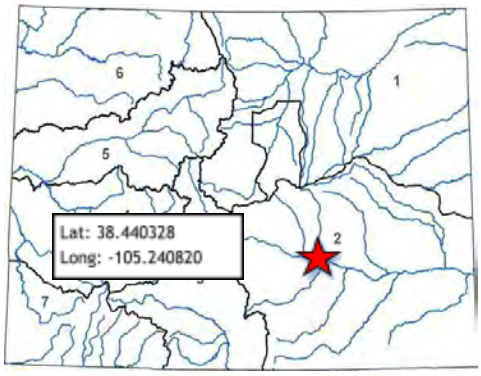
COLORADO
Colorado Water Conservation Board
Department of Natural Resources

Next Generation Water Leaders Program
River Science

March 2023 Board Meeting

Water Plan Grant Application



DETAILS	
Total Project Cost:	$198,200
Water Plan Grant Request:	$98,575
Recommended Amount:	$98,575
Other CWCB Funding:	$0
Other Funding Amount:	$0
Applicant Match:	$99,625
Project Type:	Education Activities
Project Category:	Engagement & Innovation
Measurable Result:	100 Coloradoans impacted by engagement activity

LOCATION	
County/Counties:	Statewide
Drainage Basin:	Arkansas, Southwest

Colorado Water Plan Grant funding will support River Science (a Canon City-based non-profit) in improving upon and expanding the reach of water education for junior and senior-level high-school students from the Arkansas Basin to eight school districts in Southwest Colorado. The Colorado Water Plan grant request is 49.7% of the total project cost and the non-CWCB match is 50.3%.

Building on the 30-year success of River Watch's water quality education statewide, high school teachers will be trained in locally tailored curriculum "designed to give students a foundational knowledge of water quality and water quantity, build student skill sets, provide student experiences, and spark interest in water-related careers" thereby catalyzing the next generation of Colorado's water leaders. This curriculum, which is already approved through Career Development Incentive Program (CDIP) and currently in use in Canon City, certifies students in water-related workforce skills.

The Next Generation Water Leaders Program demonstrates a commitment to collaboration with more than 100 volunteer groups, Colorado Parks and Wildlife, school districts and teachers, Water Education Colorado, the Roundtables, and Public Education, Outreach and Participation (PEPO) liaisons. The project seeks to innovate upon River Watch's educational blueprint by incorporating water quantity, policy, and planning concepts in workforce skill development. This grant application is supported by the Southwest Basins Roundtable and the Southwest PEPO liaison.

Success of the project will include 1) development of a regional resource list of interested partners, resources, and opportunities for education along with a strategic plan for expansion into new communities, 2) local adaptation of resource guides for interested schools, 3) and implementation of a 2023 pilot teacher training program. While not included in their initial Statement of Work, CWCB staff and the applicant have discussed the collection of metrics summarizing the number of teachers trained, students taught, and students securing CDIP certification for their workforce skills.

Funding Recommendation:
Staff recommends approval of the requested $98,575 to River Science for the Next Generation Water Leaders Program.

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Water Plan

Water Project Summary

Name of Applicant	River Science
Name of Water Project	Next Generation Water Leaders Program
Grant Request Amount	**$98,575.00**
Primary Category	$98,575.00
Engagement & Innovation Activities	
Total Applicant Match	**$99,625.00**
Applicant Cash Match	$99,625.00
Applicant In-Kind Match	$0.00
Total Other Sources of Funding	**$0.00**
Total Project Cost	**$198,200.00**

Applicant & Grantee Information

Name of Grantee: River Science
Mailing Address: 430 Main Street Canon City CO 81212
FEIN: 811,950,889

Organization Contact: Luke Javernick
Position/Title:
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Phone: (719) 428-9609

Organization Contact - Alternate: Allison Palmassano
Position/Title: Administration Manager
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Phone: 719-429-3707

Grant Management Contact: Luke Javernick
Position/Title:
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Phone: (719) 428-9609

Grant Management Contact - Alternate: Luke Javernick
Position/Title:
Email: luke@river.science
Phone: (719) 428-9609

Description of Grantee/Applicant

River Science is a 501c3 Non-Profit Organization. Our mission is to use education, technology, and information to improve river management and project impacts.

Type of Eligible Entity

- ☐ Public (Government)
- ☐ Public (District)
- ☐ Public (Municipality)

- [ ] Ditch Company
- [ ] Private Incorporated
- [ ] Private Individual, Partnership, or Sole Proprietor
- [x] Non-governmental Organization
- [ ] Covered Entity
- [ ] Other

Category of Water Project

- [ ] Agricultural Projects
  Developing communications materials that specifically work with and educate the agricultural community on headwater restoration, identifying the state of the science of this type of work to assist agricultural users among others.
- [ ] Conservation & Land Use Planning
  Activities and projects that implement long-term strategies for conservation, land use, and drought planning.
- [x] Engagement & Innovation Activities
  Activities and projects that support water education, outreach, and innovation efforts. Please fill out the Supplemental Application on the website.
- [ ] Watershed Restoration & Recreation
  Projects that promote watershed health, environmental health, and recreation.
- [ ] Water Storage & Supply
  Projects that facilitate the development of additional storage, artificial aquifer recharge, and dredging existing reservoirs to restore the reservoirs' full decreed capacity and Multi-beneficial projects and those projects identified in basin implementation plans to address the water supply and demand gap.

Location of Water Project

Latitude	38.440328
Longitude	-105.240820
Lat Long Flag	Default/Proponent headquarters: If the location cannot be defined with flags above, use location of project proponent headquarters
Water Source	
Basins	Southwest; Arkansas
Counties	
Districts	

Water Project Overview

Major Water Use Type	Education
Type of Water Project	Education
Scheduled Start Date - Design	
Scheduled Start Date - Construction	

Description

Our project/program serves as a catalyst to engage, educate, and inspire the next generation of water leaders. Building off our current partnerships and successful pilot programs, we want to expand these opportunities to rural schools across the State. Our water future will depend on the next generation of water leaders. We hope to grow & inspire those leaders through our program. Our program currently includes two courses (1) Water Quality & Ecology and (2) Hydrology & Watersheds. These courses are designed to give students a foundational knowledge of water quality & water quantity, build student skill sets, provide student experiences, and spark an interest in water-related careers. We are interested in exploring how to expand these opportunities Statewide.

The Water Quality and Ecology Course are moving along with eight schools currently enrolled in the program, but we wish to examine how we continue to improve this program. River Science built the Hydrology & Watersheds course specifically for Canon City High School and the Arkansas River Basin. We want to explore how we can tailor this program to serve other schools within the Arkansas River Basin as well as adapt this program for other river basins.

Measurable Results

New Storage Created (acre-feet)
New Annual Water Supplies Developed or Conserved (acre-feet), Consumptive or Nonconsumptive
Existing Storage Preserved or Enhanced (acre-feet)
New Storage Created (acre-feet)
Length of Stream Restored or Protected (linear feet)
Efficiency Savings (dollars/year)
Efficiency Savings (acre-feet/year)
Area of Restored or Preserved Habitat (acres)
Quantity of Water Shared through Alternative Transfer Mechanisms or water sharing agreement (acre-feet)
Number of Coloradans Impacted by Incorporating Water-Saving Actions into Land Use Planning
100 Number of Coloradans Impacted by Engagement Activity
Other
No additional measurable results provided

Water Project Justification

Our Next Generation Water Leaders Program supports the Colorado Water Plan, BIPs, and PEPO Education Action Plans. The program is designed to introduce junior & senior-level high-school students to critical water concepts, plans, projects, issues, and needs. The curriculum for the program first introduces students to core concepts in hydrology & water quality and builds workforce-ready skillsets through field data collection activities. Once the foundation is built, students explore state/regional/and local water issues, connect with stakeholders, understand the basics of CO water law & policy and dive into the Colorado Water Plan & BIPs. The program is designed to follow the Colorado Water Plan & Guiding Principals of the SWEAP. The curriculum covers all Critical Water Concepts identified in SWEAP and will be tailored to each region, connecting schools/teachers/and students to their local watersheds, stakeholders, and water needs. Our program directly impacts the State's education & outreach goal identified in section 9.5 "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" (CWP 9-53). Chapter 9.5 describes "Previous and Ongoing Efforts & Research" (CWP 9-54), which includes work by the CFWE (now WECO) and PEPO workgroups. Our curriculum is informed by SWEAP & PEPO work plans. We have engaged with WECO on developing our program and continue to inform them of our efforts. Additionally, we have communicated with PEPO liaisons in the Arkansas, Yampa/White/Green, and Southwest Basins. They will play a critical role in expanding our program into new areas.
Section 9.5 directly identifies the River Watch program "CPW has many education programs that focus on engaging youth in water issues. The agency funds the Colorado River Watch program in partnership with the Colorado Watershed Assembly, which supports student volunteers who collect data on water quality and watershed health throughout the State.90 CPW also supports Project WILD, which engages students in environmental education and conservation" (CWP 9-55). River Science is now the (non-profit) arm of the River Watch program. We work in partnership with CPW to administer the program. Over the past few years, we have worked to expand the program for interested schools looking to understand water on a deeper level. That extension is the Next Generation Water Leaders Program we have today, which includes (1) Water Quality &

Ecology (an extension of the River Watch Program) and (2) Hydrology & Watersheds.
Section 9.5 describes current K-12 efforts "K-12 Education: Water providers across the State administer several K-12 programs. All of these programs use education and outreach to help address specific water supply issues, many of them aimed at educating the public on how to reduce municipal and agricultural water use. Other numerous water conservancy district efforts reach thousands of students each year at children's water festivals and special initiatives within area school districts" (CWP 9-57). Our program will build off these efforts and provide additional resources, experiences, and opportunities for k-12 education. Our program is designed to provide high school teachers with a foundational curriculum on water quality & quantity. Next, we help schools connect with local experts, state agencies, water districts, non-profits, and community stakeholders to develop students' understanding of critical water concepts, engage with their local communities, and develop partnerships between schools & water professionals.
Our program significantly benefits the Colorado Water Plan's goals for education & outreach by connecting schools to their local communities & watersheds, providing a foundational water curriculum on critical water concepts, and inspiring the next generation of water leaders.

Related Studies

Our program relates to the following in terms of education & outreach:
1. Colorado Water Plan
2. Basin Implementation Plans
3. PEPO Education Action Plans
4. Statewide Water Education Action Plan

Taxpayer Bill of Rights

No TABOR requirements