

**Water Supply Reserve Fund
Water Activity Summary Sheet
March 11-12, 2020
Agenda Item 23(g)**

Applicant: West Divide Water Conservancy District
Grantee: Colorado River Water Conservation District
Water Activity Name: Crystal River Basin Augmentation Investigation
Water Activity Purpose: M&I/Needs Assessment - Study
County: Pitkin & Gunnison
Drainage Basin: Colorado
Water Source: Crystal River
Amount Requested: \$12,500 Colorado Basin Account
\$12,500 Statewide Account
\$25,000 Total Request

Matching Funds: Basin Account Match = \$12,500

- 100% of statewide request (meets 10% min)

Applicant & 3rd Parties Match (cash) = \$75,000

- 600% of the statewide request (meets 10% min)

Total Match (Basin & Applicant) = \$87,500

- 700% of the statewide request (meets 50% min)

Staff Recommendation:
Staff recommends approval of up to \$12,500 from the Colorado Basin Account and up to \$12,500 from the Statewide Account to help fund the project: Crystal River Basin Augmentation Investigation.

Water Activity Summary: WSRF Funds, if approved will assist the Colorado River Water Conservation District develop for West Divide Water Conservancy District a feasibility level study to develop a plan for augmentation in the Crystal River Basin. The drought of 2018 highlighted the fact that at least 6 subdivisions and various other junior water users do not have a legal water supply during a senior water right call on the Crystal River. During 2018, emergency SWSP's were required to ensure municipal water deliveries. It has become apparent that a basin-wide augmentation solution is needed. Division 5 has indicated they will begin issuing cease and desist orders for any junior user not actively working toward a solution. This work will focus on the following: quantify existing demands within the Crystal River drainage, evaluation the exchange potential at key locations within the basin, evaluate basin-wide augmentation strategies, update and re-evaluate small storage alternatives, evaluate new storage/recharge alternatives, develop a basin-wide augmentation strategy, public outreach and education with the various Crystal River environmental groups to educate them about the ongoing augmentation issues, and evaluate various methodologies for financing and implementation of a plan for augmentation. No on-channel, mainstem Crystal River storage will be sought, with the exception of alluvial aquifer storage.

Discussion: This effort will assist the Colorado Basin Roundtable meet the Goals and Measurable Outcomes as described in their Basin Implementation Plan (CBIP pages 112-116) by which mainly focuses on protecting, maintaining and restoring healthy rivers and potential exploration of small storage projects to benefit late season flows. The CBIP identifies securing safe drinking water as a theme, this should also include a dependable legal supply of water for users in the Crystal River basin. This work will also explore potential agreements with irrigators to provide water for domestic/municipal users in times of drought (CBIP pg 13). This activity also supports the goals of the Colorado Water Plan by addressing the supply-demand gap (CWP Chapter 10(A)) as well as addressing the feasibility of storage (CWP Chapter 10(E)) to address the gap.

The Colorado Basin Roundtable Chair's Recommendation Letter state that the Roundtable's votes was 17 yeas, 3 nays. Please refer to the Colorado Basin Roundtable minutes (highlighted sections pages 1-2 through 1-5) for this discussion.

Issues/Additional Needs: The applicant must secure a Colorado Water Plan Grant to complete their funding requirement prior to entering into a grant contract with the state, or provide an alternate funding source if they are unsuccessful, otherwise there are no additional issues or needs.

Eligibility Requirements: The application meets requirements of all eligibility components.

Evaluation Criteria: Staff has determined this activity satisfies the Evaluation Criteria.

Funding Sources/Match	Cash	In-kind	Total	Status
Colorado River Water Conservation District	\$10,000	\$0	\$10,000	Secured
West Divide Water Conservancy District	\$15,000	\$0	\$15,000	Secured
Colorado Water Plan Grant	\$50,000	\$0	\$50,000	Pending
Sub-total	\$75,000	\$0	\$75,000	
WSRF Colorado Basin Account	\$12,500	\$0	\$12,500	Secured
Sub-total	\$87,500	\$0	\$87,500	
WSRF Statewide Account	\$12,500	n/a	\$12,500	
Total Project Costs	\$100,000	\$0	\$100,000	

CWCB Project Manager: Craig Godbout

THE COLORADO BASIN ROUNDTABLE
C/O P.O. BOX 1120
GLENWOOD SPRINGS, COLORADO 81602

December 18, 2019

Megan Holcomb
Colorado Water Conservation Board
Water Supply Planning Section
1313 Sherman Street
Denver CO

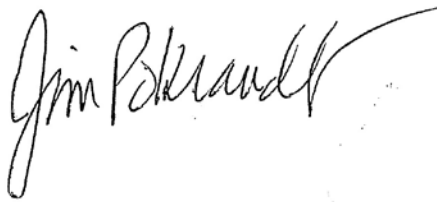
Dear Megan:

The Colorado Basin Roundtable voted at its Nov. 25, 2019 meeting to support the WSRF Basin Fund and Statewide Fund requests regarding a Crystal River Augmentation Study. Co-applicants West Divide Water Conservancy District and the Colorado River District are asking for \$12,500 from the Basin Fund and \$12,500 from the Statewide Fund.

Discussion leading up to the vote, which passed 17-3 of voting members, was concerted. This study will be a 365-degree look at all solutions to create a legal water supply for two towns and several subdivisions on the Crystal who learned in 2018, a low water year, that a call by a senior ditch knocked them out of priority and they otherwise did not have an augmentation plan. Part of the many-faceted study will examine storage options. Storage raises historical concerns on the Crystal relating to the now dead West Divide Project. Storage is also viewed by some as a countervailing to a stated goal to make the Crystal a Wild & Scenic River. I was not present for the meeting. I've attached the minutes.

The Division Engineer has urged the parties to work on solutions. This study promises to look at every possible angle while engaging the Crystal community.

Sincerely yours,

A handwritten signature in black ink, reading "Jim Pokrandt". The signature is fluid and cursive, with a long horizontal stroke extending from the end of the name.

Jim Pokrandt
Chair, Colorado Basin Roundtable

IBCC call Colorado River Basin

1. November 25, 2019, CBRT Minutes.

1. **November 25, 2019 CBRT Minutes** – Approve \$25,000 grant request for Grand Junction Audubon gravel pit rehabilitation, and Palisade school district \$25,000 ditch repair grant; table Upper Colorado Watershed study due to contention between applicant and Learn by Doing partners; \$12,500 Crystal River Augmentation Study grant approved after much discussion; Amendment DD sports gaming tax passed; Upper Colorado River Demand Management irrigation pilot project proposed.
2. **Next Meeting: January 27 , 2020, Glenwood Springs Community Center, 12:00 – 4:00.**
3. **Upcoming Meetings**
 - a. December 23, Next Steps Committee Meeting, Colorado River District Office
 - b. January 27, 2020, CBRT Roundtable Meeting, Glenwood Springs Community Center
 - c. January 27-28, CWCB meeting, Westminster
4. Reporter: These minutes were prepared by Ken Ransford, Esq., CPA, 970-927-1200, ken@kenransford.com.
5. **CBRT Members Present:** Steve Acquafresca, Paul Bruchez, Stan Cazier, Kathy Chandler Henry, Carlyle Currier, Angie Fowler, Dan Harrison, Mark Hermundstad, Kelly McNicholas Kury Pitkin BOCC, Kirsten Kurath, Merritt Linke, April Long, Ed Moyer Grand County, Ken Neubecker, Chuck Ogilby, Ken Ransford, Steve Ryken, Karn Stieglemeier, Lane Wyatt
6. **Guests:** Richard and Nancy Borden Chair Mt. Ranch, Abby Bork Grand Valley Audubon Grand Junction, John Currier CRD, Dennis Davidson Mt. Sopris Conservation District, Chuck Downey Crystal River Caucus, Dorothea and Doug Farris Crystal River Caucus, David Graf, William George Colorado Ranch Co., Luke Gingerich J.U.B. Engineers, Hannah Holm CMU, Kate Hudson Crystal River Caucus, Dawn Jewell City of Aurora, Bill Jochems Crystal River Caucus, Heather Lewin, Ryan Maecker Colo Springs Utilities, Lisa MacDonald, Pitkin County, Allan Martellaro, John Martinez Garfield County, David Merritt, John Martinez Grand Valley School District, Mickey O'Hara Colo. Water Trust, Jason Orf Crystal River Country Estates, Maria Pastore Colorado Springs Utilities, Sam Potter, Wendy Ryan Colo River Engineering, Heather Sackett Aspen Journalism, Scott Schreiber, Lisa Tasker Pitco Healthy Rivers Board, Richard Vangytenbeek Colo Trout Unlimited, Meredith Walker, Grand Valley Audubon, Chad Weaver Chair Mt Ranch Filing 2, Kent Whitmer Middle Park Water Conservancy District

7. **River Forecast.** The Colorado River is flowing 950 cfs at Dotsero, slightly below the 78-year median flow of 1,000 cfs on this date.¹ The Colorado River is flowing 1,750 cfs; the median is 1,800 cfs at Cameo on this date.²
8. **The WSRA balance is \$112,000 before approving any grants slated for today's meeting.** We expect another \$140,000 will be contributed in January 2020. Today we are voting on:
 - a. **Grand Valley Audubon \$25,000 request.** The Next Steps Committee recommends a \$25,000 grant. Meredith Walker said the grant would be used to rehabilitate steep and deep gravel pits near the Colorado River into shallow wetlands for shorebirds. Grand Junction is on the Western edge of the Central North American flyway. Much of the wetlands along the Colorado River in Grand Junction have been dried up due to diversions from the river.
 - i. Ken Ransford motioned to approve the grant and Ed Moyer of Grand County seconded it. **The motion passed unanimously.**
 - b. **Garfield County School District \$25,000 request for a ditch improvement in Palisade.** The grant will get water from an undermined ditch into a 24" pipe to irrigate 14 acres along the middle and high schools used for ball fields. The request from the school district was for \$50,000, but the Next Steps Committee reduced it to \$25,000.
 - i. Stan Cazier motioned that we approve this grant, Paul Bruchez seconded it, and it **passed unanimously.**
9. **Crystal River Augmentation Feasibility Study: \$12,500 from each of the CBRT Basin and statewide WSRA Accounts.** The Division Engineer called out users including **the Town of Carbondale in the 2018 drought to cease using water**, bringing this issue to a head. After the long discussion detailed below, the motion passed with 3 opposing.
 - a. Allan Martellaro, Division Engineer, Division 5, said that Division 5 did not issue the call, since technically, the State Engineer does not have a water right on the Crystal River. Rather, the Ella Ditch made the call and the State Engineer administers the call. Martellaro said **there have been calls on the Crystal for years**, most recently for instream flows (as the Crystal River has gained notoriety in state water discussions for nearly drying up in 2002 and 2018—ed.), and he **believes a basin-wide solution of storage or irrigation dry-up is needed.** The Town of Carbondale has no interest in drying up the river; the CWCB in recent years has been making calls for In Stream Flows. Martellaro also believes that **water above Avalanche Creek will be needed to contribute to the solution.**

¹ Dotsero forecast: https://waterdata.usgs.gov/usa/nwis/uv?site_no=09070500.

² Cameo forecast: https://waterdata.usgs.gov/co/nwis/uv/?site_no=09095500&PARAMeter_cd=00065.00060

- b. Scope of the request: The augmentation study will look at developing a Crystal River basin-wide augmentation plan. Wendy Ryan of Colorado River Engineering described the proposal.
 - i. The first step is to **quantify the amount of water needed**, and how much demand there is for augmentation water.
 - ii. Can they **augment by exchange**? The **instream flow reaches will probably limit this**, which is why they will likely need storage upstream.
 - iii. They may also want to practice alluvial aquifer recharge, by building a leaky pond that slowly recharges the aquifer and enhances river flows.
 - iv. **Where do they need supplies to meet the demands**, with an eye toward timing.
 - v. The ultimate solution is a decree for augmentation of the Crystal River.
- c. John Currier said that calls on the Crystal River are not new; they've been happening a long time. There is **no recommendation for a dam on the Crystal River (termed "on-channel storage")**. Currier said the only likely way to satisfy downstream agricultural irrigators is to build ponds upstream to recharge the aquifer.
- d. Pitkin County Commissioner Kelly McNicholas Kury said that Pitkin County will not support the grant request, because Pitkin County continues to support Wild and Scenic River status on the Crystal. Kury said that **Pitkin County requires two modifications to the proposed grant request**: (1) The application must state that **all storage will be off-channel**; (2) The study should **narrow the scope of locations for storage to below the point where the Sweet Jessup diverts from the Crystal River**.
- e. Kate Hudson represents the **Crystal River Caucus** and presented a letter explaining their position. The Caucus is concerned that the grant application was not brought to their attention earlier, so they did not have a full and timely discussion of it. They are **apprehensive of plans that do not solicit their participation**. The Caucus supports Wild and Scenic River designation as part of their master plan. The Crystal Caucus Board does not support a feasibility study that contemplates any on-channel storage on the Crystal River. The Caucus encourages the CBRT to table the submitted grant application so it can be re-worked to accommodate the Caucus' and Pitkin County's concerns. They **request the proponents to present the revised grant application at a Caucus meeting**. In particular, they are concerned about potential dams in the Crystal River drainage to support this augmentation plan.
- f. Karn Stieglemeier asked if any augmentation plan can be compatible with Wild and Scenic River designation.

- g. Bill Jochems, another Caucus member, described the Caucus’ “challenging history” with both the Colorado River District and West Divide Water Conservancy District. **In 1957 a plan for 2 reservoirs**, one at the bottom end of Redstone to store water for 4 miles up to the Placita site, and a second dam at Placita that would impound water nearly up to Marble. These conditional rights were kept alive for 50 years, as the Colorado River District consistently met the “can and will” test in Water Court at Due Diligence hearings to prove they were able and willing to build the 2 reservoirs. That is why the Caucus is so nervous whenever it hears any discussion of any dams on the Crystal River or its tributaries.
- i. **Eight years ago the Colorado River District surrendered its conditional storage water rights.** Rather than go to trial, the River District abandoned them.
- h. Carlyle Currier said the purpose of the Roundtable was to search for solutions. **“We don’t find solutions that starts out with “No,”** he said. “To find a solution, you need to look at all possibilities, and that includes looking at potential dams. The Colorado Water Plan calls for 400,000 acre feet of new storage in Colorado over the next 40 years, and dams are a part of the solution.”
- i. Zane Kessler has been on the Colorado River District’s External Affairs team, and he mentioned that **Marble and Carbondale both support the feasibility study**, as well as many local homeowners. Kessler said the Division Engineer has identified a problem, and this study will let the community weigh in on solutions it can support.
- j. **Ken Neubecker agrees with Carlyle Currier.** “A reservoir is not the first choice, but we’ve agreed that storage must be considered. **You must consider all options.** If you want Carlyle Currier to take the feasibility study seriously, it must consider all options.”
- k. Paul Bruchez. Although this is specific to the Crystal River, Demand Management is taking front and center, and the entire Colorado River basin is running out of water.
- l. **Lisa Tasker, former Pitkin County Healthy Streams Board member** and self-described environmental advocate, said she is concerned that we are ignoring that we are in a new era. **We need to think beyond traditional storage.** Storage is the preferred solution historically. The Colorado River District should have met with the Crystal River caucus first. Water in the Crystal River is not scarce; Colorado water law and diversions to grow hay is causing this problem.
- m. **Ken Ransford recommended** tabling the vote until the Colorado River District could meet with the Crystal River Caucus, and to revise the feasibility study to determine **how to solve the problem without constructing any additional reservoirs.**

- n. **Chuck Ogilby made the following motion**, “I Move that we (the Colorado River Roundtable) fund the requested portion of the Crystal River Augmentation Study from our Basin Funds for the investigation of the future augmentation of in-basin water needs only; and that the study area be limited only to the Crystal River off channel sites below the Sweet Jessup ditch. And further; that the study also look at all other **means of meeting the augmentation needs other than a new reservoir site**; and further again, that the Colorado River Water Conservation District and the West Divide Water District both agree to support and actively participate in the creation of the Wild and Scenic designation on the Crystal River above the Sweet Jessup Ditch.”
 - i. Chuck’s motion was motioned for approval seconded by Kury, but the motion **did not pass**.
- o. **John Currier** requested the Crystal River Caucus to describe what is meant by “traditional storage.” “If we only consider the river downstream of the traditional irrigation ditches, we aren’t looking at the total problem,” he said. Currier does not object to revising the augmentation study to eliminate “on-channel storage structures,” but **if storage is required upstream to solve the problem, he does not want to limit it**.
- p. **Dave Merritt**, the original chair of the CBRT, said he headed up a Crystal River Wild and Scenic River study in 1989 when working with the Colorado River District. It was initially targeted to receive funding from the National Park Service. But the River District could not sign off on the Wild and Scenic River proposal without going through the Wild and Scenic River study. The National Park Service staffer then went on maternity leave, the National Park Service funding evaporated, and the Park Service lost the survey. **“Any sort of Wild and Scenic River permitting process must consider all alternatives,”** Dave said. There won’t be a dam on or near the main stem of the Crystal River. The Colorado River District is not pre-disposed to approving all dams, but Merritt said there is a need for a small amount of augmentation water to maintain the existing population.
- q. Mark Hermundstad made a **motion to approve** the Colorado River District grant request for a augmentation plan feasibility study. Carlyle Currier seconded it. It **passed with 3 opposed; Chuck Ogilby, Ken Ransford, and Pitkin County Commissioner Kury**. Ken Ransford said he opposed it because he thinks the study should propose a solution that calls for no additional storage projects.
- r. **Chuck Ogilby suggested we do a Phase I and Phase II analysis, where Phase I is seeing if we can solve the augmentation plan without storage**. “We’ve been studying Wild and Scenic River status for 8 years. **The Forest Service already manages it as if it was Wild and Scenic River; all it lacks is federal approval of this.**”

10. **Grant Request for \$10,000 for North Fork of the Colorado for Water Implementation Plan.** The Next Steps Committee recommends a \$10,000 grant from the Colorado Basin roundtable WSRA fund. Lane Wyatt described the project. There's an inter-governmental agreement among the entities involved, as well as BuRec which operates three dams, Grand Lake and Shadow Mountain Reservoir, Granby Reservoir, and Windy Gap Reservoir. Wyatt said the project is awesome, but the problem is that **one of the applicants is a plaintiff in a lawsuit suing Northern Water over the Windy Gap Firming Project.** This lawsuit is **preventing all the environmental mitigation solutions that have been proposed and agreed to by Denver Water and Northern** from being implemented. Northern has much of the most important data, and they're not going to cooperate and share this data until the lawsuit is settled.
- a. Paul Bruchez said he's still confused about what information exists, and he is **concerned that this study could duplicate and collect data that already exists.** Decades ago, Grand County stepped up against well-funded entities (Denver Water and Northern) and it found a way to reach agreement with them. He wishes the grant applicant had taken the same approach.
 - b. Grand County Commissioner and CBRT Roundtable member Merritt Linke said that **this is a good project.** But Wyatt hit the nail on the head, Grand County officially did not support this because **some of the applicants are in conflict with the Windy Gap connectivity project.** It puts Grand County in an awkward position.
 - c. Wyatt made a **motion to table the vote, Stan seconded it.** The motion was to have more collaboration with the stakeholders, prevent duplicating data that has already been collected, and **investigate what information Northern is willing to release.** The motion passed unanimously. Paul Bruchez recommended that we send this motion to the grant applicant.
11. Karn announced that **in January we elect the chair, vice-chair and recorder.** If anyone is interested in applying for one of these positions, please contact Ken Ransford.
12. **Limitations on Grant Disbursements.** Karn reported that the **CBRT has an unwritten policy to limit grants to \$25,000.** Angie Fowler reported that we are **modifying the matrix so that grant applicants can complete it as part of their grant application.** The matrix supports our 6 basin themes. This project isn't yet complete. Angie's group also thinks it is a good idea to have all applicants together so that we can vet and compare applications, and she recommends that we discuss this at a future roundtable meeting. Angie said that some recent grant applications haven't been as much aligned with our top 6 basin themes.
13. **State Senator Bob Rankin and State Representative Julie McCluskey discussed the passage of Amendment DD,** which raises revenue from a tax on sports betting to pay for Colorado water projects. Rankin is concerned that **"This won't go very far toward meeting water project funding needs in Colorado."** Bob Rankin is on the Joint Budget Committee, which decides how to spend tax revenue raised by Colorado and provided by

the federal government from income taxes it raises. Rankin is now participating in his sixth budget negotiation.

- a. Severance taxes, the major source of water funding, are in decline, particularly starting 2 years from now. Rankin fears that **Amendment DD will cause a false sense of complacency by the electorate, causing people to say, “We’ve already funded water.** It is likely to produce less than \$10m a year, and we’ll have a public perception problem trying to get additional water project funding in the future. We set a precedent in the past few years of spending General Fund money on water; initially \$30m, then reduced to \$10m a year. This is precedent-setting, to spend General Fund money on water; there’s also a proposal to spend \$10m on a state park. This is likely to be challenged.”
- b. There is a priority to fund Roundtables. **Rankin complimented the CBRT on the conduct of our meetings.** No one knows where we are going to find long term in funding Colorado’s Water Plan or Demand Management.
- c. The **projected revenue from Amendment DD** is \$29m at the most, but Bob said this also has to fund administering the tax. He doubts we’ll get more than **\$10m** a year from it, and should not expect more than that.

14. Kirsten Kurath **Demand Management workgroup update.**

- a. They had a panel discussion at the **CMU Water conference in November** with three economists on the panel; their report is on CMU’s website. The **economists discussed how a reverse auction would work** (where irrigators would bid successively less with the **lowest bidder selected** to be paid to fallow fields and leave the water savings for Lake Powell’s Demand Management pool), and other funding plans.
- b. The **Colorado River District got a Water Smart grant for a water marketing study.** It has a public outreach and West slope stakeholder segment. We should get more info from the Colorado River District on this.
- c. The **Upper Gunnison Water Conservancy District is funding its own research study with Trout Unlimited regarding high altitude hay irrigation and measuring residual soil moisture.** They’ll fully fallow fields in 2019, followed by full irrigation **for the next 2 seasons.** They have equipment in place to monitor recovery in the next 2 years. This is the type of study everyone has been asking for, and we should ask Jesse from Trout Unlimited to give us a presentation. They’re presenting before the Colorado River District in January on this.

15. Paul Bruchez reported on the **CWCB ag impacts workgroup.** They have realized that many of the gaps and concerns that the CBRT Demand Management Group has are duplicated statewide. They too want to **do a feasibility analysis of another high elevation irrigation study, similar to the Upper Gunnison Water Conservancy District.** Paul thinks the CBRT should weigh in on this project. Bruchez said he has not

met any landowners who are excited to irrigate less and get paid to not irrigate. An Upper Colorado River Basin demonstration project with irrigators driving the study would be very valuable; he has spoken with **several NGOs** and believes **seed money will be available**. The CWCB plans to continue the work groups through June 2020, and it is still too soon to do an implementation project. We don't want to duplicate projects.

- a. The CWCB has no direction to authorize a project like this. It's premature to speak of transporting Upper Colorado Basin water to Lake Powell.
- b. **Size of demonstration project: 2,000 acre-feet.** Enough to say we did something, but not so much to have sacrificed too much toward this cause. Bob Rankin asked what the likely cost would be, and Bruchez did not know, saying, **"This is too much for ILBK. American Rivers, Trout Unlimited, and The Nature Conservancy are all excited about this."**
- c. Since we know the crop is hay, **we should be able to demonstrate what the likely cost would be, and how much conserved consumptive use we could get.** The study goal is to identify what type of innovative tools we can use to irrigate with less water.
- d. How does this compare to the Upper Gunnison Water Conservancy District? Some concepts are similar, but some differ a lot. Foregoing irrigation in the main stem of the Colorado and determining impacts to return flows go beyond what is occurring in the Upper Gunnison Water Conservancy District.
- e. **Kathy Chandler Henry** is on the CWCB's local government workgroup with Karn Stieglemeier; she was critical of what she called "artificially separated" workgroups. An **on-the-ground demonstration project is a good solution** to these shortcomings.
- f. **David Graf considered this an "environmental opportunity."** This is a way to discuss how to leave water in the river at the same time preserving agriculture. The variability among studies is pretty great, depending on whether the irrigated land is next to the river or 15 miles away.
- g. Last year when the state budget initially allocated \$30m to water grants, \$20m was for Demand Management, but when **no one could define "Demand Management,"** the budget item was reduced to \$10m. Bob Rankin said he could explain a demo project to the State budget committee, so he encouraged the Roundtable to pursue this.
- h. Carlyle Currier also supports it. To make it credible, we need to be careful who the partners are—**Perry Cabot and CSU should be involved.** The outcome should be valid, duplicatable information. Every place will be different, so it is good to do this study along with the Upper Gunnison Water Conservancy District. A multiple year project is more effective than a single-year project. It's a great idea to go forward with this. Carlyle encouraged Paul to attend the upcoming West slope ag meeting and make a presentation on this.

- i. **Steve Acquafresca said he has been asking for a definition of Demand Management**, and the CWCB hasn't been able to answer him. Bob Rankin said they set aside \$1.7m in the 2019 \$10m allocation to do just this. Acquafresca said we need a cost-benefit analysis of this: "What's the cost, and what is the benefit we expect to achieve? We wouldn't buy and insurance policy if we didn't know what the benefit is."
- i. Bruchez believes a demonstration project would yield much of the information needed to do a cost-benefit analysis. Acquafresca says this would help determine the cost, but he's still concerned that **we don't know what the benefit of preserving 500,000 acre-feet in Lake Powell.**

16. CWCB Report, Gail Schwartz.

- a. Next, CWCB Board approval of the 5 categories of water plan grants funded from the \$7M in the projects bill and partially funded with the \$10M general fund allocation. These projects are included in the following categories: Agriculture, Engagement and Innovation Activities, Environmental and Recreation, Water Conservation and Land Use Planning, and Water Storage and Supply implementing the priorities of the Water Plan. Quite a few grants were approved were for continued public education of water issues recognizing water literacy in Colorado is low and the need greater public awareness and buy-in in order to address Colorado's future water challenges.
- b. **The Board also approved the elements of the 2020 Projects Bill**, of significance is the loan and grant for the **Arkansas Valley Conduit Project of \$100M to the Southeast Colorado Water Conservancy District.**
- c. Discussion of Amendment DD's passage was brief and what funds might be anticipated in the 2021-2022 budget.
- d. Water Supply Reserve Fund Grants were also approved including the Colorado Basin projects for the Fazzi Washout Pipeline, and the Missouri Heights Pipeline Phase B2 which the CBRT recommended. It was noted that these projects were funded at a lower level that requested due to the limitations in the Basin Account.
- e. Climate impacts, ATMs and In Stream Flows were important topics at the meeting. Of interest were the **Stock Watering Uses claimed as a priority ahead of Instream Flows in CRS Section 37-92-102(3)(b)** (Irrigators are requesting that diversions for stock watering be recognized without requiring a water court decree, and that they be superior to instream flow rights, the CRS statute referenced here, and likely the longest paragraph in the entire Colorado Revised Statutes—ed.) There was considerable board and public discussion of the issue and testimony from the Colorado River District and the Southwest District. At the conclusion of the discussion, the recommendation to the staff was to continue to work with the interest groups to find a satisfactory compromise. The State engineer's office will also be party to these conversations.

- f. Power point slides and minutes of the meeting are available online and our next meeting will be held in Westminster in conjunction with the Colorado Water Congress winter meeting January 27 and 28th.
17. IBCC Report. Carlyle Currier. **Demand management was the main topic.** There is a lot of mis-information, and fear that the state has already reached conclusions on how to implement Demand Management. Is it **possible to come up with a program that is temporary and feasible? How can it be equitable because there's bound to be winners and losers.** It has to be geographically diverse, but if based on a free-market system, what will that look like. **A Metro Roundtable member said the water they would give up was water they're now leasing to agriculture on the Front Range.**
- a. Stan Cazier said that Demand Management means something different to other people, and determining equity will be very difficult. We are all in a different place; **the CBRT is much further along than the rest of the state.**
 - b. The **new Headwaters Magazine is one of the best ever produced.** It has a very good discussion and background of the future Demand Management negotiations we're likely to have.
 - c. Paul Bruchez, another IBCC rep on the CBRT Roundtable, chimed in that this is another reason why we should try to do a demonstration project, quipping, **"I'll show you mine if you show me yours."**



Last Update: July 31, 2018

Colorado Water Conservation Board
Water Supply Reserve Fund Grant Application

Instructions

All WSRF grant applications shall conform to the current [2016 WSRF Criteria and Guidelines](#).

To receive funding from the WSRF, a proposed water activity must be approved by a Roundtable(s) **AND** the Colorado Water Conservation Board (CWCB). The process for Roundtable consideration and recommendation is outlined in the 2016 WSRF Criteria and Guidelines. The CWCB meets bimonthly according to the schedule on page 2 of this application.

If you have questions, please contact the current CWCB staff Roundtable liaison:

Arkansas

Ben Wade
ben.wade@state.co.us
303-866-3441 x3238

**Gunnison | North Platte |
South Platte | Yampa/White**

Craig Godbout
craig.godbout@state.co.us
303-866-3441 x3210

**Colorado | Metro | Rio Grande |
Southwest**

Megan Holcomb
megan.holcomb@state.co.us
303-866-3441 x3222

WSRF Submittal Checklist (Required)
--

x	I acknowledge this request was recommended for CWCB approval by the sponsoring roundtable.
x	I acknowledge I have read and understand the 2016 WSRF Criteria and Guidelines .
x	I acknowledge the Grantee will be able to contract with CWCB using the Standard Contract . ⁽¹⁾
Application Documents	
x	Exhibit A: Statement of Work ⁽²⁾ (<i>Word – see Template</i>)
x	Exhibit B: Budget & Schedule ⁽²⁾ (<i>Excel Spreadsheet – see Template</i>)
x	Letters of Matching and/or Pending 3 rd Party Commitments ⁽²⁾
x	Map ⁽²⁾
	Photos/Drawings/Reports
x	Letters of Support
Contracting Documents⁽³⁾	
x	Detailed/Itemized Budget ⁽³⁾ (<i>Excel Spreadsheet – see Template</i>)
	Certificate of Insurance ⁽⁴⁾ (<i>General, Auto, & Workers' Comp.</i>)
	Certificate of Good Standing ⁽⁴⁾
	W-9 Form ⁽⁴⁾
	Independent Contractor Form ⁽⁴⁾ (<i>If applicant is individual, not company/organization</i>)
	Electronic Funds Transfer (ETF) Form ⁽⁴⁾

(1) Click "Grant Agreements". For reference only/do not fill out or submit/required for contracting

(2) Required with application if applicable.

(3) Additional documentation providing a Detailed/Itemized Budget maybe required for contracting. Applicants are encouraged to coordinate with the CWCB Project Manager to determine specifics.

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



Last Update: July 31, 2018

Schedule		
CWCB Meeting	Application Submittal Dates	Type of Request
January	December 1	Basin Account; BIP
March	February 1	Basin/Statewide Account; BIP
May	April 1	Basin Account; BIP
July	June 1	Basin Account; BIP
September	August 1	Basin/Statewide Account; BIP
November	October 1	Basin Account/BIP

Desired Timeline	
Desired CWCB Hearing Month:	March 2020
Desired Notice to Proceed Date:	April 2020

Water Activity Summary		
Name of Applicant	Colorado River Water Conservation District West Divide Water Conservancy District	
Name of Water Activity	Crystal River Basin Augmentation Investigation	
Approving Roundtable(s)		Basin Account Request(s) ⁽¹⁾
Colorado River Basin Roundtable		\$12,500
Basin Account Request Subtotal		\$12,500
Statewide Account Request ⁽¹⁾		\$12,500
Total WSRF Funds Requested (Basin & Statewide)		\$25,000
Total Project Costs		\$100,000

(1) Please indicate the amount recommended for approval by the Roundtable(s)

Last Update: July 31, 2018

Grantee and Applicant Information	
Name of Grantee(s)	Colorado River Water Conservation District (CRWCD)
Mailing Address	P.O. Box 1120, Glenwood Springs, CO 81602
FEIN	84-6000156
Grantee's Organization Contact ⁽¹⁾	Andy Mueller
Position/Title	General Manager
Email	amueller@crwcd.org
Phone	(970) 945-8522 ext 242
Grant Management Contact ⁽²⁾	Ian Philips
Position/Title	Chief Accountant
Email	iphilips@crwcd.org
Phone	(970) 945-8522 ext 237
Name of Applicant (if different than grantee)	West Divide Water Conservancy District (WDWCD)
Mailing Address	818 Taughenbaugh Blvd, Rifle, CO 81650
Position/Title	Board of Directors
Email	water@wdwcd.org
Phone	(970) 625-5461

(1) Person with signatory authority

(2) Person responsible for creating reimbursement invoices (Invoice for Services) and corresponding with CWCB staff.

Last Update: July 31, 2018

Description of Grantee
Provide a brief description of the grantee's organization (100 words or less).
<p>The Colorado River Water Conservation District (CRWCD) is a public water policy agency chartered in 1937 to be "the appropriate agency for the conservation, use and development of the water resources of the Colorado River and its principal tributaries in Colorado."</p> <p>The West Divide Water Conservancy District (WDWCD), a Colorado governmental entity, was organized in 1964 for the purposes of conserving and developing land and water resources within its boundaries in Garfield, Pitkin and Mesa counties. WDWCD provides augmentation supplies within the District for all beneficial uses, and promotes the health, safety and welfare of the public through these services.</p>

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.
x	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: are eligible for funding from the Basin Accounts but not for funding from the Statewide Account.
	Non-governmental organizations: broadly, any organization that is not part of the government
	Covered Entity: as defined in Section 37-60-126 Colorado Revised Statutes

Type of Water Activity (check one)	
x	Study
	Implementation

Category of Water Activity (check all that apply)		
	Nonconsumptive (Environmental)	
	Nonconsumptive (Recreational)	
	Agricultural	
x	Municipal/Industrial	
x	Needs Assessment	
	Education & Outreach	
x	Other	Explain: Augmentation of domestic / municipal water users

Last Update: July 31, 2018

Location of Water Activity	
Please provide the general county and coordinates of the proposed activity below in decimal degrees . The Applicant shall also provide, in Exhibit C, a site map if applicable.	
County/Countries	Pikitin & Gunnison Counties
Latitude	39.182223°
Longitude	-107.239105°

Water Activity Overview
<p>Please provide a summary of the proposed water activity (200 words or less). Include a description of the activity and what the WSRF funding will be used for specifically (e.g. studies, permitting, construction). Provide a description of the water supply source to be utilized or the water body affected by the activity. 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, area of habitat improvements. 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, and Schedule.</p>
<p>This WSRF funding will be utilized to conduct a feasibility level study to develop a plan for augmentation in the Crystal River Basin. The drought of 2018 highlighted the fact that at least 6 subdivisions and various other junior water users do not have a legal water supply during a senior water right call on the Crystal River. During 2018, emergency SWSP's were required to ensure municipal water deliveries. It has become apparent that a basin-wide augmentation solution is needed. Division 5 has indicated they will begin issuing cease and desist orders for any junior user not actively working toward a solution. This work will focus on the following: quantify existing demands within the Crystal River drainage, evaluation the exchange potential at key locations within the basin, evaluate basin-wide augmentation strategies, update and re-evaluate small storage alternatives, evaluate new storage/recharge alternatives, develop a basin-wide augmentation strategy, public outreach and education with the various Crystal River environmental groups to educate them about the ongoing augmentation issues, and evaluate various methodologies for financing and implementation of a plan for augmentation. No on-channel, mainstem Crystal River storage will be sought, with the exception of alluvial aquifer storage.</p>

Last Update: July 31, 2018

Measurable Results		
To catalog measurable results achieved with WSRF funds please provide any of the following values.		
	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)	
	Length of Pipe/Canal Built or Improved	
x	Other	Explain: Determination of a legal water supply for junior water users which may result in new storage/change of water use

Water Activity Justification
<p>Provide a description of how this water activity supports the goals of Colorado's Water Plan, the most recent Statewide Water Supply Initiative, and the respective Roundtable Basin Implementation Plan and Education Action Plan ⁽¹⁾. 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>For applications that include a request for funds from the Statewide Account, the proposed water activity shall be evaluated based upon how well the proposal conforms to Colorado's Water Plan criteria for state support (CWP, Section 9.4, pp. 9-43 to 9-44;) (Also listed pp. 4-5 in 2016 WSRF Criteria and Guidelines).</p>



Last Update: July 31, 2018

Water Activity Justification

This activity supports the goals of the Colorado Water Plan by addressing the supply-demand gap (CWP Chapter 10(A)) as well as addressing the feasibility of storage (CWP Chapter 10(E)) to address the gap. While the Crystal River water users are not facing a physical gap, they are facing a legal supply gap. Any traditional storage project will likely be a multi-use facility providing not only augmentation for domestic uses but also can be utilized to boost late-season flows and promote healthy fisheries (CWP Chapter 10(E)). In addition, the potential for recharge instead of a traditional reservoir will also be explored. The Roaring Fork basin portion of the Colorado Basin Implementation Plan (CBIP pages 112-116) mainly focuses on protecting, maintaining and restoring healthy rivers and potential exploration of small storage projects to benefit late season flows. The CBIP identifies securing safe drinking water as a theme, this should also include a dependable legal supply of water for users in the Crystal River basin. This work will also explore potential agreements with irrigators to provide water for domestic/municipal users in times of drought (CBIP pg 13). While these may end up being dry-year agreements rather than full blown agricultural transfers, the agreements will protect domestic/municipal users during times of senior water right calls on the Crystal River. This problem has been overlooked because of lack of administration during water right calls on the Crystal. Agricultural users have historically taken shortages in some years without placing a call; however, instream flow calls have been placed in more recent years which has pushed the senior agricultural users to place calls. Division 5 is aware of the legal water supply issue and have directed these users to work toward a solution, whether it be basin-wide (preferable) or independently. If progress is not made, the Division will start issuing cease and desist orders and curtailing domestic well usage during periods of Administration on the Crystal River. This issue is exactly what the Colorado Water Plan and Colorado Basin Implementation Plans seek to find solutions for, securing safe drinking water through innovative ways utilizing multi-use storage, aquifer recharge and/or agreements/transfers with willing agricultural users.

(1) Access Basin Implementation Plans or Education Action Plans from Basin drop down menu.

Last Update: July 31, 2018

Matching Requirements: Basin Account Requests	
Basin (only) Account grant requests require a 25% match (cash and/or in-kind) from the Applicant or 3 rd party and shall be accompanied by a letter of commitment as described in the 2016 WSRF Criteria and Guidelines (submitted on the contributing entity's letterhead). Attach additional sheet if necessary.	
Contributing Entity	Amount and Form of Match (note cash or in-kind)
If you requested a Waiver to the Basin Account matching requirements, indicate the percentage you wish waived.	

Matching Requirements: Statewide Account Requests	
Statewide Account grant requests require a 50% match as described in the 2016 WSRF Criteria and Guidelines. A minimum of 10% match shall be from Basin Account funds (cash only). A minimum of 10% match shall be provided by the applicant or 3 rd party (cash, in-kind, or combination). The remaining 30% of the required match may be provided from any other source (Basin, applicant, or 3 rd party) and shall be accompanied by a letter of commitment . Attach additional sheet if necessary.	
Contributing Entity	Amount and Form of Match (note cash or in-kind):
Colorado River Water Conservation District	\$10,000 (cash)
West Divide Water Conservancy District	\$15,000 (cash)
CWCB CWP Grant (Application will be heard by Board May 2020)	\$50,000 (cash)
Total Match	\$75,000 (cash)
If you requested a Waiver to the Statewide Account matching, indicate % you wish waived. (Max 50% reduction of requirement).	

Last Update: July 31, 2018

Related Studies

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

Various reservoir studies have been completed by USBR/WDWCD/CRWCD on project water rights (Placita Reservoir, Osgood Reservoir, Yank Creek Reservoir, etc).

Feasibility Investigation: Crystal River Off-Stream Reservoirs Sewell Ranch, Grand River Consulting, Sopris Engineering and ERO Resources 8/27/2009

Evaluation of Potential Water Demands within the Crystal River Watershed, Grand River Consulting, 2/2003

Crystal River Basin Small Reservoir Study, Resource Engineering. 2/12/1998

Previous CWCB Grants

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

CRWCD/WDWCD – Understanding local streamflow to quantify West Divide Project component yield, Colorado Water Plan Grant, approved November, 2017, *Contract/PO #*: CA18005-A.

CRWCD/WDWCD – Kendig Reservoir Feasibility Evaluations, Colorado Basin Roundtable, approved July, 2015, *Contract/PO #*: POGG1 2016-208.

WDWCD - Feasibility and Design Assessment of Off-Channel Reservoir Sites in the Crystal River Watershed, Colorado Basin Roundtable, approved 9/17/2008. *Contract/PO #*: 09000000052

Tax Payer Bill of Rights

The Tax Payer Bill of Rights (TABOR) may limit the amount of grant money an entity can receive. Please describe any relevant TABOR issues that may affect the applicant.

CRWCD will act as the fiscal agent on this project due to WDWCD's limited revenues and corresponding limited ability to accept grant money under TABOR. WDWCD and CRWCD are both providing matching funds.

Last Update: January 9, 2018

Colorado Water Conservation Board	
Water Supply Reserve Fund	
<u>Exhibit A - Statement of Work</u>	
Date:	2/18/2020
Water Activity Name:	Crystal River Basin Augmentation Investigation
Grant Recipient:	Colorado River Water Conservation District
Funding Source:	Colorado Basin Roundtable
<p>Water Activity Overview: (Please provide brief description of the proposed water activity (no more than 200 words). Include a description of the overall water activity and specifically what the WSRF funding will be used for.</p> <p>This WSRF funding will be utilized to conduct a feasibility level study to develop a plan for augmentation in the Crystal River Basin. The drought of 2018 highlighted the fact that at least 6 subdivisions and various other junior water users do not have a legal water supply during a senior water right call on the Crystal River. During 2018, emergency SWSP's were required to ensure municipal water deliveries. It has become apparent that a basin-wide augmentation solution is needed. Division 5 has indicated they will begin issuing cease and desist orders for any junior user not actively working toward a solution. This work will focus on the following: quantify existing demands within the Crystal River drainage, evaluation of the exchange potential at key locations within the basin, evaluate basin-wide augmentation strategies, update and re-evaluate small storage alternatives, evaluate new storage/recharge alternatives, develop a basin-wide augmentation strategy, public outreach and education with the various Crystal River environmental groups to educate them about the ongoing augmentation issues, and evaluate various methodologies for financing and implementation of a plan for augmentation. No on-channel, mainstem Crystal River storage will be sought, with the exception of alluvial aquifer storage.</p>	
<p>Objectives: (List the objectives of the project)</p> <ol style="list-style-type: none"> 1. Quantify existing demands within the Crystal River drainage 2. Evaluation the exchange potential at key locations within the basin 3. Evaluate basin-wide augmentation strategies 4. Update and re-evaluate small storage alternatives 5. Evaluate new storage/recharge alternatives 6. Develop a basin-wide augmentation strategy 7. Public outreach and education with the various Crystal River environmental groups to educate them about the ongoing augmentation issues 8. Evaluate various methodologies for financing and implementation of a plan for augmentation 	



Last Update: January 9, 2018

Tasks
Provide a detailed description of each task using the following format:
<u>Task 1 - Quantify existing demands within the Crystal River drainage</u>
Description of Task: <p>This task involves working with known entities as well as with Division 5 staff to identify all structures requiring a functional plan for augmentation. The demands from these structures will be evaluated. In addition, shortages to instream flows can be quantified from available stream gage data. These demands will be quantified and compared to historic Administrative call records in order to understand the amount of storage that would be needed to cover the varied uses in a basin-wide plan for augmentation.</p>
Method/Procedure: <ol style="list-style-type: none">1. Identify all structures requiring augmentation2. Use of user-supplied diversion information (well metering, etc), if available3. Use of standard assumptions to quantify depletions.4. Determine instream flow shortages using available stream gage records5. Quantify and summarize results monthly.
Grantee Deliverable: (Describe the deliverable the grantee expects from this task)
Spreadsheets and report summarizing the basin-wide demands for water users and instream flow reaches.
CWCB Deliverable: (Describe the deliverable the grantee will provide CWCB documenting the completion of this task)
A report summarizing results and findings.



Last Update: January 9, 2018

Tasks
Provide a detailed description of each task using the following format:
Task 2 – Evaluation of the exchange potential at key locations within the basin
Description of Task: For the purposes of understanding how the basin-wide augmentation may operate using augmentation by exchange, the potential for exchanging downstream supplies to the upper reaches of the basin must be determined. This exchange analysis will look at key locations in the basin taking into account the location of supplies, demands, available streamflow and calling water rights (including instream flow reaches).
Method/Procedure: <ol style="list-style-type: none">1. Determine available streamflow taking into account senior water rights and instream flows.2. Determine the rate and monthly volumes of exchange potential to key locations in the basin.3. Compare exchange potential of the quantified demands in Task 1.4. Determine duration and frequency of insufficient exchange capacity.
Grantee Deliverable: (Describe the deliverable the grantee expects from this task)
Exchange analysis spreadsheets and report summarizing the exchange analysis findings.
CWCB Deliverable: (Describe the deliverable the grantee will provide CWCB documenting the completion of this task)
A report summarizing results and findings.

Tasks



Last Update: January 9, 2018

Tasks
Provide a detailed description of each task using the following format:
<u>Task 3 - Evaluate basin-wide augmentation strategies</u>
Description of Task: Tasks 1 and 2 will inform the basin-wide augmentation strategy. If exchange potential is limited, that would indicate that in addition to the utilization of downstream supplies (i.e. HCU credits), upstream storage would also be required. This task will evaluate basin-wide augmentation strategies that can be used in the development of a plan for augmentation. The task will inform the location of potential storage sites taking into account location of demands.
Method/Procedure: <ol style="list-style-type: none">1. Identify locations and quantity of demands that can be covered if downstream consumptive use credits were to be acquired.2. Quantify the amount and location of demands that would need to be covered with storage.3. Determine the best location for storage to meet the basin-wide augmentation requirements.
Grantee Deliverable: (Describe the deliverable the grantee expects from this task)
Maps documenting location of potential CU credits, demands and location of potential storage. Develop "service areas" that can be served with various supplies.
CWCB Deliverable: (Describe the deliverable the grantee will provide CWCB documenting the completion of this task)
Maps and report summarizing results and findings.



Last Update: January 9, 2018

Tasks
Provide a detailed description of each task using the following format:
<u>Task 4 - Update and re-evaluate small storage alternatives</u>
Description of Task: Update and re-evaluate, as necessary, small storage alternatives produced by Resource Engineering evaluation from 1998 including the ability to meet basin-wide demands, preliminary design and costs, and potential permitting requirements. No on-channel, mainstem Crystal River storage will be sought, with the exception of alluvial aquifer storage.
Method/Procedure: Using the Resource Engineering evaluation from 1998, update and expand the analysis for the Crystal River structures. Site visits will be conducted in order to determine construction feasibility, size and location of the structures. Costs will be evaluated and potential permitting requirements will be determined.
Grantee Deliverable: (Describe the deliverable the grantee expects from this task)
Preliminary design and cost estimates by structure with explanation of permitting required for each site.
CWCB Deliverable: (Describe the deliverable the grantee will provide CWCB documenting the completion of this task)
Preliminary designs and report summarizing the costs and permitting requirements.



Last Update: January 9, 2018

Tasks
Provide a detailed description of each task using the following format:
<u>Task 5 - Evaluate new storage/recharge alternatives</u>
Description of Task: This task will look into potential new storage sites as well as determining the potential for use of aquifer recharge. No on-channel, mainstem Crystal River storage will be sought, with the exception of alluvial aquifer storage.
Method/Procedure: Utilizing the institutional knowledge of locals, identify additional storage locations that can be explored in this study. If found, preliminary design, cost and permitting will be conducted as in Task 4. In addition, a previous study looking at aquifer recharge at Schofield and Elko Parks will be revisited. This will also look at the potential for recharge in the alluvial aquifer of the Crystal River, if feasible. Based on the number of locations determined, the scope will be narrowed to conduct preliminary costing for the 2 highest ranking/feasible structures.
Grantee Deliverable: (Describe the deliverable the grantee expects from this task)
Preliminary design and cost estimates by structure with explanation of permitting required for up to 2 sites.
CWCB Deliverable: (Describe the deliverable the grantee will provide CWCB documenting the completion of this task)
Preliminary designs and report summarizing the findings, costs and permitting requirements for up to 2 alternatives.



Last Update: January 9, 2018

Tasks
Provide a detailed description of each task using the following format:
<u>Task 6 - Develop a basin-wide augmentation strategy</u>
Description of Task: A culmination of the above tasks, determine the most feasible augmentation strategy to move forward. This may be a ranked list of strategies based on: <ol style="list-style-type: none">1. Sufficiency to meet all augmentation needs.2. Cost3. Ability to implement4. Environmental impacts5. Permitting restrictions6. Other factors determined during the study
Method/Procedure: Using a ranking methodology determine the most feasible augmentation strategy to meet the basin-wide demands.
Grantee Deliverable: (Describe the deliverable the grantee expects from this task) An augmentation strategy or ranked list of potential strategies.
CWCB Deliverable: (Describe the deliverable the grantee will provide CWCB documenting the completion of this task) A report summarizing the preferred strategy and/or list of potential strategies.



Last Update: January 9, 2018

Tasks
Provide a detailed description of each task using the following format:
<u>Task 7 - Public outreach and education with the various Crystal River environmental groups to describe the ongoing augmentation issues</u>
Description of Task: <p>The Crystal River basin has a strong coalition of environmental groups that have historically opposed storage projects. This is the main reason WDWCD abandoned their Crystal River rights in 2012 during a diligence cycle. If a plan for augmentation is going to be successful, it will need to be developed in cooperation with these groups. Public outreach and educational meetings (up to 10) will be conducted with these groups to describe why an augmentation supply is needed and how it can be constructed in cooperation with environmental interests. A multi-use project may alleviate some concern from these groups if reservoir operations can be developed to not only provide augmentation of junior structures, but to also boost late season flows. The ability to provide late season water would certainly require a larger reservoir than one used for augmentation only.</p>
Method/Procedure: <p>Conduct education/outreach meetings with the various Crystal River environmental groups to solicit input and feedback. Incorporate findings into the augmentation strategy.</p>
Grantee Deliverable: (Describe the deliverable the grantee expects from this task) <p>A report summarizing the concerns and input of environmental interests. This will be incorporated into the augmentation strategy.</p>
CWCB Deliverable: (Describe the deliverable the grantee will provide CWCB documenting the completion of this task) <p>A report summarizing the concerns and input of environmental interests. This will be incorporated into the augmentation strategy.</p>



Last Update: January 9, 2018

Tasks
Provide a detailed description of each task using the following format:
<u>Task 8 - Evaluate various methodologies for financing and implementation of a plan for augmentation</u>
Description of Task: A plan will be developed on how to move this work forward into a plan for augmentation that can be operated by WDWCD. This plan will look into financing for construction of potential reservoirs or other structures as well as for water court proceedings to decree a plan for augmentation. If senior consumptive use credits can be utilized, they will need to be quantified with terms and conditions to prevent injury to other water rights.
Method/Procedure: Various grant and loan opportunities will be explored for financing reservoir construction and decreeing a plan for augmentation.
Grantee Deliverable: (Describe the deliverable the grantee expects from this task) A list of potential funding opportunities and partners.
CWCB Deliverable: (Describe the deliverable the grantee will provide CWCB documenting the completion of this task) A list of potential funding opportunities and partners will be incorporated in the final report.



Last Update: January 9, 2018

Budget and Schedule

Exhibit B - 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. A separate excel formatted Budget is required for engineering costs to include rate and unit costs.

Reporting Requirements

Progress Reports: The grantee 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 grantee shall provide the CWCB a Final Report on the grantee'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.

Payments

Payment will be made based on actual expenditures, must include invoices for all work completed and must be on grantee's letterhead. The request for payment must include a description of the work accomplished by task, an estimate of the percent completion for individual tasks and the entire Project in relation to the percentage of budget spent, identification of any major issues, and proposed or implemented corrective actions.

The CWCB will pay the last 10% of the entire water activity budget when 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 water activity and purchase order or contract will be closed without any further payment. Any entity that fails to complete a satisfactory Final Report and submit to CWCB within 90 days of the expiration of a purchase order or contract may be denied consideration for future funding of any type from CWCB.

Performance Requirements

Performance measures for this contract shall include the following:

(a) Performance standards and evaluation: Grantee will produce detailed deliverables for each task as specified. Grantee shall maintain receipts for all project expenses and documentation of the minimum in-kind contributions (if applicable) per the budget in Exhibit B. Per Grant Guidelines, the CWCB will pay out the last 10% of the budget when the final deliverable is completed to the satisfaction of CWCB staff. Once the final deliverable has been accepted, and final payment has been issued, the purchase order or grant will be closed without any further payment.

(b) Accountability: Per the Grant Guidelines full documentation of project progress must be submitted with each invoice for reimbursement. Grantee must confirm that all grant conditions have been complied with on each invoice. In addition, per the Grant Guidelines, Progress Reports must be submitted at least once every 6 months. A Final Report must be submitted and approved before final project payment.

(c) Monitoring Requirements: Grantee is responsible for ongoing monitoring of project progress per Exhibit A. Progress shall be detailed in each invoice and in each Progress Report, as detailed above. Additional inspections or field consultations will be arranged as may be necessary.

(d) Noncompliance Resolution: Payment will be withheld if grantee is not current on all grant conditions. Flagrant disregard for grant conditions will result in a stop work order and cancellation of the Grant Agreement.

Last Update: July 31, 2018



COLORADO
Colorado Water
Conservation Board
Department of Natural Resources

Colorado Water Conservation Board

Water Supply Reserve Fund

EXHIBIT B - BUDGET AND SCHEDULE - Direct & Indirect (Administrative) Costs

Date: 2/18/2020

Water Activity Name: Crystal River Basin Augmentation Investigation

Grantee Name: Colorado River Water Conservation District

Task No. ⁽¹⁾	Description	Start Date ⁽²⁾	End Date	Matching Funds (cash & in-kind) ⁽³⁾	WSRF Funds (Basin & Statewide combined) ⁽³⁾	Total
1	Quantify existing demands within the Crystal River drainage	3/1/2020	5/31/2020	\$8,438	\$2,813	\$11,250
2	Evaluation the exchange potential at key locations within the basin	5/1/2020	8/31/2020	\$5,625	\$1,875	\$7,500
3	Evaluate basin-wide augmentation strategies	5/1/2020	8/31/2020	\$7,500	\$2,500	\$10,000
4	Update and re-evaluate small storage alternatives	5/1/2020	10/31/2020	\$11,475	\$3,825	\$15,300
5	Evaluate new storage/recharge alternatives	5/1/2020	10/31/2020	\$10,425	\$3,475	\$13,900
6	Develop a basin-wide augmentation strategy	8/1/2020	10/31/2020	\$9,488	\$3,163	\$12,650
7	Public outreach and education with the various Crystal River environmental groups to educate them about the ongoing augmentation issues	3/1/2020	10/31/2020	\$8,550	\$2,850	\$11,400
8	Evaluate various methodologies for financing and implementation of a plan for augmentation	8/1/2020	10/31/2020	\$13,500	\$4,500	\$18,000
Total				\$75,000	\$25,000	\$100,000

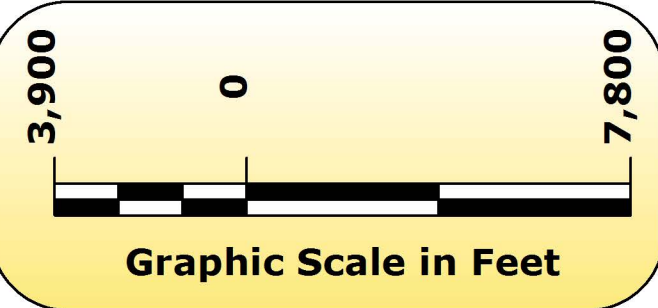
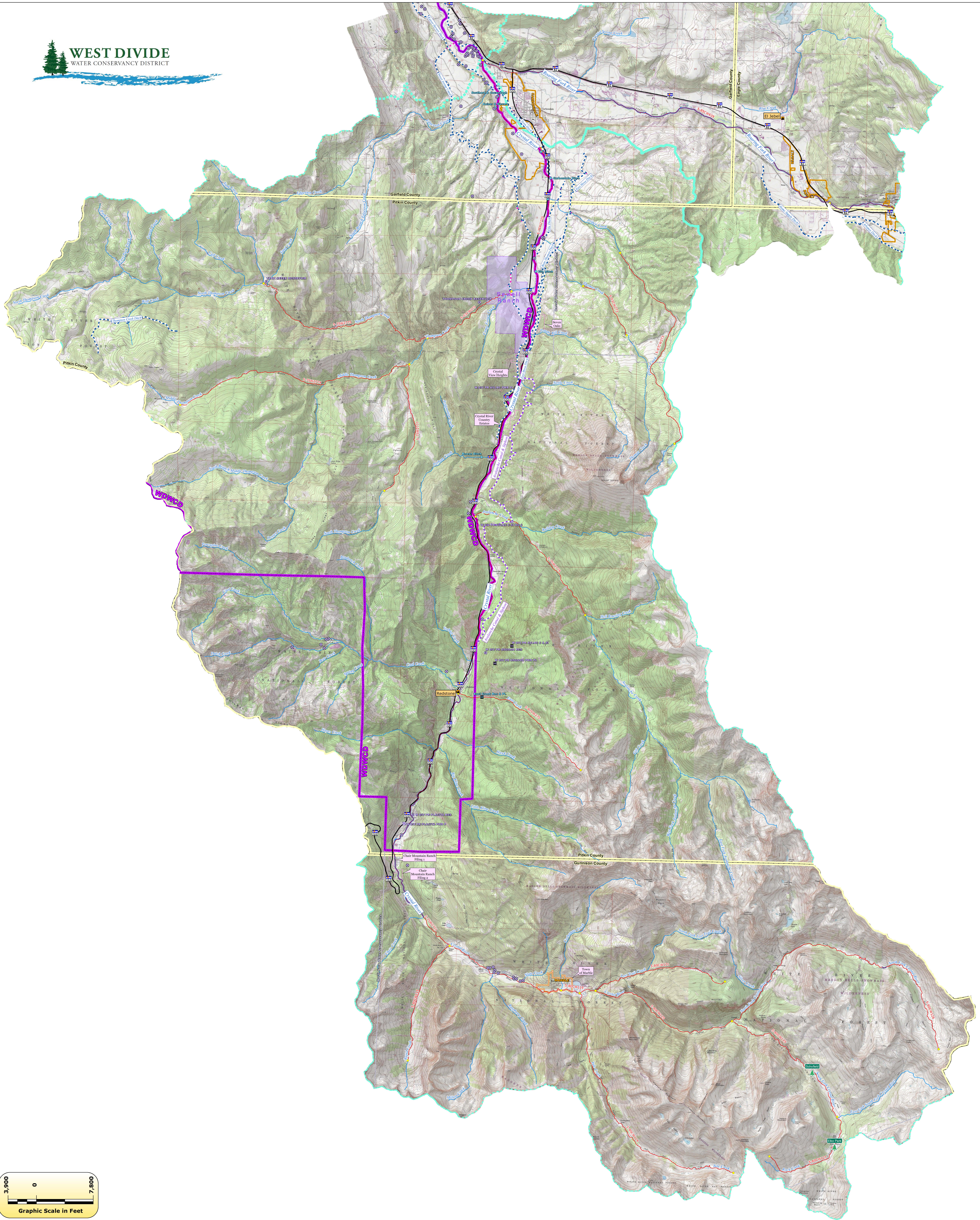
(1) The single task that include costs for Grant Administration must provide a labor breakdown (see Indirect Costs tab below) where the total WSRF Grant contribution towards that task does not exceed 15% of the total WSRF Grant amount.

(3) Round values up to the nearest hundred dollars.

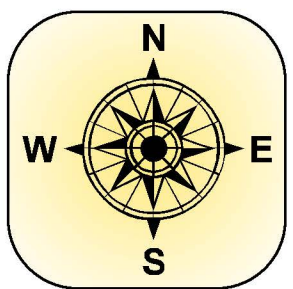
• Additional documentation providing a Detailed/Itemized Budget may be required for contracting. Applicants are encouraged to coordinate with the CWCB Project Manager to determine specifics.

The CWCB will pay the last 10% of the entire water activity budget when the Final Report is completed to the satisfaction of the CWCB staff project manager. Once the Final Report has been accepted, the final payment has been issued, the water activity and purchase order (PO) or contract will be closed without any further payment. Any entity that fails to complete a satisfactory Final Report and submit to the CWCB with 90 days of the expiration of the PO or contract may be denied consideration for future funding of any type from the CWCB.

• Additionally, the applicant shall provide a progress report every 6 months, beginning from the date of contract execution



Data Sources:
U.S. Bureau of Land Management
U.S. Census Bureau
U.S. Geological Survey
CO Department of Water Resources
CO Department of Transportation
Environmental System Research Institute



Map Key

- | | | | | | | | |
|----------------|-------------------|-----------|----------------------|-----------------------------------|--|------------|--------------|
| WDWCD DITCH | WDWCD RESERVOIR | DITCH | TOWNS | HIGHWAYS | WEST DIVIDE WATER CONSERVANCY DISTRICT | CONNECTORS | SEWELL RANCH |
| WDWCD MAINE | WDWCD CONTRACTEES | PIPELINE | DECLARED ISF TERRAIN | IRIGUIRRE CANAL & SYPHON | RIVERS | PIPELINES | COUNTIES |
| WDWCD PIPELINE | AREAS OF INTEREST | RESERVOIR | DECLARED ISF REACHES | OTHER WATER CONSERVANCY DISTRICTS | DITCHES | STREAMS | CITIES |

COLORADO
RIVER
ENGINEERING
INCORPORATED

PO Box 1301
Rifle, CO 81650
Tel 970-625-4933

Crystal River
Basin Map

Document Name: Crystal_River_Basin.mxd
Drawn by: JT

Approved by: CM Date: 10/17/2019

Client:

WDWCD

Figure:

1



COLORADO RIVER DISTRICT

PROTECTING WESTERN COLORADO WATER SINCE 1937

10/30/2019

Jim Pokrandt, Chairman CBRT

Re: Colorado River District Matching Funds Commitment for Crystal River Study

Dear Jim:

This letter is provided as confirmation that the Colorado River District has committed \$10,000 in matching funds for the grant project proposal titled: *“Investigations of Augmentation Demands, Exchange Potential, Small reservoir Storage and Recharge Pit Feasibility in the Crystal River Basin”*.

The 2018 critically low flows in the Crystal River and the ensuing water rights call by the senior Ella Ditch was a stark reminder that numerous individuals, subdivisions and municipalities along the Crystal River lack adequate dry year, legal water supplies. These entities range from the Town of Carbondale on the lower river to the Town of Marble near the headwaters. Under strict water rights administration these individuals, subdivisions and municipalities risk having their critical water supplies curtailed.

The proposed study is very important in the development of a cost effective, regionally appropriate augmentation solution for those individuals and entities that rely on the Crystal River for their domestic and municipal water supply. The River District strongly supports this effort to develop a reliable, legal water supply for our constituents.

Sincerely,

John. M. Currier, P.E.
Chief Engineer



WEST DIVIDE

WATER CONSERVANCY DISTRICT

2/18/2020

818 Taughenbaugh Blvd., Suite 101 P.O. Box 1478
Rifle, Colorado 81650-1478

Tel: (970) 625-5461

Web: www.wdwdc.org Email: water@wdwdc.org

Mr. Craig Godbout,

This letter is being provided as a commitment to matching funds for the Grant Project titled: "Crystal River Basin Augmentation Investigation". West Divide Water Conservancy District (WDWCD), working as the public entity representing the various subdivisions and towns on the Crystal River that are in need of reliable augmentation supplies, commits to providing \$15,000 in cash matching funds. This will help fulfill the budget requirements laid out by the Colorado Water Conservation Board for both Water Supply Reserve Funding and Colorado Water Plan Grants. This commitment for \$15,000, along with the Colorado River District contribution of \$10,000, fulfills the 25% matching requirement for this project. As of the end of 2019, WDWCD had already expended \$16,289 on legal and engineering expenses related to this project.

Up to \$12,037 of this \$15,000 will be reimbursed to WDWCD by the directly impacted Crystal River water users which include the towns of Carbondale and Marble, and five subdivisions including: Crystal River Country Estates, Seven Oaks, Crystal View Heights, and Chair Mountain Ranch Filings 1 & 2.

West Divide Water Conservancy District looks forward to working with the various Crystal River water users and the Colorado River District to find a solution to the long-outstanding issue of inadequate legal water supplies in the Crystal River basin. A reliable plan for augmentation would not only benefit the relatively junior water users but also stands to protect owners of senior water rights who may have been injured by the historic lack of augmentation of out-of-priority diversions.

Sam Potter, President WDWCD



COLORADO
Division of Water Resources
Department of Natural Resources

Water Division 5 - Main Office
P.O. Box 396
Glenwood Springs, CO 81602

November 18, 2019

Wendy Ryan
136 East 3rd Street
River, CO 81650
wendy@coloradorivereng.com

Via email

Re: In support of grant application to the Colorado River Basin Roundtable for a feasibility study on Crystal River Augmentation Supply

Dear Wendy,

The Division of Water Resources supports the efforts of the West Divide Water Conservancy District, the Colorado River Water Conservation District, and the junior water users without augmentation within the Crystal River drainage in the development of a regional solution to the replacement needs of these water users. DWR believes the pooling of resources by these entities in finding a storage location or locations, and finding senior irrigation rights to change for augmentation purposes will best provide the needed replacement supplies.

The primary reason we believe a regional solution is the best solution is that it would save costs for the water users. The out-of-priority diversions of concern generally involve properties that are either fully developed, or at least long past the planning stage, leaving few if any options for siting a reservoir that can deliver storage to the Crystal River. Fully developed roads, utilities, and buildings all make finding a site difficult by individual developments. Additionally, reservoirs constructed with these limitations are unlikely to have inefficient geometry, requiring additional storage to overcome evaporation losses. Individual water users seeking willing sellers of senior rights will likely stop some plans altogether, and at best make the purchase for each plan more costly. Further, the engineering and litigation of individual plans will certainly be more expensive than one plan for all.

Another reason we support this effort is that it will produce water administration efficiencies, and ensure reliable operations that prevent injury to senior municipal, irrigation, and instream flow rights. Of course, DWR will administer any augmentation plan decreed by the court, but one plan and fewer replacement sources mean less risk of delay or other issues that arise in the administration of small augmentation plans. Small ponds that are not continually active working structures encounter many problems from inoperable outlets, to inadequate storage, to inability to deliver to point of injury. Likewise, monitoring dry-up, and operability of bypass structures for changed rights in many small plans versus one larger plan present issues. Finally, replacement from fewer sources are easier to shepherd to point of injury.

Lastly, these replacement supplies will not be needed every year. A regional source from both storage and dry-up can be used for other purposes in those off years, such as, onsite recreation, and delivery for the environmental purposes of the Crystal River stream management plan. I would also like to point out any deliveries from upstream of the point of depletion will also benefit the intervening reach.



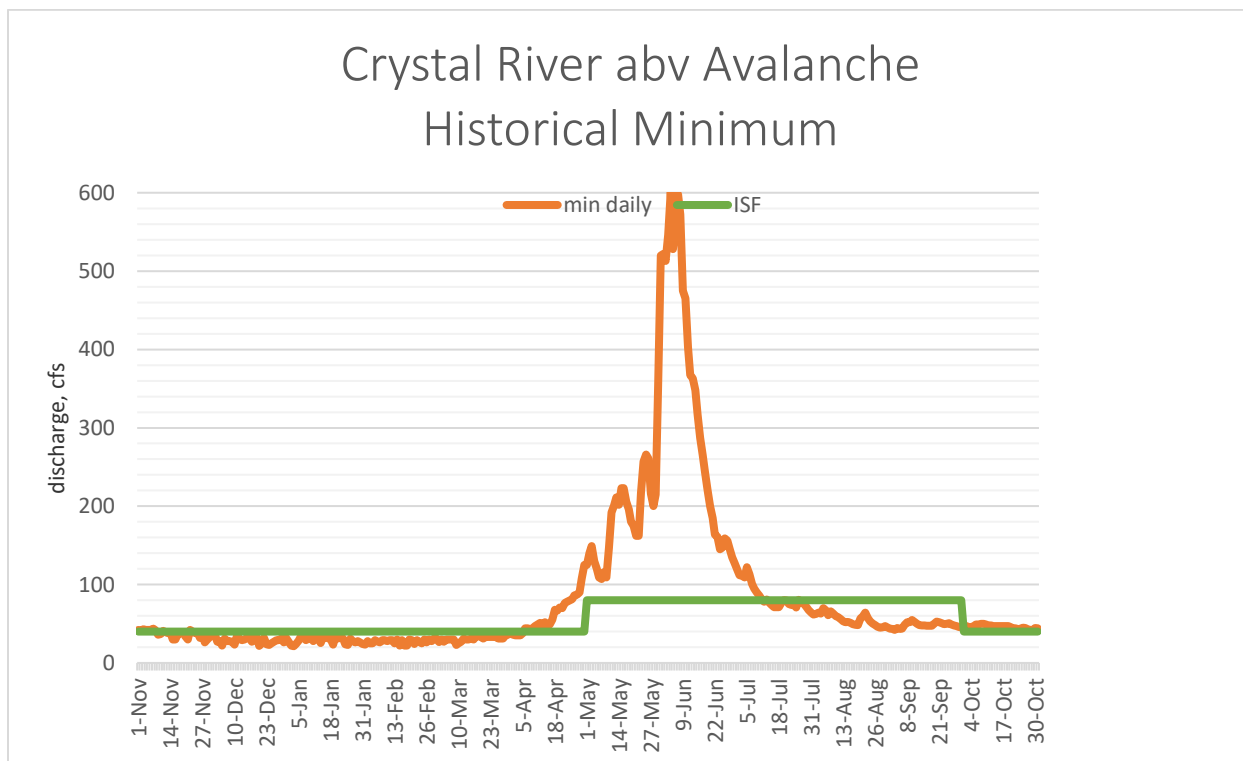
I must emphasize that storage must be a part of the solution, and that replacement supplies cannot be limited to only below Sweet Jessup Canal. The use of irrigation dry-up is limited seasonally, whereas needs run from July through early April. Irrigation rights that may be available for change to augmentation are generally downstream of Avalanche Creek, whereas needs occur both upstream and downstream of Avalanche Creek. The concerns of the lower Crystal River are well documented, to be sure both a winter and summer call are likely. Regarding the upper Crystal River, a simple analysis of the gaged data for the Crystal River above Avalanche Creek also reveals the potential for a winter and summer call. I have provided hydrographs for the gage depicting minimum historical daily average flows and 2018 daily average flows compared to the instream flow rights, as the ISF's are the likely calling rights above Avalanche Creek. Note the flow has dropped below the ISF rights on many days both winter and summer.

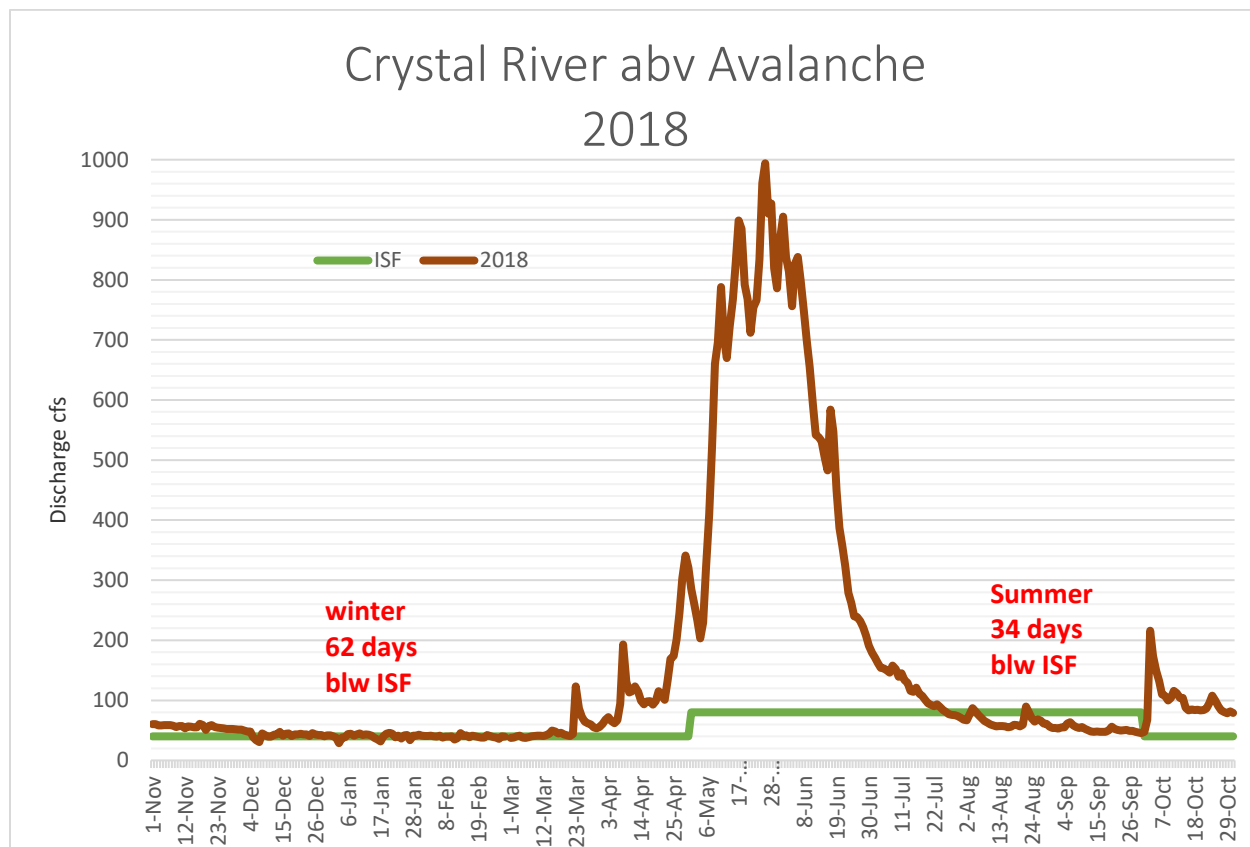
Sincerely,



Alan Martellaro, P.E.
Division Engineer

Ec: John Currier
Edward Rubin
Jake Dewolfe
James Heath
Div5filing







November 19, 2019

Mr. Jim Pokrandt, Chairman
Colorado River Basin Roundtable
Colorado River Water Conservation District
201 Centennial Street
Glenwood Springs, CO 81602

Re: Crystal River Basin Augmentation Planning Grant Request

Dear Jim,

The Gunnison Basin Roundtable would like to offer you this letter in support of the effort to obtain grant funding for water planning in the Crystal River Basin. Our understanding is that the plan would provide for investigations of Augmentation Demands, Exchange Potential, Small Reservoir Storage and Recharge Pit Feasibility in the Crystal River Basin. We support the proposal to develop a study of options to address shortages in the basin, and would like to also express our support for using a robust collaborative approach during the planning process.

The headwaters and upper reaches of the Crystal River are located in Gunnison County above the Town of Marble. Although the majority of Gunnison County is in the geographic and hydrologic boundaries of the Gunnison Basin Roundtable, this part of Gunnison County is located in the watershed tributary to the mainstem of the Colorado River. Gunnison County is represented on the Gunnison Roundtable and has an interest in the project. (Notably Gunnison County does not have a seat on the Colorado River Roundtable as I understand it).

The Gunnison Roundtable unanimously approved sending this letter of support on November 18th. The Gunnison County Board of County Commissioners and the Town of Marble Trustees have begun discussions to identify opportunities to have a better connection to water planning for the upper reaches of the Crystal River Basin. The Gunnison Basin Roundtable applauds these efforts and simultaneously supports the grant application from Colorado River Water Conservation District and the West Divide Water Conservancy District to provide planning opportunities for this area. Thank you for your consideration.

Regards,

Kathleen

Kathleen Curry, Chair
Gunnison Basin Roundtable
54542 US Highway 50
Gunnison, CO 81230
Cell – 970-209-5537
kathleencurry@montrose.net



Mount Sopris Conservation District

258 Center Drive, Glenwood Springs, CO 81601

970-404-3439

www.mountsopriscd.org

November 18, 2019

Colorado Water Conservation Board

Re: Letter of Support for West Divide Water Conservancy District

This letter is being provided by the Mt. Sopris Conservation District in support of the WSRF grant application titled "Investigations of Augmentation Demands, Exchange Potential, Small Reservoir Storage and Recharge Pit Feasibility in the Crystal River Basin" and proposed by the West Divide Water Conservancy District and Colorado River Water Conservation District. This grant application is being voted on at the November 25, 2019 Colorado Basin Roundtable meeting.

Issues with legal water supplies for Crystal River water users is not a new problem; the issue has been ongoing for many years. Funding of this grant application will allow for investigation of various alternatives to support the development of a regional plan for augmentation. Because of the lack of a legal water supply, out-of-priority depletions from junior water users have injured senior water right holders on the Crystal River. This grant will develop the most cost effective and feasible plan to move forward with a decreed plan for augmentation which will serve to protect the senior, agricultural water rights.

Sincerely,

Jeff Nieslanik, President
Mount Sopris Conservation District

Jeff Nieslanik, President; Sandy Jackson, Vice President; Robert Burry, Secretary / Treasurer;
Mike Wilde & Cassie Cerise, Board Members
Dennis Davidson, IWM Specialist; Mike Kishimoto, Conservation Technician
Sharie Prow, District Manager