhance understanding of snow as Colorado's primary source of water. After identifying this demographic and topical gap in water education locally, we would like to contribute this and other information to CWPB for its data-based water education plan (CWP 9-61).

RFC can contribute information from its existing database, with records on water education efforts since 1998, to CWP's action item to track education efforts (CWP 9-61).

RFC is regularly involved in CBRT meetings, participates in the Next Steps Committee, and regularly assists CBRT's communication, outreach and education efforts, receiving funding from their PEPO account in 2015 and 2016 (CWP 9-61).

Public Engagement:

RFC and The River Center (now under construction) will play a key role on the western slope to "significantly improve the level of public awareness and engagement regarding water issues statewide." With its prime location in the center of the Roaring Fork Valley, projections show The River Center seeing up to 40,000 visitors a year. With significant tourism from all corners of Colorado, The River Center will serve as a hub of collaboration, providing "well-informed community discourse and decision making regarding balanced water solutions." We will use this venue to enhance our existing relationships with state, local, and federal partners (CWP, Ch10-2-H, pg.10-7). Our education program is also increasing its efforts across watershed boundaries, connecting with areas on the front range that receive or use water that originates in the Roaring Fork watershed. Following the fate of our water has proved to be an effective way of building intrastate collaboration (CWP 9-54). In the past year alone, we have enhanced connections to Colorado Springs by 1) partnering with Colorado College to teach students at the site of Twin Lakes Transbasin Diversion, Ruedi Reservoir, and on the Crystal River, 2) mobilizing over 60 volunteers from University of Colorado at Colorado Springs to work on a riparian restoration project along the banks of the Roaring Fork River (the namesake of their campus dining hall), and 3) participating in an invite-only Colorado Springs Water Utilities Source Water Tour. These efforts are just an example of the opportunities that RFC can create and capitalize on to increase awareness about water across the state and promote public connection and participation in water issues (CWP, 9-55).

RFC's connections in traditional and social media make it an effective clearing house for water related information, activities and involvement (9-59).

Reaching across traditional disciplines, RFC and Colorado State University conducted an economic impact study of the lower Fryingpan River. We have also partnered with Earth Eco to assess the economic benefit of riparian areas in the Lower Roaring Fork. We hope to continue and advance this kind of work as it engages a different sector, shows the value of water in a non-traditional way, and



moves discussions forward with respect to tourism and the potential need to adapt to increasing water demands (9-59).

Describe how the project achieves the other measurable objectives and critical goals and actions laid out in Colorado's Water Plan around the supply and demand gap; conservation; land use; agriculture; storage; watershed health, environment, and recreation; funding; and additional.

Colorado's Water Plan sets an Education, Outreach and Innovation measurable objective to "significantly improve the level of public awareness and engagement regarding water issues statewide by 2020." With a mission that complements many aspects of Colorado's Water Plan and the Colorado Basin Implementation Plan, RFC's daily work helps bring the CWCB closer to achieving its goals. By engaging with Roaring Fork Valley residents and visitors, RFC has reached over 109,000 individuals in our 21 year tenure. RFC is seeking support from the CWCB to help meet the growing demand for Watershed Education programming, using our innovative programming and extensive reach to unite statewide stakeholders and community members around a common interest in water, building on the momentum and interest currently surrounding water issues in the state (CWP, xviii).

RFC's work addresses the following Measurable Objectives outlined in Chapter 10.2 of Colorado's Water Plan:

- Conservation
 - RFC partnered with Ruedi Water and Power Authority to produce the Roaring Fork Watershed Regional Water Efficiency Plan, which includes the stipulation that all major municipal water providers in the Roaring Fork Valley produce or update individual efficiency plans. As a result / in response to meeting objectives of the Plan: RFC is working closely with the City of Aspen as it begins implementing its Water Efficiency Plan with a pilot Water Efficient Landscaping Ordinance in Summer 2017. RFC provided expertise on riparian areas and helped communicate the implications of this ordinance through our biannual newsletter, reaching over 6,000 people.
 - RFC partnered with the Community Office for Resource Efficiency and the City of Aspen to produce two rain barrel workshops, where 40 participants learned about the new legislation and each received a rain barrel with instructions on installation and maintenance.
 - RFC partnered with Roaring Fork Leadership, Pitkin County Open Space and Trails, and City of Aspen to provide a Riparian Workshop to local landscapers, realtors, and property owners. This was the first workshop of its kind on the western slope, and drew over 40 participants from around the state.
- Agriculture
 - RFC continues to build relationships within the Roaring Fork Valley's agricultural community, including key stakeholder collaboration for the Crystal River Management Plan Report and Implementation projects. To communicate key elements of this collaboration and the Plan, RFC provides informative site tours to collegiate and graduate programs and multiple in-state groups including CFWE and the River Network.
 - RFC partners with the City of Carbondale to provide an annual Bicycle Ditch Tour, where participants gain access to diversion headgates, discuss water rights on the Crystal and water law in Colorado, and learn how agricultural and municipal ditches on the Lower Crystal River function.
- Watershed Health, Environment, and Recreation
 - The Roaring Fork Watershed Plan, published in 2012, provides "a reference to enable laymen, students, activists, and recreationalists to get involved with watershed management" (RFPW, p.11). Out of more than 250 outlined recommendations for improving watershed health, many have been accomplished or are currently underway. With local funding, we are working on a five-year update to re-engage stakeholders and ensure that actions are still relevant to the current state of water



affairs. As an outcome of this process, we are working to create an interactive dashboard to display both plan recommendations and Roaring Fork Watershed data including stream flows, diversions water quality, as well as water-related studies and resources.

- In 2015, RFC partnered with Colorado State University to publish the Lower Fryingpan River and Ruedi Reservoir Economic Impact Study, which details the monetary value of angling in the Fryingpan Valley. Given the positive regional impact of this globally-known Gold Medal Fishery, RFC's press release was picked up by several local and national media outlets.
- RFC served as a coordinating entity between reservoir owners and Roaring Fork Valley stakeholders, including the City of Aspen, Pitkin County, and interested citizens, after the August 2015 Grizzly Reservoir draining. RFC's work facilitated interagency cooperation, ensured timely chemical and biological monitoring, mediated public relations, and helped develop a memorandum of understanding for future communication of water releases.
- RFC hosts an annual River Float where participants float the lower Roaring Fork River with a designated 'boat ambassador,' with specific water knowledge. Ambassadors present and answer questions about water law, riparian ecosystems, and fisheries to over 100 individuals each year.
- Storage/Supply & Demand Gap
 - RFC's annual Watershed Explorations highlight many key components of the Water Plan, working to educate locals and visitors, and to bridge the gaps between east and west, recreationalist and rancher, and environmentalists and agriculture. Program highlights include:
 - Twin Lakes Tunnel and Diversion Tour: Perennially filled to capacity, this tour links east and west, as we partner with Colorado Springs Utilities to engage participants firsthand to observe how water is collected from the headwaters of the Roaring Fork River and diverted under the Continental Divide to Front Range cities and farms. Program participants visit Lost Man Reservoir, the Roaring Fork collection dam and tunnel, travel Lincoln Creek Road to Grizzly Reservoir, and explore the four-mile long Twin Lakes tunnel that moves up to 40% of the Roaring Fork River's water to the eastern slope. Staff from Twin Lakes Reservoir and Canal Company and RFC staff partner to lead this informative tour of the tunnels, dams, and ditches that move water around our state. This is one of the most popular programs offered by RFC, reaching residents of the Roaring Fork Valley as well as visitors from the Front Range and out-of-state. This full-day program provides a perfect venue to discuss the CWP and help CBRT fulfill its educational goals by creating an open dialogue on water storage in relation to the supply-demand gap and the increasing need for water efficiencies and conservation.
 - RFC's innovative, field-based Snow to Flow education program engages middle school to adult audiences in digging snow pits, collecting samples from different layers in the snowpack, and then melting the samples to determine the water content in each layer. Students also calculate snow to water equivalence using a snow tube, a more advanced piece of equipment used by professional snow surveyors. Classes analyze the results and discuss snowpack density data in relation to water storage and impacts on future water supplies. Snow science classes are critical in connecting students to snow as their primary source of water. At the conclusion of this program, students partake in a water supply forecasting exercise and discuss the economics of snow in Colorado, including ties to tourism, whitewater rafting, angling, the ski industry, use in agricultural production, as well as downstream, out-of-state water uses. We also partner with Aspen Skiing Company to bring this program to the top of Snowmass Ski Area, where it is



taught in Spanish to English Language Learner high school students who recently arrived in the Roaring Fork Valley, connecting the newest members of the community to their local Colorado water resources.

- RFC partners with Ruedi Water and Power Authority to host an annual tour of Ruedi Reservoir and the dam, all while discussing transbasin water diversions, how Ruedi Reservoir operates, and water rights.

The programs described above demonstrate RFC's commitment to collaboration, addressing multiple needs, valuing relationships with stakeholders and local governments, and ability to share and communicate our work through thoughtful and strategic programming (CWP, Section 9.4, pp. 9-43 to 9-44).

Describe how the project achieves the education, outreach, and public engagement goals set forth in the applicable Basin Implementation Plan(s).

- RFC education staff write a weekly river report that is published in The Aspen Times, disseminated to 400 individuals through an electronic mailing, and published on social media accounts including Facebook and Instagram. This directly accomplishes three primary activities described in the CBIP Public Outreach (CBIP, section 2.3, p41) related to traditional and social media, and communicating with watershed groups. RFC has been highlighted in multiple newspapers, radio spots, and on TV for various watershed policy and education initiatives including water quality monitoring, field classes, wetland and diversion tours, planning processes, etc. We are already on the radar for these media outlets and can leverage this into the future to maximize the reach of our efforts. With a mailing list of over 6,000 individuals, over 2,000 followers on Facebook, and almost 600 Instagram followers, we have a significant reach through our own communication avenues as well. CBRT frequently looks to RFC for help in outreach and communications, thus supporting this RFC education and engagement project would bolster the CBRT's efforts.
- RFC's K-12 education programs are referred to as good models for the CBRT to use to improve connections to broader populations (CBIP, section 2.3 p41). This project will ensure that RFC can continue to model excellent K-12 education programs by 1) supporting development of new/updated courses and 2) enable RFC to mentor other watershed groups and nature center staff and initiatives within the CBRT. Through organization to organization mentorship, RFC will help others adapt lessons to unique situations, share tips to build interest and commitment from area teachers and schools, and be a resource into the future.
- RFC educators teach two-hour long guest lectures in environmental science classes at CMC, reaching over 30 college students, annually. The theme of these lectures is Water in the West and the topics covered during this lecture include: an overview of Colorado's watersheds and sub-basins, snow as the primary source of water in our rivers, the diverse uses of water in the west (i.e. agriculture, recreation, energy, industry, municipal, environmental), and the implications of increasing populations on the water supply, specifically addressing the supply-demand gap outlined in the CWP. Students learn about the origins of the CWP and its purpose as we close with a discussion on managing water, water priorities, and the increasing importance of water efficiencies and conservation. This lecture is used by the CMC professor to introduce a unit on water, in which students learn the basics of monitoring river health via macroinvertebrate collections and water chemistry tests. It is interesting to note, anecdotally, that most of these students grew up on Colorado's Western slope, but are not aware of what a watershed is, the source or destination of their water, nor understand all of the different demands on water.
- In collaboration with the Twin Lakes Reservoir and Canal Company, RFC offers annual tours of the Twin Lakes Transbasin Diversion System. During this full-day program, participants see firsthand how water is collected from the headwaters of the Roaring Fork River and diverted under the Continental Divide to Front Range cities and farms. Program participants visit Lost Man Reservoir, the Roaring Fork collection dam & tunnel, and travel Lincoln Creek Road to Grizzly Reservoir and into the four-mile long Twin Lakes tunnel. As one of the most popular programs offered by RFC, reaching residents of the Roaring Fork



Valley as well as Front Range and out-of-state visitors, this program provides a perfect springboard to discuss the CWP and help CBRT fulfill its educational goals by sharing information on water storage in relation to the supply-demand gap, the increasing need for water efficiencies and conservation, and the long-term implications of the CBIP and CWP (CBIP, section 2.3 p41).

- The CBIP identifies other avenues to engage people in water issues such as film, radio, art and literature (CBIP, section 2.3 p42). RFC education programming is becoming more interdisciplinary (incorporating science and art together) and more accessible to all (some of our programs are now offered bilingual). We work with Colorado Mountain College's Isaacson School of Media and collaborating with two students to create a film about RFC's work and impact in the Roaring Fork Valley. RFC also recently published its first children's book, illustrated by students from our programs, about the habits and habitats of the American Dipper, an important indicator species for healthy streams in the American West. Supporting this project would enable us to use the book to reach more students, which is targeted for a younger student age than we typically reach through our school programs, empowering youth to immerse themselves in nature, art and learning, simultaneously.

Describe how the project achieves the basin roundtable's PEPO Education Action Plans.

RFC's Education, Outreach and Communication programs fulfill PEPO Education Action Plans by directly enhancing and creating K-12 education opportunities (see specific program details above). In effort to engage people who may not have intrinsic interest in water issues, and delight those that do, we recently published a children's book titled *Dee Dee the Fryingpan River Dipper*, a naturalist-focused story about a local American Dipper, illustrated by local school children through RFC's integrated science and art program. The book, targeted towards a younger audience than we typically reach (pre-school to grade 3), also includes a River Journal section, outlining specific activities adults and children can do to explore their local riparian habitats and streams. In addition, RFC will soon release a video, created by CMC students, expanding our reach and meeting multiple PEPO goals (enhancing opportunities in higher education and using film to engage). RFC's programs, detailed throughout this application, meet PEPO goals using all of the ongoing and near-term outreach and education activities described by CBRT.