



**COLORADO**

**Colorado Water  
Conservation Board**

Department of Natural Resources

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**TO:** Colorado Water Conservation Board Members

**FROM:** Mara MacKillop, Water Supply Planning Section

**DATE:** November 16, 2017 Board Meeting

**AGENDA ITEM:** 35a-f. Water Plan Grants - Engagement & Innovation  
Initial Consideration

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**This item is for consideration only. No Action is required at this time**

### Introduction

The Engagement & Innovation category started with \$1 million in available funds. In the first round of applications (August 1 deadline), the CWCB staff supported 9 applications totalling \$608,805 in grant requests. If the CWCB Board approves all 9 applications, there will be \$391,195 in available funds for the second and third round of applications.

For the second round of applications (October 1 deadline), CWCB staff received 3 Intent to Apply notices totaling \$150,000. CWCB staff also received 7 applications for the Engagement & Innovation category. One project was moved to the Conservation and Land Use category. The remaining 6 applications have a total grant request of \$261,730 and a total project cost of \$479,801. After reviewing the alignment of each grant application with Colorado's Water Plan, CWCB staff supports all 6 applications. If the Board approves the below 6 applications in January, there will be \$129,465 available for the third round (February 1 deadline).

Applicant	Project Name	Request	% of Project	Staff Support
a. Colorado State University	Investigation of Barriers to Policy for Low Impact Development	\$10,000	80%	\$10,000
b. Mancos Conservation District	Mancos Watershed Outreach and Data (MWOD) and School-Based Outdoor Learning Labs (SOLL) Projects	\$81,250	45%	\$81,250
c. Middle Colorado Watershed Council	Colorado River Interpretive Center	\$47,400	78%	\$47,400
d. National Young Farmers Coalition	Training Young Farmers as Water Leaders Through Colorado Water Law & Policy Bootcamps	\$33,080	80%	\$33,080



e. One World One Water Center at MSU Denver	Activating Colorado's Water Plan with Student Driven Innovation	\$40,000	80%	\$40,000
f. Roaring Fork Conservancy	River Center Education Programs	\$50,000	37%	\$50,000

#### Staff Review and Comments

##### **a. Colorado State University - Investigation of Barriers to Policy for Low Impact Development**

The Colorado Stormwater Center (CSC) is within the Department of Civil and Environmental Engineering at CSU. The CSC provides stormwater-related education and training and research for maintaining and improving healthy water bodies through proper stormwater management.

The goal of the proposed project is to identify barriers in adopting policies for Low Impact Development (LID) for urban stormwater. LID is a technique that provides an alternative water source for non-consumptive use, improves water quality of water bodies, restores natural hydrologic processes in the urban environment, promotes groundwater recharge, and provides several aesthetic and other benefits to communities.

This project helps to meet the education, outreach, and public engagement; innovation; conservation; and land use measurable objectives.

The applicant has 20% cash match for this \$10,000 grant request (total project cost \$12,500).

##### **b. Mancos Conservation District - Mancos Watershed Outreach and Data (MWOD) and School-Based Outdoor Learning Labs (SOLL) Projects**

The Mancos Conservation District (MCD) represents private and public landowners of the Mancos Valley. The conservation district's mission is to provide leadership for the conservation of natural resources to ensure health, safety, and general welfare of the citizens of the Valley through a responsible conservation ethic.

The Mancos Watershed Outreach and Data Project (MWOD) includes conducting outreach and education events to collect data and create a community report about concerns using the Mancos River Resiliency Assessment. The Mancos Conservation District's Montezuma School to Farm (MSTFP) School-based Outdoor Learning Labs (SOLL) provides garden-based experiential education lessons to 2,300 K-8th grade Montezuma County students and focuses on water conservation. It also includes a two-day Teacher Training Intensive to 25+ regional educators with a focus on water conservation lessons that can be taught in school garden classes across the Southwestern region. Lastly, it includes collaborating with local partners to organize a regional Ag Expo for youth with multiple learning stations over a 3-day period.

This project helps to meet the education, outreach, and public engagement; innovation; conservation; and agriculture measurable objectives.

The applicant has 55% cash match for this \$81,250 grant request (total project cost \$181,621).

**c. Middle Colorado Watershed Council - Colorado River Interpretive Center**

The Middle Colorado Watershed Council (MCWC) aims to evaluate, protect and enhance the Middle section of the Colorado River through the cooperative efforts of diverse stakeholders.

The Middle Colorado Watershed Council (MCWC) is creating a Colorado River Interpretive Center for educating the public on the Colorado River and its value to the residents of Colorado. The proposed project includes gathering key education specialists in the region in a design charrette process to identify the target audiences and determine a set of priority themes and messages for the Center. It also includes creating the educational themes and displays for the Center. Lastly, it includes programming for the Center.

This project helps to meet the education, outreach, and public engagement measurable objective and the Colorado River Basin Implementation Plan.

The applicant has 22% cash match for this \$47,400 grant request (total project cost \$60,400).

**d. National Young Farmers Coalition - Training Young Farmers as Water Leaders Through Colorado Water Law & Policy Bootcamps**

The National Young Farmers Coalition (NYFC) represents, mobilizes, and engages young farmers and ranchers to ensure their success. NYFC has developed 37 chapters in 26 states, and a grassroots network of more than 130,000 young farmers and supporters working together for change.

The goal of this project is to educate young farmers and ranchers on state water law and policy through NYFC Water Bootcamps, and empower them to take on roles of water leadership. NYFC has already hosted four Water Bootcamps in Colorado in the last year, reaching over 125 producers and partnering with our four Colorado chapters and dozens of partners and presenters. The proposed project would include four additional Bootcamps as well as expanding and sharing their online resource portal and increasing young farmer engagement in the basin roundtables.

This project helps to meet the education, outreach, and public engagement and agriculture measurable objectives.

The applicant has 20% cash match for this \$33,080 grant request (total project cost \$41,280).

**e. One World One Water Center at MSU Denver - Activating Colorado's Water Plan with Student Driven Innovation**

The One World One Water (OWOW) Center at Metropolitan State University of Denver strives to prepare an educated, empowered, solution-oriented Colorado citizenry to protect and preserve our precious water resources.

The One World One Water Center at MSU Denver (MSU), CU-Boulder, Denver Botanic Gardens and Brendle Group, are working together as the Colorado Water Collaboratory, a cross-campus contest that helps university departments and students connect to Colorado's Water Plan. The proposed project uses campuses as living labs for water innovation and would create a multi-campus contest with replicable outputs and measurable impact that focuses on challenges in Colorado's Water Plan.

This project helps to meet the education, outreach, and public engagement and innovation measurable objectives.

The applicant has 20% cash match for this \$40,000 grant request (total project cost \$50,000).

**f. Roaring Fork Conservancy - River Center Education Programs**

Roaring Fork Conservancy (RFC) inspires people to explore, value, and protect the Roaring Fork Watershed. The RFC brings people together to protect our rivers, works to keep water in the streams, monitors water quality, and preserves riparian habitat.

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. The proposed project includes providing field-based and in-classroom programs to students; field-based educational programs for adults and families, called Watershed Explorations; and outreach materials.

This project helps to meet the education, outreach, and public engagement; conservation; and watershed health, environment, and recreation measurable objectives.

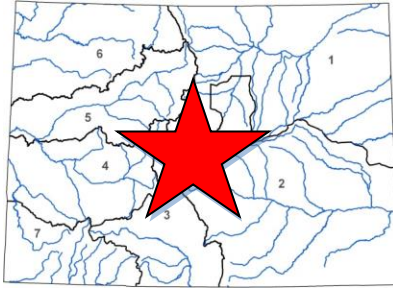
The applicant has 63% cash match for this \$50,000 grant request (total project cost \$134,000).

*See attached Data Sheets for the summaries.*



## Investigation of Barriers to Policy for Low Impact Development

### Water Plan Grant Application



L O C A T I O N	
County/Countries:	Statewide
Drainage Basin:	Statewide

### Colorado State University

November 2017 Board Meeting  
Initial Consideration

D E T A I L S	
Total Project Cost:	\$12,500
Water Plan Grant Request:	\$10,000
Applicant Match:	\$2,500
Project Type(s):	Education
Project Category(Categories):	Engagement & Innovation
Measurable Result:	aid adoption of LID for urban stormwater

The goal of the proposed project is to identify barriers in adopting policies for Low Impact Development for urban stormwater. This project will help promote innovation as LID is a new technology that can be used to bring the Colorado Water Plan goals to the stormwater sector.

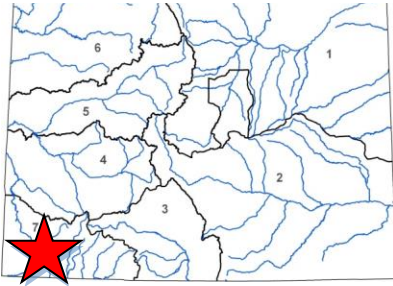
The Colorado Water Plan promotes sustainable water resources across Colorado. Even in a semi-arid region, stormwater can pollute local water bodies and alter natural hydrology. Current stormwater management strategies involves capturing and treating the water quality capture volume and control and release of varying levels of design storms. Low Impact Development (LID) is a different technique that provides an alternative water source for non-consumptive use, improves water quality of water bodies, restores natural hydrologic processes in the urban environment, promotes groundwater recharge, and provides several aesthetic and other benefits to communities. Adopting policies that promote the use of LID can lead stormwater management in a direction that is cohesive with the goals in the Colorado Water Plan. Despite the many benefits of LID, many municipalities are still hesitant to adopt LID policies. The Colorado Stormwater Center seeks to help municipalities overcome these barriers and provide examples of functioning LID sites. In order to promote LID it must first be known what the policy barriers municipalities are facing. For that reason the Colorado Stormwater Center's proposes to conduct an in-depth engagement of municipalities to determine current LID programs and identify barriers municipalities are facing in adopting LID policy.

Low Impact Development (LID) is a method of deploying stormwater management strategies that accomplish numerous goals set out by the Colorado Water Plan. LID is able to provide alternative water sources for non-consumptive use, improve water quality of stormwater that is discharged to local water bodies, restore natural hydrologic processes in the urban environment, promote groundwater recharge, as well as provide several aesthetic and other benefits to communities. By identifying and overcoming barriers that municipalities face in adopting LID policy, stormwater across Colorado can join the rest of water resources in supporting the Colorado Water Plan.

The target audience for the proposed work is municipal stormwater managers. The audience will be reached through the Colorado Stormwater Center's connection with the Colorado Stormwater Council which consists of representatives of each municipal separate storm sewer system (MS4) in the state. The community will be further engaged through the deployment of a condensed survey that will be disseminated and summarized as part of the project.



## Water Plan Grant Application



L O C A T I O N	
County/Countries:	Montezuma County
Drainage Basin:	Southwest

D E T A I L S	
Total Project Cost:	\$181,621
Water Plan Grant Request:	\$81,250
Matching Funding:	\$100,371
Project Type(s):	Education
Project Category(Categories):	Engagement & Innovation
Measurable Result:	975 landowners and 2,300 students impacted by engagement activity.

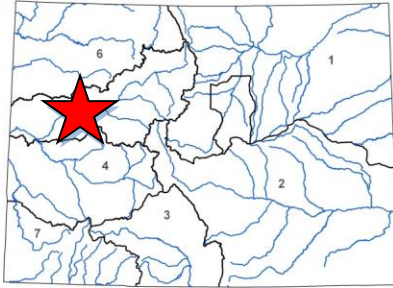
MCD is proposing two projects that will promote well-informed community discourse regarding balanced water solutions statewide. The first project is the Mancos Watershed Outreach and Data Project (MWOD) which addresses priorities identified in the Colorado Water Plan and Colorado's Water Values. As the plan suggests, MWOD will provide an opportunity to support water awareness education that creates a productive, vibrant economy in the Town of Mancos, viable and productive agriculture, efficient and effective water infrastructure promoting smart land use; and a strong environment that includes healthy watersheds, rivers and streams, and wildlife. We will focus our outreach in two ways, publicly held meetings, inviting partners, stakeholders and landowners to come and voice their concerns and outreach events using our Mancos River Resiliency Assessment, currently being developed, to address existing concerns and gaps in scientific information. This outreach initiative will enlist the time of our outreach and data collection coordinator, the two MCD Conservation Technicians, our board, as well as the participant's to-date in the Mancos Valley Watershed Group's Mancos River Resilience Project.

The second project is the Mancos Conservation District's Montezuma School to Farm (MSTFP) School-based Outdoor Learning Labs (SOLL). SOLL will enhance Colorado's water education and public engagement efforts through: 1) providing standards aligned, school garden based experiential education lessons to 2300 K-8th grade Montezuma County students that focus on water conservation studies, practices and methods; 2) providing an Annual Two-Day Teacher Training Intensive to 25+ regional educators with a focus on water conservation lessons that can be taught in school garden classes across the Southwestern region. Educators will leave with access to MSTFP's K-8th grade Drought Resilient Curriculum Manuals and the tools to be able to implement them in their school districts. SOLL achieves the Colorado Water Plan's goal of enhancing Colorado's outreach, education and public engagement efforts and supporting a statewide water innovation ecosystem by engaging students and teachers at the crossroads of regenerative agriculture and water conservation. 3) Collaborate with local partners to organize a regional Ag Expo for youth with multiple learning stations over a 3 day period.

As the Colorado Water Plan states in the lessons learned section: "...the landowners and other stakeholders impacted by a watershed plan must be included in the process, and given the opportunity to help identify the practices for implementation." MCD's goal is to gather concerns present, educate stakeholders on solutions and best practices for those concerns and to bring together the water users in the Mancos Valley while continuing to raise public awareness and involvement in water conservation strategies. Our MWOD project will specifically address this concern and the data we collect will be shared for outcomes and implementation planning.



## Water Plan Grant Application



L O C A T I O N	
County/Countries:	Garfield
Drainage Basin:	Colorado

D E T A I L S	
Total Project Cost:	\$60,400
Water Plan Grant Request:	\$47,400
Applicant Match:	\$13,000
Project Type(s):	Education
Project Category(Categories):	Engagement & Innovation
Measurable Result:	the number of guests who utilize the interpretive center

The Middle Colorado Watershed Council (MCWC) is endeavoring to create a Colorado River Interpretive Center for educating the public on the Colorado River and its value to the residents of Colorado. The Colorado River Interpretive Center will engage the public, from school groups, to tourists, to local stakeholders along the Middle Colorado River. The Colorado River Interpretive Center will include themes and stories about the river, connect people emotionally to the river, and leave the visitors with new knowledge about the River and issues facing Colorado water.

The CWP Funding will be put towards three tasks:

Task 1: Audience definition and stakeholder engagement. This will involve key education specialists in the region in a design charrette process to identify the target audiences and determine a set of priority themes and messages for the Center.

Task 2: Interpretive Material Creation and Design. This task will take the agreed upon educational themes, stories and messages and transform them into displays that work together functionally within the Center environment.

Task 3: Interpretive Center Programming. The MCWC will work with local partners and schools to create special events and educational opportunities in conjunction with the Center.

Section 10.2 H, p 10-7 outlines the CWP intention of creating measurable goals for Education, Outreach and Innovation through increasing public awareness on water issues. The Middle Colorado Watershed Council believes the Colorado River Interpretive Center (Center) will serve as an outreach and education hub for Garfield County and to inform the public and those travelling through the state on key issues outlined in the CWP.

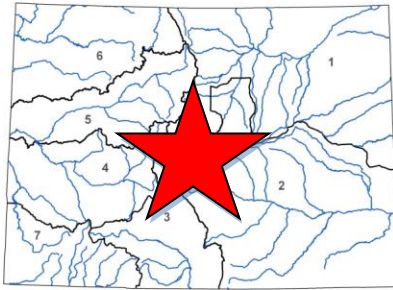
“Colorado’s Water Plan will expand outreach and education efforts that engage the public to promote well-informed community discourse and decision making regarding balanced water solutions. This work will be collaborative and include state, local, and federal partners. As one component of this overall strategy, the CWCB will work with Colorado’s innovation community, education and outreach experts, research institutions, and the Governor’s Colorado Innovation Network (COIN) to address Colorado’s water challenges with innovation and “outside-the-box” creativity.” The Center falls into the “outside the box” creativity category as it provides an opportunity to capture the attention of local and statewide residents, regional schools and other constituent groups, and non-residents travelling along the Colorado River through the I-70 corridor. Given that the Center is strategically located at a “mid-point” along the Colorado River mainstem in Colorado, it offers the opportunity to highlight basin-wide Colorado River functions, themes, and issues as described in the Colorado River BIP as well as focusing on local river-related issues that can be visually explored in the immediate environs.



## Training Young Farmers - Water Leaders National Young Farmers Coalition

November 2017 Board Meeting  
Initial Consideration

### Water Plan Grant Application



L O C A T I O N	
County/Countries:	Statewide
Drainage Basin:	Statewide

D E T A I L S	
Total Project Cost:	\$41,280
Water Plan Grant Request:	\$33,080
Applicant Match:	\$8,200
Project Type(s):	Education
Project Category(Categories):	Engagement & Innovation
Measurable Result:	at least 200 farmers and ranchers impacted by engagement activity

Due to the aging farmer population, two-thirds of Colorado's agricultural lands will need a new farmer in the next twenty years. That means agricultural water will also need new farmers to care for and put it to beneficial use. Ensuring young farmers understand and engage with Colorado water is critical to cultivating that next generation of agricultural water stewards. The goal of this project is to educate young farmers and ranchers on state water law and policy through NYFC Water Bootcamps, and empower them to take on roles of water leadership.

NYFC Water Bootcamps provide young farmers and engaged community members with a foundational understanding of Prior Appropriation and water policy, including the Colorado Water Plan. NYFC has already hosted four Water Bootcamps in Colorado in the last year, reaching over 125 producers and partnering with our four Colorado chapters and dozens of partners and presenters. We are now ready to formalize the curriculum, expand producer access, and prepare young people to participate in Basin Roundtables.

The project supports the following goals of Colorado's Water Plan:

#### Sec. 6.3.4 Agricultural Conservation, Efficiency, and Reuse

Goal(s): "Promote water efficiency ethic throughout Colorado"; and "Seek creative options for improving agricultural irrigation conservation and efficiency." Critical action 1.a.: "Outreach to the agricultural community about available agricultural water conservation techniques and incentives."

How this project supports these goals:

- NYFC Water Bootcamps will educate young farmers and ranchers on the benefits of conservation and efficiency and available cost-share support through state and federal programs;
- Water Bootcamps may include farm tours in which producers will share with one another challenges and opportunities to enhancing on-farm water conservation and efficiency.

#### Sec. 9.5: Outreach, Engagement, and Public Education

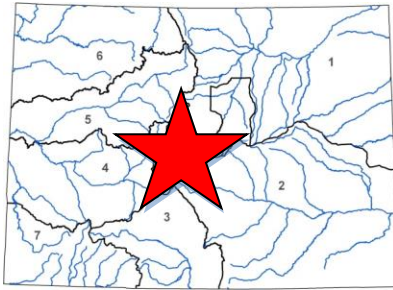
Goal: "Colorado's Water Plan provides technical and financial assistance for high-quality, balanced, and grassroots water education and outreach efforts that inform Coloradans about the issues so that they may engage in determining Colorado's water future." Measurable objective: "Significantly improve the level of public awareness and engagement regarding water issues statewide by 2020, as determined by water awareness surveys."

How this project supports this goal:

- NYFC Water Bootcamps are grassroots workshops that convene water professionals across the state. They engage NYFC farmer-led chapters and agricultural and conservation partners and, as they are open to the community, often reach the non-producer public interested in becoming better informed about water in Colorado;
- NYFC tracks impact through participant surveys and feedback forms following each Water Bootcamp.



## Water Plan Grant Application



L O C A T I O N	
County/Countries:	Statewide
Drainage Basin:	All

D E T A I L S	
Total Project Cost:	\$50,000
Water Plan Grant Request:	\$40,000
Other CWCB Funding:	\$0
In-kind Match:	\$10,000
Applicant Match:	\$20,000
Project Type(s):	Education
Project Category(Categories):	Engagement & Innovation
Measurable Result:	The measurable results will include number of students/faculty/staff impacted as well as the direct impacts of the campus projects selected through the competition.

Students and faculty at university campuses are often so focused on their specific area of study that their natural connection to water, the vast field of water related studies, and the details of Colorado's Water Plan are largely unknown to them. It's time to change that dynamic by Activating Colorado's Water Plan with Student Driven Innovation.

The One World One Water Center at MSU Denver (MSU), CU-Boulder, Denver Botanic Gardens and Brendle Group, working together as the Colorado Water Collaboratory, would like to partner to develop a cross-campus contest that helps university departments and students see themselves (and their area of study) in Colorado's Water Plan. In 2015 and 2016, MSU helped pilot efforts with a Theatre class and an Industrial Design class to create a water play and design a better rain barrel, respectively. In each case, there was a focus on understanding water challenges in Colorado and the need for wise water planning. Building on the group's vision for "Collaboratory" efforts that use campuses as living labs for water innovation and MSUs past success getting students to see themselves in the Colorado Water Plan, the team would like to create a multi-campus contest with replicable outputs and measurable impact that focuses on challenges in Colorado's Water Plan.

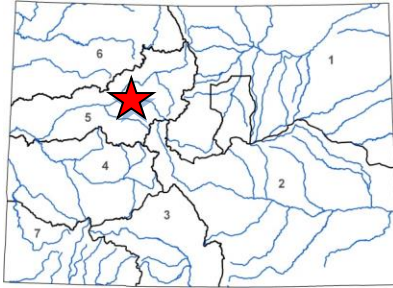
Colorado's Water Plan identifies the OWOW Center at MSU Denver as group that's leading campus communities on water supply planning, research, dialogue, and education. Bringing together the MSU Denver and CU-Boulder campuses with Denver Botanic Gardens and Brendle Group - through the Colorado Water Collaboratory - allows for unique opportunities to spearhead programs that will incorporate Colorado's Water Plan priorities and campus sustainability.

The Basin Implementation Plans described a list of goals including to "identify the necessary institutional changes, and the related cultural and economic adaptations in Colorado lifestyle, to address increasing water demands." University campuses are prime locations to test and analyze changes to water use on campus through institutional practices, infrastructure, and behavior as well as assessing cultural and economic trends amongst Colorado's growing higher education communities.

The South Platte Basin Roundtable and Metro Roundtable Education Action Plan includes an objective to work with universities to gauge public support and knowledge of the BIP and CWP through survey. This effort will include a pre- and post-survey component to measure students' knowledge before and after the contest roll-out.



## Water Plan Grant Application



L O C A T I O N	
County/Countries:	Eagle, Pitkin, Garfield
Drainage Basin:	Colorado

D E T A I L S	
Total Project Cost:	\$134,000
Water Plan Grant Request:	\$50,000
Match Funding:	\$84,000
Project Type(s):	Education
Project Category(Categories):	Engagement & Innovation
Measurable Result:	i.e. XX acre-feet created (insert data from application)

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.

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).

RFC's work addresses the following Measurable Objectives outlined in Chapter 10.2 of Colorado's Water Plan: conservation; agriculture; watershed health, environment, and recreation; and education, outreach, and innovation.

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 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.